

HAZARD RISK ANALYSIS

The methodology for this hazard analysis was first developed by FEMA in the early 1980s and was gradually refined by Oregon Emergency Management (OEM). Although nearly every jurisdiction in Oregon uses this process, the range of values is relative only within the individual jurisdiction unless two or more jurisdictions conduct their analyses at the same time and utilize the same criteria in determining the values to apply. It is not meant to compare one jurisdiction to another under other circumstances and these calculations and hazard analysis should not be applied to other jurisdictions, even those within the County, without familiarization with the process applied.

This particular hazard analysis is an early step in determining the risk – the potential for harm – facing a community. When complete, it provides a table of relative risks to focus planning priorities on those hazards most likely to occur and cause the most damage. This analysis, therefore, is constructed to:

- Establish priorities for planning, capability development, and hazard mitigation
- Identify needs for hazard mitigation measures
- Educate the public as well as public officials about hazards and vulnerabilities
- Make informed judgments about potential risks

In connection with the Emergency Management Performance Grant (EMPG) funding, the County's hazard analysis must be current and updated within the past ten years. However, a review of the hazard analysis concurrent to the promulgation of a new or renewed Comprehensive Emergency Management Plan provides a good opportunity to revisit the hazards, update the analysis, and reorder their priorities if necessary.

COMPLETING THE HAZARD ANALYSIS WORKSHEET

Values assigned are very subjective.
“One person’s rare event could be another’s frequent!”

DESIGNATION	RATING
LOW	0 to 3
MEDIUM	4 to 7
HIGH	8 to 10

History is the record of previous occurrences requiring a response.

Low: 0-1 event in the past 10 years
Medium: 2-3 events in the past 10 years
High: 4+ events in the past 10 years

Vulnerability is a measure of the percentage of the population and property likely to be affected during an occurrence of an incident.

Low: <1% affected
Medium: 1 – 10% affected
High: >10% affected

Maximum Threat is a measure of the highest percentage of the population or property which could be impacted under a worst-case scenario.

Low: <5% affected
Medium: 5 – 25% affected
High: >25% affected

Probability is a measure of the likelihood of a future event occurring within a specified period of time.

Low: more than 10 years between events
Medium: from 5 to 10 years between events
High: likely within the next 5 years

HAZARD ANALYSIS WORKSHEET

STEP 1: New Scores

2008 Scores

HAZARD	HISTORY WF = 2	VULNERABILITY WF = 5	MAX THREAT WF = 10	PROBABILITY WF = 7	SCORE
Earthquake	2 x	5 x	10 x	7 x	
Flood	2 x	5 x	10 x	7 x	
Landslide/Debris Flow	2 x	5 x	10 x	7 x	
Volcanic Eruption	2 x	5 x	10 x	7 x	
Wildland Fire	2 x	5 x	10 x	7 x	
Winter Storm	2 x	5 x	10 x	7 x	

2016 Scores

HAZARD	HISTORY WF = 2	VULNERABILITY WF = 5	MAX THREAT WF = 10	PROBABILITY WF = 7	RISK SCORE
Earthquake	2 x	5 x	10 x	7 x	
Flood	2 x	5 x	10 x	7 x	
Landslide	2 x	5 x	10 x	7 x	
Volcano	2 x	5 x	10 x	7 x	
Wildfire	2 x	5 x	10 x	7 x	
Severe Storm	2 x	5 x	10 x	7 x	
	2 x	5 x	10 x	7 x	
	2 x	5 x	10 x	7 x	
	2 x	5 x	10 x	7 x	

HAZARD ANALYSIS SUMMARY

STEP 2.A.: Transfer Risk Score

HAZARD	RISK SCORE
Earthquake	
Flood	
Landslide	
Volcano	
Wildfire	
Severe Storm	

STEP 2.B.: Risk Scores and Hazards in Numerical Order (High to Low)

HAZARD	RISK SCORE	RISK LEVEL (H-M-L)

STEP 3: Decide Risk Designation Breaks (High- Medium-Low)

(in table above)

Can use Low-Medium, Medium-High if needed