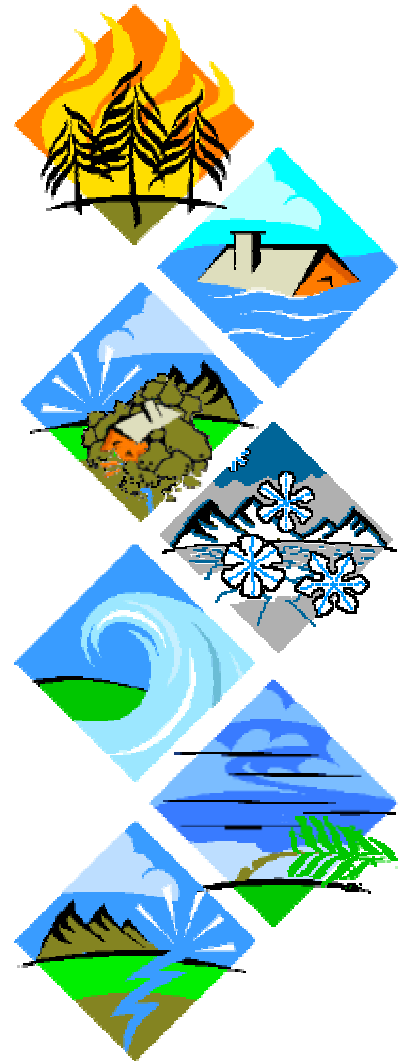


# Douglas County

## Natural Hazard Mitigation Plan



**Produced in 2003 By:**

Douglas County Emergency Management

Douglas County Planning Department

Produced With The Assistance of  
The Oregon Natural Hazards Workgroup

# Douglas County

## Natural Hazards Mitigation Plan

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### BOARD OF COMMISSIONERS

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#### CENTRAL DOUGLAS COUNTY

##### NATURAL HAZARD PLAN STEERING COMMITTEE

<b>Keith Cubic</b>	<b>Douglas County Planning Department</b>
<b>Mark Doty</b>	<b>Douglas Electric Cooperative</b>
<b>Rex Eads</b>	<b>Umpqua Regional Council of Governments</b>
<b>Mike Hansen</b>	<b>Douglas County Fire District #2</b>

##### **Ex Officio Steering Committee Members:**

Scott Doyle	Oregon Natural Hazards Workgroup
Sharon Loper	FEMA Region X
Dennis Sigrist	Oregon Emergency Management

#### COASTAL DOUGLAS COUNTY

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**Prepared By Douglas County Emergency Management and The Douglas County Planning Department**

Wayne Stinson - Douglas County Emergency Management Director  
Keith Cubic - Douglas County Planning Department Director  
Phil Stenbeck – Senior Planner  
Chuck Perino – Planner 2

Plan Created With the Assistance of The Oregon Natural Hazards Workgroup

## Future Partners

The Douglas County Natural Hazard Mitigation Plan was created to include all unincorporated areas of Douglas County. We would like to address the incorporated areas of Douglas County in this plan as “Future Partners” of the Natural Hazard Mitigation Plan.

It is our intention and hope that the Cities and Special Districts of Douglas County can use this document as a template and guide to assist them in the creation of Natural Hazard Mitigation Plans that identify their own natural hazard vulnerabilities, risk assessments and action item mitigation strategies and measures.

Appendix E of this document is a template that Douglas County Cities can use, based on this Natural Hazard Mitigation Plan, to more efficiently create and adopt individual Natural Hazard Mitigation Plans.

As Natural Hazard Mitigation Plans for the Cities and Districts (where necessary) become available, we will include those with this plan as addenda.

## DOUGLAS COUNTY CITIES

<b>City of Canyonville</b>	<b>City of Glendale</b>	<b>City of Reedsport</b>	<b>City of Sutherlin</b>
<b>City of Drain</b>	<b>City of Myrtle Creek</b>	<b>City of Riddle</b>	<b>City of Winston</b>
<b>City of Elkton</b>	<b>City of Oakland</b>	<b>City of Roseburg</b>	<b>City of Yoncalla</b>

## DOUGLAS COUNTY SPECIAL DISTRICTS

Azalea RFPD	Myrtle Creek Rural Fire District	Sutherlin Water Control District
Camas Valley RFPD	North Douglas County Rural Fire & EMS	Tenmile RFPD
Camas Valley School District 21j	North Douglas Park & Recreation District	Tiller RFPD
Days Creek RFPD	North Douglas School District #22	Tri City Water District
Douglas County Fire Dist. #2	Oakland School District	Tri City Sanitation District
Douglas Soil & Water Conservation District	Oakland Rural Fire District	Umpqua Soil & Water Conservation District
Elkton School District #34	Reedsport School District	Union Gap Water District
Fair Oaks RFPD	Riddle School District	Union Gap Sanitation District
Gardiner RFPD	Riddle Municipal & Rural Fire District	Winchester Bay RFPD
Gardiner Sanitary	Roberts Creek Water	Winchester Bay Sanitary
Glendale School District #77	Roseburg School District # 4	Winchester Water Control District
Glendale Rural Fire District	Scottsburg RFPD	Winston-Dillard Rural Fire District #5
Glide RFPD	South Umpqua School District #19	Winston Dillard School District # 116
Glide School District	South Western Oregon Community College	Winston Dillard Water District
Green Sanitary	Sutherlin Recreation District	Yoncalla Park & Recreation District
Lookingglass RFPD	Sutherlin School District #130	



# Douglas County

## Natural Hazards Mitigation Plan

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## **Section 1:**

# **Douglas County Natural Hazard Mitigation Plan Introduction and Planning Process**

## **What Is Hazard Mitigation?**

Hazard mitigation refers to long-term or permanent measures to reduce disaster damages through avoiding hazard risk or reducing the vulnerability. By reducing potential damages, communities increase their safety and economic stability.

For existing development, examples of hazard mitigation activities include retrofitting schools to increase their ability to withstand earthquakes, or elevating homes above the 100-year flood level. For new development, hazard mitigation would include identifying high hazard areas prior to building site selection, thus providing a safer building site location.

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

This mitigation plan seeks to provide resources, information and strategies for risk reduction, while helping to guide and coordinate mitigation activities throughout unincorporated areas of Douglas County. The Natural Hazard Mitigation Plan provides a set of action items to reduce risk from natural hazards through education, outreach activities, and the enhancement of partnerships, which then can decide how to implement measures that would lessen a disaster's impact in Douglas County.

The resources and information within the mitigation plan establish a foundation for the following:

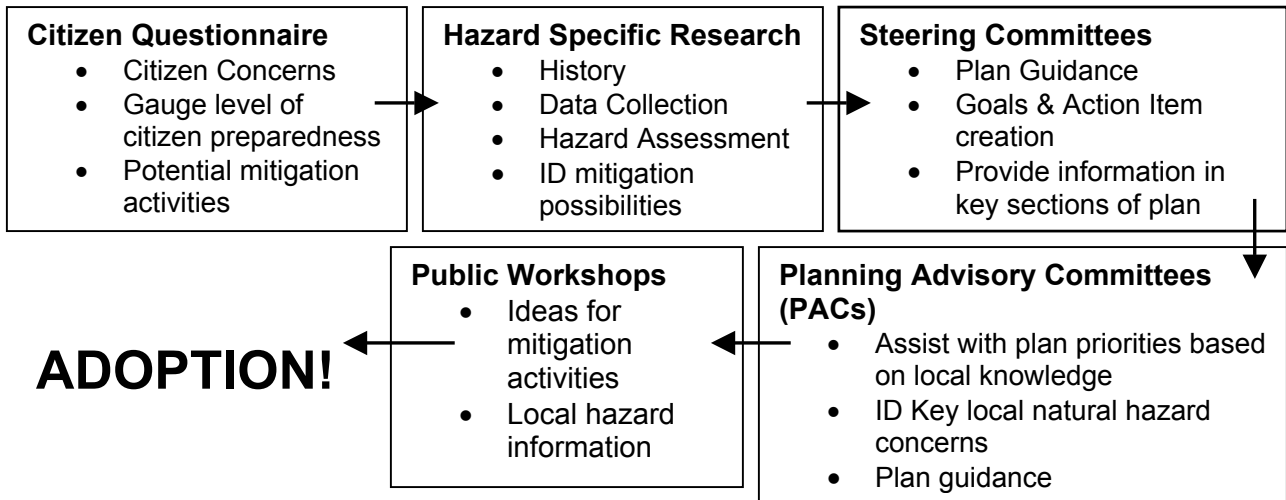
- Coordination and collaboration among agencies and the public in Douglas County
- Identification of specific vulnerabilities and possible future mitigation actions
- Assistance to communities seeking to qualify for federal disaster assistance programs
- Provides new and updated information for reviewing Douglas County Comprehensive Plan and Emergency Operation Plans
- New natural hazard mitigation strategies

## **Who Will Benefit From This Mitigation Plan?**

All unincorporated areas within the County, including all rural unincorporated communities, and special districts have an opportunity to benefit from The Natural Hazard Mitigation Plan.

# Planning Process

Figure 1-1. Douglas County's Natural Hazard Mitigation Plan Process



## Citizen Questionnaire

In January 2003, Douglas County with the assistance of the Oregon Natural Hazards Workgroup sent out a natural hazard survey letter to Douglas County residences. The survey letter provided citizens with an opportunity to share opinions about preparing for and reducing their risk to natural disasters. The information gathered in these surveys will show citizen concerns and issues.

1500 survey letters were sent to Douglas County Residents at random, of these 228 were returned (15%). A fair number of returned surveys expressed interest in future public workshops and being involved in hazard mitigation planning education outreach.

## Hazard Specific Research

The Douglas County Planning Department has collected data, compiled previously, on natural hazards specific to Douglas County. The hazards include: flood, landslide, severe winter storm, windstorm, wildfire, earthquake, and tsunami. Research included materials from previously published information from the Douglas County Planning Department, Douglas County Emergency Management, and various State and Federal agencies. Current mitigation activities, resources, programs and specific short and long-term action items are also listed in each section.

## Natural Hazard Mitigation Plan Steering Committees

Two Natural hazard mitigation plan steering committees were formed to help guide the development of the mitigation plan. The reasoning behind the two-committee approach is the differences in geography, natural hazard type, occurrence and magnitude of natural hazards between Coastal Douglas County and Central Douglas County.

Examples of the differences are: higher seismic zone rating for the Coastal area, and tsunami danger at the Coast. The two committees will hold a total of seven members.

Both Steering Committees role is in developing the mission, goals and action items for the mitigation plan.

### Central County Steering

**Committee:** Comprised of six members representing various agencies and organizations in Central Douglas County, including

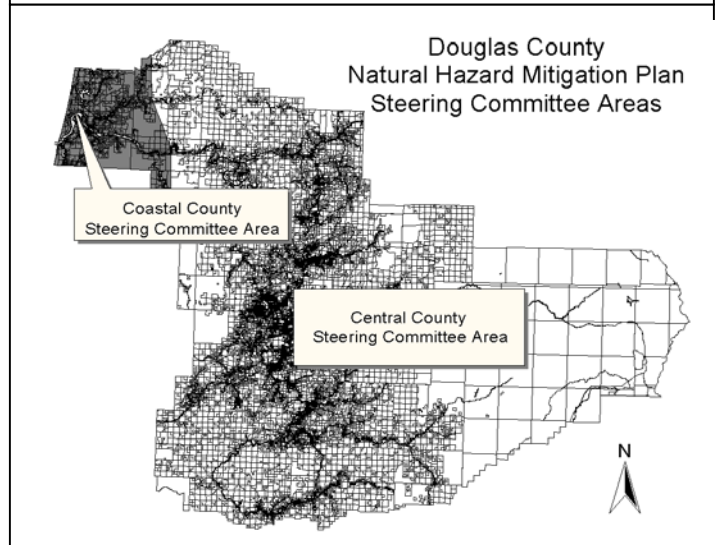
- Douglas County Emergency Management
- Umpqua Regional Council of Governments (coordinating with small incorporated communities in Douglas County)
- Oregon Emergency Management Representative
- Douglas County Fire District #2
- Douglas Electric Coop (representing infrastructure and the private sector)
- Douglas County Planning Department
- Oregon Natural Hazards Workgroup

**Coastal County Steering Committee:** The Coastal Steering Committee was formed to address coast-specific natural hazards such as tsunami and increased earthquake danger. The Coastal Steering committee was formed by using the pre-existing Coastal Planning Advisory Committee. The committee members represent a cross section of residents from Coastal Douglas County, with varying backgrounds.

## Planning Advisory Committees

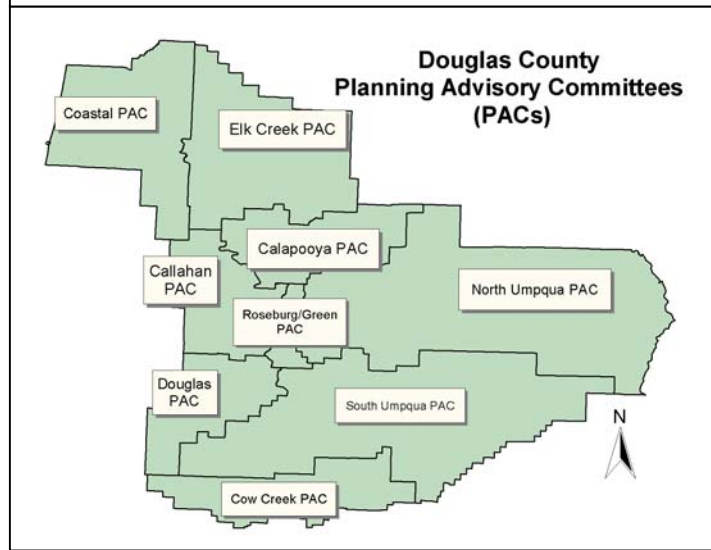
Oregon Statewide Planning Goal 1 requires that all cities and counties develop a program, which “Insures the opportunity for citizens to be involved in all phases of the planning process”. Douglas County’s Citizen Involvement Program is the mechanism in which citizens in Douglas County can participate in Douglas County’s land use process.

**Figure 1-2 Douglas County Natural Hazard Steering Committee Areas**



The Douglas County Citizen Involvement Program is organized into nine Planning Advisory Committee (PAC) areas. (Figure 1-3) The County Commissioners appoint 5 to 9 residents from each PAC area to serve as an advisory committee to the Planning Department. PAC Members generously give of their own personal time to review and make recommendations on land use applications. The hands-on, local knowledge obtained from PAC members and citizens who participate in the PAC Meetings is important in the development of the Natural Hazard Mitigation Plan.

**Figure 1-3 Douglas County PACs**



It is the goal of the Planning Department to have at least one PAC meeting in each area, in addition to the Steering Committee and Public Meetings. Throughout 2003, as the Natural Hazard Mitigation Plan is developed, The Plan will be an item on each Planning Advisory Committee's agenda at their meetings. Staff will seek input on the Natural Hazard Mitigation Plan and update the PAC on the progress of the plan. We anticipate at least one meeting for each PAC. These meetings are by public notice and the general public is invited to attend.

## **Public Workshops**

In addition to the PAC meetings and Steering Committee meetings, three public workshops will be facilitated in 2003 to inform the public on Douglas County Natural Hazards. The public meetings will gather comments and ideas from the citizens of Douglas County about natural hazard mitigation planning. Two workshops will be held in Central Douglas County, and one in Coastal Douglas County.

## **Plan Maintenance**

Maintenance of this document will ensure that the Douglas County Natural Hazard Mitigation Plan remains an active and relevant document. The maintenance process will evaluate the Plan and produce a plan revision every five years. The county will integrate public participation throughout the plan maintenance process through the Planning Advisory Committees. The Douglas County Planning Department may choose to incorporate some of the mitigation strategies outlined in this Plan into other documents such as Douglas County's Comprehensive Plan.

## Plan Adoption

The Douglas County Board of Commissioners are the decision-making authority for adopting, by resolution, the Douglas County Natural Hazard Mitigation Plan. The Board of Commissioner's have the authority to promote sound public policy regarding natural hazards. Once the plan has been adopted by resolution, the County Emergency Manager, and the Planning Director 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) for review. The Plan is required to be reviewed by FEMA and approved, prior to adoption of a resolution by the Board of Commissioners. Upon approval by FEMA, Douglas County will gain eligibility for Hazard Mitigation Grant Program funds.

## Monitoring and Implementing the Plan

### Natural Hazard Mitigation Plan Action Items

The mitigation plan identifies action items developed through data collection and research, and the public participation process. Mitigation plan activities may be considered for funding through federal and state grant programs, and when other funds are made available through the county. Action items address hazard specific issues and multi-hazard action items that could mitigate for several hazards. To help ensure activity implementation, each action item includes information on the timeline and coordinating organizations. Upon implementation, the coordinating organizations may look to partner organizations for resources and technical assistance.

- **Coordinating Organization.** The coordinating organization is the organization that is willing and able to organize resources, find appropriate funding, or oversee activity implementation, monitoring, and evaluation. Coordinating organizations may include local, county, or regional agencies that are capable of or responsible for implementing activities and programs.
- **Timeline.** Each action item includes an estimate of the timeline for implementation.
- **Ideas for Implementation.** Each action item includes ideas for implementation and potential resources, which may include grant programs or human resources.
- **Plan Goals Addressed.** The plan goals addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins.

## **Action Item Prioritization**

The Natural Hazard Mitigation Plan Steering Committees have prioritized the Action Items for each identified natural hazard in the plan. The prioritization of Action Items has ranked the action items with the greatest opportunity of providing mitigation success and achieving plan goals.

Although this prioritization provides a guide for Douglas County natural hazard mitigation implementation, Douglas County has the option to implement **any** of the action items at any time. This option to consider all action items for implementation allows Douglas County to consider mitigation strategies as new situations arise, such as capitalizing on funding sources that could pertain to an action item that is not the highest priority.

## **Plan Adoption**

The Douglas County Board of Commissioners has the authority to adopt this plan by resolution. The Board of Commissioner's have the authority to promote sound public policy regarding natural hazards. Once the plan has reached final draft, the County Emergency Manager, and the Planning Director will be responsible to submit 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) for review. The Plan is required to be reviewed by FEMA and approved, prior to adoption of a resolution by the Board of Commissioners. Upon approval by FEMA, Douglas County will gain eligibility for Hazard Mitigation Grant Program funds.

## **Implementation**

Douglas County addresses statewide planning goals and legislative requirements through its Comprehensive Plan. The Natural Hazard Mitigation Plan provides a series of recommendations – many of which are closely related to the goals and objectives of existing planning programs. The Douglas County Planning Department will have the opportunity to implement recommended mitigation action items through existing planning program.

The Douglas County Natural Hazard Mitigation Plan can also be co-adopted by cities and Special Districts. Cities and Special Districts can adopt the Douglas County Plan and customize it to meet their own vulnerabilities and hazard mitigation needs. The goals and action items developed in the Plan will help local governments, Special Districts as well as Douglas County to address natural hazards. After completing and adopting their plans using the Douglas County Plan as a guide, their Natural Hazard Mitigation Plans would be adopted as addenda to the Douglas County Natural Hazard Mitigation Plan.

This Document and Statewide Planning Goal 7 will assist communities in protecting life and property from natural disasters and hazards through planning strategies that restrict development in areas of known hazards. Goal

7 requires local governments to mitigate development in known areas of natural disasters and hazards.

## **Economic Analysis of Mitigation Projects**

The Federal Emergency Management Agency's accepted methods for determining the costs and benefits associated with natural hazard mitigation strategies, measures, or projects fall into two general categories: benefit/cost analysis and cost-effectiveness analysis. Conducting benefit/cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now, in order to avoid disaster-related damages later. 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 can provide 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.

Given federal funding, Douglas County will use a FEMA-approved benefit/cost analysis approach to identify and prioritize mitigation action items. For other projects and funding sources, Douglas County may use other approaches to understand the costs and benefits of each action item and develop a prioritized list.

Based on funding and extent of mitigation, the higher priority mitigation activities would be selected from this prioritization list. Based upon funding opportunities, Douglas County has the option to implement action items as funding becomes available, in order to assure mitigation funding is best spent, and the greatest mitigation happens, using cost/benefit analysis as a primary decision-making tool will aid the County in selecting the best possible mitigation strategy.

## **Plan Evaluation**

The Douglas County Natural Hazards Mitigation Plan will be evaluated on an annual basis to determine opportunities for making the Plan more effective and also to reflect changes that may affect mitigation priorities. Planning Department will be responsible for contacting the Hazard Mitigation Steering Committee, or Planning Advisory Committee members and organizing a meeting.

Committee members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan. The committees will review the goals and action items to determine their relevance to changing situations in the county, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The committees will also review the risk assessment portion of the Plan to determine if this information should be updated or modified, given any new available data. The organizations responsible for the various action items will have the opportunity to report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination

efforts, and which strategies should be revised.

The Planning Department will update the plan every five years. The Planning Department will also notify all holders of the Natural Hazard Mitigation Plan when changes have been made. Every five years the updated plan will be submitted to the State Hazard Mitigation Officer and the Federal Emergency Management Agency for review.

### **Continued Public Involvement**

Douglas County is dedicated to involving the public directly in review and updates of the Natural Hazard Mitigation Plan. The Natural Hazard Mitigation Plan Steering Committee, and Planning Advisory Committee members are responsible for participating in the annual review of the plan.

A public meeting will be held for each annual evaluation when deemed necessary by the Douglas County Planning Department. The meetings will provide a public forum for expressing concerns, opinions, or ideas about the Plan. The Planning Department will be responsible for publicizing public meetings and maintaining public involvement.

## **Section 2:**

# **Douglas County Community Profile**

## **Why Plan for Natural Hazards in Douglas County?**

Natural hazards impact citizens, property, the environment, and the economy of Douglas County. Historically, natural hazards such as flooding have exposed Douglas County residents and businesses to the financial and emotional challenges of recovering after natural disasters. The risk associated with natural hazards increases as more people move to areas affected by natural hazards. The inevitability of natural hazards, combined with a growing population creates a need to develop strategies, coordinate resources, and increase public awareness about natural hazards. Identifying risks posed by natural hazards, and developing strategies to reduce the impact of a hazard event, protect life and property. Douglas County residents and businesses can work together with local, state and federal agencies to create an effective natural hazard mitigation plan.

## **Geography and the Environment**

Douglas County is located in Southwest Oregon and covers an area of 5,071 square miles. The County extends from sea level to 9,182-foot Mount Thielsen in the Cascade Range. The entire Umpqua Watershed is within Douglas County, which contains nearly 2.8 million acres of forest lands.

Over 50% of the land area in Douglas County is owned by the federal government. The US Forest Service and the Bureau of Land Management manage these lands.

There are 12 incorporated cities within Douglas County: Canyonville, Drain, Elkton, Glendale, Myrtle Creek, Oakland, Reedsport, Riddle, Roseburg, Sutherlin, Winston, and Yoncalla.

Douglas County is comprised of four geologic provinces, three of which converge near the center of the County.

The Klamath Mountains Province occupies south central Douglas County. It is the oldest geological province in the County, which was created through volcanic activity, and sedimentary formations of sandstone, siltstone and mudstone. Mountains in the Klamath Province are rugged and rise to an elevation of nearly 4,100 feet. The mountains are steep with a valley floor of about 400 feet.

The Coast Range Province contains rugged mountains rising to an elevation of 3,000 feet. The valleys in this Province are fertile, with an elevation of about 300 feet above sea level. Sea level is the lowest point in this province, which encompasses the northwestern portion of Douglas County, to the Pacific Ocean. Rocks of the Coast Range province are typically igneous and sandstone.

The Western Cascade Province is the third oldest in the county. Here igneous rocks were made from material squeezed and flung in volcanic activity. Narrow “V” shaped valleys are a common natural feature in this region. Elevations in the Western Cascade region top 6,000 feet.

The high Cascade Province is the youngest in the county. This region was formed by volcanic activity. Rocks are much less weathered in this province. Mount Thielsen (9,182 feet) is the most obvious formation in this province.

### **Rivers**

Within the boundary of Douglas County lies the entire Umpqua River drainage basin. The basin covers an area of approximately 4,560 square miles. This is unique for a county boundary to entirely encompass a major river watershed.

The Umpqua Basin has ten major streams. All ten flow into the main Umpqua River, which meanders westward and joins the Pacific Ocean near Reedsport. From the confluence of the North and South Umpqua Rivers near Roseburg, the Umpqua

River flows 111 miles. The North Umpqua, from its headwaters at Maidu Lake, flows 106 miles, while the South Umpqua River flows roughly 104 miles from the headwaters of Castle Rock Creek. The other major tributaries include Cow Creek, Elk Creek, Calapooya Creek, Little River, Lookingglass Creek, Deer Creek and Smith River.

Stream gradients in the basin vary greatly. The North Umpqua River has an average gradient of 86 feet per mile. The South Umpqua to Cow Creek has a relatively flat average gradient of 6 feet per mile, increasing to an average gradient of 42.5 feet per mile near Castle Rock Creek. On the Mainstem Umpqua, there is a gentle average gradient of 4-4 1/2 feet per mile from the confluence of the North and South Umpqua Rivers to tidewater at Scottsburg.

## **Climate**

In the Umpqua Valley, moisture-laden breezes from the Pacific Ocean set the pace for seasonal temperatures and rainfall. These breezes blow over the Coast Range, through the inland valleys, and up to the Cascade Mountains, creating three distinct climatic areas. The coastal areas have the most moderate seasons. The inland valleys experience the hottest summer sun, while the Cascades witness the most extreme winter temperatures. In all three areas, however, the prevailing westerly winds cool the heat of summer and warm the chill of winter.

The ocean winds lose some of their velocity, and much of their moisture as they climb the Coast Range and enter the inland valleys. Coastal Douglas County receives the most rainfall, reporting 80 inches per year at Reedsport, and over 100 inches per year in the Coast Range. In summer the average countywide temperature ranges between 52 and 70 degrees Fahrenheit. In winter the average temperature does not drop below 37 degrees Fahrenheit. This temperature climate is due, in part, to the ocean winds that flow onshore.

The protected inland valleys have some of the lowest wind velocities in the United States. Here rainfall averages 35 inches annually. This moderate climate is marked with comfortable winters and temperate summers. Days without frost generally occur between April and October. The first hard frost usually does not arrive until December.

As ocean winds climb up the western face of the High Cascade Range they bring relatively warm days, except in winter when they bring cool and wet weather. Winter temperatures are the most extreme at high elevations. Rainfall increases to 70 inches annually. Snow is common at elevations above 2,500 feet.

## **Minerals and Soils**

The soils present in Douglas County are the acidic and leached products of weathering in a moist temperate climate under coniferous cover. Upland soils in Douglas County are characterized by variable thickness, moderate to rapid runoff, and moderate to extreme erosion hazard. Terrace soils have slow to moderate runoff and slight to high erosion potential depending on the steepness of slope. Lowland soils in the Umpqua

Valley are the products of ongoing deposition. These deep alluvial soils are rich in minerals and are great for agriculture.

Potential soil related hazards include; landslides when steep slope, shallow soils are inundated and liquefaction, an earthquake related hazard where sandy silt soils turn from a solid state to a liquid state as a result of stress and pressure.

Minerals in the Umpqua Valley are abundant and provide ample sources of ore and building materials. The abundance of minerals is due primarily to the close proximity and convergence of the four geologic provinces within Douglas County (refer to geography and environment section).

Understanding the geologic characteristics of Douglas County is an important step in hazard mitigation and avoiding at-risk development sites.

### Other Significant Geologic Features

Douglas County, like most of the Pacific Northwest, lies over the Cascadia Subduction Zone where the North American crustal plate overrides the Juan de Fuca plate underneath the earth’s crust. The fault along these two plates creates a structural sag at the Willamette River Valley. Volcanoes are present along this structural sag, and the activity on these mountains is caused by the buoyant melted rock of the Juan de Fuca plate, as it rises to the surface.

## Population and Demographics

Historically, people have lived in the Umpqua Valley as natural resources and jobs were available. They lived near their place of employment, thus creating many small communities. Now, recreational opportunities, industrial diversification, regional services and other amenities are adding reasons for residing in Douglas County.

Douglas County has a population of 100,399 in an area of 5,071 square miles. The population of Douglas County has steadily increased in the years from 1850 through 2000, and increased 6.1% from 1990 to 2000 according to the 2000 Census. Population growth is projected to continue (as shown in Figure 2-1), according to Douglas County Planning Department Projections.

**Figure 2-1. Projected Douglas County Population**

Douglas County Population Projections	<b>2005</b>	<b>2010</b>	<b>2015</b>	<b>2020</b>
	117,574	125,670	135,014	145,348

Source: Douglas County Comprehensive Plan: Population Element

Over 60% of Douglas County’s population resides in Central Douglas County from Oakland south to Winston. The largest cities in the county are Roseburg and Sutherlin, with 2000 populations of 20,017 and 6,669, respectively. Green is the largest unincorporated area in the County, with a population of 6,174. The largest city in the Coastal Region of Douglas County is Reedsport with a population of 4,378.

### Table 2-1. Douglas County Cities

<b>City</b>	<b>2000 Population</b>	<b>1990 Population</b>	<b>% Change</b>
Canyonville	1,293	1,219	6.07%
Drain	1,021	1,011	0.9%
Elkton	147	172	-14.5%
Glendale	855	707	20.9%
Myrtle Creek	3,419	3,063	11.6%
Oakland	954	844	13.0%
Reedsport	4,378	4,796	-8.7%
Riddle	1,014	1,143	-11.3%
Roseburg	20,017	17,032	17.5%
Sutherlin	6,669	5,020	32.8%
Winston	4,613	3,773	22.3%
Yoncalla	1,052	919	14.5%

Source: US Census Bureau

The twelve incorporated communities within the county comprised about 45% of the county population, leaving the 55% of the population in unincorporated areas. Table 2-1 shows the percent change in Douglas County's twelve incorporated communities from 1990 to 2000. Population in incorporated areas has increased 14.4% in this time span.

**Table 2-2. Douglas County Population, Incorporated and Unincorporated**

<b>Year</b>	<b>Incorporated</b>	<b>Unincorporated</b>
<b>1990</b>	39,699	54,950
<b>2000</b>	45,432	54,967

Source: 2000 Census

**Table 2-3. Douglas County Unincorporated Areas Population**

<b>Area</b>	<b>2000 Population</b>
Dillard	526
Gardiner	271
Glide CDP	1,690
Green CDP	6,174
Roseburg North CDP	5,473
Tri City CDP	3,519
Shady	189
Winchester Bay CDP	488

Source: 2000 Census

The increase of people living in Douglas County creates changes in how agencies prepare for and respond to natural hazards. For example, more people living on the rural resource interface can increase risk of fire. Wildfire has an increased chance of starting due to human activities in the rural resource interface, and has the potential to injure more people and cause more property damage.

Furthermore, increased density can affect risk. For example, narrower streets are more difficult for emergency service vehicles to navigate, in addition, the higher ratio of residents to emergency responders affects response times. Homes located closer together increase the chances of fires spreading house to house.

**Table 2-4. Douglas County Population By Race, 2000 Census**

<b>TOTAL POPULATION:</b>	<b>100,399</b>	
One Race:	94,687	97.3%
White:	94,234	93.9%
Black or African American:	177	0.2%
American Indian & Alaskan Native:	1,530	1.5%
Asian:	628	0.6%
Hispanic or Latino:	3,283	3.3%
Native Hawaiian or Pacific Islander:	93	0.1%
Other Race:	1,025	1.0%
Two or more races:	2,712	2.7%

Source: 2000 Census

Poverty is a serious concern in Douglas County. Vulnerable populations, including seniors, disabled citizens, women, and children, as well as those people living in poverty, may be disproportionately impacted by natural hazards.

According to the Poverty Status in 1999 information from the Census Bureau, Douglas County has 2,731 families below the poverty level, with 1,210 families having a female head of house. 12,999 individuals are living below the poverty level in Douglas County.

## **Land and Development**

Douglas County has an acknowledged Comprehensive Plan and Land Use and Development Ordinance, which is in compliance with Oregon's land use laws. Douglas County's Land Use Program provides opportunities for citizens to achieve their land use and property ownership objectives in accordance with law.

### **Highlights of Oregon's and Douglas County's Planning History**

- 1955 - Douglas County Subdivision Ordinance adopted
- 1960 - Douglas County Zoning Ordinance Adopted
- 1969 - Senate Bill 10 adopted requiring comprehensive planning and zoning regulations by local governments
- 1971 - Douglas County Floodplain management program started
- 1972 – Major revisions to scope of Subdivision Regulations
- 1973 – All of Douglas County zoned
- 1974 – Statewide Planning Goals adopted; State Uniform Building Code adopted
- 1980 - Douglas County Comprehensive Plan and Land Use & Development Ordinance adopted
- 1982 - Douglas County Plan and Ordinance acknowledged by Oregon LCDC
- 1983 – Douglas County Coastal Resources plan created
- 1984 - Douglas County Coastal Resources plan acknowledged
- 1987 – Periodic Review of Comprehensive Plan and Ordinance begun by Douglas County
- 2000 - Douglas County completes Periodic Review process

The Douglas County Comprehensive Plan provides policies and guidelines for land

use and development opportunities for land in Douglas County. The Plan is the County’s tool for complying with Oregon Statewide Planning Goals. The Land Use and Development Ordinance (LUDO) provides the local regulatory mechanism to carry out the Comprehensive Plan and Oregon Statewide Planning Goals.

The twelve cities in Douglas County each have their own Comprehensive Plan. All cities in the County also have an Urban Growth Boundary, required by law, which is intended to identify lands that are needed to satisfy the demands of population and employment growth for a 20-year period. The County and cities jointly manage the Urban Growth Areas.

## Housing and Community Development

The attractive nature of Douglas County with its rural settings and smaller cities, along with relatively low interest rates from late 1996 to the present, has contributed a great deal to a strong real estate market. The number of dwellings built between 1990 and 2000 was 4,986, an 11.5% increase in new housing from the 1990 Census.

**Table 2-5. Douglas County Housing Type Data 1990 and 2000 Census**

<b>2000 Census: 43,284 Housing Units</b>			<b>1990 Census: 38,298 Housing Units</b>		
Single Family Dwellings	27,166	62.8%	Single Family Dwellings	24,899	65.0%
Duplex	2,089	4.8%	Duplex		
Multi Family Dwellings	3,809	8.8%	Multi Family Dwellings		5.9%
Mobile Homes	9,364	21.6%	Mobile Homes	9,054	22.7%
Recreational Vehicles	676	1.6%	Recreational Vehicles		1.6%

Source: US Census Bureau Housing Characteristics 2000 Census; 1990 Census

Home ownership in Douglas County is listed at 71.7%, higher on average than the State, with a 64% home ownership. Renter occupied homes make up 28.3% of the housing in Douglas County. The average value for homes in rural and urban Douglas County are comparable, estimated at \$104,800.

## Employment and Industry

### Douglas County Employment and Industries

- Lumber and Wood Products
- Service Industry
- Retail Trade and Services
- Tourism
- Health Care
- Local, State, Regional and Federal Agencies
- Agriculture

The lumber and wood products industry still provides many jobs and businesses in Douglas County. Retail trade and services are centered in Roseburg. Roseburg’s trade area encompasses a buying population of about 60,000 people. The retail

trade sector employs a great number of workers, and fosters the greatest number of businesses in Douglas County. The services industry provides many jobs in support of existing businesses and tourism, and is a source for a number of businesses in the county. Local, State and Federal Government agencies support a large number of jobs in Douglas County, and Health Care is also a very large contributor to the Douglas County Economy.

Douglas County is a prime location for tourism. Approximately 100 miles of Interstate-5 pass through the county, nearly 1/3 of I-5's total mileage in the State. Destination points such as the Oregon Dunes National Recreation Area, Salmon Harbor, Wildlife Safari, Seven Feathers Casino and Crater Lake National Park are large attractions for tourists. The tourism industry and the related service industry are on the rise in Douglas County.

Agriculture is also an important factor in the economy with field crops, orchards, wine making and livestock as major products.

## **Transportation and Commuting Patterns**

### **Public Highways and Roads**

Douglas County has a vast network of public highways and roads maintained by federal, state, and local governments.

The heaviest traveled routes are the Interstate-5 corridor and state highways. Interstate-5, part of the nationwide interstate freeway system runs north and south through Douglas County's interior. Traffic on I-5 exceeds 13,000 vehicles daily. Cars and other light vehicles comprise 74% of the traffic, heavy truck traffic makes up 26% of the total traffic volume.

Entirely within Douglas County, State Highways 38 and 138 run from the coast to Douglas County's eastern border in the Cascades. Other State Highways parallel the Interstate, or the east-west route. U.S. Highway 101 goes north and south through Gardiner, Reedsport and Winchester Bay at the Pacific Coast. State Highway 42 connects Interstate 5 with the city of Coos Bay to the west, and goes east and west through Winston, Tenmile and Camas Valley.

Intersecting the Interstate and State Highways are paved County roads. County roads access areas throughout Douglas County, and provide access to rural communities.

Over the past 30 years, the use of the automobile as a means of transportation in Douglas County has increased steadily. The number of annual miles traveled per capita over this period has increased from approximately 2,900 in 1950 to 6,900 in 1982 and to 9,500 in 1990. In 1994, 89% of the workers in the county traveled to work by private automobile. 76% of workers drive to work alone, while 13% carpool. Mean travel time to work is 19.6 minutes.

## Bus Service

Public bus lines serve the major cities in Douglas County. Umpqua Transit operates daily bus service from Roseburg south to Winston, and north to Oakland.

Greyhound bus service operates north and southbound directions from Roseburg, and also north and southbound directions in Reedsport and Gardiner on the Coast.

## Air Transportation

There are three existing public use airports in Douglas County including Roseburg Regional, Myrtle Creek Airport, and the US Forest Service Toketee Airfield. There are also numerous public airstrips located throughout the County, which provide service to agricultural, industrial and residential users.

## Rail Transportation

The Central Oregon Pacific Railroad provides rail service to Douglas County. Central Oregon Pacific operates two branch lines that run through the County, one line on the Coast and another through the central valley.

The shipment of goods to and from the County by rail totals 1,214,000 tons. The total originating and terminating tonnage in Douglas County is 3.6 percent of the state total.

There is no passenger rail service available in Douglas County.

## Water Transport

The lower 27 miles of the Umpqua River is a commercially navigable waterway. The Port of Umpqua ships the third largest tonnage of all Oregon Coast ports. Port facilities include Salmon Harbor at Winchester Bay and docking facilities at Reedsport, Gardiner and Bolon Island. Portions of three rivers in Douglas County are navigable for freight transportation including the Umpqua River, Smith River and Schofield Creek. Channel depth in the Umpqua and Smith Rivers are maintained by the US Army Corps of Engineers.

## Community Profile Resources

Douglas County Transportation System Plan – December 2001

A Place Called Douglas County- Douglas County Planning Department.

US Census Bureau, 1990 Decennial Census

US Census Bureau, Census 2000

Environmental Geology of Western Coos and Douglas Counties, Oregon – State of Oregon Department of Geology and Mineral Industries, 1975