

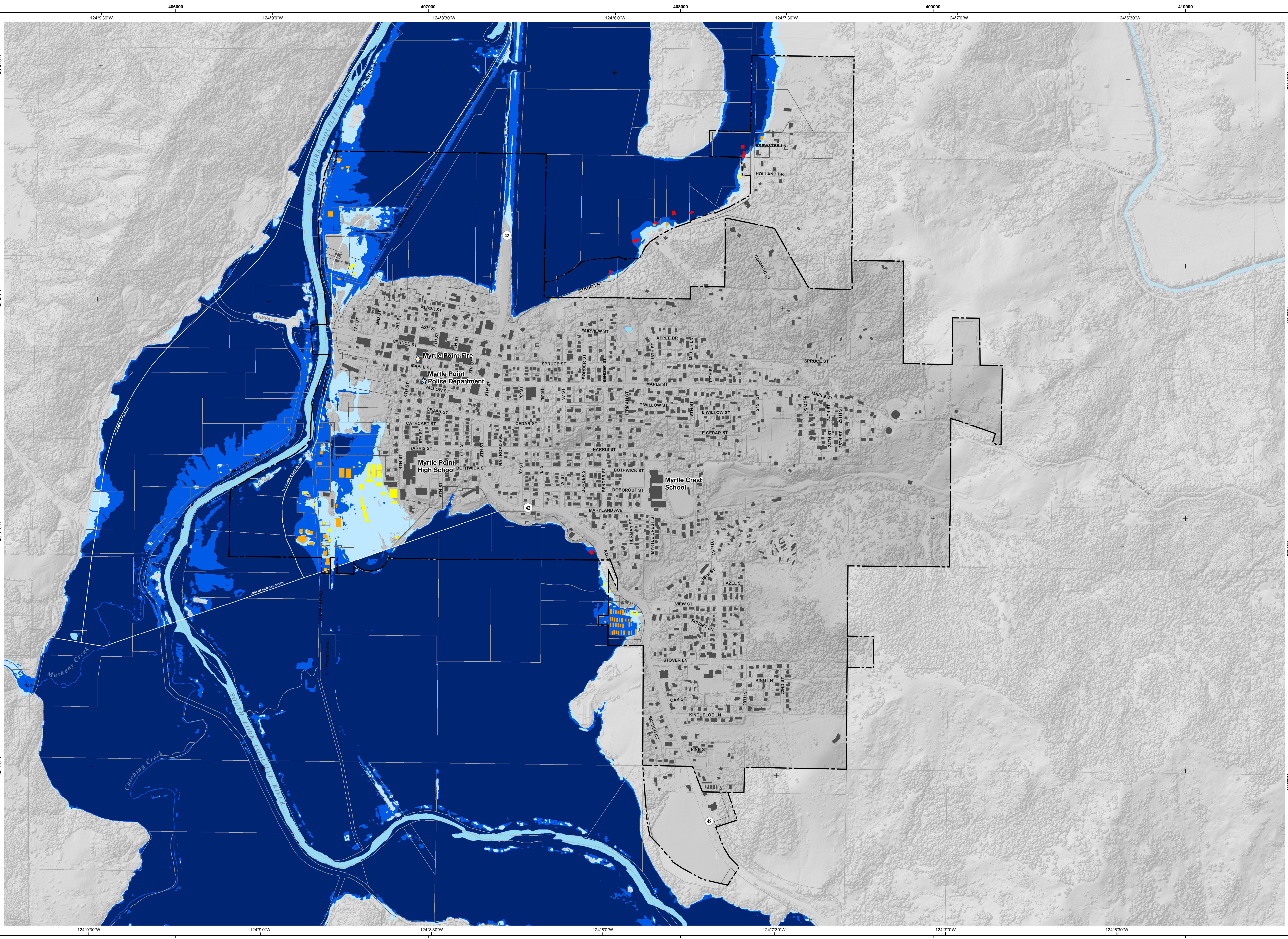
STATE OF OREGON  
DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES  
VICKI S. McCONNELL, STATE GEOLOGIST

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

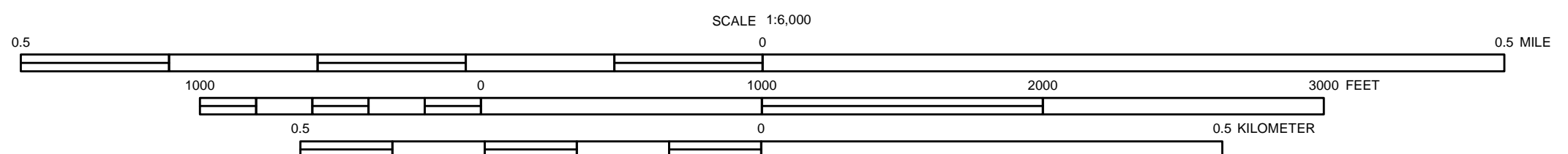
OPEN-FILE REPORT O-10-09

1-Percent Annual Flood Hazard and Exposure Risk Map,  
City of Myrtle Point, Coos County, Oregon  
By Mathew A. Tilman

Funding provided by Federal Emergency Management Agency as part of the Flood  
Map Modernization Program under Cooperating Technical Partner award  
EMS-2008-GR-0013.



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 (flow) 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  
Coastal and Atmospheric Administration Geophysical Data Center, and  
the Federal Emergency Management Agency.



## 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.

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## KEY

- Buildings Affected (Building Count)**
- Greater than 6 feet (8)
  - From 3 to 6 feet (66)
  - From 0 to 3 feet (26)
  - Not affected (1,160)
- Flood Depth Ranges**
- Greater than 6 feet deep
  - From 3 to 6 feet deep
  - From 0 to 3 feet deep
- Public Services**
- Fire
  - Police
- Political Boundary Lines**
- County
  - Corporate
  - Urban Growth Boundary
  - Forest, Park, Reservation, or  
Miscellaneous Public Land Boundary

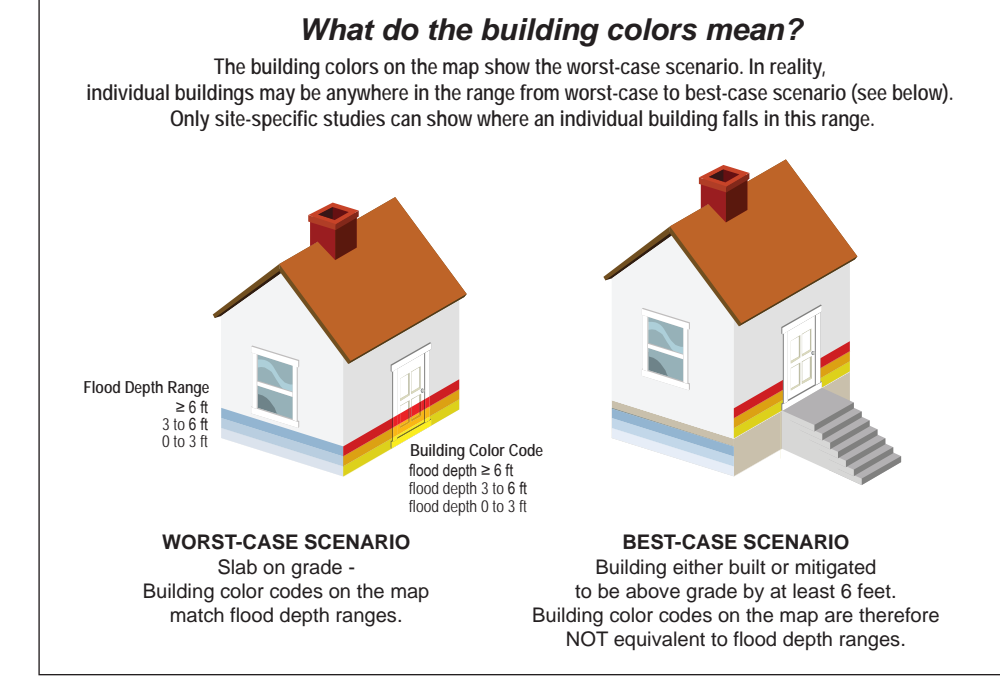


Figure 1. Worst-case and best-case scenarios for exposure to flood risk.

## 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  
systems) 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 3 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.

Table 1. 100-Year Flood Exposure Summary Table: Cumulative Assessor Parcel Exposure Analysis									
Parcels	Parcels and Buildings	Land Value (\$)	Improvements (\$)	RMV	Acres	Acres Flooded			
27	Parcels with buildings where BOTH are flood affected	1,865,055	4,788,087	6,653,142	180.83	171.74			
20	Parcels with flooding AND buildings that are not affected	1,298,077	2,502,613	3,800,690	65.56	35.31			
39	Parcels with NO buildings affected but some flooding	99,988	61,050	655,038	135.63	104.26			
1,164	Parcels with NO flooding	49,463,785	111,544,375	161,014,754	772.40	—			
1,250	Sum all	\$ 53,226,906	\$ 118,896,728	\$ 172,123,634	1,154.51	311.31			
							Acreage affected by flood	26.9%	
							%		
							3.5%	4.0%	3.9%
							2.4%	2.1%	2.2%
							1.1%	0.1%	0.4%
							92.9%	93.8%	93.5%
									100.0%

NOTE: Values shown above are for parcels that lie within the City of Myrtle Point city limits and the City of Myrtle Point Urban Growth Boundary. RMV is Real Market Value.

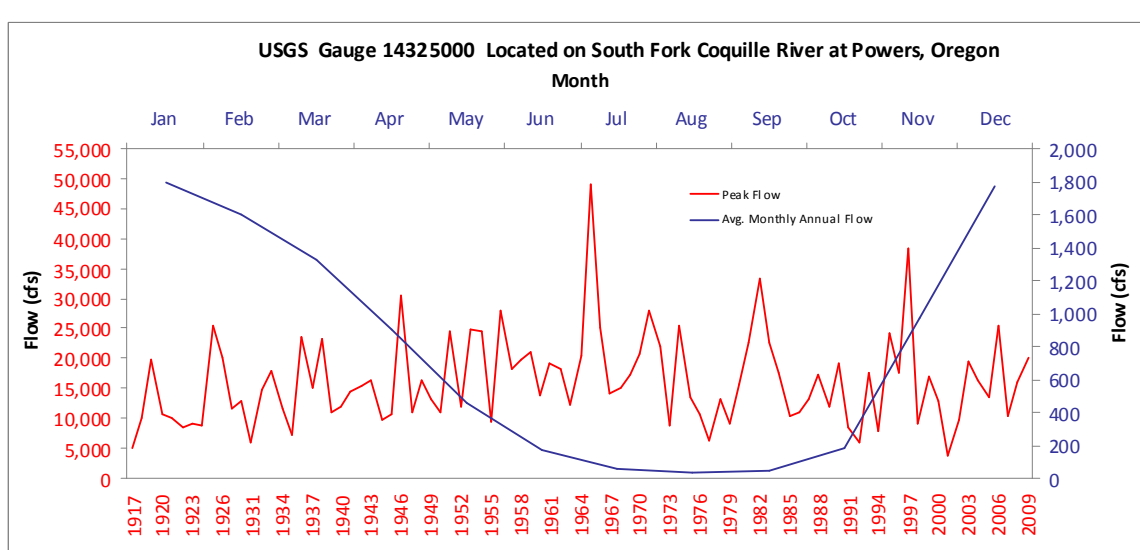


Figure 2. This figure is representative of the regional hydrology for Coos County, Oregon. The figure  
depicts historic peak flows (labels and line in red) and average annual monthly flow (labels and line in blue)  
in cubic feet per second (cfs). This figure describes both the years in which major flows occurred (i.e.,  
1964, 1996) 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.

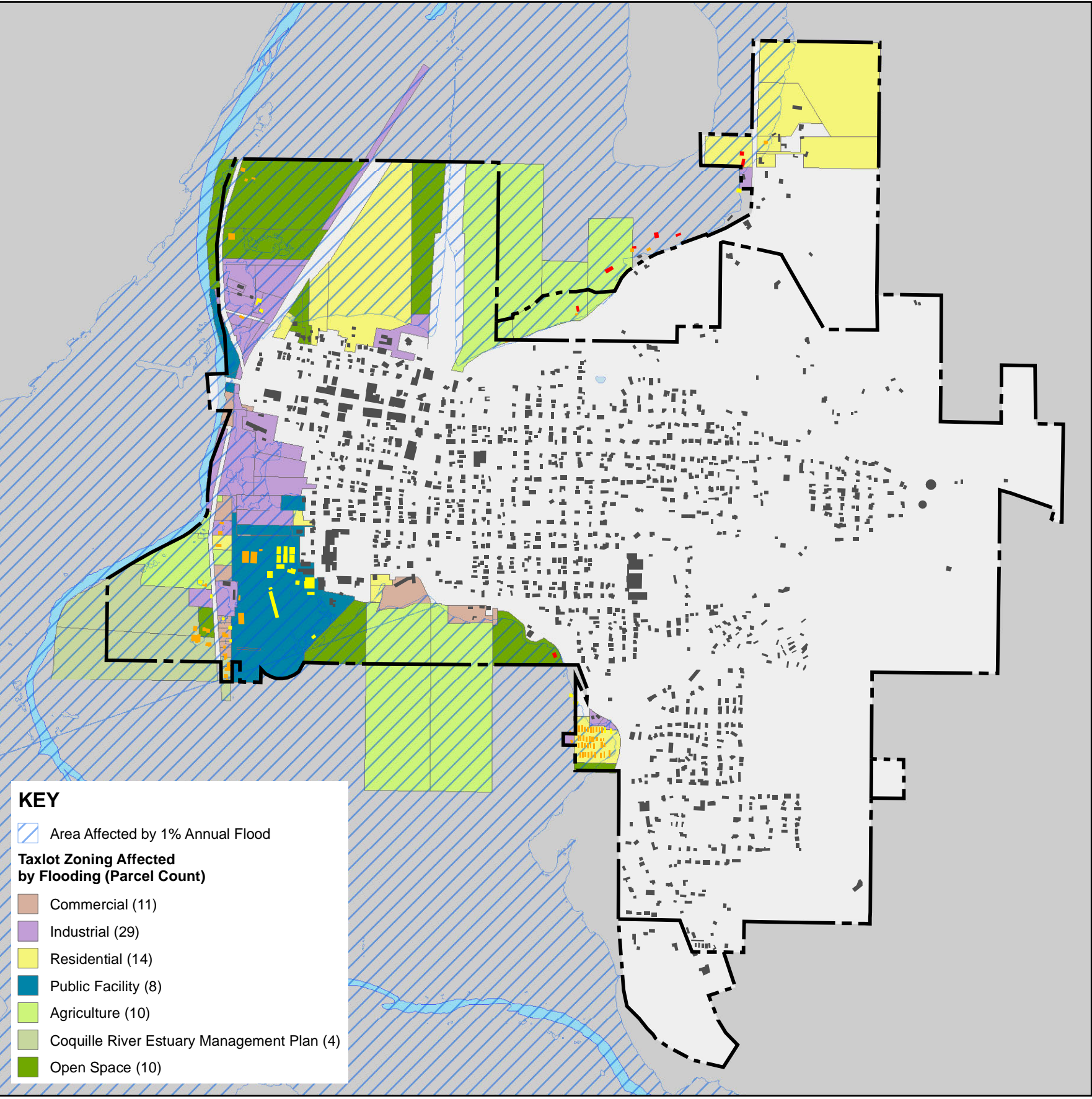


Figure 3. Taxlot zoning affected by flood.

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