

# Section 1: Introduction

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# Introduction

Yamhill County, the tenth most populous county in Oregon, is located in the heart of the Willamette Valley, with the Willamette River as its eastern boundary and the Coast Range on the west. These natural features contribute to the beauty of the County and region, but also make the environment and population vulnerable to natural disaster situations. The county is subject to flooding, earthquakes, landslides, wildfires, severe winter storms, drought and windstorms. It is impossible to predict exactly when these disasters will occur, or the extent to which they will affect the county. With careful planning and collaboration among public agencies, private sector organizations, and citizens within the community, however, it is possible to minimize the losses that can result from natural disasters.

Yamhill County experienced several significant natural disasters during the 1990s. On March 25, 1993, at 5:34 AM, a 5.6 magnitude earthquake occurred near the town of Scotts Mills, which is approximately 32 miles south of Portland, 20 miles northeast of Salem, and 22 miles southeast of Dayton. Although considered moderate, in terms of magnitude/intensity and damage, this was the largest earthquake that Yamhill County felt in recent recorded history and caused major damage to the Dayton Bridge on Highway 18, and at least 90 buildings in Newberg suffered some damage. No serious injuries were reported.

Yamhill County most recently experienced large-scale destruction during the severe weather events in February 1996. The Willamette River and its tributaries swelled beyond the 100-year flood level, causing flooding in both rural and urban areas. Prolonged precipitation accompanied by an early snowmelt caused very unstable soil conditions, resulting in many landslides and debris flows in the county. The damage to Yamhill County businesses, residences, and infrastructure was estimated at about \$4.35 million.<sup>1</sup>

## The Yamhill County Natural Hazards Mitigation Plan

During the summer of 2003, Marion, Polk, Linn, Benton, and Lane Counties obtained an Emergency Management Performance Grant to complete Phase I of the respective counties' Natural Hazards Mitigation Plan. During Phase I, the Mid-Willamette Valley Council of Governments (MWVCOG) and the Oregon Natural Hazards Workshop (ONHW), under contract, identified known hazards, compiled a community profile and other background information, and completed vulnerability assessments for known hazards.

In October 2003, Yamhill County joined with Polk, Marion, Linn, Benton, and Lane counties to submit a competitive planning grant application to FEMA to continue the natural hazards planning process for each of the six counties. In 2004, FEMA awarded grant funds to the Oregon Department of Geologic and Mineral Industries (DOGAMI) to fund completion of the natural hazards mitigation planning process for Lane, Linn, Benton, Marion and Polk Counties, and to commence with and complete the process for Yamhill County.

The county contracted with the Mid-Willamette Valley Council of Governments (MWVCOG) to identify known hazards, compile a community profile and other background information, and complete vulnerability assessments for known hazards. MWVCOG will help Yamhill County develop specific strategies and action items to better assess the impacts of natural hazards to life and property within the County and to minimize or mitigate those impacts.

The natural hazards mitigation planning process for Yamhill County first focuses on data collection and analysis to: (1) provide a profile of existing conditions within the county, including demographics, geography, development trends, and transportation patterns; (2) identify areas of the county that are vulnerable to specific natural hazard events; and (3) describe the history of past natural hazard events that impacted Yamhill County. Once this portion of the planning process is complete, MWVCOG will assist the county in developing specific strategies and action items to better assess the impacts of natural hazards to life and property within the county and to minimize or mitigate those impacts.

## **Why Develop a Mitigation Plan?**

The rising cost of natural disasters has led to a renewed interest in identifying effective ways to reduce vulnerability to disasters. Natural hazard mitigation plans assist communities in reducing risk from natural hazards by identifying resources, information, and strategies for risk reduction, while helping to guide and coordinate mitigation activities throughout the Yamhill County.

The plan provides a set of action items to reduce risk from natural hazards through education and outreach programs, the development of partnerships, and implementation of preventative activities such as land use or watershed programs.

The resources and information within the Mitigation Plan: (1) establish a foundation for coordination and collaboration among agencies and the public in Yamhill County; (2) identify and prioritize future mitigation projects; and (3) assist in meeting the requirements of federal assistance programs. The mitigation plan works in conjunction with other county plans, including the County Comprehensive Land Use and Emergency Operations Plans.

**What is natural hazard mitigation?** *Natural hazard mitigation is the development and implementation of activities designed to reduce or eliminate losses resulting from natural hazards.*

## Whom Does the Mitigation Plan Affect?

The Yamhill County Natural Hazards Mitigation Plan affects unincorporated urban areas, and the rural, unincorporated areas of the county. Map 1 shows cities, urban unincorporated areas, and major roads and rivers in Yamhill County. While this plan does not establish requirements for the cities in the County, it does provide them with a framework for planning for natural hazards. The resources and background information in the plan is applicable countywide, and the goals and recommendations can lay groundwork for local mitigation plans and partnerships.

## Natural Hazard Land Use Policy in Oregon

Planning for natural hazards is an integral element of Oregon's statewide land use planning program, which began in 1973. All Oregon cities and counties have comprehensive plans and implementing ordinances that are required to comply with the statewide planning goals. The continuing challenge faced by local officials and state government is to keep this network of coordinated local plans effective in responding to the changing conditions and needs of Oregon communities.

This is particularly true in the case of planning for natural hazards where communities must balance development pressures with detailed information on the nature and extent of hazards. Oregon's land use program has given its communities and citizens a unique opportunity to ensure that natural hazards are addressed in the development and implementation of local comprehensive plans.

In 1996, FEMA estimated that Oregon saves about \$10 million a year in flood losses because of strong land-use planning. Statewide land use planning Goal 7, Areas Subject to Natural Disasters and Hazards, calls for local plans to include inventories, policies, and ordinances to guide development in hazard areas. Goal 7, along with other land use planning goals, has helped to reduce losses from natural hazards.

## State Support for Natural Hazard Mitigation

All mitigation is local, and the primary responsibility for development and implementation of risk reduction strategies and policies lies with local jurisdictions. Local jurisdictions, however, are not alone. Partners and resources exist at the state and federal levels. Numerous Oregon state agencies have a role in natural hazards and natural hazard mitigation. Some of the key agencies include:<sup>2</sup>

- **Oregon State Police - Office of Emergency Management**

**(OEM)** is responsible for disaster mitigation, preparedness, response, recovery, and the administration of federal funds after a major disaster declaration;

- **Building Codes Division (BCD)** and local counterparts, are responsible for construction and for some hazards that are building-specific in their occurrence (such as earthquakes); also included are provisions for expansive soils, and damage assessment of buildings after an earthquake;
- **Oregon Department of Forestry (ODF)** is responsible for all aspects of wildland fire protection on private, state, and in Western Oregon, Bureau of Land Management (BLM) forestlands, and administers forest practices regulations, including landslide mitigation, on non-federal lands;<sup>3</sup>
- **Oregon Department of Geology and Mineral Industries (DOGAMI)** is responsible for geologic hazard characterization, public education, the development of partnerships aimed at reducing risk, and exceptions (based on science-based refinement of tsunami inundation zone delineation) to state mandated tsunami zone restrictions; and
- **Department of Land Conservation and Development (DLCD)** is responsible for planning-based hazard management including implementation of land use planning and Goal 7 (natural hazards), with attention given to hazard assessments and hazard mitigation.

## Plan Methodology

Information in the Mitigation Plan is based on research from a variety of sources. The research methods and various contributions to the plan include:

### ***Executive Summary: Five-Year Action Plan***

#### ***Input from the steering committee:***

The steering committee, comprised of representatives from county departments, the McMinnville Fire Department, and the Polk County Emergency Manager, met eight times over the course of nine months. The steering committee developed the plan's mission statement and plan goals; contributed to the development of mitigation action items; and continually reviewed the plan.

#### ***Stakeholder interviews:***

Stakeholders consisted of the fire districts within Yamhill County, all of the county's incorporated cities, major employers within the county, school districts, Chemeketa Community College's McMinnville campus, Willamette Education Service District, Yamhill Soil & Water Conservation District, the Yamhill Basin Council Coordinator, Oregon Department of Forestry, U.S. Bureau of Land Management, and public utility companies. Stakeholder interviews identified historic natural hazards events in the county, additional information regarding current natural hazards mitigation activities,

identified mitigation needs or gaps, potential action items, and additional resources.

**Hazard specific research:**

Historical data is presented on seven natural hazards: flood, landslide, severe winter storm, windstorm, wildfire, earthquake, and drought.

**Community Open House:**

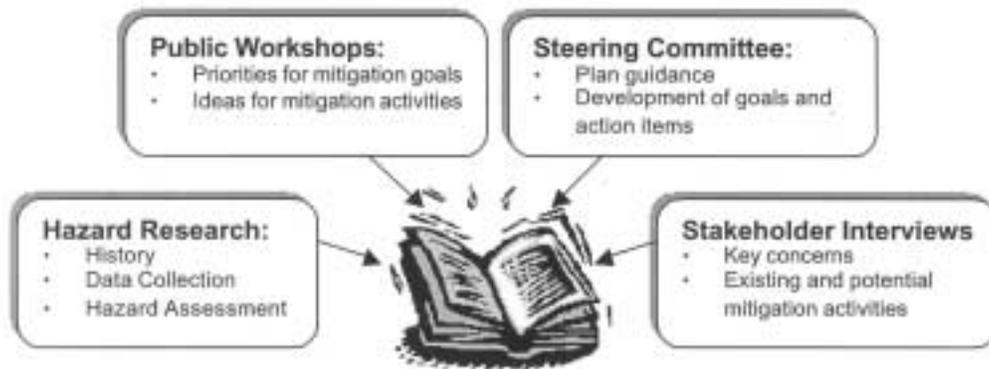
An open house was held on April 20, 2005, to inform the public on Yamhill County Natural Hazards. The purpose of the open house was to gather comments and ideas from the residents of Yamhill County about natural hazards mitigation planning, to inform the public about natural hazards that occur in Yamhill County, and identify community priorities, and potential strategies for achieving these priorities.

Meetings with the project steering committee, stakeholder interviews and the public open house all served as methods to obtain input and priorities in developing goals for reducing risk and preventing loss for natural hazards in Yamhill County.

## How Do I Use the Plan?

The resources and information cited in the mitigation plan provide a strong local perspective and help identify strategies and activities to make Yamhill County more disaster resilient. **Figure 1.1** shows the mitigation planning process components and the key outcomes.

**Figure 1.1. Hazard Mitigation Planning Process**



Each section of the mitigation plan provides information and resources to assist people in understanding the county and the hazard-related issues facing citizens, businesses, and the environment. Combined, the sections of the plan work together to create a document that guides the mission to reduce risk and prevent loss from future natural hazard events.

The structure of the plan enables people to use a section of interest to them. It also allows county government to review and update sections when new data becomes available. The ability to update individual sections of the mitigation plan places less of a financial burden on the county. Decision makers can allocate funding and staff resources to selected pieces in need of review, thereby avoiding a full update, which can be costly and time-consuming. New data can be easily incorporated, resulting in a natural hazards mitigation plan that remains current and relevant to Yamhill County.

#### *Executive Summary: Five-Year Action Plan*

The Executive Summary can be used as a quick-reference document for the Yamhill County Natural Hazards Mitigation Plan. It includes brief discussion of what is in the plan; the plan goals, which entities participated in the plan; and a matrix that lists all of the county's action items and the applicable plan goals.

#### *Section 1: Introduction*

The *Introduction* describes the background and purpose of developing the mitigation plan for Yamhill County.

#### *Section 2: Community Profile*

This section presents the history, geography, demographics, and socioeconomics of Yamhill County. It serves as a tool to provide an historical perspective of natural hazards in the county.

#### *Section 3: Risk Assessment*

This section provides general information on hazard identification, vulnerability and risk associated with natural hazards in Yamhill County.

#### *Section 4: Mitigation Plan Mission, Goals, and Action Items*

This section provides information on the process used to develop goals and action items that cut across the seven natural hazards addressed in the mitigation plan.

#### *Section 5: Plan Implementation, Maintenance and Public Participation*

This section provides information on plan implementation, monitoring and evaluation.

## Volume II: Hazard-Specific Information

This plan addresses six chronic hazards and one catastrophic hazard. Chronic hazards occur with some regularity and may be predicted through historic evidence and scientific methods. The chronic hazards addressed in the plan include:

- *Section 6: Flood*
- *Section 7: Landslide*
- *Section 8: Wildfire*
- *Section 9: Severe Winter Storm*
- *Section 10: Windstorm*
- *Section 11: Drought*

Catastrophic hazards do not occur with the frequency of chronic hazards, but can have devastating impacts on life, property, and the environment. The catastrophic hazard presented in the plan is:

- *Section 12: Earthquake*

Each of the hazard-specific sections includes information on the history, hazard causes and characteristics, hazard assessment, goals and action items, and local, state, and national resources.

## Volume III: Resources

The plan appendices are designed to provide users of the Yamhill County Natural Hazards Mitigation Plan with additional information to assist them in understanding the contents of the mitigation plan, and potential resources to assist them with implementation.

### *Appendix A: Plan Resource Directory*

The resource directory includes county, regional, state, and national resources and programs that may be of technical and/or financial assistance to Yamhill County during plan implementation.

### *Appendix B: Public Participation Process*

This appendix includes specific information on the various public processes used during development of the plan.

### *Appendix C: Benefit-Cost Analysis*

This section describes FEMA's requirements for benefit-cost analysis in natural hazards mitigation, as well as various approaches for conducting economic analysis of proposed mitigation activities.

### *Appendix D: Driveway Construction Checklist/Inspection Form and Enabling Ordinance 514*

This section provides information on how the county requires private driveways to be accessible for fire, life and safety vehicles.

### *Appendix E: List of Acronyms*

This section provides a list of acronyms for county, regional, state, and federal agencies and organizations that may be referred to within the Yamhill County Natural Hazards Mitigation Plan.

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- <sup>1</sup> Mid-Willamette Valley Council of Governments. 1996. *Flood Economic Recovery Coordination Project for Marion, Polk, and Yamhill, Counties, Oregon*. Salem, OR: MWVCOG.
- <sup>2</sup> Agency descriptions (with the exception of the ODF description) are derived from: OR Department of Geology and Mineral Industries, Special Paper 31, *Mitigating Geologic Hazards in Oregon: A Technical Reference Manual*, 1999.
- <sup>3</sup> Oregon State Police, Office of Emergency Management. June 2000. *State Natural Hazards Mitigation Plan*.