

## **APPENDIX A: Study Area Information**

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**Hazards**

**Soils Map**

**Wild and Scenic River Systems**

**Local Wetlands and Riparian Inventories**

**Molalla Comprehensive Plan**

**Precipitation Data**

**Water Resources Registration**

## Hazards

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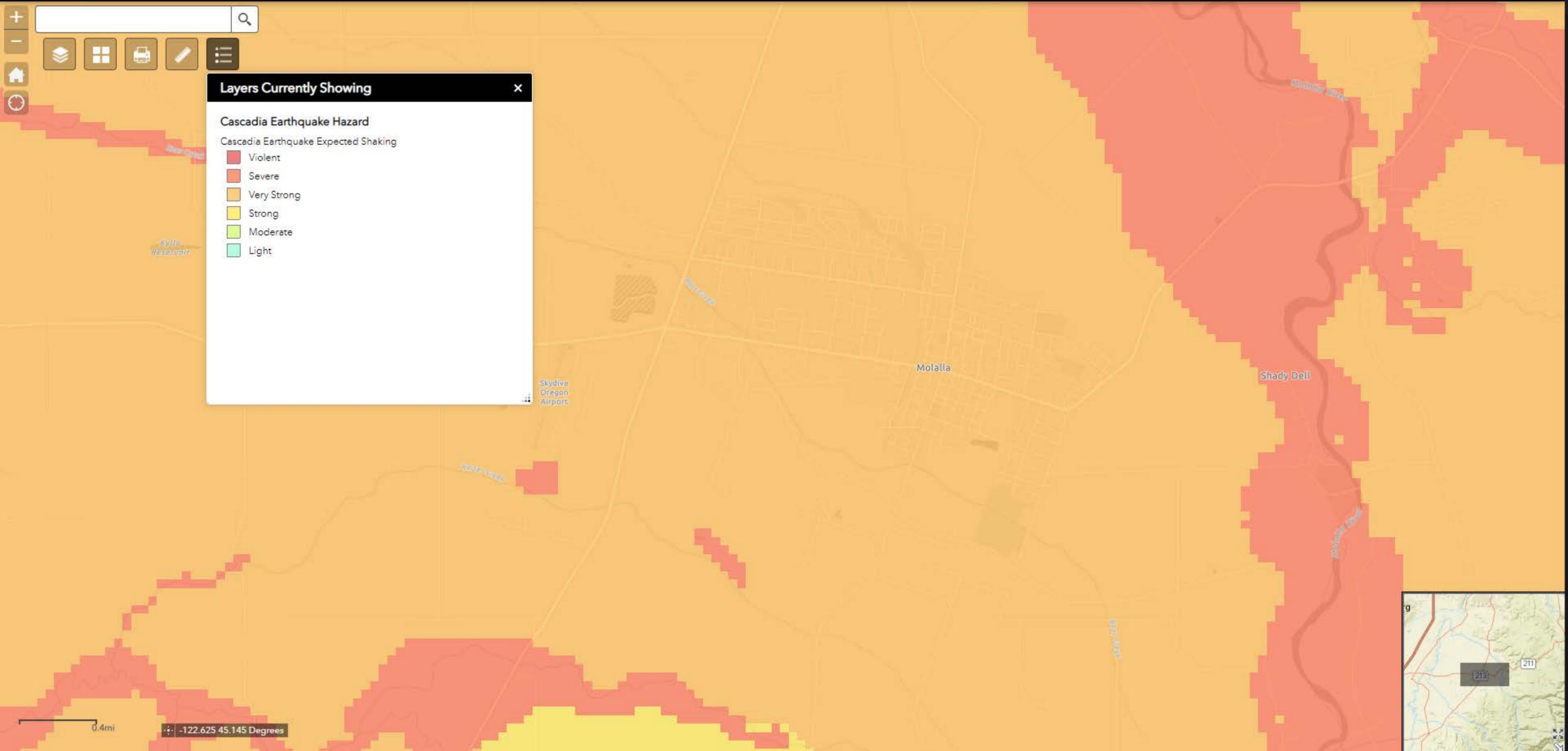
Map navigation controls including zoom in (+), zoom out (-), search, layers, print, and home icons.

### Layers Currently Showing

**Cascadia Earthquake Hazard**

Cascadia Earthquake Expected Shaking

- Violent
- Severe
- Very Strong
- Strong
- Moderate
- Light



**NOTES TO USERS**

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**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) zone 10. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov/> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NNGS12  
National Geodetic Survey  
SSMC-3, #9202  
1315 East-West Highway  
Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov/>.

**Base map** information shown on this FIRM was derived from multiple sources. High resolution color orthophotos produced by Merrick & Co., Pixures, Inc., and Clean Water Services covered portions of the county. USGS Digital Quadrangles at a scale of 1:12000 or less dated 9/20/94 covered the remainder of the county.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the Flood Insurance Study report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on this map.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

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Contact the **FEMA Map Service Center** at 1-800-358-9616 for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at <http://www.msc.fema.gov/>.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call 1-877-FEMA MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/>.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
- ZONE A99** Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**

- ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

**OTHER AREAS**

- ZONE X** Areas determined to be outside the 0.2% annual chance floodplain.
- ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**

**OTHERWISE PROTECTED AREAS (OPAs)**

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

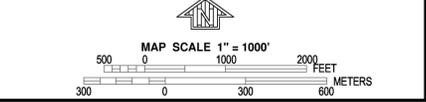
- 1% annual chance floodplain boundary
- 0.2% annual chance floodplain boundary
- Floodway boundary
- Zone boundary
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- Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
- Base Flood Elevation line and value; elevation in feet\* (EL 987)
- Base Flood Elevation value where uniform within zone; elevation in feet\*

\* Referenced to the North American Vertical Datum of 1988 (NAVD 88)

- Transsect line
- Geographic coordinates referenced to the North American Datum of 1983 (NAD 83)
- 42°5'00"N
- 1000-meter Universal Transverse Mercator grid ticks, zone 10
- 6000000 M
- 5000-foot grid ticks: Oregon State Plane coordinate system, north zone (FIPSZONE 3601), Lambert Conformal Conic
- DX5510
- Bench mark (see explanation in Notes to Users section of this FIRM panel)
- M1.5
- River Mile
- MAP REPOSITORIES
- Refer to Map Repositories list on Map Index
- EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
- June 17, 2008
- EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0540D**

**FIRM FLOOD INSURANCE RATE MAP**

**CLACKAMAS COUNTY, OREGON AND INCORPORATED AREAS**

**PANEL 540 OF 1175**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

COMMUNITY	NUMBER	PANEL	SUFFIX
CLACKAMAS COUNTY	41588	0540	D
MOLALLA, CITY OF	410020	0540	D

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

**MAP NUMBER 4100C0540D**

**EFFECTIVE DATE JUNE 17, 2008**

Federal Emergency Management Agency

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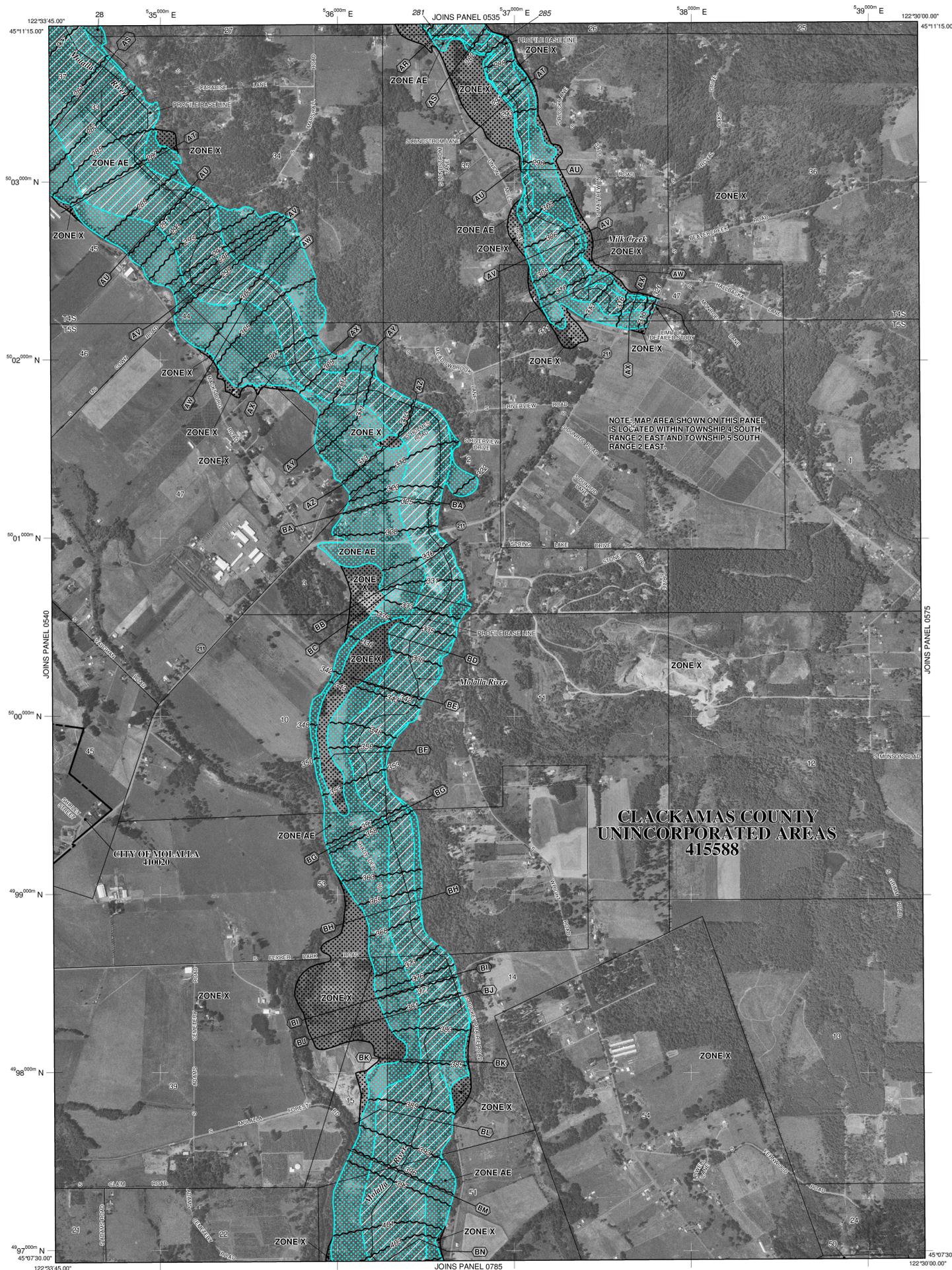
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**CLACKAMAS COUNTY  
UNINCORPORATED AREAS  
415588**

**LEGEND**

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- MAP REPOSITORIES  
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MAP SCALE 1" = 1000'  
0 1000 2000 FEET  
0 300 600 METERS

**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0545D**

**FIRM  
FLOOD INSURANCE RATE MAP  
CLACKAMAS COUNTY,  
OREGON  
AND INCORPORATED AREAS**

**PANEL 545 OF 1175**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

**CONTAINS:**

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MOLALLA, CITY OF	410020	0545	D

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**MAP NUMBER  
41005C0545D**

**EFFECTIVE DATE  
JUNE 17, 2008**

**Federal Emergency Management Agency**

Search bar: Molalla, OR, USA

Show search results for Molalla, OR, ...

Map navigation controls: Home, Full Screen, Print, Share, Layers



**Layers Currently Showing**

**Landslide Hazard**

- Low - Landsliding Unlikely
- Moderate - Landsliding Possible
- High - Landsliding Likely
- Very High - Existing Landslide

0.2mi

-122.538 45.156 Degrees



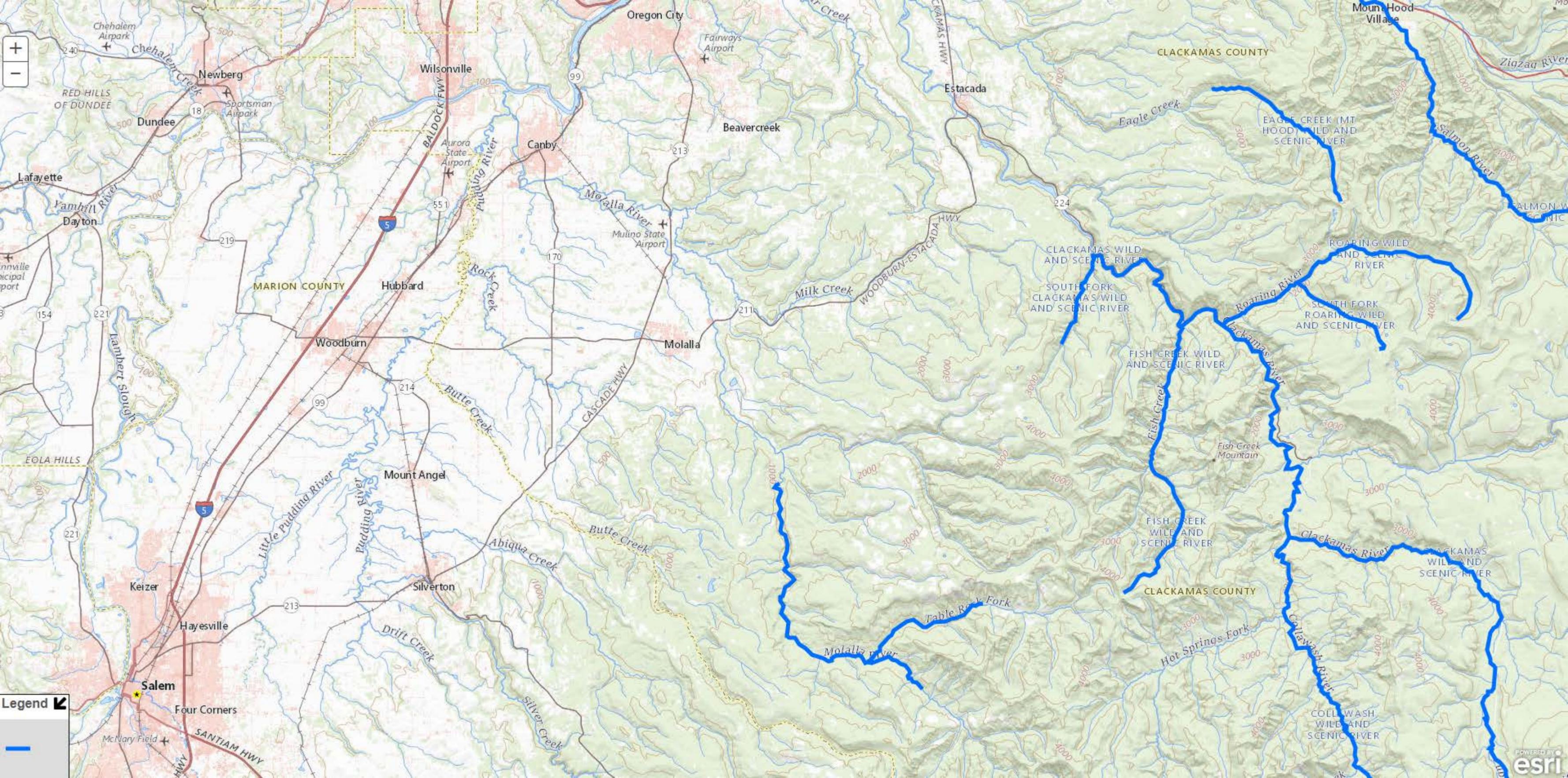
# Soils Map

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## **Wild and Scenic River Systems**

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Legend

