# Station Action for Emergency Readiness Project (SAFER) Emergency Preparedness Manual

## **REVISION v1.3 1/6/11**

"The emergency wasn't at the meeting and didn't get the follow up memo"

# **TABLE OF CONTENTS**

- Chapter 1 Emergency Preparedness, a Community Responsibility
  - 1.1 Station Responsibilities
  - 1.2 Emergency Plan First Elements
    - 1.2.1 Staff Response Plan
    - 1.2.2 Damage Assessment
    - 1.2.3 Chain of Command
    - 1.2.4 Staff Contact List
    - 1.2.5 Emergency Response Levels
    - 1.2.6 Relationships with Local Agencies
    - 1.2.7 Emergency Credentials
  - 1.3 Emergency Alert System (EAS)
    - 1.3.1 Purpose of EAS
    - 1.3.2 EAS Codes
    - 1.3.3 Multilingual alerts
    - 1.3.4 CAP
    - 1.3.5 Automatic Alerts
  - 1.4 Chapter Review and Checklist
    - 1.4.1 Main Points Covered
    - 1.4.2 Action Checklist
- Chapter 2 Providing Useful Information
  - 2.1 Sources of Information
    - 2.1.1 Contact With Staff
    - 2.1.2 Monitoring Emergency Radio Systems
    - 2.1.3 Email and Text Alerts
    - 2.1.4 Information Policy
    - 2.1.5 Communicate Clearly, Plainly and Repeatedly
  - 2.2 Two Way Radio Networks
    - 2.2.1 Amateur Radio (RACES)
    - 2.2.2 Station Owned System
    - 2.2.3 Information Policy
  - 2.3 Listener Call-In
    - 2.3.1 Emergency Personnel Only
    - 2.3.2 Hotline

## 2.4 Collaboration With Other Media

- 2.4.1 Meetings
- 2.4.2 Written Agreements
- 2.4.3 Station Contact Lists

## 2.5 Chapter Review and Checklist

- 2.5.1 Main Points Covered
- 2.5.2 Action Checklist

# Chapter 3 - Staying On (or Returning To) the Air

## 3.1 Emergency Generator

- 3.1.1 Capacity and Quality of Power
- 3.1.2 Installation, Permanent or Transportable
- 3.1.3 Fuel Type
- 3.1.4 Auto Start and Transfer Switching
- 3.1.5 Generator Testing and Maintenance
- 3.1.6 Commercial Power Indicator
- 3.1.7 Uninterruptable Power Supplies

#### 3.2 Phone Lines

- 3.2.1 PBX Reliability
- 3.2.2 Backup POTS lines
- 3.2.3 Satellite Phones
- 3.2.4 Satellite Data Terminals
- 3.2.5 Beyond the Reach of 911

# 3.3 On Line Resources

- 3.3.1 Website
- 3.3.2 Streaming
- 3.3.3 Twitter, Facebook
- 3.3.4 Off Premises Servers

## 3.4 Alternate Station Housing

- 3.4.1 Construction Trailer, Recreational Vehicle
- 3.4.2 Off-Site Equipment Cache
- 3.4.3 Alternate Studio Transmitter Link (STL)
- 3.4.4 Operations From the Transmitter Site
- 3.4.5 Emergency Supplies, Off-Site and at the Station

# 3.5 Station Vehicles

- 3.5.1 Fuel
- 3.5.2 Identification Placards
- 3.5.3 Insurance

# 3.6 Chapter Review and Checklist.

- 3.6.1 Main Points Covered
- 3.6.2 Action Checklist

# Chapter 4 - Business Continuity

- 4.1 High Limit Credit Card
- 4.2 Off-Premises Record Backup
  - 4.2.1 Digital Records
  - 4.2.2 Music Library

- 4.2.3 Paper Records
- 4.2.4 Regular Backups
- 4.3 Account Numbers and Passwords
  4.3.1 Bank Accounts
  4.3.2 Credit, Debit Card PINs

  - 4.3.3 Online Passwords
  - 4.3.4 Keys and Combinations
  - 4.3.5 Trusted Information Keepers
    4.3.6 High Security Required
- 4.4 Chapter Review and Checklist
  - 4.4.1 Main Points Covered
  - 4.4.1 Main Points Covered
    4.4.2 Action Checklist

# **Acknowledgements**

Station Action For Emergency Readiness (SAFER) is a joint project of the National Federation of Community Broadcasters (NFCB) and National Public Radio (NPR), with funding from the Corporation for Public Broadcasting (CPB)

Manual writer: Richard Dillman
Emergency Readiness Consultant: David Stephenson
Project Co-Directors: Ginny Z. Berson (NFCB) and Gemma Hooley (NPR)

Station-based Project advisers:

Sheila Cowley (WMNF, Tampa FL)
Kate Lochte (WKMS, Murray KY)
Paul Maassen (WWNO, New Orleans LA)
Sue Matters (KWSO, Warm Springs OR)
Carey Needham (WAMU, Washington DC)
Tim Olson (KQED, San Francisco CA)
Silvia Rivera (WBEW/Vocalo.org, Chicago IL)
John Weatherford (Public Broadcasting Atlanta, Atlanta GA)
Jay Woods (Mississippi Public Broadcasting, Jackson MS)

Special thanks:
Kai Aiyetoro
Zach Brand
Carolyn Caton
Dana Davis Rehm
Keith Hopper
Joyce Macdonald
Carol Pierson
Mike Starling
Loris Taylor
Dustin Watson
Sydney White
Mike Riksen

# **CHAPTER 1 - Emergency Preparedness, a Community Responsibility**

"Nature will always throw something at you that you could not reasonably have foreseen."

#### 1.1 STATION RESPONSIBILITIES - First Elements

Broadcast stations, in return for the privilege of being broadcasters, owe a special responsibility to the communities they serve in times of emergency. This is particularly true of public and community stations which often have close ties to the people, emergency responders and relief agencies in their listening area. In return for their financial support of the station, listeners expect that the station will be there for them in an emergency, providing the information they need to protect themselves and their property from danger.

It is not enough for a station just to agree with the principles of community responsibility. Adequate emergency preparedness requires the adoption of a well thought-out station emergency plan and a commitment to keep that plan current and functional.

Creating and adopting an emergency plan need not be burdensome. Much of what is required may already be in place. The most important factor is the specific acknowledgement by station management of the responsibilities the station has to its listening community. The elements of the emergency plan will flow from this acknowledgement according to the specific needs of the station and its listeners.

A memo will not usually be adequate to start a station on the path toward a workable emergency plan. A face-to-face, all-staff meeting is typically the required starting point.

► Action Point – Schedule a staff meeting to discuss station emergency response

# 1.2 EMERGENCY PLAN

The foundation of station emergency preparedness is the emergency plan. The first hours of an emergency will be confused, hectic and sometimes frightening. This is the period when the emergency plan is most useful. The structure of an emergency plan will provide the guidance and direction that can help create an organized response to the situation. In this manual we'll go through the step-by-step process of creating such a plan for your station.

The finished plan must outline how your station will respond to emergencies. Each plan must of necessity be unique to the station it serves. Yet certain basic elements will be a part of every emergency plan. These elements should include at a minimum:

- Damage Assessment assure that your station is safe for entry and use. This will guide how the rest of the emergency plan will be implemented.
- Staff response plan who reports where and what their duties are in an emergency
- Contact list Phone, email and online chat (eg. Skype) information for each station staff member and for important external personnel
- Levels of Response Levels of station response based on the severity of the emergency

## 1.2.1 - Damage Assessment

The safety of staff is of paramount consideration. If there is any question that the normal station offices and production areas are unsafe to occupy or may become so in the near future, plans for alternate station housing must be put into effect.

The forces that may compromise station integrity will vary with the event. Wind, water and earth movement are among the greatest dangers. Sometimes several forces combine to produce damage in multiple areas. WXEL in West Palm Beach, FL incurred extensive wind, water and structural damage in 2005 as a direct result of Hurricane Wilma

Station personnel may be the most familiar with their station's areas of vulnerability. In the event that time and logistics may not permit the services of a professional structural engineer to assess station damage, station personnel may be called upon to make decisions based on the best information they can obtain on the spot.

For example, see how WHYY in Philadelphia, PA has incorporated information about the structure and responsibilities of its damage assessment team into its business continuity plan:

## B. Damage Assessment Team

The Chief Technology Officer will chair the Damage Assessment Team. The Team will be comprised of the following jobs:

Chief Engineer
Manager, Plant Engineering
Technician or Engineer who are available
Representative from Marketing/Development
Representative from Content Production

#### Responsibilities

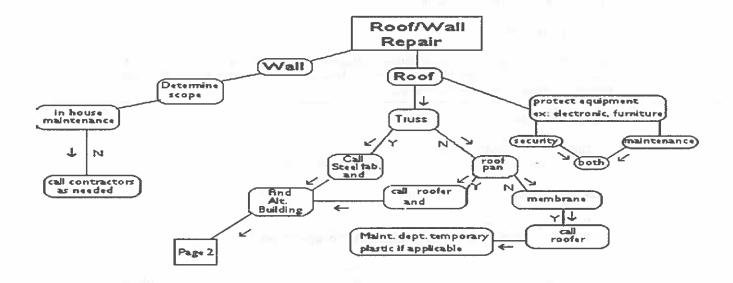
- As soon as they are notified of the emergency travel to the site to determine what has happened.
- Before entering the site confer with community emergency response
  personnel to determine the extent to the problem to make sure that no
  WHYY staff members are put into a potentially dangerous situation.
- Notify the Management Team of the status of the emergency and convey details of what has been learned to the Recovery Team as soon as possible. The first update should be no more than one hour from the time the emergency situation is reported.

# **Authority**

- The team leadership may restrict access to the site until it is satisfied that the site is stable and secure.
- Working with community resources the Team has the authority to utilize security and plant engineering staff to control, stabilize and secure the site

Hint – Avoid the use of personal names when assigning tasks as these can change. Note that WHYY avoids this pitfall by using position titles instead.

WHYY has also created a chart to help guide the decision-making process during station damage assessment that may be adapted to other stations and situations:



## 1.2.2 - Staff Response Plan

Staff members of a broadcast station carry a heavy responsibility to their community in times of emergency. In this they are like first responders in the law enforcement and fire services. The staff at a broadcast station are the information bridge between the first responders and the public, providing information vital to the safety of life and property. Just as members of the community expect the police and fire services to respond when called, they expect their broadcasters to be there when they need them most.

Broadcasters also have responsibilities to their homes and families. But they have a public duty too, and they should be prepared to carry out that duty when it matters most, just as first responders do.

All staff members should know what their duty is in an emergency and where they are to report in order to fulfill that duty. It will be understood that in some cases the emergency itself will prevent some staff from reaching their duty stations. Nevertheless it is important for staff to understand fully what their duties are in an emergency so they may make the best possible attempt to carry them out. Establish and distribute the emergency response plan on paper and online. Include it as part of the employment briefing for new staff and emphasize its importance.

For a small station the basic Emergency Response Plan may be very simple, indicating where each staff member is to go and what they are to do when they get there. Here's an example of such a basic plan in use at KWMR in West Marin, CA:



# STAFF RESPONSE PLAN

It is the first responsibility of staff in an emergency to report to their duty stations if physically possible, or to advise the Station Manager or other staff at the station of their location and status by any available means.

#### **Chain of Command**

The Station Manager has overall responsibility for the management of resources in an emergency. If the Station Manager is unavailable or can not reach the station, senior staff are to assume management control.

## Station Manager

- Duty station KWMR office
- · Function Overall coordination of emergency response

# Station Engineer

- Duty station 1 Generator
- Function Start generator, switch station to emergency power
- Duty station 2 Emergency operations desk
- Function Activate emergency communications equipment, assist with coordination of on air reports

#### **News Director**

- Duty station Production studio. Mobile if required to areas of importance in the listening area
- Function Gather and report information to the emergency operations desk

## Program Director

- Duty station KWMR office
- Function Assist Station Manager as required

# **IT Director**

- Duty station IT Desk
- Function Maintain streaming, update Web site, continuation of email and Internet connection.

# On Air Staff

- Duty station KWMR on-air studio
- Function Provide emergency information updates as directed

Larger stations may wish to designate certain groups of employees as first or second level Emergency Employees, each with a designated level of responsibility to the station in an emergency.

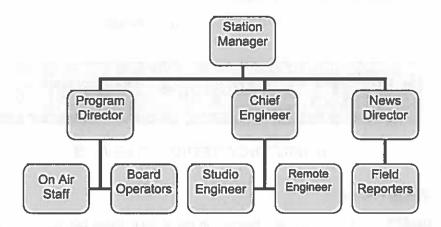
► Action Point - Create your staff response plan

#### 1.2.3 - Chain of Command

It's important to know who is in charge during an emergency. While the normal station management structure may be disrupted, it is still useful to create and distribute a chain of command document so that the general outline is known.

The chain of command also allows staff to see immediately where vacancies may occur and where others may need to step in to assume added responsibility.

Here's a sample chain of command for a small station:



## 1.2.4 - Staff Contact List

A fundamental part of any emergency plan is a staff contact list including phone numbers, email addresses and any other appropriate means of contact. Assuring staff safety and gathering staff together will be part of the first phase of station response to an emergency. The staff contact list is a vital part of that first phase.

Creating a staff contact list is easy. Keeping it up to date is the more difficult but critical task. The staff contact list must be reviewed periodically for accuracy and updated. This task should be carried out twice a year if the list is to have real value in an emergency.

A printed staff contact list is likely to be filed in a folder and placed in a drawer, putting it beyond reach in many emergency situations. A contact list in electronic form and kept on computers, PDAs or smartphones may be better. But the best form for the contact list may well be a laminated card carried in your wallet. This low tech version of the list is the one most likely to survive and be available when needed most.

KWMR's pocket list is simple and ideal for lamination:

Department	Name	Home	Cell	Skype
Management	Amanda Eichstaedt	415-555-1234	415-555-1212	kwmrmgr
Engineering	Richard Dillman	415-663-8982	415-555-1234	kwmreng
News	Jimmy Olson	415-555-1278	415-555-3456	kwmrnews

Programming	Lyons Filmer	415-555-6765	415-555-0987	Kwmrpgm

# ► Action Point - Create your staff contact list

## 1.2.5 - Levels of Response

The general Emergency Response Plan may be augmented with a single page document posted in on-air studios and control rooms showing the progressive levels of station response corresponding to each level of emergency. These can range from watchful waiting to complete dedication of station facilities to the emergency.

Here's the Emergency Response Level document in use at KWMR:



## **EMERGENCY RESPONSE LEVELS**

## Level 0 - Normal

Level 1 - Watchful Waiting - Normal on the air operations but station personnel are on alert, watching the developing situation with a view toward possible emergency activation. Individual announcements as required with reference to events of local significance.

Indications: Developing weather, possibly significant fire, tsunami advisory

Action: Review contact information for station management

**Level 2** - Emergency Activation – Emergency Operations Desk activated. Normal on the air operations with information updates 10 minutes or as the situation dictates.

**Indications:** Local or general flooding or other adverse weather, significant power outages, significant fire, tsunami warning or alert

Actions: Contact station management if not already on scene. Activate Emergency Operations Desk microphone. Divert phone lines 1 and 2 to Emergency Operations Desk, Monitor Emergency Operations Desk two-way radio and scanner.

- Disaster Activation - KWMR operations given over entirely to emergency programming. All personnel to report to the station if possible.

**Indications:** Widespread weather related damage or flooding, widespread power outages, spreading significant fire, tsunami, earthquake, request for use of facilities by emergency officials.

Actions: Assess the physical integrity of the station building and determine its safety for continued operations. Broadcast information and announcements at any time as directed by emergency personnel or station management. Bring supplies to the station from the

emergency cache as required.

Station Evacuation – Station premises abandoned by all personnel.

**Indications:** Rapidly deteriorating situation in which the safety of personnel at the station are or will soon be threatened: rising water, spreading fire, impending building collapse.

Actions: Leave the station taking only effects and equipment that can be quickly gathered. Report to muster point or secondary broadcast location.

WAMU in Washington DC, a university licensee based on campus, has an emergency plan that contains specific procedures for station evacuation. A particularly notable feature of the WAMU plan is the designation of a check-in point where staff will gather after the evacuation:

## **Brandywine Building Evacuation Procedures**

American University has provided a set of evacuation procedures for the Brandywine Building. The plan is:

The building marshal will begin evacuation procedures by pulling the fire alarm. WAMU Executive Team members listed in Appendix A will ensure that all employees are evacuated from the building.

Special consideration must be given to on-air broadcasts. Depending on the time of day, WAMU is producing live broadcasts from our studios on the fourth floor of the Brandywine Building. The backup procedures for program restoration are detailed in appropriate sections of this document and are initiated by the on-air personnel on shift. While most employees will proceed to the designated area located on or off campus as applicable, the designated key employees will proceed to alternate sites to continue and/or restore the emergency broadcast operations of the station. All other staffs will proceed to the central locations as follows:

In a single building evacuation involving only Brandywine, WAMU staff is to proceed to Federal Dining Room (see attached map – Appendix D) and check in with designated personnel. All key employees will proceed to alternate site locations.

In a campus-wide evacuation, WAMU staff is to proceed to St. Anne's church (see attached map – Appendix D) and check in with designated personnel. St Anne's is located at the corner of Wisconsin Avenue and Yuma Street.

The designated liaison of the WAMU Executive Team identified in Appendix A will notify the building marshal when the WAMU staff is fully evacuated.

# ► Action Point - Create your response level plan

To reduce the shock effect of an emergency, get into the habit of thinking "What would I do if it happened right now?" Station personnel should use this technique - a mental rehearsal for the actual event - at various times during the day and ask themselves what their immediate reaction would be if the emergency happened right then. What would they need to grab? Where would they go? Whom would they contact? These rehearsals cost nothing and don't disrupt regular routing. But they increase the chances that in the actual event the proper response will be almost automatic.

- ▶ Action Point Create mental rehearsals for various locations and scenarios
- 1.2.6 Relationships with Local Agencies

Hint - Contact your local agencies before the emergency

An actual emergency is the worst possible time to establish relationships with local service agencies, when they will be at their busiest and most pressed. So it is important to establish a personal, working relationship with these agencies well before the emergency arises so that station staff will be well known to them and, even more important, trusted.

Establish or strengthen personal contact with law enforcement, fire service and other emergency personnel. Personal contacts often trump paperwork. Personal contact may be easier for small stations in small communities, but all stations can become part of emergency preparedness organizations and attend meetings of city or county boards and committees. The objective is to become known and trusted by emergency personnel so they will turn to you as a matter of course when the public must be made aware of important information.

Here are the agencies a station will need to have contact with during an emergency and the type of information typically available from each:

- Law Enforcement Restricted areas, road closures
- Fire Department Rescue operations
- · Hospitals and Clinics Which facilities are open and able to receive patients
- Red Cross Shelter locations

Hint: Public Information Officers — On your first contact with an agency you'll probably be directed to their Public Information Officer (PIO). PIOs can be good sources of information but typically present the "company line" and will be extremely busy during an emergency. Try to cultivate a relationship with someone "on the inside" at each agency who will be willing to provide information directly, even if this information is not used directly on the air.

Hint: Obtain the phone number for the agency dispatch center. If time permits they will be an excellent source of up to date information

Personal relationships with these agencies may be built up in the same way as any others. An initial contact in a social setting, at the station or at the emergency facility is an excellent beginning. Make sure the agencies know the home phone numbers of critical station staff and encourage them to call at any time. Expand this initial contact through participation in community drills and exercises. It is through these types of events that the agencies will see that station staff are professionals and can be trusted. And that the station is a valuable community asset, a tool they can use in furtherance of their duties during emergency situations.

► Action Point - Create your agency contact list

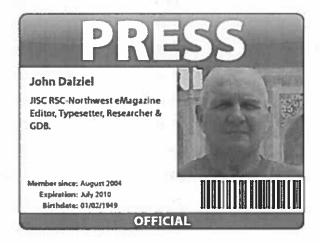
A contact list for these agencies can be added to the reverse side of the Staff Contact List, for example:

Law Enforcement	PIO	Local Official	Dispatch Center
Sheriff	Jones, Bob - 415-555-1212	Smith, Bill - 415-555-1212	415-555-9111
State Police	Jones, Bob - 415-555-1212	Smith, Bill - 415-555-1212	415-555-9111
Fire Department			
City Fire	Jones, Bob - 415-555-1212	Smith, Bill - 415-555-1212	415-555-9111
County Fire	Jones, Bob – 415-555-1212	Smith, Bill - 415-555-1212	415-555-9111
Red Cross			
City Chapter	Jones, Bob - 415-555-1212	Smith, Bill - 415-555-1212	415-555-9111
Regional	Jones, Bob - 415-555-1212	Smith, Bill – 415-555-1212	415-555-9111

# 1.2.7 - Emergency Credentials

# ▶ Action Point - Create and distribute your station credentials

While personal contacts with emergency agencies are highly valuable, events that take place over a large area may prevent contact with personnel you know. In some jurisdictions broadcasters are considered first responders. Even if this is not the case in your area, obtain an official pass — for both personal and vehicle identification — from law enforcement for priority staff. Unofficial, station-created passes should also be provided. Here's an example to modify:



Local emergency responders may know and trust station personnel. But in a large event emergency personnel may be brought in from outside the area. Typical examples include the National Guard or law enforcement and fire personnel from other areas providing mutual aid in the stricken area. Credentials identifying you as a responsible member of radio station staff can be critical in this situation. These credentials may be station-generated or provided by official sources. But in either case they should be kept with you, and kept current, at all times.

## 1.3 - EMERGENCY ALERT SYSTEM (EAS)

1.3.1 Purpose of EAS — The Emergency Alert System may be a primary source of official emergency information. Confirm that your EAS equipment is in good working order and that staff are trained in its use. Confer with your EAS committee or working group for a full understanding

of who is authorized to issue alerts and what they expect of you as a broadcaster. Confirm that the alert codes programmed into your EAS conform to the type of emergencies likely to occur in your area.

Larger stations with paid staff, or stations that receive a large number of EAS messages that do not affect their listening area, may wish to delay the broadcast of EAS messages so they can be reviewed and sent at an appropriate time. Small stations with volunteer staff may wish to program their EAS equipment for immediate transmission of EAS messages to avoid the possibility that an important message will not be broadcast due to operator error or confusion.

1.3.2 - EAS Codes. EAS equipment may be programmed to respond to specific warnings. Ensure that your equipment is programmed to respond to events that might be expected in your area. Here's a list of weather-related EAS events along with the associated EAS codes that can be programmed into your equipment:

EAS Event (NWR-SAME) Codes

Weather-Related Events	NWR-SAME Code	Status
Blizzard Warning	BZW	Operational
Coastal Flood Watch	CFA	Operational
Coastal Flood Warning	CFW	Operational
Dust Storm Warning	DSW	Operational
Flash Flood Watch	FFA	Operational
Flash Flood Warning	FFW	Operational
Flash Flood Statement	FFS	Operational
Flood Watch	FLA	Operational
Flood Warning	FLW	Operational
Flood Statement	FLS	Operational
High Wind Watch	HWA	Operational
High Wind Warning	HWW	Operational
Hurricane Watch	HUA	Operational
Hurricane Warning	HUW	Operational
Hurricane Statement	HLS	Operational
Severe Thunderstorm Watch	SVA	Operational
Severe Thunderstorm Warning	SVR	Operational
Severe Weather Statement	SVS	Operational

Several other non-weather related codes are available in the EAS system. The codes you select will depend on the type of events typically experienced at your location and station policy regarding the carriage of non-weather related events such as child abduction ("Amber") alerts.

► Action Point — Check your EAS system for proper operation and programming

# 1.3.3 - Multilingual alerts

If your station normally broadcasts in more than one language, consider putting in place a plan to assure that alerts in those languages can be broadcast in time of emergency. If your station is the sole service station with a significant listening population that does not speak English -- regardless of whether you broadcast in English only -- consider making advance arrangements to provide alerts in those non-English languages.

## 1.3.4 - CAP

At the time of writing the requirement for stations to comply with the Common Alerting Protocol (CAP) is coming into effect. CAP allows the transmission of detailed messages and files in digital format using several delivery methods (satellite, the Internet, etc.) It also permits the transmission of alert messages to devices such as smart phones. While some aspects of CAP are as yet undecided, especially on the state level, the basic facts regarding what CAP means to stations are known.

- EAS will remain CAP is an addition to, not a replacement for, the current EAS system.
- CAP will change As the CAP standard evolves changes will be made. But new, CAP compliant EAS/CAP equipment usually has the capacity to follow these changes via firmware upgrades.
- Stations must comply All stations must have CAP compliant equipment by the federally mandated deadline

Some manufacturers offer adapters to make older EAS equipment with the CAP standard. Such adapters may save money in the short run but if you choose this option check them carefully to assure that they will work correctly with your existing equipment.

# 1.3.5 - Automatic Alerts

The FCC rules permit certain EAS alerts to be delayed before broadcast to allow for an appropriate break in programming. Larger stations with adequate trained staff may wish to implement such delays as a matter of policy. However smaller stations may wish to program their EAS equipment to broadcast alerts immediately and automatically. While it may surprise on-air personnel when their programming is interrupted this may be preferable to trying to train volunteer personnel in the procedure required to get an important alert on the air.

# 1.4 - CHAPTER REVIEW AND CHECKLIST

## 1.4.1 - Main points covered in Chapter 1:

- Emergency Preparedness A community responsibility for all stations
- Emergency Plan A framework for station action in an emergency

- Contact with Local Agencies Your source for vital information
- EAS and CAP A source for official warnings and alerts

# 1.4.2 - Action Checklist

- □ Emergency plan staff meeting held
- □ Staff response plan created
- □ Emergency response levels plan created
- Relationships with local agencies established
- ☐ Emergency credentials created and distributed
- EAS checked for proper operation and programming
- Create mental rehearsals for various locations and scenarios

## **CHAPTER 2 – Providing Useful Information**

The reason for a station to remain on (or return to) the air in an emergency is to provide its listeners with the information they need to find resources and escape injury. This is a heavy responsibility that must be approached with care and planning. In addition to the information itself it is sometimes a calm voice on the air that means the most.

# 2.1 - SOURCES OF INFORMATION

#### 2.1.1 - Contact With Staff

Station staff in the field represent a first-line source of reliable information from trusted personnel. Primary contact with staff in the field will be by cell phone as long as the cell system is functional. Each staff member should be provided with a laminated card as described in Chapter 1 containing the contact numbers for primary emergency and disaster relief personnel. These numbers should also be programmed into the contact lists on each staff member's cell phone.

Effective use may also be made of SMS text messages as a replacement for voice calls for coordination and the transmission of information.

## 2.1.2 - Monitoring Emergency Radio Systems

It is possible and legal to monitor the radio transmissions of emergency agencies. These transmissions can provide important information directly from the scene relating to a developing emergency situation. However, understanding these transmissions and extracting information from them requires experience. The extracted information must be used with care to avoid spreading false information or damaging relationships with the emergency agencies.

Install a scanning receiver in the news room, emergency operations desk or other location that will become a command post in the event of an emergency. A roof antenna will be required for good reception. Program this receiver with the channels used by the local emergency agencies. Listen to the receiver during normal times to become familiar with unit numbers, procedures, etc.

The radio channels used by your local agencies may be obtained from several sources. Friendly technicians at the county radio shop and local scanner enthusiasts can be helpful. Detailed information may also be found online. The excellent website www.radioreference.com has information for just about every agency for most places in the U.S.

Modern emergency radio systems are often highly sophisticated, requiring a scanning receiver of equal sophistication. If you're unsure of the type of systems your area uses, the radio shop of the agency itself may be able to help.

Hint: Station engineering staff or a local scanner enthusiast can often help with the selection, installation and programming of a scanning receiver.



Bearcat BCD996XT Digital Scanning Receiver

# ► Action Point - Select and install your scanning receiver

#### 2.1.3 - Email and Text Alerts

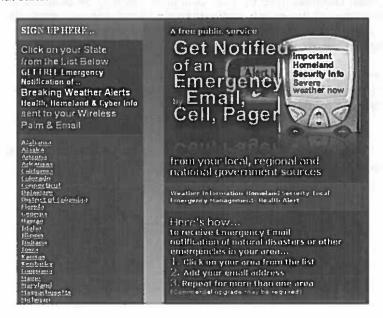
Important emergency information from national, state and local agencies is increasingly available via email, text messaging and online services such as Twitter. Station management and staff should sign up to receive relevant notifications directly. A simple online subscription form typically allows the subscriber to select the type and locations of emergencies they wish to be informed about and the method by which they wish to receive the information. Once that's done no further action is required. The selected information will be sent in near real time.

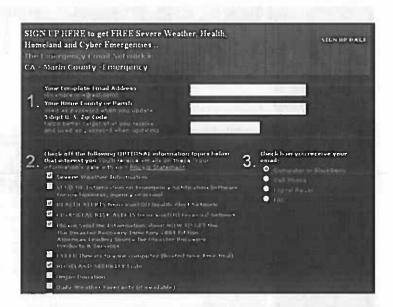
Additional information is also available on the websites of local and national organizations. Check the sites frequently for updates and more detailed information.

These sources of electronically-delivered information provide a conduit between the emergency response organizations and the station. The information flowing through these conduits is official and may be used by station management and staff to inform and expand the reports they make on the air to their listeners.

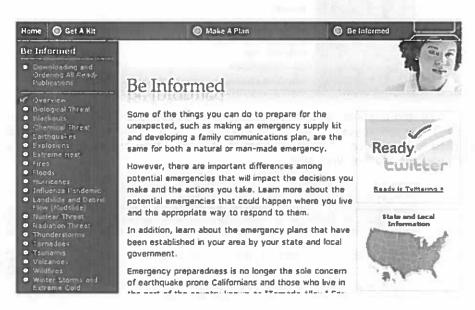
Not only is this information easy to find and use, it is free.

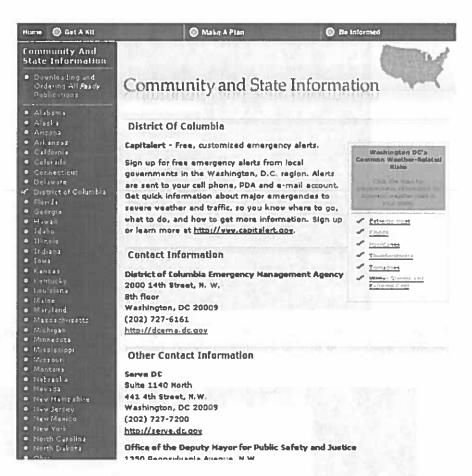
Examples of electronic information sources that have proven valuable include EmergencyEmail which permits the selection of information for a particular state and specific information within that state:



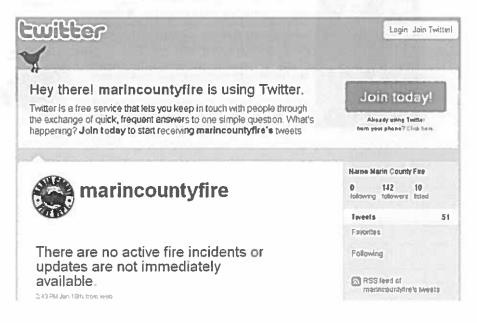


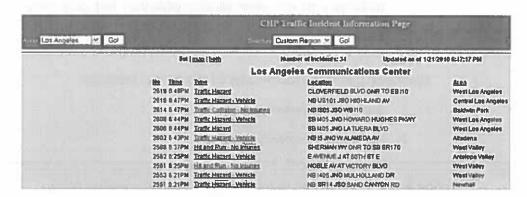
Ready.gov is a national, information-rich site that provides guidance on everything from local emergency agencies to how to assemble different types of emergency kits for family and business.





Local and regional fire and law enforcement agencies often provide the same or similar services. These messages tend to be more locally focused. Use the personal contacts you have established with your local first responders to find out if they provide these services or do an Internet search to find their Web sites.





The timely messages provided by these sites can be extremely valuable, especially when staff are working remotely. The information offered can also help guide a station and station listeners in the steps they need to take to prepare for emergencies.

► Action Point – Survey national, regional and local sources of emergency alert information, evaluate which will serve you best, and sign up.

# 2.1.4 - Information Policy

Establish a policy for how information derived from the scanning receiver and online sources will be used on the air. Certain information, such as the death or injury of a particular person, should not be broadcast. Other information, such as flooding, fire or blocked roads may be used if the units on scene have confirmed that these events are in fact occurring. If in doubt contact the dispatch center for the agency involved for confirmation.

A general information policy, posted in the on-air studios, covering how all information coming into the station from various sources should be handled can provide an immediate reference in emergency situations. Here's an example from KWMR in West Marin, CA:



## **EMERGENCY INFORMATION POLICY**

It is the policy of KWMR to provide important emergency information as quickly as possible consistent with the need for accuracy and sensitivity regarding the impact the information may have.

#### Never Broadcast

- 1. Information about death or injury unless specifically directed to do so by station management or authorized emergency personnel.
- 2. Information from callers unless the information is very general in nature or has been verified.

Personal opinions about what direct actions listeners should take in response to an emergency situation other than the most general statements such as "stay clear of the area".

## **Permitted to Broadcast**

Information from these sources may be immediately broadcast

- 1. Station management staff
- 2. Authorized emergency personnel
- ➤ Action Point Create and distribute your station information policy
- 2.1.5 Communicate Clearly, Plainly and Repeatedly

Your sources of information are identified, your information policy is in place... now it's time to communicate with your listeners. In an emergency situation, your listeners will want the facts, they will want reassurance that those facts are current, and they will want to feel connected with reliable sources. The Public Information Officer at the Kentucky Emergency Management Agency advises these best practices for how, and what, to communicate during an emergency:

- 1. What's happened
- 2. What's being done
- 3. Who's in charge
- 4. How does it affect me
- 5. When are things going to get back to normal (delivered with empathy statement)

During the catastrophic ice storms of January 2009, WKMS in Murray, KY put these bullets on their studio walls to remind on-air staff to keep a basic "drumbeat" of reliable information going throughout their programming. Based on the levels of emergency coverage that you have determined for your station (see chapter 1.2.5), deliver and repeat these updates as frequently as you think necessary.

# 2.2 - TWO-WAY RADIO NETWORKS

Civilian two way radio networks can provide a valuable means to obtain information from observers on the scene. These networks may be composed of local citizens with amateur radio licenses, or the station itself may establish its own network (in which case operator licenses are not required). Each option has its own advantage. Ideally a station will have access to both.

# 2.2.1 - Amateur Radio (RACES)



Radio amateurs in many areas have established emergency networks, usually operating under a national organization called RACES (Radio Amateur Civil Emergency Service), which in turn is often coordinated by the local law enforcement agency. Only personnel who have passed a test and received an amateur radio license may participate in RACES. Thus RACES installation at your station may not be activated until you have a licensed amateur radio operator on board. But the basic Infrastructure, training, and individual equipment are provided by RACES members at no cost to your station.

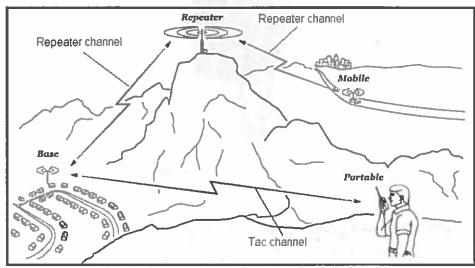
If station personnel wish to obtain their own amateur radio licenses, the study materials and the examinations are provided at a nominal cost by local Volunteer Examiners, usually part of a local amateur radio club. Some clubs offer "ham cram" classes over a weekend with the examination taken at the end of the class. Such classes provide the minimum grade of amateur license needed to participate in RACES and may be sufficient for those without a wider interest in amateur radio.

Information about RACES organization in your area may be found through a local amateur radio club or via the American Radio Relay League (www.arrl.org), the national organization for amateur radio.

# ► Action Point - Contact your local RACES organization

## 2.2.2 - Station-Owned System

Large stations may already have a two-way radio system installed. Smaller stations should consider establishing such a system which can often be funded through local and Department of Homeland Security (DHS) grants. Such a system is useful in normal times for the coordination of remotes, news gathering and other purposes. In emergency or disaster situations, it can provide a vital link for station personnel when the cell phone infrastructure is overloaded or inoperative. With a station-owned system there is no need to wait for someone on staff to become a licensed operator. Staff may "grab and go", meaning they can pick up their radio and immediately begin communicating.



Typical Repeater Based Two-Way Radio System

As with information obtained via the scanning receiver, information provided via a twoway radio system must be properly vetted before being broadcast. If a station-owned system is used, this process will be easier since known and presumably trusted station staff will be providing the information.

## 2.3 - LISTENER CALL-IN

Listeners can be a valuable source of front-line information. But extra care must be taken to prevent inaccurate information from being broadcast. Large stations will have a delay on their live phone calls. Smaller stations may have to use their best judgment before putting a caller on the air.

# 2.3.1 - Emergency Personnel Only

A station may wish to implement a policy (especially in the early stages of an emergency or disaster) that only calls from emergency services personnel will be broadcast. Calls from listeners can be taken off the air and compiled and edited for broadcast.

# 2.3.2 - Hotline

A special hotline phone, red with no dial and a strobe light ringer, may be installed in the on-air control room. The distribution of the number associated with this phone should be strictly limited to emergency personnel and station staff. Its use should be restricted to callers with important emergency information. Programmers should be instructed to answer this phone "no matter what".



KWMR's No-Dial "Must Answer" Hotline Phone

# 2.4 - Collaboration With Other Media

Hint - Contact your local stations and newspapers before the emergency

Collaboration with other radio and television stations, and with local newspapers, may be a feasible way to make the best use of combined resources to gather and deliver accurate information in an emergency. Make contact with other radio and TV stations (commercial and non-commercial), and newspapers before the emergency happens. Then, when the need arises, a structure of cooperation will already be in place.

#### 2.4.1 - Meetings

Meet with the management and engineering staff of other stations in your area to determine what resources can be shared in an emergency. Items of most usefulness include:

- Direct links between newsrooms (consider shared FTP sites for filed audio, and shared websites for emergency information)
- Pool reporting by regional personnel
- Remote trucks
- Remote broadcasting equipment
- ► Action Point Schedule and conduct a meeting with other media outlets in your area.

# 2.4.2 - Written Agreements

Some arrangements with other stations will require written agreements. Rebroadcasting another station's programming may be vital in an emergency. However FCC rules require that a written agreement to do this must be in place. Such agreements may be simple, but they should be established in advance so they can be implemented immediately when needed.

► Action Point — Obtain written agreements with other media outlets in your area and file them with other important station documents.

# 2.4.3 - Station Contact Lists

Much in the same way that you maintain and update a contact list of station personnel consider creating a list of names and contact information for your opposite numbers at the media outlets you may be working with in an emergency. Schedule quarterly reviews for currency.

► Action Point – Establish a contact list for personnel at other stations

# 2.5 - CHAPTER REVIEW AND CHECKLIST

- 2.5.1 Main points covered in Chapter 2:
- Providing useful information The primary reason for being on the air
- · Sources of information staff, radio systems, listener call-in
- Information policy Make sure your information helps rather than hinders

 Collaboration with other media – Establish relationships local broadcasters and newspapers <u>before</u> the emergency

# 2.5.2 - Action Checklist

- Relationship with local broadcasters and newspapers established
- Information policy created and distributed
- Contacts with amateur radio (RACES) networks made
- Scanning receiver installed
- Survey of national, regional and local sources of emergency alert information sources completed
- Meeting with other media outlets scheduled

## CHAPTER 3 - Staying On (or Returning To) the Air

## 3.1 EMERGENCY GENERATOR

A source of emergency power at both your studio site and your transmitter site is the foundation on which all operations rest during emergencies. The type and size of the generator and its method of installation will vary from station to station. But reliable generators, and a reliable source of fuel to power them, are a must.

Hint: Contact your local power company regarding the possible donation of a generator. Large public utilities often have outreach programs designed to support worthy community activities. The provision of backup power to a community station dedicated to providing emergency information can be an attractive project for these companies.

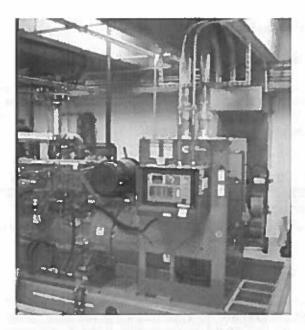
# 3.1.1 - Capacity and Quality of Power

The generator you select must have the capacity to support the station load. But this is not enough. Electrical loads have a way of increasing over time. Select your generator with extra capacity in mind so you can meet future demands. It is not unreasonable to specify a generator able to support twice the initial expected load. This will also allow the generator to operate at less than maximum capacity, extending its useful life.

Also consider the quality of the power the generator supplies. The equipment typically found in broadcast stations may demand better quality power than retail appliances found in a home. Items such as the uninterruptable power supplies often used to protect computers may be particularly demanding of clean power. So, plan to spend some time researching the frequency and voltage stability, and the amount of electrical noise associated with the generator you are considering. It will be time well spent.

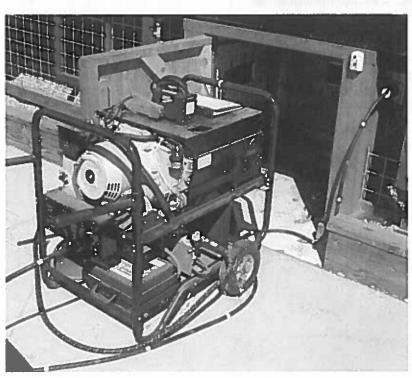
## 3.1.2 - Installation, Permanent or Transportable

Larger stations may choose a permanently installed generator. Such an installation is no small undertaking, requiring housing, venting, auxiliary equipment and fuel precautions that all must meet stringent codes. However the amount of power large stations require may only be available in large, permanently installed power plants.



Typical permanent generator installation

Smaller stations with lower power demands may choose a transportable generator kept in a convenient and secure location. The electrical and fuel connections for such a generator may be pre-installed, ready for hook up when emergency power is required. When needed, the generator may be rolled into position, connected and started. Staff and volunteers should be trained in generator operation. This approach has the decided advantage of not requiring the level of installation associated with a permanent generator and avoiding the majority of code requirements while providing a reliable and relatively inexpensive source of emergency power.



The KWMR studio generator above is a 7kW propane fueled Onan unit. It is stored in a locked cabinet beneath the station porch. Note the electrical connection to the right of the cabinet. The propane connection, which has a padlocked on/off valve, is to the left of the cabinet. The generator has an electrical start. But there are three backups to give the best chance that the generator will start when needed:

- 1. On board battery maintainer to assure that the start battery is kept fully charged.
- 2. Battery booster (seen atop the generator) for use if the start battery becomes discharged.
- 3. Booster cables (in black case on the bottom shelf) for use if both the start battery and the battery booster become discharged by connection to a vehicle battery.

The keys to the generator are kept in the key safe (the small white box to the upper right of the door) to avoid the need to search for the keys in a darkened station.

► Action Point – If a transportable generator is selected, identify staff willing to be trained in its operation. Conduct generator trainings at least twice a year.

## 3.1.3 - Fuel Type

Diesel fuel is usually required for larger, permanently installed generators. Requirements for fuel containment to deal with leaks and spills, and proper fuel treatment for long term storage, must be provided.

Propane is usually the best choice for small stations, especially if the station location is already provided with propane service. Use of propane precludes the need for fuel containment or fuel treatment.

Gasoline is not recommended due to the problems with storing gasoline safely, the deterioration of gasoline over time and the probable unavailability of gasoline during an emergency, especially when electrical power has been interrupted.

- Hint: Contact your local diesel or propane supplier to make sure they know that your need for fuel in an emergency will be critical.
- Hint: Make sure your fuel supplier knows where the access point is for your fuel tank. During an emergency in Buffalo, WBFO's emergency generator worked perfectly but ran out of fuel when campus personnel could not find the access point to refill the tank.
- Hint: In earthquake prone areas propane tanks may have automatic shut off valves that activate when a quake is detected. If you use propane for your generator check to see if one of these valves is present and find out if you will be able to safely reset it after the earthquake to get fuel to your generator.

# 3.1.4 - Auto Start and Transfer Switching

Generators may be designed to start automatically when power fails. Likewise, an automatic transfer switch may be installed to switch the station from commercial power to generator power without operator intervention.

Automatic generator start and automatic power transfer are critical features that are virtually required for transmitter sites that have no personnel on duty. (The delay involved in

getting a qualified person to the transmitter site, especially in emergency conditions, is simply unacceptable to most stations committed to emergency service.)

However, smaller stations may choose manual generator start and manual power transfer for their studio location. Indeed, manual start and transfer are the only available option for the type of transportable generator installation described above.

But even stations with permanent generator installations may not want their generator to start automatically at 2am when the station may be off the air or unattended. For example, if the station does not operate 24 hours a day, a power failure at 2am will start the generator but it will be running needlessly with nothing to power until someone actually arrives at the station to begin operations. Or, as another example: if the station is unattended and operating via an automation system, a 2am power failure and automatic generator start will keep the station on the air. But it may seem that the station is unmindful of the emergency which can cause great frustration to listeners.

▶ Action Point – Install your studio and transmitter emergency generators, switchgear and auxiliary equipment, including a power indicator light and battery maintainers.

## 3.1.5 - Generator Testing and Maintenance

Regular testing of the emergency generator systems is crucial. Without regular tests, system faults will be found at the worst possible time: when power is needed in an actual emergency.

Generator systems should be tested monthly, preferably with an actual transfer of station power to the generator. The results of each test should be kept in the generator log.

Avoid falling into the trap that the station systems are too critical to be put to a full test. Prior to the 1989 San Francisco earthquake, several critical telecommunications installations were provided with emergency power plants. But these installations were never tested on emergency power because they were considered "too critical to test". When the earthquake struck, the emergency power for all these installations failed due to faults that would have been detected in a full test. Their failure had a significant adverse impact on recovery efforts. The lesson learned is to test your emergency systems in the ways they will actually be used.

➤ Action Point - Avoid the "too critical to test" trap by designing your generator test procedures to test the full emergency power system

Generator maintenance is as critical as generator testing. Keep a log of all generator use. Regularly inspect the generator for leaks, damage or corrosion. Change the oil and filters as recommended by the manual, according to the hours shown in the generator log. Be sure to note each inspection and any maintenance done in the generator log.

The generator start battery requires particular maintenance attention. A generator that can't be started is useless in an emergency. Avoid this by providing a permanently connected battery charger/maintainer for all generator start batteries. Institute a program of regular battery maintenance.

► Action Point – Design your generator maintenance program to assure that all systems are in good condition.

# 3.1.6 - Commercial Power Indicator

When operating on generator power it may not be readily apparent when commercial power has been restored. A commercial power indicator light, placed in a visible location at the station, will show when normal power has returned and the station can switch back from generator power. Note: Use a long life indicator light designed for this purpose, since a burned out indicator will never do its job.

## 3.1.7 - Uninterruptable Power Supplies

Install UPS units for protection of vital infrastructure (eg. computers and phone system) during power surges or transfer to generator. Caution: select UPS units that will tolerate generator power and that turn themselves off when the switch to generator power is made. Establish a regular program of UPS battery replacement. For full performance, most UPS batteries should be replaced once a year. To expedite this process, select UPS units with easy battery access.

UPSs have application even in stations equipped with emergency power generators as a means to bridge the gap between the failure of commercial power and the provision of generator power. Care should be taken when selecting a UPS for this service since some UPS devices will not recognize generator power and will continue to try to supply power from their own internal batteries even after generator power becomes available.

#### 3.2 - PHONE LINES

Telephone lines are the primary means of voice communications into and out of a broadcast station in an emergency. While standard phone lines, known as POTS (Plain Old Telephone System) lines, are among the most reliable means of communications, station equipment attached to them may be vulnerable. Stations using VoIP (Voice Over Internet Protocol) phone service may have no POTS lines at all. The station phone lines and systems should be reviewed with all possibilities from power loss to physical damage in mind, with a view toward assuring that telephone service will be available in an emergency.

# 3.2.1 - Phone System Reliability

Most stations use PBX (Private Branch Exchange) systems to handle calls and voice mail. These systems must be fully protected against power surges and power failure to avoid leaving your station without phone service in an emergency. If the PBX uses VoIP (Voice over Internet Protocol) lines, the hardware associated with these lines must be protected as well.

Most well-installed phone systems are equipped with battery-powered backup power systems. However, these systems may be able to support the phone system for only a matter of hours. Assure that the phone system is supplied with power from the emergency generator so that phone service will be available even after the battery backup system is depleted.

Failure to provide long term emergency power for the station phone system may result in the frustrating situation of having perfectly good phone lines entering the station while a dead PBX prevents these lines from being used.

Hint: Consider using more than one service provider for station cell phones to provide inherent backup in the event the facilities of one provider are damaged but those of another are still in service.

# 3.2.2 - Backup POTS lines

Old fashioned telephone lines, called POTS lines (for Plain Old Telephone System), are among the most reliable means of voice communications in an emergency. No matter what kind

of PBX a station may use and whether the PBX uses POTS lines or Internet based VoIP lines for connection to the outside world, it's a good idea to have several POTS line telephones available for use at critical points in the station. To provide maximum reliability, these telephones should be connected directly to the phone line itself with no intervening electronics of any kind. Avoid the use of cordless phone systems in association with these lines since such systems rely on power to operate.

#### 3.2.3 - Satellite Phones

In extreme situations, all terrestrial and wireless phone systems may be overloaded, damaged or destroyed. In such situations, phone communications may be maintained through satellite-based systems. While these too may become overloaded in a wide area emergency, they provide a way to bypass damaged or destroyed infrastructure and make contact with the outside world.

Handheld satellite phones are available for voice communications. While these look like over-sized cell phones, there are significant differences between satellite and cell phones that must be kept in mind. First among these is the fact that satellite phones must have a clear view of the sky to operate. Therefore they will not function inside buildings or even outdoors if there are obstructions like buildings blocking significant parts of the sky. Hand held satellite phones are most useful for making outgoing calls and are less useful for receiving incoming calls, unless someone stationed at a location with good satellite reception is dedicated to this task.

Several satellite phone systems are available. One of the most widely used is the Iridium system, with several different models. .



Iridium Model 9555 Hand Held Satellite Phone

## 3.2.4 - Satellite Data Terminals

Connection to the Internet may be maintained via satellite data terminals. The most widely used version of these is called BGAN (for Broadband Global Area Network). BGAN terminals operate through the INMARSAT system of geostationary satellites and provide data download speeds up to 384 kbps.

Like all satellite based systems, BGAN terminals require a clear view of the sky to operate. But beyond that, BGAN terminals must be able to "see" the southern area of the sky (in North America) in order to link with the INMARSAT satellite.

Several models of BGAN terminals are available, each with various options including the capability to make and receive voice calls. All models allow the satellite Internet connection to be shared with multiple users via a LAN (Local Area Network). Some models allow the satellite internet connection to be shared with other users via a WiFi connection.



Hughes HSN-9201 BGAN Terminal

## 3.2.5 - Beyond the Reach of 911

The availability of immediate assistance via 911 service has become so common that it's easy to forget that there are areas of the country without such service. Native American communities are those most commonly beyond the reach of 911.

Stations in these areas have both the opportunity and the obligation to serve their community as "public safety hubs". Some stations have designed their studio facilities so that they can house public safety agencies in an emergency. Special phone lines may be dedicated to this purpose. The agencies to be represented will vary depending on the location of the station. Examples include the fire and rescue agencies serving the area, plus specialized agencies such as the Border Patrol or Bureau of Indian Affairs. The idea is to allow the station to become a call center that community members know they can rely on.

# 3.3 - ONLINE RESOURCES

The Internet and the services it supports have become important conduits for news and information for many public broadcasters. Careful thought should be given to assuring that your Internet-based services remain viable in an emergency situation.

Decide in advance what your online content priorities will be in an emergency, and allocate resources accordingly. Develop a strategy and best practices for your station's website in emergencies. These might range from simply delivering your live on-air stream, to engaging audience fully in interactive social media activities that gather and report the news. (Note: Please see the SAFER Social Media Appendix <a href="http://www.saferstations.org/soc-en/index.html">http://www.saferstations.org/soc-en/index.html</a> for additional information)

Hint: Treat the planning for your online services on a parallel track with your plans for staying on the air. If online service is a priority, don't let staffing be an afterthought. You will need to allocate human and technical resources in both cases.

#### 3.3.1 - Website

The station website can provide important information ranging from weather to flood warnings to evacuation and shelter information. Even if your broadcast signal is off the air for any reason during the emergency, your website can still serve as a resource.

Extend your existing relationships with other media in your community (and region) to the web. Are there partnerships and initiatives you can tap into that will support your online activities in a time of emergency?

One recent example is the work coordinated by Crisis Commons after the earthquake in Haiti. Groups of volunteer developers gathered in cities around the globe to collaborate on digital initiatives. Examples included a tool that matched relief organizations with willing donors, a Creole translator for mobile devices, and a tool that combined missing persons databases with mapping technology. All the activities and initiatives are described in the CrisisCommons Wiki (a collaborative website for sharing and updating information), accessible via their website: http://crisiscommons.org/

Manage expectations of what listeners can find on your site. If your site is already an interactive social media portal with features like blogs, forums and video galleries, decide whether you can sustain and enhance those that activities during an emergency, and plan accordingly. If you currently serve a more static, one-way informational site, plan for how to keep that site relevant and current during a crisis.

Make use of online widgets that aggregate readiness content and push it to your site. Many government organizations and non-profits (for example the Centers for Disease Control, FEMA, Department of Homeland Security, National Oceanic and Atmospheric Administration, American Red Cross) provide these types of tools. The SAFER website has a comprehensive list of tools and best practices for displaying content on your site. (link will be provided here)

Hint: One approach might be to create an information page that is not seen on your station's website during normal times, but is easily activated in an emergency. This page can have basic information and a template allowing the addition of information specific to the emergency.

# 3.3.2 - Streaming

Live online programming feeds (streams) have become an important source of information for many listeners. If your over-the-air signal is down in an emergency, a live online stream that listeners can hear via computer or mobile devices can become even more critical for listeners within the emergency zone, and for those who have been evacuated but need to continue to monitor developments at home.

Section 4.2.1 of this manual covers the need for providing redundancy and backup for a station's data resources. The servers that provide streaming services should be assigned a level of importance equal to the other servers containing valuable station data.

Examine your online vendor relationships, and determine in advance the answers to questions about domain redirection, power pathing, and host server capacity.

- -- Where are points of failure for the path of your stream audio source to the streaming servers (hosted by your station's content delivery network such as Akamai or StreamGuys, or university servers)?
- -- Is there a backup for the audio source if your initial connection is cut?
- -- Does your content delivery network (streaming servers) have the ability to increase your bandwidth allotment to accommodate significant increase in requests for the stream?

KPBS-FM's experiences with coverage of the California wildfires in 2007 is often used as a case-study example of how online resources were deployed to keep listeners informed.

KPBS-FM, serving the San Diego region, was knocked off the air on October 23, 2007 when the Southern California wildfires destroyed power lines that fed its transmitter on Mount St. Miguel. The station, which had provided its listeners with wall-to-wall terrestrial and Internet radio coverage throughout the emergency, scrambled to increase its streaming capacity to accommodate concerned listeners in San Diego and beyond. With assistance from the Integrated Media Association (IMA), a nonprofit organization focused on Internet policy, practices and service for public broadcasting, KPBS contacted StreamGuys, Inc. of Northern California to provide a robust streaming platform to handle the increased website traffic. StreamGuys configured a new stream for KPBS across multiple servers capable of supporting upward of 5,000 listeners, using the existing KPBS stream for source. StreamGuys e-mailed a new stream address to the station, which was quickly placed on the website and accommodating KPBS listeners within minutes.

Work with your Internet service provider to ensure a robust streaming platform during emergencies. If your broadcast signal is off the air, it's likely that you will experience an increase in overflow traffic to your site from concerned listeners looking for emergency information updates.

Establish a relationship in advance with your service provider in the event that you will need to bolster stream capacity under emergency conditions. Work out with them what level of support they can offer, who to contact directly to set this up when the need arises, and what the technical specifications are for making the updates. Then make sure that this exchange and the technical adjustments are built into your emergency plan.

## 3.3.3 - Social Media

Online tools like blogs, social networking sites and RSS feeds make it possible to reach large numbers of people with critical information in emergencies. Properly used, they can become powerful social, political and information tools. But of course these networking services are only as good as the information fed into them.

It is important to establish and follow best practices for shaping and managing your interactions and your messaging. In this section, we will focus on social media use specifically in the context of emergencies.

Decide now how interactive your station will be able to be, as this is a commitment of staff and technical resources. Will you use social media sites, blogs, photo galleries and other tools to crowd-source information and display it on your site and your air? Or will you simply use them to push reliable information from vetted sources out to your listeners?

Develop your social media networks in advance of an emergency. Each station should consider establishing accounts on simple social networking sites like Twitter and Facebook, if you

haven't already. These sites are free to use, and simple to set up and maintain. They should complement your station's other communications efforts.

Because social networks require people to sign up to follow or join them, you should establish them as part of your station communications long before an emergency strikes. You want as many followers as possible, to help you distribute your information as widely as possible when disaster strikes. And you want to build trust among your online followers that you are a regular and reliable source of fresh information. Building that trust takes time and repetition.

Consider partnering on social media messaging with the same community partners that you have built relationships with for emergency response. Many state and local government agencies now are creating their own Facebook pages, Twitter accounts and YouTube channels as another way of reaching citizens with emergency information. For university licensees, find out how to integrate your social media communications with the university's policy and practices. Campus emergencies like the shootings at Virginia Tech have revealed an overwhelming need for university emergency communications to include not only the students but the surrounding neighborhoods, parents, friends and loved ones, and the media.

The responsibility for providing information via these social networking services should be specifically assigned to a station staff member or team. Train staff and volunteers in best practices so that everyone is comfortable with the purpose, etiquette and technology.

▶ Action Point: Visit the SAFER website for more information and best practices about how to get your station set up with the basics.

#### 3.3.4 - Off Premises Servers

It has become standard procedure to protect the computers holding vital station data with uninterruptable power supplies and regular backups. But this will not suffice in emergencies that may damage computers or make them inaccessible. Backup servers located at secure, off-premises locations are required.

Numerous companies are in the business of providing reliable and highly secure off site backup for digital records at reasonable cost. Arrangements can be made directly with these companies (or via the station or licensee) IT department, if one exists).

## 3.4 - ALTERNATE STATION HOUSING

Our homes and offices seem like permanent structures. Even though we know rationally that they can be destroyed or made unusable, it is hard to imagine that actually happening. That's why it's important to make arrangements for alternate station housing before the worst happens, when the luxury of time for planning exists.

#### 3.4.1 - Construction Trailer, Recreational Vehicle

If the station premises have been made unusable you'll need secure, dry, warm (or cool) office space immediately. There are a couple of options for achieving this in minimum time.

Temporary offices like those seen at construction sites are available for rent. These can be towed into position and installed quickly. They typically come equipped with office spaces, HVAC (heating, ventilation and air-conditioning) and sanitary systems. Various sizes and configurations are available depending on need.



Typical Portable Office with Two Office Spaces

Hint: Portable offices are usually <u>not</u> ready to plug into electrical power as supplied. They require a separate electrical pole and meter that must be installed by a qualified vendor.

Smaller stations may find that a recreational vehicle (RV) can meet their needs. RVs have several advantages:

- They can be driven to the location of need and moved to another location without the need of a tow vehicle
- They have self contained generators and can also plug directly into a typical electrical outlet for power.
- They are equipped with HVAC systems, sleeping and cooking areas and water and sanitary facilities.

Hint: Establish a relationship, and possibly even an account, with a nearby portable office and/or RV rental facility so you will have a name and contact number immediately when you need it most.

► Action Point – Make contact with your portable office or RV vendor.

### 3.4.2 - Off-Site Equipment Cache

A cache of basic equipment stored in a secure, off-site location will be invaluable in emergencies in which station equipment is lost, damaged or put beyond reach. Each station and each engineer will have a different idea of what should be in such a cache. But at minimum it should contain a mixer, microphones, headphones, microphone cables, plenty of AC extension cables and a means to connect this equipment to the transmitter.

Radio equipment has become so compact that it is possible to assemble a virtual radio station in a box, sometimes called a "fly-away kit", for use when time permits only a "grab-and-go" response. Numerous vendors now supply remote broadcast equipment complete with mixer and connection equipment that will work with everything from a satellite connection to a POTS line. Even if the budget won't support current, cutting edge equipment it should be possible to

assemble a kit of basic equipment in a transport case that can be immediately grabbed when the need arises.

Hint: Equipment caches and fly-away kits are primary targets for the inhouse pilfering of equipment for use in non-emergency situations, always with the intent to replace the equipment afterwards. This inevitably results in an empty cache or flyway kit when it is most needed. Guard your kit against pilfering!

## 3.4.3 - Alternate Studio Transmitter Link (STL)

Except for stations where the studio and transmitter are co-located, the STL (stands for Studio Transmitter Link) is usually the means for connecting the studio to the transmitter. This may be a radio link or an IP (Internet Protocol) link. If backup STL equipment can be part of the off-site equipment cache, then the station can be put back on the air (assuming the transmitter is undamaged) from a from a wide number of locations.

If the station uses a radio link for the STL, any location that can "see" the transmitter site can be used, although the receiving antenna at the transmitter may have to be re-aimed at the new location. If the station uses an IP STL then the station can be put on the air from any location where a good Internet connection is available.

One inexpensive way to have an emergency STL ready to go is to purchase a pair of Barix boxes. The pair consists of a data transmitter and receiver that work over the public internet. They provide a high quality audio feed wherever a good Internet connection is available.



Barix "Instreamer" Data Transmitter

Hint: Like most IP devices, Barix boxes have a myriad of possible settings. Set your boxes up beforehand and determine what settings work best for you so you won't have to be trying to figure this out under the stress of an actual emergency.

# 3.4.4 - Operations From the Transmitter Site

Transmitter sites are typically located away from the station itself and often have their own source of emergency power. Broadcasting from the transmitter site also eliminates the need to establish an STL connection with the studio or other location. These factors make transmitter sites viable locations for continued station operations when the main studio is compromised.

However, most transmitter locations were not designed with local broadcasting from the site in mind. There is often no easily available way to connect local studio equipment to the transmitter, the location is often remote and access to telephone lines may be minimal. But only a small amount of effort is required to provide easily available connections to the transmitter audio input that will allow equipment brought to the site in an emergency to be quickly connected and put into service.

# 3.4.5 - Emergency Supplies, Off-Site and at the Station

A source of food and water is of critical importance in an extended emergency. Supporters who normally feed station staff during events like pledge drives will be busy taking care of themselves in an emergency.

Sanitary facilities (portable toilets) and sleeping facilities are equally important for staff that may be isolated at the station during an emergency.

Emergency food kits can be assembled with relatively little expense using compressed "lifeboat" rations for long term storage. If these blocks of food don't look particularly appetizing, don't worry. In time of need they will be very welcome indeed. Similarly, supplies of water with long shelf life may be obtained.



Typical Emergency Food Ration

Hint: If management balks at spending money for a kit of emergency rations, point out that similar rations are readily available for cats and dogs! There is certain to be an animal lover among the management staff who will immediately see the need for such a kit.

People don't usually think of sanitary facilities until they aren't available. But if the supply of water is interrupted it will no longer be possible to use the normal facilities. A small, portable camp toilet, or several of them, with plenty of supplies, is an important part of any emergency kit.



Typical Portable Camp Toilet

Sleeping facilities are important too, especially for staff who may be marooned at the station. Several sleeping bags and sleeping mats will allow exhausted staff to catch up on sleep when they can.

- ▶ Action Point Assemble your emergency food, water and sanitary facility kit, store it in a safe place, and tell staff where it's stored so it can be found and used when needed.
- ► Action Point Establish a program to annually inspect the emergency supplies and replace those items with expired dates.

#### 3.5 - STATION VEHICLES

Station vehicles, including privately owned vehicles of station staff, will become critical in an emergency.

# 3.5.1 - Fuel

At the first hint of a shortage of fuel, the lines at gas stations may become blocks long. Always drive on "the top half of the tank", meaning that the fuel tank should be refilled when if becomes half empty, not fully empty. That way you will always have a fuel reserve of at least half a tank.

#### 3.5.2 - Identification Placards

For privately-owned vehicles or station vehicles without identification, it may be useful to have magnetic signs made with the station logo or other identification that can help gain access to restricted areas. These can be stored in the vehicle for application when needed.

### 3.5.3 - Insurance

In an emergency the tendency will be to respond immediately with whatever transportation is available. However, it is vital to confirm beforehand that insurance coverage

does indeed extend to the drivers and the vehicles, both station-owned and privately-owned vehicles that are used on station business.

## 3.6 - CHAPTER REVIEW AND CHECKLIST

#### 3.6.1 - Main Points Covered

- Emergency Generator Critical backup power for emergencies
- Phone Lines Backup systems and POTS lines
- Online Resources Backup plans for Internet-based systems
- Alternate Station Housing Where to go when your offices no longer exist
- Emergency kit of food, water, sanitary and sleeping supplies
- Station Vehicles Fuel, identification and insurance preparations

## 3.6.2 - Action Checklist

- □ Emergency generator installed
- ☐ Generator training, testing and maintenance program in place
- □ Backup telephone system plan in place
- ☐ Online resources backup plan in place
- Online content priorities decisions made
- □ Alternate station housing plan in place
- Emergency food, water, sanitary and sleeping kit assembled
- ☐ Station vehicle plans in place

# **CHAPTER 4 – Business continuity**

A detailed plan for business continuity after an emergency is essential if the organs of the station are to remain functional. These are the support structures upon which the station will depend, especially if the emergency situation extends for a period greater than 24 hours.

WAMU in Washington DC has a detailed plan for business continuity in an emergency. Their plan contains Infrastructure Preparedness Tasks for each department. The tasks for Business Systems illustrate an excellent system for identifying and keeping track of jobs to be done with clearly assigned responsibilities for each:

System/ Procedure						Priority
Office shut down	Short-term (less than 24) closure	Essential staff report Non-essential staff stay home	Confirmed	Carey Needham	Confirmed	1
Invoices and checks	Unable to process invoices and checks	If less than 24, no plan If greater than 24, checks will be processed by AU off-site	Pending	Carey Needham	Need to confirm	2
Financial Data Backup	Unable to access Datatel system	Receive support from AU IT	Confirmed	Carey Needham	Confirmed	1
WAMÚ Payroll	Greater than 24 hours	Pay stub available via my.american.edu Re-route campus mail Courier mail to new location	Partially confirmed	Carey Needham	Need to finalize plan	1 1
Phones	Greater than 24 hours	Instal WAMU emergency line Supply essential staff with handheld communication devices	Pending	John Holt Carey Needham	Need to finalize plan	
email	No delivery greater than 24 hours	Re-route email to personal email addresses	Pending	Dick Cassidy/ Carey Needham	Pending	1
Mail	No delivery greater than 24 hours	Re-route mail to new address or off-campus	Pending	Carey Needham	Pending	2 0
Supplies	Greater than 24 hours	acquireX from computer terminal Provide business continuity kit for all staff in building	Pending	AU Safety office BA Team	Pending	1

# 4.1 - HIGH LIMIT CREDIT CARD

Every person who has had to bring a damaged station back onto the air, or keep a station on the air in an emergency, knows that a credit card with a high limit can be your best asset.

Hint: Stick with Visa or MasterCard. American Express and Discover cards are not accepted by many of the vendors and rental agencies you will want to deal with.

Make sure the card is <u>in the possession</u> of the person or persons who will have primary responsibility for getting the station back on the air. A card carefully stored somewhere in a flooded or burned or earthquake damaged building will be useless. The finance department may balk at issuing such cards. (That is their job after all!) But it must be carefully explained to them that this is a special need that must be filled.

➤ Action Point — Secure a high limit Visa or MasterCard credit card for emergency use.

A high limit credit card will ideally be in the possession of critical station staff. If this is not possible then the information about the card - number, PIN, security code - might be kept in a digital file for use for on-line purchases.

If station finances can not support a high limit credit card station staff may be required to fund disaster recovery efforts personally, on a reimbursement basis. In this case it will be critical to document all purchases and to retain all receipts. Management authorization should be obtained in advance if possible to avoid conflicts about repayment later. Alternate methods of payment, such as PayPal, should also be explored and set up in advance of the emergency

#### 4.2 - OFF-PREMISES RECORD BACKUP

The business records of a station are of primary importance for continued operations in or after an emergency. Data that is taken for granted during normal operations may be difficult or impossible to recreate. An investment of time and money before the emergency will pay big dividends after the event. Off-premises record backup should be considered insurance in the same way that the station carries fire and liability insurance.

Hint: When trying to obtain a budget for record backup it is often helpful to consider how much one would be willing to pay <u>after</u> the data is lost to have it miraculously re-appear. A small fraction of that amount will assure that the data does not disappear in the first place.

The data to be held off-premises will vary from station to station. But certain data is likely to be vital to most stations. When trying to decide what station data must be protected, it can help to ask what data would damage station operations most if it became unavailable; what data would be most devastating to lose.

First level candidates for off-premises storage include:

- Underwriter information
- Membership lists
- Financial records
- Pavroll information
- Accounting and tax records
- FCC licenses and documents
- Public file
- Manuals for primary station equipment

#### 4.2.1 - Digital Records

It has become standard procedure to protect the computers holding vital station data with uninterruptable power supplies and regular backups. But this will not suffice in emergencies that may damage computers or make them inaccessible. Backup servers located at secure, off-premises locations are required.

Numerous companies are in the business of providing reliable and highly secure off site backup for digital records at reasonable cost. Arrangements can be made directly with these companies (or via the station or licensee) IT department, if one exists).

#### 4.2.2 - Music Library

Many stations now hold their music libraries in digital form. Often these libraries form the backbone of station programming. As such they are vital to station recovery plans. As with the member database or other crucial operations data that is backed up regularly, the digital music library contains files and data that are also extremely difficult, and in some cases impossible, to recreate.

Backups of your digital music library are absolutely necessary and should be done on a regular schedule. A combination of on-site and off-site backups is best, with off-site backups ideally done on a weekly basis.

#### 4.2.3 - Paper Records

Many station records may exist on paper, and only on paper. These records too may be essential to continued station operation. The paper records must be protected and made available during and after an emergency. But a special challenge may be that these vital records are stored in several locations with each department having its own files and filing systems. Plus, unlike digital data, physical records often are of significant size and weight.

Much in the same way that certain companies offer backup, off-premises storage for digital data, other companies provide the same service for physical records. These companies will provide not only secure storage but document indexing services and programs for assuring that important documents are transferred to backup storage in a timely manner.

Hint: The station's FCC mandated public file is one of those files that would be very difficult to reconstruct. Most public files are still on paper and some are too large to be conveniently duplicated. If that's the case at your station, consider making a digital copy of the file for storage and backup along with other digital records.

# 4..2.4 – Waivers and STAs

In an emergency you may have to conduct operations from locations other than those specified in your station license (or with equipment or power ratings other than specified). Post-Katrina, the FCC will typically grant waivers of their rules or issue a Special Temporary Authority (STA) to allow you to operate legally in such situations.

Situations in which waivers or STAs are needed include the use of a temporary antenna to replace one that is damaged, transmitting from a site other than that specified in the license or operation at reduced power with an emergency antenna.

Information may be found online at: <a href="http://www.fcc.gov/pshs/services/sta.html">http://www.fcc.gov/pshs/services/sta.html</a>

FCC staff who can help with the waiver and STA process may be reached at these numbers:

202-418-2700 Monday through Friday, 8:00am - 5:30pm EST/EDT 202-418-1122 After hours

## 4.2.4 - Regular Backups

The funds spent on the best arrangements for safe, off-premises backup of data, music and paper records will be money wasted unless a program mandating the regular transfer of material to these safe locations is established and adhered to. Frequent backups are always better than occasional backups. Many stations find that a weekly transfer of data works best for them. Consider how quickly your data changes when deciding on the frequency of backup for your station.

► Action Point – Obtain backup and storage service for digital and physical data and establish a program to assure that important station information is transferred to backup storage frequently.

#### 4.3 ACCOUNT NUMBERS AND PASSWORDS

The funds needed for emergency operations or recovery may be in the station bank accounts. But without the proper means of access to these accounts these funds will be inaccessible. This information should be part of the data that is secured off premises.

#### 4.3.1 - Bank Accounts

Backup information should include the names of the institutions holding station funds, the account numbers of those accounts and the contact persons at the institution who deals with the business of the station.

For funds upon which checks may be drawn, the list of authorized signers should also be maintained.

Hint: Will the contact information you use on a normal day still apply in an emergency? Your bank may be affected by the emergency too. Try to obtain a list of their emergency contact phone numbers with the promise that the list will be kept confidential.

#### 4.3.2 - Credit, Debit Card PINs

Backup information should include the Personal Identification Numbers associated with station debit and credit cards.

### 4.3.3 - Online Passwords

Backup information for online accounts should include the URLs and online passwords for these accounts.

## 4.3.4 - Keys and Combinations

Information needed: The location of keys and combinations required to access files and documents at the station.

# 4.3.5 - Trusted Information Keepers

Multiple trusted information keepers should be identified as the persons who will keep the information needed to access station records in off-premises secure locations.

#### 4.3.6 - High Security Required

Information that provides access to station funds clearly must be protected by a high level of security. As always, security must be balanced against convenience and the need for quick access in an emergency.

▶ Action Point – Store all information needed for access to station accounts and physical files in a secure, accessible location.

The business continuity plan at WHYY in Philadelphia, PA provides a good example of how to set forth specific responsibilities for specific teams, including a recovery team.

# C. Recovery Team

The principal mission of the Recovery Team is to implement the pre-arranged plan for recovery of operations in the shortest possible time. The Station Manager will chair the Team. Roles and the amount of involvement by each member will depend upon the extent of the problem and the problem's impact upon their area of responsibility. Comprising the Recovery Team will be representatives from each division or major part of a division:

- Chief Engineer
- Sr. Manager, M.I.S.
- Webmaster
- Manager, Staffing and Corporate Services
- Manager, Plant Operations
- Controller
- Director, Underwriting
- Manager, On-Air Development
- Manager, Data Entry
- Director, Direct Marketing

# Responsibilities

Team Chair will:

- Coordinate the efforts of the assigned division point persons.
- Accumulate information from assigned division representatives.
- Communicate with the Management Team on a regular basis regarding the status of the recovery and needs that have been identified.
- Coordinate efforts of the Recovery Team with the Salvage and Security Team to assure quick and safe return to normal. Work closely with the Salvage and Security Team to assess the level of the problem and what steps need to be implement in what order so the station can return to normal.
- Initiate the notification of staff members regarding work arrangements and other work related matters through the division representatives.

## 4.4 - CHAPTER REVIEW AND CHECKLIST

# 4.4.1 - Main Points Covered

- High Limit Credit Card
- Off-Premises Record Backup
- Account Numbers and Passwords

# 4.4.2 - Action Checklist

- □ High limit credit card obtained
- Off-premises backup and storage for digital and physical records arranged
   Account numbers, PINs, passwords, keys and combinations stored for emergency use

## INDEX

911 service,	Emergency Alert System,13
Account numbers and passwords, 43	Emergency Credentials,13
Acknowledgements,4	Emergency food,38
Agency contact list,12	Emergency generator 25
Agency dispatch center,12	Emergency personnel only, calls from, 23
Akamai, 33	Emergency plan,
Alternate station housing,35	Emergency preparedness,
Amateur radio,22	Emergency radio systems,16
American Radio Relay League, 22	Emergency response plan,7, 10
Automatic generator start,	Emergency supplies,38
Automatic power transfer,	EmergencyEmail.com,17
Bank Accounts,43	Equipment pilfering,37
Barix boxes, 37	Facebook, 34, 35
Beyond the reach of 911, 32	FEMA,
BGAN,31	FCC Waivers and STAs45
Blogs,	Fire department,12
Broadband Global Area Network, 31	Food and water,38
Business continuity,41	Fuel,
CAP16	Gasoline,
Capacity and Quality of Power, 26	Generator - auto start,
Cell phones, 16, 22	Generator - battery maintainer,27
Chain of command,9	Generator - commercial power indicator
Collaboration with other media,24	light,
Commercial power indicator,29	Generator - fuel type,27
Communicate clearly, plainly and	Generator - permanent or transportable, 26
repeatedly,21	Generator - transfer switching,
Construction trailer,35	Generator - testing and maintenance, 28
Contact list,5	Generators,25
Contact with staff,	Hospitals and clinics,12
County radio shop,16	Hotline,
Credentials, 13, 15	Identification placards,39
Credit cards,41	Information policy,
Crisis Commons,	INMARSAT,3
Damage Assessment, 5, 6	Insurance,
Diesel,27	Iridium phone,30
Digital music library,42	Keys and combinations,44
Digital records,42	Law enforcement,
EAS,13, 14, 15	Levels of response,6, 10
EAS codes, 14	Listener call-in,23
EAS multilingual alerts16	Music library,42
EAS automatic alerts 16	Off premises servers,35
Electrical loads 26	Off premises data backup,4
Email and Text Alerts, 17	Off-site equipment cache,36

Online passwords,	44
Online resources,	32
Paper records,	42
PBX (Private Branch Exchange),	29
Phone lines,	29
Phone system reliability,	
PINs,	43
PIOs,	12
POTS lines,29, 30,	40
Propane,	
Providing useful information,	16
Public file,	43
Public Information Officers,	12
Public safety hubs,	32
RACES,22,	25
Radioreference.com,	16
Ready.gov,	18
Recovery team,	44
Recreational vehicles,	35
Red Cross, 12, 13,	33
Relationships with local agencies,	12
Repeater,	
SAFER website,	
Safety of staff,	6
Sanitary facilities,	38
Satellite data terminals,	31
Satellite phones,	30
Scanner enthusiasts,	
Scanning receiver,16, 17, 20,	23

Skype,	5
Sleeping facilities,	
SMS text,	
Social media,	
Sources of information,	
Staff contact list,	
Staff response plan,	
Staff response plan,	
Station contact list	
Station responsibilities,	
Station vehicles,	
Station-owned radio systems,	
STL,	
StreamGuys,	
Streaming,	
Studio Transmitter Link,	
Temporary offices,	
Too critical to test,	
Trusted information keepers,	
Twitter,17,	
Two way radio networks,	
Uninterruptable Power Supplies,	
UPS,	
VoIP,	
Website,	
Widgets,	
WiFi,	
YouTube,	