Now What?
Post-Disaster Communications

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Vice-Chair Nebraska VOAD (Volunteer Organizations Active in Disaster)
Some Housekeeping

• Please put pagers/cell phones on vibrate.

• I will not personally gain from this presentation and have nothing to disclose.
PLACE HOLDER FOR WALTER KRONKITE VIDEO
Objectives

- Explain types of back-up communications
- Differentiate the pros and cons of each
- Describe the ham radio resource
- Assess areas where ‘hams’ can help
Why Amateur Radio Operators Help
Federal Communications Commission

§97.1 Basis and purpose

The rules and regulations in this Part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communications and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill.
What ‘Hams’ Do
NEWINGTON, CT, Aug 28, 2005--With the dangerous and powerful Hurricane Katrina drawing a bead on New Orleans, thousands of residents there and elsewhere along Louisiana's Gulf Coast have been heading out of town or to storm shelters. Officials issued mandatory evacuation orders for New Orleans, and say power and water service could be lost when the Category 5 storm strikes. The Hurricane Watch Net (HWN) on 14.325 MHz has activated. The net works in cooperation with WX4NHC at the National Hurricane Center (NHC), which is calling Katrina "potentially catastrophic." HWN Assistant Net Manager Bobby Graves, KB5HAV, says the net's mission at this point is to compile a list of stations in the affected area that can be available--primarily with measured weather data--beginning at 1300 UTC Monday morning.
NEWINGTON, CT, Feb 17, 2006--The Amateur Radio Emergency Service (ARES)….got positive mentions in a post-Katrina report from the US House of Representatives.

The report noted, "In Mississippi, FEMA dispatched Amateur Radio operators to hospitals, evacuation centers, and county EOCs to send emergency messaging 24 hours per day."
It further cited comments from Bay St Louis Mayor Edward A. "Eddie" Favre that Amateur Radio operators "were especially helpful in maintaining situational awareness and relaying Red Cross messages to and from the Hancock County (Mississippi) EOC."
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According to the report, radio amateurs at airports in Texas and Louisiana "tracked evacuees and notified families of their whereabouts," while the Red Cross "deployed Amateur Radio volunteers at its 250 shelters and feeding stations, principally in Mississippi, Alabama and Florida."
"Additionally, the NCS coordinated the frequencies used by the nearly 1000 Amateur Radio Emergency Service (ARES) volunteers across the nation who served in the Katrina stricken area providing communications for government agencies, the Red Cross and The Salvation Army," the report continued.
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The Salvation Army, the report pointed out, operates its own system of Amateur Radio volunteers known as SATERN (Salvation Army Team Emergency Radio Network).

"Emergency communications were conducted not only by voice, but also by high-speed data transmissions using state-of-the-art digital communications.”
What About Other Situations?
NEWINGTON, CT, Feb 8 2007 -- When deadly tornados struck Central Florida early Friday, February 2, Amateur Radio volunteers turned out to assist emergency managers and relief organizations to supplement communication and offer other support.

Amateur Radio Emergency Service (ARES) and SKYWARN volunteers were active in Lake, Seminole, Sumter and Volusia counties -- all designated as federal disaster areas.
NEWINGTON, CT, Feb 15, 2007 -- Amateur Radio Emergency Service (ARES) and SKYWARN volunteers activated February 13 and 14 as a fierce winter storm generated potentially dangerous weather conditions from the Great Lakes into New England.

In Ohio, ARES teams in five counties took on a variety of weather-related duties February 13. Ohio Section Emergency Coordinator Frank Piper, KI8GW, says District Emergency Coordinators in his Section were ready to deploy volunteers in the event of shelter openings or by request of served agencies.
"I am proud of all the ARES volunteers in Ohio who responded or were prepared to deploy upon notification," Piper told ARRL.

Piper says that Seneca County ARES members activated a net from the county's emergency operations center to gather reports of local weather conditions, road conditions and stranded motorists. The Ohio Single Sideband Net, which convenes three times a day on 75 meters (3927.5 kHz), and VHF/UHF repeaters kept northern Ohio radio amateurs in contact with each other.
Who Are These ‘Hams’
‘Ham’ Radio Demographics

• There is no minimum age requirement to earn an amateur radio license in the U.S.
• The average age of amateur radio operators is about 50 years old.
• In some countries, the average age is over 60 years old, with most amateur radio operators earning their license in their 40s or 50s.
‘Ham’ Radio Demographics

Licensed in US
679,864 in 2000
847,809 in 2004

Women
15%

Men
85%
‘Ham’ Radio Demographics

Licensed in Nebraska
4,670

Women 14%

Men 86%
The Technical Stuff
The Technical Stuff

• VHF radios are line-of-sight
  – Radio’s antennas must be able to see each other
  – Power makes little difference
The Technical Stuff

Simplex
The Technical Stuff

Receive on “Red”
Transmit on “Green”

Transmit on “Red”
Receive on “Green”

Repeater
What We Do In Lancaster County
Amateur Radio Emergency Service (ARES)
Lancaster County Amateur Radio Emergency Service

- 170 members
- All trained spotters (NWS training, open to public)
Lancaster County Amateur Radio Emergency Service

- 170 members
- All trained spotters (NWS training, open to public)
  - 33 spotters’ points (specific locations)
  - 10 support locations (hospitals, media, airport, EOC)
    - Nebraska Heart Institute
    - Nebraska Surgical Center
    - Bryan East Hospital
    - Bryan West Hospital
    - St. Elizabeth Hospital
    - Madonna Rehabilitation
    - KOLN-TV
    - KLKN-TV
    - Three Eagles Communications (7 stations)
    - Nebraska Broadcasting (4 stations)
• Lancaster County
  – Phase I (pre-disaster)
  – Phase II (post-disaster)
  – Drills
What Can ‘Hams’ Do For You?
Types of ‘Ham’ communications

• Computer to computer
• Voice to voice
• Digital secure
• Images
• Television
Communications Alternatives

• FRS - Family Radio Service
• GMRS - General Mobile Radio Service
• MURS - Multi-Use Radio Service
Communications Alternatives

• FRS - Family Radio Service
  – Line of sight
  – Range of 2-miles
Communications Alternatives

- **MURS - Multi-Use Radio Service**
  - The maximum permissible Transmitter Power Output (TPO) is 2 Watts.
  - MURS is intended for short-range local communications.
  - No license is needed. MURS is available for unlicensed business or personal use
  - Radios suitable for use on the MURS channels are now available from dozens of different manufacturers, and are sold by several online companies and by consumers electronics store chains.
Communications Alternatives

• GMRS - General Mobile Radio Service
  – *personal* radio service available for the conduct of an individual's personal and family communications
  – Only those radios that have been *type-certified* by the FCC for use in the GMRS
  – An FCC license is required ($75, as of Fall 2002), and persons operating under a *personal* license may operate on *any* GMRS frequency.
  – 8 set frequencies in the 462 MHz band
Your Communications Concerns
(What is your plan ?)

• Telephone service within your facility goes down
• Telephone service in your community is interrupted
• Cell phone service is disrupted
• 9-1-1 and Emergency Services lose communications
• Police/Fire/Ambulance lose communications
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Questions?