



EMCOMM in Clark Co. and Clark County NV ARES (SM)

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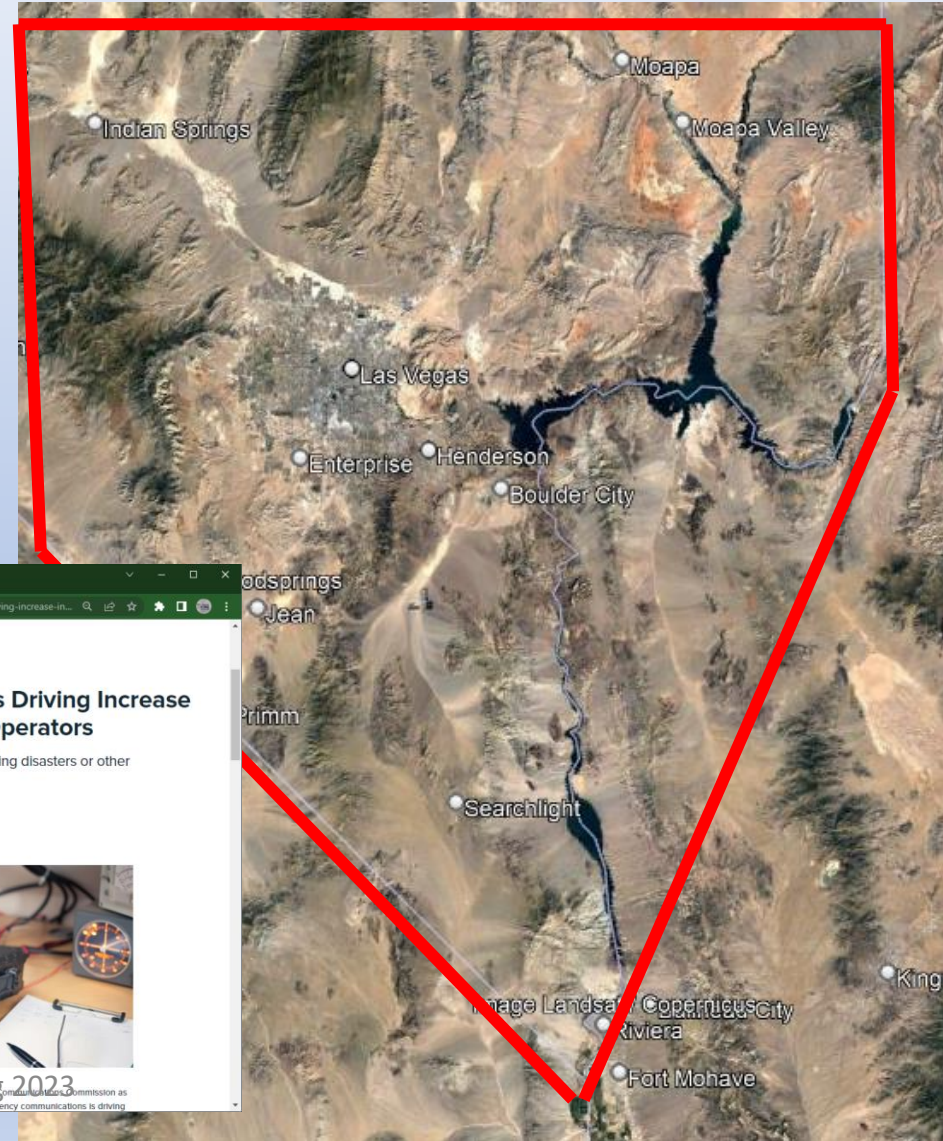
Waypoints

- Ham Emergency Communications (EMCOMM) in Clark Co NV
 - The Need for EMCOMM
 - Known Organizations
- Clark Co NV ARES
- What should YOU do in an emergency?



The Need for EMCOMM

- 2.3M people in county, the overwhelming majority of NV population
- Clark Co is about triangular, 130 miles/side
 - Larger than the smallest 5 US states!
- 57 listed med facilities on County OEM website
 - Ham radio backup at many
- 19 town boards + major city councils
 - County OEM direction to support them all
- Earthquake territory
- Monsoons
- Mountains make remote comms difficult → hams' specialty





The Need for EMCOMM

- Ridgecrest earthquakes
- Nashville bombing
- Amazon Web Services outage

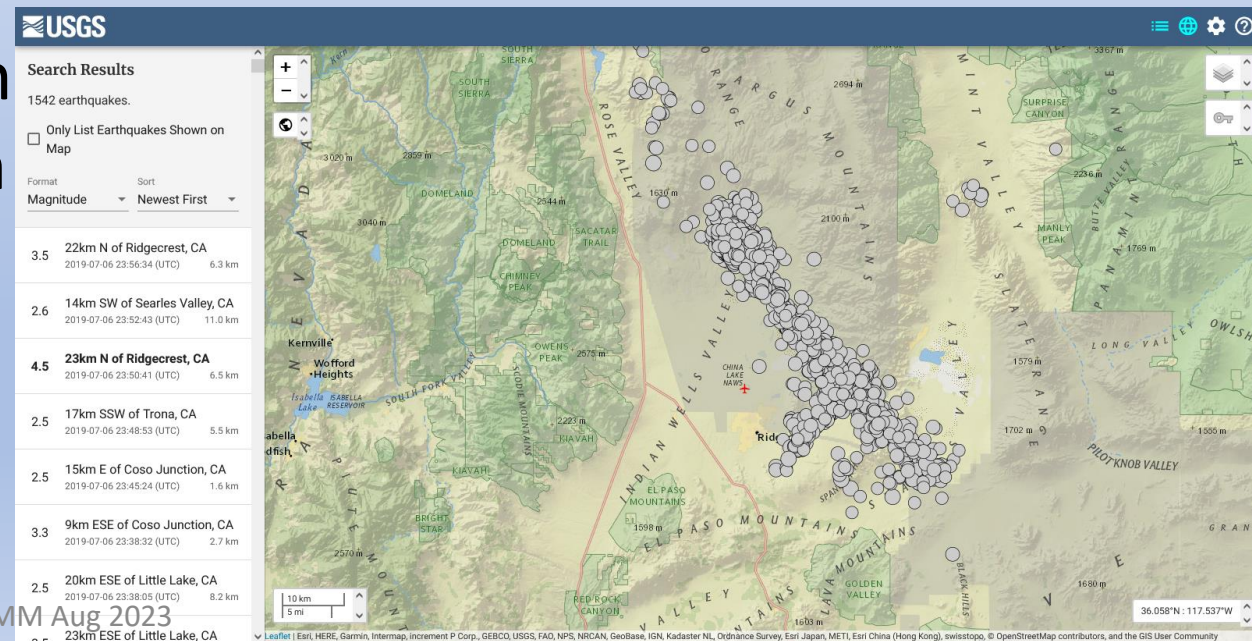


The Need for EMCOMM: ARES Activation, Ridgecrest Earthquakes

- 4, 5 July 2019; greater than magnitude 7 quakes
- Eastern Kern Co ARES activated twice, three days total
- 57 total radio operators, community population 28,000
- Mobile and at police station comms van
- Damage reports, response coordination
- Ref: 15 May 2020 6.5 mag IVO Tonopah

Temblors > 2.5

<https://www.arrl.org/news/ares-responds-to-early-july-earthquakes-and-aftershocks-in-southern-california>





The Need for EMCOMM: Nashville Bombing, 25 Dec 2020

Consequences

- There was an [AT&T service outage](#) throughout the United States, primarily in Middle Tennessee...
- Cellular service was also spotty on other carriers...
- [911 services were also disrupted](#) in many areas.
- ...
- The Memphis Air Route Traffic Control Center experienced communications issues...

Excerpted from

<https://theprepared.com/blog/lessons-from-nashvilles-2020-christmas-day-bombing/>

It also affected the Federal government sponsored, AT&T operated, “backup” communications system – **FirstNet**, which emergency responders and critical infrastructure providers nationwide depend on. So far, FirstNet has been impacted for more than two full days and counting after the explosion. “Most of the Metro Nashville Police Department’s administrators and officers use AT&T [FirstNet], and their phones went down Friday, according to spokesperson Kris Mumford.”

<https://www.aresd1.com/post/nashville-bombing-proves-the-need-for-amateur-radio-emergency-communications-is-higher-than-ever>



The Need for EMCOMM: Internet Isn't Perfect

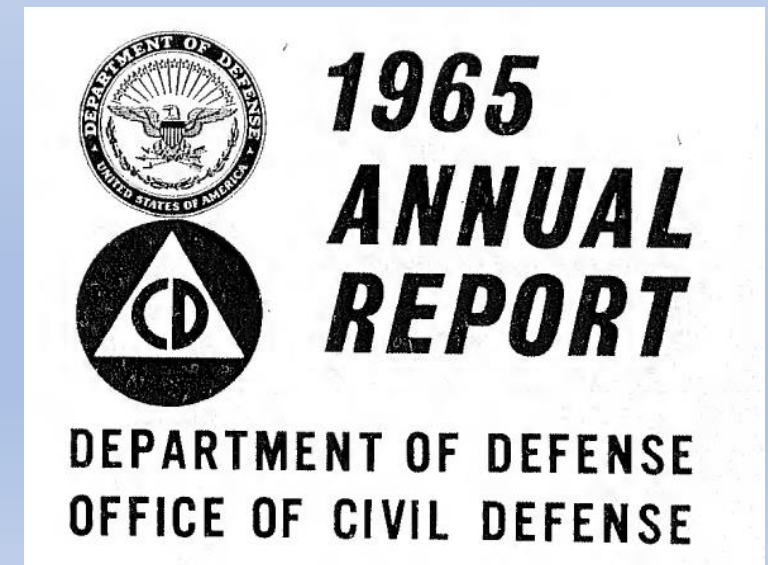
- “The internet will never go down.” Oh yeah?
- 13 June 2023 Amazon Web Services outage was substantial
- “Other major AWS outages have happened, including in 2021. The year before, an outage hobbled companies including the Amazon-owned Ring security camera service, iRobot’s Roomba vacuum cleaner app, services from design technology firm Autodesk and the publishing systems of news outlets such as The Washington Post.
- The cloud provider’s customers include major companies such as Netflix, Deloitte and Comcast, as well as hundreds of start-ups and **multiple government agencies**. AWS brought in more than \$21 billion in revenue in the first quarter of 2023, according to a company earnings statement.”
- <https://www.washingtonpost.com/technology/2023/06/13/amazon-aws-down-outage/>



EMCOMM Reality

- The Radio Amateur Civil Emergency Services (RACES) continued to be an important emergency supplement to State and local communication systems. RACES, operational since 1952, enables amateur radio operators to perform emergency communication functions in accordance with State-approved plans. At the end of fiscal year 1965, RACES remained operational in every State and included more than 1,750 approved plans.

“Those were the days...”





EMCOMM Reality

- Hams can still have a huge impact locally, need to integrate with agencies for large events
- As comms technology improved and spread, hams stopped being the go-to
 - 6.92B cell phones, capabilities of which would have been unthinkable to hams in 1980
- Post-9/11 esp in Clark Co, well-funded and –organized agencies are ready to respond, and crowdsource info via cell/social media

Huge solo impact on isolated incidents

- Vessels in distress
- Wayward or injured hikers



Vs.

Part of a team on large incidents





Local EMCOMM-Related Orgs

- Clark County ARES (ccnvares.org)
- Possible:
 - Boulder City Emergency Radio Group KK7BC
 - Mercury Amateur Radio Association (MARA)
 - Clubs: Las Vegas Radio Amateur Club, Henderson Amateur Radio Club, Nellis Radio Amateur Club, HXO, Desert Radio Club of NV, (about 8 more)
- ARES outreach to determine opportunities to team, synergize efforts



What is Clark County ARES?

- Amateur Radio Emergency Service[®], a national private organization sponsored by the Amateur Radio Relay League (ARRL.org)
- A 503(C) registered org.
- Volunteer ham radio operators serving their communities with voice and data communications—e.g., Technicians, RADOs, COML, COMT
- ARES provides training **specified by our served agencies** and informs them who is qualified to support **their** requirements
- Served agencies “activate” registered hams as needed for their events



Services Available: Clark County ARES Demonstrated Capabilities

- About 35 core members; **2023 recruiting emphasis as needed to meet emerging requirements.**
- Voice and data are exercised weekly on ARES Net, Monday 1930L. Typically 60-80 check-ins over all voice/digital modes
- Sep 2019 Storm Area 51 activation in conjunction with Lincoln & Nye Co.
 - Linked Alamo, Hiko, Rachel facilities before state resources arrived, supported the entire activation, about 1 week. Voice & email comms. Health and welfare traffic.
- ARES members are **cross-trained for SKYWARN®** weather spotting—many reports to National Weather Service during 2022's summer monsoons
- Many members support community events and contests: Field Day, Winter Field Day, Baker to Vegas, First Responder's Relay Race, Silver State Classic Challenge & Nevada Open Road Challenge, Pony Express, Tonopah Rally race.



CCNV ARES Resources and Technologies

- K7CCN series of analog/voice repeaters, other repeaters
- DMR, DSTAR, Echolink voice
- HF voice and digital
- VHF/UHF voice and digital
- Packet: BBS, Winlink, peer-to-peer and via digipeaters
- VaraFM and VaraHF
- Winlink email, APRS
- Mesh (initial capability). Likely the major path forward
- GMRS (reinvigorating)
- Simplex, fixed-installation and ad-hoc repeaters/digipeaters
- Off-grid power, deployed locations
- “By any mode necessary” Training offered.
- Mon 1930 net over K7CCN repeaters



CCNV ARES Served Agencies

- Clark County Office of Emergency Management
- Local hospitals
 - Post-COVID equipment surveys in progress
- NV Department of Emergency Management



CCNV ARES Bottom Line

- Supporting government agencies in a formal structure
 - Drives training and certification requirements
 - Drives requirement to stay current and demonstrate so
- Hospital support is still forming, likely lower training requirements
- Coordinating clubs' EMCOMM plans
- Without specified requirements, we exercise all available ham modes, bring to bear best tool
- → Hams with a *desire* and *ability* to serve



CCNV ARES Wish List

- About 500 hams ready to support their local hospital or town/city/county org
- Healthy EMCOMM community among all hams
- Legislative changes to explicitly address volunteers in emergency management, ref CO, CA.
- You org's EMCOMM plans, coordinated



What should YOU do in an emergency?

- Prior: plan, prepare, practice. Keep comms equipment functional, backup power available, you ready
 - Drill with ARES, SKYWARN, clubs. Support public service events
 - Download forms from ccnvares.org
- Secure yourself, family, property. Discharge commitments to your employer.
- Monitor K7CCN repeaters/repeater outputs if towers down:
 - 147.180 (+) D244 (Mt. Charleston)
 - 145.300 (-) D244 (Glendale)
 - 447.325 (-) PL100 (Boulder City)
 - 147.180 (+) PL127.3 (Laughlin)
- Monitor club repeaters, yours and others, HF
- DO NOT just show up at a fire station or other office



Resources

- ccnvares.org
- lasvegasskywarn.wixsite.com/lasvegasskywarn
- www.clarkcountynv.gov/government/departments/fire_department/services/emergency_management/index.php
- earthquake.usgs.gov/earthquakes/map
- dem.nv.gov
- www.fema.gov/emergency-managers/national-preparedness
- www.arrl.org/emergency-communications-training
- Wavetalkers.com : EMCOMM-related training videos