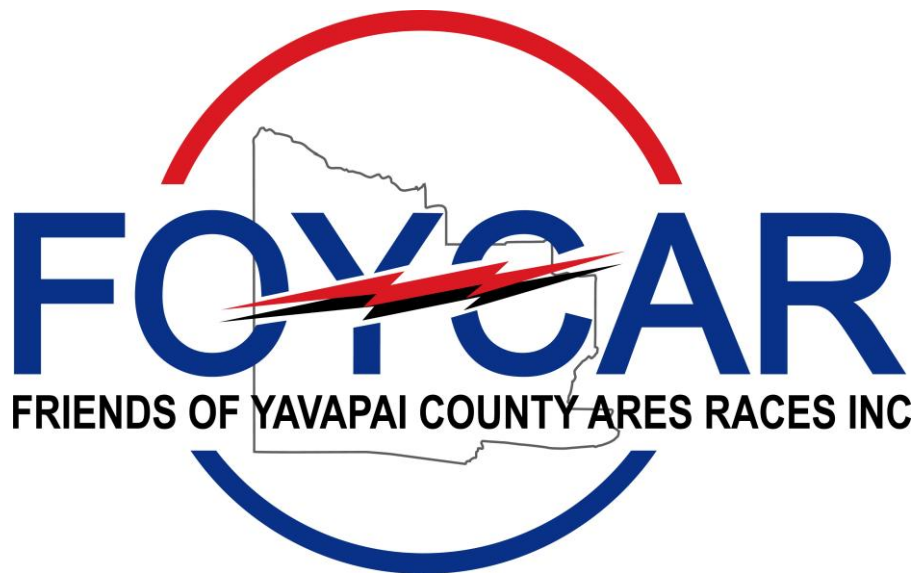


Yavapai County ARES/RACES



Yavapai Amateur Radio Club
Mar. 5, 2026

This Presentation

- Who We Are
- The Problem
- The Solution
- Questions
- It Can't Happen Here?



Enhance and Ensure Emergency Communications

Who We Are

- ~35 licensed, FEMA-trained emergency communications operators
- Mission:
 - Provide backup when primary communications are out
 - Fill in where communications don't exist
 - Augment communications across an entire incident
- We serve:
 - County and Municipal Emergency Management, Public safety
 - Hospitals and other health organizations
 - Emergency volunteer organizations: Animal Disaster Services, Red Cross, etc.
- Independent infrastructure, self-equipped
- Uniquely positioned – literally the only alternative comm organization

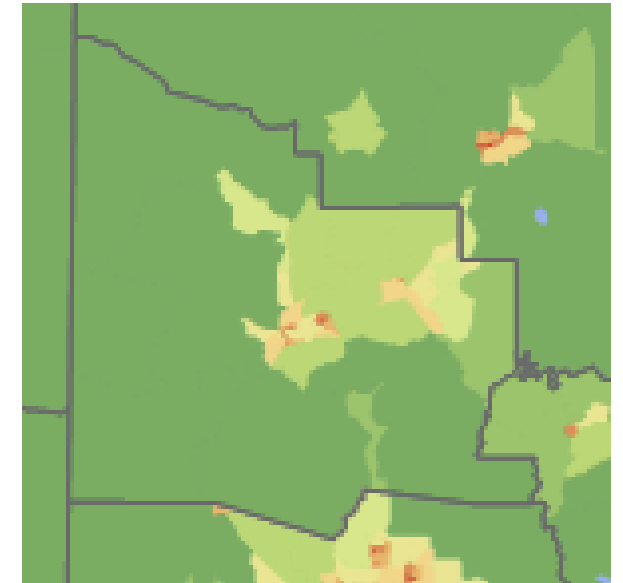


Enhance and Ensure Emergency Communications

Yavapai County

- Over 8k mi², larger than 3 US states
- Two population centers, but the risk not where the density is
- Public safety agencies are sized to *population*, not coverage area
 - One reason volunteers are so important to the county

Region	Connecticut	Yavapai County
Area (sq mi)	5,543	8,128
Population (2010)	3,574,097	211,033
Population Density	645 people/sq mi	26 people/sq mi



- Commercial communications infrastructure similarly apportioned



Enhance and Ensure Public Safety Communications in an Emergency

Emergency Communication Org Challenges

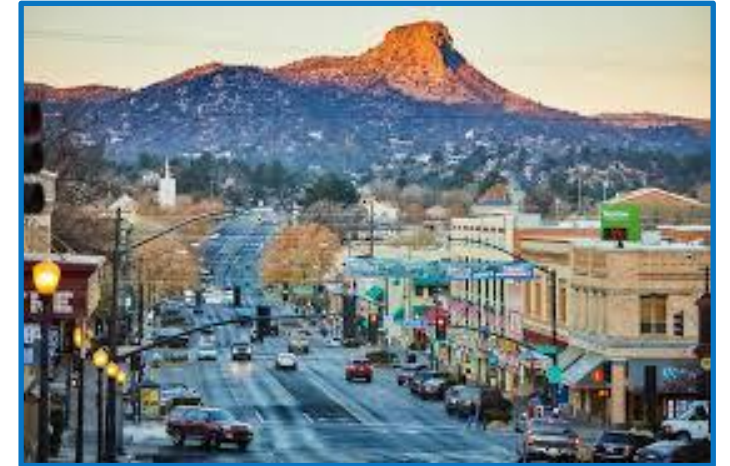
- Many organizations ...
 - Public safety agencies
 - Volunteer disaster response groups
 - Outside agencies: federal, state, private
- Universal need for instantaneous, robust communications
 - Dispatch ... shelter lists ... medical information ... imagery ... deployment
- Over a wide geographic area
 - Within the county
 - Outside the county (DEMA, state agencies, etc.)



Enhance and Ensure Public Safety Communications in an Emergency

Communication Infrastructure Challenges

- Spotty cellular coverage, *especially* in fire risk areas
- Public safety radio coverage is also limited outside population centers
- Intrastate public safety communications is voice only
- Lack of communication redundancy throughout the county
 - Some overlapping public safety radio infrastructure
 - No Internet backup at county facilities
 - EOC activations are all on-line
 - Common fiber runs for all cellular carriers ... single point of failure



Enhance and Ensure Public Safety Communications in an Emergency

What is an Emergency?

- Emergencies are different everywhere
 - In Florida, 4” of rain is just another day – in Prescott it’s a flooding emergency
 - In California, they get them all
- Prescott’s primary threats are wild fires and flooding then low probability events like earthquakes, chemical spills, terrorism (including cyber-threats)
- ARES/RACES is an all-hazard organization – we train for all these events



Enhance and Ensure Public Safety Communications in an Emergency

Recent Accomplishments

- Backbone Fire: radio operators for Incident Command Post
 - Filled in for regular staff, who were unavailable
- Spur Fire: deployed portable tower and repeater
 - Restored communications for YCSO in Bagdad
- Cellar Fire: established initial air-to-ground communications
 - Prevented delay in air operations due to missing equipment
- Horse Fire: helped deploy emergency repeater on Mt Union
 - Extended coverage area using our facilities

Amateur Radio Emergency Service assists with communication during Bagdad's recent Spur Fire



Art Protas, a member of the Amateur Radio Emergency Service, stands by the backup relay tower that he and Rusty Evenson transported to Bagdad to help with communications during the Spur Fire. (Don Bauer/Courtesy)

Daily Courier



Enhance and Ensure Emergency Communications

ARES/RACES Infrastructure

- Voice Repeaters
 - Mt. Union, Mt. Francis, Mingus Mt.
- Winlink – Internet Email over Radio (VHF or HF)
 - Linked to the Internet or independent
 - Digital Repeaters/Gateways
 - Mt. Union (2), West Prescott, Mingus Mt., Porcupine Mt. , Mingus Tanks, Bill Williams, Wickenburg, PV PD
- EOC radio rooms
 - Commerce Drive (in process), Prescott Valley PD, Camp Verde Public Works
- MOUs with other repeaters, gateways, e. g. YARC, VVARA, BWMRC



Enhance and Ensure Emergency Communications

ARES/RACES Infrastructure

- MARC (**M**obile **A**mateur **R**adio **C**ommunications)
 - Full complement of brand new radio equipment for all requirements
 - VHF, HF, Microwave (WiFi), Starlink
 - Can be deployed immediately to support Incident Command Post set up and/or to support evacuation site



Enhance and Ensure Emergency Communications

ARES/RACES Infrastructure

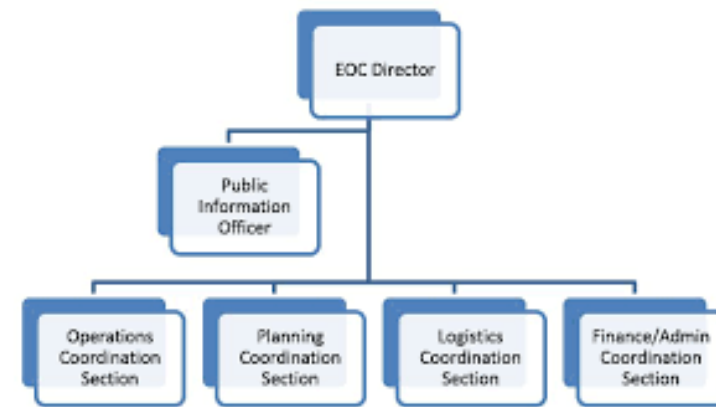
- New (used) trailer donation
 - Full complement of radio equipment for all requirements
 - VHF, HF, Microwave (1.2 GHz)
 - Large LiFePo batteries with solar panels and charger
 - Can be deployed immediately to support Incident Command Post set up and/or to support evacuation site



Enhance and Ensure Emergency Communications

How We Operate

- Served agency model
- Training
 - FEMA training
 - Incident Command System (ICS) – the language of emergency communications
 - Public service events – **our best training!**
 - Internal training
 - ARES/RACES-only exercises
 - County- and state-wide exercises
- Process and procedures
 - Callout, deployment, operating
 - Information and procedures: documented, indexed, distributed
 - More on how we operate at k7yca.org



Enhance and Ensure Public Safety Communications in an Emergency

ARES/RACES Membership Requirements

- FCC amateur radio license
- FEMA ICS and ARRL EmComm Course (when available)
 - IS-100, -200, -700, -800
 - All courses on-line
- County background check
- Exercise and training commitment
- Weekly net check-ins
- Training exercises and incident deployments commitment

Go to k7yca.org to learn more and to sign up



Enhance and Ensure Public Safety Communications in an Emergency

Friends of Yavapai County ARES/RACES

- 501(c)(3) funding organization est 2019
- Grants and donations to date: > \$39,000
- Major fund raising currently on hold



Enhance and Ensure Emergency Communications

Why We Do It ... and You Should Too!

- Apply our training and experience to something that makes a positive impact on a lot of people ... life and property
- Contribute to the community
- Improve our operating skills and knowledge
- Be “in the know” during emergencies
- Be a part of a great team
- Sound good? Consider joining!

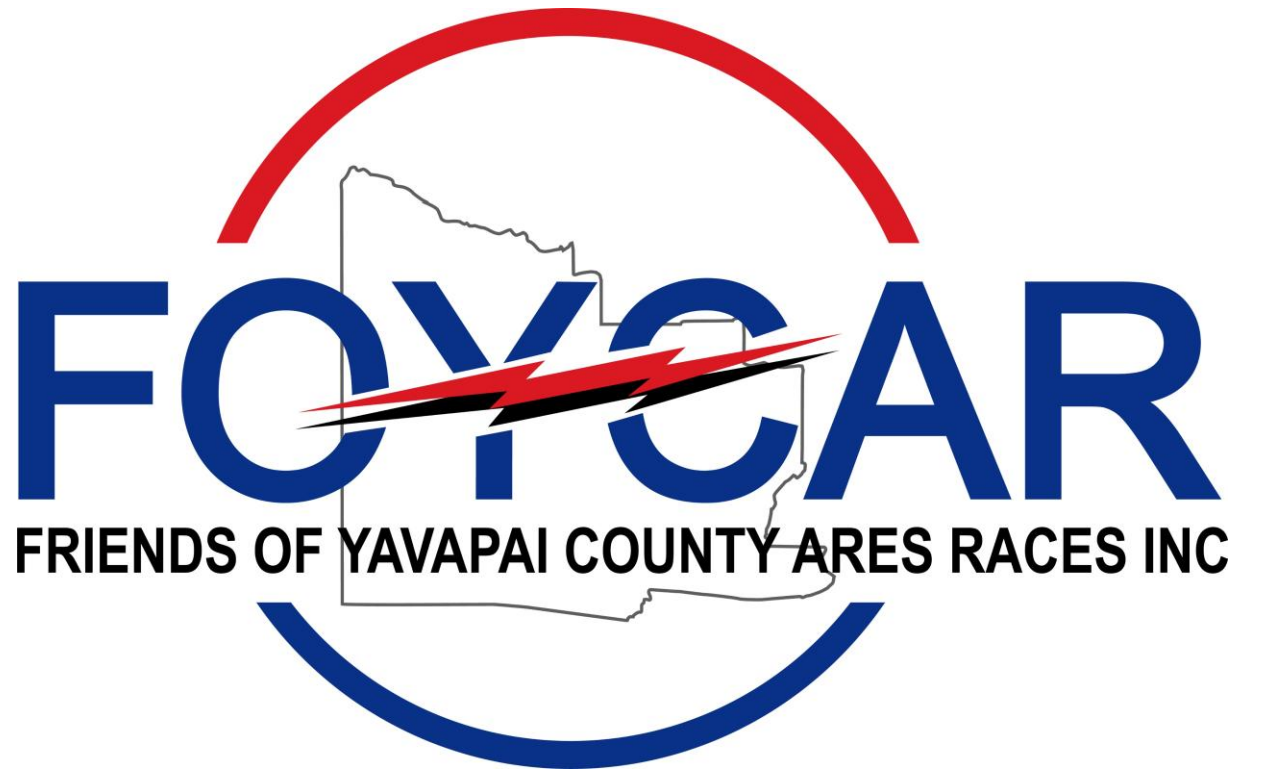


Enhance and Ensure Public Safety Communications in an Emergency

QUESTIONS?



Enhance and Ensure Public Safety Communications in an Emergency



It Can't Happen Here?

- Watch these videos on the Camp Fire in Paradise, CA (each one is 15 – 20 minutes long) and think about the topography of Prescott.

Episode 1: Best Laid Plans <https://youtu.be/pdMQ0wAA1vk>

Episode 2: Keep Calm But Run For Your Life <https://www.youtube.com/watch?v=rVFdSO5XhbU>

Episode 3: Information at the End of the World <https://www.youtube.com/watch?v=GPaQn4L1z24>

Episode 4: After and the Days Beyond <https://www.youtube.com/watch?v=Ec7s4I5oEWg>

