

WASHINGTON STATE DEPT OF
**NATURAL
RESOURCES**
WASHINGTON
GEOLOGICAL SURVEY

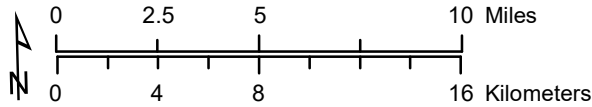
**Potential Impact of Permanent Ground Deformation
to Portland, Oregon/Vancouver, Washington Regional Area
Emergency Transportation Route Segments
Cascadia Subduction Zone Magnitude 9.0 Earthquake
Dry Soil Scenario**

**Maximum Potential Permanent
Ground Deformation Within Segment**

- < 0.5 meters
- 0.5–1.0 meters
- 1.0–2.0 meters
- > 2.0 meters

Permanent ground deformation combines earthquake-induced landslide and lateral spread from liquefaction (Plate 7). Probability of occurrence for segments with > 0.5 m of permanent ground deformation is between 20% and 30% (Plate 8).

Cities limited to study area. Not all cities are labeled.



Source Data:
City Boundaries, Highways: Oregon Dept. of Transportation, 2018;
Washington Dept. of Transportation, 2019
Potential impact to Multnomah, Washington County Routes:
Bauer and others, 2018
Projection: Lambert Conformal Conic, EPSG 2913.

