

Goal 7 Areas Subject To Natural Disasters And Hazards

□ Section 2, Earthquake Hazards

BACKGROUND

Statewide Planning Goal 7: Areas Subject To Natural Disasters And Hazards

"To protect life and property from natural disasters and hazards."

Statewide Planning Goal 7 prohibits planning or locating developments subject to damage or loss of life in known areas of natural disasters and hazards without appropriate safeguards. Plans are to be based on an inventory of known areas of natural disaster and hazards, including flooding, erosion, landslides, earthquakes, weak foundation soils or other hazards which may be unique to local or regional areas.

Until just a few years ago, Oregon was unaware of the seriousness of the earthquake threat in the state. Recent scientific studies and search for evidence of past seismic activity have proven that the state may be more vulnerable than previously suspected. In addition, Oregon experienced an earthquake of 5.6 on the Richter scale in March, 1993. The area within Lake Oswego's Urban Service Boundary has experienced seismic activity in historic times, making it a seismically active area.

In 1991 the Oregon Seismic Safety Policy Advisory Commission researched actions to address earthquake risk in Oregon. This Commission concluded that additional research and assessments of seismic hazards are needed to develop informed policy decisions for land use planning, structural codes and emergency response to earthquakes. Current seismic hazard assessment data was deemed to be inadequate to guide preparation for earthquake events. Recently, seismic risk maps for Oregon's Structural Code have been upgraded from seismic zone 2B to zone 3, which requires an increased level of design for structures built in western Oregon. This is in recognition of recent geologic evidence which is causing an increased emphasis to be placed on building flexibility.

The scientific understanding of earthquake hazards in Oregon, although incomplete, continues to advance. In 1994, the State of Oregon Department of Geology and Mineral Industries (DOGAMI) collected data to construct a Relative Earthquake Hazard Map of the Lake Oswego Quadrangle. This map will be based on a detailed mapping of the area's geology and specialized geophysical and geotechnical measurements and will categorize areas into one of four relative hazard categories from greatest hazard to least hazard. It will not provide information with regard to the probability of damage occurring. Rather, it will show that when an area is shaken by an earthquake, the damage is more likely to occur or be more severe in the higher hazard areas. This type of relative hazard determination will be useful in developing hazard mitigation policies such as in emergency response plans, directing efforts for

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strengthening or replacing older and weaker buildings in areas of greatest hazard effects or determining the location of future urban expansion or intensified development. Metro is also developing model code language for the region to assist cities in regulating earthquake hazards.

In 1993, the City completed an interim “Earthquake Plan” as part of its Emergency Operations Plan and Annexes document. The Earthquake Plan provides the basic framework to guide City departments in their efforts to mitigate, prepare for, respond to and recover from a major earthquake. This Plan will enable the City leadership to influence the ease and timeliness with which daily life resumes in the aftermath of a disaster.

The City’s previous Comprehensive Plan contained no policies regarding earthquake hazards.

Summary of Major Issues

The following are some of the issues and changed circumstances and conditions which were considered in the update of this element of the Comprehensive Plan:

- The Oregon Structural Code was updated in 1993, upgrading the level of structural design to that required by Zone 3, for western Oregon.
- The Oregon Seismic Safety Policy Advisory Commission concluded in its 1992 report that additional research and assessments of seismic hazards are needed to develop informed policy decisions for land use planning in response to earthquake hazards.
- In 1993 The City of Lake Oswego completed its “earthquake annex” to add to its Emergency Operation Plan. This plan outlines the City’s disaster response and recovery plan for earthquake events.
- DOGAMI mapped faults and areas of seismic activity in Oregon in 1993.

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GOALS, POLICIES AND RECOMMENDED ACTION MEASURES

GOAL

The city shall protect life and property from earthquake hazards.

POLICIES

1. Cooperate with the DOGAMI in the delineation of areas of relatively greater hazard due to potential damage from earthquakes.
2. Enact regulations governing the location of structures and land uses, as new seismic information becomes available.
3. Coordinate adequate earthquake emergency response with the Federal Emergency Management Agency, Clackamas County Emergency Operations and other appropriate government agencies.
4. Require compliance with the current edition of the Oregon Structural Specialty Code regarding building design for earthquake resistance.
5. Provide education and public awareness of earthquake risks and public safety.

RECOMMENDED ACTION MEASURES

- i. Review and modify the City's Emergency Operations Plan as necessary to achieve a reduction in loss of life, personal injury and property damage in the event of an earthquake.
- ii. Integrate earthquake safety planning into all City operations.
- iii. Maintain and provide current earthquake information and Oregon Structural Specialty Code seismic requirements to developers and other interested citizens.

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- iv. Assess potential seismic influences, damage potential and possible corrective actions to City sewer and water systems, bridges and other City facilities
- v. Use DOGAMI's inventory of relative earthquake hazards in the Lake Oswego area to determine areas that will likely experience the greatest effects from any earthquake. This information can be used in refining the Emergency Operations Plan and determining relative damage potential of various locations.
- vi. Supply information brochures on earthquake preparedness, to residents, schools and civic groups and make brochures available at the Library.