

# **Enabling City-Wide CERT Communications Using GMRS Radio**

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Thursday January 31, 2019  
BDPNN**



**BeCERTAINN**

**Berkeley CERT & Inter Neighborhood Network**

# Why BeCERTAINN?

- **During a major event neighborhoods should assume 911 services will not be available**
- **The impact of any event will not be evenly distributed**
- **Neighborhood resources (physical and human) will not be evenly distributed – some will lack resources while other have expertise or resource “slack”**



# Why BeCERTAINN?

**CERT-to-CERT communication can support two primary outcomes / objectives**

- 1. Situation awareness**
- 2. Coordinated action / resource sharing**

**By utilizing good operating procedures for disaster communications**

**But, not communications *up the chain of command*: Fire; police, medical, etc.**



# What Does BeCERTAINN Do?

- **Maintains a reliable, city wide, radio communications**
- **Provides a means of sharing resources between neighborhoods**
- **Deployment and development of emergency response tools (eg. radios, maps, protocols)**
- **Training exercises to test equipment and simulate disaster response communication**
- **Weekly “nets” (coordinated radio check in)**
- **Coordination with & between other CERT groups and networks**

# How do we do this?

## We use the General Mobile Radio Service

- FCC licensed radio service
- “No test” license available online
- One license covers all family members – *including in-laws*

# **What is GMRS?**

## **General Mobile Radio Service**

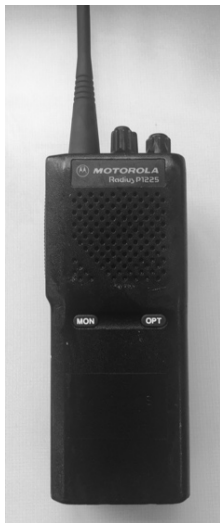
- **FCC licensed radio service**
- **“No test” license available online**
- **One license covers all family members – including in-laws**
- **Higher operating power than cheap walkie-talkies**
- **Use of repeaters**

# **What is a Repeater & Why is It Useful?**

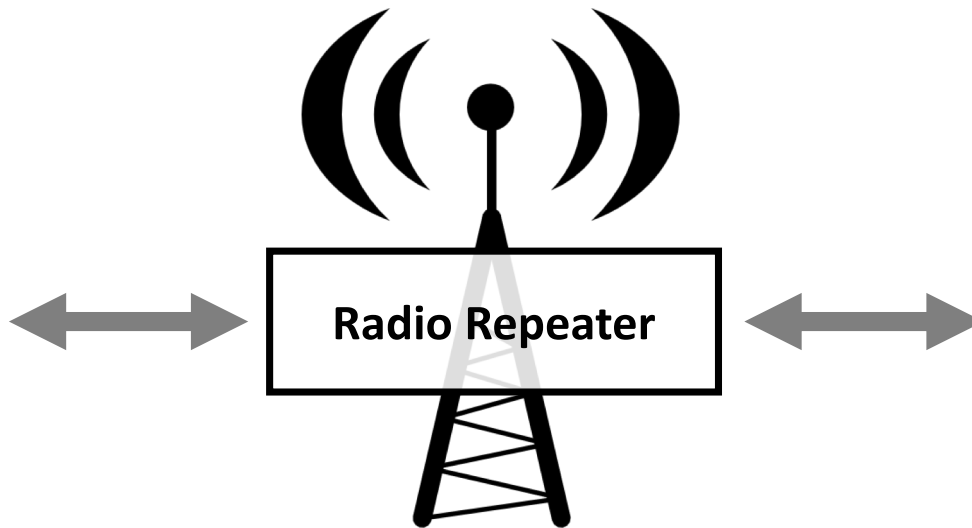
- **A repeater is a combination of a radio receiver and a radio transmitter that receives then retransmits a signal**
- **The advantage is a repeater can reach much longer distance because of its better location, quality antenna and higher power**

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CERT-Team #1



CERT-Team #2

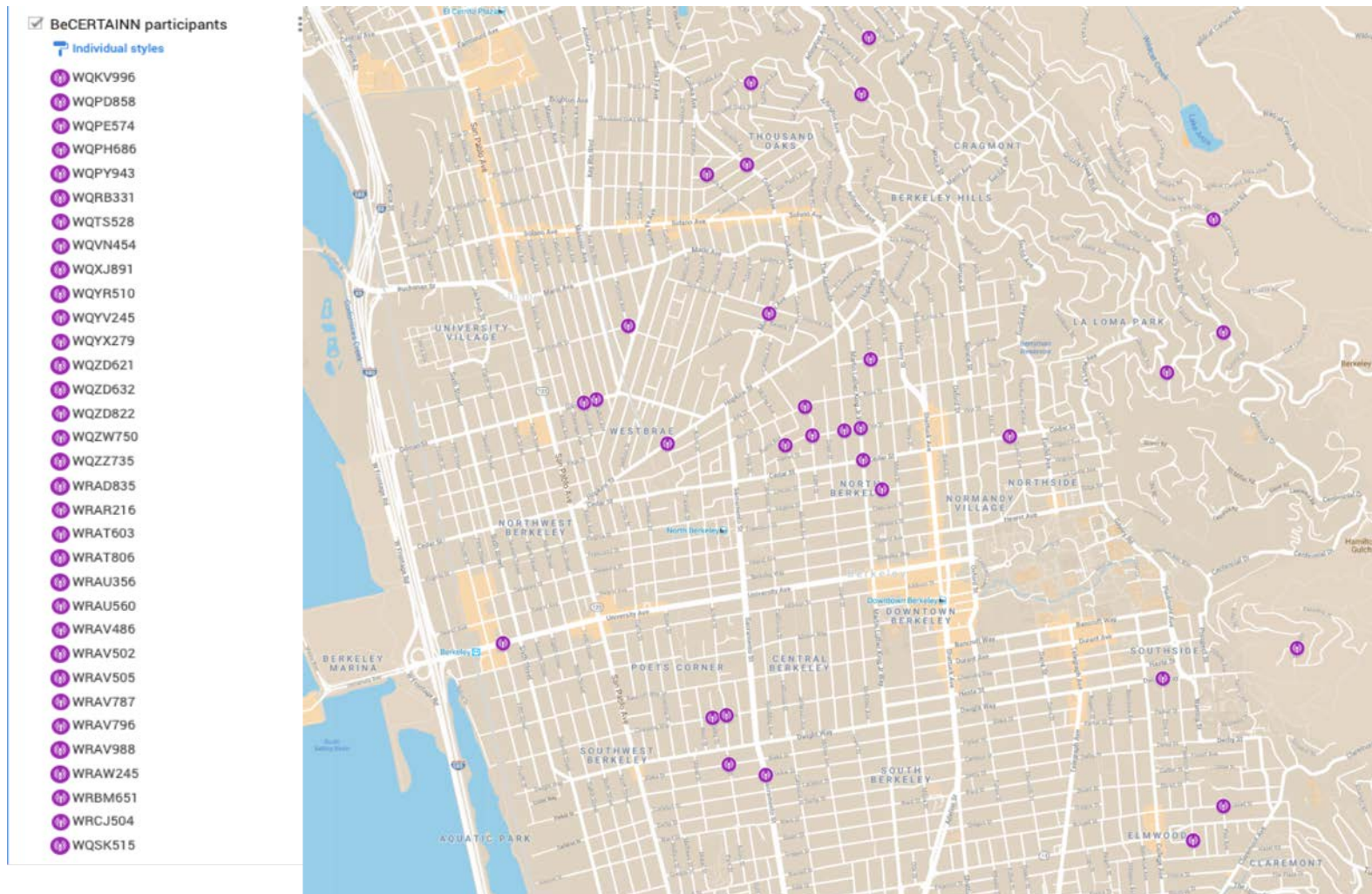


# What is a Repeater & Why is It Useful?

- **BeCERTAINN has built and maintains a GMRS repeater**
- **Coverage for all of Berkeley and some immediately surrounding areas**
- **Open to all CERT groups and persons interested in emergency preparedness**
  - **No fees or membership required**
  - **Available 24/7**

# Who is BeCERTAINN?

- Over 30 licensed GMRS users located all over Berkeley
- Plus dual licensed HAM / GMRS users



# What has BeCERTAINN Accomplished?

- **Radio equipment purchasing, programming and distribution**
- **Weekly nets every Tuesday at 19:30**
  - **Average 10 participants per night**

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- **Participated in Berkley Path Survey**
  - **5 survey teams + net control**
  - **13.5 miles of paths surveyed**
  - **45 participants**





# What Did BeCERTAINN Do in 2018?

- Radio equipment purchasing, and distribution
- Weekly nets every Tuesday at
  - Average 10 participants per net
- Participated in Berkley Path Survey
  - 5 survey teams + net conducted
  - 13.5 miles of paths surveyed
  - 45 participants
- **Solano Stroll exercise**



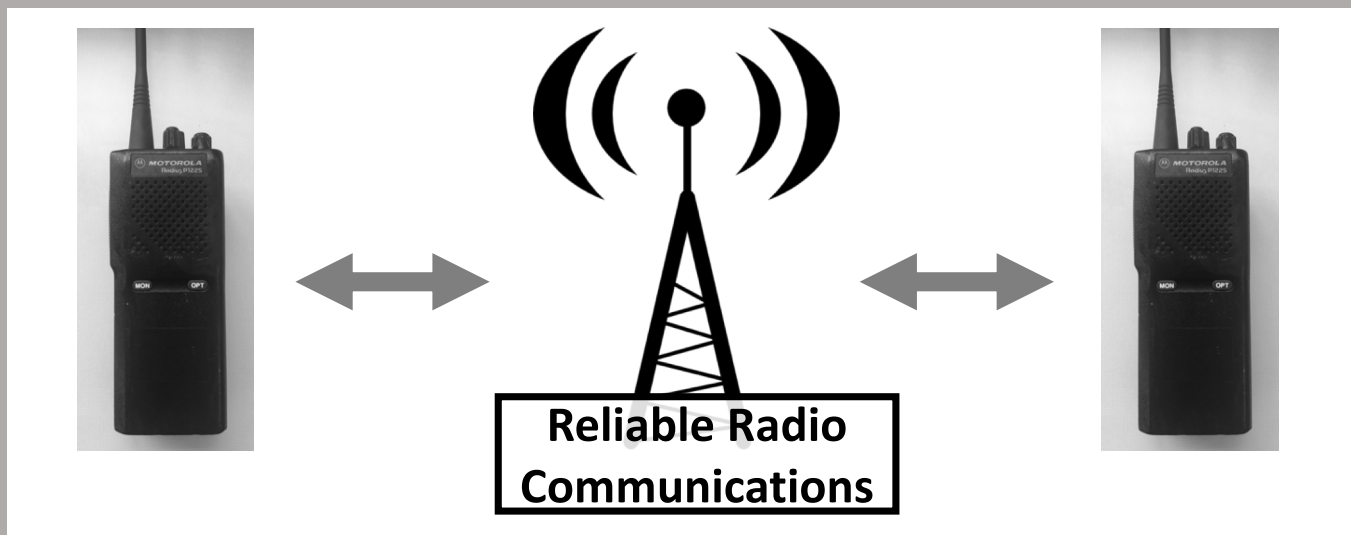
# Take-Home Message?

**We emphasize:**

**City-wide CERT to CERT Communication**

**Self sufficiency until help can arrive**

**Neighbors helping neighbors**



# Thank You; Questions?

Participate in our weekly GMRS Net every Tuesday at 19:30 on GMRS CH 22R

Receive frequency: 462.725 mHz

Transmit frequency: 467.725 mHz

Receive PL Tone: 88.5 (Optional)

Transmit PL Tone: 88.5 (Required)



## BeCERTAINN

Berkeley CERT & Inter Neighborhood Network

# Why BeCERTAINN?

**Situation Awareness:** What is going on over there?

**Networking:** What human and/or physical resources do you have/need?

**Relaying Information:** Is there information that others need to have?

**Documentation:** Is there something other need to know?

**Tracking:** How is the situation developing over there?

**Relay:** Is there a message you want me to pass on?

**Coordinate:** Let's keep CERT Teams on the same page