



## Partners for Disaster Resistance & Resilience

# Post-Disaster Recovery Planning Forum: How-To Guide

Prepared By: Oregon Natural Hazards Workgroup



**DRAFT**

# Post-Disaster Recovery Planning Forum: How –to– Guide

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**NOTE: This is a draft document for discussion  
purposes. We welcome feedback and suggested  
improvements.**

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The ideas and opinions expressed in the document represent those of Oregon Natural Hazards Workgroup, the creator of the how –to– guide, and not necessarily the partners or supporters listed above.

DRAFT

# Preface

Recent catastrophic disaster events remind us that many communities are vulnerable to natural hazards. The Indian Ocean basin earthquake and tsunami took over 250,000 lives and caused major disruptions in the regional and local economies. Hurricane Katrina killed over 1200 and caused over \$150 billion in reported damages to the US Gulf Coast. Both events highlight what has long been known by researchers: that many costs associated with disaster events—including social and economic disruption—are difficult to quantify but have profound, long-term impacts on a community's ability to recover.

Not all recent news on disasters is grim. Researchers have been able to prove that there are benefits to communities that take steps toward pre-disaster planning; specifically, mitigation efforts can greatly reduce their losses. Pre-disaster planning can decrease the potential loss of life, property, and economic damages from disaster events. For pre-disaster planning to be effective it must be institutionalized in the local decision-making process. Communities must think more holistically about how they prepare for, respond to, and recover from disasters.

The fact is that no community is immune to disaster loss. Cities are designed and dependent on a very complex interrelated network of built and socially constructed systems. These systems are the core that makes a community tick. Disaster events often expose the fragility of some of these systems. By looking at community risk from a more holistic and systems approach we can better identify a community's resource exposure (e.g. buildings, roads, utilities, social structure and services etc.) and sensitivity, which equates the relative importance of the system (e.g. vulnerable populations or economy) along with the community's ability to respond and recover, - its resiliency. Based upon this evaluation we can develop strategies for both short-term and long-term mitigation and disaster recovery and reconstruction.

This guide provides an approach for assisting communities in identifying issues they will face after a disaster. The intent is to provide a process for communities to start pre-disaster planning for catastrophic events by engaging partners in identifying the critical issues the community will face in a post-disaster reconstruction environment. This is only the first step toward making your community more disaster resilient and sustainable —now and for the future.

## **CREW**

CREW is comprised of a group of private and public representatives whose goal is to reduce the effects of earthquake events on Cascadia Region communities. CREW helped fund the project and contributed scientific data; in particular, the Cascadia Subduction Zone Earthquakes: A Magnitude 9.0 Scenario, which provided participants with background information on the potential risks they face.

## **ONHW**

Since 2000, ONHW has worked with state and local governments and the private sector to coordinate efforts and build capacity for the identification, evaluation and implementation of risk reduction efforts statewide. This is accomplished through the development and coordination of Partners for Disaster Resistance & Resilience: Oregon Showcase State initiative. The Partnership is a coalition of public, private, and professional organizations working collectively toward the mission of creating a disaster resilient state. ONHW coordinated the development of the forum process and presentation materials for a pilot forum held in 2006.

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*"Our organization had been engaged in all-hazards response and business continuity activities prior to the forum. The biggest benefit was being asked to come to the table. Typically private industry does not get that opportunity in community planning efforts. This forum recognized that the majority of utilities are maintained by private industry and gave us the opportunity to participate and form new partnerships."*

*- Private Utility Company Representative*

*"Post-disaster recovery planning is a worthwhile investment for every community. Without a recovery strategy, it is likely that political and economic pressures, both internal and external, will strongly influence the redevelopment priorities after a disaster. You might end up with the visioning for your community being conducted by a regional or state task force with little or no local stakeholder input."*

*- State/Provincial Emergency Manager*

Guide funded by: CREW, USGS

# Overview

The events of the 2004 Sumatra earthquake and tsunami, as well as Hurricane Katrina in 2005, have proven that most communities are ill-prepared to undertake the long-term post-disaster recovery and reconstruction efforts necessary to bring a community back after a catastrophic disaster. The purpose of this guide is to provide communities with a process for getting organized and identifying regional and local long-term recovery issues and needs before a disaster strikes. It is the first step in the development of a community long-term plan for recovery from catastrophic events. All too often communities struggle to develop recovery plans after the disaster occurs. At a time when most resources are focused on providing essential services, communities have few resources available to establish holistic strategies for long-term recovery and reconstruction.

*Recent research supports the idea that implementing a more holistic pre-disaster approach is more cost effective in the long-run. Every \$1 spent on hazard mitigation saves society \$4 in response and recovery costs.<sup>1</sup>*

Catastrophic disaster events result in community-wide impacts on the population, economy, infrastructure, political system, and environment, as well as the community's way of life. Disaster events demonstrate how communities are vulnerable to large scale destruction. The importance of this issue to coastal communities in the Pacific Northwest is heightened due to their location along the Cascadia Subduction Zone. Earthquakes generated along this 800-mile long fault have the potential to result in catastrophic impacts on coastal communities due to the generation of local tsunamis.

To make our coastal communities more disaster-resilient, we must take a more comprehensive, collaborative, and regional approach to preparing for catastrophic events well before a disaster strikes. Communities that take a disaster-resilient approach to catastrophic events also can better prepare for, respond to and mitigate against future disasters.

This guide was developed to complement the CREW Cascadia Scenario, however, it can be used by any community to address any type of catastrophic disaster.

<sup>1</sup> Multihazard Mitigation Council (MMC). 2005. Natural Hazard Mitigation Saves: An independent Study to Assess the Future Savings from Mitigation Activities. Washington, D.C.: National Institute of Building Sciences

## **Cascadia Subduction Zone Earthquakes: A magnitude 9.0 earthquake scenario**

The Scenario was developed to provide information to government agencies, businesses, and families about the potential effects of a Subduction earthquake. The scenario defines a Subduction zone earthquake, provides case studies from Sumatra and Alaska, and outlines the 9.0 scenario for various regions in the Pacific Northwest.

*“A Cascadia earthquake will seriously affect our region, but it won't destroy us. We will rebuild our cities, our neighborhoods, and our businesses. The time it takes us to recover will depend largely on what preparations we make before the earthquake.”*

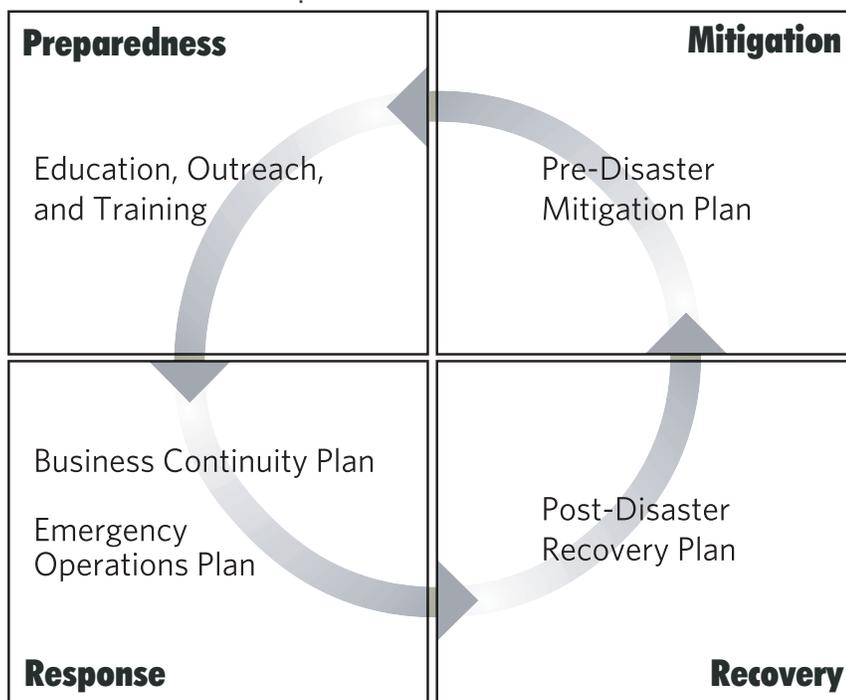
*- M9.0 Earthquake Scenario Executive Summary*

# Disaster Cycle

The emergency management profession has developed the concept of the disaster cycle as a basis for disaster management. The disaster cycle has four distinct yet interrelated phases: Mitigation, Preparedness, Response, and Recovery. The concept of the cycle implies an ongoing process in which communities, businesses, and individuals can plan for and reduce potential disaster losses. When communities apply adequate resources to all four phases of the disaster cycle, they increase their capacity to become disaster resilient.

Today's emergency management programs tend to focus on the preparedness and response phases, leaving limited resources to address the recovery and mitigation phases. The goal of a disaster resilient approach is to prevent losses, prepare, respond, and recover from future disaster events in a manner that efficiently leverages limited resources – both human and financial.

This guide focuses on the recovery phase of the disaster cycle. However, it is important to have a basic understanding of all four of the phases. The figure below illustrates the phases communities experience and also includes the types of plans and activities that can assist communities during each of the phases.



## Mitigation

a method to reduce or eliminate injuries and loss of life and/or property from natural hazards through short and long-term activities

## Preparedness

refers to activities, programs, and systems developed prior to a disaster, designed to build and enhance capabilities to support the response to and recovery from disasters.

## Response

begins as soon as a disaster event occurs. Response is the provision of search and rescue, medical services, access control, and repairing and restoring communication and data systems.

## Recovery

operations that provides for basic needs and restore the community. The process of recovery can take months or even years to accomplish.

# Post-Disaster Recovery Planning

Post-disaster recovery planning is defined as developing a set of strategies to assist a community to rebuild after a disaster occurs. Recovery planning can also be thought of as building the blueprint for reconstruction of the community after a disaster. There are a number of activities that communities can engage in to address post-disaster recovery. These strategies may include developing and implementing:

- post-disaster recovery plans,
- recovery ordinances,
- business and government continuity plans,
- post-disaster buildable lands inventories,
- utility recovery and reconstruction plans,
- temporary shelter and housing plans, and
- the establishment of a coordinating organization and guiding principles for reconstruction.

In addition to post-disaster recovery planning, mitigation, or loss reduction activities, such as relocating critical facilities out of harm's way can also help communities become more disaster resilient by removing the potential for damage before an event occurs.

**Planning:** *the act or process of making or carrying out plans; specifically: the establishment of goals, policies, and procedures for a social or economic unit*

-Merriam-Webster's Online Dictionary

Community planning requires that interested parties work together to identify alternatives for a desired outcome. Recovery planning is no different. Post-disaster recovery planning is a shared responsibility between individuals, private businesses and industries, state and local governments, and the federal government.

Getting organized and identifying critical issues for long-term recovery and reconstruction –both locally and regionally is the first step in the development of a long-term recovery plan.

The goals of community recovery planning before the disaster are to:

- Identify and prioritize key issues
- Establish partnerships
- Develop a recovery game plan
- Effectively direct internal and external resources
- Identify pre-disaster mitigation projects
- Enhance response and preparedness capabilities



Photos courtesy of USGS

# The Community Forum

One way to begin the post-disaster recovery planning process in your community is to host a community forum. A community forum provides a platform for local governments and community organizations to share resources and information in order to better prepare their community to recover from a catastrophic disaster. The Forum process also allows community members and technical experts to work together to integrate vulnerability data with local knowledge, values and experience.

This guide outlines a community process that engages broad and diverse community stakeholders to begin community level discussions about the potential impacts of a catastrophic disaster. Specifically, the guide identifies a process for organizing resources to develop, implement and document a community post-disaster recovery forum to identify critical issues and needs.

The Forum planning process includes three phases and seven tasks (shown below). Each task includes facilitator ideas that provide helpful tips based on our experiences from over 30 years of working collaboratively with communities.

## Pre-Forum Phase

- 1 Build a Forum Organizing Team
- 2 Identify and Invite Forum Participants
- 3 Develop Community Profile

## During-Forum Phase

- 4 Facilitate Issue Identification
- 5 Develop Draft Strategies
- 6 Facilitate Strategy Discussion

## Post-Forum Phase

- 7 Develop Workplan

## Purpose of this Guide

The process outlined in this guide will provide you with the essential building blocks for starting a post-disaster recovery planning initiative in your community. The process was designed to get community decision makers, professionals, and residents to think holistically about how their communities "tick" and how disaster events could affect all of the systems upon which they depend.

# Task 1: Building the Forum Team

## What's involved?

- Create the team**
- Develop the agenda**

### Create the team

Your first task is to find a person or a team of people that will be responsible for organizing, facilitating, and documenting the Forum and its outcomes. This should be a project-specific team that has one focus – to organize and host the Post-Disaster Recovery Forum.

The Forum Team can consist of whomever is interested in recovery planning. However, we suggest involving people from the following agencies/disciplines: emergency management, city planning, business, public works, and neighborhood associations. Although Forum planning can be accomplished by one person, an ideal team consists of 4-6 organizers.



Photos courtesy of ONHW

## Notes:



### Facilitator Ideas

-  If possible, develop a diverse Forum Team so that different skill sets are represented and can be utilized.

# Task 1: Building the Forum Team

## Develop the agenda

The purpose of the post-disaster forum is to identify community-specific issues related to long-term, catastrophic post-disaster recovery and to develop strategies to address those issues. The example agenda outlines a framework from which to work as you develop your community-specific process. Your community needs, issues and resources will determine the exact agenda.

The Forum process works best when held as two separate work sessions. Whether the sessions are on two consecutive days, or one month apart, is up to you and depends on your resources and overall timeline. The separation between sessions allows the Forum organizers to synthesize information gathered at the first session and present it during the second session so that community members can move from identifying issues to defining strategies.

## Products

- Forum Organizing Team
- Forum Agenda
- Schedule for Forum Development



## Facilitator Ideas

As you develop the agenda for this Forum, think about how identifying issues and strategies related to post-disaster recovery can benefit other community planning efforts, such as: comprehensive plan, emergency operations plan, capital improvement plans, and economic development strategic plans.

## Agenda

### Session 1 (2-4 hours)\*

- I. **Why are we here today?** (Welcome, Introductions, Purpose of Meeting)
- II. **How could a M9.0 earthquake affect our community?** (CREW Scenario 9.0 Overview)
- III. **What is post-disaster recovery?** (Description of Emergency Management Cycle)
- IV. **What are the recovery issues facing our community?** (Issue Identification Exercise)

### Session 2 (2-4 hours)\*

- I. **Why are we here today?** (Introductions, Purpose of Meeting, Summary of Session 1)
- II. **How can we improve the draft strategies?** (Discussion of Draft Strategies)
- I. **Where do we go from here?** (Next Steps)

\*If you schedule a meeting for more than 2 hours, be sure to include breaks.

## What's involved?

- Identify Participants
- Invite Participants & Develop Invitation Packet

## Identify Participants

It is important to think carefully about who should attend your Forum. Consider inviting any organization or person who has an interest or stake in the community's emergency preparedness efforts. Particularly important organizations to include are those who have the authority to make decisions about post-disaster recovery strategies. As a guide to creating the list, ask yourself, "Who are the key players in the community?"



### Facilitator Ideas

- Use networks of people to expand invitee list. Ask key community members who they think should be involved.
- Garner political buy-in from the City Council or other respected organization before you start your process. This will help communicate the significance of the Forum to possible attendees
- When possible, try to identify a specific person at an organization rather than sending a generic invitation.

## Who should be invited?

- Emergency Services (police and fire)
- Utilities
- City Public Works
- City Planning
- Healthcare Organizations
- Elected Officials
- Local Business Leaders
- School District
- Department of Transportation
- Home Builders Association
- American Red Cross
- Neighborhood Association
- Chamber of Commerce
- Vacation Rental Services
- Media (newspaper, radio)
- Social Service Providers
- \_\_\_\_\_
- \_\_\_\_\_

## Invite Participants & Develop Invitation Packet

The invitation packet provides participants with essential information about the Forum. The materials should include a letter of invitation that explains the purpose, the expected outcome, the agenda, and the reason why the individual is being asked to participate. Very few participants will walk in the door with a true understanding of how tsunamis and earthquakes could affect their community or what long-term post-disaster recovery really means. Including the CREW Scenario is recommended because it can help paint the picture of what issues the community may face following a Cascadia Subduction Zone event.

## Packet Components

- Forum Agenda
- CREW 9.0 Scenario
- Letter of Invitation\*

\*See "Resources" at the end of the guide for an unabridged example of an invitation letter.

*"The forum packet was very beneficial. It was nice to get something besides an agenda before a meeting. It was a good way to understand what the Forum was going to be about"*

*- Pilot Forum Participant*



## Facilitator Ideas

-  To follow-up with those people who do not respond to the invitation letter, develop a system of reminders including phone calls and emails when possible.
-  Depending on local politics, consider having elected officials sign the invitation letter. If they have time, they can also help make follow-up phone calls to potential participants.
-  Stress the fact that participants need to read the packet before they come to the Forum, so that more time can be spent on identifying issues rather than on background information.

## What's involved?

- Develop a Community Profile**
- Collect Hazard History Information**
- Identify Existing Plans and Policies**

### Develop a Community Profile

Pulling together a Community Profile can assist you in answering the question – *What makes your community thrive?* The Community Profile briefly describes the overall characteristics of the community based upon four themes: (1) population, (2) economy, (3) cultural, historic, and natural resources, and (4) land use and development. This basic thematic data will provide participants with background information to help them identify potential losses and recovery issues. Highlights from the Community Profile should be presented during Session 1 of the Community Forum.

### Collect Hazard History Information

Collecting hazard history information can assist you in answering the question – *How has the hazard impacted the community in the past?* Identify when, how, and where the hazard has impacted the community in the past. If possible, begin to identify what buildings, infrastructure or cultural assets might be located in the hazard zone.

## Data for Community Profile

### Population

- Total population
- Potential growth in population
- Age structure of population
- Percentage of residents below the poverty level
- Percentage of residents who don't speak primarily English

### Economy

- Biggest industries
- Highest occupational categories
- Median household income
- Data on residents who commute to work

### Cultural, Historic, & Natural Resources

- Structures or landmarks on the National Historic Register
- Locally significant structures
- Archeological sites
- Wetlands, estuaries, and preserves

### Land Use & Development

- Total area of community
- Number, type and age structure of housing units
- General land use patterns
- Number and size of lots available for development

# Pre-Forum Data Collection

## Identify existing plans and policies

Collecting information on the community's existing plans and policies can assist you in answering the question - *What does the community already have in place to address the hazard?* The Team should create an inventory of existing planning documents, policies, and programs that are applicable to post-disaster recovery. Knowing what is already in place is important because official planning documents and existing programs already have support from decision makers, businesses, and residents. They also may contain ready-made structures for implementing strategies discussed at the Forum.



### Facilitator Ideas

- 💡 Make sure that the Forum facilitators have a good understanding of the characteristics of the community and what factors might make the community more or less at risk. This knowledge can help keep the Forum discussions focused on the relevant issues and activities.
- 💡 Develop a handout that lists the plans and programs and distribute it during the Issue Identification Exercise during Session 1 at the Forum.
- 💡 Google Earth is an easy and free way to identify important community assets that might be located in the tsunami inundation zone.
- 💡 All of the activities in this task should be completed prior to the Forum and then presented to the participants during the event. When this information is presented to Forum participants, it will assist in their understanding of the community's vulnerability to natural hazards. It is especially helpful when it comes time to clearly define recovery strategies.

## Example Plans, Policies, and Programs

- Comprehensive Plan
- Historic Preservation Plan
- Transportation Plan
- Capital Improvement Plan
- Economic Development Plan
- Red Cross Outreach Program
- Business Continuity Training Program
- Health and Social Services Programs
- Community Organizations and Service Clubs

## What's involved?

- Introduction**
- Review Hazard Scenario**
- Description of Recovery Planning**
- Issue Identification Exercise**
- Closing Remarks**

### **Introduction**

In the Introduction it is important to welcome everyone, introduce the facilitators and participants, cover logistics and schedule of the event, and the purpose and goals of the Forum.

### **Review Hazard Scenario**

Starting off with a discussion of the hazard is helpful to give participants background on the hazard and the impacts it could have on the community. If the community is addressing the Cascadia event, use the CREW scenario to present potential regional effects of a Cascadia Subduction M9.0 earthquake. Community planners, public works staff, and emergency managers may be the most qualified people to talk about local impacts of hazards because they know where the people, buildings, and infrastructure are located within the community.

### **Description of Recovery Planning**

The purpose of this session is to distinguish between immediate response and post-disaster recovery planning. Emphasize that post-disaster recovery planning provides a long-term vision to re-develop a community after a disaster, not to address immediate life safety issues.

## Issue Identification Exercise

The primary goal of this exercise is to give participants an opportunity to discuss issues their community may face following a catastrophic event. This exercise asks the people who live and work in the community to identify community-specific recovery issues. The following process asks participants to identify and prioritize issues related to three general themes (population, economic development, and land and development). In addition, participants will be asked to identify specific infrastructure-related issues for each of the three themes. Basic instructions for this exercise are listed below.

### Facilitator: Introduce Exercise

1. Provide the participants with instructions for completing the issue identification exercise.
2. Present highlights from the Population portion of the Community Profile. This gives the participants important background information that they need to help them identify potential issues. Review thematic questions to help participants identify issues. (Questions are provided on the following pages)

### Participants: Work on Issue Identification Worksheets\*

3. List as many issues as they can on the worksheet; work individually
4. Circle top 3 issues on the worksheet
5. Write top prioritized issues on piece of paper

### Facilitator: Summarize Issues

6. Lead discussion on top issues and document the issues discussed. Highlight any infrastructure related issues that have been raised.
7. Collect completed worksheets from participants.
8. Repeat steps 2-7 for economy and land development themes
9. Summarize the main issues identified so that participants can get a feel for what other community members are saying. Pay particular attention to issues that may have been raised in all three themes.

## Closing Remarks

When concluding Forum Session 1, it is important to talk about the next steps and how the issues the participants identified will be used. You'll also want to cover what will be accomplished at the second forum session.

## Facilitator Ideas



By having each person complete and hand in an issue identification worksheet, you are able to capture the thoughts and ideas of all the participants. In some brainstorming processes, strong personalities can take over a group discussion and steer the group off course. The worksheet approach helps keep participants on track and allows everyone's thoughts to be incorporated.

Posting each participant's top priorities on the wall allows you to go from a large number of issues to a smaller group of the most critical issues which will help the community prioritize strategies in the next steps.

*"This was a great way to narrow down to the core issues since we were such a diverse group."*

*- Pilot Forum Participant*

\* See "Resources" at the end of this guide for an example Issue Identification Worksheet

## Population

This theme looks at how the community's population and demographics might be impacted by an event.

### Questions

- Where do people live?
- What, if any, special needs populations live in vulnerable areas (elderly, disabled, non-English speaking, children)?
- Where are there significant non-residential populations? (Non-residential population is an employee or a tourist.)
- Are there cultural or historic resources in the community that if damaged or lost would have a significant impact on residents?

#### *Infrastructure questions:*

- What types of infrastructure do your residents rely upon?
- Are there residents who need power for life safety equipment (e.g. breathing apparatus or oxygen, dialysis, etc.) to survive?

## Fictional Community Example

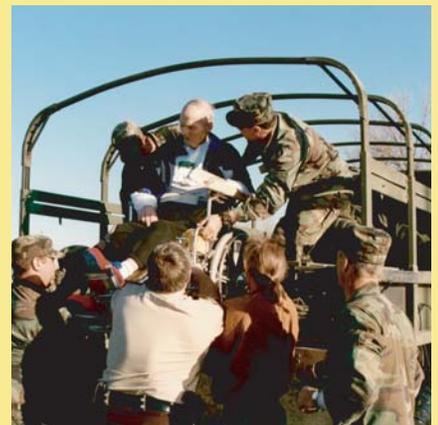
While natural hazards do not discriminate, the impacts -- in terms of loss and the ability to recover -- vary greatly, depending on certain demographic characteristics. According to the FEMA Preparedness, Training and Exercise Directorate, 80% of the disaster burden falls on the public. Women, children, minorities and the poor bear a disproportionate amount of this burden. The 2000 Census reported that 12% of Crewville's residents were living below the poverty line. In Crewville, 8% of households are female-headed and 2% live below the poverty line. Eighty-five percent of residents in Crewville are white, 11% are Hispanic or Latino, and less than 5% are African American, Asian, American Indian, Alaska Native or other races.

## Population

### Sample Recovery Issues for Population Theme

Here are sample recovery issues related to the population theme.

- Return of or routing of visitors to community
- Worker retention in service industries
- Loss of employment for residents
- Financial and insurance support
- Long-term medical care
- Housing
- How can we protect our youngest and oldest community members?
- How can we identify resources in private and public sectors outside the hazard area for helping those in need?



Photos courtesy of FEMA

## Economy

This theme looks at how the community’s economy might be impacted by an event.

### Questions

- How will businesses be impacted by a disaster (i.e., earthquake, tsunami, flood)?
  - What types of businesses will be impacted?
  - Which ones are location dependent and which can be relocated? (e.g., a business in the fishing industry.)
- What businesses represent significant components of your community’s economy? (e.g., 85% of economy comes from the fishing industry)
- Is there available space or vacant buildings outside of the inundation zone where businesses could be relocated, if necessary?
- Are there cultural or historic resources that, if damaged or lost, would have a significant impact on the local economy?

#### Infrastructure questions:

- How are segments of your economy dependent on infrastructure to function?
- What types of infrastructure does your local economy rely upon?

	City Total	In Tsunami Zone	Percent
Businesses	185	145	78%
Employees	1476	1189	81%
Sales Volume	\$108M	\$85M	79%

This table illustrates the number of businesses, employees and sales volume in the city compared to the number of businesses, employees, and sales volume located in the tsunami zone. This type of data can help illustrate how vulnerable your local economy might be to the impact of a disaster.

## Fictional Community Example

Although Crewville’s permanent population is small (1,650), more than 400,000 tourists visit per year. The three top employers in Crewville are specifically involved in the hospitality service industry. The economic characteristics of Crewville demonstrate the city’s dependence on tourism. The three highest occupational categories in Crewville are management, professional, and related occupations (30%), service occupations (28%); and sales and office occupations (27%).

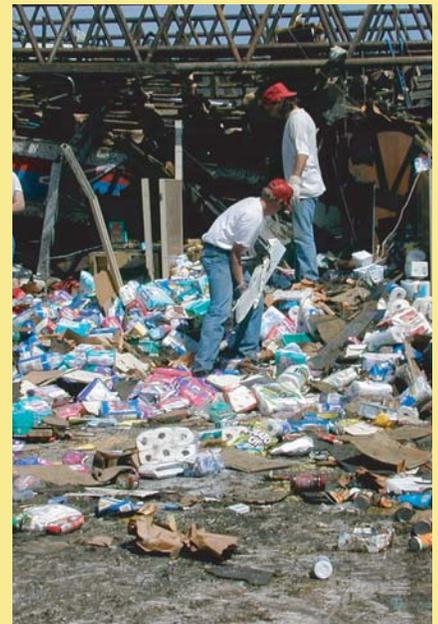
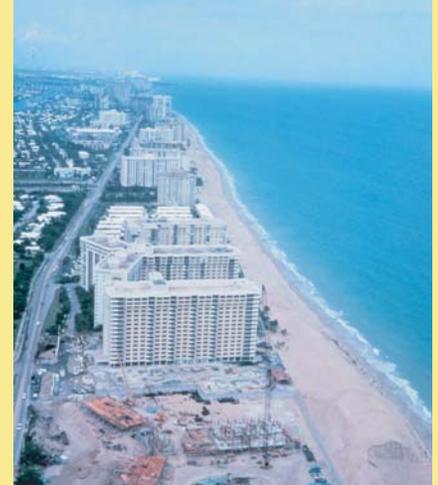
Research has shown that no business, small or large, is immune to the impacts of a natural hazard event. Research being conducted by the USGS indicates that 80% of Crewville businesses are in the tsunami inundation zone. A catastrophic disaster event would directly impact the service sector of the economy. The ripple effect of business closures would impact not only tourists, but residents as well.

## Economy

### Sample Recovery Issues for Economy Theme

The following are sample recovery issues related to the economy theme.

- Can hotels help with housing?
- Loss of available retail services to residents
- Warehousing or local distribution of products
- Are grocery stores located in the hazard zone?
- People's livelihood and means will be interrupted, how will they be able to access goods and services?
- Business recovery: tax base greatly affected because of lack of tourism, employees may be scarce
- Do we rebuild downtown differently?
- Impact on second home industry
- Workforce would move away with no source of income to pay them



Photos courtesy of FEMA

# Facilitate Forum Session 1

## Land Use and Development

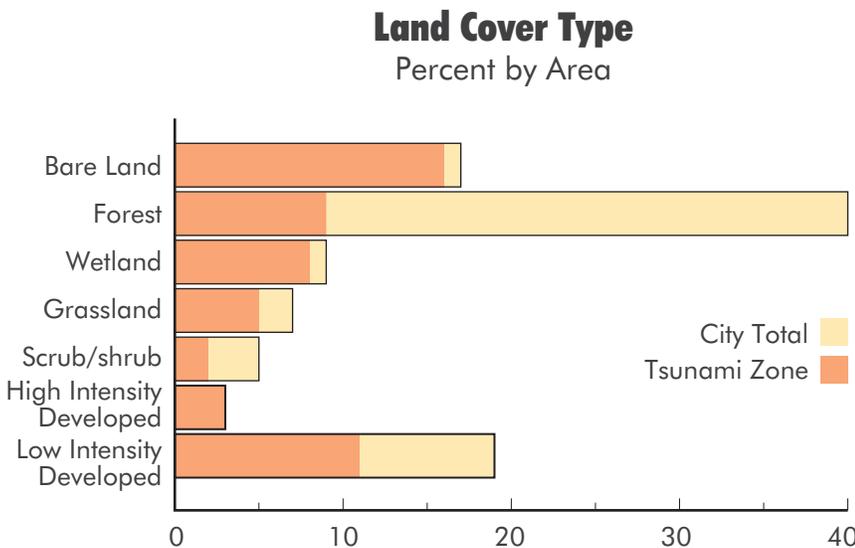
This theme looks at how the community’s land use and development might be impacted by an event.

### Questions

- Do current development patterns or land use plans minimize development in vulnerable areas?
- Where in your community is growth projected to occur?
- What, if any, policies are in place to address post-disaster redevelopment?
- How will the community provide temporary shelter and housing after a catastrophic event?

#### Infrastructure questions:

- Describe the relationship between infrastructure and land use and development in your community.
- What types of infrastructure are necessary to support post-disaster re-development?



## Fictional Community Example

The severity of damage from a natural disaster depends upon the types of land use and the patterns of development in a community. Much of the commercial land use in Crewville is concentrated in the downtown area. This area is in close proximity to the beach and, according to existing data, most of it is located within the hazard zone.

To the left is a graph that can be created prior to a post-disaster recovery workshop. Based on the integration of USGS National Land Cover Dataset with tsunami-hazard information, the graph shows the types of land in a community, both in a tsunami-hazard zone (in dark orange) and for the entire community (in light orange).

This graph shows that all of the land classified as “high-intensity developed,” which typically represents infrastructure, commercial and high-density residential areas, is in the tsunami zone. Approximately half of the land classified as “low-intensity developed,” which typically represents lower-density residential areas, is in the tsunami zone.

## Land Use and Development

### Sample Recovery Issues for Land Use and Development Theme

The following are sample recovery issues related to the land use and development theme.

- Do we have sufficient places to temporarily house people?
- Are we willing to relax our land use and design standards to expedite reconstruction?
- What permanent damage will be done to the environment?
- Lack of policies on land use de-regulation
- Relocating downtown business district
- Zone/code changes to allow density
- Long-term transportation planning
- What land is available for relocation?
- What themes should be used to guide economic rebuilding? Tourism – environmental, cultural, intellectual?
- What do we do with the debris?
- Do we need to rethink our zoning?
- Community is projected to grow



Photos courtesy of FEMA

## What's involved?

- Summarize Issues
- Develop Draft Strategies

### Summarize Issues

During Session 1, participants identified many issues related to the three community themes. The Team should review both the prioritized issues that were posted on the wall during Session 1 as well as the individual worksheets. The summary of issues identified by the participants will serve as the basis for developing draft recovery strategies.

### Develop Draft Strategies

Strategies are inextricably tied to community-specific issues. The strategies provide detailed recommendations for activities that local departments, citizens and others could engage in to plan for long-term recovery. For example, if one of the issues that emerged from Session 1 is that “80% of businesses are located in the hazard zone”, then a corresponding strategy might be “Identify locations outside of the hazard zone where businesses could relocate after a catastrophic disaster.” To be successful, strategies need to be more than an idea; they must be tangible activities attached to an individual or an organization with a defined outcome.

Prior to Session 2, the Forum Team should fill out the strategy worksheet as completely as possible for each of the proposed strategies. This includes documenting identified issues in the rationale section, and brainstorming initial ideas for implementation. During Session 2, Forum participants will review the draft strategies and assist the Team in completing the remainder of the worksheet components. Both a blank and completed sample strategy worksheet have been provided in “Resources” at the end of this guide.



### Facilitator Ideas

-  One way to begin to summarize the issues is to start to categorize them into “like” groups. This allows you to move from a large number of individually identified issues to a more manageable number of issues.
-  To complete the rationale section of the strategy, use issues that were identified during Session 1 and any supporting information from the Community Profile.
-  Develop a manageable number of strategies for your community. Lots of ideas are wonderful, but concrete ideas that can be implemented are even better!
-  In our experience in natural hazard planning processes, groups sometimes have difficulty switching gears from “What are our problems?” to “What do we do about them?” To try to avoid this difficulty, we suggest that the Forum Team summarize and analyze the findings from the issue identification exercise and draft a list of potential strategies. This way, community members are responsible for responding to the proposed strategies instead of trying to develop original ideas as a group.

## Components of Recovery Strategy Worksheet

Following are the key components of the recovery strategy worksheet. The intent of the worksheet is to assist communities develop detailed strategies that clearly outline a process for implementing the strategy.

**Proposed Recovery Strategy:** Brief description of the strategy.

**Theme Addressed:** Indicates which theme (population, economy, cultural and historic resources and land and development) the strategy addresses.

**Rationale:** Describes the critical issues that the strategy will address.

**Ideas for Implementation:** Description of how the strategy will be implemented locally.

**Coordinating Organization:** The group that is willing and able to organize resources, find appropriate funding, and oversee activity implementation, monitoring, and evaluation.

**Partners:** These are groups that may be able to assist in the implementation of strategies by providing relevant resources to the coordinating organization.

**Timeline:** Identifies when the strategies should be implemented -- either pre- or post-disaster.

## Example Strategies

In addition to developing strategies from general issues, the proposed strategies may also include suggestions that address the following:

- (1) Creating an Oversight Committee that will champion recovery planning efforts within the community. This could be a new committee or a standing committee, such as the planning commission or natural hazard mitigation planning committee. It is important to appoint someone or an agency to be responsible for developing agendas and setting meeting schedules.
- (2) Writing and adopting a recovery ordinance that gives the city/county the authority to guide its own redevelopment; (See example strategy for this kind of ordinance in "Resources" at the end of this guide).
- (3) Developing an infrastructure recovery protocol that prioritizes which infrastructure gets back online first after a hazard event.

## What's involved?

- Introduction
- Review Draft Strategies
- Next Steps

### Introduction

At this time, explain the purpose and agenda of the meeting and summarize what was accomplished in Session 1 of the Forum. Present the list of consolidated issues from the previous session.

### Review Draft Strategies

During this exercise, Forum participants review and prioritize the draft strategies developed from the issues identified in Session 1. Depending on the number of people at this Session, form small groups of six to ten people, or remain in a large group. The facilitators should follow these steps to help the group prioritize the strategies:

- 1) The group should review each strategy and decide if the strategy is appropriate for the community.
- 2) If the strategy is appropriate, each person should vote on a priority category (High, Medium, or Low) for each strategy. If people disagree within the group, the facilitator then leads a discussion about the placement of the strategy.
- 3) Once all the strategies have been placed into categories, review their placement relative to each other.
- 4) Gather input from participants on: why the strategy is important for the community, how it could be implemented locally, and who would take the lead in implementing the strategy.

### Next Steps

The Forum Team should inform participants how their feedback will be used and where the planning process will go from here. This will be discussed more in Task 7.

The end result of this discussion will be a set of prioritized post-disaster recovery strategies that could be implemented in the community.



### Facilitator Ideas

-  During the strategy discussion, have a scribe take notes on an easel so that all participants can see what is being said.
-  Depending on the number of proposed strategies, the Team might consider having multiple work sessions so that the group is reviewing a manageable number of strategies. This may help reduce the chance of participants getting burned out on reviewing strategies in one sitting.
-  It is useful to have the participants write their top strategies on individual pieces of paper. This way, the facilitator can group the issues into like categories on the wall to lead the summary discussion.

## What's involved?

- Develop Workplan**
- Discuss Strategies with Coordinating Organizations**
- Share Strategies with State/Provincial Emergency Management Agencies**

### Develop Workplan

After Session 2 of the Forum, you should have a compilation of prioritized strategies. From these strategies, you can develop a workplan that clearly defines the tasks to be accomplished along with a timeline for completing the tasks. Some of the strategies identified in the Forum will be activities that can take place before a disaster event ever happens and others will be implemented soon after the event. Developing this workplan can help lay out a “roadmap” for how and when the community begins to increase its disaster resilience. One of the most important strategies of your workplan should be to form an Oversight Committee that will champion recovery planning efforts within the community.

### Discuss Strategies with Coordinating Organizations

During Session 2, Forum participants reviewed strategies and generated ideas for the appropriate coordinating organization. Members from the Forum Organizing Team should sit down with all identified coordinating organizations and discuss relevant strategies. This one-on-one contact facilitates greater understanding of the strategy and ensures that the coordinating organization supports the item. Securing a letter of support from each coordinating organization would help illustrate the community’s commitment and capacity to implement those particular strategies. Local elected officials (City councils, County Commissions, etc) should be kept up-to-date on all major recovery planning activities so that they are aware of these activities something is requested of them.

### Send Strategies to State/Province Emergency Management Agency

Send strategies and work plans to the State/Provincial Emergency Management Agency so that the state/province is informed of what local recovery needs will be when the event occurs.



### Facilitator Ideas



Workplans can be incorporated into the local natural hazards mitigation plan.

*“The best result was creating momentum to do things and implement changes.”*

*-Pilot Forum Participant*

