



Building Distribution Map of Clatsop County, Oregon

PLATE 1

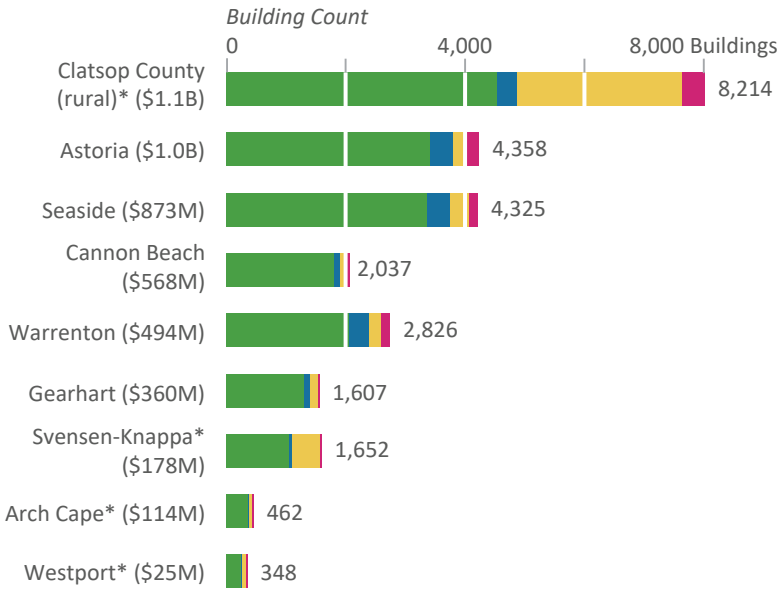
Building Occupancy

- Agricultural / Utility
- Commercial / Industrial
- Public / Non-Profit
- Residential

Building by Occupancy Class

(Ranked by Value)

- Residential
- Commercial/Industrial
- Agricultural/Utility
- Public/Non-Profit



*Unincorporated

Data Sources:
Building footprints: Oregon Department of Geology and Mineral Industries (2017)
Roads: Oregon Department of Transportation Signed Routes (2013)
Place names: U.S. Geological Survey Geographic Names Information System (2015)
City limits: Oregon Department of Transportation (2014)
Basemap: U.S. Geological Survey and Oregon Lidar Consortium (2012)
Hydrography: U.S. Geological Survey National Hydrography Dataset (2017)

Projection: NAD 1983 UTM Zone 10N
Software: Esri® ArcMap 10, Adobe® Illustrator CS6

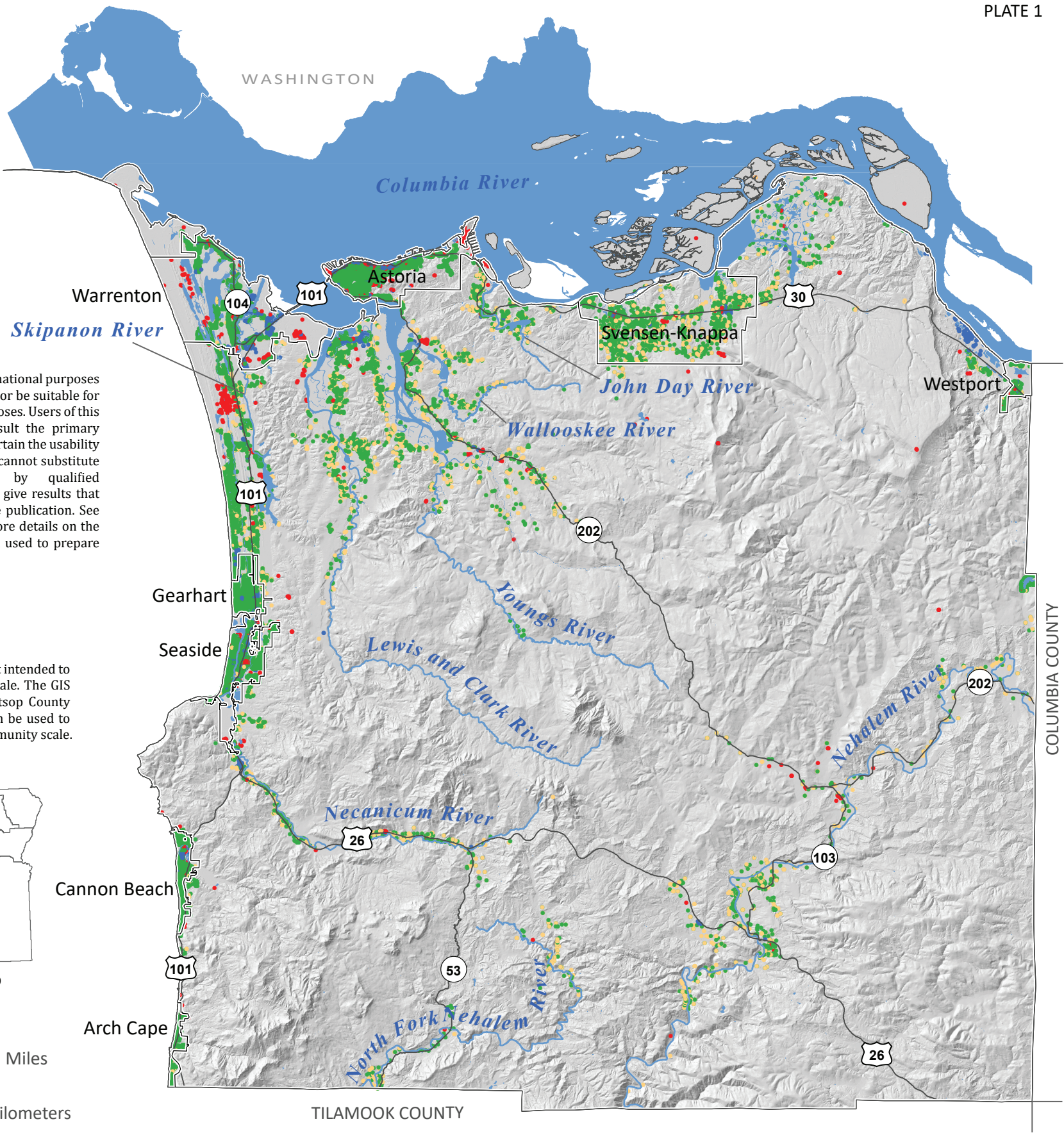
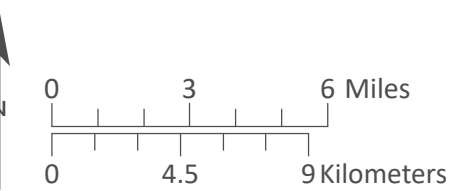
Cartography by: Lowell H. Anthony, 2018

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Study Location Map



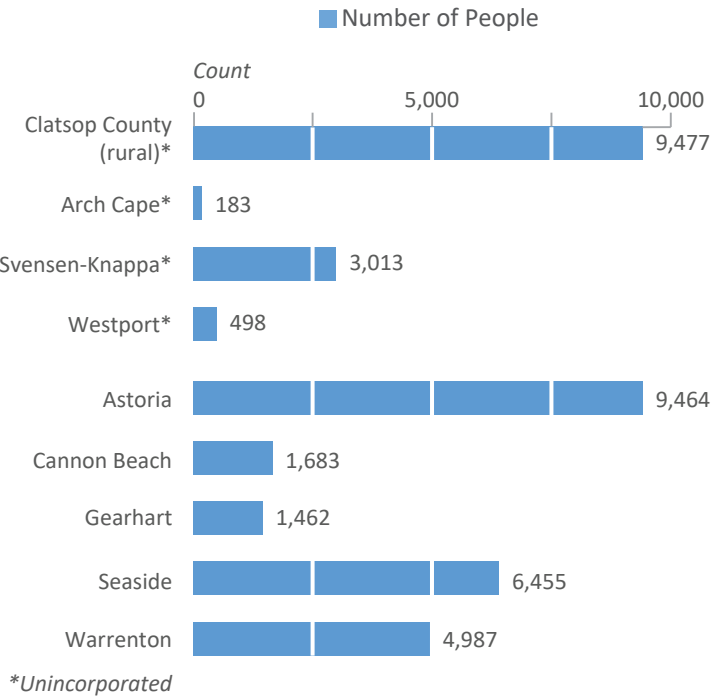


Population Density Map of Clatsop County, Oregon

People per 20 acres

- Building(s) present
no permanent residents
- 1 - 5
- 6 - 15
- 16 - 30
- 31 - 60
- 61+

Population

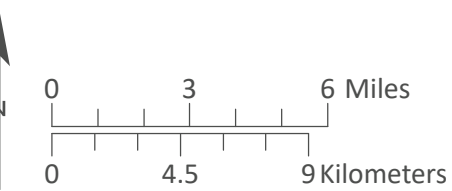


Data Sources:
Population data: U.S. Census (2010)
Roads: Oregon Department of Transportation Signed Routes (2013)
Place names: U.S. Geological Survey Geographic Names Information System (2015)
City limits: Oregon Department of Transportation (2014)
Basemap: U.S. Geological Survey and Oregon Lidar Consortium (2012)
Hydrography: U.S. Geological Survey National Hydrography Dataset (2017)

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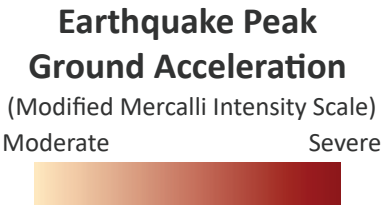
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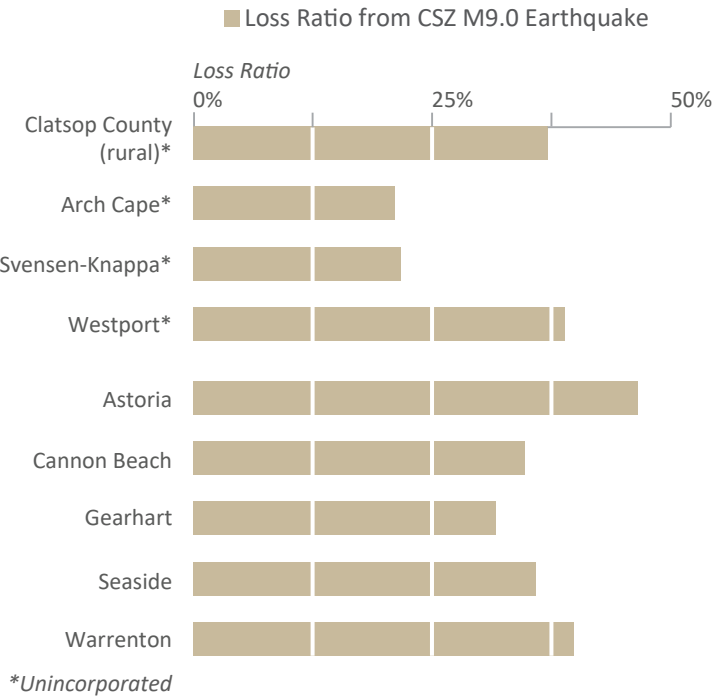


M9.0 CSZ Earthquake Shaking Map of Clatsop County, Oregon



Peak Ground Acceleration (PGA) is the maximum acceleration in a given location or rather how hard the ground is shaking during an earthquake. It is one measurement of ground motion, which is closely associated with the level of damage that occurs from an earthquake.

Total Building Value Loss Ratio from M 9.0 Earthquake

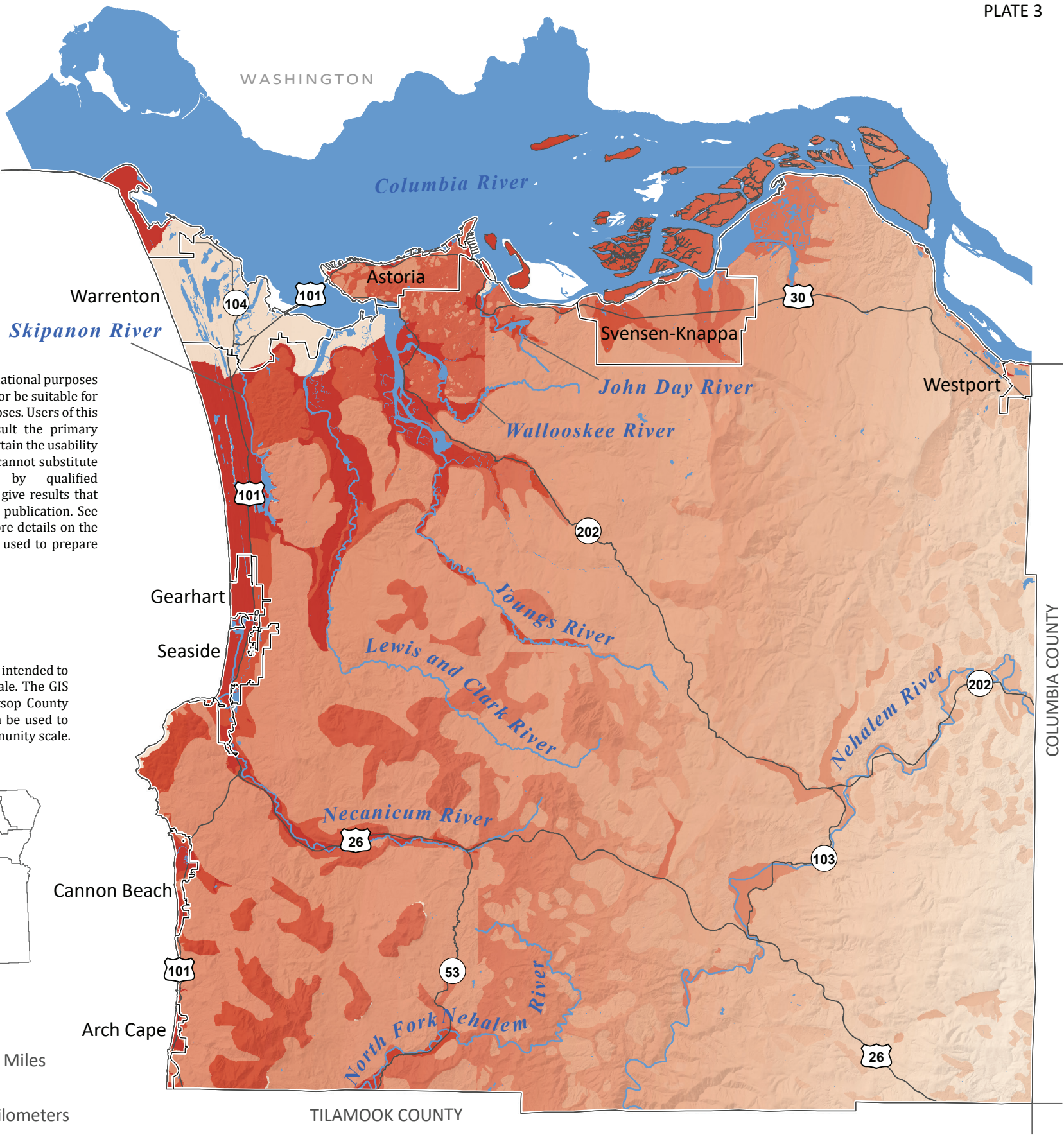
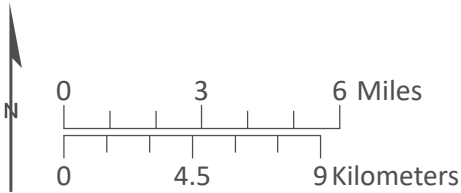


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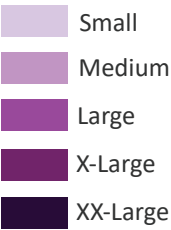
Data Sources:
Earthquake peak ground acceleration: Madin and Burns (2013)
Roads: Oregon Department of Transportation Signed Routes (2013)
Place names: U.S. Geological Survey Geographic Names Information System (2015)
City limits: Oregon Department of Transportation (2014)
Basemap: U.S. Geological Survey and Oregon Lidar Consortium (2012)
Hydrography: U.S. Geological Survey National Hydrography Dataset (2017)
Projection: NAD 1983 UTM Zone 10N
Software: Esri® ArcMap 10, Adobe® Illustrator CS6
Cartography by: Lowell H. Anthony, 2018



Tsunami Inundation Map of Clatsop County, Oregon

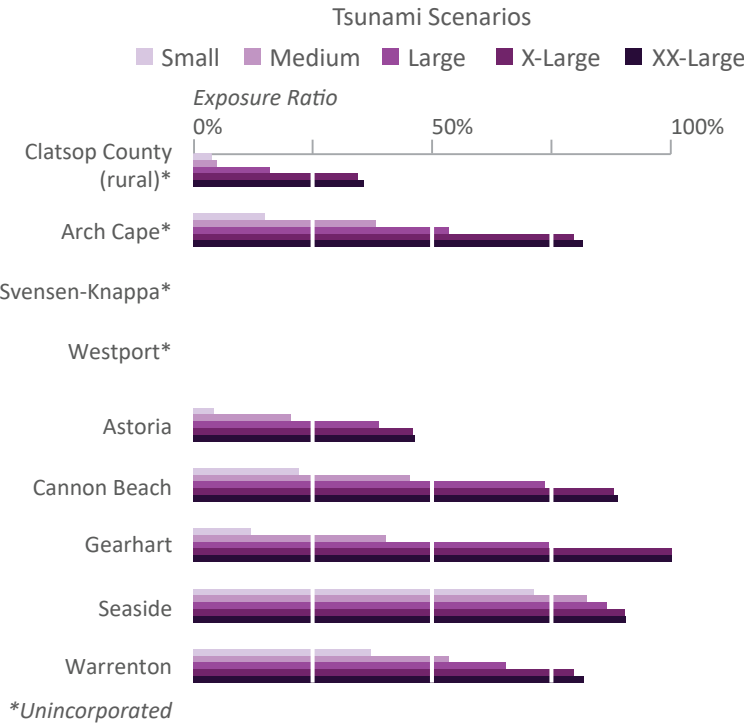
PLATE 4

Tsunami Hazard Zone



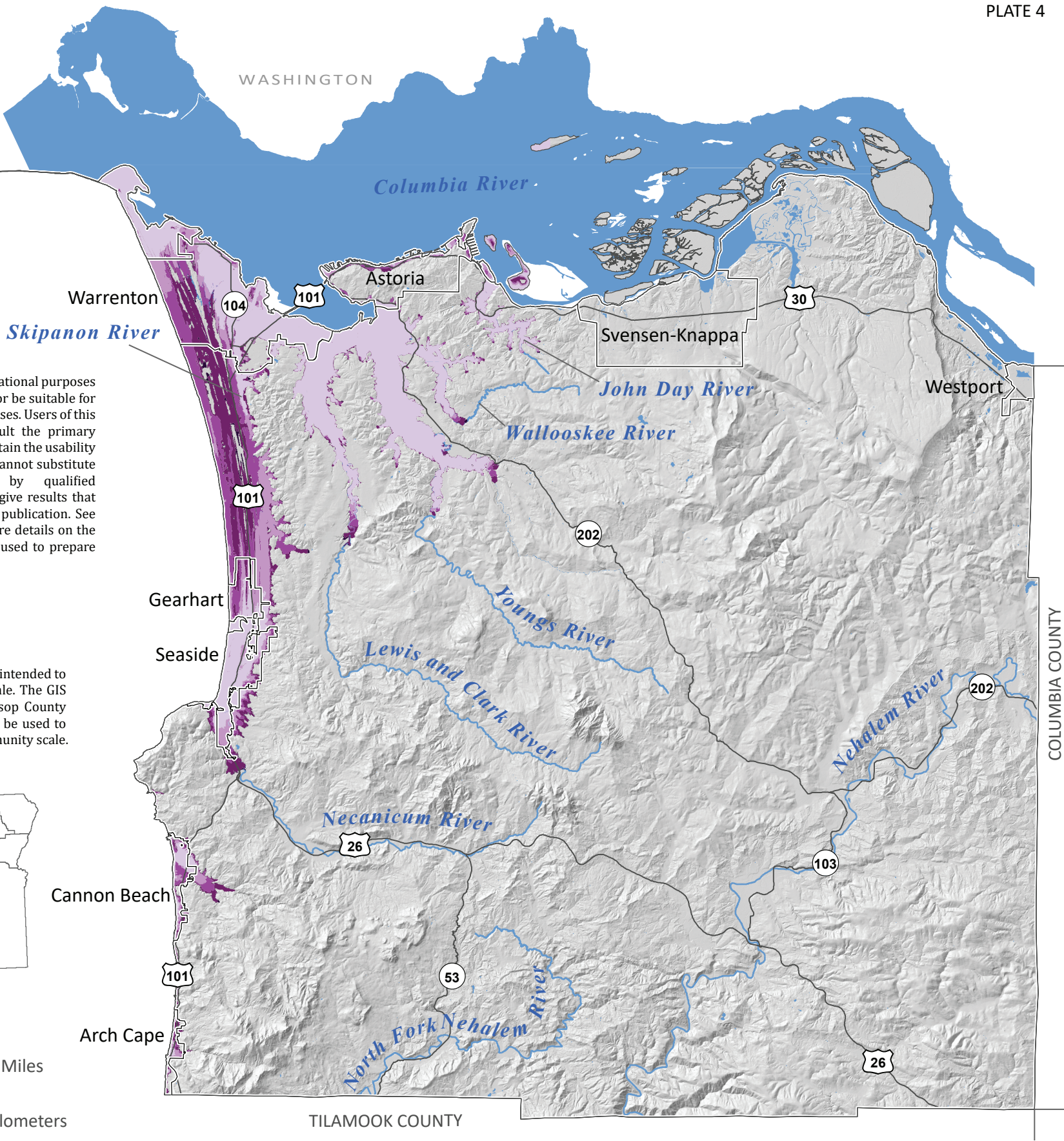
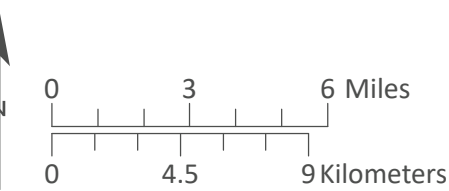
The tsunami hazard data show areas of expected inundation from several local tsunami scenarios produced from a magnitude 9.0 CSZ earthquake. The scenarios were categorized based on “t-shirt” sizes, ranging from Small to XX-Large.

Ratio of Building Value Exposed to Tsunami



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Data Sources:
Tsunami Hazard Zones: Oregon Department of Geology, Priest and others (2013)
Roads: Oregon Department of Transportation Signed Routes (2013)
Place names: U.S. Geological Survey Geographic Names Information System (2015)
City limits: Oregon Department of Transportation (2014)
Basemap: U.S. Geological Survey and Oregon Lidar Consortium (2012)
Hydrography: U.S. Geological Survey National Hydrography Dataset (2017)
Projection: NAD 1983 UTM Zone 10N
Software: Esri® ArcMap 10, Adobe® Illustrator CS6
Cartography by: Lowell H. Anthony, 2018



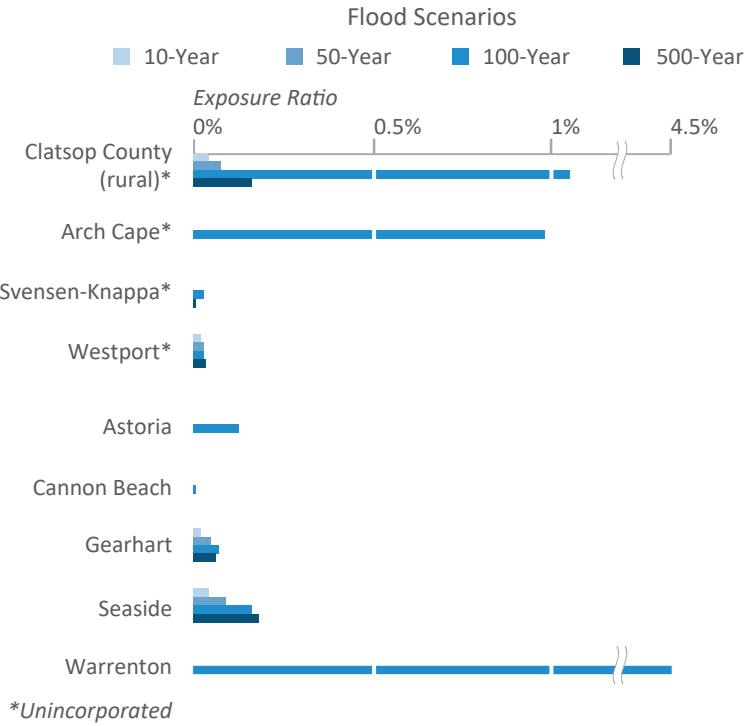
Flood Hazard Map of Clatsop County, Oregon

Flood Hazard Zone

100-Year Flood
(1% annual chance)

The flood hazard data show areas expected to be inundated during a 100-year flood event. Flooding sources include riverine. Areas are consistent with the regulatory flood zones depicted in Clatsop Counties Digital Flood Insurance Rate Maps.

Ratio of Estimated Loss to Flooding

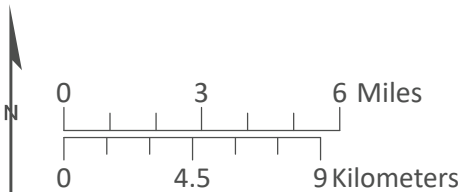


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Study Location Map



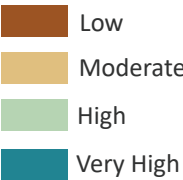
Data Sources:
Flood hazard zone (100-year): Clatsop County Flood Insurance Rate Map (2018)
Roads: Oregon Department of Transportation Signed Routes (2013)
Place names: U.S. Geological Survey Geographic Names Information System (2015)
City limits: Oregon Department of Transportation (2014)
Basemap: U.S. Geological Survey and Oregon Lidar Consortium (2012)
Hydrography: U.S. Geological Survey National Hydrography Dataset (2017)
Projection: NAD 1983 UTM Zone 10N
Software: Esri® ArcMap 10, Adobe® Illustrator CS6
Cartography by: Lowell H. Anthony, 2018



Landslide Susceptibility Map of Clatsop County, Oregon

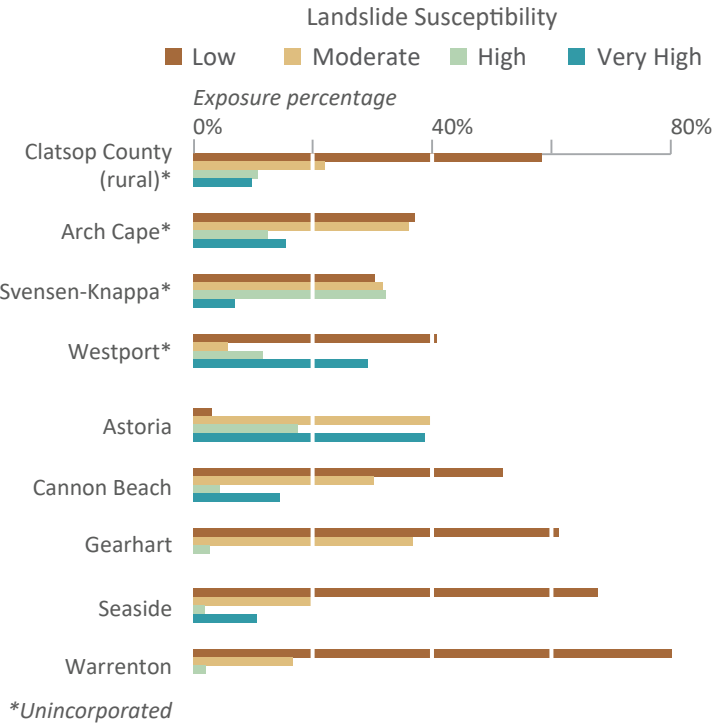
PLATE 6

Landslide Susceptibility



Landslide susceptibility is categorized as Low, Moderate, High, and Very High which describes the general level of susceptibility to landslide hazard. The dataset is an aggregation of three primary sources: landslide inventory (SLIDO), generalized geology, and slope.

Ratio of Building Value Exposed to Landslide

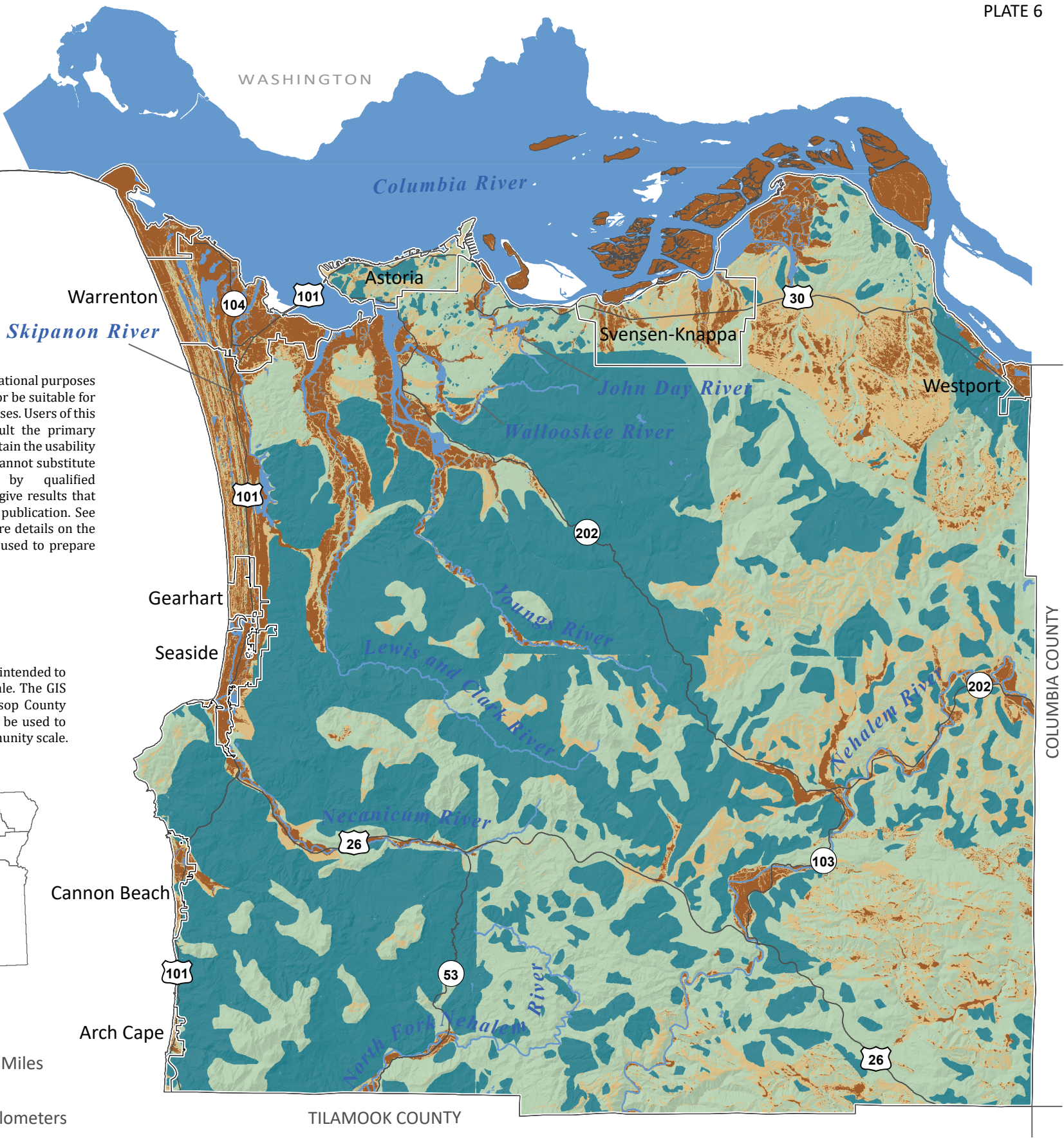
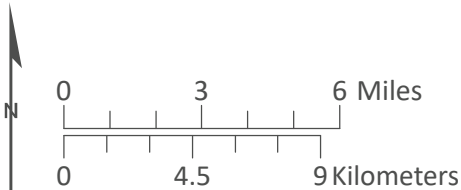


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Study Location Map



Data Sources:
Landslide susceptibility: Oregon Department of Geology, Burns and others (2016)
Roads: Oregon Department of Transportation Signed Routes (2013)
Place names: U.S. Geological Survey Geographic Names Information System (2015)
City limits: Oregon Department of Transportation (2014)
Basemap: U.S. Geological Survey and Oregon Lidar Consortium (2012)
Hydrography: U.S. Geological Survey National Hydrography Dataset (2017)

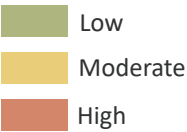
Projection: NAD 1983 UTM Zone 10N
Software: Esri® ArcMap 10, Adobe® Illustrator CS6
Cartography by: Lowell H. Anthony, 2018



Wildfire Risk Map of Clatsop County, Oregon

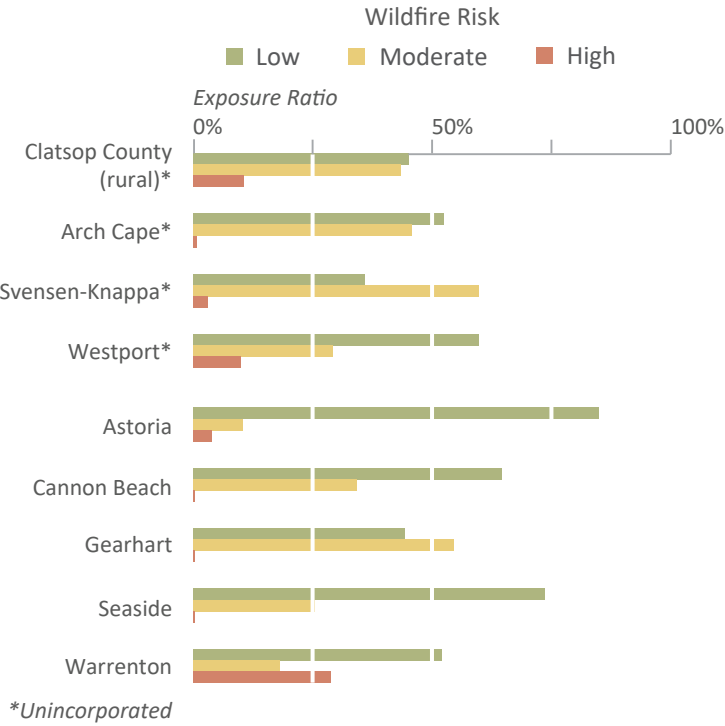
PLATE 7

Wildfire Risk



Wildfire Risk is categorized as Low, Moderate, and High and indicates the level of risk a location has to wildfire hazard. The Wildfire Risk data layer (Fire Risk Index) is derived from a combination of the Fire Threat Index (fire history and behavior) and the Fire Effects Index (infrastructure and assets).

Ratio of Building Value Exposed to Wildfire

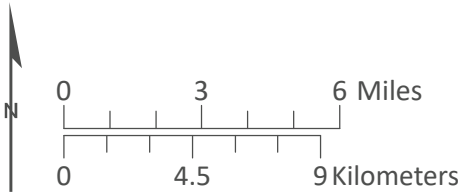


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Study Location Map



Data Sources:
Wildfire risk data: Oregon Department of Forestry, Sanborn Map Company, Inc. (2013)
Roads: Oregon Department of Transportation Signed Routes (2013)
Place names: U.S. Geological Survey Geographic Names Information System (2015)
City limits: Oregon Department of Transportation (2014)
Basemap: U.S. Geological Survey and Oregon Lidar Consortium (2012)
Hydrography: U.S. Geological Survey National Hydrography Dataset (2017)

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