

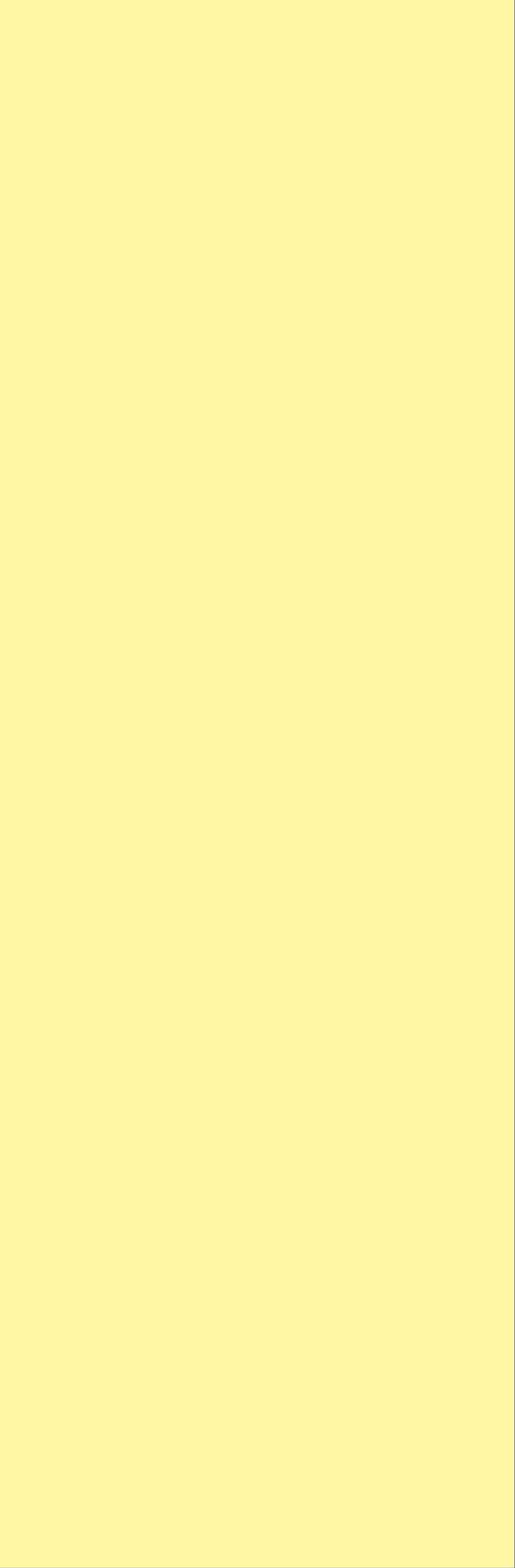


Oregon Pre-Disaster Mitigation Program Plan Update Training Manual

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Introduction

Natural hazard mitigation plans (NHMP) summarize a community's exposure, sensitivity, and risk to natural hazards and provide long and short term mitigation strategies to minimize losses. Jurisdictions with Federal Emergency Management Agency (FEMA) approved mitigation plans are eligible for federal mitigation grant funding. However, to retain their eligibility, jurisdictions must maintain, update, and seek re-approval of their plans every five years.

This plan update manual summarizes the federal requirements for plan updates and provides the resources and tools for assisting your community in updating your NHMP. In addition, this update manual provides guidance for integrating mitigation strategies into existing plans and policies to facilitate implementation. It is an appendix to The Oregon Partnership for Disaster Resilience's (The Partnership) *Community Training Manual*, and combines and integrates plan update methods developed by the Partnership and state and federal agencies. This manual is intended to supplement FEMA's 2008 *Local Multi-Hazard Mitigation Planning Guidance* which outlines the federal requirements for plan updates.

A number of regional, state, and federal resources can further assist your community in updating your natural hazards mitigation plan. These resources include the Department of Land Conservation and Development's *Planning for Natural Hazards: Oregon Technical Resource Guide* (a technical resource for land use planning approaches relating to natural hazards affecting Oregon communities); the State of Oregon's Enhanced Natural Hazards Mitigation Plan; the State Natural Hazards Risk Assessment; and FEMA's 'How-To Guide' series for state and local mitigation planning. These documents provide technical and resource assistance for developing natural hazard mitigation projects, and can also provide useful information for updating community hazard mitigation plans. For more information, see the resources section of this training manual.

The Partnership

The Partnership for Disaster Resilience (OPDR/the Partnership) is a coalition of public, private, and professional organizations and is housed within the University of Oregon's Community Service Center.

Since 2000 OPDR 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.

Notes:

Why Update a Natural Hazard Mitigation Plan?

Updating your NHMP every five years and obtaining FEMA's approval will allow your community to remain eligible for federal grant funding. The federal grant programs available to communities with a NHMP include FEMA's Pre-Disaster Mitigation (PDM) Program, Hazard Mitigation Grant Program (HMGP), and Flood Mitigation Assistance (FMA) Program.

The PDM Program provides federal funding to communities for projects that reduce a community's overall hazard risk to populations and structures *before* a natural disaster occurs. The HMGP provides funding for mitigation projects *after* a major presidential disaster declaration, and enables mitigation measures to be implemented during the recovery stage. Finally, the FMA Program funds projects that reduce or eliminate long-term risk of flood damage to buildings insurable under the National Flood Insurance Program (NFIP). For more information on the each grant program and eligibility requirements, see FEMA's *FY2010 Hazard Mitigation Assistance Unified Guidance* available at www.fema.gov.

For more information on natural hazard mitigation plans and their purpose, see pages 1 and 2 in the *Oregon Pre-Disaster Mitigation Community Training Manual* (at <http://opdr.uoregon.edu>).



Oregon Statewide Planning Goal 7

Natural hazard mitigation plans can assist communities in addressing Statewide Land Use Planning Goal 7, which requires communities to protect life and property from natural hazards through their comprehensive land use plans.

This is accomplished through the factual base established in the mitigation plan that documents historical incidents of hazards in the community and the effects natural hazards can have on current and future development.

Moreover, natural hazard mitigation plans recommend action items to assist the community in reducing risk and preventing loss from natural hazard events. The action items may recommend amendments and improvements to policies, zoning requirements, and ordinances for improvement, which further assist in meeting Goal 7 planning requirements.

Notes:

Purpose and Organization of the Update Manual

This update manual provides a model six-stage plan update process and describes the resources your community can use to update your NHMP. The planning process and resources described in this manual will assist your community in meeting federal requirements for mitigation plan updates. The information in this manual is meant to serve as a guide; your community should apply the ideas and principles locally in the way that is most appropriate.

The six planning stages described in this manual are:

Stage 1: Getting Organized

Stage 1 involves reviewing your NHMP to become familiar with your plan and identify areas that need to be updated, gathering documentation of previous mitigation activities, developing a work plan, identifying strategies for involving the public, and reconvening the steering committee.

Stage 2: Review the Risk Assessment

Stage 2 addresses the NHMP's risk assessment. It involves reviewing and updating hazard history events, identifying new local, state, and federal studies to be incorporated into the risk assessment, identifying data limitations in the previously approved plan and whether they have been met, updating maps if they were included in the last version of the plan, and holding the second steering committee meeting.

Stage 3: Review the Mitigation Strategy

Stage 3 addresses the NHMP's goals, objectives, and mitigation actions. Tasks involved in this stage should include reviewing and updating existing plan goals and actions, identifying new mitigation action items to be included in the update (based on input from the steering committee), and holding the third steering committee meeting.

Notes:

Stage 4: Review the Plan Maintenance Process

Stage 4 addresses the NHMP's plan maintenance process. It involves meeting with the steering committee to review and update the plan maintenance method and schedule, the steering committee responsible for implementing the plan, and the strategies for continued public involvement.

Stage 5: Final Plan Preparation

Stage 5 involves completing final edits to the NHMP, documenting changes made to the plan, sending the plan to FEMA for review, and adoption of the mitigation plan by resolution.

Stage 6: Plan Implementation and Maintenance

Stage 6 involves implementing the NHMP once the plan has been approved by FEMA and adopted by the local jurisdiction by resolution. During stage 6, the steering committee will convene to begin the plan implementation process.

To assist communities in planning their update process, a sample 9- month update schedule encompassing each of the six planning stages is presented on page 7. This schedule will allow for enough time to complete the update process, but is only meant to serve as a guide and should be modified to fit your local situation and needs. Keep in mind that if your community is using federal Pre-Disaster Mitigation planning funds to update the mitigation plan, then your community should begin the planning process within two years prior to the federal grant's completion date.

Task #	Primary Task Categories	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9
1	Getting Organized									
1.1	Review Mitigation Plan									
1.2	Develop a Work Plan									
1.3	Identify Steering Committee Members									
1.4	Identify Public Involvement Strategies									
1.5	STEERING COMMITTEE MEETING 1									
1.6	Document Meeting Outcomes									
2	Reviewing the Risk Assessment									
2.1	Review Hazard Profile									
2.2	Review Vulnerability Assessment									
2.3	Review Risk Analysis									
2.4	STEERING COMMITTEE MEETING 2									
2.5	Document Meeting Outcomes									
3	Reviewing the Mitigation Strategy									
3.1	Identify new mitigation action items									
3.2	STEERING COMMITTEE MEETING 3									
3.3	Document Action Item Process									
4	Reviewing Plan Maintenance Process									
4.1	STEERING COMMITTEE MEETING 4 - Implementation Strategies									
4.2	Document Meeting Outcomes									
5	Final Plan Preparation									
5.1	Finalize Plan Changes									
5.2	Local Review									
5.3	FEMA Review & Local Adoption									
6	Plan Implementation and Maintenance									
6.1	Convene Coordinating Body									

 Indicates months to hold steering committees

Disaster Mitigation Act of 2000

The Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390) provides the legal basis for FEMA's mitigation planning requirements for State, local, and Indian Tribal governments as a condition of mitigation grant assistance.

DMA 2000 amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need for State, local, and Indian Tribal entities to closely coordinate mitigation planning and implementation efforts.

Notes:

Federal Requirements for Plan Updates

All NHMP updates must meet the 17 federal requirements outlined in the Disaster Mitigation Act of 2000 (DMA2K), Section 201.6. The requirements address the following general mitigation plan components:

- Plan adoption
- Multi-Jurisdictional involvement
- Planning process
- Risk assessment
- Mitigation strategy
- Plan maintenance process

The federal requirements for each plan component can be found in the tip boxes at the beginning of each planning stage in this manual.

In addition to meeting the DMA2K requirements, FEMA requires that updated NHMP's are in the form of a complete and current plan. FEMA does not allow plan updates to be annexes or appendices to a previously approved plan. The plan update can either validate existing information in the previously approved plan, or, if necessary, the update can involve a major rewrite.

Describing the Planning Process

Documenting the planning process is an important component to a mitigation plan update, and in many ways, the planning process is as important as the plan itself. All NHMPs are required to provide a narrative description of the process used to develop the plan – i.e. a systematic account about how the NHMP evolved from the moment the planning team was created (or revived), to how each section of the plan was updated, to what plans or studies were incorporated into the plan, and how it will be implemented, evaluated, and updated.

It is important to be aware of the planning process requirements before beginning the update process to ensure that each requirement will be met. The planning process description must include the following components:

1) Who was involved in the plan update process

The plan update process section should describe who led the development at the staff level and whether there were any external contributors such as contractors. In addition, information should be provided about who participated on the steering committee, provided information, and reviewed drafts. Finally, there should be a discussion about the opportunity provided to neighboring communities, government agencies, businesses, academia, and other relevant private and non-profit interests to be involved in the hazard mitigation plan update process. Typically, this involves describing how the planning team was developed and who was invited to participate. Sign-in sheets can be used to document who attended meetings, and should be included in a public process appendix.

Notes:



Resource Tip

An example “changes memo” can be found on the Partnership website at <http://opdr.uoregon.edu>

2) Meetings held to update the plan

The plan update process should provide an overview of the time period during which the plan was reviewed and analyzed, as well as the number, type, and outcome of meetings. Any meeting agendas and materials should also be included in a public process appendix.

3) Process for reviewing and analyzing sections of the plan

The plan update process section must discuss how the planning team reviewed and analyzed each section of the plan and which sections were revised as part of the update process. If the planning team or committee finds that some sections of the plan warrant an update, and others do not, the process the team undertook to make that determination must be documented. This documentation can be written in the plan update process description or incorporated into a plan update “changes memo.”

While not required by FEMA, the changes memo helps to document all changes made in each plan section and serves as a record of change as the plan is updated throughout its lifetime.

4) Public involvement during the plan update

The planning process should discuss the opportunities the public had to comment on the plan during the drafting stage and prior to plan approval. This section should reflect the public involvement strategy developed in Stage 1 of the planning process. Any materials relating to public involvement, such as press releases should be documented in a public process appendix.

5) Studies, reports and technical information reviewed and incorporated into the plan

For plans to remain current, existing plans, studies, reports, and technical information should be reviewed and incorporated where appropriate. These can include plans developed by a jurisdiction that are relevant to natural hazards (e.g. a flood mitigation plan, a stormwater management plan, landslide ordinance); reports published by the Oregon Department of Geology and Mineral Industries (DOGAMI) (e.g. earthquake hazard maps, tsunami inundation maps, HAZUS studies); regional profiles found in the State Natural Hazards Mitigation Plan; and geologic information published by federal agencies such as the United States Geological Survey (USGS).

As your community completes each stage of the plan update process, you should review the components described above and incorporate relevant information into the plan update process description. Supporting documentation, such as meeting sign-in sheets, agenda, and materials, should be gathered throughout the update process and compiled into an appendix. Final documentation of the planning process will occur in Stage 5 once the plan update process is complete.

Notes:

Multi-Jurisdictional Requirements

If your community's natural hazards mitigation plan is a multi-jurisdictional plan, there are additional steps you must consider to meet FEMA's requirements. Multi-jurisdictional plans in Oregon typically consist of a larger county-wide mitigation plan as the primary plan document, with smaller jurisdiction's, such as cities or special districts, included as plan addenda.

FEMA requires that all jurisdictions represented in the NHMP update their sections on the same schedule. Therefore, all jurisdictions represented in the plan should update their relevant sections concurrently and all plan sections must be submitted for FEMA's review at the same time. As your community updates its multi-jurisdictional NHMP, keep in mind the following FEMA requirements:

1. Each jurisdiction must document how they participated in the planning process [i.e. jurisdictions must be represented as participants in the county-wide plan update process];
2. Each jurisdiction must review the updated county's risk assessment and clearly indicate where their jurisdiction's risks are the same and where their jurisdiction's risks vary from the risks identified for the county;
3. Each jurisdiction must develop mitigation strategies in the form of action items that specifically address each jurisdiction's exposure to natural hazards;
4. Each jurisdiction must formally adopt the mitigation plan addendum with specific reference to the county hazard mitigation plan via resolution.

This manual lists the additional steps communities should take to update their multi-jurisdictional NHMP during each planning stage.

Stage 1: Getting Organized

Task 1.1.	Review mitigation plan	Month	1
Task 1.2	Develop a work plan	Month	1
Task 1.3	Identify steering committee members	Month	1-2
Task 1.4	Identify public involvement strategies	Month	1-2
Task 1.5	Hold first steering committee meeting	Month	2
Task 1.6	Document meeting outcomes	Month	2

Stage 1 describes the steps that you should take to become familiar with your local natural hazards mitigation plan (NHMP) and reconvene/create the plan update committee who will oversee the update process. Tasks 1.1 to 1.4 should be done in preparation for the first steering committee meeting.

1.1 Review Mitigation Plan

Before beginning the update process, it is important to have a solid understanding of all the different components found in a community's NHMP. Conducting a thorough review of the NHMP can help identify which plan sections need to be addressed during the update process and who should be involved in updating the plan. Topics to identify during the review are indicated in the sidebar.

Task 1.1 Activities

During your plan review, the project leads should identify the following plan components:

- Jurisdictions represented in the mitigation plan.
- Stakeholders involved in developing and implementing the mitigation.
- The natural hazards identified in the plan and any maps or data used in the mitigation plan.
- The community vulnerabilities identified in the existing plan.
- Mitigation plan maintenance meetings that occurred since the plan was last adopted.



Disaster Mitigation Act of 2000 Requirements

Stage 1 activities apply to the following DMA2K requirements:

Requirement §201.6(a)(3): Multi-jurisdictional plans (e.g. watershed plans) may be accepted as appropriate, as long as each jurisdiction has participated in the planning process...Statewide plans will not be accepted as multi-jurisdictional plans.

Requirement §201.6(b): In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include:

Requirement §201.6(c)(1): [The plan shall document] the planning process used to develop the plan, including how it was prepared, who was involved in the process, and how the public was involved.

Stage 1: Getting Organized

Notes:

1.2 Develop a Work Plan

Developing a work plan early in the planning process can assist the community in understanding the tasks that need to be accomplished and the documentation that should be completed/gathered during the plan update process. As you develop your work plan, keep in mind the planning process requirements described in the Introduction section of this manual and that the work plan's tasks incorporate each of these requirements.

1.3 Identify Steering Committee Members

The steering committee is a critical component to any planning process. The steering committee serves as the primary source of information about local hazard events, community vulnerabilities, the status of mitigation action items, and generally oversees the planning process. A steering committee that is representative of the broader community is also a means of involving the public and making sure the plan is representative of the larger community.

The steering committee that has maintained and implemented the NHMP should be the group to update the plan. However, if there are additional stakeholders that might be useful, or if a community decides to create a new steering committee, then the committee should include representatives from a broader array of stakeholders. Information on who to include in your local steering committee can be found on pages 10-11 in the *Oregon Pre-Disaster Mitigation Program Community Training Manual*.

Notes:

Multi-Jurisdictional Steering Committee Requirements

For multi-jurisdictional plans, it is important to involve representatives from all of the jurisdictions represented in the plan throughout the plan update process. Representatives from each jurisdiction should be part of the plan update steering committee or involved in the public involvement strategy. Their level of involvement should be documented in the planning process section of the update.

The plan update must identify all participating jurisdictions, including new, continuing, and those no longer participating in the multi-jurisdictional plan. If jurisdictional participation has changed since approval of the previous plan, the planning process section should discuss why participation has changed.

1.4 Identify Public Involvement Strategies

Public involvement ensures that the plan update includes diverse community perspectives, reflects community needs, and assists in garnering community support and participation when the plan is implemented. State and federal policies require that the planning process involve both stakeholders and the general public when mitigation plans are developed and updated. Stakeholders are agencies and organizations – local, regional, state, or federal – that have a role in future growth and development, or authority over community assets. The plan update process must include strategies for involving the public and allowing them to comment on drafts of the plan before it is submitted to FEMA for approval.

Stage 1: Getting Organized

Notes:

There are a number of strategies that can be used to involve the public and each strategy has a different level of public impact. At the lowest level of public impact, a public involvement strategy will simply inform the public about activities taking place. Public involvement can then move to higher levels of impact by consulting, involving, collaborating, and finally empowering the public to participate. These different levels of public impact are described in the figure below.

IAP2 Spectrum of Public Participation



Increasing Level of Public Impact 

Public participation goal

Inform

To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.

Consult

To obtain public feedback on analysis, alternatives and/or decisions.

Involve

To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.

Collaborate

To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.

Empower

To place final decision-making in the hands of the public.

In preparation for the first steering committee meeting, it is important to identify the public involvement strategy that will work best for your community and the level of public impact needed. Examples for how and when stakeholders and/or the public can be involved in the local mitigation planning process, and the level of public impact for each strategy can be found on the Partnership website (<http://opdr.uoregon.edu>).

Notes:

1.5 Hold First Steering Committee

Once you have identified steering committee members for the plan update process, your community should convene their first steering committee meeting to address the topics below.

First Steering Committee Meeting Objectives

- Describe the timeline and tasks to be completed during the update planning process;
- Identify roles and responsibilities of the committee;
- Discuss the public involvement strategy to be used during the update process;
- Discuss community stakeholders/jurisdictions that should be contacted to provide hazard and vulnerability information.
- Previous plan maintenance meetings that occurred over the past five years.

1.6 Document Meeting Outcomes

A meeting description and any outcomes should be documented in the planning process section of the NHMP. This includes the public involvement strategy to be used, the community stakeholders/jurisdictions to be included in the update process, and details of previous plan maintenance meetings that occurred over the past five years. Meeting materials such as agendas, handouts, and attendance sheets should be documented in a public process appendix. Attendance sheets for all steering committee meetings are important to document participation. If the plan update is federally funded, attendance sheets are important for billing and reporting purposes, and for ensuring that the community is properly documenting local match requirements. For more information on documenting the planning process, refer to the Planning Process Description in the Introduction.

Stage 1: Getting Organized

Notes:

Stage 1 Review

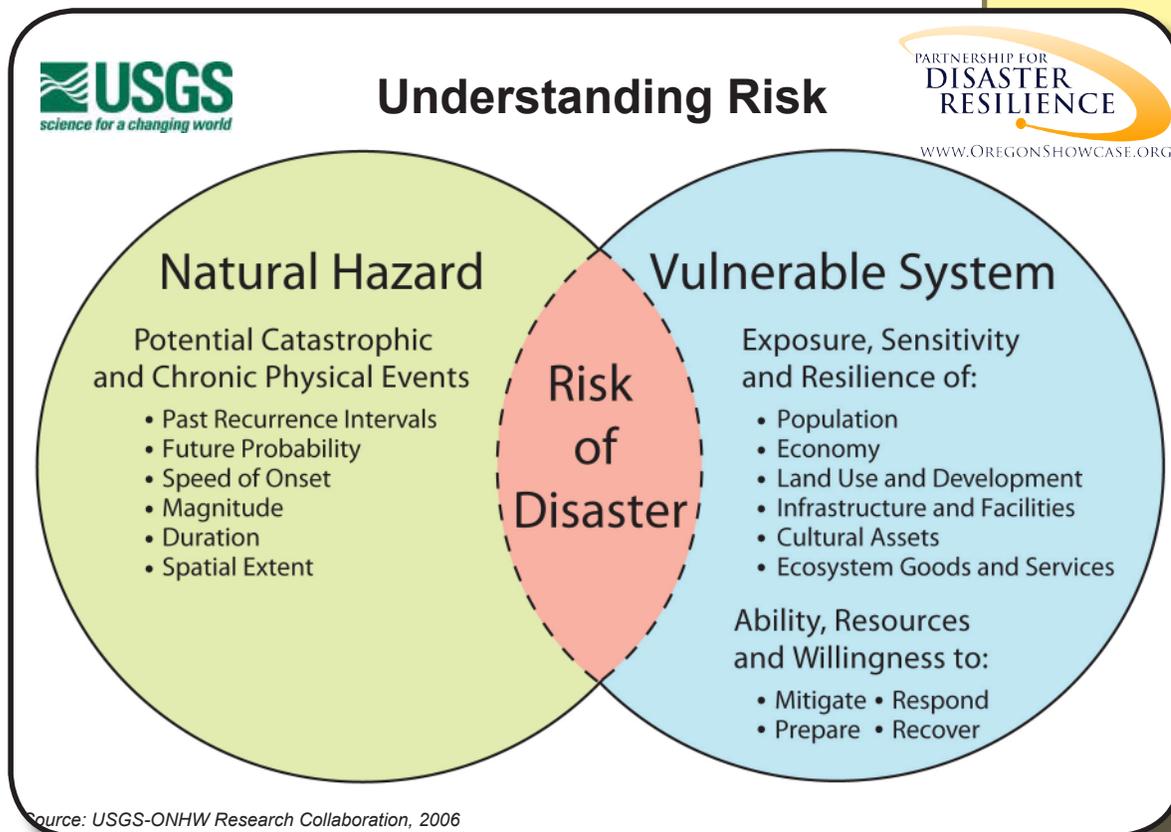
1. Have you created a work plan to update your community's NHMP that incorporates all the planning process requirements?
2. Have you identified new and continuing jurisdictions to be involved in the plan update process?
 - a. Are there jurisdictions that were included in the previous mitigation planning effort, but will no longer be participating in the plan update? If so, have you documented why they are no longer participating?
 - b. Is there adequate representation of each jurisdictions in the steering committee?
3. Have you identified a public involvement strategy for the plan update process that will:
 - a. Provide an opportunity for the public to comment on the plan during the drafting stage; and
 - b. Provide an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia and other private and non-profit interests to be involved in the planning process.
4. Have you documented the outcomes from the first steering committee meeting in the planning process description?

Stage 2: Reviewing the Risk Assessment

Task 2.1.	Review hazard profile	Month	2-4
Task 2.2	Review vulnerability assessment	Month	2-4
Task 2.3	Review the risk analysis	Month	2-4
Task 2.4	Convene second steering committee	Month	4
Task 2.5	Document Meeting Outcomes	Month	4

A risk assessment provides the factual basis for activities proposed in the mitigation strategy to reduce losses from identified natural hazards. It identifies the natural hazards in a community and a community's vulnerable systems. By understanding the relationship between natural hazards, vulnerable systems, as well as community capacity, communities will be better equipped to identify and implement actions aimed at reducing the overall risk of hazards. Figure 2.1 explains this relationship between natural hazards, vulnerable systems, and community capacity.

Figure 2.1 Understanding Community Risk



Notes:

Stage 2: Reviewing the Risk Assessment

Notes:

A NHMP's risk assessment has three components: (1) hazard identification and profile; (2) community-wide vulnerability assessment; and (3) risk analysis. When updating your community's NHMP, each of these three components must be reviewed and updated by the plan update steering committee. Tasks 2.1 to 2.3 list the steps each jurisdiction should take prior to hosting the second steering committee meeting, discussed in Task 2.4.

Each task describe in Stage 2 applies to both county natural hazard mitigation plans and to any addenda included in a multi-jurisdictional natural hazards mitigation plan. Changes made to the larger plan's risk assessment during the update process must be incorporated into each jurisdiction's risk assessment. Where the jurisdiction's risk assessment varies from others included in the plan, the addenda should document the unique and varied risks.



Disaster Mitigation Act of 2000 Requirements

Stage 2 activities apply to the following DMA2K requirements:

Requirement §201.6(c)(2)(i): The risk assessment shall include a description of the type...of all natural hazards that can affect the jurisdiction.

Requirement §201.6(c)(2)(i): The risk assessment shall include a description of the...location and extent of all natural hazards that can affect the jurisdiction. The plan shall include information on previous occurrences of hazard events and on the probability of future hazard events.

Requirement §201.6(c)(2)(ii): The risk assessment shall include a description of the jurisdiction's vulnerability to the hazards described in paragraph (c)(2)(i) of this section. This description shall include an overall summary of each hazard and its impact on the community. The plan should describe vulnerability in terms of: The types and numbers of existing and future buildings, infrastructure, and critical facilities located in the identified hazard areas...

Requirement §201.6(c)(2)(ii): The risk assessment must also address National Flood Insurance Program (NFIP) insured structures that have been repetitively damaged by floods.

Requirement §201.6(c)(2)(iii): For multi-jurisdictional plans, the risk assessment must assess each jurisdiction's risks where they vary from the risks facing the entire planning area.

Requirement §201.6(c)(3)(ii): The mitigation strategy must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

Stage 2: Reviewing the Risk Assessment

Notes:

2.1 Review Hazard Profile

Identifying and profiling natural hazards involves characterizing the natural hazards that occur (or may occur) in your community. Only when you fully understand the hazards that impact your community can you develop informed mitigation measures. All NHMPs must identify the types of hazards that affect the jurisdiction, and for each hazard, describe the causes, characteristics, geographic location, extent (magnitude or severity of the hazard), previous occurrences, and probability of future events.

For the plan update, information included in the hazard profile must be reviewed and updated accordingly. This review involves: (1) identifying any new hazards if needed; (2) reviewing and updating components of the hazard profile; and (3) reviewing hazard maps.

Identify any new hazards

The updated risk assessment must include any newly identified hazards that have been determined to pose a more significant threat than was apparent when the previously approved plan was prepared. If the hazard identification omits (without explanation) hazards commonly recognized as threats to the jurisdiction, the plan will not receive approval by FEMA.

A resource that may help to determine whether new hazards should be included in your plan are the Regional Profiles and Natural Hazard Risk Assessments found in the *State of Oregon Enhanced Natural Hazards Mitigation Plan*. The state plan organizes the state into eight different regions, and the Regional Profile and Natural Hazard Risk Assessments describe the causes, characteristics, history, probability and community vulnerability for each hazard that affects the region. The information presented in the Risk Assessments can help your community determine if a hazard should be included in the plan update. If your community decides to add a new hazard to your NHMP, the Risk Assessments can be a useful starting point for identifying and profiling hazards.



Resource Tip

You can download a copy of the *State of Oregon Enhanced Natural Hazards Mitigation Plan* from the Partnership website (<http://opdr.uoregon.edu>).

Stage 2: Reviewing the Risk Assessment

Existing Plans

Consulting local, state, and federal studies or plans may be necessary to determine whether any new information is available. The types of studies or plans that could be consulted include:

Local Plans

- Local storm water master plans
- Local comprehensive plans
- Local capital improvement plans
- Local emergency operations plans
- Local flood or wildfire plans
- Local hazard analysis reports

Department of Geology and Mineral Industries

- HAZUS studies
- Geologic maps (e.g. earthquake, landslide, coastal erosion, tsunami)
- 2007 Statewide Seismic Needs Assessment Using Rapid Visual Screening, documenting seismic hazards for k-12 schools and critical facilities

Oregon Partnership for Disaster Resilience

- Oregon Enhanced State Natural Hazard Mitigation Plan (Natural Hazard Risk Assessments)

United States Geological Survey (USGS)

- Volcanic studies and debris flow reports
- Tsunami hazard studies: Variations in City Exposure and Sensitivity to Tsunami Hazards in Oregon, Nathan Wood, 2007. United State Geological Survey (USGS)

Other Plans

- Flood Insurance Rate Maps (FIRM)
- Flood Insurance Studies

Any newly identified hazards must have a complete hazard risk assessment. More information about developing a new hazard risk assessment can be found in Phase 2 of the *Oregon Pre-Disaster Mitigation Program Community Training Manual*.

Review and update the hazard profile

The hazard profile describes the causes, characteristics, location, extent, previous occurrences, and probability for each hazard addressed in the plan. Information in the hazard profile must be reviewed and updated with current information, which may require collecting information from local, state, and federal data sources.

Causes and characteristics of the hazard

Review the definition of the causes and characteristics of the hazard and update if new information is available. Phase 2 of the *Oregon Pre-Disaster Mitigation Program Community Training Manual* lists resources that can be used to update this section.

Location and Extent

The location of a hazard describes the geographical areas in the community that would be affected by a hazard. The extent of the hazard describes the magnitude, or severity, of the hazard. Magnitude is a measure of the strength of the hazard event, and where possible should be indicated numerically. If numerical data is not available, a narrative description of the hazard's extent is acceptable.

Information regarding the location and the extent of the hazard should be reviewed for accuracy and updated if needed. If any studies or plans have been consulted to update the location and extent, this must be indicated in the plan. A partial list of plans to be consulted can be found in the sidebar.

Your NHMP may have mapped the location and extent of the hazard if information was available. For the plan update, any maps must be reviewed and updated to ensure that they reflect current information.

Stage 2: Reviewing the Risk Assessment

The local steering committee can provide valuable information regarding the location and extent of the hazard. Location and extent information, and any hazard maps, should be reviewed by the steering committee and updated as needed.

Previous Occurrences

The updated plan must include descriptions of hazard events that have occurred since the plan was last adopted. Federal, state, and local resources that can provide hazard history include the Federal Emergency Management Agency (FEMA), Oregon Emergency Management (OEM), National Oceanic and Atmospheric Administration (NOAA), United States Geological Survey (USGS), the National Climatic Data Center, local newspapers, and local emergency managers. The plan update steering committee will also serve as a resource for hazard history events and information should be gathered at the second steering committee meeting.

Probability assessments

A NHMP must discuss the probability of future hazard events. "Probability" is a statistical measure of the likelihood that a hazard event will occur in an area. The updated plan must incorporate any new data that describes the probability of a hazard occurring. Some mitigation plans use the probability assessments developed through a local hazard analysis, which assesses local vulnerability and probability ratings to determine a community's overall risk to a natural hazard, and these should be consulted to determine if new information is available. (An example of a scoring rubric is located in the sidebar.) However, better scientific information may improve probability assessments, and should be incorporated into the mitigation plan where applicable. A review of local, state, and federal plans or studies (listed under the Location and Extent section above) may provide a better assessment of the probability of a hazard occurring. All probability assessments should be gathered and reviewed with the steering committee and updated as needed.

Notes:

Probability & Vulnerability Assessment Scoring

Probability scores address the likelihood of a future major emergency or disaster within a specific period of time as follows:

High = One incident likely within a 10-35 year period

Moderate = One incident likely within a 35-75 year period

Low = One incident likely within a 75-100 year period

Vulnerability scores address the percentage of population or region assets likely to be affected by a major emergency or disaster, as follows:

High = More than 10% affected

Moderate = 1-10% affected

Low = Less than 1% affected

Stage 2: Reviewing the Risk Assessment

Task 2.2 Activities: Local Community Plans

The types of plans developed for your community, their purpose, the most recent date of adoption, and their relation to hazard mitigation should be noted in your community profile and updated accordingly. Plans that may be listed include:

- Comprehensive plan
- Capital improvement plan
- Emergency operations plan
- Parks and open space plan
- Stormwater management plans
- Floodplain ordinances and mitigation plans
- Tree and limb maintenance programs
- Community Wildfire Protection Plan
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-

2.2 Review Vulnerability Assessment

A community's vulnerability assessment discusses how natural hazards may impact the well-being of your community. It combines the information from the hazard profile with an inventory of the existing (or planned) property and population exposed to a hazard, and attempts to predict how different types of property and population groups will be affected by a hazard. Phase 2 of the *Oregon Pre-Disaster Mitigation Program Community Training Manual* describes vulnerability assessments in more detail.

For the plan update, the community's vulnerabilities must be updated with new information when available. Updating the NHMP's vulnerability assessment involves (1) updating the community profile; (2) reviewing local vulnerabilities; (3) reviewing and updating repetitive flood loss and National Flood Insurance Program (NFIP) information.

Update the community profile

To better understand a community's sensitivity and resiliency to natural hazards, NMHPs typically include a community profile. The profile describes the local geography and climate, population and demographics, employment and economics, housing, land use and development, transportation, critical facilities and infrastructure, historic and cultural resources, and government structure. Where needed, information in the community profile should be updated accordingly. Local government plans such as comprehensive, land use, and transportation plans can provide useful information for updating the profile.

Review and update existing plans and policies

The community profile may have included existing plans and policies found in a community. Identifying these plans and policies and noting how they can be used for hazard mitigation will assist the implementing body identify which components of the mitigation strategy can be incorporated into existing planning mechanisms. A partial list of local plans is in the sidebar.



Resource Tip

The *Community Profile Bibliography* on the Partnership's website (<http://opdr.uoregon.edu>) lists additional sources of information for updating the community profile.

Stage 2: Reviewing the Risk Assessment

Review and update community organizations and programs

The community profile may have included information on community social systems that provide social and community-based services to the public. These can play an important role in mitigation by implementing communication-related activities or specific projects. Special attention should be given to organizations that provide services to children, elderly, low income individuals, non-English speakers, and businesses. If included in the NHMP, the list of community organizations and programs should be reviewed and updated to provide new information or add organizations not previously listed.

Review vulnerability assessment

A community's vulnerability assessment includes information about the hazard's potential impacts within the community.

For the plan update, the NHMP's vulnerability assessment should be reviewed for accuracy and updated where necessary. Data included in the vulnerability assessment should also be discussed at the second steering committee meeting and additional information can be gathered from the committee members if necessary. Vulnerability data needs that may need to be reviewed and updated are located in the sidebar.

Notes:

Task 2.2 Activities: Vulnerability Data Needs

- Number and type of existing and future buildings, infrastructure, and critical facilities in hazard areas**;
- New buildings that house high-risk populations (e.g. elderly, low-income, disabled);
- Potential impacts of future land development, including areas that may be annexed in the future;
- Completed mitigation action items that reduce overall vulnerability;
- Potential dollar losses for vulnerable structures.

***To be eligible for flood mitigation assistance funding, this component must be included in the flood hazard.*

Stage 2: Reviewing the Risk Assessment

Task 2.2 Activities: Repetitive Flood Loss Properties

The NHMP should include the following information about repetitive flood loss properties:

- Number of properties in the community
- Number, dates, and amounts of claims paid
- Maps showing areas of repetitive loss concentration
- If and how these properties will be mitigated or addressed in the future.

Task 2.2 Activities: NFIP Requirements

The mitigation plan must describe the jurisdiction's participation in the NFIP. Information that can describe the jurisdiction's NFIP participation, when available, include:

- Number of NFIP insured properties in the community;
- Number, dates, and amounts of claims paid;
- Most recent community assistance visit (CAV) or community assistance contact (CAC);
- Most recent effective date of the community's Flood Insurance Rate Maps (FIRMs);
- Date community entered the NFIP;
- CRS level (if applicable)

Review repetitive flood loss property/NFIP information

All mitigation plans must address structures insured under the National Flood Insurance Program (NFIP) that have been repetitively damaged by floods. A repetitive loss property is an NFIP-insured property for which two or more losses (occurring more than 10 years apart) of at least \$1,000 each have been paid within any 10-year period since 1978. In order to remain eligible for flood mitigation assistance funding, the plan must describe the jurisdiction's vulnerability in terms of the types and numbers of repetitive flood loss properties, and the update must include the most current information. However, repetitive flood loss addresses must remain confidential.

The mitigation plan must also describe the jurisdiction's participation in the NFIP. For the plan update, review NFIP information found in the plan. If necessary update with new information (see sidebar for information that can be included)

All changes should be documented to demonstrate that new repetitive flood loss and NFIP information has been incorporated into the plan.



Resource Tip

Resources that can be used to find flood information include:

- NFIP Flood Insurance Statistics (www.fema.gov/business/nfip)
- FIRMs, FEMA Flood Map Service Center (www.fema.gov)
- FEMA Community Rating System (CRS) (<http://www.fema.gov/business/nfip/crs.shtm>)
- Department of Land Conservation and Development (<http://egov.oregon.gov/LCD/index.shtml>)

2.3 Review Risk Analysis

A risk analysis estimates the damage, injuries, and costs likely to be incurred in a geographic area over a period of time. It can be a valuable tool for estimating potential losses that could be caused by natural hazards and can assist in prioritizing mitigation activities. A risk analysis has two measurable components: (1) the magnitude of the harm that may result, defined through the vulnerability assessment, and (2) the likelihood or probability of the harm occurring. An example of a risk analysis product is HAZUS, a risk assessment software program for analyzing potential losses from floods, hurricane winds, and earthquakes. In HAZUS-MH, current scientific and engineering knowledge is coupled with the latest geographic information systems (GIS) technology to produce estimates of hazard-related damage before, or after a disaster occurs.

If your community's NHMP has completed a risk analysis, this should be reviewed and updated with new information, if available. If your NHMP does not have a risk analysis, estimate losses given specific hazard events that impact life and property in hazard-prone areas.

Notes:

Stage 2: Reviewing the Risk Assessment

Notes:

2.4 Convene Second Steering Committee Meeting

Once a review of a plan's hazard assessment and vulnerability assessment are complete, the next step is to convene the second steering committee to gather additional information and discuss portions of the plan that must be updated. Objectives for the second steering committee are listed below.



Second Steering Committee Meeting Objectives

- Identify new hazards to be included;
- Discuss changes made to the hazard profile and gather new information
(Causes, characteristics, location, extent, previous occurrences, probability assessments, hazard maps)
- Review and update vulnerability assessment
(Community Profile, vulnerability assessment, repetitive flood loss information)
- Review and update risk analysis if available

2.5 Document Meeting Outcomes

Topics discussed and major outcomes from the risk assessment meeting should be described in the planning process section of the mitigation plan. Meeting materials such as agendas, handouts, and attendance sheets should be documented in a public process appendix. Attendance sheets for all steering committee meetings are important to document participation. If the plan update is federally funded, attendance sheets are important for billing and reporting purposes, and for ensuring that the community is properly documenting local match requirements. For more information on documenting the planning process, refer to the Planning Process Description in the Introduction.

Stage 2: Reviewing the Risk Assessment

After the second steering committee meeting, project leads should incorporate new information into the plan's risk assessment. Based on new data, project leads should begin to think about new mitigation action items in preparing for Stage 3 of the plan update process, reviewing the mitigation strategy.

Stage 2 Review

Hazard Identification

1. Are there newly identified hazards that will be part of the plan update?
 - a. If so, have you identified the causes, characteristics, impacts, previous occurrences, location, extent, probability of the hazard, as well as vulnerable community sectors?
2. Have new hazard events occurred in the past five years and have they been included in the plan update?
3. Are there additional local, state, or federal studies and plans that can inform the updated risk assessment and may change the causes, characteristics, location, and extent of the hazard?
4. Are there new probability assessments that can be incorporated into the risk assessment?

Vulnerability Assessment

1. Have you reviewed the NHMP's vulnerability assessment for accuracy?
 - a. Vulnerability assessment information that should be updated include (if available):
 - i. Number and type of existing and future buildings, infrastructure, and critical facilities in hazard areas;
 - ii. New buildings that house high-risk populations (e.g. elderly, low-income, disabled);
 - iii. Potential impacts of future land development, including areas that may be annexed in the future;
 - iv. Potential dollar losses for vulnerable structures.

Notes:

Stage 2: Reviewing the Risk Assessment

Notes:

Risk Analysis

1. Have you reviewed the NHMP's risk analysis?

Documenting Meeting Outcomes

1. Have you documented the meeting outcomes and included a description in the planning process?

Stage 3: Reviewing the Mitigation Strategy

Task 3.1	Identify new mitigation action items	Month	4-5
Task 3.2	Hold third steering committee meeting	Month	5
Task 3.3	Document meeting outcomes	Month	5

A NHMP's mitigation strategy serves as a long-term blueprint for addressing a community's vulnerability to natural hazards as identified in the risk assessment. The mitigation strategy is comprised of goals and mitigation action items.

A NHMP's goals describe the outcomes that are to be produced by the plan and how the community intends to work toward mitigating risk from natural hazards. In Stage 3, these goals will be reviewed by the steering committee to determine if they are still relevant and will be updated as needed.

Action items are detailed recommendations for activities that a broad range of community stakeholders could engage in to reduce risk. By targeting activities intended to address a community's vulnerability to natural hazards, action items reduce a community's risk of disaster by strengthening its vulnerable systems. In Stage 3, the previously approved NHMP's action items will be reviewed by the steering committee to determine whether they have been completed or not. In addition, the steering committee will develop new action items to address any new vulnerabilities identified during the risk assessment update.

Notes:



Disaster Mitigation Act of 2000 Requirements

Stage 3 activities apply to the following DMA2K requirements:

Requirement §201.6 (c)(3)(i): The hazard mitigation strategy **shall** include a description of mitigation goals to reduce or avoid long-term vulnerabilities to the identified hazards.

Requirement §201.6(c)(3)(ii): The mitigation strategy **shall** include a section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

Stage 3: Reviewing the Mitigation Strategy

Notes:

Multi-jurisdictional plans include a mitigation strategy for each jurisdiction represented in the plan. Each jurisdiction must review and update their mitigation strategy as outlined in the tasks below.

3.1 Identify New Mitigation Action Items

During Stage 2, the plan update committee discussed the natural hazards that affect their jurisdiction and reviewed and updated community vulnerabilities. New actions should be developed if: (1) the community identified new vulnerabilities that cannot be addressed by existing actions; or (2) the existing actions do not appropriately mitigate existing vulnerabilities. If your community needs assistance in determining how to mitigate vulnerabilities, you can reference other communities' mitigation action items. For a complete list of all mitigation action items in Oregon, see the Action Item Database at the Oregon Partnership for Disaster Resilience Website (<http://opdr.uoregon.edu>).

The Partnership recently revised its mitigation action item proposal form to outline 13 critical components of an action item. The action item proposal form gives communities an advantage because: (1) it encourages communities to develop realistic and well-developed actions, and (2) it can serve as a starting point if a community wants to seek grant funding. More information on developing an action item proposal form can be found in Phase 3 of the *Oregon Pre-Disaster Mitigation Program Community Training Manual*.



Resource Tip

For a complete list of community mitigation action items, see the Action Item Database at the Oregon Partnership for Disaster Resilience Website (<http://opdr.uoregon.edu>).

Stage 3: Reviewing the Mitigation Strategy

3.2 Hold Third Steering Committee

For the third steering committee meeting, committee members must review and update the mitigation plan goals and mitigation action items found in the previously approved plan, and develop new actions for the plan update. The topics below should be addressed during the third steering committee meeting.



Third Steering Committee Meeting Objectives

- Review Plan Goals
- Review Mitigation Action Items
- Document Continued NFIP Compliance
- Review Proposed Mitigation Actions to ensure compliance with FEMA requirements

Review Plan Goals

The community's hazard reduction goals guide the development and implementation of mitigation actions. The goals are aspirational statements that reflect a community's intent to reduce or avoid the effects of natural hazards. NHMP goals should be consistent with other goals identified in community plans and policies and be consistent with state priorities. The steering committee should either reaffirm or update the goals based on current conditions. Updating the goals may be required if mitigation activities have been completed, the risk assessment includes new information, or state priorities have changed.

If the goals do not change from the previously approved plan, the updated plan must document that goals were re-evaluated and that they were determined to remain valid and effective.

Task 3.2 Activities: Goal Review Questions

Questions to ask when reevaluating plan goals include:

- Do the goals and objectives identified in the previously approved plan reflect issues identified the updated risk assessment?
- Did the goals and objectives identified in the previously approved plan lead to mitigation projects and/or changes in policy that helped the jurisdiction(s) to reduce vulnerability?
- Do the goals and objectives identified in the previously approved plan support any changes in mitigation priorities?
- Are goals identified in the updated local mitigation plan reflective of current state goals regarding natural hazard mitigation planning?

Stage 3: Reviewing the Mitigation Strategy

Notes:

Task 3.2 Activities: NFIP Compliance

Common examples of community compliance includes:

- Adoption and enforcement of floodplain management requirements, including regulating all and substantially improved construction in Special Flood Hazard Areas (SFHAs);
- Floodplain identification and mapping, including any local requests for map updates, if needed;
- Outreach to the community about the NFIP; or
- Participation in the Community Rating System (CRS).

Review Mitigation Action Items

For the plan update, the steering committee must review all action items found in the previously approved plan to determine whether action items have been completed, deleted, or deferred (unchanged). Some mitigation actions may have been implemented by a jurisdiction, and these should be indicated in the plan. The community may want to eliminate some actions due to limited capabilities prohibitive costs, low benefit/cost ratio, or other concerns. Finally, if action items are being deferred (unchanged), then the committee must indicate why they remain unchanged.

FEMA also recommends that previously approved plans point out data limitations (if any), and identify actions to obtain the data to be incorporated into the risk assessment. If there are actions addressing data deficiencies to be obtained at a later time, then the committee must review these actions to determine whether data deficiencies have been addressed. If data deficiencies have been addressed, the committee should indicate that the action has been completed. However, if deficiencies have not been addressed, there must be an explanation for why the deficiencies still exist and an updated schedule for resolving the issue.

Continued NFIP Compliance

The mitigation strategy must identify, analyze, and prioritize actions related to a jurisdiction's continued compliance with the National Flood Insurance Program (NFIP). The steering committee must review NFIP action items to ensure that the jurisdiction remains in compliance with the NFIP program requirements. Examples of NFIP compliance activities are located in the sidebar.

Stage 3: Reviewing the Mitigation Strategy

New Mitigation Actions

Once the committee has reviewed the existing mitigation action items, the committee can move on to reviewing mitigation actions developed in task 3.1 by project leads, or develop new action items as a committee. New mitigation actions must address any new vulnerabilities identified during Stage 2. Keep in mind that mitigation action items need to address how the actions will be implemented and administered, including the responsible department, existing and potential resources, and a timeframe for completion.

The mitigation strategy must describe how actions will be implemented and administered, including the responsible department, existing and potential resources, and a timeframe for completion.

Notes:

Task 3.2 Activities: Mitigation Strategy Criteria

As you update your NHMP's mitigation strategy, all mitigation actions must meet the following criteria:

- The plan must include a comprehensive range of mitigation action items for each hazard;
- The mitigation strategy must include action items that address existing and new buildings and infrastructure;
- The mitigation strategy must include action items that address continued compliance with the National Flood Insurance Program.

Stage 3: Reviewing the Mitigation Strategy

Notes:

3.3 Document Meeting Outcomes

After the third steering committee meeting, the next step is to document any changes to the plan's goals, the status of all mitigation action items, and compile a new set of action items for the plan update.

Any changes to the goals can be documented in the relevant section or in a "changes memo" that indicates which goals changed. If goals are being reaffirmed, then the NHMP must indicate that the goals were re-evaluated and remain effective.

To indicate whether action items have been completed, deleted, or deferred, indicate the status of the action item in the status field of the action item form. Note that deferred actions must include an explanation for why the action remains unchanged, but an explanation for completed or deleted actions should also be included. Completed action items may be grouped elsewhere in the plan, along with "success stories" or explanations of how they were implemented. However, if the steering committee finds that no changes to the action items are needed, then the update must indicate why changes are not necessary. Keep in mind that any new vulnerabilities included in the risk assessment must be addressed with action items.

Deferred actions and new action items should be compiled to develop a new mitigation strategy for the plan update. It is important to remember that the new mitigation strategy must meet the following criteria:

- The mitigation strategy must describe how actions will be implemented and administered, including the responsible department, existing and potential resources, and a timeframe for completion. If the community completes a full action item form for each action, all of these requirements will be met;
- The plan must include a comprehensive range of mitigation action items for each hazard;
- The mitigation strategy must include action items that address existing and new buildings and infrastructure;

Stage 3: Reviewing the Mitigation Strategy

- The mitigation strategy must include action items that address continued compliance with the National Flood Insurance Program.

Topics discussed and major outcomes from the mitigation strategy review should be described in the planning process section of the mitigation plan. Meeting materials such as agendas, handouts, and attendance sheets should be documented in a public process appendix. Attendance sheets for all steering committee meetings are important to document participation. If the plan update is federally funded, attendance sheets are important for billing and reporting purposes, and for ensuring that the community is properly documenting local match requirements. For more information on documenting the planning process, refer to the Planning Process Description in the Introduction.

Notes:

Stage 3 Review

NHMP Goals

1. Has the steering committee reviewed the mitigation plan goals?
 - a. Have you documented that the committee reviewed and re-evaluated the mitigation plan goals?

Mitigation Actions

1. Have you reviewed all the previously-approved mitigation action items and documented whether they have been completed, deleted, or deferred in the update?
2. Are there action items that discuss data deficiencies, and have these data deficiencies been addressed?
 - a. If not, is there an explanation for why data deficiencies have not been met and is there a strategy to further address the deficiency?
3. If your community is a participant in the NFIP, are there mitigation actions that address continued NFIP compliance?
4. Have you identified new mitigation actions that reflect all the vulnerabilities identified in the risk assessment?
5. Does your list of new mitigation actions address the mitigation strategy criteria?

Documenting Outcomes

1. Have you documented the outcomes of the third steering committee in the planning process description?

Stage 4: Reviewing the Plan Maintenance Process

<i>Task 4.1</i>	<i>Hold fourth steering committee meeting</i>	<i>Month</i>	<i>6</i>
<i>Task 4.2</i>	<i>Document meeting outcomes</i>	<i>Month</i>	<i>6</i>

A NHMP must include a plan maintenance process that ensures the mitigation plan remains an “active and relevant document.” This plan maintenance process includes (1) a method and schedule for monitoring, evaluating, and updating the plan at least every five years; (2) an explanation of how local governments intend to incorporate their mitigation strategies into existing planning mechanisms, such as comprehensive or capital improvement plans, or zoning and building codes; (3) there is continued public participation throughout the plan maintenance process; and (4) there is a method for prioritizing mitigation projects.

Notes:



Disaster Mitigation Act of 2000 Requirements

Stage 4 activities apply to the following DMA2K requirements:

Requirement §201.6(c)(3)(iii): The mitigation strategy section shall include an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization shall include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

Requirement §201.6(c)(4)(i): The plan maintenance process shall include a section describing the method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.

Requirement §201.6(c)(4)(ii): The plan shall include a process by which local governments incorporate the requirements of the mitigation plan into other planning mechanisms such as comprehensive or capital improvement plans, when appropriate.

Requirement §201.6(c)(4)(iii): The plan maintenance process shall include a discussion on how the community will continue public participation in the plan maintenance process.

Stage 4: Reviewing the Maintenance Process



Resource Tip

Phase 4 of the *Oregon Pre-Disaster Mitigation Program Community Training Manual* has additional information on each of the plan components discussed in Stage 4 should they need to be revised during the update process.

For the plan update, local jurisdictions must assess how the NHMP maintenance process worked and identify whether changes to the process are needed. Adjustments to the method and schedule for maintaining the plan may be necessary to ensure the plan's value for risk reduction.

As the mitigation plan evolves through updates, the plan maintenance process serves as the basis for the next update, and the process of updating the plan provides local jurisdictions with an opportunity to document progress in achieving mitigation goals.

Multi-jurisdictional plans also have a separate plan maintenance process to ensure that their plan sections are implemented, and the steps outlined in Stage 4 apply to multi-jurisdictional addenda as well.

4.1 Hold Fourth Steering Committee Meeting

At the fourth steering committee meeting, committee members should review and update the following plan components:

Prioritization Process

All plans include an action item prioritization process that determines the method, and/or order in which actions will be implemented. Considerations that may be used to prioritize actions include social impacts, technical feasibility, administrative capabilities, political and legal effects, and economic as well as environmental issues (also known as the STAPLEE approach). In addition, the prioritization must consider the benefits that would result from the mitigation actions versus the cost of those actions.

Stage 4: Reviewing the Maintenance Process

This action item prioritization process should be reviewed with the steering committee to determine whether it has been effective at prioritizing and implementing mitigation actions, and if it adequately considers the costs versus the benefits of implementing mitigation action items. If your committee determines that the existing prioritization process needs to be changed, the Partnership has developed a four-step process for prioritizing projects, which can be found in the *Oregon Pre-Disaster Mitigation Community Training Manual*.

Method and Schedule for Monitoring, Evaluating, and Updating the Plan

All mitigation plans must describe how, when, and by whom the plan will be monitored, evaluated, and updated. FEMA recommends that the plan be reviewed and updated on an annual basis or after a hazard occurrence to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. Monitoring, evaluation, and updating activities should take place on an annual basis.

For the plan update, the update steering committee must review the previously approved plan's method and schedule for monitoring, evaluating, and updating the plan. This review will look at strengths and weaknesses of the method and schedule, and what elements, if any, have changed. The steering committee must also describe the method and schedule to be used over the next five years to monitor, evaluate, and update the plan. Activities to be completed during plan evaluation are listed in the sidebar.

Plan Evaluation

Throughout the plan maintenance process, the plan should be regularly evaluated to determine whether:

- The goals and objectives address current and expected conditions;
- The nature, magnitude, and/or type of risks that have changed;
- The current resources are appropriate for implementing the plan;
- There are implementation problems, such as technical, political, legal, or coordination issues with other agencies;
- The outcomes have occurred as expected (a demonstration of progress);
- The agencies and other partners participated as originally proposed.



Resource Tip

A plan update toolkit developed by the Partnership can be included in this section to serve as a guide for future NHMP updates. The toolkit can be found on the Oregon Partnership for Disaster Resilience website (<http://opdr.uoregon.edu>).

Stage 4: Reviewing the Maintenance Process

Notes:

Incorporation into Existing Planning Mechanisms

The mitigation plan must specify how the mitigation strategy, including the goals, objectives, and mitigation actions, will be incorporated into other planning mechanisms. These mechanisms can include comprehensive plans, strategic plans, and land use plans which are updated regularly. These plans already have the support of local residents, businesses, and policy makers, and incorporating a mitigation strategy into existing plans and policies will increase their likelihood of being supported and implemented.

The steering committee should discuss how the local government incorporated the mitigation plan into other planning mechanisms as a demonstration of progress. In addition, the committee must discuss how the mitigation strategy and other information, such as the risk assessment, will continue to be integrated into other planning mechanisms in the future, and they must identify what those planning mechanisms are. If the community has not made any progress on implementing mitigation into existing planning mechanisms, then the process should be further refined and documented in the plan.

Your community can use a number of strategies to incorporate natural hazard mitigation requirements into existing planning mechanisms. As your community updates and develops new NHMP actions, alignment of the action with existing plans and policies should be indicated in the action item form. The Community Profile of your NHMP includes a list of local plans and policies where mitigation actions and information from the risk assessment can be incorporated (see Task 2.2). During regular maintenance of the NHMP, the list of plans and policies should also be consulted to determine where relevant information can be incorporated.

Continued Public Involvement

The NHMP must describe the opportunities the public will have during the plan's regular review to comment on the progress made to date and the proposed plan revisions. The NHMP should also describe the mechanisms for keeping the public involved.

Stage 4: Reviewing the Maintenance Process

At the fourth steering committee meeting, the committee must discuss:

- How the public was kept involved during the past five years (this discussion should be documented in the planning process section of the plan rather than the plan implementation and maintenance section);
- How the public will continue to be involved in the plan maintenance process over the next five years.

Refer to the public involvement strategies identified in Stage 1 for ideas on continuing to involve the public.

Notes:

Goals Objectives Fourth Steering Committee Meeting

- Action Item Prioritization Process;
- Method and schedule for monitoring, evaluating, and updating the plan, including the responsible departments;
- Incorporation of the mitigation strategy into existing plans and programs;
- Continued public involvement.

4.2 Document Meeting Outcomes

Topics discussed and major outcomes from the plan implementation and maintenance review should be described in the planning process section of the NHMP. Meeting materials such as agendas, handouts, and attendance sheets should be documented in a public process appendix.

Attendance sheets for all steering committee meetings are important to document participation. If the plan update is federally funded, attendance sheets are important for billing and reporting purposes, and for ensuring that the community is properly documenting local match requirements. For more information on documenting the planning process, refer to the Planning Process Description in the Introduction.

Stage 4: Reviewing the Maintenance Process

Notes:

Stage 4 Review

Action Item Prioritization

1. Did you review the action item prioritization process and update as needed?

Monitoring, Evaluating, and Updating the Plan

1. Did you review and update the method and schedule for monitoring, evaluating, and updating the NHMP?

Incorporation into Existing Planning Mechanisms

1. Did you discuss how components of the NHMP were incorporated into other planning mechanisms (i.e. comprehensive plans, capital improvement plans) over the past five years?
2. Does the updated plan identify a process and local planning mechanisms to incorporating the NHMP's components?

Continued Public Involvement

1. Did you identify how the public was involved in the plan maintenance process over the past five years?
2. Did you discuss how the public will continued to be involved in regular plan maintenance activities over the next five years?

Documenting Outcomes

1. Have you documented the outcomes of the fourth steering committee in the planning process description?

Stage 5: Final Plan Preparation

<i>Task 5.1</i>	<i>Finalize plan changes</i>	<i>Month</i>	<i>6-7</i>
<i>Task 5.2</i>	<i>Local Review</i>	<i>Month</i>	<i>6-7</i>
<i>Task 5.3</i>	<i>FEMA review and local adoption</i>	<i>Month</i>	<i>8-9</i>

During Stage 5, the project leads prepare the final draft of the updated plan to be reviewed by the steering committee and then sent to FEMA for review. FEMA has 45 days to pre-approve a NHMP or suggest additional plan changes. Upon FEMA's pre-approval, each participating jurisdiction must adopt the plan by resolution in order to receive formal approval from FEMA.

Notes:



Disaster Mitigation Act of 2000 Requirements

Stage 5 activities apply to the following DMA2K requirements:

Requirement §201.6(c)(5): The local hazard mitigation plan shall include documentation that the plan has been formally adopted by the governing body of the jurisdiction requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

Requirement §201.6(c)(5): For multi-jurisdictional plans, each jurisdiction requesting approval of the plan must document that it has been formally adopted.

Stage 5: Final Plan Preparation

Task 5.1 Activities: Planning Process Components

- Who was involved in the plan update process.
- Meetings held to update the plan.
- Process for reviewing and analyzing sections of the plan.
- Public involvement during the plan update.
- Studies, reports and technical information reviewed and incorporated into the plan.

More detailed information for each component can be found in the Introduction section of this manual.

Notes:



Resource Tip

The FEMA crosswalk can be found on the Oregon Partnership website (<http://opdr.uoregon.edu>), or in FEMA's 2008 *Local Multi-Hazard Mitigation Plan Guidance* found at www.fema.gov.

5.1 Finalize Plan Changes

Finalizing the plan changes involves documenting the update planning process and the major changes made to the plan.

Describe the Planning Process

Documenting the planning process is an important component to a mitigation plan update. Each required component of the planning process description is outlined in detail in this manual's Introduction. A suggested format for describing the plan update process is to place the narrative description after the planning process description of the previously-approved mitigation plan.

Write memo showing plan changes

All changes made to the NHMP during the plan update process must be documented somewhere in the plan. Documentation can be accomplished by either providing a summary of changes in each section of the plan, or documenting changes in a "changes memo." A changes memo is a separate document that indicates deletions and additions made to each plan section during the update process. More information about the "changes memo" can be found in the Introduction section of this manual.

5.2 Local Review

Once a final draft of the NHMP has been completed, the plan should be reviewed locally before being submitted to FEMA for review. First, the plan should be evaluated using the *Plan Review Self-Assessment (crosswalk)* to determine if it meets FEMA's requirements. If the plan meets FEMA's requirements, the local steering committee and the public should have the opportunity to review a final draft of the NHMP. This local review applies to all jurisdictions represented in the NHMP. Once the local review is complete and all comments incorporated into the NHMP, the plan is ready to be submitted to FEMA for review.

Notes:

5.3 FEMA Review and Local Adoption

The updated NHMP must be submitted to FEMA for review in its complete form. Once FEMA has received the plan, it has 45 days to review it. If no changes are required, FEMA will provide pre-approval of the plan, allowing the community to adopt the NHMP locally. Upon local adoption, the community becomes eligible for federal grant funding.

The following steps outline how to approach the FEMA review and local adoption process:

1. Assemble one electronic copy of the entire plan (pdf preferred) and either email or mail an electronic copy to the State Hazard Mitigation Officer at Oregon Emergency Management (OEM).
2. OEM conducts a final review of the plan and forwards the plan to FEMA on behalf of the community. FEMA typically takes about 45 days to review the plan.
3. Set a City Council date for local adoption in anticipation of receiving FEMA's approval within 2 months.
4. Once FEMA has completed their review, OEM will forward the review outcome to the community. The outcome will be either pre-approval or comments for further revision.
 - a. If the community receives a pre-approval, go on to step 6.
 - b. If the community receives comments, those comments must be addressed. Copies of the revisions (only) should be re-submitted to OEM.
5. Once the community receives FEMA's pre-approval, the community should begin the local adoption process, adopting the plan by resolution.
6. Send a copy of the local adoption resolution to FEMA through OEM.
7. The community will receive a final approval letter from FEMA indicating that the community is eligible for federal mitigation funding programs. These funding programs include the Pre-Disaster Mitigation Program, the Hazard Mitigation Grant Program, and the Flood Mitigation Assistance Program.

Stage 5: Final Plan Preparation

Notes:

For multi-jurisdictional plans, all participating jurisdictions must follow the steps listed above for their portion of the NHMP. Since city addenda are tied to the county dates of approval, city addenda are not formally approved until the county adopts. Therefore, city addenda should wait with their local adoption until the county formally adopts the NHMP. Once all jurisdictions have adopted their relevant portion of the NHMP, the resolutions should be sent to FEMA through OEM together to receive a single formal adoption date. If one city does not adopt their portion of the NHMP, this will not compromise other cities' eligibility for federal funding.

Stage 5 Review

1. Does your planning process description address all the required components listed in task 5.1?
2. Have you documented all the changes made to the plan either in the plan document or in a separate changes memo?
3. Have you completed a *Plan Review Self-Assessment (cross-walk)*?
4. Did your committee and the public have the opportunity to review a final draft of the NHMP before submitting the plan to FEMA?
5. Did you submit your NHMP and all the addenda to FEMA in their complete form and at the same time?
6. Upon receiving pre-approval, have you adopted the NHMP locally by resolution before all jurisdictions adopted their relevant portions of the NHMP?
7. Did you submit all adoption resolutions to FEMA at the same time to receive a single formal adoption date?

Stage 6: Plan Implementation and Maintenance

Task 6.1 Convene Coordinating Body Month 9

A mitigation plan is only useful at reducing a community's risk if it is being implemented by the community. In this final stage, the steering committee and convener of the mitigation plan will begin the plan's implementation.

6.1 Convene Steering Committee to Implement Plan

The steering committee responsible for implementing the NHMP should convene its first committee meeting to begin the plan implementation process soon after FEMA formally adopts the plan. This first meeting will serve as a kickoff for future efforts to implement the mitigation strategy in the plan and identify where the mitigation strategy can be incorporated into existing plans, policies, and activities. The meeting should follow the plan implementation and maintenance schedule outlined in the plan implementation and maintenance portion of the NHMP.

Guest speakers can also provide valuable information at this first steering committee meeting in terms of grants available and assistance in conducting a cost benefit analysis. A list of speakers and sample discussion topics for the first steering committee meeting is included below.

Notes:

Stage 6: Plan Implementation and Maintenance

Notes:

Guest Speakers

Speaker	Agency	Discussion Topic
Dennis Sigrist	Oregon Emergency Management	Grant Opportunities Benefit-Cost Analysis Mitigation Success Stories
Kristen Meyers	Federal Emergency Management Agency	FEMA Grant Programs
Josh Bruce	Oregon Partnership for Disaster Resilience	Plan Implementation Plan Development

Sample Discussion Topics

- Discuss any available funding streams
- Identify opportunities for incorporating mitigation actions into existing plans and policies
- Identify action items to be implemented within the next year