

FLOOD EMERGENCY ACTION PROCEDURES

PREPARATION GUIDE FOR SMALL COMMUNITIES

FIRST EDITION



FLOOD EMERGENCY ACTION PROCEDURES

PREPARATION GUIDE FOR SMALL COMMUNITIES

FIRST EDITION

This manual is the FIRST EDITION and is subject to modification. The Midwest Assistance Program (MAP) anticipates there will be improvements to the methodology as small communities use the manual to prepare Flood Emergency Action Procedures. MAP would also appreciate receiving any comments or suggestions for modification from communities, organizations, agencies, and others with an interest in assisting small, rural communities to be more self-reliant in preparing for flood events.

Funding is provided by the Bush Foundation and St. Paul Foundation.



Prepared by:
Midwest Assistance Program, Inc.
P. O. Box 81
New Prague, Minnesota 56071
800.822.2981

TABLE OF CONTENTS

SECTION A	1
THE PLANNING PROCESS	1
<i>Introduction</i>	1
<i>Why Have A Flood Emergency Action Procedure (FEAP)?</i>	1
<i>Preparing The First FEAP</i>	2
<i>What Should Be In The First FEAP?</i>	2
<i>Community Involvement Is Critical!</i>	3
<i>Can More Be Done?</i>	4
<i>FEAP Preparation Manual Use</i>	4
<i>Updating A FEAP</i>	6
<i>Maintain A Distribution List</i>	6
SECTION B	8
KEY PERSONNEL ORGANIZATION	8
<i>Introduction</i>	8
<i>Positions</i>	8
<i>Organizational Chart</i>	10
<i>Personnel Selection</i>	10
<i>Pay For Key Personnel</i>	11
SECTION C	14
FLOOD EMERGENCY CONTACTS	14
<i>Introduction</i>	14
<i>Contact Organization</i>	14
<i>Emergency Contacts Information</i>	15
<i>Annual Updating</i>	16
SECTION D	17
FLOOD RECOGNITION DATA	17
<i>Introduction</i>	17
<i>Why Is Flood Recognition Data Needed?</i>	18
<i>Where Can Flood Data Be Obtained?</i>	19
<i>How Much Flood Recognition Data?</i>	20
<i>Descriptive Flood Recognition Narrative</i>	21
<i>Develop A Flood History Library</i>	21
SECTION E	25
TASK/STEP FLOOD PROTECTION	25
<i>Introduction</i>	25
<i>Task Identification</i>	26
<i>Task Location Map</i>	26
<i>Task Supervisor/Team Leader Identification</i>	27
<i>Task Flood Levels</i>	27
<i>Task Description</i>	27
<i>Task Location Description</i>	28
<i>Task Personnel</i>	28
<i>Tools, Equipment And Materials</i>	28
<i>Steps For Task Completion</i>	29
<i>Optional Photographs</i>	29

Materials And Equipment List.....	30
Material And Equipment Supplier List	30
SECTION F	33
HAZARDOUS MATERIALS NOTIFICATION.....	33
<i>Introduction</i>	<i>33</i>
<i>Locating And Identifying Hazardous Materials</i>	<i>34</i>
<i>Contact Information</i>	<i>34</i>
<i>Relocation Or Protection Plans</i>	<i>35</i>
<i>Annual Updating</i>	<i>35</i>
SECTION G	36
UTILITIES NOTIFICATION	36
<i>Introduction</i>	<i>36</i>
<i>Locating And Identifying Utility Facilities</i>	<i>37</i>
<i>Inclusion As A Task</i>	<i>37</i>
<i>Cooperative Agreement.....</i>	<i>38</i>
<i>Annual Updating</i>	<i>38</i>
<i>Section Optional</i>	<i>38</i>
SECTION H.....	42
EMERGENCY SHELTER DESIGNATION	42
<i>Introduction</i>	<i>42</i>
<i>Identifying Possible Flood Emergency Shelters</i>	<i>43</i>
<i>Inventory The Possible Shelters.....</i>	<i>43</i>
<i>Flood Emergency Shelter Selection</i>	<i>44</i>
<i>Flood Emergency Shelter Improvements</i>	<i>45</i>
SECTION I	47
EVACUATION PROCEDURES	47
<i>Introduction</i>	<i>47</i>
<i>Written Evacuation Procedures</i>	<i>48</i>
<i>Identifying Evacuation Routes</i>	<i>48</i>
<i>Evacuation Warning.....</i>	<i>49</i>
APPENDIX A	
SAMPLE BLANK FORMS	
APPENDIX B	
SAMPLE COMPLETED FORMS AND RECORDS	

SECTION A

THE PLANNING PROCESS

FLOOD EMERGENCY ACTION PROCEDURES (FEAP) PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

The Midwest Assistance Program, Inc. (MAP), through funding from the Bush Foundation and St. Paul Foundation, developed this flood preparedness planning methodology for small rural communities. This methodology allows communities to be self-sufficient in a flood emergency. MAP received input, suggestions, and comments from small communities, counties, watershed districts, state agencies, federal agencies, and others in developing this methodology. The methodology and this manual are subject to refinement as MAP continues to work with communities, organizations, and agencies enhancing individual community flood preparedness. The methodology presented in the following sections of this manual should be of use to most small rural communities that are subject to recurring flooding.

This planning process is a suggested format that can be modified to suit the individual community's needs or desires. There is no 'cast in stone' method for flood preparedness plan preparation.

Why Have A Flood Emergency Action Procedure (FEAP)?

Most small rural communities rely on one or two residents or staff that have the personal knowledge needed to take action in preparing for any flood event. Larger rural communities generally have more paid staff to cope with regular flood threats, but will probably have to rely upon untrained help during major flood events. If these people are not available or are overwhelmed with tasks, the loss of their expertise can be disastrous.

Because of the 1997 Flood in the Red River Valley of the North and the Upper Minnesota River Valley, many communities improved their flood protection measures, which may lead to a false sense of security. There are always some flood protection

measures that need to be accomplished such as culvert closings, pump placements, levee closures across roads, etc.

A community with a FEAP, prepared in a simple, easily understood, instructional format, reduces its reliance on the personal knowledge of a few people to protect itself when a flood event is predicted. MAP feels that specific flood protection measures should be in a step by step format to allow inexperienced personnel or volunteers to accomplish these flood preparation tasks with minimal supervision. This allows key personnel from the community to coordinate the operations. As a result, the Tasks that need to be accomplished can be completed simultaneously.

Preparing The First FEAP

The first FEAP should be prepared based on the community's present flood protection measures which may include sandbags, pumps, levee closures, and other operations necessary to protect the community from recurring river or overland flooding.

Consideration can be given to when a Task should be implemented based on flood severity predictions from forecasting agencies and local indicators such as the predicted flood crests both upstream and downstream of the community. This prioritization allows the lowest areas to be protected first with later protection measures being accomplished as the water rises. While there is some risk in not accomplishing all the Tasks, due to the unpredictability of nature, some Tasks may not be required in a given flood event and the clean up costs can be reduced.

The first FEAP can be prepared with technical and capacity building assistance from MAP. The involvement of elected officials, staff, city consultants, county emergency management, and state/federal officials to provide information about past experiences and methods used in flood protection is a necessity. A FEAP is an action procedure for the community's present situation.

What Should Be In The First FEAP?

The first FEAP can include the following:

- ◆ An organizational section designating key flood emergency personnel and responsibilities or authority.
- ◆ Flood emergency contacts such as the County DEM, Corps of Engineers, FEMA, State DEM, ambulance service, relief organizations, weather service, etc.
- ◆ Flood recognition and historic data for reference.

-
- ◆ A prioritized list of specific Tasks to be accomplished.
 - ◆ Assignment of Task Team Leaders and volunteers.
 - ◆ Location map(s) identifying the Task work site.
 - ◆ Communication methods to be used to coordinate completion of the Tasks.
 - ◆ Detailed instructions for each specific Task including materials/equipment needed and the location of the materials/equipment. This section may include photographs or drawings to enhance the instructions.
 - ◆ Notification list for hazardous materials within the community that may require relocation or protection at specific flood levels. This would include herbicides, pesticides, fuel storage, and other potential hazards that could be released by a flood.
 - ◆ Coordination with private utilities such as power and telephone to reduce the loss of service potential.
 - ◆ A distribution list for the FEAP to provide updates to FEAP holders.
 - ◆ Other information useful in flood mitigation as the community needs.

Community Involvement Is Critical!

The community must be very actively involved in FEAP preparation because it is the COMMUNITY'S Flood Emergency Action Procedures. MAP can provide technical assistance in guiding communities through the process. The community must supply the knowledge and information for the FEAP and edit it until the community's needs are met.

MAP suggests a committee begin gathering data and writing the FEAP. Committee members should include individuals who actively participated in a recent flood fight as well as community officials and staff. Others can include school officials, congregate care operators, business owners and citizens. Use caution in keeping the group reasonably sized to allow the group to function. The committee should determine meeting times to reduce interference with members' work schedules in order to obtain their input into the FEAP. MAP is available to attend committee meetings and provide guidance.

The committee should involve and consult with community staff such as the police, fire, and utility personnel to consider their input. Representatives of the private utilities that serve the community such a power and telephone companies should be invited to at least one meeting to provide insight into their services and needs during a flood event. County officials should be included for insight into their role during a flood event.

Final review of the FEAP should be open to the public for comment before adoption by the city council.

Can More Be Done?

The first FEAP can become a final action plan or it can be utilized as a basis to improve the community's flood planning and protection methods. There may be protection measures other than sandbags or temporary levees that could be implemented to reduce time and effort implementing the measures as well as the cost associated with removal after the flood event.

Communities can look at changes in zoning or ordinances that reduce the potential for flood damage. A flood planning committee can be organized to enhance the FEAP to include food service for volunteers, emergency rescue, medical services, and other vital services.

Vital infrastructure such as water, sewer, power and telephone can be protected to very high flood levels to preserve service during extreme flood events. Electrical generators, both portable and permanent can help insure maintenance of service.

A FEAP can also become part of an all-natural disaster emergency management plan for a small community. If an all disaster plan is prepared in accordance with state and federal emergency standards, a FEAP can become an annex, a sub-part or addition, to the all disaster plan.

A community may also wish to consider alternatives for the possibility that their new levees and dikes could be overtopped in a future flood. The 1997 Flood was called the 'Flood of the Century', which means statistically we should not see those flood levels for at least another 100 years, but nature doesn't know that.

FEAP Preparation Manual Use

This manual was developed in sections to allow a community to prepare Flood Emergency Action Procedures (FEAP) in a logical manner. The section order is optional, however the order as presented will probably provide the necessary information in the sequence it is needed during an actual flood emergency.

The FEAP preparation process does not have to be undertaken in the order presented in this manual. In fact, there is a significant amount of information that is interactive between the various sections.

A suggested order for the preparing FEAP components follows:

-
1. Obtain and develop Flood Recognition Data and flood history.
The Flood Recognition Data will be the basis for many decisions in preparing the other sections of the FEAP.
 2. Determine the Tasks that need to be completed and their priority.
Some Tasks may be identical or can be combined as one Task, such as closing several flood gates.
 3. Prepare the Task/Step instructions and materials information.
Detail is important as there may be inexperienced volunteers completing some of the Tasks.
 4. Determine the number of Key Personnel positions and write descriptions.
The number and type of Tasks will control the number of Key Personnel positions. In many cases, the responsibilities can be combined. Give consideration to the Key Personnel positions concerning the workload and the actual number of supervisors needed. Generally, a lesser number of supervisors will enhance the flood fight, but do not overload these Key Personnel with too many responsibilities.
 5. Inventory and select an Emergency Shelter based on features.
The Emergency Shelter selection will depend on the Flood Recognition Data for its selection as will the development of the Evacuation Procedures.
 6. Prepare Evacuation Procedures based on the previous sections.
The need to evacuate a community is always a possibility. When to evacuate becomes the critical question.
 7. Develop the Flood Emergency Contacts list.
The Flood Emergency Contacts section can be prepared anytime, as it is not dependent upon the Flood Recognition Data.
 8. Develop the Utilities Notification list or forms.
The maintenance of services such as power and telephone can become a coordinated effort between the community and utility.
 9. Develop the Hazardous Materials Notification list or forms.
The Utilities Notification and Hazardous Materials Notification sections can be prepared at any time after the Flood Recognition Data is complete.

All applicable sections presented in this manual should be included in a FEAP for a small community. MAP recognizes there may be some situations where information in a particular section is not necessary, such as the Hazardous Materials Notification

section. It is also possible to prepare only certain sections from this manual and still have some flood fighting capabilities, but communities should adopt this approach carefully. The method presented in this manual is the result of research and contact with disaster and planning agencies as well as input from small communities to address the local concerns during a flood emergency.

Updating A FEAP

As with any disaster or emergency plan, a FEAP is only as useful as the most recent update and revision. MAP recommends that small communities place an item on their city council annual appointment agenda requiring FEAP review and updating. Unknown changes occur outside the community, such as changes in telephone numbers, that can have a significant impact on the effectiveness of this type of document. There may be small or large changes within the community itself, such as Key Personnel turnover or drainage improvements, which will affect a flood fight.

The FEAP initial preparation is the major hurdle to small community flood preparedness, but that first FEAP is accurate only until the first change occurs. One method of reviewing a FEAP is to hold an annual FEAP drill during which the whole FEAP is reviewed and certain Tasks are actually performed to insure accuracy.

The forms presented in this manual are available on computer disk in Microsoft Word 97 and WordPerfect 7 formats for use by small communities in preparing and updating their FEAP. Once a FEAP is in the community's computer, it is very easy to maintain.

Maintain A Distribution List

Since a FEAP should be updated on an annual basis, it is very important that each community maintain a distribution list of people and agencies where the FEAP is on file or available.

(This page is left blank intentionally.)



(This page is left blank intentionally.)

SECTION B

KEY PERSONNEL ORGANIZATION

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

The selection of personnel to implement your community's Flood Emergency Action Procedures (FEAP) is one of the more critical steps in developing an effective flood management organization. Each community has unique needs in preparing for a flood event and, consequently, the assigned positions for dealing with a flood emergency are unique to each community. In many cases, some or all of the members of the FEAP preparation committee can make good candidates for assigned positions.

The objectives of SECTION B - KEY PERSONNEL ORGANIZATION are as follows:

1. Determine the positions needed for flood emergency personnel.
2. Develop description of the position, duties and authority.
3. Develop a Key Personnel Organization Chart.
4. Select people for listing as possibilities for each Key Position.
5. Establish an hourly rate of pay for each position.
6. Develop an Hourly Time Record form.

Positions

The position titles and number of positions should be based on the community needs and past experience. The positions provided in the example 'Key Personnel Organization' section are suggested to assist in determining what positions are needed and assignment of titles for those positions. Some positions may be combined or others may be added to suit the individual communities needs. Some positions may not be required at all.

The FEAP should include a 'Description of Duties' for each position to assist the assigned person in completing his or her assignments. Sample 'Position Descriptions' are included in the example 'Key Personnel Organization' section in Appendix A to assist in preparing descriptions.

The following list can be used as a guide for determining the titles and number of positions needed in your community.

- ◆ Flood Coordinator/Manager/Director
- ◆ Purchasing Agent/Assistant
- ◆ Communications/Public Affairs
- ◆ Interior Drainage Supervisor
- ◆ Dike and Sandbag Supervisor
- ◆ Traffic Control Supervisor
- ◆ Materials/Equipment Supervisor

The Flood Coordinator should be directed into action or appointed by the mayor when a flood is possible. The Flood Coordinator should assess available information from flood forecasting agencies and local conditions, then advise the mayor and city council as to when or if action should be taken. The Flood Coordinator should also arrange for staffing of the Key Positions listed in the FEAP, inventory materials and equipment, inspect permanent flood protection facilities, and direct city personnel to prepare flood fighting equipment and materials during a Preparatory Phase. During the Action Phase, the Flood Coordinator should be in full charge of the procedures.

The Purchasing Agent assists the City Auditor/Clerk/Administrator/Manager in pricing and arranging for materials, equipment, and keeping records of flood related expenses that may be reimbursable later.

The Communications and Public Affairs person generally handles phone and radio communications from Key Personnel along with public communications, media coverage and information releases to reduce confusion. Photographic and video coverage of the procedures should also be kept for documentation of the event and future use in improving action procedures.

The Interior Drainage Supervisor is responsible for maintaining drainage within the levees or flood protection devices since drainage of surface water out of the community is usually not possible during a flood event. This person may also be responsible for the sewer and water systems. Task team leaders and volunteers may be supervised by this position.

The Dike and Sandbag Supervisor is responsible for the construction and maintenance of dikes, levees, and sandbagging operations. This position supervises dike watchers. Task Team leaders and volunteers may also be supervised by this position.

The Traffic Control Supervisor is responsible for parking control and traffic so that flood procedures are not hampered.

The Materials and Equipment Supervisor is responsible for the control of materials and equipment. This position is generally responsible for distribution of materials and

equipment to the public.

Organizational Chart

An organizational chart, such as the one presented in the example KEY PERSONNEL ORGANIZATION CHART (Appendix A, pages P-1 through P-8), should be developed to clearly establish the chain of command for the flood emergency positions.

The example provided can be used as a guide based on your community's needs. The FEAP preparation committee should keep this chart as simple as possible for ease of understanding.

If a specific person is assigned to a Key Personnel position his or her name can be placed in the box on the Organization Chart. The assigned person should be contacted annually and the FEAP Organizational Chart updated accordingly.

Another alternative is to provide a blank area for writing the designated person into the chart for a flood event. This can allow more flexibility in the personnel designated for a position based on availability, but has the disadvantage of reducing the assigned workers familiarity with a specific position.

A list of alternate personnel, including daytime and night telephone numbers, should be prepared for each position in the Organizational Chart. These people may be listed in order of preference based on the committees and the individual's opinions. An individual can be listed for more than one position as an alternate to the first alternate. For example, the person listed first alternate for Dike and Sandbag Supervisor could be listed second for the Flood Coordinator position.

Personnel Selection

The people designated or assigned for each Key Personnel position in the Organizational Chart should meet several criteria. These would include leadership, previous flood fight experience, knowledge of the position and community, willingness to fill the position, and dedication to the community. Generally, it is best if the personnel work within the community so they are readily available when the FEAP needs to be implemented or the mayor declares a flood emergency.

It is suggested that the mayor and clerk/auditor/administrator NOT be designated for positions other than their elected or appointed roles. These members of the community's government will have significant duties during a flood emergency. Again,

this is discretionary for the community.

The Utility Superintendent's first priority should be protecting and maintaining community sanitary sewer system and water supply services. In many cases, it may be advisable to assign the Interior Drainage Supervisor position to the Utility Superintendent, or one of his staff, due to their knowledge of the internal drainage and the equipment necessary to maintain that drainage.

Team leaders for Task completion could be selected from the Volunteer Fire Department, if one is active. Usually the Tasks will be completed in a relatively short period following the declaration of a flood emergency. This use of personnel should be weighed against the possibility of these trained people being needed for other emergencies such as fire or search and rescue operations.

Pay For Key Personnel

The community should be responsive to concerns from personnel regarding possible implications of a long flood fight on their regular employment status. In many cases, employers may not be willing to release a person from their regular job to assist in flood emergency efforts. With this thought in mind, it may be desirable for the community to establish an hourly rate of pay for the Key Personnel and include time sheets for recording hours worked.

This can allow Key Personnel to be absent without pay from regular employment for a flood emergency without a financial hardship. In addition, a set pay schedule will allow easier fund recovery from disaster relief agencies if established in an adopted plan or procedure.

A list of Flood Emergency Positions and the hourly rate of pay for each should be included as an adopted part of the FEAP.

Task team leaders may or may not be a paid position depending on the community's feelings. As previously mentioned, a given Task can usually be completed in a short period and probably does not require constant attention.

Labor positions, such as Sandbagging or Dike and Pump Watch, can also be compensated depending on the community's desires and the longevity of the need for these positions to be on duty. Availability of labor is another consideration for including labor positions on the paid compensation list.

The Key Personnel may be the only paid flood workers in some communities as volunteers may be readily available for most labor intensive Tasks. The Key Personnel

may have to be on duty for days, or even weeks, as was the case for some communities during the 1997 Flood in the Red River Valley of the North.

(This page is left blank intentionally.)

SECTION C

FLOOD EMERGENCY CONTACTS

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

Each community should have a list of contact or notifying agencies or organizations that are critical to its Flood Emergency Action Procedure (FEAP). The agencies will vary from state to state and possibly from county to county, but each will have a specific function or contribution to the small communities flood procedures.

Materials, equipment or supplies can be procured from some contacts, relief support is available from others, and emergency services such as ambulance, fire and law enforcement need to be notified of road closings by flood protection methods. In some cases, it may be necessary to notify potable water supply or wastewater regulatory agencies of specific conditions that are affecting a community's infrastructure.

Some of the more critical contacts for a flood emergency are the flood forecasting agencies that operate and maintain the flow monitoring equipment for the rivers and streams that can effect the community.

As with the Key Personnel Organization, each community has a unique situation with regard to the Flood Emergency Contacts that need to be included in a FEAP and only the community can decide which are important for its needs.

The objectives of SECTION C - FLOOD EMERGENCY CONTACTS are as follows:

1. Determine what contacts are needed.
2. Organize the contacts in a logical manner.
3. Develop the necessary contact information.
4. Provide a system for regular updating of the contact information.

Contact Organization

There are many ways to organize a Flood Emergency Contacts list. MAP suggests that these contacts be listed by function. An alphabetical listing can be confusing to persons not involved or knowledgeable of the community during a flood emergency.

Possible categories for inclusion in a FEAP could include the following:

- ◆ Flood Recognition Data
- ◆ Emergency Management
- ◆ Emergency Services
- ◆ Utilities (non-community)
- ◆ Disaster Relief Organizations
- ◆ Regulatory Agencies

Emergency Contacts Information

In each locality, there is an established protocol for emergency management contacts. Generally, the first or primary community contact will be the county sheriff or emergency management department. They will probably be responsible for contacting the State Disaster Emergency Management (DEM) agency who will then contact the Federal Emergency Management Agency (FEMA) as needed. A written contact protocol should be part of this section of a FEAP. Contact numbers for the state and federal agencies should be for information only, unless the first contacts cannot be made. In a major flood event, contact numbers will have to be updated to reflect field offices or command posts for contacts such as relief organizations or the National Guard.

DO NOT use acronyms, such as FEMA or DEM, as names for contacts. If acronyms are used, be sure to include the full name of the agency or contact. In many cases, telephones are answered using a full name and not an acronym. This may be confusing during a flood emergency where time and the resulting stress come into play.

Each entry in the Flood Emergency Contacts list should contain a person's name and position title, if possible. Make a note if the contact is a recorded message, as may be the case in flood forecasting contacts. Dispatchers may answer some emergency service contacts. Include 911 as a contact number only when an ambulance or law enforcement is required immediately.

Telephone numbers for each contact should include a work number, cellular number, fax number, pager number, and home number, where possible. There will not be home numbers available for many officials in county, state, or federal agencies, but these agencies are generally staffed on a 24-hour basis during a crisis.

For contacts that have recorded or electronic messages, write a brief set of instructions for accessing the information at those numbers on a separate sheet and write a note or

symbol in the contact information space. For example, an answering system that requires a sequence of button pushes on a touch-tone phone to access information specific to your community. These instructions may need to be written the first time a number is accessed during a flood event as the systems do change due to updates or modifications by their owners.

Some of the cautions presented above may seem redundant to the FEAP committee when organizing this information. Remember that in a small community there is a good possibility that the one critical person who managed the previous flood may not be available. The clearer the information, the easier it is for a layman to use.

Annual Updating

Each of the Flood Emergency Contacts should be verified and updated on at least an annual basis. Many of the contact numbers could be changed without notice. This may be the result of changes in area codes, telephone services, or telephone systems. In communities subject to flash flooding, the updates may need to be more frequent. It is recommended that this updating become a regular agenda item on the community's governing board. A suggested time may be the annual appointment of consultants, auditors, and staff personnel within the community.

The primary contact for many small communities is the County Emergency Management office. Generally, more than one community in a county is subject to recurring floods. It may be advantageous for a group of communities to meet annually with the county to update contacts and other pertinent mutual information. Such meetings may include state emergency management personnel with updated information regarding state and federal program changes. MAP could assist in organizing and facilitating this type of meeting.

An example FLOOD EMERGENCY CONTACTS form is provided (Appendix A, pages EC-1 through EC-2) with this manual as a suggested format. An actual contact protocol for a community should be prepared based on the experiences with the most recent flood event.

(This page is left blank intentionally.)

SECTION D

FLOOD RECOGNITION DATA

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

Establishing Flood Recognition Data for your community is a vital step in preparing a Flood Emergency Action Procedures (FEAP). The flood stages or elevations and the rate of rise of flood waters are unique for each community. These unique conditions depend on multiple fixed and variable factors.

The number of rivers impacting a community, the terrain surrounding the community, and the width and depth of the river channel(s) as they pass through the community all cause the flood waters to react in different manners. These fixed factors make each community unique in its planning needs.

Variable factors include unpredictable events such as the weather, both locally and upstream; ice jams; structural failure of dams, bridges and roads; channel breakouts; and other unforeseen occurrences which can change the characteristics of a flood event very rapidly.

While communities and the public have come to rely heavily on the government flood forecasting services, these agencies cannot predict flood crests and the time of cresting with absolute accuracy. The flood forecasts are well-educated estimates based on statistical historic information. In the 1997 Spring Flood in the Minnesota River and Red River of the North, there was very little historical information available to make predictions for a flood of the magnitude that was experienced.

The gathering and use of Flood Recognition Data is important to provide a basis for making decisions regarding the level of protection a community needs for a given flood event. Remember, Nature is unpredictable, so reasonable error on the side of caution may be a good policy.

The objectives of SECTION D - FLOOD RECOGNITION DATA are as follows:

1. Research historical flood data.
2. Develop a record flood history.
3. Establish preparatory, action, and critical flood stages.
4. Prioritize Tasks in order of accomplishment by flood stages.

Why Is Flood Recognition Data Needed?

During the preparation of a FEAP, the Tasks necessary to activate existing flood protection measures and devices generally need to be accomplished in a sequence beginning with Tasks at the lowest elevations and progressing to higher elevations. An example TASK LIST BY STAGE LEVEL form is provided (Appendix A, page T-1) with this manual as a suggested format.

A community in a wide flat river valley, like that of the Red River of the North, may have to accomplish a majority of its flood protection Tasks almost simultaneously. Flood waters tend to spread relatively uniformly over a large area.

On the other hand, a community in a narrow, steep river valley will need to complete the protection Task at the lowest elevation first; then progress to Tasks at higher elevations as flood waters rise or crest predictions change. These communities may not have to accomplish all of the flood protection Tasks for floods with lower than record crests.

The Flood Recognition Data will assist the community in prioritizing Tasks and determining three important flood stages or elevations for each Task. These flood stages are called: Preparatory, Action, and Critical.

The Preparatory Stage is a river level or flood stage at which the community should began preparation for protecting itself from a predicted eminent flood threat. This stage will vary from below flood stage in communities where flood waters rise rapidly to flood stage or above in other communities. Flood stage is usually the water level at which a river or water body leaves its banks or exceeds the ordinary high water level. Preparations would include inspecting and preparing pumps and equipment; getting materials such as sandbags, sand and poly; notifying Key Personnel, Task Team Leaders, and generally preparing to activate a FEAP.

The Action Stage is a river level or flood stage at which the community accomplishes the Tasks in the FEAP in the prioritized order to increase the level of flood protection with the completion of each Task. Task Team Leaders will assemble their teams; obtain the necessary materials, equipment, keys and tools; and complete the assigned Tasks in a Step by Step manner as directed for each Task.

The Critical Stage is a river level or flood stage at which the water is likely to exceed the Task/Step protection measure or measures. A contingency plan or procedure should be developed for raising the flood protection levels of all areas within the community or evacuating the areas which could be flooded. There are varieties of stop gap measures that can be applied to levee tops in a Critical Stage flood situation. Most of these measures will require pre-planning as they are equipment, material and labor intensive.

Each community should develop a procedure for possible overtopping of permanent levees or other devices.

The Evacuation Stage is the flood stage at which evacuation of non-essential personnel and the public should be implemented. The Evacuation Stage could fall between any of the other three flood stages depending upon the flood characteristics of the community.

Generally, the Evacuation Stage will be between the Action Stage and the Critical Stage. Refer to SECTION I - EVACUATION PROCEDURES for additional guidance.

Where Can Flood Data Be Obtained?

There is an unbelievable amount of information available to communities and the public about flood peaks and flows, some of which dates back to the very early 1900's. The following list is probably not complete, but will provide a starting point for developing preparatory, action and critical flood stages for your community.

- ◆ National Weather Service (NWS)
- ◆ National Oceanic and Atmospheric Administration (NOAA)
- ◆ U. S. Geological Survey (USGS)
- ◆ U.S. Army Corps of Engineers - District Offices (USACE)
- ◆ State Department of Natural Resources (DNR)
- ◆ Natural Resources Conservation Service (NRCS) - county offices
- ◆ Watershed Districts or Area Water Boards
- ◆ Private industry data sources

One Internet site that is useful in developing historic flood data is the National Weather Service web site at the shortcut address of www.nws.noaa.gov/oh/hic. Once at the site go to 'Other Hydrometeorological Web Pages'. Go to 'River Forecast Centers' and then select the nearest Center. Now go to 'Hydrology Data Links', and then 'U. S. Geological Survey'. Under 'Water Resources Data' select the location nearest your community. Finally, you will be viewing a list of basins. Select the major river basin and finally the gaging station you wish to view data from. Follow the directions on the screen and you can, after some trial and error, have the USGS database list record flood events or peaks by year. *Hint: After you find the proper gaging station record the assigned number. It is a shortcut to future use of the River Forecast Center web site.*

In many cases, this information may already be available in the community archives or as knowledge in older community residents. Personal experience during a record flood can be invaluable in determining the actual water levels experienced under specific conditions. This experience can be as simple as the memory of the water being at a certain level on a building in the 1969 Flood, for example. This level can then be translated to an elevation or flood stage for reference.

CAUTION: Some of the flood stages for rivers in Minnesota and North Dakota are being revised. It may be advisable to verify flood stage information on an annual basis due to changes, adjustments or the installation of new monitoring equipment.

How Much Flood Recognition Data?

The goal in FEAP development is to simplify the process of preparing for a flood. With this thought in mind, a community should NOT provide the Flood Coordinator with a huge volume of information. The FEAP committee should decide what flood stages necessitate what Task actions with the assistance of staff, emergency, engineering, and agency advise.

The important flood stages of Preparatory, Action, and Critical should be decided for each Task and included in the Task Prioritization List and on each Task/Step instruction sheet to be used by Task Team Leaders.

It will probably be helpful to compile a list of the flood event crests of the last 30 to 50 years and develop a simple line graph or vertical bar graph indicating the peak flood crests for that period. The accepted Flood Stage for the community should also be included as a line fully across the graph. If the graph of peak flood crests will not become confusing the Preparatory, Action and Critical flood stages may also be placed on the graph. Example 'RECORD FLOOD' graph is included at the back of this manual for reference.

The primary function of the graph is to provide the Flood Coordinator with a visual aid to making decisions. During a flood event, a copy of the graph can be used to plot rising waters with a stage, time, and date to provide additional historic data for the future.

As another aid to the Flood Coordinator, Additional Graphs of upstream gaging stations can be helpful indicators of the need for action. If a community has the potential to be impacted by more than one flood source then graphs comparing the peak flood crests for each source can be useful in making decisions. An example of this scenario would be a community located on a tributary of a major river, but close enough to the major river that flooding can be caused by a backwater condition on the major river as well as the river through the community.

If the flood data is in stages, you will want to convert stages to Mean Sea Level (MSL) elevations for determining Task priority. Each gaging station will have a Datum elevation reference to MSL. This Datum elevation is equal to zero (0.00) feet in river stage. To obtain the MSL elevation of a Flood Stage, add the Flood Stage to the Datum elevation. For example, if the gage datum elevation were 945.5 and flood stage were 14.0 for that gaging station the MSL elevation of flood stage is 959.5 feet above sea

level.

MSL elevations are normally used in all capital improvement projects, such as street work or sewer installation, within a community. As-built Plans or Record Drawings from these types of improvement projects can be a good source of Task elevation information for comparison to calculated MSL flood elevations.

Most communities will require Technical Assistance from governmental agencies and private consultants, such as their engineering consultant, in analyzing the historic flood data, establishing Task site elevations, and determining the important flood stages for a FEAP. Utility staff can be very helpful in establishing the locations and possibly the stage/elevation comparisons for determining Task priority.

Descriptive Flood Recognition Narrative

A brief and concise Flood Recognition narrative should be written and included in the FEAP to aid the Flood Coordinator and elected officials in deciding to issue a flood warning to the community.

The narrative should be one or two paragraphs that describe the reaction of the flood water source(s) based on past experiences. This is particularly important for communities that are affected by more than one river or flood source. In a broad flat river valley, there is always the possibility that flood waters can come from a distant source overland across areas normally above or outside the flood plain.

The narrative should reference the Preparatory, Action, Critical and Evacuation Stages determined earlier in this manual section and state a suggested response to the flood threat depending upon the judgment of the community leaders.

The Flood Recognition narrative will assist personnel who may not have been present during previous flood events make intelligent flood fighting decisions more quickly and accurately when compared with flood forecasting agencies predictions for flood crests.

Develop A Flood History Library

It can be very beneficial for a community to develop a written account of how the flood sources respond to different conditions in different flood situations. Because of nature's unpredictability and changes to waterways, sometimes at distant locations, there will probably never be two identical floods. However, there can be similarities that may help determine the best course of action if similar conditions are recorded from past experiences.

The accounts of a historic flood should be a compilation of the memories of several people who witnessed the flood event and have first hand knowledge of the conditions and responses of the flood sources during a given flood event. The accounts should be brief and include only information that could be pertinent in a later flood event.

(This page is left blank intentionally.)

(This page is left blank intentionally.)

SECTION E

TASK/STEP FLOOD PROTECTION

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

The Task/Step portion of your community's Flood Emergency Action Plan (FEAP) is probably the most important information in the document. It is the 'meat and potatoes' of the FEAP and the primary reason for preparing a FEAP.

Communities in recurring flood areas generally have specific temporary flood protection measures that must be operated or put in place to protect the community to the highest level possible. Examples of the temporary measures include closing a slide gate on a culvert through a levee, sandbagging a culvert, sandbagging across a roadway that enters the community, and so on.

Usually following a major flood event like the Red River of the North Flood of 1997, the whole community is aware of what was done where to prevent flood water from entering the community. MAP is aware of the tremendous community involvement in a flood fight through visiting with people and officials in many small rural communities in the Red River and Minnesota River valley's. Unfortunately, the complete knowledge of protection measures gained in fighting a large flood usually remains personal knowledge for a few community residents.

MAP developed the TASK/STEP method for flood preparation so small communities do not have to rely on specific knowledge of a few individuals from a flood event that may have occurred 10 or 15 years ago. If the individual knowledge for the entire community is documented as separate Tasks with step-by-step directions for each Task, it is possible for untrained or outside help to prepare a community for a flood event.

The objectives of SECTION E - TASK/STEP FLOOD PROTECTION are as follows:

1. Identify the specific Tasks that must be accomplished to provide the amount of flood protection needed for a forecast flood event.
2. Prepare a Location Map for all Tasks within the community.
3. Determine the flood stage at which completing each Task becomes necessary.
4. Describe each Task and provide location information for the Task Team.
5. Quantify the personnel, tools, equipment, and materials needed to

-
- complete each Task.
 6. Develop step-by-step instructions for accomplishing each Task.
 7. Optionally include photographs with each TASK/STEP form to assist the team in completing the Task properly.
 8. Provide for notification of the Key Personnel supervisors that each Task has been accomplished.

An example FLOOD EMERGENCY TASK No. ____ form (Appendix A, pages TS-1 and TS-2) has been developed and is included in this manual. This form is a general guide and should be adapted to the Task and the community. For instance, if a Task requires that a locked wheel operated slide gate be closed, remove all of the extraneous information boxes from the final Task form to reduce confusion. Such a Task may only have a description, the Task location, the key required and its location, and directions to operate the slide gate with a photograph indicating the closing direction to turn the wheel.

Task Identification

Many communities with a history of recurring flooding have constructed some form of permanent system for protection. In many cases, these are levees of various materials, elevated roadways, railroad embankments, and other man made structures that reduce or block flood water intrusion into the community.

Unfortunately, these permanent systems must have numerous breaches or low areas to allow normal drainage out of the community for rainfall and seasonal snow melts during non-flood periods. During a flood event, the openings must be closed to prevent the flood water from entering the community. These specific Tasks must be accomplished to protect the community from most flooding.

In addition, there may be certain Tasks outside the perimeter of the levee necessary to protect the community's infrastructure, such as the water supply or sanitary sewer system. As examples, a sewage lift station, wastewater treatment facility or potable water well may be outside the levee and require protection procedures.

Each Task that is necessary to complete the integrity of the levee system, protect the infrastructure, or maintain a vital service needs to be identified and a solution for the method of protection developed.

Task Location Map

A simple Location Map of the community with street names and a few local landmarks

should be prepared to provide Task Teams with directions to each Task location. It is important that the Location Map be clear, but not cluttered. There are many times when volunteers from outside the community will be able to accomplish Tasks without resident assistance if the location and other information is clear and concise.

Task Supervisor/Team Leader Identification

Identify the Task supervisor from the Key Personnel at the beginning of the Task form. This may be a permanent part of the form or written on the Task form when the supervisor is assigned. The method of contacting the supervisor and, if pertinent, a phone number should be included. This is important to allow reporting of Task completion or unforeseen circumstances which may impact the Task or its results.

The Task Team Leader should also be identified on the Task form. It is suggested that this name be written in for each flood event on two copies of the TASK/STEP form. One copy is sent with the Task Team for use on site and the other is retained by the supervisor to note completion of the Task.

Task Flood Levels

As the Tasks are identified, an elevation or river stage must be determined for the various action stages and included on the 'Task List by Stage Level' - Section D - Flood Recognition Data, in ascending order to prioritize the Tasks. Task No. 1 should be the Task with the lowest river stage or elevation.

The Task form should include the Preparatory, Action, and Critical stage or elevation for the Task.

Task Description

A brief description of each Task should be written to help the Task Team understand the assigned Task. This will help select volunteer team members for a Task in that some Tasks will require greater strength or specific skills such as pump or equipment operation.

Task Location Description

The location of each Task should be clear and concise with reference to local landmarks (i.e. Smith's Barn) as well as street names, highway numbers, and other information to allow outside and local volunteers to easily find the Task sites. It can be very time consuming to have well-meaning volunteers sandbag a wrong location which must be immediately removed to allow local interior drainage to flow.

Task Personnel

The number and strength of personnel necessary to complete a specific Task in a reasonable amount of time is essential to the success of a FEAP. These decisions should be made very carefully and with insight from local people with major flood experience.

The experience is critical to develop a feel for the length of time it has taken flood water to rise in the past. If the time lag between the action levels of a Task is relatively long, the personnel numbers can be less than if the time lag is short and the Task must be completed quickly. This variation is greatly impacted by the width of the river valley and the surrounding topography to the community.

Strength is another important consideration as there may be some Tasks, such as closing a slide gate, that can be accomplished without the demand for great physical strength or endurance. Assigning Tasks and Task Teams wisely can save valuable time.

Tools, Equipment And Materials

Proper tools, equipment, and materials for the Task are very important. There is wide variation in the needs for each specific Task. In some cases, only a key to unlock the operating wheel of a slide gate may be necessary. In another location, the need for pumps to control interior drainage, hip boots or waders, large numbers of sandbags, or possibly even heavy equipment will greatly increase the list to provide the necessary protection for the community.

As previously mentioned, if a Task only requires a key or a special valve wrench, the other categories on the Task form should be removed to eliminate any confusion for the Task Team.

In the case of a Task requiring the placement of sandbags, there should be detailed sandbagging instructions attached to the Task Teams copy of the Task form showing

them how to place sandbags properly. A sample set of sandbagging instructions is provided in Appendix A of this manual.

If tools and equipment are not available for the Task Teams at the flood control center there should be a specific location given for the necessary items. Assemble and bundle tools, equipment and materials for each Task during the preparatory phase of the FEAP. Check all equipment to insure it is in operable conditions if the city staff has not performed the checks and maintenance recently (i.e. within a month or so).

Materials such as polyethylene can be distributed to Task Teams with the tools and equipment, but it is generally best to deliver sandbags to the Task site already filled and ready for placement unless the emergency levee is extremely large.

Steps For Task Completion

Carefully prepare concise and understandable step-by-step directions for the Task form. Complete simple directions will allow the Task Team to complete the Task with minimal supervision, in a timely manner, and correctly. Whenever possible, write instructions in layman's terms.

Reference marks at the site, such as the base of a power pole or tree, should be used for establishing the top of a required sandbag levee. In some Task locations, permanent flood specific reference marks can be placed (i.e. painted line on a pole) to aid the Task Team in knowing when the Task is completed. In all cases where sandbags are placed, be sure to indicate the width of the base row to insure that the levee can be constructed to the necessary height.

The final STEP in any Task should be to notify the supervisor listed in the first part of the Task form.

Optional Photographs

A photograph or two on the Task form can simplify the written instructions and reduce confusion for the Task Team. The best photograph would be of the completed Task. Unfortunately, with the many changes to flood protection that occur following a major flood event there may not be such photos available.

A color photograph with markings on the photo indicating sandbag levee heights or the

direction of wheel turn for a slide gate is invaluable to a Task form. Photos can easily be included in the FEAP by leaving space on the form for the photo, marking the photo, attaching it to the finished Task form, and taking the Task forms to a copy shop with a color copier. This is generally the most viable, low cost option for a small community. Instead of the copying process, photos can also be scanned into a computer, placed in the Task form, and printed, but this requires some costly computer equipment.

Materials And Equipment List

A master Material and Equipment List should be prepared for listing all of the supplies, tools and equipment necessary to complete all of the individual Tasks for which Task/Step forms have been prepared. The number of sandbags, rolls of poly, cubic yards of sand, etc. should be totaled and compiled on a master list to be used by the Supervisors and Purchasing Assistant in the Preparatory Phase of a flood fight.

Use much thought when preparing the Material and Equipment List. There may be many small items that are over looked such as flashlights for the Dike and Pump Watchers. Some form of lighting a sandbag filling area or Task site which is remote from the community street lights could be another consideration.

An example MATERIAL AND EQUIPMENT LIST form (Appendix A, page TM-1) has been developed and is included in this manual. This form should be modified to meet the needs of the community. This form could also serve as a maintenance check list for servicing owned equipment on a regular basis.

Material And Equipment Supplier List

The FEAP should also include a listing of suppliers or sources of materials and equipment. In many cases, communities have rented or leased items such as pumps or generators from private parties during a flood emergency. In other situations, there may be a pool of equipment available for use through the National Guard or other agencies.

There should be not less than two telephone numbers for each supplier or source. One would be a regular business telephone number. The other should be a 24-hour contact number. If available include the name of the contact particularly with the 24-hour number to help the Purchasing Assistant or buyer connect with the right person. Many times these numbers are a home telephone or a pager.

(This page is left blank intentionally.)

SECTION F

HAZARDOUS MATERIALS NOTIFICATION

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

Within or near your community there may be businesses or other facilities with hazardous materials on the premises. Hazardous materials can create very dangerous conditions both during and following a flood event. Examples would include toxic fumes, soil contamination, building contamination, and threats to health from exposure. In some instances, a community's potable water supply could be contaminated.

The community itself may have some hazardous materials or potential contaminants for use in maintenance or general operations of the infrastructure. These could include fuel storage, herbicides, pesticides, water treatment chemicals, lubricants and other potential hazardous or pollution sources.

Most small rural communities have agriculture-related businesses located within their jurisdiction. Many communities have fuel suppliers, hardware stores, small industries, and other places that use, sell or store hazardous materials.

It is in the community's best interest to identify potential hazardous materials or pollutants and their locations in the Flood Emergency Action Plan (FEAP). This enhances the community's ability to not only provide a flood threat notice to the owners of the materials, but also to require the owners to develop relocation or protection procedures for their hazardous materials.

The objectives of SECTION F - HAZARDOUS MATERIALS NOTIFICATION are:

1. Locate and identify hazardous materials within the community.
2. Obtain information to notify the owner/representative during flood threats.
3. Review the owners' relocation or flood protection procedures.

The HAZARDOUS MATERIALS NOTIFICATION form (Appendix A, page HM-1) is a suggested format for compiling the information needed to provide flood threat notification to the owners of hazardous materials within your community.

It is important to understand that the community should not accept responsibility for private hazardous materials within its jurisdiction. The relocation or protection of private

hazardous materials is the responsibility of the owner. The community's responsibility lies only in notifying the owners of the flood threat.

If the community is the owner of hazardous materials, then the community is responsible for the relocation or protection of its hazardous materials.

Locating And Identifying Hazardous Materials

Generally, most small communities know of hazardous materials stored within their jurisdiction. This is the result of common knowledge and fire department records. Other sources for locating and identifying hazardous materials sites could include County Emergency Management or State Pollution Control offices.

Each known hazardous materials owner should be contacted to determine what specific materials are on the hazardous materials site and to identify the hazardous materials. Be sure to clarify with the owner that the contact is only for notifying them in case of a flood threat.

The location of the materials storage site should be included on the notification form to allow verification of owner actions during a flood threat. This address should be the storage location and not the owners' business or home address if these addresses are different.

A description of the hazardous materials on the site should be included on the form to assist emergency personnel in a response to a spill or contamination problem during a flood event.

In addition, specific information for the hazardous materials storage location on the site should be on the form. The storage location could be isolated, in a lower level, or in a completely separate building, making verification of relocation or protection difficult.

Contact Information

Each hazardous material site should have adequate telephone contact numbers as to allow 24-hour/7-day notification to the owner or their representative. The more numbers for such a contact the better. Many owners and employees carry pagers or cellular phones and access to the owner can be critical to reducing the potential of a costly or dangerous situation for the owner and the community.

In the case of larger industries, you may be contacting a dispatcher or operations desk. If this is the case, special notification directions for the Flood Coordinator or

Communications person in the community may be advisable as an addition to the standard information on a notification form.

Relocation Or Protection Plans

Each hazardous material site should have a written relocation or protection plan on file with the community. These do not have to be elaborate detailed plans, but should provide the community with a means of verifying that the owner has taken action to relocate or protect the hazardous materials from the flood threat. In some cases, some planning may be in place due to regulatory agency requirements.

Again, use caution in accepting a relocation or protection plan so as not to incur a responsibility for the community. MAP specifically does not recommend the formal acceptance of such a plan by motion or resolution of the governing body. Such action could place the community in a liable position.

It is recommended to attach a copy of the relocation or protection plan to the FEAP or the notification form. As an alternative, write a brief description of the actions planned on the notification form for verifying relocation or protection plan implementation by the owner.

Annual Updating

Each hazardous material site identified in the FEAP should be visited annually before the flood season to verify the data, contact numbers, contact persons, materials inventory, and changes to the relocation or protection plan.

Private business and industry frequently change locations, products, and personnel. If current information is not available, valuable time can be lost in notifying the hazardous material owner of a flood threat. This could result in a spill or pollution accident that can be costly or dangerous to the owner and the community.

(This page is left blank intentionally.)

SECTION G

UTILITIES NOTIFICATION

(OPTIONAL)

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

All small rural communities are served with private utilities such as electricity, telephone and, in many cases, natural gas. The maintenance of these services is vital to the protection of the community during a flood event.

The loss of electric power service is one of the major causes of water damage because community utilities such as wastewater systems and potable water systems will cease to function. On a residential level, sump pumps will no longer be able to remove ground water before it causes damage to basements or foundations. There is also the potential loss of heat since virtually all heating systems require electricity to function. Since many flood events occur in the spring, significant damage can occur if long periods of cold weather accompany the flood event.

If sanitary sewer system lift stations fail, sewage can backup into basements. A potable water system that loses pressure due to power failure must be disinfected before water service can be restored.

Telephone service can also cripple infrastructure systems as many systems rely on telemetry (telephone connections) to control their automatic operations. While the loss of wired telephone service is no longer a major concern for flood emergency communications due to cellular phones and emergency radios, it can imperil persons in their homes.

Geographically wide-spread flood events put utility companies at a disadvantage with limited staff to respond to many locations at one time. Small communities can optionally coordinate with utility providers to assist in protecting critical facilities such as electrical substations and telephone switch facilities. Should your community desire to coordinate efforts with utilities this information should be included in the Flood Emergency Action Procedures (FEAP).

The objective of SECTION G - UTILITIES NOTIFICATION are as follows:

1. Locate and identify critical utility facilities that serve the community.

-
2. Contact the owner and discuss options for protecting those facilities.
 3. Optionally coordinate with the utility to assist in protecting facilities.

The UTILITIES NOTIFICATION form (Appendix A, page U-1) is a suggested format for compiling the information need to provide flood threat notification and contact for assisting the utility in protecting its facilities that affect the community.

As a caution, the community should only provide assistance under the guidance of staff personnel from the utility to protect itself from liability for injury to volunteers or damage to the facility. Generally, the assistance would be in labor to place flood protection measures at the facilities with the utility providing the materials and supervision.

Locating And Identifying Utility Facilities

The utilities serving your community are easily identified through telephone numbers and addresses on their bills. Generally, however, these contacts will not be the right people for collecting information or notification of a flood event.

Locating the proper contacts within a utility may require some investigation. Each utility will have a different name for the position responsible for acting in a flood event.

Your community should have already identified these position or personnel in the Emergency Contacts section of the FEAP. These contact numbers will probably be the same.

Even though the contact information is already in the FEAP, it should be repeated in this section. This will alert the flood coordinator and other response personnel that there is additional coordination to be accomplished with the utilities beyond notification of a flood event.

Initially, the community should determine if the utility has any interest in obtaining volunteer assistance and if there are any critical facilities that need attention during a flood event to maintain the service in the community. In some cases, the utility has already taken precautions by constructing their facilities above the flood plain. Do not increase the community work load in preparing for a flood unnecessarily.

Inclusion As A Task

If protecting private utilities is beneficial to your community, the work needed should

become one or more of the Tasks needed for flood protection.

Refer to SECTION E - TASK/STEP FLOOD PROTECTION for information regarding preparing a Task for the FEAP.

Cooperative Agreement

If there is an interest in working with a utility to protect one of their facilities, the details of the assistance to be provided by the community should be written into a cooperative agreement and signed by both parties.

This agreement should specifically indicate the scope and type of assistance the community can provide. MAP recommends that this generally be only supervised labor to implement flood protection measures. The supervision should be provided by the utility in all cases. The utility should be responsible for obtaining, delivering, and removing all necessary materials or for reimbursing the community for any such material. In addition, the utility may have to reimburse the community for the labor provided if the community pays its volunteers in accordance with the KEY PERSONNEL ORGANIZATION Section of the FEAP should such expenses not be reimbursed to the community.

In most cases, the Task Form will simply state the number of volunteers and possibly the equipment needed to complete the Task. MAP suggests legal counsel be consulted regarding any cooperative agreements to reduce liability for the community.

Annual Updating

Each private utility site that is included for Task protection in the FEAP should be reviewed with the utility owner annually. The telephone contact numbers, position descriptions, and names should be verified and adjusted if necessary.

The cooperative agreements should also be reviewed to determine Task changes, other than updating contacts. The utility may upgrade or relocate a facility to permanently flood proof it without notifying the community. This could result in the loss of time or valuable labor to an unnecessary Task during a flood event.

Section Optional

This section of a FEAP is optional for the community. It could be advantageous to the community to assist a utility during a flood event. This may allow the utility to separate

work crews and supervise the protection of multiple facilities with volunteer labor simultaneously. It may also allow for mutual aid between communities during flood events.

(This page is left blank intentionally.)

(This page is left blank intentionally.)

SECTION H

EMERGENCY SHELTER DESIGNATION

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

The designation of a flood emergency shelter within your community is important in that an established location will be easily prepared for use during a flood event. An established flood emergency shelter will provide relief, rest, food and housing for volunteers, the National Guard, disaster relief organizations, and the local population who become displaced during a flood event.

The flood emergency shelter can also become a central location for reuniting families, communicating with the public, medical services, volunteer recruitment, and if necessary, an evacuation center.

The structures available to a small community for use as a flood emergency shelter are extremely varied. One community may have several suitable structures while a neighboring community can be very limited in its emergency shelter choices.

Each community should have a designated flood emergency shelter and that shelter should be identified in the Flood Emergency Action Procedures (FEAP). Preparing the flood emergency shelter that was used during the previous major flood event with this data will be easier than relying on memory of the last event.

The objectives of SECTION H - EMERGENCY SHELTER DESIGNATION are as follows:

1. Identify possible flood emergency shelters within or near the community.
2. Inventory the buildings for features available.
3. Select the best available flood emergency shelter.
4. Consider improvements to the building features to enhance its use as a shelter.

The EMERGENCY SHELTER INVENTORY form (Appendix A, page ES-1) is a sample guide for use in identifying and inventorying possible flood emergency shelters. The EMERGENCY SHELTER SELECTION form (Appendix A, page ES-2) is a sample guide for use in selecting the most desirable shelter. MAP suggests that the community

modify these forms to fit their specific needs for emergency shelter during a flood event.

Examples of specific needs could include the need for care of nursing home residents, hospital patients, group homes, or other special needs facilities. Some flood victims living outside the community boundaries will also seek safety in your shelter facility.

Identifying Possible Flood Emergency Shelters

As previously mentioned, the possible structures for a community flood emergency shelter vary greatly from one community to the next. If there are multiple choices within your community, MAP suggests that each possible shelter be inventoried for location, elevation, features, and capacity to allow for the selection of the best alternative.

The first concern is if the owner of the building is willing to allow the use of the building for a flood emergency shelter. It is recommended that the owners be contacted before the inventory, even if the building is considered 'public property'. An example of 'public property' would be a school building, which is technically owned by the school district. A representative of the community government should appear at a school board meeting to obtain official permission for the inventory to insure that the building will be available for inclusion as a shelter in the FEAP. Privately owned buildings may be suitable also. These may include nursing homes, hospitals, churches, or other service provider buildings.

Some communities have identified storm shelters, however they may be in the basement or lower level of a building. For obvious reasons, such a shelter would not be a good choice for a flood emergency unless the location is well above the flood plain and is not subject to sewer backup. Look for buildings or portions of buildings with as much elevation as possible to reduce the possibility of inundation of the flood emergency shelter. At a minimum, the building should be well within levees or other flood protection measures.

Inventory The Possible Shelters

The EMERGENCY SHELTER INVENTORY data form (Appendix A, page ES-1) is a basic guide for inventorying possible flood emergency shelters. Each community should review the form and modify it to fit the community's needs for shelter during a flood event.

The inventory of possible shelters should include the building name and location. The location should be accessible to large vehicles and have ample parking facilities on the

site or nearby. Handicap accessibility is preferred although there will generally be adequate personnel available to aid physically impaired people entering and leaving the shelter.

The elevation of the building and susceptibility to flooding should be assessed. If the building is within the flood protection levee, a critical evacuation flood stage or elevation should be determined. This is particularly true in communities that lie in a broad flood plain where flood waters may surround the community and make evacuation difficult at very high flood stages.

The inventory should include a listing of at least three contacts that can provide access to the shelter building on a 24 hour basis. It is also advisable that these contacts be familiar with the systems and operations of any special equipment for the shelter building such as standby electrical generators, kitchen equipment, etc.

Obtain, or estimate, the shelter's capacity from the owner to provide information to the community Flood Coordinator and the Communications/Public Affairs Supervisor. This will allow for communicating available space to other communities or persons in the area needing shelter as well as reduce the possibilities of overcrowding or overtaxing features in the shelter.

Finally, all of the equipment and systems in the building should be reviewed and inventoried to determine function during a flood event which could include the loss of electrical power, potable water, sanitary facilities, heat, and other features.

Flood Emergency Shelter Selection

The selection of the best available shelter for flood emergencies will depend upon all of the items listed in the inventory. One method of objectively narrowing the field is to determine a relative importance value of the inventory features. These inventory items might be rated five on a scale of five to zero. As an example, the location and elevation of a building above the flood plain may be the most important feature and receive a rating of five. Shower facilities, while extremely convenient, are not necessary and may only rate a one. Use a zero rating for a feature that is not available at a particular possible shelter site.

By listing the inventory features and their importance values vertically on a chart and placing the possible shelters across the top of the chart, the committee can total the relative desirability of the shelters and select the best shelter. Remember that the owner may require some use of the shelter building during a flood event, as would be the case with a hospital or nursing home. The EMERGENCY SHELTER SELECTION form (Appendix A, page ES-2) is provided as a guide for the selection process.

Try to consider as many options as is practical within the community. It may be possible to establish a secondary or backup flood emergency shelter which is less desirable from the standpoint of features, but more suitable due to elevation to allow for a more flexible FEAP.

The community should also try to avoid mixing flood fight coordination center with the emergency shelter. Interference with the flood fight and preparations by traffic and bystanders near the emergency shelter may cause confusion or safety concerns.

Flood Emergency Shelter Improvements

In many communities, there will be several suitable buildings for a flood emergency shelter. Very few buildings will offer all of the features that may be considered desirable for the shelter.

The community should consider means of enhancing the flood emergency shelters features to improve their function during a flood emergency. Such improvements may be the addition of standby electrical generation equipment for the heating and cooking equipment. It may be possible through joint efforts to install an electrical connection on the building for a portable generator. This may also allow the shelter to be used during other emergencies (storms or blizzards) where the electrical power supply ceases to function.

If the shelter is within levees that could be overtopped, it could be equipped with permanent or semi-permanent flood proofing measures of its own allowing the shelter to be used in extreme conditions as a haven of last resort until rescue efforts can be completed.

In certain instances, communities with well thought out emergency procedures or plans can obtain financial assistance to upgrade an emergency shelter or other flood protection measures. Generally, the assisting agencies require a FEAP or similar plan as part of the application to indicate a planned need for the equipment or improvements.
(This page is left blank intentionally.)

(This page is left blank intentionally.)

SECTION I

EVACUATION PROCEDURES

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

Introduction

Evacuation of an area of a community or the whole community is generally the last resort to protect human life and safety. No community wishes to face this possibility, but it is a reality that should be addressed in a Flood Emergency Action Procedure (FEAP) to insure that there is an escape route for the residents.

Evacuation is a very difficult subject to deal with considering the variables that are present from one community to the next. A community in a wide flat river valley that experiences relatively shallow, but extensive area flooding may need to consider early evacuation as the roads out of the community may become impassable and prevent a mass evacuation. Communities in deeper and narrower river valleys will probably have evacuation routes available to higher ground or high ground shelters even during the peak of a flood, but portions of the community may become isolated islands without an evacuation route.

The variables are expanded by the extent and type of flood protection the community has in place during a given flood. Permanent earth levees with adequate closures for low areas can withstand substantial flood stages. Temporary earth or sandbag levees are generally more prone to failure if the flood crest is higher than predicted.

No matter what the community's individual situation, it is important that evacuation of flood prone areas be considered in the FEAP. Nature does not have a planned flood and predicted crests can change rapidly.

The objective of SECTION I - EVACUATION PROCEDURES is to create an awareness of the considerations which should be included in an evacuation procedure. Due to the variables involved in individual community situations MAP has not prepared a sample form for use in preparing evacuation procedures.

Written Evacuation Procedures

A WRITTEN narrative, one or two paragraphs long, should be prepared for the flood area or community providing information to the flood coordinator on when to recommend evacuation and what actions are to be taken.

The narrative should contain information on the critical flood stage from the Flood Recognition Data Section of the FEAP, a rationale for making the decision that evacuation is eminent, and the best course of action.

The emergency contacts for the sheriff or county flood coordinators should be included, along with directions, to verify the evacuation routes before use. Generally, the mayor must order an evacuation, but this can vary depending upon local laws.

The private public utilities contacts for electric and natural gas should be notified to turn off these services. Electric power can cause fires when equipment is exposed to water even during a flood. Natural gas mains and services can be disturbed or damaged and pose explosion or fire threats as well.

The disaster relief organization contacts should be referenced or included to provide information to the public about nearby flood shelter locations with space available.

The methods of public notification should be included insure that the flood prone area or community is evacuated.

The narrative should be brief and clear as to the actions required for evacuation. Avoid a wordy explanation and minimize the details. Usually evacuation is the last resort and time will be important.

Identifying Evacuation Routes

The FEAP committee should examine historic flood data for the record flood stages in the community to determine the maximum crest levels experienced in the past. In SECTION D - FLOOD RECOGNITION DATA this information was gathered and placed on a graph.

The maximum flood to date should be converted to a mean sea level (MSL) elevation and compared to the possible evacuation routes from the community or portion of the community. Road elevations should then be compared to the maximum previous flood for indications of inundation of the roads. The information should indicate if the road has previously been inundated with flood waters.

Information should be obtained from county and state highway departments as to the damages that were sustained by the possible evacuation routes during the record flood. Sections of a roadway may have been lowered to allow flood waters to pass over the road at a predetermined location without damaging the road.

Evacuation routes should be verified as serviceable before the beginning of an evacuation. In many floods, the conditions can change rapidly due to the blockage of the flood flows by debris or ice. In other cases flood flows can wash out diversions such as road or railroad embankments and allow flooding of areas previously thought to be safe.

Evacuation Warning

An EVACUATION WARNING should be issued by local authorities with a press release to all media. Written evacuation warnings should be available for distribution at traffic control points and door to door as the situation requires. Usually the warning can be pre-written with only a few blanks to be filled in.

If possible, the written evacuation warning should contain the telephone numbers of relief organizations, law enforcement agencies, and possible shelters. A description of the evacuation route should also be included.

(This page is left blank intentionally.)

APPENDIX A

FLOOD EMERGENCY ACTION PROCEDURES PREPARATION GUIDE FOR SMALL COMMUNITIES

SAMPLE BLANK FORMS

KEY PERSONNEL ORGANIZATION

FLOOD EMERGENCY CONTACTS

TASK LIST BY STAGE LEVEL

FLOOD EMERGENCY TASK NO. ____

HAZARDOUS MATERIALS NOTIFICATION

UTILITIES NOTIFICATION

EMERGENCY SHELTER NO. ____ INVENTORY

EMERGENCY SHELTER SELECTION

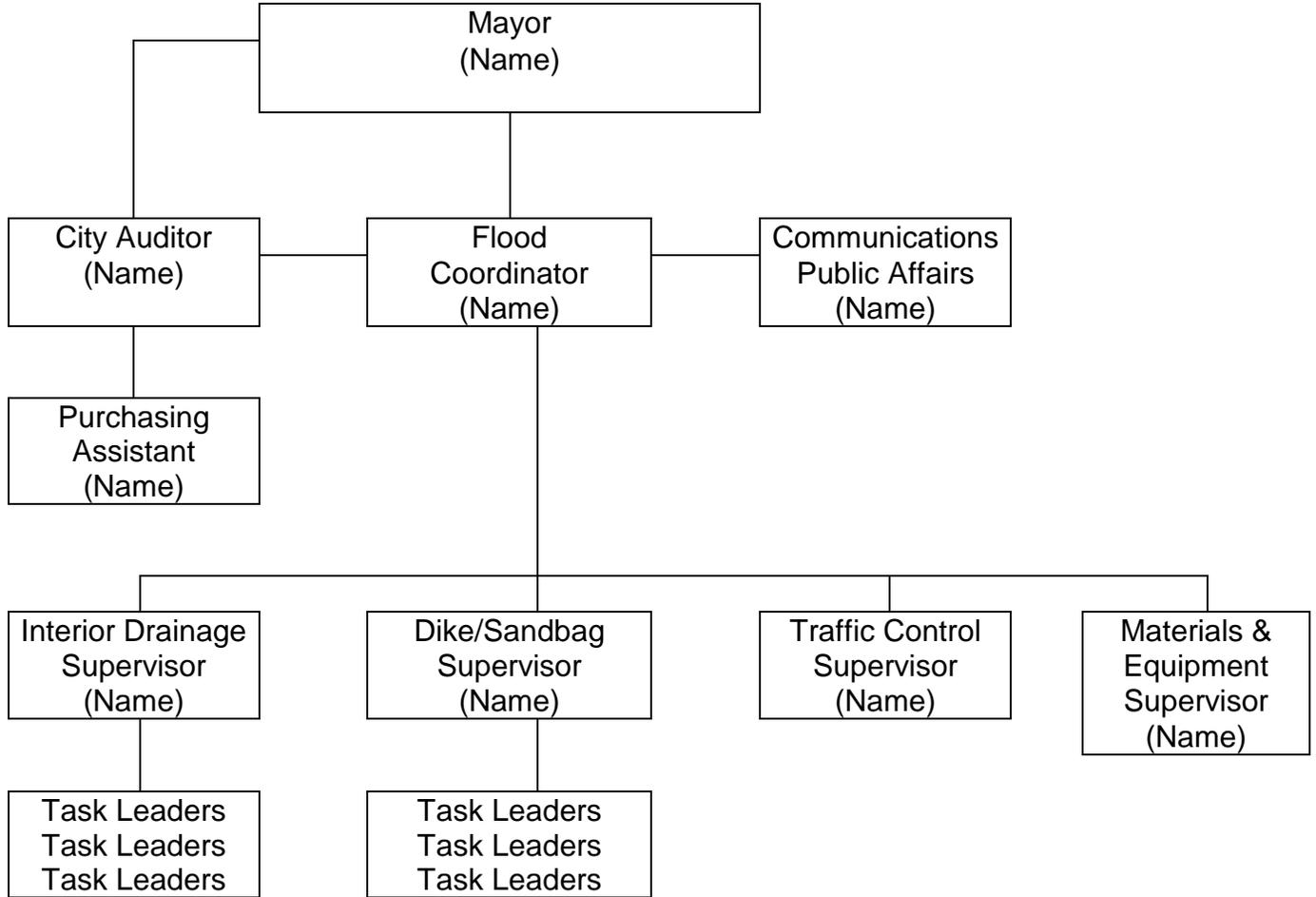
APPENDIX B

FLOOD EMERGENCY ACTION PROCEDURES
PREPARATION GUIDE FOR SMALL COMMUNITIES

SAMPLE COMPLETED FORMS AND RECORDS

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

KEY PERSONNEL ORGANIZATION CHART



Date Prepared: _____
Updated: _____
Updated: _____
Updated: _____

CITY OF _____,
FLOOD EMERGENCY ACTION PROCEDURES

POSITION - DESCRIPTION OF DUTIES

Flood Coordinator

Preparatory Phase: At such time as it appears the City of _____ will be threatened by flooding the Mayor shall request the Flood Coordinator to begin preparations for Flood Emergency Action Procedures to be initiated. If the Flood Coordinator is not designated at that time or the designated Flood Coordinator is not readily available, the Mayor shall then appoint a person to that position. The Flood Coordinator will assess the available information and advise the Mayor and City Council about when and whether a Flood Emergency should be declared.

The preparations for a Flood Emergency should include:

1. Arranging staff for the Flood Emergency Action Procedures organization.
2. Inventorying and inspecting existing flood protection devices such as flap gates, drainage facilities, levees, dikes, etc.
3. Inventorying and inspection flood fighting equipment and materials such as pumps, generators, sandbags, loaders, trucks, etc.
4. Direct City personnel to prepare flood fighting equipment and materials.

Action Phase: At such time that a Flood Emergency is declared by the City, the Flood Coordinator shall take full charge of the procedures. The Flood Coordinator shall make decisions on what level of protection and at what time to begin the Tasks for each level of protection. The Flood Coordinator shall have the Flood Organization Personnel notified and conduct meetings as necessary to direct and manage the Flood Action Procedures. The Flood Coordinator shall manage the entire procedure. The Flood Emergency Action Procedure shall be the guide for the procedure. The Flood Coordinator shall be the contact person for coordinating the efforts of the U.S. Army Corps of Engineers and other agencies involved in the procedures. The Flood Coordinator will provide periodic updates and reports to the Mayor as to the progress of the procedures and of any problems needing attention by the City Council.

Purchasing Assistant

The Purchasing Assistant shall be selected by the City Auditor/Clerk/Administrator and will be supervised by the Auditor/Clerk/Administrator. The Purchasing Assistant will provide assistance to the Auditor/Clerk/Administrator in the purchase of materials, equipment, and other flood related expenditures. The Purchasing Assistant will aid the

Auditor/Clerk/Administrator in keeping records, FEMA documentation, payrolls, and receipts for all flood expenditures.

Communications and Public Affairs

The Communications and Public Affairs person shall work under the supervision of the Flood Coordinator. Communications and Public Affairs shall arrange for communications for the flood procedures including telephones and radios. Communications and Public Affairs will also handle calls from the public and the media including managing media coverage, provide media tours and information, and limit incorrect reports, interruptions, and interference of the Flood Emergency Action Procedures. Communications and Public Affairs shall take photographs and video coverage of the Flood Procedures for documentation purposes.

Interior Drainage Supervisor

The Interior Drainage Supervisor works under the supervision of the Flood Coordinator. The Interior Drainage Supervisor shall be responsible for supervising Tasks No. _____, _____, _____, and _____ which involve the closing of existing mechanical devices such as flap gates and valves to prevent flood intrusion into the protected area of the City. Interior Drainage Supervisor shall be responsible for Tasks No. _____, _____, _____, and _____ which involve the placement of pumps, hoses, and equipment to provide interior drainage of the City during the Flood. Interior Drainage Supervisor will also coordinate with the operations of the Water and Sanitary Sewer systems by providing assistance to keep those systems operational. Interior Drainage Supervisor shall provide notification to the Flood Coordinator of serious problems with the Water and Sewer systems.

Dike and Sandbag Supervisor

The Dike & Sandbag Supervisor shall work under the supervision of the Flood Coordinator. Dike & Sandbag Supervisor shall be responsible for construction and maintenance of sandbag or earth levees in Task No. _____, _____, and _____ during the Flood Procedures. Dike & Sandbag Supervisor will supervise the activities of the volunteers, dike watchers, and others involved in this work. Dike & Sandbag Supervisor shall conduct a periodic evaluation of the dike and levee system and report problems or concerns to the Flood Coordinator immediately.

Traffic Control Supervisor

The Traffic Control Supervisor works under the supervision of the Flood Coordinator. Traffic Control Supervisor is responsible parking control and traffic so that neither interferes with the Flood Procedures. Traffic Control Supervisor will request signs from the County or other sources for road closures and detours as necessary. The Traffic Control Supervisor shall notify the County Sheriff's Department in the event traffic or sightseers become unmanageable locally.

Materials and Equipment Supervisor

The Materials and Equipment Supervisor works under the direction of the Flood Coordinator. Materials and Equipment Supervisor is responsible for the control of the necessary materials, equipment and supplies for the Tasks of the Flood Procedures. Materials and Equipment Supervisor provides for the maintenance and repair of equipment. Materials and Equipment Supervisor shall keep an inventory of sandbags, poly, and/or other materials to provide and adequate supply. Materials and Equipment Supervisor shall control the disbursement of flood supplies and materials to the public. It should be noted that the City is responsible for charges for all Federally furnished pumps and materials unless those charges are waived by the Federal Government.

Task Team Leaders

The Task Team Leaders work under the direction of the Key Personnel Supervisor to which they are assigned. Task Team Leaders are responsible for completing each step of the TASK to which they are assigned. Task Team Leaders are responsible for the supervision of their Team to complete the assigned Task of Tasks. The Task Team Leaders will communicate the completion of an assigned Task to their Supervisor.

CITY OF _____,
FLOOD EMERGENCY ACTION PROCEDURES

FLOOD ORGANIZATION PAY SCHEDULE

<u>POSITION DESCRIPTION</u>	<u>PAY PER HOUR</u>
1. Flood Coordinator	\$ _____.
2. Purchasing Assistant	\$ _____.
3. Communications/Public Affairs	\$ _____.
4. Interior Drainage Supervisor	\$ _____.
5. Dike and Sandbag Supervisor	\$ _____.
6. Traffic Control Supervisor	\$ _____.
7. Material and Equipment Supervisor	\$ _____.
8. Task Team Leaders	\$ _____.
9. Sandbag Labor (Optional)	\$ _____.
10. Dike and Pump Watch (Optional)	\$ _____.
11. _____	\$ _____.

NOTE: *These positions are possibilities for the FEAP and should be decided by the City for inclusion in each individual document. Some communities may need only a few of the positions while other communities may need to designate additional or different positions.*

(This page is left blank intentionally.)

CITY OF _____,
FLOOD EMERGENCY ACTION PROCEDURES

ALTERNATE KEY PERSONNEL LIST

Status Code **A**=available **U**=unavailable

Flood Coordinator

Name	Stat	Home	Work	Cellular	Pager

Purchasing Assistant

Name	Stat	Home	Work	Cellular	Pager

Communications/Public Affairs

Name	Stat	Home	Work	Cellular	Pager

Interior Drainage Supervisor

Name	Stat	Home	Work	Cellular	Pager

Dike/Sandbag Supervisor

Name	Stat	Home	Work	Cellular	Pager

Traffic Control Supervisor

Name	Stat	Home	Work	Cellular	Pager

Materials/Equipment Supervisor

Name	Stat	Home	Work	Cellular	Pager

Task Team Leaders

Name	Stat	Home	Work	Cellular	Pager



(This page is left blank intentionally.)

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

FLOOD EMERGENCY CONTACTS

Flood Forecasting

Contact	Name	Work	Cellular	Pager	Fax	Home
National Weather Service						
Army Corps of Engineers						
Nat. Res. Conservation Service						
State Dept. of Natural Resources						

Emergency Management

Contact	Name	Work	Cellular	Pager	Fax	Home
County Emergency Services						
State Emerg. Management						
Fed. Emerg. Management						

Emergency Services

Contact	Name	Work	Cellular	Pager	Fax	Home
Ambulance Service						
Police Department						
Fire Department						
County Sheriff						
State Patrol						

Utilities (Non-Community)

Contact	Name	Work	Cellular	Pager	Fax	Home
Power Company						
Telephone Company						
Natural Gas Company						
One-Call for Utilities						
Cellular Provider						

Disaster Relief Organizations

Contact	Name	Work	Cellular	Pager	Fax	Home
American Red Cross						
Lutheran Brotherhood						

Regulatory Agencies

Contact	Name	Work	Cellular	Pager	Fax	Home
Pollution Control						
Department of Health						
Watershed District						

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

TASK LIST BY STAGE LEVEL

NOTICE: Tasks to be completed in this order!

No.	Task Description	Prep. Stage	Action Stage	Critical Stage
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				

CITY OF _____,
FLOOD EMERGENCY ACTION PROCEDURES

MATERIAL AND EQUIPMENT LIST

Materials Required: (sandbags, sand, poly., plywood, etc.)

Check	Item	Qty.	Unit	On Hand	Order

Tools Required: (shovels, waders, saws, pry bars, etc.)

Check	Item	Qty.	Unit	On Hand	Order

Equipment Required: (pumps, generators, heaters, etc.)

Check	Item	Qty.	Unit	Owned	Rent

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

FLOOD EMERGENCY TASK No. _____

SUPERVISOR: _____ **CONTACT BY:** (Cellular, Radio, etc.) _____

TASK FLOOD LEVELS	PREPARE	ACTION	CRITICAL
RIVER STAGE			

TASK DESCRIPTION:

--

TASK LOCATION: (Refer to the attached map)

--

PERSONNEL:

Team Leader:		Cellular # _____	Radio # _____
LABOR: Number and Strength	_____ Strong	_____ Average	_____ Not Critical

REQUIRED TOOLS AND EQUIPMENT:

KEYS REQUIRED:

Check	For what lock or equipment	Location	ID #

TOOLS REQUIRED:

Check	Tool Name	Location of Tool	Each

EQUIPMENT REQUIRED:

Check	Equipment Name	Location of Equipment	ID #

MATERIALS REQUIRED:

--	--	--

Check	Material	Quantity	Unit

STEPS TO COMPLETE TASK NO. _____

Check	No.	Instruction for Step.
	1.	
	2.	
	3.	
	4.	
	5.	
	6.	
	7.	Notify _____ Supervisor of TASK NO. ____ completion.

AREA FOR INSERTION OF PHOTOGRAPH OF TASK SITE

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

HAZARDOUS MATERIALS NOTIFICATION

This information is for notifying owners of flood threats only. The owners are responsible for relocation or protection of all hazardous materials.

HAZARDOUS MATERIAL SITE NO. _____

Business/Owner Name: _____
Storage Location/Address: _____
Materials Description: _____
Material Location on Site: _____

CONTACTS FOR NOTIFICATION OF FLOOD THREAT

No.	Name	Work	Cellular	Pager	Fax	Home
1.						
2.						
3.						

Relocation or Protection Plan: YES NO
Plan Summary/Description: _____

HAZARDOUS MATERIAL SITE NO. _____

Business/Owner Name: _____
Storage Location/Address: _____
Materials Description: _____
Material Location on Site: _____

CONTACTS FOR NOTIFICATION OF FLOOD THREAT

No.	Name	Work	Cellular	Pager	Fax	Home
1.						
2.						
3.						

Relocation or Protection Plan: YES NO
Plan Summary/Description: _____

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

UTILITIES NOTIFICATION

This information is for notifying utilities of flood threats only. The utilities are responsible for protection of their facilities except under cooperative agreement.

ELECTRICAL POWER:

Business Name: _____
Address: _____
Facility Description: _____

CONTACTS FOR NOTIFICATION OF FLOOD THREAT

No.	Name/Position	Work	Cellular	Pager	Fax	Home
1.						
2.						
3.						

TELEPHONE SERVICE:

Business Name: _____
Address: _____
Facility Description: _____

CONTACTS FOR NOTIFICATION OF FLOOD THREAT

No.	Name	Work	Cellular	Pager	Fax	Home
1.						
2.						
3.						

NATURAL GAS SERVICE:

Business Name: _____
Address: _____
Facility Description: _____

CONTACTS FOR NOTIFICATION OF FLOOD THREAT

No.	Name	Work	Cellular	Pager	Fax	Home
1.						
2.						
3.						

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

EMERGENCY SHELTER No. _____ INVENTORY

Shelter Location/Description

Building Name: _____
 Shelter Location/Address: _____

Above Flood Plain YES NO
 Within Levees YES NO

EVACUATION FLOOD STAGE _____ feet (elev.)

Contacts For Shelter Access/Operation

No.	Name	Work	Cellular	Pager	Fax	Home
1.						
2.						
3.						

Facilities Information

Shelter Capacity: _____ Operating Staff
 _____ Flood Victims/Workers
 _____ Total Occupancy

Accessibility: Good Fair Poor
 Parking: Ample Adequate Limited
 Sanitary Facilities: Toilets Showers City Sewer
 Potable Water: City Individual
 Kitchen Facilities: Commercial Residential Refrigeration
 Standby Power: Yes No
 Heating Fuel: Oil Propane Nat. Gas Electric

CITY OF _____, _____
FLOOD EMERGENCY ACTION PROCEDURES

EMERGENCY SHELTER SELECTION

- ◆ Features should be added or changed for community’s preference.
- ◆ Features should be assigned a relative value of importance. (i.e. 5 thru 0)
- ◆ Total the values of the features for each shelter and select preferred shelter.

FEATURE	VALUE	No.____	No.____	No.____	No.____	No.____
Availability						
Above Flood Plain						
Within Levees						
Number of Contacts for Access						
People Capacity						
Accessibility						
Parking						
Sanitary Facilities						
Potable Water Supply						
Kitchen Facilities						
Standby Power						
Heating Fuel						
TOTAL VALUE FOR SHELTER						