

Appendix E

## COMMUNICATIONS AND WARNING



The EOC's ability to function is directly related to its ability to communicate. It is essential that emergency managers consider the following issues involved in maintaining a functional communications system.

1. Primary communications systems include the jurisdiction's police, fire, and medical services' radio systems. Good radio procedure is especially important during emergencies because of the high volume of information that must be transmitted. Emergency simulation training for dispatcher staffs, while frequently resisted because of potential interruptions of day-to-day traffic, is essential in developing good radio discipline and strong net control by central dispatchers.

2. The emergency will often jeopardize communications. Earthquakes, windstorms, fires, and flooding can disrupt service by damaging or destroying antenna systems, repeaters, or base stations. Communications facilities and equipment should be designed, installed, and maintained with that in mind. Where practical, replacement equipment, especially antennas, should be kept in stock.

3. A well-designed communications system will include capability for sending and receiving messages to and from adjacent jurisdictions and headquarters. At a minimum, all primary frequencies of neighboring local jurisdictions should be listed in EOC resource or data collections.

4. In the stress of a major emergency, primary local government radio systems are seldom capable of handling all required information flow. Plans should therefore be made and necessary equipment purchased so that the EOC can effectively use private radio equipment and operators, particularly amateur radio and citizens band. Amateur radio can provide both short- and long-range communications by voice and radioteletype (RTTY). Citizens band, though it has a larger pool of operators and radios, is typically short-range and may present problems of poor radio discipline in an emergency situation. Either service, however, can assume at least part of the emergency communications load by establishing links with incident scenes, mass care shelters, medical facilities, and other areas without communications. To be effective, these assignments should be made in advance and incorporated in emergency planning documents.

5. Monitoring capabilities should also be part of an EOC. Television and commercial radio receivers will enable the direction and control element to keep informed about the situation in other localities and to evaluate its public information and advisory announcements. In areas subject to severe weather, such as tornadoes, the EOC should have some means of monitoring weather reports that are broadcast continually on special frequencies. Direct two-way communication between EOCs and the National Weather Service should be reserved for multijurisdictional-area and State-area EOCs.

6. EOCs should also have an intercom and public address system for use during emergencies. Intercom systems will allow direct two-party and conference call communications across a noisy EOC. If connected to a larger system, intercoms will also allow EOC representatives to contact their offices. A public address system will enable the director of emergency services to alert the entire EOC staff to a particular problem or make known an important policy decision.

7. The EOC should have control of the jurisdiction's warning system.
8. The Communications Center should be located next to the Operations Room. However, since communications equipment tends to be noisy, provisions must be made to keep the noise level as low as possible in the Communications Center and Operations Room. There may also be a message control unit or message center within the Communications Center to record receipt and dispatch of messages and maintain message files.
9. Layout of the center should allow staff to carry out the following communication functions efficiently and effectively.
  - a. Receipt and dissemination of attack or weather warning, including activation of warning sirens, public address systems, or other methods to alert the public. This includes providing the attack or weather warning to the appropriate official who can, in turn, activate the Emergency Broadcast System. Public officials can be alerted by use of telephone land line, radio communications or inexpensive weather monitors.
  - b. Communicating emergency instructions or information to the public.
  - c. Communicating with other EOCs (city, county, or State governments, as appropriate) and with public shelters.
  - d. Communicating with police, fire, rescue, health, engineering, or other operating units of government.
  - e. Receipt and dissemination of radiological data.

Appendix F

## EQUIPMENT AND OPERATIONAL SUPPLIES

Equipment and operational supplies used in an EOC contribute directly to its ability to function. In selecting equipment the following should be considered:

A. Mobility

Since conditions change during a crisis, configuration of the EOC and field force operations must be flexible. Bulky, heavy, or cumbersome supplies and equipment will hinder, rather than help.

B. Reliability

Selection of equipment should rely greatly on durability and reliability. An EOC dealing with an emergency does not need additional crises created by failing equipment. If equipment used at an EOC has the potential for breakdown, spare parts, repair instructions, and training for maintenance should be incorporated into EOC planning.

C. Electrical Compatibility

All electrical equipment should be test run on the EOC emergency power supply. Careful examination of all equipment operating standards should be compared to emergency power supply standards (i.e., a.c. or d.c., cycles, amperage, and total wattage).

D. Perishability

Foodstuffs, medical supplies, and other staples in an EOC often have short shelf lives. In the past, civil defense shelter stocks have been allowed to deteriorate to the point where they are unusable. If an EOC is stocked with perishables, every effort should be made to supplement them with items of longer storage life (dehydrated or freeze-dried foodstuffs or medical supplies that do not lose their effectiveness over a short period of time). Since batteries deteriorate over time, they should also be rotated.

E. Sustenance

Certain supplies are essential for sustained EOC operations. Provisions should be made to ensure they are given priority for purchase. Such supplies should be accessible to the EOC team, regardless of how disruptive any potential emergency might be. Listed below are basic supplies for which provisions should be made for all EOCs:

1. Basic supplies, including medical, bedding, food, fuel, water, lubrication, and sanitation equipment that does not need resupplying for at least two weeks.
2. Spare parts inventory for backup lighting, communications, ventilation, and other necessary maintenance.

3. Auxiliary lighting such as flashlights, lanterns, batteries, and bulbs.
4. A standard complement of office equipment, including forms, pencils, etc., will be required. Preference should be given to nonelectric machines, such as manual typewriters or hand-operated mimeograph machines, and battery-operated equipment such as calculators and recorders. If computer storage and processing are incorporated in an EOC, all hardware and software should be located within the protected EOC areas. It should not depend on hookup with outside data banks. Careful consideration should be given to the computer power supply and interference generated by communications and other equipment. Since the climate of an EOC under emergency conditions might not always provide the maximum operating environment for computers (humidity control, heating and air conditioning, static, power fluctuation, etc.) backup systems, procedures, and modification of computer components should be included in EOC planning.
5. Paper forms required for standard emergency reporting should be kept on hand in sufficient quantities to allow EOCs to meet various contingencies (see Figures 23-30). Other basics such as pens and paper clips should be held in sufficient amounts accessible to EOC operations.
6. Recording equipment cannot be overlooked. Because of the compressed time factors in responding to crisis situations, instant-and simple-recording of vital information is important. An instant developing camera with a fresh supply of film will enable EOC team members to record information on display boards that are being constantly updated. One quick picture will allow a board to be erased and more information entered without loss of data. Hand-held, battery-operated recorders are excellent for rapid storage of information. Many such devices can be adapted to telephone and radio lines for recording incoming information. Taping such transmissions allows EOC staff to repeat messages which might have been misunderstood or delivered too rapidly. Logs, message forms, and related material should be kept on hand.
7. Displays to be used in the operational areas of the EOC should be kept in sufficient quantities to meet anticipated demands. Additional information on this subject will be provided in the Technical section of this handbook to be published.
8. Specialized equipment for each EOC to meet its unique function. Hazardous waste spills, toxic gas leaks, or nuclear plant accidents pose their own special requirements for breathing apparatus and protective clothing. Such equipment might not be locally available, so advance planning is essential. Work with local commercial, public, and private organizations to identify state-of-the-art equipment. Experts from these areas are generally the best reference in selecting reliable, reasonably priced emergency equipment. (A chemical plant technical staff would be the best source of information on what specific hazards are present and the appropriate protective clothing.)

Emphasis has been on the survivability and operability of an EOC following an emergency, either natural, manmade, or war. But there will be occasions when a limited amount of warning time exists; a precrisis stage during which people can be relocated or sheltered, and safeguards taken. During these brief periods, it is vital that the operating staff of the EOC move rapidly and effectively. Having road markers, shelter signs, and other information ready for immediate dissemination will determine how effectively an EOC uses its short grace period before disaster strikes. Bull horns (hand-held public address equipment) and road barricades will aid rapid evacuation. Prepared pamphlets, camera ready material, directions, and pocket SOPS for field forces will help spread vital information quickly. Information can also be rapidly disseminated via EBS and Cable TV.

FIGURE 23  
EMERGENCY REPORT FORM

NUMBER 1024

DATE June 10, 1962 TIME 1810

Item 1	REPORTED BY: RADEF Team #3
2	LOCATION OF EMERGENCY 26th & Madison
3	NUMBER OF PERSONS IN DANGER 3 CRITICAL TIME 1915
4	DESCRIPTION OF EMERGENCY RADEF Team #3 in hot area 26th St. & Madison Ave.
5	SPECIFIC ASSISTANCE REQUESTED What is nearest shelter available?
6	NEARBY SOURCE OF A I D _____
7	RADIATION DOSE RATE OUTSIDE r/h 50 INSIDE r/h _____
8	CURRENT MEASURED DOSE 125r COMMUNICATOR'S INITIALS OR # <span style="border: 1px solid black; padding: 2px;">-RSE</span>
9	THIS EMERGENCY ASSIGNED TO Shelter OPS TIME 1813 PRIORITY <input checked="" type="checkbox"/> ROUTINE <input type="checkbox"/>
10	DIRECTIVE NUMBER D 1024
11	DISPATCH TO: RADEF Team #3 FOR ACTION   FOR INFORMATION ONLY
12	INSTRUCTIONS Go to SCH #40-Basement of J.C. Penney Co. Store—7 blocks west on Madison Ave. from your location
13	DOSIMETER REQUIRED <input type="checkbox"/> MAXIMUM DOSE SPECIFIED <input type="checkbox"/> r
14	DIRECTIVE ISSUED BY J.B. Jones TIME 1819
15	COORDINATED WITH: Police <input type="checkbox"/> Fire <input type="checkbox"/> Shelter <input type="checkbox"/> Medical <input type="checkbox"/> Welfare <input type="checkbox"/> Public Works <input type="checkbox"/>
16	DIRECTIVE REVIEWED BY WKC TIME 1820
17	COMMUNICATIONS TRANSMISSION PRIORITY <input type="checkbox"/>

Forms are shown only as examples.  
FEMA does not stock or distribute  
these forms.

COMMUNICATOR'S  
-RSE  
INITIALS OR #

FIGURE 24

EMERGENCY REPORT FLOWCHART

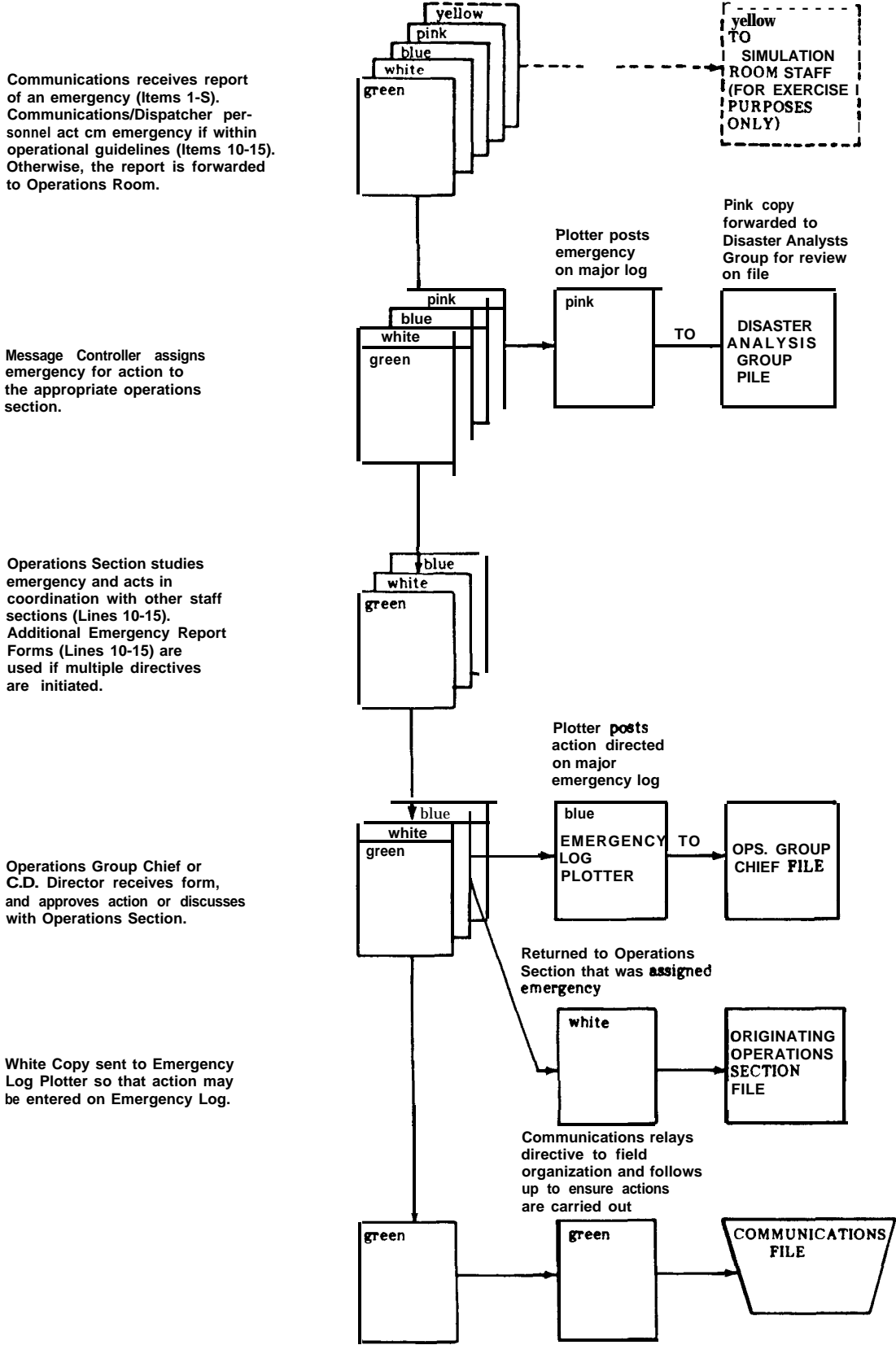


FIGURE 25

SHELTER COMPLEX LOADING REPORT FORM

**SHELTER COMPLEX LOADING REPORT**

① SHELTER COMPLEX #15 DATE JUN 10, 1962

② CAPACITY 12,400 TIME 1750

③ CURRENT OCCUPANCY 6,400

④ PERSONS ENROUTE ( if known ) 1,000

**DETAIL**

NUMBER	FROM
_____	_____
_____	_____
_____	_____

⑤ AVAILABLE CAPACITY 5,000  
 LINES ② MINUS ③ MINUS ④


⑥ COMMENTS NO STOCK OF WATER PLENTY OF  
FOOD AVAILABLE

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

COMMUNICATOR'S  
  
 INITIALS OR,

**INSTRUCTIONS TO COMMUNICATIONS OPERATOR**

- Use this form only for information on SHELTER STATUS
- For shelter problems requiring ACTION use the emergency report form
- For RADEP reports from shelter complexes use the RADIATION NUCLEAR DETECTION report form
- For all other information use the general message form

Forms are shown as examples. FEMA does not stock or distribute these forms.

FIGURE 26  
SHELTER COMPLEX REPORT FLOW

COMMUNICATIONS  
FILLS OUT SHELTER  
COMPLEX REPORT  
(Lines 1 - 5)

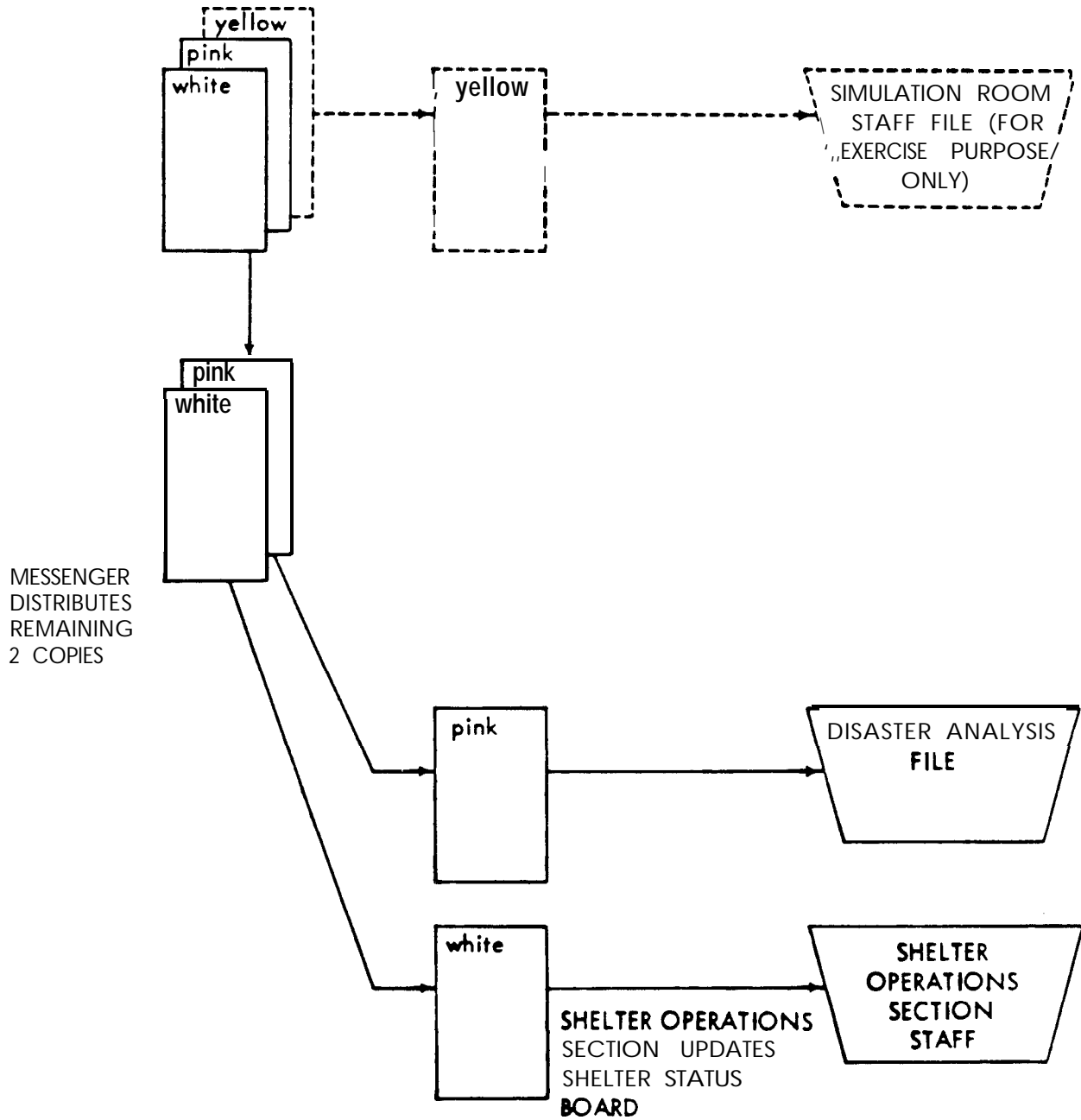




FIGURE 27

RADIATION/NUDET REPORT FORM

**RADIATION/NUDET REPORT**  
**RADIATION REPORT**  
(DO NOT HOLD)

**0 1** TYPE OF REPORT FLASH DATE  
(circle one) SCHEDULED TIME  
 SPECIAL REQUEST

**0 2** REPORTING UNIT: 

--	--	--	--	--	--	--	--

  
For consolidated reports enter identification • individual units

**0 3** TIME OF READING: 

--	--	--	--	--	--	--	--

**0 4** DOSE RATE OUTSIDE: 

--	--	--	--	--	--	--	--

**0 5** DOSE RATE INSIDE: 

--	--	--	--	--	--	--	--

**0 6** TOTAL DOSE OUTSIDE: 

--	--	--	--	--	--	--	--

**0 7** OTHER INFORMATION OR COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

COMMUNICATOR'S  

--	--

  
INITIALS OR #

---

**NUDET REPORT# \_\_\_\_\_**  
PRIORITY MESSAGE)

**0 1** UNIT REPORTING: \_\_\_\_\_ DATE  
**0 2** LOCATION OF UNIT: \_\_\_\_\_ TIME  
**0 3** DIRECTION OF FLASH: \_\_\_\_\_ COMMUNICATOR'S  

--

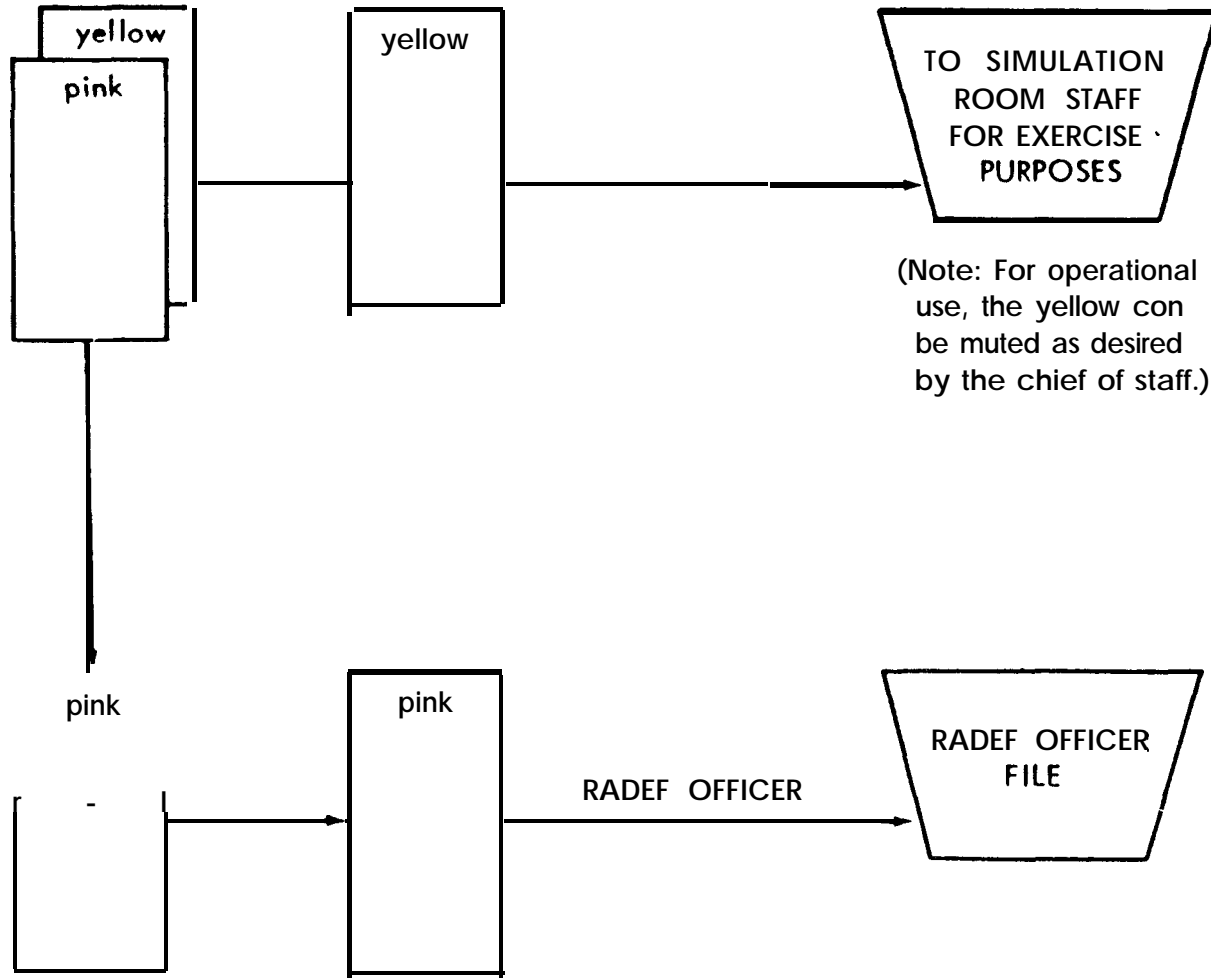
  
INITIALS OR #

**0 4** TIME OF DETONATION: \_\_\_\_\_

FIGURE 28

RADIATION/NUDET REPORT FLOW

COMMUNICATIONS  
FILLS OUT APPRO-  
PRIATE PORTION  
OF REPORT



PINK COPY TO  
RADEF OFFICER  
IN DISASTER  
ANALYSIS GROUP

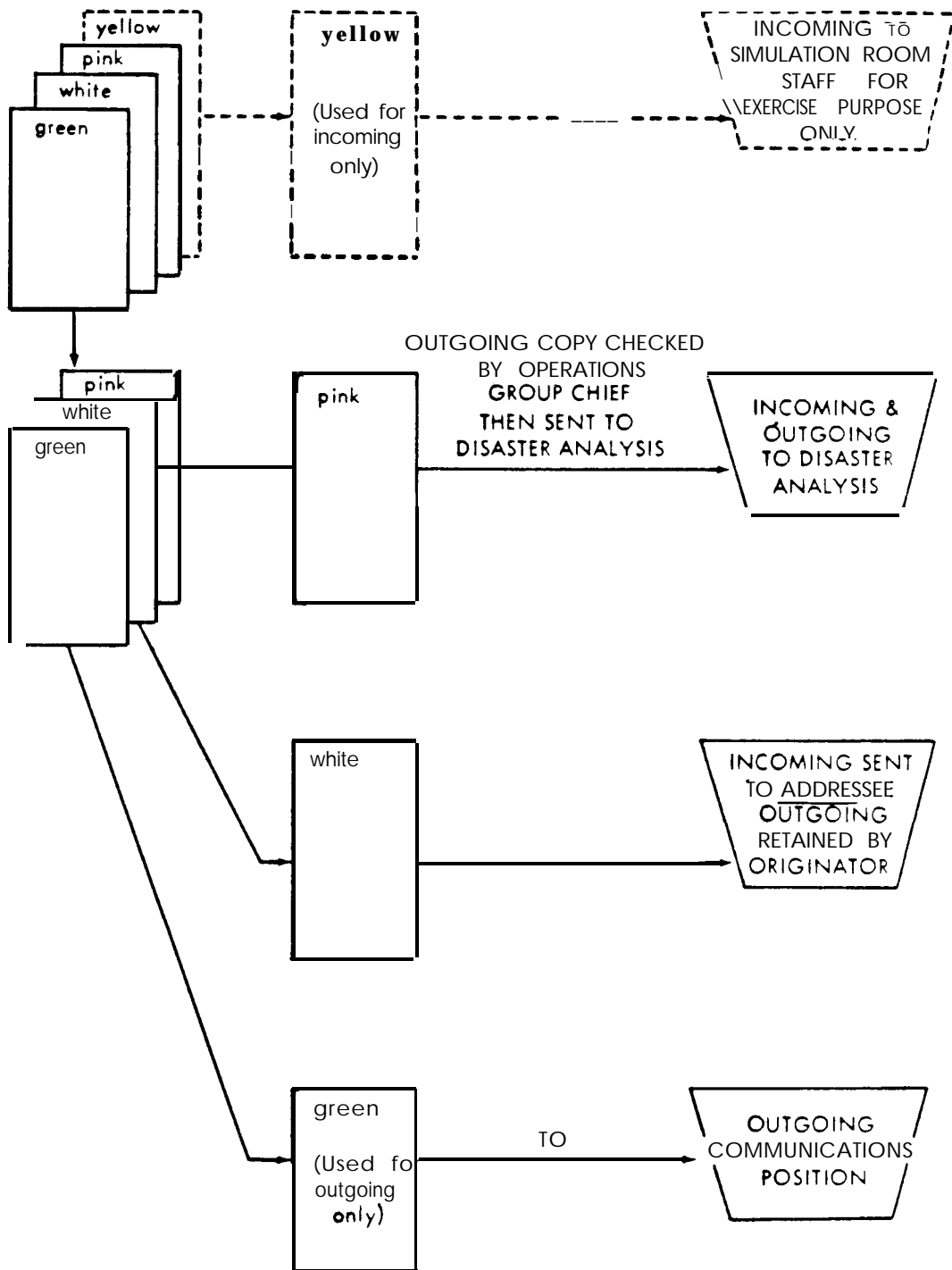
(Note: For operational use, the yellow can be muted as desired by the chief of staff.)

RADEF OFFICER  
FILE



FIGURE 30  
GENERAL-MESSAGEFLOW

COMMUNICATIONS (in)  
OR ORIGINATOR (out)  
FILLS OUT 3 LINES  
ON FORM



The storage area should be as close to the EOC as possible, without hampering operations. It should be dry and protected from extremes of temperature that cause rapid deterioration of medicines, food supplies, and some equipment. Dampness, heat, and **age** can destroy most paper supplies. Storage not only should protect vital equipment and supplies, but also allow for rotation of stock and periodic inspections. Having rooms with defective, outdated, or damaged supplies and equipment will leave EOCs vulnerable to failure even before they begin their mission.

APPENDIX G

**SAMPLE EOC**

**STANDARD OPERATING PROCEDURE**

This is a sample Emergency Operating Center Standard Operating Procedure, prepared for illustrative purposes. Checklists may be printed at the front of the document on an outstanding color paper, such as pink, to make them easy to read. Explanatory material for training and general reference follows. Easily accessible tabs with reference data are at the end of the SOP on yellow paper.

Greenfield County EOC SOP

SAMPLE EOC SOP

Greenfield County

- CHECKLIST - ACTIVATION
- CHECKLIST - SETUP
- CHECKLIST - DEACTIVATION

- ACTIVATION
  - Authority
  - Alerting
  - Setup

- COMMUNICATIONS PROCEDURES
  - General
  - Incoming Messages
  - Outgoing Messages

DISPLAY PROCEDURES

OPERATIONAL PROCEDURES

- TAB A - Alerting Information
  - Alert List
  - Cooperating Agency Alert List
- TABB - Floorplans
  - EOC Floorplan Sketch
  - Alternate EOC Floorplan
  - Expansion Rooms
- TAB C - Forms
  - Message Form
  - Local Emergency Declaration
  - Increased Readiness Reporting (IRR) Local Status Form
  - Local EOC Weapons-Effects Message Form
- TAB D - Displays
  - Problem Log
  - Damage Assessment Chart
  - Hospital Status Chart
  - Temporary Medical Facilities Chart
  - Fallout Shelter Status Chart
  - Law Enforcement Resources Chart
  - Transportation Resources Chart
- TAB E - Communications Reference Information
  - Priority Code
  - 10 Code
  - Radio Amateur Q Code

May 29, 1984

CPG 1-20

Greenfield County EOC SOP

SAMPLE EOC SOP

**Greenfield County**  
(continued)

Radio Amateur Continuous Wave Code  
Transmitting Numbers  
Phonetic Alphabet  
Time Conversion Chart

TABF - After-Action Report Format



Greenfield County EOC SOP

EOC ACTIVATION CHECKLIST

1. ALERT ONE EACH OF THE FOLLOWING GROUPS:

_____Alerted	Director Asst Dir at EM Coord	_____ (time)
--------------	-------------------------------------	--------------

_____Alerted	Sheriff Asst Sheriff at Patrol Lt	_____ (time)
--------------	---	--------------

_____Alerted	Fire Chief Asst Fire Chief at Fire Battalion Chief	_____ (time)
--------------	--	--------------

_____Alerted	Public Works Chief Asst Pub Works Chief at Road Division Supervisor	_____ (time)
--------------	---	--------------

2. ALERT THE FOLLOWING:

_____Alerted Ambulances:		
_____ Mercy Ambulance at		_____ (time)
_____ Med Serv Ambulance at		_____ (time)

_____Alerted Hospitals:		
_____ County Hospital at		( t i m e )
_____ Good Samaritan Hospital at		_____ (time)
_____ VA Hospital at		( t i m e )

_____Alerted Planning Department at		( t i m e )
-------------------------------------	--	-------------

_____Alerted Building Department at		( t i m e )
-------------------------------------	--	-------------

_____Alerted Transportation District at		( t i m e )
---	--	-------------

_____Alerted Health Department at		_____ (time)
-----------------------------------	--	--------------

_____Alerted Jackson County at		( t i m e )
--------------------------------	--	-------------

_____Alerted State Emergency Management Agency at		_____ (time)
---	--	--------------

_____Alerted State National Guard at		( t i m e )
--------------------------------------	--	-------------

_____Alerted Red Cross at		( t i m e )
---------------------------	--	-------------

_____Alerted Salvation Army at		( t i m e )
--------------------------------	--	-------------

Greenfield County EOC SOP

\_\_\_ Alerted Water Company at \_\_\_\_\_(time)  
\_\_\_ Alerted Gas and Electric Company at \_\_\_\_\_(time)  
\_\_\_ Alerted Telephone Company at \_\_\_\_\_(time)  
\_\_\_ Alerted Airport at \_\_\_\_\_(time)

3. DETERMINE WHETHER TO USE MAIN OR ALTERNATE EOC.

Greenfield County EOC SOP

EOC SETUP CHECKLIST

- \_\_\_\_\_ Set up furniture (stored behind stage)  
Floorplan at TAB B; keys at Sheriff's patrol desk
- \_\_\_\_\_ Mount displays (stored behind stage)  
Floorplan at TAB B
- \_\_\_\_\_ Connect phones, radios, and scanners (stored in closet)  
Floorplan at TAB B
- \_\_\_\_\_ Distribute stationery supplies to each desk (stored in Emergency  
Management Coordinator's Office)
- \_\_\_\_\_ Inspect generator, antennas, food and water stocks, and fuel supply
- \_\_\_\_\_ Stand by to set up media center (Holloway Hotel)  
Chalkboards, chalk, and erasers are in **Sheriff's** Training Room
- \_\_\_\_\_ Stand by to set up public information center (Wilkins School)
- \_\_\_\_\_ Stand by to move to alternate EOC (Public Works Yard).

Greenfield County EOC SOP

EOC DEACTIVATION CHECKLIST

ACTION	RESPONSIBILITY
_____ Store furniture behind stage	General Services
_____ Clean and store displays	Planning Department
_____ Disconnect and store communications	Commo Department
_____ Inventory and store supplies	Emergency Management
_____ Replenish supplies	Emergency Management
_____ Prepare after-action report	Emergency Management

## Greenfield County EOC SOP

**ACTIVATION****Authority**

The EOC will be activated as required for exercises of impending or actual emergencies, on order of the County Administrator, the Emergency Management Coordinator, the Sheriff, the County Engineer, or any other duly constituted authority. The EOC shall not be activated for surprise exercises without the knowledge and consent of both the County Executive and the Sheriff.

**Alerting**

The County Communications Center is responsible for alerting EOC staff (Alert list, TAB A). County Communications is also responsible for alerting cooperating agencies, neighboring jurisdictions, and State and Federal agencies (Alert list, TAB A).

**Setup**

1. Furniture will be brought into the EOC from the storage area behind the stage and set up according to the EOC sketch in TAB B. General Services Department is responsible for this action. Keys for the backstage storage area are kept at the Sheriff's patrol desk.
2. Communications equipment is stored in the closet next to the County Communications Center. The Senior Dispatcher on duty has the key. County Communications radio shop is responsible for hook-up of communications systems in the EOC. EOC sketch in TAB B shows locations of connections.
- 3.. EOC charts and display materials are also located in the backstage storage area. The County Planning Department is responsible for setup according to the EOC sketch in TAB B. Keys to the storage area are kept at the Sheriff's patrol desk.
4. The Emergency Management Office is responsible for moving the following equipment from its office into the EOC: copying machine, two manual typewriters, two battery-powered calculators, battery-powered radio receiver, box of message and report forms, and other stationary supplies. The Emergency Management Office is also responsible for ensuring that extra copies of the County Emergency Plan and related annexes, SOP, and checklists are available in the EOC.
5. The designated alternate EOC is the Public Works Yard. General Services is responsible for moving EOC furniture, displays, and supplies to the yard, if required, when directed by the Emergency Management Coordinator. County Communications is responsible for moving the communications van to the yard when so directed.
6. The following facilities may be opened on order of the Director of Emergency Management:

Media Center - Holloway Hotel  
Public Information Center - Wilkins School

General Services is responsible for moving equipment to these locations.

Greenfield County EOC SOP

COMMUNICATIONS PROCEDURES

**General**

A primary function of an EOC in an emergency is to collect and disseminate information. Information will reach the EOC through many different channels: telephone, teletype, government radio, amateur radio (RACES), citizens band radio, commercial radio, runners, etc. The following paragraphs describe the responsibilities of the various elements of the EOC. staff in receiving and processing incoming and outgoing information. A sample message form is in TAB C.

**Responsibilities - INCOMING Information**

1. Receiver

Message Form Entry

Upon Receipt of a message reporting a new development or problem, write it down on the INCOMING section of a message form. Time and date of receipt should be entered on the DATE/TIME line at the top of the form.

Message Number and Section Identifiers

Enter a message number at the top of the form. The message number should begin with a two-letter service (department) identifier and then a number. Incoming messages should be numbered consecutively.

EXAMPLES

- DR-1 First message received by Director of Emergency Manager (EM)
- MD-3 Third Message received by medical section
- PW-5 Fifth message received by public works

Section identifiers are as follows:

- |                         |                       |
|-------------------------|-----------------------|
| DR - Director of EM     | CM - Corn munications |
| PI - Public Information | SC - Schools          |
| SA - Situation Analysis | TR - Transportation   |
| FR - County Fire        | RD - RADEF            |
| LE - Sheriff            | RC - Red Cross        |
| MD - Health/Medical     | WL - Welfare          |
| PW - Public Works/Roads | Ut - Utilities        |

Message priority

Assign a priority from 1 (highest) to 4 (lowest) as follows:

- Priority 1 - Lives endangered-immediate response required
- Priority 2 - Lives endangered--fast response required
- Priority 3 - Timely operational response required
- Priority 4 - Routine data and logistics messages

Action

Take any immediate action required by the message, remove the last (pink) copy for record (noting action and time action was taken), and send form to the message center desk.

## Greenfield County EOC SOP

2. Message Center
  - Log  
Log all incoming messages in order received.
  - Action  
Retain yellow 'data board' copy for record and route remaining copies to appropriate action or coordination sections. Route white 'action/data board' copy to Situation Analysis section.
3. Action Section
  - Action  
Take any necessary action and coordinate with other sections as required. Note actions taken and time on message form.
  - Display  
Make entries or update displays as required.
  - Followup  
Continue followups until problem is solved or no further action is necessary.
4. Coordinating Section  
Take appropriate action and note time and action taken on copy of message form.
5. Situation Analysis  
Post status boards with major emergency information, problems, and actions taken. Alert director of civil defense and public information officer to major problems and to large areas from which no reports have been received.
6. Messengers  
Distribute messages from message center to data board and to sections. Pick up messages from sections and deliver to message center.

**Responsibilities-OUTGOING Information**

1. Originator  
Write message in OUTGOING section of message form. Enter priority (see above) at top of form. Remove last copy of message form and retain. Pass message form to message center.
2. Message Center  
Log message in outgoing message log and enter time on message form. Remove last copy for file. Send message to Communications Center or RACES room for transmission.
3. Messengers  
Take OUTGOING messages from message center to communications center or to RACES room as directed by message center.
4. Com municator  
Send message. Time-stamp copy and retain for record.

## Greenfield County EOC SOP

## DISPLAY PROCEDURES

## General

Because the Emergency Operating Center's major purpose is accumulating and sharing information to ensure coordinated and timely emergency response, all EOC sections must maintain display devices so that other sections can quickly comprehend what actions have been taken and what resources are available. Display needs will vary with the nature and scope of the emergency, but the following charts are the core of the EOC display system whenever the facility is activated. All display charts, boards, and materials are located in the storage area behind the stage.

## Problem Log

The County Planning Department (Situation Analysis Section) is responsible for maintaining the problem log. All major problems should be entered on the log as they are received. The log is a large, plastic-covered board with columns for problem number, nature of problem, response section, response, and remarks. A copy of the Problem log is in TAB D, -with sample entries.

## Damage Assessment Chart

The County Building Department representatives in the Situation Analysis Section are responsible for maintaining the damage assessment chart. The chart contains columns showing cities in the county reporting damage, time of report, and extent of reported damage. A copy is in TAB D, with sample entries.

## County Map

The County Planning Department (Situation Analysis Section) is responsible for maintaining current information on the county map. The following information is particularly important to all sections in the EOC and should be posted immediately:

- Transportation routes closed or impeded
- Areas of major damage
- Locations of medical treatment and congregate care facilities open
- Expected inundation area (in flood emergencies)
- Limits of evacuation area, control points, and exit routes.

## Weather Map

The Emergency Management Office is responsible for maintaining a weather map showing current forecasts and wind patterns and for plotting fallout predictions in cases of threatened or actual nuclear attack.

## Medical Facility Chart

The medical section is responsible for maintaining current information on the status of permanent and temporary medical facilities, including locations, beds available, blood and other critical supply needs, manpower requirements, and communications links. The chart on which this information is displayed is in TAB D, with sample entries. It is particularly important to note locations of temporary medical facilities so that the public information officer and other EOC elements can instruct the public.



## Greenfield County EOC SOP

**Fallout Shelter Status Chart**

The Emergency Management Office is responsible for maintaining the fallout shelter status chart. (TAE D), which includes information on location and capacity of shelter; current loading; status of food, water, and medical stocks; name of shelter manager; and communications links.

**Congregate Care Facility Chart**

The Red Cross is responsible for maintaining the congregate care facility chart, which includes information on shelter locations, spaces still available, and communications links.

**Law Enforcement Resources Chart**

Sheriff's representatives in the EOC are responsible for maintaining the law enforcement resources chart. The chart provides information on numbers and locations of sworn, reserve, and auxiliary manpower, as well as status of mutual aid units. The chart is in TAB D with sample entries.

**Fire Resources Chart**

The County Fire Department is responsible for maintaining the fire resources chart which displays deployment and availability of fire units and status of fire mutual aid forces.

**Transportation Resource Chart**

The County Transportation District is responsible for maintaining current status and availability of all public and private transportation (chart in TAB D).

**Other Displays**

The County Planning Department (Situation Analysis Section) is responsible for maintaining other general and emergency-specific displays which may be needed in the EOC. These may include evacuation route maps for crisis relocation and for nuclear reactor incidents; utility system maps; rolling blackout block assignments; fault line, soil, and landslide potential maps; maps of predicted inundation in the tsunami areas and below dams, flood plain maps; locations of hazardous materials storage sites; and other such materials.

## Greenfield County EOC SOP

### OPERATIONAL PROCEDURES

#### **Declarations**

Early in the emergency, the Director of Emergency Management will determine whether to declare a local emergency. A fill-in declaration form is included at TAB C.

#### **Security and Sign-h**

Depending on the nature of the emergency, the Director of Emergency Management may decide to establish special security for the EOC. The Sheriff is responsible for physical security of the EOC and its critical systems. The Sheriff shall establish an EOC roster and sign-in sheet as conditions require or at the request of the Director of Emergency Management.

#### **Shift Scheduling**

As soon as possible after the onset of the emergency, 12-hour shift schedules should be prepared by each EOC section and posted on the bulletin board. Relief shifts should arrive 30 minutes early so that briefings can be conducted on what has occurred, what decisions have been reached, and what problems remain.

#### **Briefings and Conferences**

Briefings for the Director of Emergency Management, the County Board, and the Public Information Officer should be scheduled at six-hour intervals. The Emergency Management Coordinator will post a briefing schedule on the bulletin board. EOC section chiefs should be prepared to participate in these briefings with a three-minute summary of their section's progress. The briefing by each section will include:

- 1 - unresolved problems;
- 2 - major new problems during previous six hours;
- 3 - assistance needed from other Greenfield County agencies or outside organizations;
- 4 - information developed by the section that should be passed to other EOC sections or to the public.

Additional briefings may be organized at the request of the Emergency Management Director or Coordinator. These may include VIP, news media briefings, and situation reviews for newly arrived state or federal representatives.

Conferences of key EOC personnel may be convened at any time by the Emergency Management Director to discuss and resolve major issues. These conferences will be held in the emergency management office.

The Emergency Management Coordinator is responsible for ensuring that any decisions reached at conferences are quickly relayed to all EOC personnel.

## Greenfield County EOC SOP

**Reports**

The Emergency Management Coordinator is responsible for ensuring that all required reports are forwarded to the next higher EOC (State Regional EOC at Barnardstown) on time. He or she is also responsible for preparing and sending any special reports on damages, threats, and assistance needed.

The public information officer is responsible for informing all EOC sections of special information needed by county personnel in the field in order to respond to citizen inquiries. Locations and services offered at temporary medical, feeding, or congregate care facilities, in particular, should be rapidly disseminated to all emergency workers in the county.

**TAB A**  
**ALERTING INFORMATION**

**Alert List**  
**Cascade Alert System**  
**Notification Table**

**ALERT LIST**

**SELF-TRIGGERING** - In the event of an emergency in which telephone or beeper service is interrupted, staff members should see to the safety of their families and then report to the Emergency Operating Center.

**PHONE ALERT** - The Fire Department or Sheriff will normally receive first notification of an emergency. Whichever agency is first notified, it will ensure that the other is aware of the situation, and then notify the emergency management director or coordinator, who will initiate further notifications as shown in the fan-out sketch.

POSITION	INCUMBENT	WORK PHONE	HOME PHONE	OTHER PHONE
EM Director	Mary Smith	323-4567	765-432 1	567-8910
EM Coordinator	Fred Jones	323-7645	766-2181	_____
Asst EM Dir	Will Uttley	323-869 1	765-5749	-----
EOC Opns Chief	Ann South	323-6848	765-1 188	323-7711
Sit Analysis Ch	Mark Wells	323-2 122	766-8743	_____
Pub Info Off	Beth Price	323-4568	765-8841	_____
RADEF Off	Carl Pawsie	323-692 1	765-702 1	-----
Sheriff	Sue Munoz	323-1 134	765-4030	-----
Fire Chief	Al Wilkes	323-2121	765-8840	-----
Public Works Chief	Herb Taney	323-4131	765-5741	323-8123
Red Cross Coord	Nan Shultz	764-8811	765-4877	764-8822
Housing Chief	Bill Mabey	323-7463	766-8780	_____
Transport Chief	Ann Kalb	323-2483	765-3665	_____
Utilities Chief	Pete Pipes	328-94 11	765-4186	_____
Health/Med Chief	Dr. Ross	764-1212	766-2739	764-2479

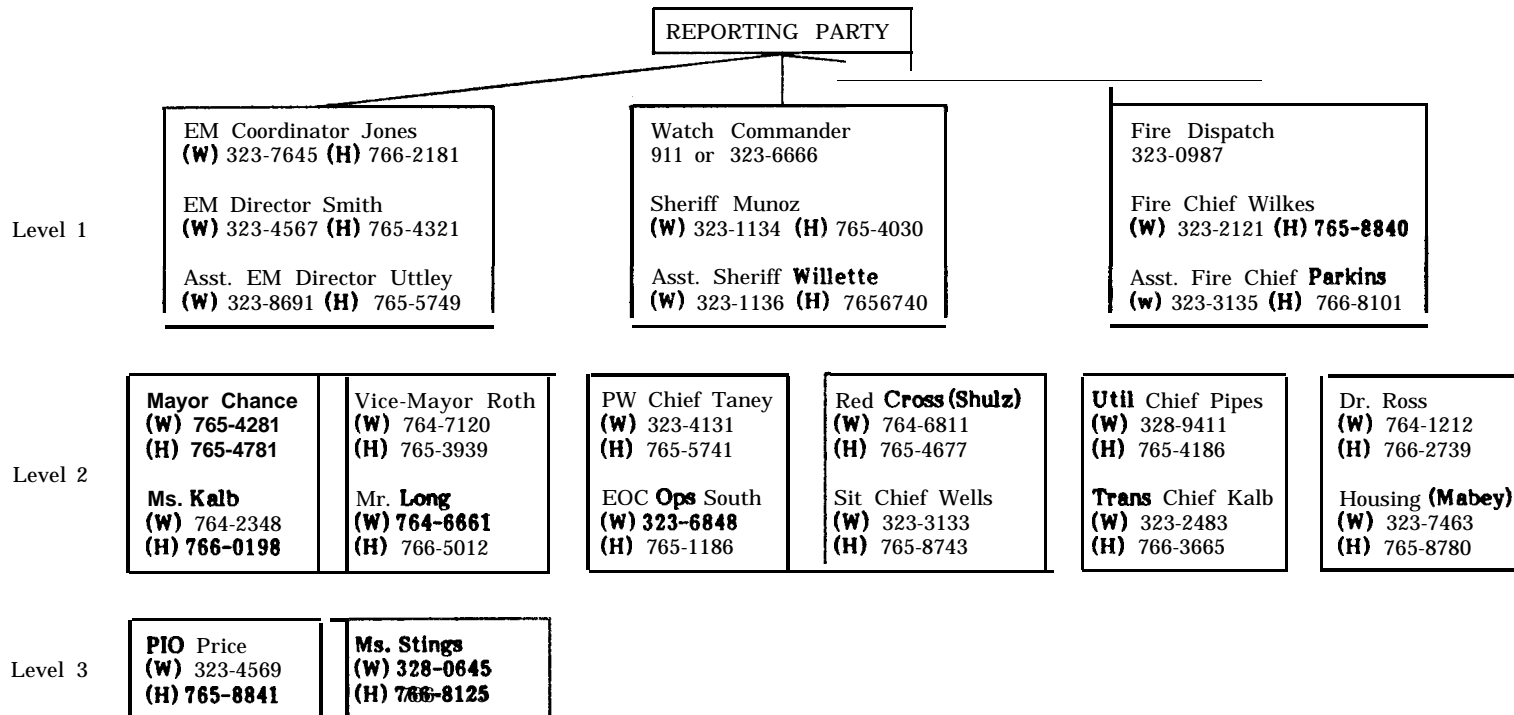
**CITY COUNCIL MEMBERS**

Mayor	Pat Chance	765-4281	765-4781	_____
Vice Mayor	Earl Roth	764-7120	765-3939	_____
Councilwoman	Sher Kalb	764-2348	766-0 198	_____
Councilman	Wes Long	765-666 1	766-50 12	_____
Councilwoman	Bea Stings	328-0645	766-8125	_____

6/1/80

## CASCADE ALERT SYSTEM

- Step One: The party reporting an impending or actual emergency should contact at least one of the persons in each of the three boxes at Level 1.
- Step Two: The person at Level 1 alerted by the reporting party should first contact at least one of the persons in the Level 2 boxes, then contact the other persons within his own box.
- Step Three: Persons at Level 2 who receive an alert message should contact the person in the Level 3 box, then contact the other persons within his own box.



NOTIFICATION TABLE

	<u>EARTH- QUAKE</u>	<u>TOR- NADO</u>	<u>NUKE INCDT</u>	<u>HAZ MAT</u>	<u>AIR CRASH</u>	<u>FLOOD OR DAM PAIL</u>	<u>ATTACK- RELATED EMERGENCY</u>
<u>COUNTY STAFF</u>							
EM Director	x	x	x	x	x	x	x
Asst Director	x	x	x	x	x	x	x
EM Coordinator	x	x	x	x	x	x	x
Sheriff	x	x	x	x	x	x	x
FD Chief	x	x	x	x	x	x	x
PW Chief	x	x	x	x	x	x	x
'Transport	x	x	x			x	x
Utilities	x	x	x			x	x
<u>OTHER AGENCIES</u>							
Red Cross	x	x	x	x	x	x	x
Salvation Army	x	x			x	x	x
State EM Office			x	x	x	x	x
State Hwy Dept			x		x		x
State Police		x	x	x	x	x	x
National Guard	x	x				x	x
Schools	x	x	x	x		x	x
Airport			x	x		x	x
Seaport			x	x		x	x
Phone Company					x	x	x

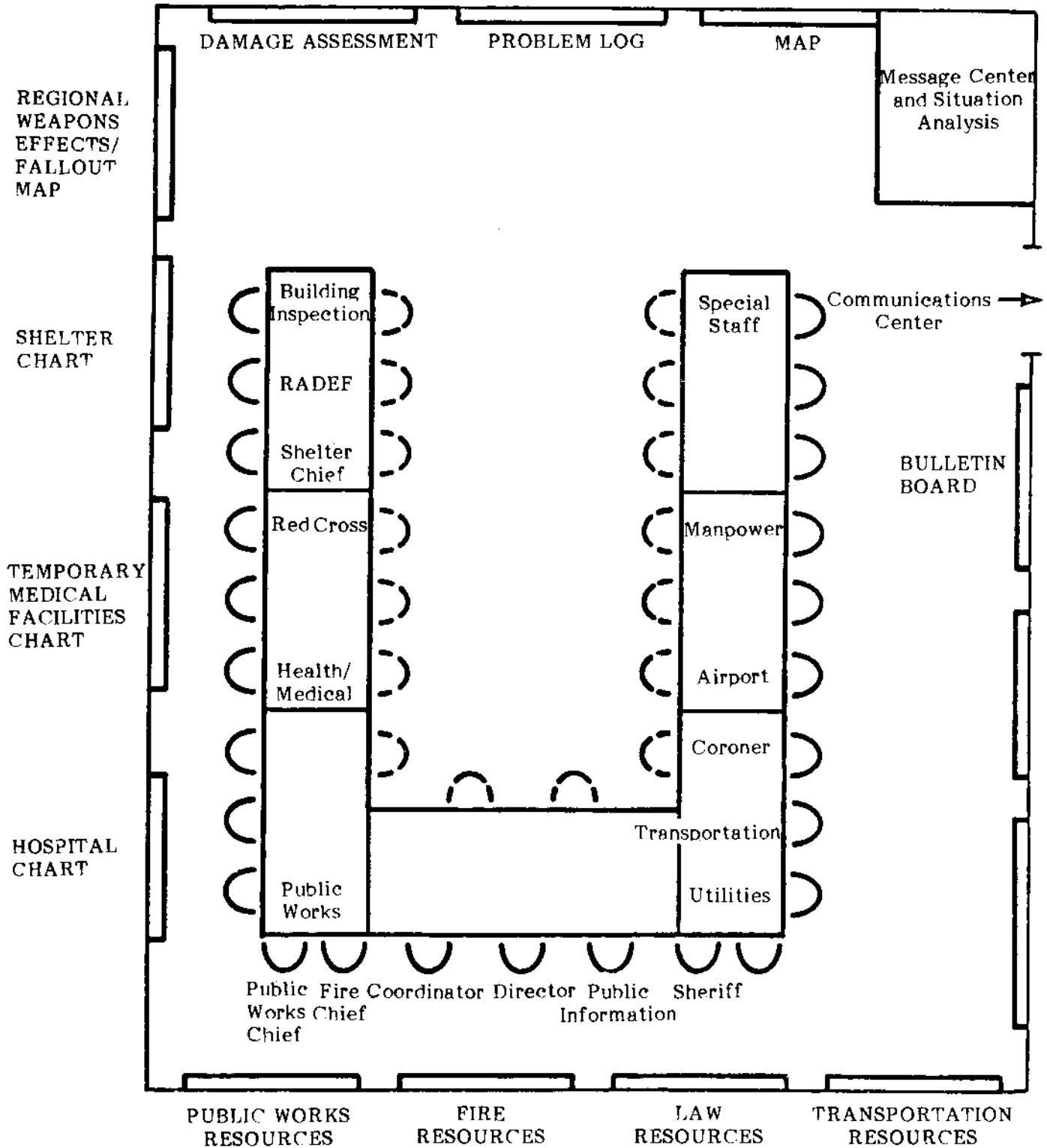
**TAB B**  
**FLOORPLANS**

**EOC Floorplan Sketch**  
**Alternate EOC Floorplan**

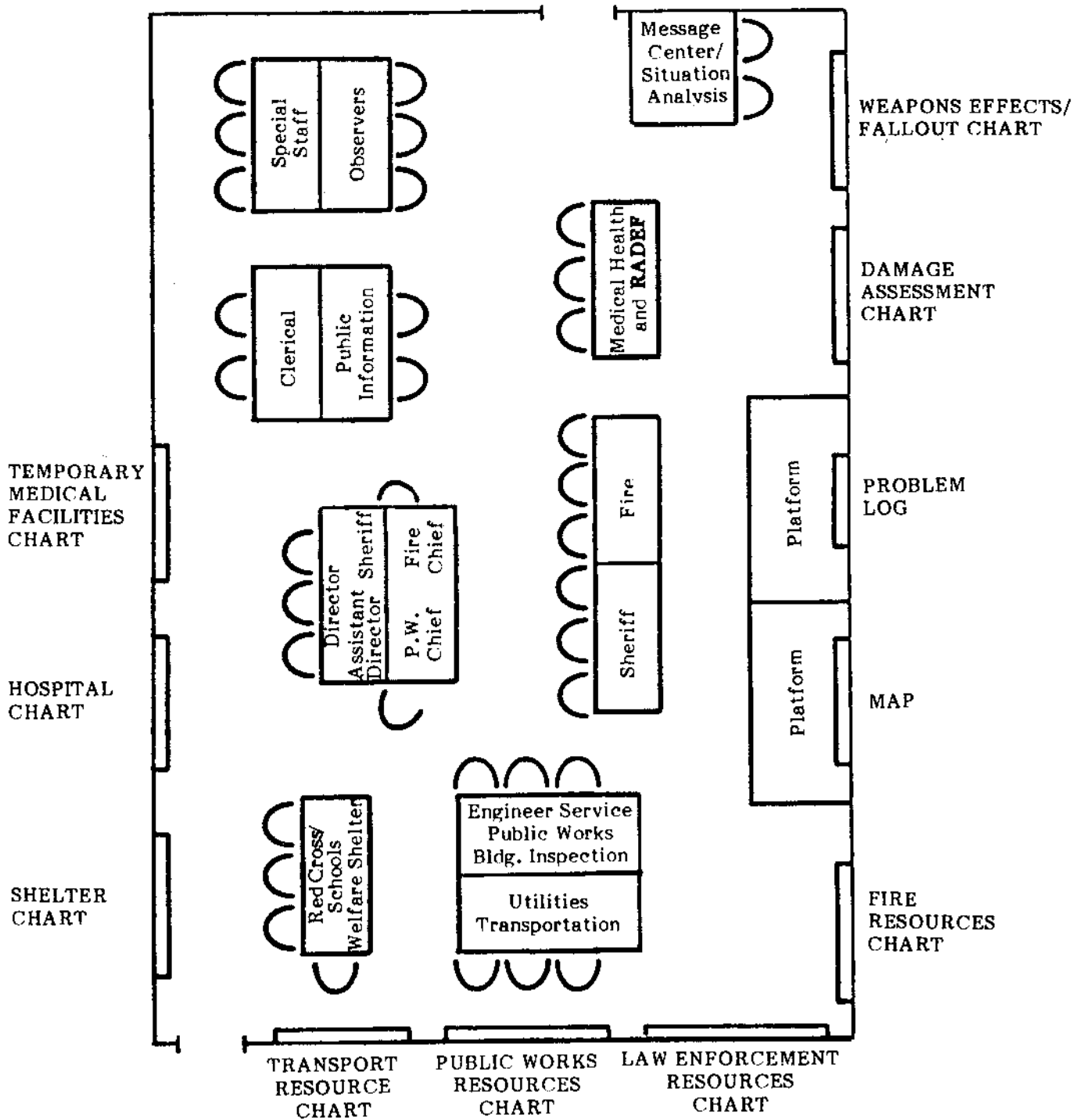


### EOC FLOORPLAN

(For major emergencies, add chairs to inside of U)



### ALTERNATE EOC FLOORPLAN (Corporate Yard Training Room)



**TAB C**

**FORMS**

Message Forms

**Proclamation of Existence  
of a Local Emergency**

**IRR Local Status Form**

**Local EOC Weapons-Effects  
Message Form**

MESSAGEFORM

CITY-COUNTY NAME \_\_\_\_\_

# _____
PRIORITY _____

EMERGENCY MESSAGE NO. _____	DATE/TIME _____
-----------------------------	-----------------

TO: \_\_\_\_\_ FROM: \_\_\_\_\_ VIA \_\_\_\_\_

(MARK <b>(A)</b> FOR ACTION. <b>(C)</b> FOR COORDINATION)		
IN	ROUTING	OUT
	Director	
	Fire	
	Police	
	Pub Wks.	
	Transp.	
	Utilities	
	Commun.	
	RADEF	
	Shelter	
	Red Cr.	
	Welfare	
	Medical	
	Schools	

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

FROM: \_\_\_\_\_ TO: \_\_\_\_\_ DATE/TIME \_\_\_\_\_  
(use coordination agency message as appropriate)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

DISTRIBUTION

IN	OUT		ACTION AGENCY	COORD. AGENCY	COORD. AGENCY
GREEN ACT AGENCY	DISPATCH	DIRECTED BY (SIGNATURE)			
WHITE ACT. AGENCY	DATA (RESPONSE)	DISPATCHED BY (INITIALS)			
GOLD ACT. AGENCY	COORD. AGENCY	DISPATCHED DATE/TIME			
YELLOW DATE (PROS)					
PINK RECEIVER FILE					

ACTION/DISPATCH  
ACTION/COORD.  
DATA BOARD

Forms are shown only as examples. FEMA does not stock or distribute these forms.

Date:

Time:

PROCLAMATION OF EXISTENCE OF A LOCAL EMERGENCY

WHEREAS, Ordinance 1478 of Greenfield County empowers the Director of Emergency Management to proclaim the existence or threatened existence of a local emergency when said county is affected or likely to be affected by a public calamity and the County Board is not in session; and

WHEREAS, the Director of Emergency Management of Greenfield County does hereby find:

That conditions of extreme peril to the safety of person and property have arisen within said County, caused by

; and

That the County Board of Greenfield County is not in session;

NOW, THEREFORE, IT IS HEREBY PROCLAIMED that a local emergency now exists throughout said County; and

IT IS FURTHER PROCLAIMED AND ORDERED that during the existence of said local emergency the powers, functions and duties of the emergency organization of this County shall be those prescribed by State law, by ordinances and resolutions of this County, and by the Greenfield County Emergency Plan, as approved by the County Board.

“This sample is for general guidance only and should not be incorporated into any State or local plan or standard operating procedures guidance. Instead, the State or local planner should request a sample form of proclamation or other instructions from the chief legal officer of the particular government involved.”

Mary Smith  
Director of Emergency Management

IRR LOCAL STATUS FORM

rom, \_\_\_\_\_

INCREASED READINESS REPORTING (IRR) LOCAL STATUS FORM		DATE:	REPORT NO.
INCREASED READINESS (IR) ACTIONS TO BE REPORTED			TODAY'S REPORT
<b>BASIC ACTIONS TO INCREASE LOCAL GOVERNMENT READINESS</b>			
1A	Head of government briefed and checklist of IR actions reviewed		1A
1B	Local Emergency Operations Plans reviewed and/or updated		1B
<b>EMERGENCY PUBLIC INFORMATION</b>			
2A	Moderate step-up in local CD public information activities		2A
2B	Local CSP.type information disseminated to public		2B
2C	Final public information crisis preparations short of taking shelter		2C
<b>SIGNIFICANT PUBLIC ACTIONS DURING IR PERIOD</b>			
3A	Estimated level of retail food sales above normal		3A
3B	Estimated level of retail sales above normal		3B
3C	Estimated number of persons who have evacuated		3C
3D	Estimated number of evacuees arriving		3D
<b>ACCELERATED TRAINING</b>			
4A	Accelerated training started		4A
4B	Number of shelter managers completing training		4B
4C	Number of radiological monitors completing training		4C
<b>EOC FACILITY IMPROVEMENT</b>			
5A	Improvement or development of EOC completed		5A
<b>DIRECTION AND CONTROL READINESS</b>			
6A	EOC manned 24 hours at standby level		6A
6B	EOC manned at minimum operational level		6B
6C	EOC fully manned		6C
<b>PUBLIC SHELTER IMPROVEMENT</b>			
10A	Expedient group shelter improvement and/or construction started		10A
10B	Expedient group shelter improvement and/or construction completed		10B
TEXT:			
		Comm. Initial	Time sent

SAMPLE FORM

Forms are shown only as examples. FEMA does not stock or distribute these forms.



**TAB D**

**DISPLAYS**

**Problem Log**

**Damage Assessment Chart**

**Hospital Status Chart**

**Temporary Medical Facilities Chart**

**Fallout Shelter Status Chart**

**Law Enforcement Resources Chart**

**Transportation Resources Chart**



**PROBLEM LOG**

Incident Number	Date/Time of Report	Problem/Location	Assigned To	Response
1	081430	Chlorine Leak/5th & Main	Fire Department	2 trucks

DAMAGE ASSESSMENT

PUBLIC-SECTOR DAMAGE	Total Public Damage	\$		0
	Public Facilities	\$	3D	0
	Federal Facilities	\$	3C	0
	Schools Grades 1-12	\$	3B	0
	Fed Aid System Road?		3A	0
	Total Private Damage	\$		30,000
PRIVATE-SECTOR DAMAGE	Private Utilities	\$	2I	0
	Private Schools	\$	2H	0
	Private Hospitals	\$	2G	0
	Railroads	\$	2F	0
	Agriculture	\$	2E	0
	Businesses Destroyed	#	2D	0
	Businesses Damaged	#	2C	0
	Homes Destroyed	#	2B	0
	Homes Damaged	#	2A	1
	Number Dead	#	1B	0
	Number Injured	#	1A	3
TIME OF REPORT				1430
INCIDENT AND LOCATION				1

HOSPITAL STATUS

	BEDS	BEDS AVAILABLE	PATIENTS SENT	BURN CASES SENT	COMMUNICATIONS	REMARKS
Hospital A 110 Main	120				368-1464	
Hospital B 847 Spruce	75				362-1211	
Hospital C 2028 Elm	50				493-1080	
PDH #704 Weldon Rec Ctr 85 Mission	200				493-6861	

TEMPORARY MEDICAL FACILITIES

FACILITY	LOCATION	PATIENTS TREATED	COMMUNICATIONS	REMARKS
FAS- St. Lukes Church	475 Walnut		362-1848	
FAS- Central High School	47 Grove		367-8613	
FAS- Morton Community Center	1083 Pine		492-8486	
Downtown Clinic	1430 Main		493-1444	

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May 29, 1984

CPG 1-20

FALLOUT SHELTER STATUS

CPG 1-20

LOCATION				FACILITY NAME STREET ADDRESS	CAPACITY			Current occupancy	STOCKS (Person/Day)		Manager	Commo	Remarks
Zip Code	Census Tract	Std Loc 3834-	Map Grid		PP 0-1	PP 2-8	Total		Food	Water			
0000	3147	3011	15-A7	Hillside High School 47 Main	80	20	1100		1,000	1.20	J. Wilcox	28-6147	
0001	3148	3014	15-B4	Greenville High School 01 N. 12th Street	100	300	1500		1,500	1,500	J. Defoe	28-1388 EACT H 23	
0001	3149	3018	15-D8	Railroad Tunnel 5 Frontage Road et Elm		000	5000		0,000	60,000	R. Renzi		Alert h 14
60001	3148	1016	15-B2	Greenville College 00 Campus Drive	600	3,100	3,700		0,000	50.00	J. Brown	28-5400 A-4XY2	
60000	3147	3012	15-A6	Melton Office Building 18 Main Street	110	50	160		900	90	J. Wong	64-7118	

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May 29, 1984

LAW ENFORCEMENT RESOURCES

UNIT	LOCATION	COMPOSITION	ASSIGNMENT	COMMO	REMARKS-
Wilton County Sheriff-Mutual Aid	VFW Hall 42 Elm	1 Lt. 5 officers	Search and Rescue Highland Area	765-1861 TAC 3	
Law Enforcement Explorer Post 32	Hillbrook School 202 Maple St.	? leaders 24 scouts	Search and Rescue Brookdale Area	323-4884 REACT Tm 7778 Ch. 15	
Noodvill Mounted Patrol	Woodvill Stables 100 Woodville Rd.	12 horses and riders	Search and Rescue Big Rock State Park	ALERT 174 Ch. 19	
sheriff's Reserves	County Government Center	1 Lt, 1 Sgt, 16 officers	Downtown Patrol	TAC 2	

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May 29, 1984

CPG 1-20

TRANSPORTATION RESOURCES

ORGANIZATION	DISPATCH LOCATION	VEHICLE FLEET COMPOSTION	ASSIGNMENT	COMMO	REMARKS
123d Transportation Co. National Guard	Armory, 137 Main	40 2 -ton trucks 8 5-ton trackors 16 semi-trailers		328-16 17	
School Bus Yard	939 Oak St.	53 25-passenger buses		323-4888	
Mountain Charter Bus	144 S. 17th St.	4 50-passenger buses		764-53 10	
Bud's Taxi	87 Main	8 taxis		764-1818	
U.S. Postal Service	457 Wilow	24 -ton, 6 1-ton trucks		323-9999	
Burke Airport Shuttle	Burke Airport	17 g-passenger vans		328-6410	
Red Cross	40 Main St.	1 disaster bus 3 station wagons		764-88 12	
<u>Aviation</u>					
Civil Air Patrol	Greenville Airport	Numerous private aircraft		323-3088	VHF 127.5
Sheriff's Air Squadron	Greenville Airport	12 private aircraft		323-3055	VHF 125.8
Coast Guard	Burke Airport	3 H-61 helicopters		328-6410	
223d MedEvac (MAST)	Fort William	25 UH-1 helicopters		<b>281-MAST</b>	

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(

)

TAB E

COMMUNICATIONS REFERENCE INFORMATION

Message Priority Code

Official Ten Signal List

Radio Amateur Q Code

Radio Amateur CW Code

Transmitting Numbers

Phonetic Alphabet

Time Conversion Table



**MESSAGE PRIORITY CODE**

- Priority 1- Lives endangered-immediate response required**
- Priority 2- Lives endangered-fast response required**
- Priority 3- Timely operational response required**
- Priority 4- Routine Data and logistics messages**



Associated Public-Safety Communications Officers, Inc.



OFFICIAL TEN SIGNAL LIST

Revised **6/1/74**

Ninth Edition June 1, 1974

**REVISED**

**REVISED**

- |                                |                                       |  |
|--------------------------------|---------------------------------------|--|
| 10-1 — Signal Weak             | 10-15 — Message Delivered             | <b>10-28</b> — Ownership Information                     |
| 10-2 — Signal Good             | <b>10-16</b> — Reply to Message       | <b>10-29</b> — Records Check                             |
| 10-3 — Stop Transmitting       | <b>10-17</b> — <b>Enroute</b>         | 10-30 — Danger/Caution                                   |
| <b>10-4</b> — Affirmative (OK) | <b>10-18</b> — Urgent                 | <b>10-31</b> — Pick Up                                   |
| 10-5 — Relay (Io)              | 10-19 — (In) Contact                  | <b>10-32</b> — ___ Units Needed<br>(Specify/Number/Type) |
| <b>10-6</b> — Busy             | <b>10-20</b> — location               | 10-33 — Help Me Quick                                    |
| 10-7 — Out of Service          | 10-21 — Call ( ) <u>by</u> P h o n e  | <b>10-34</b> — Time                                      |
| 10-8 — In Service              | 10-22 — Disregard                     | <b>10-35</b> — Reserved —                                |
| 10-9 — Say Again               | <b>10-23</b> — Arrived at Scene       | <b>10-36</b> — Reserved —                                |
| <b>10-10</b> — Negative        | <b>10-24</b> — Assignment Completed   | <b>10-37</b> — Reserved —                                |
| 10-11 — _____ <b>On</b> Duty   | 10-25 — Report to (Meet)              | <b>10-38</b> — Reserved —                                |
| 10-12 — Stand By (Stop)        | <b>10-26</b> — Estimated Arrival Time | <b>10-39</b> — Reserved —                                |
| 10-13 — Existing Conditions    | 10-27 — license/Permit<br>Information |  |
| 10-14 — Message/Information    |                                       |  |

The numbering, sequence, words or word phrasing of the above signals may not be altered. nor may the reserved signals be otherwise implemented except by APCO. Any user may employ signal numbers upward beginning with 10-40 as may best suit his own needs.

## RADIO AMATEUR Q CODE\*

- QRG Will you tell me my exact frequency (or that of ...)? Your exact frequency (of that of ...) is ... kHz.
- QRH Does my frequency vary? Your frequency varies.
- QRI How is the tone of my transmission? The tone of your transmission is ... (1 Good, 2 Variable, 3 Bad).
- QRK What is the intelligibility of my signals (or those of ...)? The intelligibility of your signals (or those of ...) is ... (1 Bad, 2 Poor, 3 Fair, 4 Good, 5 Excellent).
- QRL Are you busy? I am busy (or I am busy with ...). Please do not interfere.
- QRM Is my transmission being interfered with? Your transmission is being interfered with ... (1 Nil, 2 Slightly, 3 Moderately, 4 Severely, 5 Extremely).
- QRN Are you troubled by static? I am troubled by static ... (1-5 as under QRM).
- QRO Shall I increase power? Increase power.
- QRP Shall I decrease power? Decrease power.
- QRQ Shall I send faster? Send faster (... wpm).
- QRS Shall I send more slowly? Send more slowly (... wpm).
- QRT Shall I stop sending? Stop sending.
- QRU Have you anything for me? I have nothing for you.
- QRV Are you ready? I am ready.
- QRW Shall I inform ... that you are calling him on ... kHz? Please inform ... that I am calling on ... kHz.
- QRX When will you call me again? I will call you again at ... hours (on ... kHz).
- QRY What is my turn? Your turn is number ...
- QRZ Who is calling me? You are being called by ... (on ... kHz).
- QSA What is the strength of my signals (or those of ...)? The strength of your signals (or those of ...) is ... (1 Scarcely perceptible, 2 Weak, 3 Fairly good, 4 Good, 5 Very good).
- QSB Are my signals fading? Your signals are fading.
- QSD Are my signals mutilated? Your signals are mutilated.
- QSG Shall I send ... messages at a time? Send ... messages at a time.
- QSK Can you hear me between your signals and if so can I break in on your transmission? I can hear you between my signals, break in on my transmission.
- QSL Can you acknowledge receipt? I am acknowledging receipt.
- OSM Shall I repeat the last message which I sent you, or some previous message? Repeat the last message which you sent me (or message(s) number(s) ...).
- OSN Did you hear me (or ...) on ... kHz? I did hear you (or ...) on ... kHz.
- OSO Can you communicate with ... direct or by relay? I can communicate with ... direct (or by relay through ...).
- OSP Will you relay to ...? I will relay to ...
- OSU Shall I send or reply on this frequency (or on ... kHz)? Send or reply on this frequency (or on ... kHz)?
- OSV Shall I send a series of Vs on this frequency (or ... kHz)? Send a series of Vs on this frequency (or ... kHz).
- QSW Will you send on this frequency (or on ... kHz)? I am going to send on this frequency (or on ... kHz).
- OSX Will you listen to ... on ... kHz? I am listening to ... on ... kHz.
- OSY Shall I change to transmission on another frequency? Change to transmission on another frequency (or on ... kHz).
- OSZ Shall I send each word or group more than once? Send each word or group twice (or ... times).
- OTA Shall I cancel message number ...? Cancel message number ...
- OTB Do you agree with my counting of words? I do not agree with your counting of words. I will repeat the first letter or digit of each word or group.
- OTC How many messages have you to send? I have ... messages for you (or for ...).
- OTH What is your location? My location is ...
- QTR What is the correct time? The time is ...

## The RST System

## READABILITY

- 1- Unreadable.
- 2- Barely readable, occasional words distinguishable.
- 3- Readable with considerable difficulty.
- 4- Readable with practically no difficulty.
- 5- Perfectly readable.

## SIGNAL STRENGTH

- 1- Faint signals barely perceptible.
- 2- Very weak signals.
- 3- Weak signals.
- 4- Fair signals.
- 5- Fairly Good signals.
- 6- Good signals.
- 7- Moderately strong signals.
- 8- Strong signals.
- 9- Extremely strong signals.

\*Reprinted with permission of the American Radio Relay League.

RADIO AMATEUR CONTINUOUS WAVE (CW) CODE\*

<b>AA</b>	All after	<b>GN</b>	Good night	<b>SASE</b>	Self-addressed, stamped envelope
<b>AB</b>	All before	<b>GND</b>	Ground	<b>SED</b>	Said
<b>ABT</b>	About	<b>GUD</b>	Good	<b>SIG</b>	Signature, signal
<b>ADR</b>	Address	<b>HI</b>	The telegraphic laugh; high	<b>SINE</b>	Operator's personal initials or nickname
<b>AGN</b>	Again	<b>HR</b>	Here, hear	<b>SKED</b>	Schedule
<b>ANT</b>	Antenna	<b>HV</b>	Have	<b>SR!</b>	Sorry
<b>BCI</b>	Broadcast interference	<b>HW</b>	How	<b>SSB</b>	Single sideband
<b>BCL</b>	Broadcast listener	<b>LID</b>	A poor operator	<b>s v c</b>	Service, prefix to service message
<b>BK</b>	Break; break me; break in	<b>MA,MILS</b>	Milliampere	<b>T</b>	Zero
<b>BN</b>	All between; been	<b>MSG</b>	(Message; prefix to radiogram	<b>TFC</b>	Traffic
<b>BUG</b>	Semi-automatic key	<b>N</b>	No	<b>TMW</b>	Tomorrow
<b>B4</b>	Before	<b>NCS</b>	Net control station	<b>TN X-TKS</b>	Thanks
<b>C</b>	Yes	<b>ND</b>	Nothing doing	<b>TT</b>	That
<b>CFM</b>	Confirm; I confirm	<b>NIL</b>	Nothing; I have nothing for you	<b>TU</b>	Thank you
<b>CK</b>	Check	<b>NM</b>	No more	<b>TVI</b>	Television Interference
<b>CL</b>	I am closing my station; call	<b>NR</b>	Number	<b>TX</b>	Transmitter
<b>CLD-CLG</b>	Called; calling	<b>NW</b>	Now; I resume transmission	<b>TX</b>	Text
<b>CQ</b>	Calling any station	<b>OB</b>	Old boy	<b>UR-URS</b>	Your; you're; yours
<b>CUD</b>	Could	<b>OC</b>	Old chap	<b>VFO</b>	Variable-frequency oscillator
<b>CUL</b>	See you later	<b>OM</b>	Old man	<b>VY</b>	Very
<b>CUM</b>	Come	<b>OP-OPR</b>	Operator	<b>WA</b>	Word after
<b>CW</b>	Continuous wave (i.e., radio telegraph )	<b>OT</b>	Old timer; old top	<b>WB</b>	Word before
<b>DLD-DLVD</b>	Delivered	<b>PBL</b>	Preamble	<b>WD-WDS</b>	Word; words
<b>DR</b>	Dear	<b>PSE</b>	Please	<b>WKD-WKG</b>	Worked; working
<b>DX</b>	Distance, foreign countries	<b>PWR</b>	Power	<b>WL</b>	Well; will
<b>ES</b>	And, &	<b>PX</b>	Press	<b>WUD</b>	Would
<b>FB</b>	Fine business, excellent	<b>R</b>	Received as transmitted; we	<b>w x</b>	Weather
<b>FM</b>	Frequency modulation	<b>RCD</b>	Received	<b>XCVR</b>	Transceiver
<b>GA</b>	Go ahead (or resume sending)	<b>RCVR (RX)</b>	Receiver	<b>XMTR (TX)</b>	Transmitter
<b>GB</b>	Good-by	<b>REF</b>	Refer to; referring to; reference	<b>XTAL</b>	Crystal
<b>CBA</b>	Give better address	<b>RFI</b>	Radio frequency Interference	<b>XYL(YF)</b>	Wife
<b>GE</b>	Good evening	<b>RIG</b>	Station equipment	<b>YL</b>	Young lady
<b>GG</b>	Going	<b>RPT</b>	Repeat; I repeat	<b>73</b>	Best regards
<b>GM</b>	Good morning	<b>RTTY</b>	Radioteletype	<b>88</b>	Love and kisses
		<b>RX</b>	Receiver		

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**TRANSMITTING NUMBERS**

Numbers should first be spoken individually, then the entire number read as a whole. The number 1,234 should be transmitted "one, two three four; one thousand two hundred thirty four."

Numbers should be pronounced as follows:

1-	Wun	6-	Silks
2-	Too	7-	Sev-ven
3-	Th-r-ee	8-	Ate
4-	Fo-wer	9-	Nie-yen
5-	Fie-yev	IO-	Wun zee-row

PHONETIC ALPHABET

<b>A-</b>	Alfa	N-	November
<b>B-</b>	Bravo	<b>O-</b>	Oscar
C-	Charlie	<b>P-</b>	Papa
D-	Delta	<b>Q-</b>	Quebec
<b>E-</b>	Echo	<b>R-</b>	Romeo
<b>F-</b>	Foxtrot	<b>S-</b>	Sierra
G	Golf	<b>T-</b>	Tango
H-	Hotel	<b>U-</b>	Uniform
I-	India	V-	Victor
<b>J-</b>	Juliatt	W-	Whiskey
<b>K-</b>	Kilo	<b>X-</b>	X-ray
<b>L-</b>	Lima	<b>Y-</b>	Yankee
<b>M-</b>	Mike	<b>Z-</b>	Zulu

## TIME-CONVERSION TABLE

<i>Coordinated Universal Time (Z)</i>	<i>Eastern Standard</i>	<i>Central Standard</i>	<i>Mountain Standard</i>	<i>Pacific Standard</i>	<i>Ha waii Alaska Standard</i>
2400 Midnight	1900 7:00 pm	1800 6:00 pm	1700 5:00 pm	1600 4:00 pm	1400 2:00 pm
0100	2000 8:00 pm	1900 7:00 pm	1800 6:00 pm	1700 5:00 pm	1500 3:00 pm
0200	2100 9:00 pm	2000 8:00 pm	1900 7:00 pm	1800 6:00 pm	1600 4:00 pm
0300	2200 10:00 pm	2100 9:00 pm	2000 8:00 pm	1900 7:00 pm	1700 5:00 pm
0400	2300 11:00 pm	2200 10:00 pm	2100 9:00 pm	2000 8:00 pm	1800 6:00 pm
<b>0500</b>	2400 Midnight	2300 11:00 pm	2200 10:00 pm	2100 9:00 pm	1900 7:00 pm
<b>0600</b>	0100 1:00 am	2400 Midnight	2300 11:00 pm	2200 10:00 pm	2000 8:00 pm
0700	0200 2:00 am	0100 1:00 am	2400 Midnight	2300 11:00 pm	2100 9:00 pm
0800	0300 3:00 am	0200 2:00 am	0100 1:00 am	2400 Midnight	2200 10:00 pm
<b>0900</b>	0400 4:00 am	0300 3:00 am	0200 2:00 am	0100 1:00 am	2300 11:00 pm
1000	0500 5:00 am	0400 4:00 am	0300 3:00 am	0200 2:00 am	2400 Midnight
1100	<b>0600</b> 6:00 am	0500 5:00 am	0400 4:00 am	0300 3:00 am	0100 1:00 am
1200	0700 7:00 am	0600 6:00 am	<b>0500</b> 5:00 am	0400 4:00 am	0200 2:00 am
1300	0800 8:00 am	0700 7:00 am	0600 6:00 am	0500 5:00 am	0300 3:00 am
<b>1400</b>	0900 9:00 am	0800 8:00 am	0700 7:00 am	0600 6:00 am	0400 4:00 am
<b>1500</b>	1000 10:00 am	0900 9:00 am	0800 8:00 am	0700 7:00 am	0500 5:00 am
1600	1100 11:00 am	1000 10:00 am	0900 9:00 am	0800 8:00 am	0600 6:00 am
1700	1200 Noon	1100 11:00 am	1000 10:00 am	0900 9:00 am	0700 7:00 am
1800	1300 1:00 pm	<b>1200</b> Noon	<b>1100</b> 11:00 am	1000 10:00 am	0800 8:00 am
1900	1400 2:00 pm	1300 1:00 pm	1200 Noon	1100 11:00 am	0900 9:00 am
<b>2000</b>	1500 3:00 pm	1400 2:00 pm	1300 1:00 pm	1200 Noon	1000 10:00 am
2100	1600 4:00 pm	<b>1500</b> 3:00 pm	1400 2:00 pm	1300 1:00 pm	1100 11:00 am
2200	1700 5:00 pm	1600 4:00 pm	1500 3:00 pm	1400 2:00 pm	1200 Noon
<b>2300</b>	1800 6:00 pm	1700 5:00 pm	1600 4:00 pm	1500 3:00 pm	1300 1:00 pm

Appendix H

## TRAINING

A. Emergency Staff Training

EOC managers and staff should be trained in responding to emergencies, understanding implementation plans and procedures, and using the EOC to maximum potential. Each specialized staff division should be given individualized attention. Specific training needs are listed below.

1. Clerical Staff

- a. Familiarization with proper maintenance of data, display, and compilation so information can be rapidly retrieved and presented to decisionmakers during emergencies.
- b. Training in EOC liaison roles to enable better response to requests for information and assistance from outside sources.
- c. Exposure to EOC communications and routing procedures, knowing who gets what and when as information is disseminated through the EOC.

2. Core Staff

- a. Three or four persons should be selected for detailed training on activating and operating the EOC in emergencies.
- b. The core staff should be capable of explaining the EOC role to all field operating forces and other officials or agencies interacting with the EOC.
- c. They should be aware of EOC information requirements.

3. Volunteer Staff.

- a. A practical course on functions and operations procedures of the EOC should be provided to volunteers. This will help them understand their role in the overall structure, and familiarize them with key tasks required of volunteers.
- b. Volunteers need a sense of participation and value; efforts should be made to include them in preparing and modifying EOC operational planning.
- c. Periodic information tours of the EOC, particularly following expansions or modifications, addition of new equipment or creation of alternate EOCs.
- d. Procedural briefings in which a new SOP is reviewed and questions answered should be presented on a regular basis.
- e. Volunteers should participate in facility and systems testing.



## B. Exercising

To maintain the highest level of preparedness, both the EOC facility and its personnel should be exercised on a regular basis. The following types of exercises are all valuable in increasing response abilities and pinpointing problems.

### Operational Field Exercises

An exercise designed primarily for the purpose of testing and evaluations of the integrated emergency preparedness capability of community/county and/or , State jurisdictions in an operational environment. This type of exercise will include the mobilization of personnel. and resources sufficient to demonstrate on-site coordination and response.

### Emergency Operations Simulation (EOS)

An exercise used primarily to demonstrate the conduct of centralized operations in an Emergency Operations Center or interim EOC facility which simulates the use of available resources. (In the process it is useful in training emergency staff in EOC operations, in addition to getting an understanding of one another's respective emergency responsibilities).

### Tabletop or Planning Seminar

An exercise in which key officials and agency representatives are presented with a series of hypothetical simulated problems based on a scenario. It is usually informal and is designed to elicit discussions by the participants as they attempt to resolve problems based on their assigned responsibilities as identified in emergency plans.

### Drills

A training activity aimed at perfecting facility and skills, especially by regular practice.

1. Included in the regular exercise schedule should be a review of auxiliary forces and an examination of mutual aid agreements. Checks should be made to see if adjoining jurisdictions that have promised additional field forces (e.g., fire, police, and public works personnel) are still capable-and willing-to respond. Heads of local governments, city managers, mayors, county executives, governors, and other key leaders who would be called upon to make decisions should be included as often as possible. These officials will have to make critical choices and they should be totally familiar with available options and facilities, equipment, and personnel on hand.

2. Regular mechanical/equipment checks should be an integral part of every EOC plan. Emergency systems, lighting, backup power, and communications must be checked for reliability and operability. Battery-powered equipment, from portable radios to hand-held calculators should be periodically checked. Display functions should be reviewed, modified, and updated as the local environment changes. If EOC plans include provisions for designated populations, set numbers of hospital beds, or other givens, changes in these basic figures should be reflected on data storage and display systems.

Ultimately, if an EOC is to respond to a variety of crises, it must be prepared to react with current data, functioning equipment, and trained personnel. If any of these key elements fail, the EOC may not be able to serve the jurisdiction it was designed to protect.