



Post-Disaster Recovery Planning Forum: How-To Guide

Prepared by: Partnership for Disaster Resilience



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 1,200 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. Pre-disaster planning can decrease the potential for loss of life, property, and economic damages from disaster events.

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.

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.

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.

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

CREW

The Cascadia Region Earthquake Workgroup (CREW) is composed of private and public representatives whose goal is to reduce the effects of earthquake events on Cascadia region communities. CREW helped fund this project and contributed scientific data; in particular, the Cascadia Subduction Zone Earthquakes: A Magnitude 9.0 Scenario, which provides background information on the potential risks communities face.

The Partnership

Since 2000, the Partnership for Disaster Resilience - a coalition of public, private, and professional organizations - 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 in Oregon. The Partnership coordinated the development of the forum process and presentation materials for a pilot forum held in 2006.

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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 M9 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
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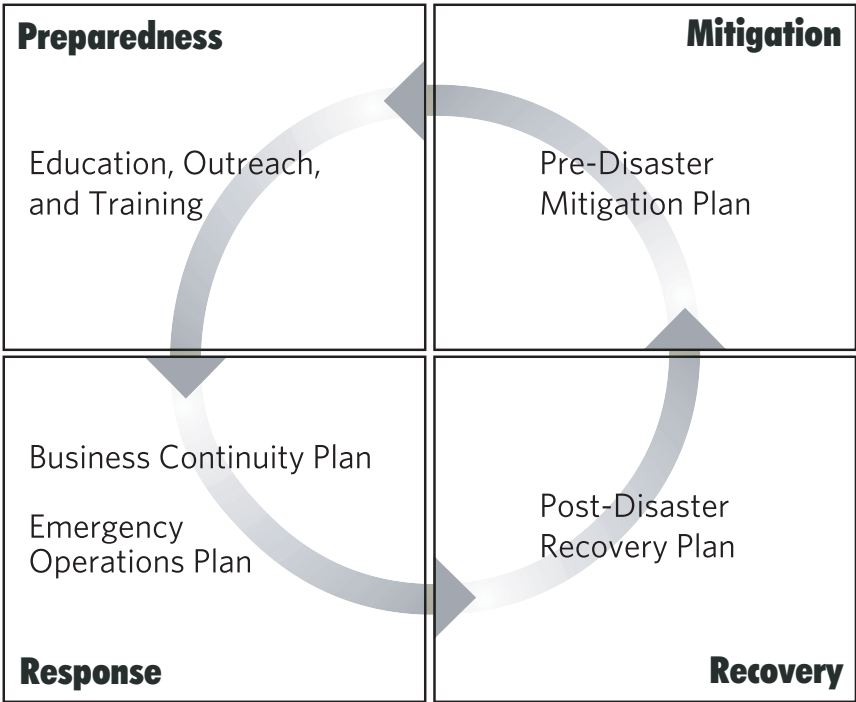
Guide funded by:
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Disaster Cycle

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
methods 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 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 provide basic needs and restore the community. The process of recovery can take months or even years to accomplish.

Post-Disaster Recovery Planning

Goals

The goals of post-disaster recovery planning are to:

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

Notes:

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.

Post-disaster recovery planning is defined as developing a set of strategies to assist a community in rebuilding 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.

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 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 over 30 years of working collaboratively with communities.

Pre-Forum Phase

- 1 Build the Forum Organizing Team
- 2 Identify and Invite Forum Participants
- 3 Collect Community-Based Data

During-Forum Phase

- 4 Facilitate Forum Session 1
- 5 Develop Draft Strategies
- 6 Facilitate Forum Session 2

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.

Notes:



Photos courtesy of PDR

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.



Facilitator Ideas

-  If possible, develop a diverse Forum Team so that different skill sets are represented and can be utilized.
-  You may want to seek guidance from elected officials about who should be involved.

"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

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 the 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 (24hours)*

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

Session 2 (24hours)*

- I **Why are we here today?** (htroductions, Purpose of Meeting, Summary of Session 1)
- I **What are the potential recovery strategies?** (Discussion of Draft Strategies)
- I **Where do we go from here?** (Nex Steps)

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

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
- ☐ _____
- ☐ _____

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 organizations 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.

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.

“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.
- 💡 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.

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.

Notes:

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 English primarily

Economy

- ☐ Largest 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

What's involved?

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

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 Forum Organizing 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. In addition to identifying plans, policies and programs, it is also helpful to identify community agencies that might be potential partners during the recovery phase.

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.



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. Before developing a new community profile, look at other plans because a profile may already have been developed.

Highlights from the Community Profile should be presented during Session 1 of the Community 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.

Notes:

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
- ☐ Emergency Operations Plan
- ☐ Natural Hazard Mitigation Plan
- ☐ Hazard Vulnerability Assessments

Recovery Planning is:

- ☐ Business continuity
- ☐ Community visioning
- ☐ Economic development
- ☐ Reconstruction
- ☐ Land use regulations
- ☐ Bilding moratoriums
- ☐ Historic preservation
- ☐ Planning for debris management

Recovery Planning is NOT:

- ☐ Search and rescue
- ☐ Provision of food and water
- ☐ Warning and evacuation
- ☐ Critical infrastructure reconstruction
- ☐ Damage assessment
- ☐ Debris management

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. In addition, emphasize the importance of addressing attitudes focused on “returning to normal”. In some cases, following catastrophic disasters, communities cannot return to normal. The disaster may cause changes in the physical, political, demographic or economic landscape. This requires that the community adapt and change as it recovers and reconstructs. Keeping these ideas in mind during the Forum can help participants think about how the community might work in the future.

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 should be asked to identify specific infrastructure-related issues for each of the three themes. Basic instructions for this exercise are listed below.



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.

See Resources at the end of the guide for a copy of the Issue Identification Worksheet.

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***

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 to post on the wall.

Facilitator: **Summarize Issues**

7. Lead discussion on top issues and document the issues discussed. Highlight any infrastructure-related issues that have been raised.
8. Collect completed worksheets from participants.
9. Repeat steps 2-7 for economy and land development themes.
10. 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 Session 2 of the Forum.

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

- Pilot Forum Participant

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.

Theme: Population

This theme looks at how the community's population and demographics might influence or affect the community's recovery process.

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?
- 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?

	In Tsunami Zone	City Total	Percent in Zone
Total population	701	1542	45%
Median age	50.6	48	-
African American	12	47	25%
Native American	47	62	76%
Asian	6	25	24%
Hispanic	6	175	3%
Under 5 years old	12	325	4%
Over 65 years old	93	475	20%
Avg. no. of persons per household	2.8	3.1	-
Houses	143	322	44%
Renter-occupied units	65	145	45%
Females	383	711	54%

Theme: Population

Sample Recovery Issues for Population Theme

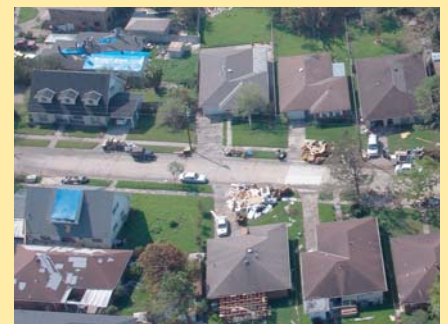
Here are sample recovery issues related to the population theme.

- 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?



Facilitator Ideas

- 💡 The issue of housing is especially important in planning for long-term post-disaster recovery. The re-establishment of housing in a community is directly dependent on the re-establishment of infrastructure including, but not limited to: water, sewer, electricity, and roads. Communities may choose to relocate certain infrastructure to reduce the risk of impact from future disasters, thus creating the need to develop new housing strategies that take revised infrastructure plans into account. In addition, through this recovery planning process, the community should think critically about where to place temporary housing during redevelopment because temporary housing locations often end up becoming permanent housing. Housing also has ties to economic development and the recovery of local businesses because it is difficult to maintain or attract employees when there are no housing options.



Photos courtesy of FEMA

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 United States Geological Survey 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.

Theme: 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 (e.g., 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?

	Crewville Total	In Tsunami Zone	Percent in Zone
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 fictional community 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.

Theme: Economy

Sample Recovery Issues for Economy Theme

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

- Loss of retail services available 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
- With no source of income, workforce might move away



Facilitator Ideas



Economic development is a key component of both pre-and post-disaster planning. Routine economic development activities taking place before the disaster should take post-disaster recovery concepts into consideration to make sure that new investments are disaster resilient. Recovery concepts related to economic development include locating new businesses outside of hazardous areas and encouraging the development of business continuity plans. In the post-disaster phase, economic development is vital to a community's recovery. Getting businesses back up and running is dependent on the re-establishment of infrastructure and housing. Re-establishing businesses after the disaster should also focus on developing outside of known hazard areas to reduce the impact of future events.



Photos courtesy of FEMA

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.

At the bottom right is a graph that can be created prior to a post-disaster recovery workshop. Based on the integration of United States Geological Survey 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 white).

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.

Theme: Land Use and Development

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

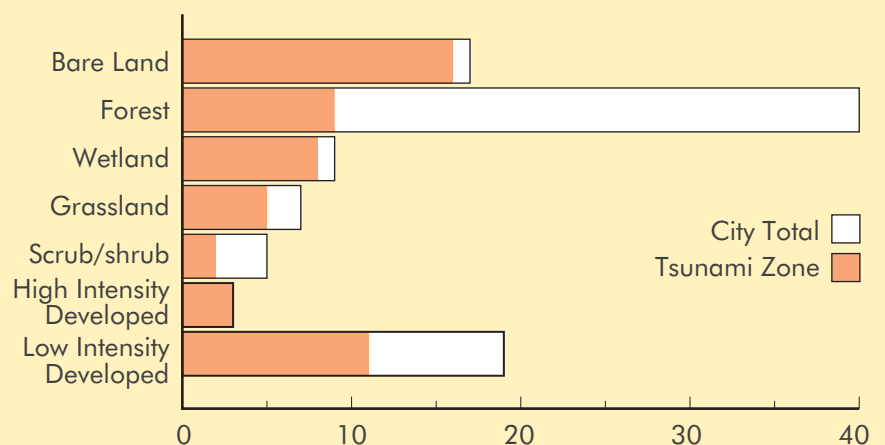
Questions

- 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?

Crewville Land Cover Type
Percent by Area



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?

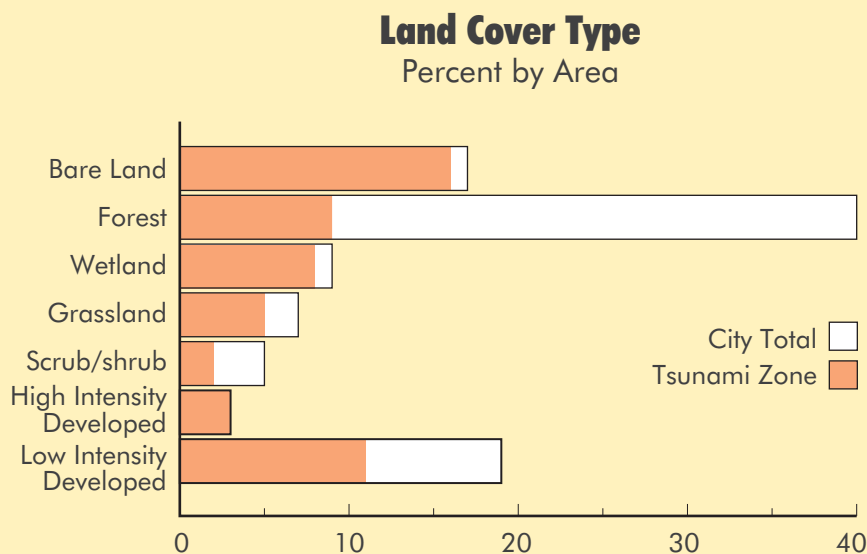
Infrastructure questions:

- 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 white).



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.

Example Strategies

In addition to developing strategies from community-specific issues, consider developing strategies that address the following:

- ☐ 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.
- ☐ Writing and adopting a recovery ordinance that gives the city/county the authority to guide its own redevelopment.
- ☐ Developing an infrastructure recovery protocol that prioritizes which infrastructure gets back online first after a hazard event.

What's involved?

- ☐ **Summarize Issues**
- ☐ **Develop Draft Strategies**

Summarize Issues

During Session 1, participants identified many issues related to the three community themes. The Forum Organizing 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 to “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 Forum Organizing Team in completing the remainder of the worksheet components.

Components of a Strategy Worksheet

Following are the key components of the recovery strategy worksheet. The intent of the worksheet is to assist communities in developing detailed strategies that clearly outline a process for implementation. See the “Resources” section at the end of this guide for a copy of the strategy worksheet.

Proposed Recovery Strategy: States the strategy.

Theme Addressed: Indicates which theme (population, economy, or land and development) the strategy addresses.

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

Ideas for Implementation: Describes how the strategy will be implemented locally.


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


Partners: Identifies 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.




Facilitator Ideas

 In our experience, 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 Organizing 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.

 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, Hazard History, or Existing Plans, Policies, and Programs.

 Develop a manageable number of strategies for your community. Lots of ideas are wonderful, but concrete ideas that can be implemented are even better!

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 Forum Organizing 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.



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) 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.
- 3) 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.
- 4) Once all the strategies have been placed into categories, review their placement relative to each other.

Next Steps

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

Notes:

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 when 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

Afterword



Photos courtesy of FEMA

You have organized, facilitated and documented a post-disaster recovery forum for your community and identified a series of next steps to help make your community more disaster resistant. The work you have done so far has created a blueprint for implementing actions that are based on local needs and strategies.

Maintaining the momentum generated from the Forum will be important to ensure that the identified actions get implemented. Finding ways to incorporate post-disaster recovery into everyday community decisions will help keep this momentum going.

Good Luck!

Resources - Forum Invitation Letter

Dear Sir or Madam:

Please mark your calendars to attend the Cannon Beach Post-Disaster Recovery Forum on Thursday, March 2, 2006. As you may be aware this forum is an opportunity to: (1) assess current capacity to recover from a large-scale natural disaster event e.g. tsunami and (2) begin to develop strategies and/or logical steps to increase that capacity for post-disaster recovery. Your role will be to help identify issues and concerns for post-disaster recovery for the City of Cannon Beach. You have been invited because of your specific insight into the community. The input you provide will ensure that all facets of the community are represented during the forum process.

The Partners for Disaster Resilience (PDR) and the United States Geological Survey (USGS) will be facilitating the forum. Funding for the forum has been provided through a partnership with the Cascadia Region Earthquake Workgroup (CREW), United States Geological Survey (USGS), and University of Oregon's PDR. PDR is a program within the Community Service Center at the University of Oregon. PDR strives to build the risk reduction capacity of local governments through collaboration, communication and coordination to reduce the natural hazard risks that Oregon communities face. For more information, visit the PDR website: <http://www.oregonshowcase.org>

A detailed informational forum packet will be sent two weeks prior to the forum. This informational packet will include:

- Background information specifically relating to the forum process;
- The Cascadia Region Earthquake Workgroup's 9.0 Scenario, this publication represents one possible scenario that may occur due to an offshore earthquake event;
- The Natural Hazards Informer from the Natural Hazards Research and Applications Information Center at the University of Colorado at Boulder, this publication highlights current knowledge, tools, and strategies for post-disaster recovery.

We look forward to meeting you at the Cannon Beach Post-Disaster Recovery Forum on Thursday, March 2nd. If you have any questions or comments please contact xxxx.

Sincerely,

XXXX

Resources - Issue Identification Worksheet

Instructions: Identify specific response and recovery issues your community could face in the event of a disaster in the left hand column below. For each issue, use the columns on the right hand side to check the potential period of time each issue could affect the community. Check all that apply			
Population	Community Impacts Felt (Check all that apply)		
Framing Questions: <ul style="list-style-type: none"> Where are the high population densities for residents? Are any in the inundation zone? Are there special-needs populations in the inundation zone? (Examples – Elderly, disabled, minorities, children, and infants) Where are there significant non-residential populations? (Examples – Residents, Employees, Tourists) 	0- 72 hours - Response	72 hours – 1 month – Response/Recovery	1 month – on-going – Recovery

Resources - Issue Identification Worksheet

Instructions: Identify specific response and recovery issues your community could face in the event of a disaster in the left hand column below. For each issue, use the columns on the right hand side to check the potential period of time each issue could affect the community. Check all that apply.			
Economy		Community Impacts Felt (Check all that apply)	
Framing Questions: <ul style="list-style-type: none">Are businesses in the inundation zone? What types of businesses? Which ones are location-dependent and which can be relocated?What businesses represent significant components of your community's economy, in terms of employees, sales volume, or tax base?Are alternate commercial spaces available if current stock is damaged?	0- 72 hours - Response	72 hours – 1 month – Response/Recovery	1 month – on-going – Recovery

Resources - Issue Identification Worksheet

Instructions: Identify specific response and recovery issues your community could face in the event of a disaster in the left hand column below. For each issue, use the columns on the right hand side to check the potential period of time each issue could affect the community. Check all that apply.

Land Use and Development	Community Impacts Felt (Check all that apply)		
Framing Questions: <ul style="list-style-type: none">Do current development patterns or land use plans minimize development in the inundation zone?Is your community growing or projected to grow denser in the inundation zone?Are there policies in place to address post-disaster redevelopment?Is the community capable of providing temporary shelter and housing outside of the inundation zone?	0- 72 hours - Response	72 hours – 1 month – Response/Recovery	1 month – on-going – Recovery

Resources - Strategy Worksheet Definitions

Proposed Recovery Strategy:

Include a brief description of the proposed strategy.

Theme Addressed:

During the recovery forum, participants are asked to identify issues for the following three themes: Population, Land Use and Development, and Economy. These checkboxes allow the proposed recovery strategies to be categorized by theme.

Rationale or Key Issues Addressed:

The rationale describes the critical issues that the strategy will address. It presents the logic and the fact base behind the strategy: why is it important that this action be implemented? The findings from the forum are a good source of rationale for proposed strategies.

Ideas for Implementation:

For each strategy, the form asks for some ideas for implementation, which serve as the starting point for taking action. This information offers a transition from theory to practice. Ideas for implementation could include: (1) collaboration with relevant organizations, (2) alignment with the community priority areas, and (3) applications to new grant programs.

The ideas for implementation are just that: ideas. They do not necessarily prescribe the exact steps that the community or its partners should take to implement a particular strategy. When an action is implemented, more work will probably be needed to determine the exact course of action.

Coordinating Organization:

The coordinating organization is the public agency with authority to implement the identified strategy. It can also be an agency that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation.

Internal Partners:

Internal partner organizations are departments within the community that may be able to assist in the implementation of a strategy by providing relevant resources (time, budget, staff, data, etc.) to the coordinating organization.

External Partners:

External partner organizations or jurisdictions can assist the community in implementing the strategies in various functions. They may include local, regional, state, or federal agencies, as well as local and regional public and private sector organizations.

Timeline:

Recovery strategies can be implemented at two different stages in the disaster cycle. They can be implemented before the disaster happens to better prepare the community to address the impact of the disaster. Strategies implemented in this timeline are considered pre-disaster strategies. Strategies can also be implemented after the disaster occurs and will assist the community in the immediate recovery and reconstruction phases. Strategies implemented in this timeline are considered post-disaster strategies.

Resources - Strategy Worksheet

Proposed Recovery Strategy:		Theme Addressed:	
		<input type="checkbox"/> Population <input type="checkbox"/> Land Use & Development <input type="checkbox"/> Economy	
Rationale for Proposed Recovery Strategy:			
Ideas for Implementation:			
Coordinating Organization:			
Internal Partners:		External Partners:	
Timeline:		If available, estimated cost:	
<input type="checkbox"/> Pre-Disaster <input type="checkbox"/> Post-Disaster			
Form Submitted by:			

The form should include critical information on the rationale or fact base for the proposed strategy, ideas for implementation, coordinating and partner organizations, timeline, and plan goals addressed. This approach, developed by the University of Oregon's Partnership for Disaster Resilience provides documentation of the proposed strategy and keeps together all of the essential information needed to implement the idea.

The Partnership for Disaster Resilience
 University of Oregon Community Service Center
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