

Tribal Communications

Considerations for Decision-making on Emergency Communications

Emergency, or redundant, communications systems are used when the normal, day-to-day systems fail, due to loss of commercial electrical power, loss of circuit, or other disruption of routine operations. There are a number of different types of systems, and they all have pluses and minuses as to their use. The following are presented as some considerations for choosing between the various systems:

- Who do you need to talk to?
- How far away are they? (next building, next town, next county, next state? Consider possible geographic or topographic barriers)
- When do you need to talk to them? (Can you talk to them 7x24x365 if necessary?)
- What kinds of information do you need to exchange? (voice, data, written documents, etc.)
- Do you have a means of providing backup power if the electricity goes out? (generators, battery backup, etc.)
- Have you completed a Hazard Vulnerability Assessment for your location, so you know what potential threats exist for your location?
- What forms of emergency communication are already in use, or planned, for your jurisdiction? (try to take a systems approach for interoperability)
- When the HRSA grant funding ends, will you be able to maintain/sustain the ongoing maintenance fees?

Some potential forms of emergency communications include:

Satellite Phones:

- Fixed satellite phone, installed in a facility: The antenna and transceiver unit must be installed in a building penthouse, or utility/mechanical area, with access to the roof. The antenna must have a clear view of the sky, horizon-horizon, in order to contact the satellite. The RAU unit requires that it be connected to emergency power for backup – generator or battery. The facility is responsible for providing a roof or sidewall penetration, as well as any internal telephone wiring, and an analog phone to connect to the phone jack. The phone is available with or without a data connection port and connection cable. (GSP-2900)
Cost for fixed satellite phone with data capability is approximately \$4000.00 including installation and 2 years of airtime. (40 min/month)
Cost for fixed satellite phone without data capability (voice only) is approximately \$2300 including installation, and 2 years airtime. (40 min/month)
- Portable satellite phone – must be used outside. The phone's antenna must have a clear view of the sky, horizon-horizon. Advantages are that it is portable; disadvantages are that it won't work inside or in a vehicle without an external antenna. It is battery powered, so batteries must be kept charged. (GSP-1600)
Cost for portable satellite phone is about \$1800, including 2 years airtime (40 min/month)
- Portable satellite phone in a pelican case with docking station, portable, mag-mount antenna, and a data connection cable. It can be powered by a car battery or connected to AC power. (EDK-1410)
Cost for portable phone with pelican case docking kit is about \$3000 including 2 years airtime (40 min/month)

Two-way Radio Communications:

- Commercial two-way radios – Many public safety agencies have a regional or local communications system, enabling them to communicate with other agencies within their jurisdiction. If this is the case, then coordinating access to that system would be an effective method of emergency communications. This would have to be determined on a case by case basis.
- Amateur (Ham) radio communications – the radio equipment is relatively inexpensive compared to commercial 2-way radio equipment; it is extremely versatile, and is considered the final backup when all else fails. HOWEVER: in rural areas, the infrastructure is often lacking (mountain-top or tower-mounted repeaters); the radios require that a licensed amateur radio operator must perform the operation, also in short supply in rural areas; they cannot be used for day-to-day business operation. These are significant detriments to choosing this as an option for communications in rural, mountainous areas. Costs for the radio(s), antennas, installation can be anywhere from \$500.00 to \$5000.00. Adding repeater infrastructure would require engineering consultations and significant additional cost. In urban areas, they may be a viable solution. This would have to be determined on a case by case basis.

For questions or additional information concerning redundant communications, contact:
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