

# Section 5:

## Plan Implementation and Maintenance

### Overview

The plan implementation and maintenance section of this document details the formal process that is designed to ensure that the Lane County Natural Hazards Mitigation Plan (NHMP) remains an active and relevant document. This section provides the foundation for the Lane County Disaster Policy Council and outlines how the Council will prioritize projects for reducing the county's risk to natural hazards.

This section also includes a schedule for maintaining and updating the plan. The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing an updated plan every five years. This section includes an explanation of how Lane County intends to incorporate the mitigation strategies outlined in this Plan into existing planning mechanisms and programs such as the Lane County comprehensive land use planning process, capital improvement planning process, and building codes enforcement and implementation. This section also describes how Lane County will integrate public participation in the plan maintenance and implementation process.

It is critical that Lane County have a "living document" and not a plan that will simply sit on a shelf and gather dust. The plan's format allows Lane County to review and update sections as new data becomes available. New data can be incorporated, resulting in a natural hazards mitigation plan that remains current and relevant to Lane County. The benefits of a current and relevant natural hazard mitigation plan include:

- Keeping the public informed of and involved in the County's natural hazard mitigation efforts;
- Building community partnerships and collaboration between local/state/federal governments, local businesses, and private landowners;
- Identifying a variety of funding sources and opportunities available to the county; and
- Protecting lives, property, and critical resources from natural hazards.

### Plan Implementation

The Lane County Natural Hazards Mitigation Plan was developed and will be implemented through a collaborative process. After the Plan is

adopted via resolution by the Lane County Board of Commissioners, Lane County Emergency Management will be responsible for submitting it to the State Hazard Mitigation Officer at Oregon Emergency Management. Oregon Emergency Management will then submit the Plan to the Federal Emergency Management Agency (FEMA – Region X) for review. This review will address the federal criteria outlined in FEMA Interim Final Rule 44 CFR Part 201. Upon acceptance by FEMA, Lane County will gain eligibility for the Pre-Disaster Mitigation Grant Program, as well as the Hazard Mitigation Grant Program and Flood Mitigation Assistance program funds.

After the Plan is adopted, the plan development Steering Committee will remain intact and become the Lane County Disaster Policy Council. The Disaster Policy Council will be responsible for addressing all disasters faced by Lane County, and will focus its efforts on implementing the Natural Hazards Mitigation Plan through the identified action items.

The Steering Committee identified a range of action items that, if implemented, will assist the County in reaching the Plan's established goals and would reduce loss from hazard events in Lane County. The effectiveness of Lane County's non-regulatory Natural Hazards Mitigation Plan will be contingent upon the implementation of the plan and incorporation of the identified action items into existing Lane County plans, policies, and programs.

## **Co-Conveners**

Lane County Emergency Management and the Lane County Land Management Division will serve as co-conveners to oversee the plan's implementation and maintenance. They will co-chair the Disaster Policy Council and fulfill the chair's responsibilities. These two entities will be responsible for calling meetings to order at scheduled times or when issues arise, (e.g., when funding becomes available or following a major natural hazard event).

Emergency Management roles:

- Coordinate Disaster Policy Council meeting dates, times, locations, agendas, and member notification;
- Document outcomes of Committee meetings;
- Serve as a communication conduit between the Disaster Policy Council and key plan stakeholders; and
- Identify emergency management-related funding sources for natural hazard mitigation projects.

Land Management roles:

- Serve as gatekeeper to the project prioritization process;

- Incorporate, maintain, and update Lane County’s natural hazards risk GIS data elements; and
- Utilize the Lane County Natural Hazards Risk Assessment as a tool for prioritizing proposed natural hazard risk reduction projects.

## **Coordinating Body**

In accordance with Multi-Hazard action item #1, the plan development steering committee will become the Disaster Policy Council and will: oversee implementation, identify and coordinate funding opportunities and sustain the Natural Hazards Mitigation Plan. The Disaster Policy Council will act as the coordinating body and serve as a centralized resource for natural hazard issues and risk reduction in Lane County. Additional roles and responsibilities of the committee include:

- Serving as the local evaluation committee for funding programs such as the Pre-Disaster Mitigation Grant Program, the Hazard Mitigation Grant Program funds, and Flood Mitigation Assistance program funds;
- Prioritizing and recommending funding for natural hazard risk reduction projects;
- Documenting successes and lessons learned;
- Evaluating and updating the Natural Hazards Mitigation Plan in accordance with the prescribed maintenance schedule, (See Table 5.1); and
- Developing and coordinating ad hoc and/or standing subcommittees as needed.

## **Members**

The following organizations were represented and served on the Steering Committee during the development of the Lane County Natural Hazards Mitigation Plan. These groups will continue to be members of the Disaster Policy Council in the implementation and maintenance phases of the natural hazards mitigation plan.

- Lane County Emergency Management
- Lane County Land Management Division
- Oregon Department of Forestry – East Lane and South Cascade Districts
- Lane County Public Works, GIS and Roads Units
- United States Forest Service
- Bureau of Land Management

- Eugene Water and Electric Board
- Springfield Utility Board

Because of the importance that the planning process places on collaboration and the fact that natural hazards mitigation is a shared responsibility among a number of diverse stakeholders, the Disaster Policy Council may look to expand the current membership, as needed. More and more, competitive funding sources are using collaboration as an evaluation criterion for scoring potential projects. Having a more diverse Council will help County projects score higher on competitive grants. Potential future committee members may include:

- Budget/Finance Office;
- Building Code Enforcement Office;
- Colleges/Universities;
- County Assessor's Office;
- Home Builders Association;
- Home Owners Association;
- Insurance representatives;
- Land Developers;
- Local elected officials;
- Professional Engineering/Planning Firms;
- Sanitation & Water District;
- School District or School Board Representative;
- Siuslaw, Long Tom, McKenzie, Coast Fork Willamette and Middle Fork Willamette Watershed Councils;
- Local service organizations (American Red Cross, Salvation Army, United Way); and
- United States Army Corps of Engineers.

## **Implementing through Existing Programs**

The Natural Hazards Mitigation Plan includes a range of action items that, when implemented, will reduce loss from hazard events in Lane County. Lane County's Capital Improvement Program, 1980 Parks and Open Space Plan, Rural Comprehensive Plan, Transportation System Plan, Storm Water Management Plan, and building and construction codes all influence the development and land-use practices within the county. These plans, programs, and codes also help Lane County meet the requirements of Oregon's Statewide Planning Goals and the

requirements of FEMA's Local Hazard Mitigation Planning process. Furthermore, Lane County has a Strategic Plan and a General Plan that assist the County in planning for development and land-use, and providing services to its residents. The effectiveness of the implementation of these two plans influences the effectiveness of the county's plans and policies that influence development and land-use.

Lane County's Natural Hazard Mitigation Plan, though non-regulatory in nature, provides recommended actions that the county can take to reduce its risk of losses from natural hazards such as earthquakes, floods, landslides, wildfire, and winter storms. Many of the Natural Hazards Mitigation Plan's recommendations are consistent with the goals and objectives of the county's existing plans and policies. Where possible, Lane County should implement the Natural Hazards Mitigation Plan's recommended actions through existing plans and policies that already enjoy the support of local residents, businesses, and policy makers. Many land-use, comprehensive, and strategic plans get updated regularly, and can adapt easily to changing conditions and needs.<sup>1</sup> Implementing the natural hazards mitigation plan's action items through such plans and policies increases their likelihood of being supported and getting updated to remain current, and maximizes the county's resources.

Examples of action items from the Natural Hazards Mitigation Plan that could be implemented through Lane County's existing plans and policies include the following:

- **Multi-Hazard Action Item #1:** Create and formalize a Lane County Disaster Policy Council to oversee implementation, identify and coordinate funding opportunities, and sustain the Lane County Natural Hazards Mitigation Plan (including the CWPP) and the Emergency Operations Plan, as a single integrated effort.

This action item could be implemented through Lane County's Strategic Plan.

- **Flood Hazard Action Item #4:** Complete an inventory of locations in Lane County subject to frequent storm water flooding.

This action item could be implemented through Lane County's Storm Water Management Plan.

- **Flood Hazard Action Item #5:** For locations with repetitive flooding and significant damages or road closures, determine and implement mitigation measures such as upsizing culverts, or storm water drainage ditches.

This action item could be implemented through Lane County's Capital Improvement Program.

- **Winter Storm Hazard #8:** Develop a hazardous tree inventory for all County properties.

This action item could be implemented through Lane County’s 1980 Parks and Open Space Plan.

See Appendix B: *Existing Plans Policies, and Programs in Lane County* for documentation of existing plans, policies, and programs that can be used to implement mitigation activities.

## Plan Maintenance

Plan maintenance is a critical component of the natural hazards mitigation plan. Proper maintenance will ensure that this plan benefits Lane County’s efforts to reduce the risks posed by natural hazards. This section was developed by the University of Oregon’s Oregon Natural Hazards Workgroup and presents a process to ensure that a regular review and updating of the plan occurs. The Disaster Policy Council and local staff will be responsible for implementing this process as well as maintaining and updating the plan through a series of meetings outlined in the maintenance schedule below.

**Table 5.1: Plan Maintenance Meeting Schedule**

<b>Semi-Annual Meeting</b>	<b>Annual Meeting</b>	<b>Five-Year Review</b>
Review Current Actions	Update Risk Assessment Data and Findings based upon new data	Review plan update questions
Identify New Issues and Needs	Discussion of Methods of Continued Public Involvement	Update plan sections as necessary
Prioritize Potential Projects	Documenting Successes and Lessons Learned	

### Semi-Annual Meeting

The Disaster Policy Council will meet on a semi-annual basis to:

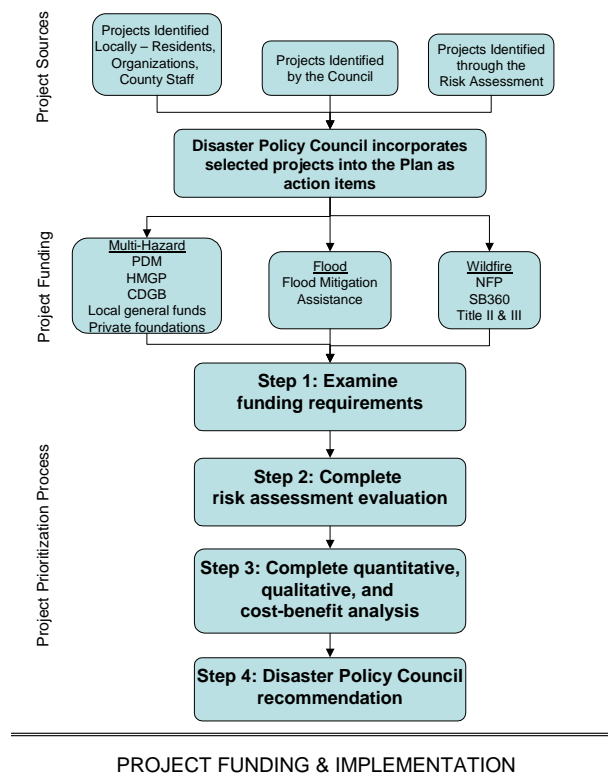
- Review existing action items to determine appropriateness for funding;
- Identify issues that may not have been evident when the plan was developed; and
- Prioritize potential mitigation projects using the methodology described below.

The co-conveners will be responsible for documenting the outcome of the semi-annual meetings. The process the Disaster Policy Council will use to prioritize mitigation projects is detailed in the section below.

## Project Prioritization Process

The requirements of the Disaster Mitigation Act of 2000 state that the plan must identify a process for prioritizing potential actions. Potential mitigation activities often come from a variety of sources; therefore, the project prioritization process needs to be flexible. Examples of the means by which projects may be identified include: Disaster Policy Council members, local government staff, other planning documents, or the Risk Assessment. The Disaster Policy Council will consider all proposed projects and select the ones that align with the Plan’s goals, and incorporate them into the plan as formal action items. Funding can then be considered for projects that have been formally incorporated into the Plan. Depending on the potential project’s intent and implementation methods, several funding sources may be appropriate. Examples of mitigation funding sources include, but are not limited to: FEMA’s Pre-Disaster Mitigation competitive grant program (PDM), the Flood Mitigation Assistance (FMA) program, the National Fire Plan (NFP), Title II funds, Title III funds, Community Development Block Grants (CDBG), local general funds, and private foundations, among others. Some of these examples are used in the figure below to illustrate the project prioritization process, which utilizes a four step method to prioritize activities and ensure that mitigation dollars are used in a cost-effective manner.

Figure 5.1: Project Prioritization Process Overview



Source: Community Service Center's Oregon Natural Hazards Workgroup at the University of Oregon, 2005

## **Step 1: Examine Funding Requirements**

The Disaster Policy Council will examine the selected funding stream's requirements to ensure that the mitigation activity is eligible through the funding source. The Disaster Policy Council may consult with the funding entity, Oregon Emergency Management, or other appropriate state or regional organization about the project's eligibility.

## **Step 2: Complete Risk Assessment Evaluation**

The second step in prioritizing the plan's action items is to examine which hazards would be addressed and where these hazards rank in terms of community risk. The Disaster Policy Council will determine whether or not the plan's Risk Assessment supports the implementation of the mitigation activity. This determination will be based on the location of the potential activity and the proximity to known hazard areas, historic hazard occurrence, and the probability of future occurrence documented in the plan. To rank the hazards, the community's natural hazard risk assessment was utilized. This risk assessment identified various hazards that may threaten community facilities and are categorized as either: low, average, or high.

Ranking of hazards by risk follows:

1. Windstorm – Risk score of 190 out of 240
2. Wildfire – Risk score of 180 out of 240
3. Earthquake – Risk score of 175 out of 240
4. Landslide – Risk score of 171 out of 240
5. Flood – Risk score of 165 out of 240

## **Step 3: Complete Quantitative, Qualitative Assessment, and Economic Analysis**

Depending on the type of project and the funding source, either a quantitative or qualitative assessment of cost effectiveness will be completed to assist in prioritizing potential actions. Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking immediately, in order to avoid future disaster-related damages. Cost-effectiveness analysis evaluates how best to spend a given amount of money to achieve a specific goal. Determining the economic feasibility of mitigating natural hazards provides decision-makers with an understanding of the potential benefits and costs of an activity, as well as a basis upon which to compare alternative projects.

If the activity is seeking federal funding for a structural project, the Disaster Policy Council will use a FEMA-approved cost-benefit analysis tool to evaluate the appropriateness of the activity. See *Appendix A: Economic Analysis of Natural Hazard Mitigation Projects* for a description of the FEMA-approved cost-benefit analysis. A project must

have a benefit cost ratio of greater than 1 in order to be eligible for FEMA funding.

For FEMA-funded non-structural projects, or projects funded through entities other than FEMA, a qualitative assessment will be completed to determine the project's cost effectiveness. The Disaster Policy Council will use a multi-variable assessment technique called STAPLE/E to prioritize the actions. STAPLE/E stands for Social, Technical, Administrative, Political, Legal, Economic, and Environmental. Assessing projects based upon these seven variables can help define a project's qualitative cost effectiveness.

The STAPLE/E technique has been tailored for natural hazard action item prioritization by the University of Oregon's Oregon Natural Hazards Workgroup. See *Appendix A: Economic Analysis of Natural Hazard Mitigation Projects* for a description of the STAPLE/E evaluation methodology.

#### **Step 4: Council Recommendation**

Based on the steps above, the Disaster Policy Council will recommend whether or not the mitigation activity should be moved forward. If the Disaster Policy Council decides to proceed with the action, the coordinating organization designated for the activity will be responsible for taking further action and documenting success upon project completion. The Disaster Policy Council co-conveners will call a meeting to review the issues surrounding grant applications and provide council members the opportunity to share knowledge and resources. This process will afford greater coordination and assist the County in maximizing limited funds.

The Disaster Policy Council and the community's leadership have the option to implement any of the action items at any time (regardless of the prioritized order). This allows the Disaster Policy Council to consider mitigation strategies as new opportunities arise, such as funding for action items that may not be of the highest priority. This methodology used by the Disaster Policy Council to initially prioritize the plan's action items will also be used to maintain the action list during annual review and update.

Dam Safety Action Item #2 is an example of an action item that the County may wish to implement immediately. This action recommends working with the U.S. Army Corps of Engineers to complete seismic vulnerability assessments for dams upstream of heavily populated areas in Lane County and to make seismic improvements as necessary. Dam safety is ranked as one of Lane County's secondary hazards: a hazard that can affect the county but has a lesser probability of occurrence than the primary hazards. However, in light of heightened public awareness following the events of Hurricane Katrina, Lane County has placed a high level of priority on addressing this issue.

## Annual Meeting

The Disaster Policy Council will meet annually to review updates of the Risk Assessment data and findings, discuss methods of continued public involvement, and document successes and lessons learned based on actions that were accomplished during the past year. The co-conveners will be responsible for documenting the outcomes of the annual meeting.

## Five-Year Review of Plan

This plan will be updated every five years in accordance with the update schedule outlined in the Disaster Mitigation Act of 2000. During this plan update, the following questions should be asked to determine what actions are necessary to update the plan. The co-conveners will be responsible for convening the Disaster Policy Council to address the questions outlined below.

- Are the plan goals still applicable?
- Do the plan's priorities align with State priorities?
- Are there new partners that should be brought to the table?
- Are there new local, regional, state, or federal policies influencing natural hazards that should be addressed?
- Has the community successfully implemented any mitigation activities since the plan was last updated?
- Have new issues or problems related to hazards been identified in the community?
- Do existing actions need to be reprioritized for implementation?
- Are the actions still appropriate, given current resources?
- Have there been any changes in development patterns that could influence the effects of hazards?
- Have there been any significant changes in the community's demographics that could influence the effects of hazards?
- Are there new studies or data available that would enhance the risk assessment? (See

Oregon's Statewide Planning Goal 7 – *Response to New Hazard Information*: **STEP 1** New hazard inventory information provided by federal and state agencies shall be reviewed by the Department in consultation with affected state and local government representatives; **STEP 2** After such consultation, the Department shall notify local governments if the new hazard information requires a local response; and **STEP 3** Local governments shall respond to new inventory information on natural hazards within 36 months after being notified by the Department of Land Conservation and Development, unless extended by the Department.

sidebar for additional information)

- Has the community been affected by any disasters? Did the plan accurately address the impacts of this event?

The questions above will help the Disaster Policy Council determine what components of the mitigation plan need updating, and, based on the answers, Council will be responsible for updating any deficiencies found in the plan.

## Continued Public Involvement

Lane County is committed to directly involving the public in the review and updates of the Natural Hazard Mitigation Plan. The Disaster Policy Council, the body responsible for maintaining and implementing the Plan, represents the public to some extent, however, the public will also have the opportunity to provide input and feedback about the Plan.

A copy of the Plan will be made available to the public at the offices of Lane County Emergency Management. In addition, access to the Plan and notices of all updates and changes will be maintained on the Lane County website, which will also provide an e-mail address and phone number that the public can use to submit comments and questions about the Plan.

A public forum will also be incorporated into the Disaster Policy Council's annual review meeting of the Plan. Public notice will be given, informing the public of a community forum that will follow the annual review meeting. The purpose of the public forum will be to invite the public to share concerns, comments, and ideas about the Plan with the Disaster Policy Council

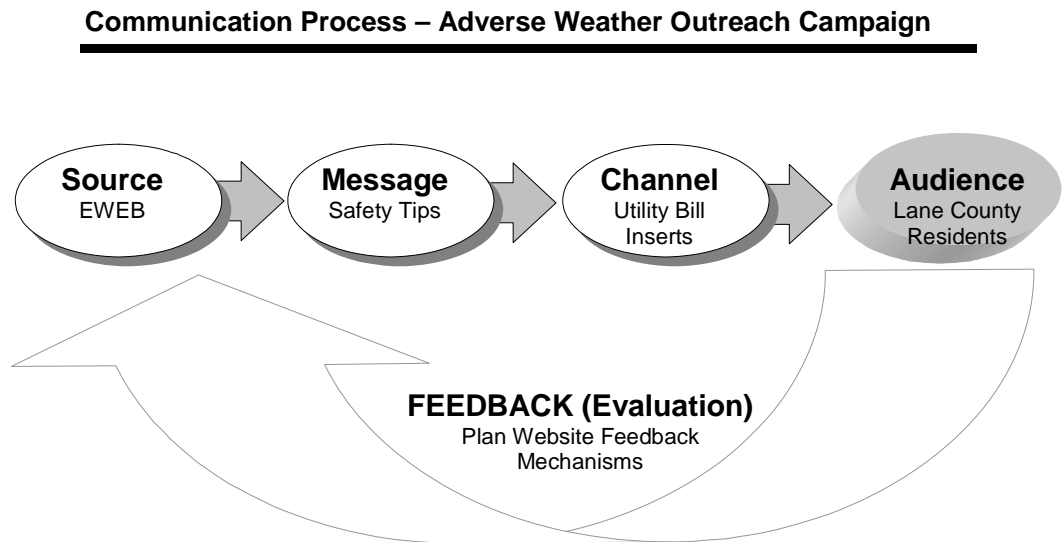
The Disaster Policy Council will also engage in various outreach campaigns in an effort to make the public aware of the risks hazards pose and the efforts the County and its partners are making to reduce overall risk in the County. The Disaster Policy Council will use a commonly accepted communication process to implement these outreach strategies. The communication process is described below, using Winter Storm Action Item #5 as an example.

There are five essential elements for communicating effectively to a target audience. These five features are graphically presented in **Figure 5.2**:

- The **source** of the message must be credible,
- The **message** must be appropriately designed,
- The **channel** for communicating the message must be carefully selected,
- The **audience** must be clearly defined, and

The recommended action must be clearly stated and a **feedback** channel established for questions, comments and suggestions.

**Figure 5.2 Communication Process**



Source: Adapted from the U.S. Environmental Protection Agency Radon Division's outreach program

The winter storm action item calls for the implementation of a public outreach campaign to remind people how to get around under adverse weather conditions. The Lane County Public Works Roads Division has been identified as the coordinating organization for this action. A potential credible *source* might be the Eugene Water and Electrical Board or other utility providers; the message could include safety tips on driving in adverse conditions and key contacts for current weather and driving conditions; and distribution could be in the form of an utility bill inserts (the channel). The target audience of the campaign would be residents and utilizing utility bill inserts allows the County to reach residents, including both homeowners and renters - a large portion of the County's population. The utility inserts could include a link to the County's mitigation plan on-line so that residents can provide feedback.

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<sup>1</sup> Burby, Raymond J., ed. 1998. *Cooperating with Nature: Confronting Natural Hazards with Land-Use Planning for Sustainable Communities*.