

# Hazard Mitigation Planning

As Outlined in **Title 44 CFR Part 201.6**  
and Authorized by the  
**Disaster Mitigation Act of 2000**

- ▶ **Saving Lives**
- ▶ **Protecting Property**
- ▶ **Creating Safer Communities**
- ▶ **Enhancing Economic Security**

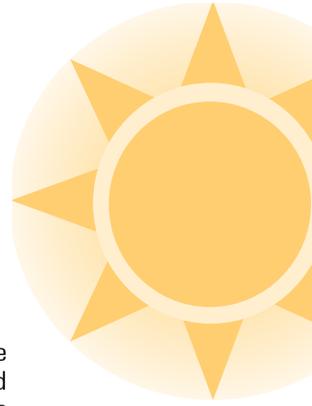
If these are matters of importance to your community, you need to know how Hazard Mitigation Planning will enable you to accomplish these goals and qualify for Federal Emergency Management Agency (FEMA) hazard mitigation grants.

**FEMA Region 10**  
September 2002





# Hazard Mitigation Planning Works



Whether it's the Nisqually earthquake of 2001 shaking the ground and damaging buildings, or the severe storms and flooding of 1996-97 ravaging homes in the floodplain, as footage of these disasters is broadcast to the homes of millions, a question on people's minds is — can't something be done about this? The answer is called hazard mitigation, which reduces the long-term risks to people and damage to property.

There are many forms of mitigation, including structural and non-structural measures. Typical non-structural mitigation measures would include using computer straps to ensure equipment remains stable during an earthquake, or using metal strapping to stabilize a water heater. Examples of structural mitigation would be choosing to strengthen a building to withstand a major earthquake, or elevating a home in the floodplain.

As our northwest communities continue to grow, more development is constructed near fault lines, in floodplains, along shorelines, and in other hazard prone areas. The need for communities to become involved in hazard mitigation has never been so great. Each year natural disasters have the potential to cause millions of dollars in damages in communities throughout the Northwest United States.

Investing in hazard mitigation practices *now* will significantly reduce the demand for future investments by lessening the amount of time and funding needed for disaster recovery, repair and reconstruction. Mitigation is ultimately a cost- and time-effective solution to natural disasters.

Furthermore, practicing hazard mitigation will enable local residents, public services, businesses and industries to re-establish themselves in the wake of a disaster, bringing local economies back to normal sooner and with less interruption. Hazard mitigation practices offer a wide array of benefits, both direct and indirect.





Direct benefits include:

- ▶ Reduced loss of life, property, essential services, critical facilities and economic hardship
- ▶ Reduced short-term and long-term recovery and reconstruction costs
- ▶ Increased cooperation and communication within the community through the planning process, and
- ▶ Expedited pre-disaster and post-disaster grant funding

Hazard mitigation also offers a community indirect, or non-quantifiable, benefits including:

- ▶ Disaster resilience
- ▶ Environmental quality
- ▶ Economic vitality
- ▶ Quality of life

Measures such as the acquisition or regulation of land in known hazard areas can aid in achieving multiple community goals, such as preserving open space, maintaining environmental health and natural features, and enhancing recreational opportunities. Many of these common goals will become increasingly evident as a community begins to walk through the mitigation planning process. More importantly, mitigation planning has the potential to produce long-term and recurring benefits by breaking the repetitive cycle of disaster loss.

Benefits can best be achieved through hazard mitigation planning, a collaborative process whereby hazards affecting the community are identified, vulnerability to those hazards is assessed, and actions are taken to minimize or eliminate the adverse impacts of these hazards.

If you are not convinced to start working on a hazard mitigation plan today, consider this. . . the Federal government will be requiring local entities, tribes and states to have an approved hazard mitigation plan in order to qualify for FEMA hazard mitigation project grants. Only those with approved plans will be eligible to apply for hazard mitigation project grants.

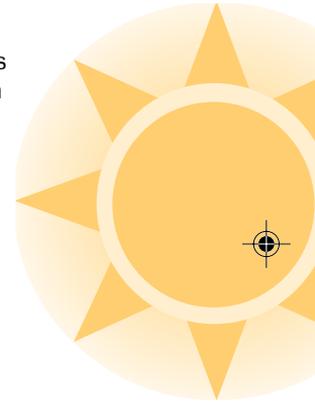
**Develop a hazard mitigation plan and begin realizing the benefits of a disaster resistant community today!**



# What is Contained in a Hazard Mitigation Plan?

A hazard mitigation plan contains the essential strategy and activities, based on risks and vulnerabilities, to reduce disaster damages and losses. The Disaster Mitigation Act of 2000 established a hazard mitigation plan requirement to be eligible for FEMA mitigation project grants. Title 44 CFR Part 201 identifies the content requirements for state, local and tribal hazard mitigation plans. The basic elements involved in a hazard mitigation plan are:

- o **Planning Process** – review existing plans or studies, and involve local agencies, businesses, non-profit organizations, and neighboring communities.
- o **Risk Assessment** – identify hazards, vulnerabilities and impacts to determine and prioritize mitigation actions.
- o **Mitigation Strategy** – introduce the activities chosen to minimize the risks and losses associated with each hazard, and describe the strategy for implementation.
- o **Plan Maintenance** – describe the method and schedule for monitoring, evaluating and updating the plan.
- o **Adoption** – utilize the formal adoption of the plan to demonstrate the commitment of the community and elected officials to the goal of becoming disaster-resistant.



Contained in the following pages are a description of these five mitigation plan elements, the tasks and some tips on how to meet or exceed the FEMA requirements, and a checklist describing the essential elements of an approvable plan.

**TASK** ▶ Plan content required to meet minimum FEMA requirements as outlined in Title 44 CFR Part 201.6 (Required)

▶ **Tip** Recommended approach or additional information to improve the plan beyond the minimum requirements (Optional)





# Planning Process

Provide documentation of 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.

**TASK** ▶ Provide a narrative description of the planning process used to establish a roadmap that includes who is involved in each phase of the planning process, what their responsibilities and capabilities are, and what resources are necessary and available.

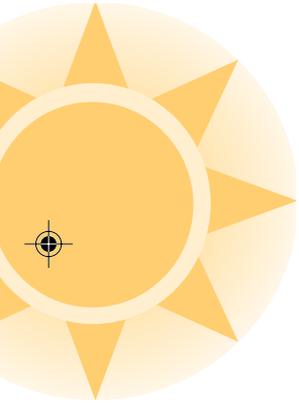
▶ **Tip** Maintain meeting minutes for all public workshops, meetings, and/or hearings.

**TASK** ▶ Develop and implement a method for public involvement in the planning process to increase the quality of the plan. Public involvement provides information from various stakeholders to support a long-lasting and comprehensive approach. It also enhances the general sense of community and ownership in the plan.

▶ **Tips** Communities can encourage public involvement by advertising and hosting public workshops, meetings, and/or hearings.

The planning process may be integrated into departments within the government, and the plan itself can be integrated into existing plans. By utilizing existing plans, resources and information, communities may reduce the cost of mitigation planning.

Involve a diverse cross section of local stakeholders and decision makers to strengthen community support and result in a higher quality plan.





## Risk Assessment

Identify hazards, vulnerabilities and impacts to determine and prioritize mitigation actions. Consider developing enhanced risk and vulnerability assessment to improve the overall quality of the plan.

**TASK** ▶ Identify and describe all the hazards that affect the area. The typical natural hazards that face communities in the Northwest states are earthquakes, fires, floods, severe winds, winter storms, volcanoes, landslides, drought, and tsunamis.

▶ **Tips** Communities can increase the quality of their plans by describing the sources used to identify the hazards.

A comprehensive plan will include man-made or technological hazards, such as hazardous materials and terrorism.

**TASK** ▶ Develop a risk assessment to provide a profile of all the possible hazards events that affect the community. Communities can utilize available information and resources. Each hazard must be described in terms of:

- Location (general area in which a hazard might occur)
- Extent (severity or hazard area relative to total area)
- Previous Occurrence (historical data and past disaster declarations)

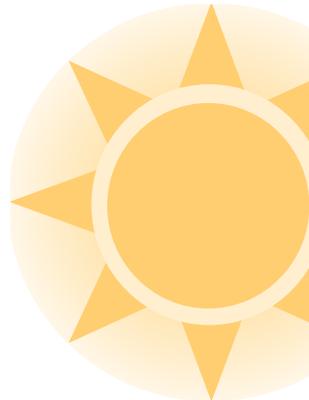
**TASK** ▶ Describe the vulnerability to assets (e.g., existing and future buildings, infrastructure and critical facilities) located in hazard areas, and include an assessment of impacts.

▶ **Tips** Maps can be used to identify the location of assets relative to natural hazard risk areas.

Develop a building inventory, and identify repetitive loss areas, to provide a deeper understanding of vulnerability, resulting in the selection of the most appropriate mitigation options.

Quantify risk assigning potential dollar loss estimates to vulnerable assets.

Maximize the long-term viability of a plan by incorporating planned development, anticipated growth and trends in the vulnerability assessment.





# Mitigation Strategy

Develop a mitigation strategy to provide a blueprint for reducing the potential losses identified in the risk assessment based on authorities, policies, programs and resources, and the ability to expand on and improve existing tools.

**TASK** ▶ Establish mitigation goals, which are general guidelines that explain what the community wants to achieve (e.g., reduce flood damages).

▶ **Tips** Supplement goals with objectives to identify an additional level of detail to support hazard mitigation implementation. For example, an objective would be to relocate flood-prone homes.

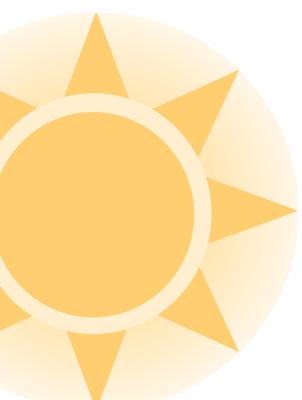
Identify significant community issues that may impact how a mitigation measure would be utilized or implemented.

**TASK** ▶ Based on mitigation goals, identify a comprehensive range of specific mitigation actions and projects for each hazard, which reduce the effects of hazards on both existing and future development and infrastructure.

**TASK** ▶ Determine a methodology for prioritization and implementation. The four required elements of the methodology are:

- Prioritization — determining how the actions will be prioritized
- Benefit/Cost Analysis — determining how benefit and cost analysis will be used for selecting and prioritizing
- Implementation — determining how the actions will be implemented
- Administration — determining who will administer the actions

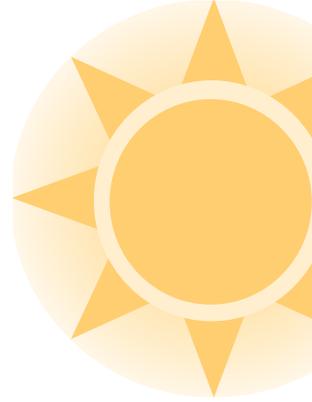
▶ **Tip** Funding assistance for implementation may be leveraged from all levels of government, as well as from contributors such as private sector organizations.





## Plan Maintenance

Describe the method and schedule of monitoring, evaluating and updating the plan within a five-year cycle.



Routine maintenance of the plan ensures:

- Consistency with the most current policies and programs
- Achievement of goals and objectives are illustrated
- Changes to the built environment following a disaster are reflected
- Up-to-date data, analysis, and resources are properly allocated
- Implemented mitigation actions support the adopted strategy
- Opportunity to “fill in the blanks” in the original plan

**TASK** ▶ Establish procedures to monitor and evaluate the plan and its implementation, and to update and amend the plan. The procedures must include an anticipated schedule.

▶ **Tip** An internal review may be conducted after significant events, such as a disaster, when a major goal is accomplished, or a major political change occurs, to ensure the plan remains consistent with current community conditions.

**TASK** ▶ Other mechanisms must be identified where the requirements and process of the mitigation plan may be incorporated (e.g., comprehensive or capital improvement plans.) This approach may reduce the necessary time or finances of plan maintenance.

**TASK** ▶ Describe the intended approach for achieving continued public involvement. Maintaining public involvement will ensure that local stakeholders retain their sense of value and commitment to the plan.

▶ **Tip** Public involvement can be achieved through public notices, ongoing mitigation plan committees, and annual review meetings with stakeholders.





# Adoption



Document that the plan has been formally adopted by the governing body of the community requesting approval of the plan (e.g., City Council, County Commissioner, Tribal Council).

Adopting the plan does not obligate communities to undertake particular actions. Rather, it demonstrates the community's commitment to mitigation.

**TASK** ▶ In a multi-jurisdictional plan, each participating community must adopt the plan to qualify for grants. Each community retains the ability to amend the plan to reflect their unique risks, vulnerabilities, and goals. Communities maintain their independence in grant application, qualification, awarding and implementation.

▶ **Tip** To ensure political commitment for the planning and implementation of mitigation actions, it is essential for stakeholders to be aware of the value and importance of disaster damage reduction.

## FEMA Plan Approval

FEMA reviews the plan to determine if it meets the requirements of the Disaster Mitigation Act of 2000's hazard mitigation plan criteria, as outlined in 44 CFR Part 201, to qualify for hazard mitigation grants.

**TASK** ▶ Plans must be submitted through the appropriate State Hazard Mitigation Officer (SHMO). The SHMO receives the local plans to ensure a state level review and coordination is performed, for among other reasons, to support the transfer of information between the State Hazard Mitigation Plan and the various local hazard mitigation plans. The SHMO will forward the plan to FEMA for review and approval.

▶ **Tip** Consider submitting a final version of your plan to the State for a pre-adoption review by FEMA to ensure the plan meets the minimum requirements prior to completing the adoption process.

**TASK** ▶ An approved plan must be resubmitted to FEMA every 5 years for review and approval to continue mitigation grant eligibility.





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## Contact Information

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**Federal Emergency Management Agency**  
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Phone: 425.487.4600

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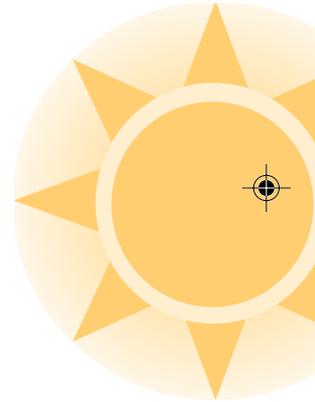
**Idaho Bureau of Disaster Services**  
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Phone: 208.334.3460

**Oregon Emergency Management**  
595 Cottage St. NE  
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**Washington Emergency Management Division**  
Washington Military Department  
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Camp Murray, Washington 98430-5122  
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**Institute for Hazards Mitigation Planning and Research**  
[www.depts.washington.edu/mitigate/](http://www.depts.washington.edu/mitigate/)

This guide was developed through a contract with the University of Washington's Institute for Hazards Mitigation Planning and Research (IHMPR). Andrew Bohlander researched and wrote the guide, under the direction of the Project Manager and Editor, Sharon Loper of FEMA Region 10.



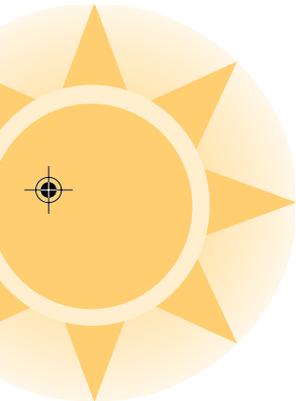


## CD-ROM Resource

The CD-ROM in this jacket contains FEMA's **Mitigation How-to-Series**. This series walks through the process involved in hazard mitigation planning. The series includes, among others:

- Getting Started - Mitigation Planning Overview
- Understanding your Community's Risk
- Developing a Mitigation Plan
- Implementing the Plan
- Integrating Human-caused Hazards into Mitigation Planning

The **Mitigation How-to-Series** is also available at [www.fema.gov](http://www.fema.gov) or through FEMA's Publication Warehouse at 1.800.480.2520.





## Plan Development and Approval Checklist

This checklist identifies the required and optional content of a local hazard mitigation plan, as outlined in 44 CFR Part 201.6. Utilize the checklist to develop a hazard mitigation plan and/or to verify the required content is included in the plan prior to submitting it for review and approval.

| Plan Element                               | Content  | Completed<br>Y/N |
|--|--|------------------|
| <b>Planning Process</b><br>§201.6(c)       | Description of process   |                  |
|  | Contributors   |                  |
|  | Public involvement   |                  |
| <b>Risk Assessment</b><br>§201.6(c)(2)     | Description of hazards   |                  |
|  | ▶ Location   |                  |
|  | ▶ Extent   |                  |
|  | ▶ Previous occurrences   |                  |
|  | Vulnerability to assets  |                  |
|  | Impacts to assets  |                  |
|  | Estimate potential losses (OPTIONAL)                                   |                  |
| Analyze development trends (OPTIONAL)      |  |                  |
| <b>Mitigation Strategy</b><br>§201.6(c)(3) | Identify mitigation goals  |                  |
|  | Identify objectives (OPTIONAL)   |                  |
|  | Propose mitigation actions & projects                                  |                  |
|  | ▶ Actions for existing buildings, infrastructure & critical facilities |                  |
|  | ▶ Actions for future buildings, infrastructure & critical facilities   |                  |
|  | Prioritization process   |                  |
|  | Cost/benefit analysis utilization                                      |                  |
|  | Implementation options   |                  |
| Administration process                     |  |                  |
| <b>Plan Maintenance</b><br>§201.6(c)(4)    | Description of monitoring, evaluating, and updating process            |                  |
|  | Schedule for plan maintenance  |                  |
|  | Continued public involvement   |                  |
|  | Incorporation process with other plans                                 |                  |
| <b>Adoption</b><br>§201.6(c)(5)            | Plan adoption  |                  |
|  | Adoption documentation   |                  |
| <b>Plan Review</b><br>§201.6(d)            | Submit plan to SHMO for review   |                  |
|  | Pre-adoption FEMA Review (OPTIONAL)                                    |                  |
|  | Resubmit plan every 5 years  |                  |