Shallow Landslide Susceptibility Map of Central and Western Multnomah County, Oregon

Study Area

Contributing Factors

Resisting Forces

The natural hazard inventory is vulnerable to weathering and erosion, which can reduce the integrity of the soil and the stability of slopes. Weathering processes can weaken the soil by breaking down rocks, minerals, and organic matter into smaller particles. Erosion processes, such as rainfall, wind, and gravity, can remove soil and debris from slopes, leading to instability and potential landslides. Both weathering and erosion can result in a loss of cohesion and strength in the soil, making it more susceptible to landslides.

Landslide Inventory

Landslide inventory data are used to identify areas where landslides have occurred in the past and to predict areas where future landslides are likely to occur. The inventory data are derived from various sources, such as aerial photographs, LiDAR (Light Detection and Ranging) data, and ground surveys. The inventory data are then analyzed to determine the susceptibility of each location to shallow landslides.

Safety

The Safety section includes a map of the study area with symbols indicating the location of study sites. The symbols represent different types of landslides and their associated safety risk. The symbols are color-coded to indicate the susceptibility level: high, moderate, or low. The map also includes a legend explaining the symbols and a scale bar for reference.

Explanation of Symbols

- High Susceptibility
- Moderate Susceptibility
- Low Susceptibility

Legend

- Study Area
- City of Portland
- County Boundary
- Community Boundary
- Water Body
- Road
- Buildings
- Vegetation

The map is designed to help identify areas with a higher risk of landslides and prioritize mitigation efforts. By understanding the susceptibility levels and contributing factors, stakeholders can develop strategies to reduce the risk of landslides and ensure public safety.