

# One-Percent Annual Flood Hazard and Exposure Risk Map City of Lakeside, Coos County, Oregon 2010

## NOTICE

This map cannot serve as a substitute for site-specific investigations by qualified practitioners. Site-specific data may give results that differ from those shown on the maps. The views and conclusions contained in this document are those of the author and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Federal Emergency Management Agency.

## KEY

- Buildings Affected (Building Count)**
  - Greater than 6 feet (30)
  - From 3 to 6 feet (21)
  - From 0 to 3 feet (73)
  - Not affected (1099)
- Flood Depth Ranges**
  - Greater than 6 feet deep
  - From 3 to 6 feet deep
  - From 0 to 3 feet deep
- Rivers or Lakes**
- Floodway Boundary**
- Public Services**
  - Fire
- Political Boundary Lines**
  - County
  - Corporate
  - Urban Growth Boundary
  - Forest, Park, Reservation, or Miscellaneous Public Land Boundary

## PURPOSE

FEMA (Federal Emergency Management Agency) produces flood maps that show areas that have a 1 in 100 chance of being flooded in any year (the 100-year flood). These maps are made by using the historical record of flood height and frequency, a hydrologic computer model, and the best available topographic data. The resulting maps, called DFIRMs (Digital Flood Insurance Rate Maps), are used to determine which properties need flood insurance.

The Oregon Department of Geology and Mineral Industries (DOGAMI) has updated the DFIRMs for Coos County, Oregon, by using new, extremely accurate topographic data collected with a laser scanning system called lidar (light detection and ranging). The new DFIRMs much more accurately show flood zone boundaries and also allow us to measure flood depth at any point. At the same time, lidar data allow us to locate every building in a community and make a GIS (geographic information system) map that shows the exact location, elevation, zoning class, and assessed value of each building collected from tax assessor records. Together, these new types of information can provide a very detailed map that shows the general level of flood risk exposure for each building in a community.

This information can be used by city officials, emergency managers, property owners, lenders, and insurers to better understand flood risk and reduce risk from future floods.

## UNDERSTANDING THE MAP

This map shows areas expected to be flooded during a 100-year flood. The expected depth of flooding is shown by one of three colors:

- light blue: 0- to 3-foot flood depth
- medium blue: 3- to 6-foot flood depth
- dark blue: 6-foot or more flood depth

Buildings are color coded to show exposure to flood risk. Note that this color scheme is based on the assumption that all buildings are constructed with slab-on-grade foundations; that is, the color codes are for the worst case scenario (see Figure 1).

- black: outside the 100-year flood zone
- yellow: partly or completely in the 0 to 3 foot flood depth zone
- orange: partly or completely in the 3 to 6 foot flood depth zone
- red: partly or completely in the 6 foot or more flood depth zone

Figure 2 shows zoning (commercial, residential, industrial, etc.) types within the city along with the area predicted to be flooded in a 100-year flood. This map is intended to provide an overview of exposure to flood risk for the city from an urban planning perspective.

Table 1 provides a risk exposure summary for the city. The table shows total land value, total improvement value, total real market value, total parcel acreage, and total parcel acreage flooded on the basis of four categories:

- parcels with one or more structures with at least one structure flooded
- parcels with one or more structures where some ground is flooded but no structures are flooded
- parcels that are either completely or partially flooded but have no structures
- parcels that are not flooded

The summation line gives totals for the land value, improvement values, real market values, full tax lot acreage, and acres flooded per tax lot. The table also shows the percentage of land within the city boundary that is flooded.

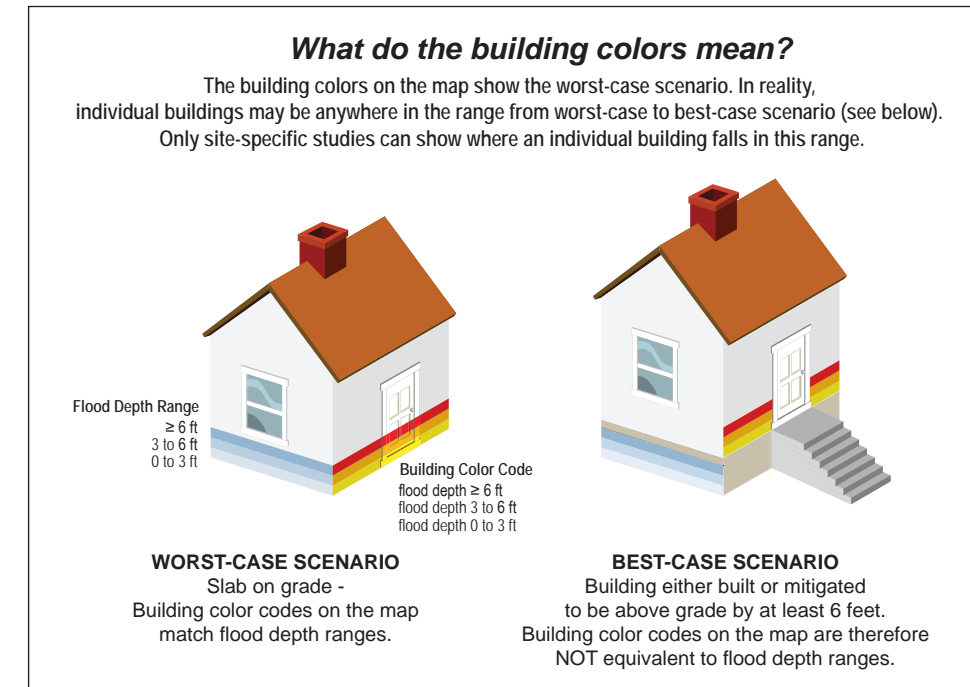


Figure 1. Worst-case and best-case scenarios for exposure to flood risk.

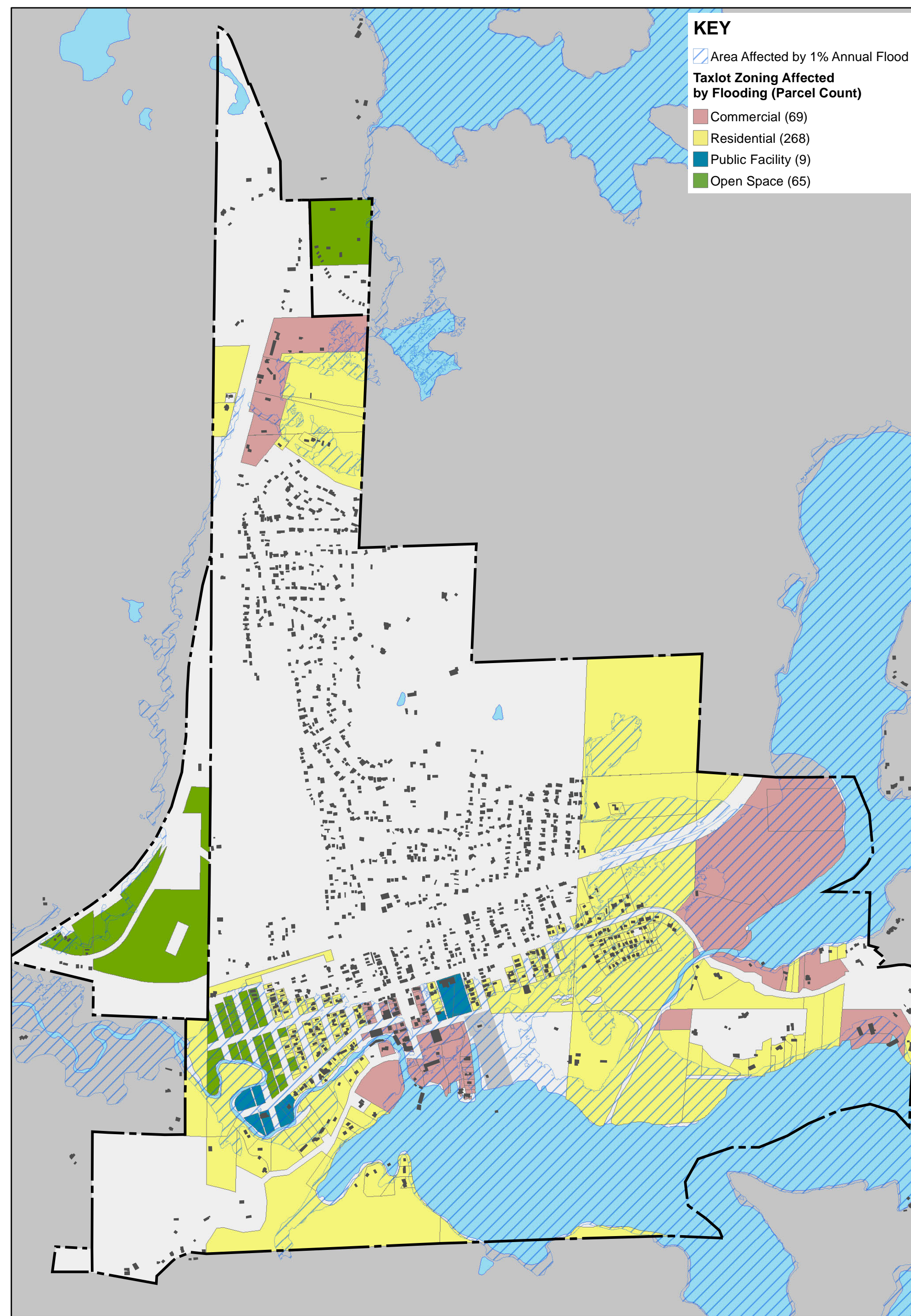
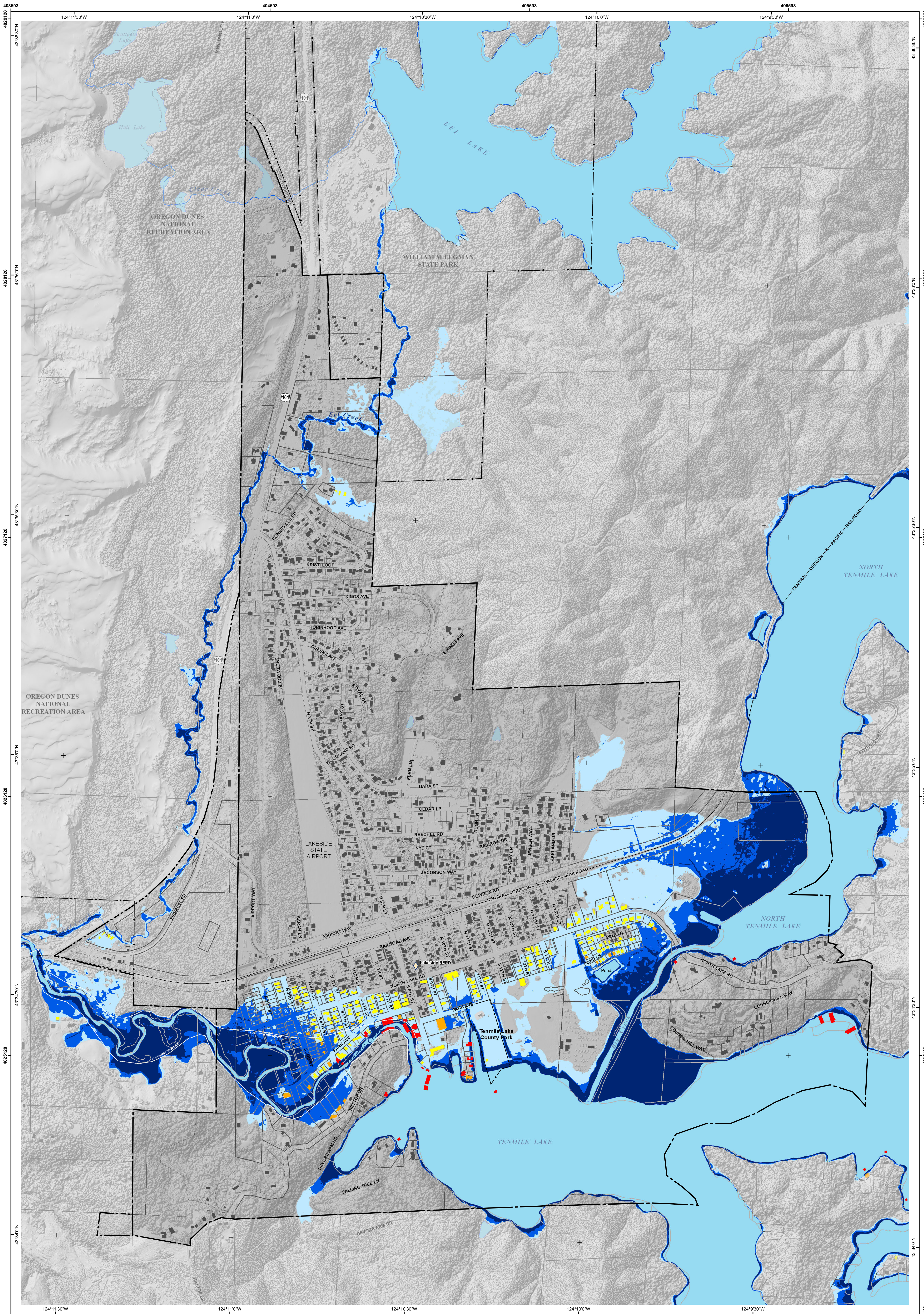
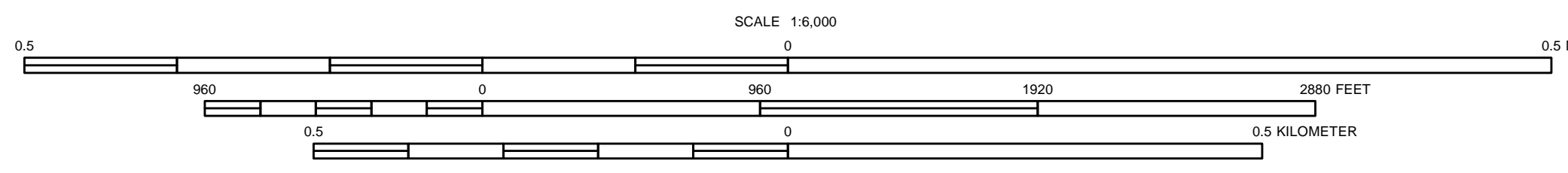
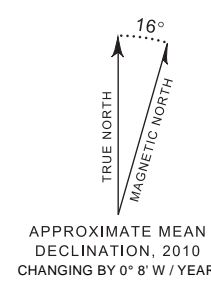


Figure 2. Taxlot zoning affected by flood.



Projection: UTM Zone 10N, Unit: Meter  
Datum: NAD 1983  
Map series and analysis created and performed by the Oregon Department of Geology and Mineral Industries.  
Lidar data acquired ( flown ) in 2008.  
Other data sources: Coos County Assessor's Office (2009 parcel data), U.S. Army Corps of Engineers (USACE), U.S. Geological Survey, National Oceanic and Atmospheric Administration, Geophysical Data Center, and the Federal Emergency Management Agency.



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Table 1. 100-Year Flood Exposure Summary Table: Cumulative Assessor Parcel Exposure Analysis

Parcels	Parcels and Buildings	Land Value (\$)	Improvements (\$)	RMV	Acres	Acres Flooded
190	Parcels with buildings where BOTH are flood affected	13,173,583	15,420,688	28,594,271	97.06	76.45
66	Parcels with flooding AND buildings that are not affected	8,115,511	13,405,043	21,520,554	153.26	69.00
155	Parcels with NO buildings affected but some flooding	6,540,390	650,376	7,190,766	245.71	91.62
845	Parcels with NO flooding	54,696,243	46,416,613	101,112,856	566.91	---
1,256	Sum all	\$ 82,525,727	\$ 75,892,720	\$ 158,418,447	1,062.94	227.06
Acreage affected by flood 21.4%						
		%	%	%	%	%
Parcels with buildings where BOTH are flood affected		16.0%	20.3%	18.0%	9.1%	33.7%
Parcels with flooding AND buildings that are not affected		9.8%	17.7%	13.6%	14.4%	26.0%
Parcels with NO buildings affected but some flooding		7.9%	0.9%	4.5%	23.1%	40.4%
Parcels with NO flooding		66.3%	61.2%	63.8%	53.3%	0.0%
						100.0%

NOTE: Values shown above are for parcels that lie within the City of Lakeside city limits and the City of Lakeside Urban Growth Boundary. RMV is Real Market Value.  
Data disclaimer: Parcel boundaries and tax values were provided by the Coos County Assessor's Office and are used only as a guide to provide potential property damage estimates for a 100-year flood event. Please see the Coos County Assessor's Office for the most up-to-date parcel information. The results from the analysis are considered to be highly accurate but should be used for planning purposes only.

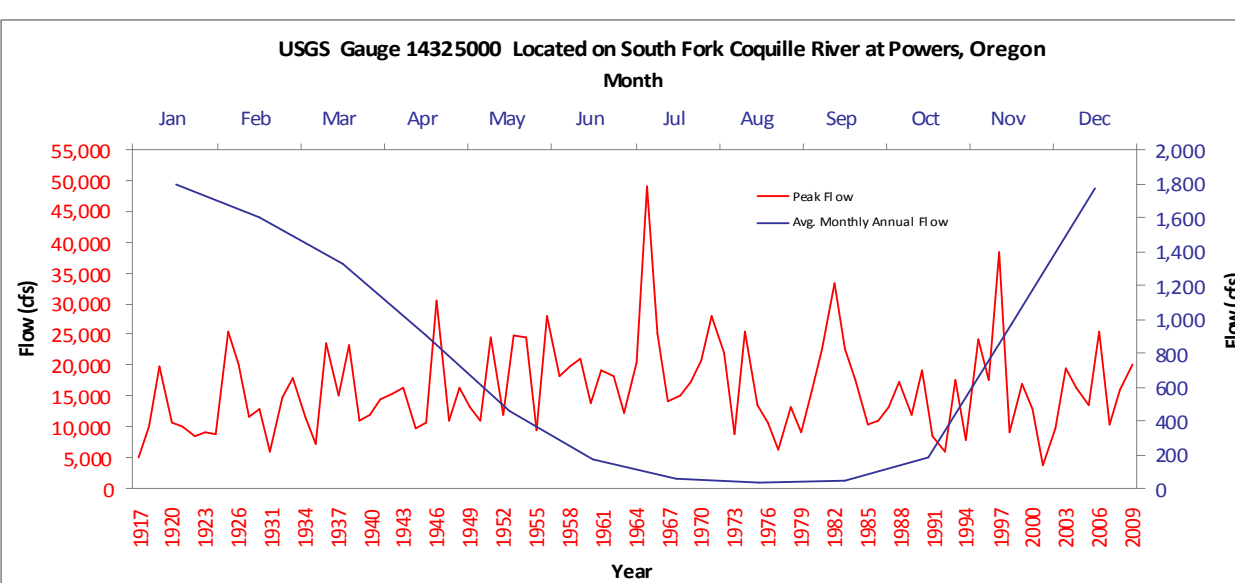


Figure 3. This figure is representative of the regional hydrology for Coos County, Oregon. The figure depicts historic peak flows (labels and line in red) and average annual monthly flow (labels and line in blue) in cubic feet per second (cfs). The figure describes both the years in which major flows occurred (i.e., 1984, 1990) and the seasonal variation in flow typical of an Oregon coastal stream. Although these values describe flows only at a specific gauge, the shape and peaks do describe the common hydrologic regime.