

Tsunami Planning

Tsunami Sample Planning Template

Management

Management may want to focus on several areas during the planning process, including organizational structure; coordination of various disciplines; inclusion of non-profit organizations or private businesses in the possible response organization; public information concerns; safety and security; and information sharing among the key players. In addition, management may also want to be involved in threat analysis plans and procedures development.

Organizational Structure

Local government should consider the organizational structure required for a tsunami threat or actual event. In developing the organization, agencies may want to address the following questions:

- How should organizational and planning issues be addressed? Through multi-agency tsunami planning committee (TPCs)? Through regional as well as local efforts? Much of the success of future tsunami response efforts will depend upon establishing close working relationships among the key players at various government levels.
- What organization is already in place to deal with tsunamis?
- How will they interface with their state and federal counterparts?
- What levels of government need to be represented?
- What are the procedures for liaison to OES? Others?
- What organizational elements need to be represented? For example, the unified command?
- How will the transition from tsunami watch/warning to tsunami response be accomplished—if necessary?

Coordination of Disciplines

A tsunami event will require multi-agency, multi-discipline coordination at all levels, including first responders. Questions to consider:

- How do local jurisdictions plan to coordinate medical, health, fire and rescue, public works, law and coroner?
- What are the issues associated with discipline coordination? In the EOC environment? In the field?
- What communication systems and protocols need to be in place?
- How will vulnerable population issues be addressed?
- How will education and childcare facilities be addressed?
- How will animal care issues be addressed?

Non-Profits and Private Businesses

Non-profit organizations and businesses may become involved in a tsunami threat or event, either as potential victims or as possible support organizations.

- What non-profit organizations need to be involved in tsunami response planning?
- How do local jurisdictions include them in tsunami response?
- Are there businesses that need to be involved in tsunami response planning? Would they be potential victims? Could they provide support to emergency operations?

Public Information

All Public Information personnel should review current plans and/or protocols to ensure the area(s) listed below are addressed. As we have seen in California during our natural disasters, public information plays a crucial role in managing an event. Some questions to consider are:

- What system(s) are available to alert the public?
- What protocols need to be established by local government?
- How does local government ensure support and cooperation with the media on a potentially sensitive subject?
- What protective actions need to occur for government response personnel to the public?
- How do local governments and the media address bilingual and multicultural concerns?
- What public information organizations need to be established? Media centers?

Safety and Security

All Safety and Security personnel should review current plans and/or protocols to ensure the area(s) listed below are addressed. Staff safety and operational security will be key concerns during a tsunami threat or actual event. Questions to consider:

- What actions do local governments need to take to protect their staff?
- What actions need to be taken to ensure operational security?
- What agencies have responsibility for perimeter security?

Information Dissemination

Information dissemination and sharing will be crucial during a tsunami threat or actual event. How an event unfolds will be determined to a great extent by “information” and how it is processed. Questions to consider:

- What protocols need to be established about sharing threat information? How will various disciplines share information across discipline lines (e.g.: law enforcement to medical).
- What components of the local response organization need to have information?
- What information elements need to be shared? And with what agencies, organizations, businesses, volunteer organizations, the media, and so on?
- Do agencies need to have “alert levels” or “readiness conditions” – even those that do not normally use these terms?

Operations

This section addresses concerns that may surface during tsunami response planning for branches normally associated with Operations.

Fire Department

All Fire and Rescue personnel should review current plans and/or protocols to ensure the areas listed below are addressed. Tsunami inundations are not a single wave event; several waves may inundate the coast over several hours. The first wave may be followed by larger, more destructive waves that go farther inland and carry debris.

- Are fire and rescue response personnel staged outside of the potential tsunami run up area until an all clear is given?
- Do existing procedures need to be modified to accommodate a tsunami scenario?

- Do first responder personnel need to receive any special instructions in the face of a potential tsunami threat?
- What time-critical refresher training needs to occur in anticipation of an event? (For example, refresher training on chemical agent identification.)
- What additional technical support teams will be required for a tsunami situation?
- Which fire and rescue functions need to be co-located with other disciplines for coordination purposes?
- Will the Fire and Rescue Branch need to request mutual aid to deal with the consequences of a tsunami event?
- Will Fire and Rescue Branch require extensive logistical support for their operations?
- How will fire and rescue personnel deal with the potential that they may become secondary tsunami casualties upon response to an event?
- How will fire and rescue personnel expand their operations beyond the normal day-to-day emergency response? What will be required to do this?
- How will the environmental needs be addressed?
- Have fire and rescue personnel prepared for an incident?
- Are decontamination procedures in place for fire and rescue personnel?

Hazardous Materials

All Hazardous Materials/Radiological personnel should review current plans and/or protocols to ensure the areas listed below are addressed. Tsunamis often involve many waves; several waves may inundate the coast over several hours. The first wave may be followed by larger, more destructive waves that go farther inland and carry debris.

- Are hazardous materials response personnel staged outside of the potential tsunami run up area until an all clear is given?
- Do existing procedures need to be modified to accommodate a tsunami scenario?
- Do first responder personnel need to receive any special instructions in the face of a potential tsunami threat?
- What time-critical refresher training needs to occur in anticipation of an event? (For example, refresher training on chemical agent identification.)

- What additional technical support teams will be required for a tsunami situation?
- Which hazardous materials or radiological functions need to be co-located with other disciplines for coordination purposes?
- Will the HazMat or Radiological Branch need to request mutual aid to deal with the consequences of a tsunami event?
- Will HazMat or Radiological Branch require extensive logistical support for their operations?
- How will HazMat or Radiological team personnel deal with the potential that they may become secondary tsunami casualties upon response to an event?
- How will HazMat expand their operations beyond the normal day-today emergency response? What will be required to do this?
- How will the environmental needs be addressed?
- Have radiological personnel prepared for an incident?
- Are decontamination procedures in place for radiological personnel?

Law Enforcement

All law enforcement personnel should review current plans and/or protocols to ensure the areas listed below are addressed. Several tsunami waves may inundate the coast over a number of hours. The first wave may be followed by larger, more destructive waves that go farther inland and carry debris.

- Are law enforcement personnel staged outside of the potential tsunami run up area until an all clear is given?
- Do existing procedures need to be modified to accommodate a tsunami scenario?
- Do first responder personnel need to receive any special instructions in the face of a potential tsunami threat?
- What time-critical refresher training needs to occur in anticipation of an event? (For example, refresher training on evacuations).
- What additional technical support teams will be required for a tsunami situation?
- Which law enforcement functions need to be co-located with other disciplines for coordination purposes?

- ❑ Will the law enforcement branch need to request mutual aid to deal with the consequences of a tsunami event?
- ❑ What additional logistical support will law enforcement require for operations?
- ❑ How will law enforcement expand their operations beyond the normal day-to-day emergency response? What will be required to do this?
- ❑ Are law enforcement personnel prepared to perform/direct mass evacuations and spontaneous evacuations?

Coroner

Generally, all of the standard mass fatality concerns would apply for coroner operations during a tsunami response. Tsunami inundations are not a single wave event; several waves may inundate the coast over several hours. The first wave may be followed by larger, more destructive waves that go farther inland and carry debris.

- ❑ Are coroner personnel staged outside of the potential inundation area?
- ❑ Do existing procedures need to be modified to accommodate a tsunami scenario?
- ❑ Do existing procedures address and deal with decontamination in the presence of hazardous materials? One area to be addressed is decontamination of the deceased prior to leaving the scene to prevent contamination of facilities. This requires setting up a specific decontamination procedure prior to transportation to the incident morgue or central morgue facility. It may also be necessary to establish a temporary morgue for any work with contaminated deceased.
- ❑ Are there provisions in place for securing of personal effects? They may be needed to assist in identification or at least in the “believed to be (BTB) identification. They must be secured for release to the family if appropriate.
- ❑ Are there provisions for the recovery and identification of the deceased? This is usually the highest priority of the family. It may, however, conflict with the other issues of a tsunami response. Recovery of bodies may be delayed, for instance, due to continued tsunami risks. Coroner staff should not enter the inundation zone until the “all clear” is issued.
- ❑ Do procedures address the issues of identification of large numbers of tsunami casualties, when there may be decontamination and dismemberment issues?
- ❑ Do procedures include the establishment of a Family Assistance Center? Mass fatalities management usually includes such centers. The centers facilitate information flow. Family members may need to be available for interviews, identification notifications, and remains disposition.

- Do coroner personnel need to receive any special instructions in the face of a potential tsunami threat?
- What time-critical refresher training needs to occur in anticipation of an event?
- What additional technical support teams will be required for a tsunami situation?
- Which coroner functions need to be co-located with other disciplines for coordination purposes?
- Will the Law Enforcement Branch need to request mutual aid to deal with the consequences of a tsunami event?
- What additional logistical support will be required for coroner operations?
- How will operations be expanded beyond the normal day-to-day emergency response? What will be required to do this?

Medical and Health

All medical and health personnel should review current plans and/or protocols to ensure the areas listed below are addressed. Tsunami waves may inundate the coast over several hours. The first wave may be followed by larger, more destructive waves that go farther inland and carry debris.

- Are medical personnel staged outside of the potential tsunami run-up area until an all clear is given.
- Do existing procedures need to be modified to accommodate a tsunami scenario?
- Do first responder personnel need to receive any special instructions in the face of a potential tsunami threat?
- What time-critical refresher training needs to occur in anticipation of an event (refresher training on chemical agent identification, biological hazards, or decontamination procedures, for example)?
- What additional technical support teams will be required for a tsunami situation?
- Which medical or health functions need to be co-located with other disciplines for coordination purposes? For example, there are instances in which medical and hazardous material personnel may need to conduct joint activities.
- Will the medical and health branches need to request mutual aid to deal with the consequences of a tsunami event? What will be the source of this aid?

- Will the medical and health branches need to establish significant logistical support for operations?
- How will medical and health personnel deal with the possibility that they may become secondary tsunami victims upon response to an event?
- How will medical and health expand their operations beyond the normal day-to-day emergency response? What will be required to do this?
- Should medical and health personnel establish contacts in the private sector prior to an incident for quicker access to supplies and personnel?
- Are decontamination procedures in place for medical personnel?
- If the event is a Mass Casualty Incident (MCI), how will medical personnel address the need for the possible massive amounts of mutual aid required?

Mental Health

“Medical” also includes mental health support, which will focus on support to victims of a tsunami and support to response personnel, including EOC staff. Mental health planners should consider the same sort of questions that other elements of the medical and health community address. In addition, plans should incorporate the following areas:

Staff Background and Training

- Does your mental health staff have the requisite training in disasters, tsunamis, and dealing with trauma?
- Do they have an understanding of governmental response roles?
- Are they able to function as part of a multi-disciplinary team?

Crisis Management

- Public information:** What role should mental health practitioners play as part of public information? What effect does public information have upon the mental health of the victims and responders?
- Support services:** How can the mental health community provide crisis counseling, screening, diagnosis, and treatment for those in need of such services?
- Stress Management:** How can mental health personnel support stress management programs within the EOC and other locations?

Follow-up: What mental health follow-up programs need to be developed as a result of a threat or event?

Integration and support: How do mental health activities integrate with and support other medical/health activities?

Resources: What mental health resources are available within the community? Will additional mental health resources be required? How can non-medical support personnel, such as religious staff or social services personnel, be integrated into the process?

Psychological aspects: How can mental health professionals address the psychological aspects of response activities such as: body recovery, identification, family notification, and transportation of the injured?

Care & Shelter

All care and shelter personnel should review current plans and/or protocols to ensure the areas listed below are addressed.

Do existing procedures need to be modified to accommodate a tsunami scenario?

What special instructions do care and shelter personnel need to receive regarding a potential tsunami threat?

What time-critical refresher training needs to occur in anticipation of an event (for example, refresher training on facility security procedures or event (for example, refresher training on facility security procedures or mental health concerns during a tsunami event)?

What level of facility security will be required for care and shelter operations during a tsunami situation?

At what levels of the emergency response organization should there be care and shelter representation? Field level incident command post? City EOC? OA EOC?

Will the care and shelter branch need to request mutual aid to deal with the consequences of a tsunami event? If so, what will be the source of this aid?

Will the care and shelter branch need to establish significant logistical support for its operations? How will this connect to other logistical support, such as medical?

How will care and shelter personnel handle mass evacuations and spontaneous evacuations? How will local law enforcement and fire personnel address this situation?

Public Works and Utilities

All Public Works personnel should review current plans and/or protocols to ensure the areas listed below are addressed. This branch may include public works, local state agency representation, and private concerns. It may include representatives from professional organizations. Tsunami inundations are not a single wave event; several waves may inundate the coast over several hours. The first wave may be followed by larger, more destructive waves that go farther inland and carry debris.

- Are public works and private and public agency personnel staged outside of the potential tsunami run up area until an all clear is given?
- How will building inspectors and other professionals be included in the process?
- All Utilities personnel should review current plans and/or protocols to ensure the areas listed below are addressed.
 - The Utilities branch may be composed of both public and private utilities organizations in the areas of potable water, wastewater and sewage treatment, gas, and electricity. The branch may, of necessity, coordinate extensively with the construction and engineering branch.
 - What are the vulnerabilities for utilities?
 - Do existing utilities procedures need to be modified to accommodate a tsunami scenario? If so, how should they be modified?
 - Do utilities field personnel need to receive any special instructions in the face of a potential tsunami threat?
 - What time-critical refresher training needs to occur in anticipation of an event?
 - At what levels of the emergency response organization should there be utilities representation? Field level incident command post? City EOC? OA EOC?
 - What additional utility technical support teams will be required for a tsunami situation?
 - Which utilities components need to be co-located with other disciplines for coordination purposes? There are, For example, instances when utilities personnel may need to conduct joint activities with fire and rescue personnel.
 - Will the utilities branch need to request mutual aid to deal with the consequences of a tsunami event? If so, what will be the source of this aid?
 - Will the utilities branch need to establish significant logistical support for operations?

- How will utilities expand their operations to accommodate the emergency response?

Planning and Intelligence

There are at least two (2) main areas to consider:

- 1) Threat analysis; and
- 2) Identification of gaps and shortfalls in plans and procedures.

Threat Analysis

Threat analysis can include human factors (deaths, injuries, sheltering needs, etc.), lifelines and infrastructure (utilities, roads, bridges, etc.), and critical facilities (police and fire stations, schools, hospitals, etc.). Other possible areas to examine would be facilities such as transportation hubs and industrial facilities with hazardous materials that are in the tsunami run-up zone. The Certified Unified Program Agency (CUPA), for example, will be registering the facilities that are exposed to the tsunami threat.

Identification of Planning Gaps

After reviewing the items contained in this Planning Template section, answer the following questions:

- What needs to be done?
- What are the action items?
- Who needs to do them?
- What are the timelines?
- Does the local jurisdiction need an entirely new plan to address tsunami issues or can existing plans and procedures be modified?

Logistics

As part of the planning process for the tsunami response, local government will probably identify support requirements (supplies, services, equipment, facilities, etc.). Resources databases will also need to be identified, developed, and maintained. Logistics planners will probably want to identify critical support operations, such as computer operations, that must remain intact and functional during an event.

Support Requirements

The following questions should be considered when identifying support requirements:

- ❑ What assets do local jurisdictions have to deal with the tsunami threat?
- ❑ What do they think they might need to overcome shortfalls?
- ❑ Do local jurisdictions know how to access/request resources from other sources?

Resources Data Bases

Development and use of the appropriate databases will be essential to the response effort. Some questions to consider:

- ❑ What resource databases exist? How does the local government access them?
- ❑ What inundation maps exist?
- ❑ What resources do they need to manage and how?
- ❑ Does the jurisdiction need to develop a tsunami specific resources database? What should be in this database? Should its accessibility be restricted in some way?

Finance and Administration

Issues, which may need to be addressed, include continuity of operations, such as payroll processing, and tracking the costs of an event.

Continuity of Operations

- ❑ What systems do local jurisdictions have for personnel tracking and payroll operations?
- ❑ What are the staff recall procedures?
- ❑ Will there need to be a set of recall procedures specific to tsunami response?

Cost Tracking

Like any other emergency response, local jurisdictions will want to track costs associated with a tsunami response. Is there anything unique to tsunami response that will impact cost tracking procedures?

Training and Exercises

Training and exercises are a crucial component for a successful tsunami response program. There are several areas which local jurisdictions may want to consider:

- Development of a “Tsunami Response Training Program”
- Existing training programs
- Tsunami Awareness Programs
- First Responder Training Exercise Program

Tsunami Response Training

The local jurisdiction may want to develop a comprehensive program, based upon its training needs assessment. The program would include maintenance of training records. Key questions to consider:

- What are our training needs?
- Can we identify our training needs?
- What do we need to do to meet our training needs?

Tsunami Awareness Programs

Questions to consider regarding tsunami awareness programs:

- Does the local jurisdiction need to develop and conduct a tsunami awareness program?
- Who should get the awareness training?
- Does the awareness training include a quick orientation module that personnel can take in anticipation of a potential threat?

First Responder Training

Questions to consider:

- What First Responder Training already exists that can be used by the local jurisdiction?
- Where does the first responder training fit with other training elements?
- Does the jurisdiction need to develop first responder training?
- Does the jurisdiction need assistance in developing its training?
- What training needs to be implemented for dispatch centers? For fire and rescue? For EMS? For HazMat? For law enforcement?

Exercises

What is the current exercise program? Can it be modified to accommodate tsunami concerns?

- Does the jurisdiction need to develop a separate exercise program for tsunami?
- Who should develop, conduct, and maintain the new tsunami response exercise program?
- Does the jurisdiction have the resources to conduct such exercises?
- What about funding for the program?