Amplification Susceptibility Map of the Salem East and Salem West Quadrangles, Marion and Polk Counties, Oregon

1996

Explanation

Category 9
Categories 9-11: Amplification factor > 1.0
Category 8: Amplification factor 0.8-1.0
Category 7: Amplification factor 0.6-0.8
Category 6: Amplification factor 0.4-0.6
Category 5: Amplification factor 0.2-0.4
Category 4: Amplification factor 0.1-0.2

This amplification susceptibility map depicts the categories identifying levels of susceptibility to amplification of earthquake vibrations. It is based on the earthquake scenario map of the Willamette Valley, a study that identified different earthquake scenarios. The six categories of amplification susceptibility are shown on the map to represent different degrees of expected ground shaking. Category 9 indicates the highest level of amplification, while Category 1 indicates the lowest. The map uses colors to differentiate between the categories, with possible exceptions to small, localized areas in Category 9. It provides a visual tool for understanding the potential for ground shaking and its impact on buildings and infrastructure.

Amplification of seismic ground motions can increase severe damage to the building environment, such as foundations and structures. Seismic sources and underground environments can significantly affect building susceptibility to earthquake effects. Amplification occurs as a result of the earth's movement and can increase the severity of building damage in the Willamette Valley. The map is designed to assist in understanding the potential for ground shaking and its implications for urban development and infrastructure planning.

This map was developed to serve as a regional planning tool and has not been verified for use in specific local planning or construction projects. The map is an analytical tool and should be used in conjunction with other data and analysis. The map provides a general overview of the susceptibility to ground shaking, regardless of the specific hazards present. 

Notes:
This map is not intended to be used for project design or engineering purposes. The map is not intended to replace specific engineering analysis or site-specific engineering design. The map should be used in conjunction with other data and analysis for planning and design purposes. The map is subject to change and may not be current. 

Map by: GeoFirma, Inc.
Prepared by: Jon M. Young

The technical information on the map is available in digital format.