

APPENDIX A

REGION 5 ALL HAZARD MITIGATION PLAN 2015-2020 EDITION ACRONYM LIST

Acronym	Description
AC	Asbestos Cement
ACE	Army Corps of Engineers
ADA	Americans with Disabilities Act
AED	Automated External Defibrillator
AP	Auxiliary Power
APA	American Planning Association
ARC	American Red Cross
ASCE	American Society of Civil Engineers
ASDSO	Association of State Dam Safety Officials
ATC-20	Applied Technology Council – Procedures for Post-earthquake Safety Evaluation of Buildings
BCP	Business Continuity Plan
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BLR	Buildable Lands Report
BP	Before Present (Before 1950)
BPA	Bonneville Power Administration
BSSC	Building Seismic Safety Council
C	Critical
CDMG	California Division of Mines and Geology
CEMP	Comprehensive Emergency Management Plan
CERT	Community Emergency Response Teams
CF	Cubic Feet
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CIG	Climate Impact Group
COG	Continuity of Government
COOP	Continuity of Operations Plan
COPS	Community Oriented Policing Services
CPC	Climate Prediction Center
CPFR	Central Pierce Fire & Rescue
CPR	Cardio-pulmonary Resuscitation
CRS	Community Rating System
CTED	Community Trade and Economic Development

Acronym	Description
CVO	Cascade Volcano Observatory
D	Drought
DART	Disaster Assistance Response Team
DEM	Department of Emergency Management
DHP	Disaster Housing Program
DMA	Disaster Mitigation Act
DNR	Department of Natural Resources
DOE	Department of Ecology
DR	Disaster Declaration Number
DSR	Damage Survey Reports
E	Earthquake
EAS	Emergency Alert System
EMD	Emergency Management Division
EMP	Emergency Management Plan
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ERP	Emergency Response Plan
F	Flood
FAST Corridor	Freight Action Strategy for the Everett-Seattle-Tacoma Corridor
FAST	Functional Assessment Service Teams - Pierce County
FEMA	Federal Emergency Management Agency
FHBM	Flood Hazard Boundary Map
FIRES	Finance, Insurance, Real Estate and Services
FIRM	Flood Insurance Rate Map
FIS	Fidelity National Information Services (Flood Services)
FMA	Flood Mitigation Assistance Program
FSAC	Forest Service Avalanche Center
GEES	Geotechnical Earthquake Engineering Server
GETS	Government Emergency Telecommunications
GHMWC	Graham Hill Mutual Water Company
GIS	Geographic Information Systems
GISS	Goddard Institute for Space Studies
GPS	Global Positioning Systems
HAP	Housing Assistance Program
HIRL	High Incident Response Level
HIRA	Hazard Identification and Risk Assessment
HLS	Homeland Security
HMEP	Hazardous Materials Emergency Preparedness (Grant)
HMF	Hazard Mitigation Forum
HMGP	Hazard Mitigation Grant Program

Acronym	Description
HSGP	Homeland Security Grant Program
HVAC	Heating, Ventilation & Air Conditioning
ICS	Incident Command System
IFGP	Individual and Family Grants Program
IFPL	Industrial Fire Precaution Levels
IMT	Incident Management Team
IPCC	Intergovernmental Panel on Climate Change
JISAO	Joint Institute for the Study of the Atmosphere & Ocean
KPN	Key Peninsula North
KPS	Key Peninsula South
KVA	Kilo Volt – Amps
L	Landslide
LID	Local Improvement District
LIDAR	Light Detection and Ranging
M	Magnitude
MM	Manmade (to include terrorism)
MOU/MOA	Memorandum of Understanding/Memorandum of Agreement
MRNP	Mount Rainier National Park
MRSC	Municipal Research Services Center (of Washington)
M_s	Surface Wave Magnitude
MSDS	Material Safety Data Sheet
MSH	Mount St. Helens
M_w	Moment Magnitude
NA or N/A	Not Applicable or Not Available
NCEF	National Clearinghouse for Educational Facilities
NDMC	National Drought Mitigation Center
NEHRP	National Earthquake Hazards Reduction Program
NESDIS	National Environmental Satellite, Data and Information Services
NET	Neighborhood Emergency Teams
NFDRS	National Fire Danger Rating System
NFP	National Fire Plan
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Association
NGDC	National Geophysical Data Center
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Association
NOPP	National Oceanographic Partnership Program
NPDES	National Pollutant Discharge Elimination System
NPS	National Park Service
NRC	National Research Council
NSIDC	National Snow and Ice Data Center
NSGP	Nonprofit Security Grants Program
NSSL	National Severe Storms Laboratory

Acronym	Description
NWAC	Northwest Avalanche Center
NWS	National Weather Service
OAR	Oceanic and Atmospheric Research
OCB	Ocean Conveyor Belt
OCS	Oregon Climate Service
OFM	Office of Financial Management
ONA	Other Needs Assistance
OPSG	Operation Stonegarden
OWSC	Office of the Washington State Climatologist
PALS	Planning and Land Services
PC	Pierce County
PCFD	Pierce County Fire District
PC-NET	Pierce County Neighborhood Emergency Teams
PCSD	Pierce County Sheriff Department
PD	Police Department
PDM	Pre-Disaster Mitigation Grant Program
PPD-8	Presidential Policy Directive / PPD-8: National Preparedness
PDSI	Palmer Drought Severity Index
PLU	Pacific Lutheran University
PMEL	Pacific Marine Environmental Laboratory
PNSN	Pacific Northwest Seismic Network
PNW	Pacific Northwest
Ppm	Parts per million
PSAP	Public Safety Answering Point
PSCORT	Pierce County Search & Operation Teams
PSE	Puget Sound Energy
PSGP	Port Security Grant Program
PSRC	Puget Sound Regional Council (FAST Corridor consolidated in the PSRC)
PTA	Parent Teacher Association
PW	Project Worksheets
RCW	Revised Code of Washington
S	Shelter
SCADA	Supervisory, Command & Data Acquisition
SBA	Small Business Association
SFHA	Special Flood Hazard Area
SHSP	State Homeland Security Program
SIC	Standard Industrial Classification
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control & Countermeasure
SR	State Route
SW	Severe Weather
T	Tsunami
TAC	Tactical Unit

Acronym	Description
TBD	To Be Determined
TIME	Tsunami Inundation Mapping Efforts
TMR	Tacoma Mountain Rescue
TPCHD	Tacoma Pierce County Health Department
TSGP	Transit Security Grant Program
U/I	Urban Interface
UASI	Urban Areas Security Initiative
UCAR	University Corporation for Atmospheric Research
UGA	Undeveloped Geographical Area
UNFCCC	United Nations Framework Convention on Climate Control
USDA	United States Department of Agriculture
USFA	United States Fire Administration
USFS	United States Forest Service
USGS	United States Geological Survey
UWPCC	University of Washington Program on Climate Change
V	Volcano
VAC	Volts Alternating Current
VIPS	Volunteers in Police Service Program
WABO	Washington Association of Building Officials
WAC	Washington Administrative Code
WCI	Western Climate Initiative
WDFW	Washington Department of Fish & Wildlife
WESC	Washington Economic Steering Committee
WMA	Watershed Management Act (of 1998)
WRCC	Western Regional Climate Center
WRH	Western Region Headquarters (National Weather Service)
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WSP	Washington State Patrol
WUI	Wildland/Urban Interface
WW	Wastewater

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APPENDIX B

REGION 5 ALL HAZARD MITIGATION PLAN 2015-2020 EDITION MAPS, FIGURES AND TABLES

Geological Hazards	
Map, Figure or Table Title	Page Number
AVALANCHE	
Figure 4.G1-1 Slab Avalanche	Pg. 4.G1-3
Map 4.G1-1 Areas Vulnerable to Avalanche	Pg. 4.G1-5
Table 4.G1-1 Pierce County Avalanches of Record	Pg. 4.G1-7
EARTHQUAKE	
Figure 4.G2-1 Types of Earthquakes	Pg. 4.G2-2
Map 4.G2-1 Major Faults in the Puget Sound Basin	Pg. 4.G2-4
Map 4.G2-2 Seattle and Tacoma Fault Segments	Pg. 4.G2-5
Map 4.G2-3 Pierce County Seismic Hazard	Pg. 4.G2-6
Map 4.G2-4 Major Pacific Northwest Earthquakes	Pg. 4.G2-7
Table 4.G2-1 Notable Earthquakes Felt in Pierce County	Pg. 4.G2-8
Figure 4.G2-2 Salmon Beach, Tacoma Washington – Following Feb. 2001 Earthquake	Pg. 4.G2-11
Figure 4.G2-3 Liquefaction, Niigata Japan 1964	Pg. 4.G2-14
Figure 4.G-4 Lateral Spreading – March 2001	Pg. 4.G2-14
LANDSLIDE	
Figure 4.G3-1 Northeast Tacoma – Landslide 01/2007	Pg. 4.G3-2
Table 4.G3-1 Notable Landslides in Pierce County	Pg. 4.G3-4
Map 4.G3-1 Pierce County Landslide and Soil Erosion Hazard	Pg. 4.G3-5
Map 4.G3-2 Pierce County Shoreline Slope Stability Areas	Pg. 4.G3-6
Figure 4.G3-2 Ski Park Road – Landslide 01/31/03	Pg. 4.G3-7
Figure 4.G3-3 SR-165 Bridge Along Carbon River – Landslide 2/1996	Pg. 4.G3-9
Figure 4.G3-4 Aldercrest Drive – Landslide	Pg. 4.G3-9

Geological Hazards	
Map, Figure or Table Title	Page Number
TSUNAMI	
Figure 4.G4-1 Hawaii 1957 – Residents Explore Ocean Floor Before Tsunami	Pg. 4.G4-2
Figure 4.G4-2 Hawaii 1949 – Wave Overtakes a Seawall	Pg. 4.G4-3
Figure 4.G4-3 Puget Sound Fault Zone Locations, Vertical Deformations, and Peak Ground Acceleration	Pg. 4.G4-5
Map 4.G4-1 Seattle and Tacoma Faults	Pg. 4.G4-6
Figure 4.G4-4 Tsunami Inundation and Current Based on Earthquake Scenario	Pg. 4.G4-7
Figure 4.G4-5 Puget Sound Landslide Areas and Corresponding Tsunamis	Pg. 4.G4-9
Figure 4.G4-6 Puget Sound River Deltas, Tsunami Evidence, and Peak Ground Acceleration	Pg. 4.G4-10
Figure 4.G4-7 Salmon Beach, Pierce County, 1949 – Tsunamigenic Subaerial Landslide	Pg. 4.G4-12
Figure 4.G4-8 Puyallup River Delta – Submarine Landslides	Pg. 4.G4-14
Figure 4.G4-9 Puyallup River Delta – Submarine Landslides and Scarp	Pg. 4.G4-15
Figure 4.G4-10 Damage in Tacoma from the 1894 Tsunami	Pg. 4G.4-17
VOLCANIC	
Figure 4.G5-1 Volcanic Hazards	Pg. 4.G5-2
Figure 4.G5-2 Debris flow at Tahoma Creek, July 26,1988	Pg. 4.G5-3
Figure 4.G5-3 Douglas Fir Stump – Electron Lahar Deposit in Orting	Pg. 4.G5-3
Figure 4.G5-4 Landslide from Little Tahoma Peak Covering Emmons Glacier	Pg. 4.G5-4
Table 4.G5-1 Tephra Types and Sizes	Pg. 4.G5-5
Map 4.G5-1 Lahars, Lava Flows, and Pyroclastic Hazards of Mt. Rainier	Pg. 4.G5-6
Table 4.G5-2 Estimated Lahar Travel Times for Lahars 10(7) to 10(8) Cubic Meters in Volume	Pg. 4.G5-8
Map 4.G5-2 Ashfall Probability From Mt. Rainier	Pg. 4.G5-9
Map 4.G5-3 Annual Probability of 10 Centimeters or more of Tephra Accumulation in the Pacific NW	Pg. 4.G5-9
Figure 4.G5-5 Cascade Eruptions	Pg. 4.G5-10
Table 4.G5-4 Mt. Rainier Identified Tephra, last 10,000 years	Pg. 4.G5-10
Table 4.G-5 Pierce County River Valley Debris Flow History	Pg. 4.G5-11

Meteorological Hazards	
Map, Figure or Table Title	Page Number
CLIMATE CHANGE	
Figure 4.M1-1 Global Temperature Change: 1850 to 2006	Pg. 4.M1-2
Table 4.M1-1 Recent and Projected Temperatures for the Pacific Northwest	Pg. 4.M1-5
Figure 4.M1-2 Comparison of the South Cascade Glacier: 1928 to 2003	Pg. 4.M1-9
Figure 4.M1-3 Lower Nisqually Glacier Retreat: 1912 to 2001	Pg. 4.M1-10
DROUGHT	
Figure 4.M2-1 Sequence of Drought Impacts	Pg. 4. M2-3
Table 4.M2-1 Palmer Drought Severity Index	Pg. 4. M2-4
Table 4. M2-2 % Area of Basin in Drought Conditions Since 1985	Pg. 4. M2-5
Map 4. M2-1 Pierce County Watersheds	Pg. 4. M2-6
Map 4. M2-2 % of Time in Severe to Extreme Drought: 1895-1995	Pg. 4. M2-7
Map 4. M2-3 % of Time in Severe to Extreme Drought: 1985-1995	Pg. 4. M2-7
Table 4. M2-3 Notable Droughts Affecting Pierce County	Pg. 4. M2-8
Figure 4.M2-2 National Drought Mitigation Center Drought Impact Reporter	Pg. 4.M2-9
Map 4. M2-4 Columbia River Basin	Pg. 4. M2-11
Map 4. M2-5 USDA Climate Zones – Washington State	Pg. 4.7 M2-16
FLOOD	
Map 4.M3-1 Pierce County Watersheds	Pg. 4.M3-4
Map 4.M3-2 Pierce County Flood Hazard	Pg. 4.M3-5
Map 4.M3-3 Pierce County Repetitive Loss Areas	Pg. 4.M3-6
Map 4.M3-4 Clear Creek Basin	Pg. 4.M3-9
Map 4.M3-5 Repetitive Flood Loss Aerial Photo	Pg. 4.M3-10
Table 4.M3-1 Flood Hazard Declared Disasters	Pg. 4.M3-13
Figure 4.M3-1 Feb 8, 1996 Flooding – Del Rio Mobile Homes Along Puyallup River	Pg. 4.M3-14
Figure 4.M3-2 Nov. 2006 Flooding River Park Estates – Along Puyallup River	Pg. 4.M3-16
Figure 4.M3-3 Nov. 2006 Flooding State Route 410 – Along Puyallup River	Pg. 4.M3-18
Figure 4.M38-4 Nov. 2006 Flooding Rainier Manor – Along Puyallup River	Pg. 4.M3-19

SEVERE WEATHER	
Table 4.M4-1 Fujita Tornado Damage Scale	Pg. 4.M4-3
Figure 4.M4-1 Windstorm Tracks	Pg. 4.M4-4
Map 4.M4-1 Pierce County Severe Weather Wind Hazard – South Wind Event	Pg. 4.M4-5
Map 4.M4-2 Pierce County Severe Weather Wind Hazard – East Wind Event	Pg. 4.M4-6
Table 4.M4-2 Notable Severe Weather in Pierce County	Pg. 4.M4-7
Figure 4.M4-2 Snowstorm 01/2004 Downtown Tacoma	Pg. 4.M4-10
Figure 4.M4-3 Satellite Image – Hanukkah Eve Windstorm	Pg. 4.M4-11
Figure 4.M4-4 Before/After Tornado Damage Greensburg, KS 05/04/07	Pg. 4.M4-13
Figure 4.M4-5 Public Works Responds 2005 Snowstorm	Pg. 4.M4-14
Figure 4.M4-6 Downed Power Pole 02/2006 Windstorm	Pg. 4.M4-17
Figure 4.M4-7 County Road December 2006 Windstorm	Pg. 4.M4-19
Figure 4.M4-8 Tacoma Narrows Bridge – November 7, 1940 Windstorm	Pg. 4.M4-22
WILDLAND URBAN INTERFACE FIRE	
Map 4.M5-1 Washington State Fire Hazard Map Pg. 4.M5-3	Pg. 4.M5-3
Map 4.M5-2 Pierce County Forest Canopy	Pg.4.M5-4
Map 4.M5-3 Industrial Fire Precaution Level Shutdown Zones	Pg. 4.M5-5
Figure 4.M5-1 Carbon Copy Fire August 2006	Pg. 4.M5-6
Map 4.M5-4 Washington State DNR Wildland Fire Statistics: 1973-2007	Pg. 4.M5-7
Table 4.M5-1 DNR Wildland Response South Puget Sound Region: 2002-2007	Pg. 4.M5-7
Table 4.M5-2 Pierce County DNR Fires	Pg. 4.M5-8

Technological Hazards	
Map, Figure, or Table Title	Page Number
ABANDONED MINES	
Figure 4.T1-1 Warning Sign Posted at Mine Entrance	Pg. 4.T1-2
Table 4.T1-1 Some Pierce County Named Coal Mines	Pg. 4.T1-3
Figure 4.T1-1 Lady Wellington Mine Tipple	Pg. 4.T1-4
Map 4.T1-1 Mine Hazard Areas of Pierce County	Pg. 4.T1-5
Figure 4.T1-3 Pacific Coast Coal Mine Tipple, Carbonado	Pg. 4.T1-7
CIVIL DISTURBANCE (This section contains no maps, figures or tables)	
Map 4.T2-1 Civil Disturbance Hazard Areas of Pierce County	Pg. 4.T2-3
DAM FAILURE	
Figure 4.T3-1 Reasons for Dam Failures Nationally	Pg. 4.T3-2
Table 4.T3-1 Pierce County Dams that Pose a High or Significant Risk to the Public	Pg. 4.T3-3
Map 4.T3-1 Pierce County High and Significant Risk Dams	Pg. 4.T3-4
Table 4.T3-2 Select Dam Failures in Washington State	Pg. 4.T3-5
Figure 4.T3-2 Mud Mt. Dam Intake	Pg. 4.T3-6
ENERGY EMERGENCY	
Figure 4.T4-1 The Carrier Lexington Providing Electricity to the City of Tacoma	Pg. 4.T4-3
Figure 4.T4-2 Solar Panels, the New Face of Power Generation	Pg. 4.T4-4
PANDEMIC/EPIDEMIC	
Figure 4.T5-1 Individuals Hoping to Avoid Contacting Disease	Pg. 4.T5-5
HAZARDOUS MATERIALS	
Table 4.T6-1 Environmental Protection Agency's Toxic Release Inventory, for Pierce Co. in 2013	Pg. 4.T6-3
Table 4.T6-2 Environmental Protection Agency's Identified Top Five Facilities	Pg. 4.T6-3
Figure 4.T6-1 Exxon Valdez Oil Spill, 1989	Pg. 4.T6-3
Figure 4.T6-2 Dalco Passage Oil Spill Clean Up	Pg. 4.T6-5
PIPELINE EMERGENCY	
Table 4.T7-1 Cities & Towns with Interstate Pipelines within, or within 1 Mile of City Limits	Pg. 4.T7-3

Figure 4.T7-1 Olympic Pipeline Rupture 06/10/99	Pg. 4.T7-3
Map 4.T7-1 Pierce County Pipelines	Pg. 4.T7-5
Figure 4.T7-2 Whatcom Falls Park, 2003	Pg. 4.T7-7
TERRORISM ATTACKS	
Figure 4.T8-1 World Trade Center, 9/11/2001	Pg. 4.T8-2
Figure 4.T8-2 Alfred P. Murrah Building, Oklahoma City	Pg. 4.T8-3
Table 4.T8-1 Select U.S. Terrorist Incidents	Pg. 4.T8-4
Figure 4.T8-3 Responders search 'the pile' at the WTC	Pg. 4.T8-6
TRANSPORTATION DISRUPTIONS	
Table 4.T9-1 Airports in Pierce County	Pg. 4.T9-2
Table 4.T9-2 Ferry Service in Pierce County	Pg. 4.T9-4
Figure 4.T9-1 Train Wreck on Mounts/Old Nisqually Road	Pg. 4.T9-5

APPENDIX C

REGION 5 ALL HAZARD MITIGATION PLAN 2015-2020 EDITION GLOSSARY

A

Anthropogenic – Resulting from human influence on nature.

Aquifer – An underground layer of water permeable rock or unconsolidated material, like sand or gravel, from which ground water can be extracted.

Attenuate – To lessen, the amount, force, magnitude or value of something. In the case of earthquake waves it has to do with their decrease in size and energy as they progress out from the Focus over time and distance.

B

Benioff Zone – A deep active seismic area within a subducting plate; also called Benioff-Wadati Zone or Wadati-Benioff Zone.

Biotic Zone – An area easily defined by the similar plants and animals living throughout it.

Brownout – A period of lowered illumination from reduced electrical distribution when demand exceeds a utility's ability to respond to that demand.

C

Clastic – Rock composed of fragments of older rocks.

Climate Change – A generic term, that refers to the variations in weather, on either regional or global scales, over time.

Cordilleran Ice Sheet – The large ice sheet that covered much of North America and expanded south from British Columbia into Western Washington around 15,000 years ago, extending south into Thurston County. See Fraser Glaciation.

Cornice – A mass of snow projecting over a ridge.

Coseismic Subsidence – Subsidence happening simultaneously with an earthquake.

Coseismic Uplift – Surface uplift happening simultaneously with an earthquake.

Critical Facilities – Those facilities, or portions of the infrastructure, that must be continually maintained for the preservation of the community.

D

Deltaic – Relating to or having aspects of a delta.

Disaster – The impact on a community of one or more hazards that outstrips the community's ability to cope with injury, death, property damage, or disruption to essential functions. It is the intersection of a hazard with the human environment that produces a disaster.

Drift – The general term for unconsolidated sediment transported by glaciers and deposited directly on land or in the sea.

Duff - Partially and fully decomposed organic matter on forest floor.

E

Epicenter – The point on the earth's surface directly over an earthquake's Focus.

F

FEMA Region X – FEMA Administrative Region consisting of the states of Alaska, Idaho, Oregon and Washington.

Focus – The point along a fault where an earthquake first occurs.

Fraser Glaciation – The period of extensive glacial advance, retreat and readvance into the Puget lowlands, lasting approximately 10,000 years and ending around 11,000 years ago. See Cordilleran Ice Sheet.

Fuel Moisture Content – The quantity of moisture in the fuel expressed as a percent of the overall oven dried weight.

G

Glacial Outburst Flood – A sudden release of water that was impounded within the confines of a glacier, causing a debris flow. These are not usually of great size.

Glacial Outwash – Stratified material, generally composed of sand and gravel, carried away from a glacier by the meltwater stream and deposited at some point downstream.

Graupel – Granular snow pellets, also called soft hail.

H

Hazard – A condition, natural or technological, that has the potential to threaten human life and property.

HLS Region 5 – See Homeland Security Region 5.

Hoarfrost - A deposit of interlocking ice crystals (hoar crystals) formed on objects, which have a surface sufficiently cooled, mostly by nocturnal radiation, to cause the direct sublimation of the water vapor contained in the ambient air. In the case of hoarfrost development on the surface of a

hillside covered by previously fallen snow, it can form a very weak layer that when covered by a new layer of snow may increase the tendency for the slope to avalanche.

Homeland Security Region 5 – The geographic area of Pierce County.

Hydrothermal Alteration – The process where water percolating down through cracks in volcanic rock is heated to steam, becomes a weak sulfuric acid solution that then begins to change the chemical composition of the rock, transforming it into clay.

Hyperconcentrated Stream Flow – An intermediate level between a normal stream flow and a debris flow. They are flows with a sediment load usually ranging between 4% and 60% by volume or 10% and 80% by weight.

I

Interplate – The processes that occur on the boundary area between two tectonic plates.

Intraplate – Occurring within a tectonic plate.

Infrastructure – The underlying physical structure that supports a community and maintains the community's quality of life.

L

Lapilli – Tephra ranging in size from 2 to 64 millimeters in size.

Lateral Spreading – Essentially a landslide that occurs on very shallow or level slopes due to the horizontal movement of the ground surface from liquefaction. See Liquefaction.

Liquefaction – The tendency for soft soils, especially with a high water content, to soften further or liquefy, with ground shaking so as to be unable to support structures built on them. Water within the soils is frequently expressed to the surface and may form small boils of sand or mud.

Liquefiable Soils – Soil types that tend to soften or lose structural integrity with ground shaking. See Liquefaction.

M

Magmatic – Relating to magma. In the case of volcanoes Magmatic Events are eruption related events.

Magnitude – A measure of size. To measure the size of an earthquake a number of Magnitude Scales are used. These include, among others, the Richter scale, the Body Wave Magnitude Scale and the Moment Magnitude Scale. Each one measures a different portion of an earthquake. The Moment Magnitude Scale is the closest to measuring an earthquake's size because it measures the actual energy released by the earthquake.

Mitigation – Those actions taken to reduce or eliminate the long-term risk to people, property, the social infrastructure, or the environment from hazards and their effects.

N

Natural Hazard – Hazards that are part of the natural environment.

O

Ocean Conveyor Belt - The global recirculation of water masses that determines today's climate.

P

Peak Ground Acceleration – Measurement of ground acceleration created by earthquake waves as a percent of gravity. Acceleration is usually along all three axes, albeit at different rates.

Pluton – A body of igneous rock formed beneath the surface of the earth by the consolidation and cooling of magma.

Pre-Adoption Review – A review of a plan by the Washington State Emergency Management Division and FEMA to correct any errors or omissions prior to local adoption.

Probability of Exceedance – The percentage chance that something will occur more frequently than at a specified level. For example a 2% Probability of Exceedance for a specific peak ground acceleration in 10 years means that there is a 1 in 50 chance that there will be an earthquake strong enough to cause higher peak ground acceleration than the specified level during a ten year period.

Private Sector – Those portions of the community that are owned, controlled or funded by individuals or businesses.

Public Sector – Those portions of the community that are controlled and/or funded by the community at large.

Q

Quaternary (Period) – A geologic period and is divided into two epochs: the Pleistocene (2.588 million years ago to 11.7 thousand years ago) and the Holocene (11.7 thousand years ago to today).

R

Region 5 – See Homeland Security Region 5.

Repetitive Loss Properties – A classification under the National Flood Insurance Program of properties that flood multiple times.

Revetment – The armoring by placing a stone facing on an embankment to prevent erosion.

Rise – The % increase in steepness of a slope compared with the horizontal.

Risk – The probability that any physical, structural or socioeconomic element will be damaged, destroyed or lost to a natural technological or socially derived hazard.. Risk is a combination of the susceptibility (vulnerability) of a jurisdiction and its infrastructure, assets, citizens or environment from a particular threat (hazard) and the potential effects (consequences) if that threat materializes.

Robert T. Stafford Disaster relief and Emergency Assistance Act as Amended – The federal legislation that constitutes the statutory authority for most Federal disaster response activities, especially as they pertain to FEMA and FEMA programs.

S

Saltation – On snowfields, the tendency for particles to be picked up and bounced along the surface by the wind.

Section 322 – That section of the Stafford Act outlining the requirements that state and local mitigation plans must follow if they wish to be eligible for federal mitigation monies.

Seiche - An oscillating water wave in an enclosed or partially enclosed body of water.

Serac – A large ice block or pinnacle in a glacier formed at the intersection of two or more crevasses. Since they form on steep convex slopes they tend to be very unstable and frequently collapse.

Stafford Act – See Robert T. Stafford Disaster relief and Emergency Assistance Act as Amended.

Subaerial Landslide – A landslide located above the still water line of a lake or other body of water. The term is generally used in connection with tsunamis generated by landslides entering a body of water.

Subduction – The process where one tectonic plate slides under another.

Sublimation - The transition of a substance from the solid phase directly to the vapor phase, or vice versa, without passing through an intermediate liquid phase.

Submarine Landslide – A landslide located below the still water line of a lake or other body of water.

Subsidence – A sinking of the land.

T

Tectonic Plate – Any of a number of large pieces of the earth's crust that slowly moves, or slides, independent of other pieces, across the earth's mantle.

Tephra – Airborne volcanic ejecta of any size.

Tertiary (Period) – An interval of geologic time, lasting from 65 to c.2 million years ago.

Till – Glacially deposited unstratified material consisting of sand, clay, gravel and boulders mixed together.

Tsunami – A wave caused by an unusual disturbance of the water, usually caused by an earthquake, landslide or undersea volcanic eruption.

Turbulent Suspension – The picking up from the ground and suspension of snow particles in the air by the continued upward movement of air near the surface.

V

Volcanoclastic – A clastic rock containing volcanic fragments.

Vulnerability – The susceptibility of a jurisdiction, its assets, infrastructure, citizens or environment to damage, destruction, or incapacitation from a particular hazard.

W

Water Purveyor – A utility, either public or private, that acts as a water distribution source for a select community or geographic area.

Waterspout – A tornado that is on a body of water.

WUI Fire (Wildland/Urban Interface Fire) - A fire located in a geographic area with a mixture of human developed land combined with natural vegetative fuels such as forest or grassland.

PROCEDURE TO ADD JURISDICTION

This procedure was developed in cooperation with the Washington State military Department, Emergency Management Division following the development and adoption of the original **Region 5 Hazard Mitigation Plan** in 2008. This procedure has been incorporated into the Plan as part of the update procedure.

1. The jurisdiction wishing to join the Plan contacts the Pierce County Department of Emergency Management with the request to become a participant of the Plan.
2. The Pierce County Department of Emergency Management provides the jurisdiction with a copy of the approved Plan, planning requirements, and any other pertinent data.
3. The jurisdiction reviews the Plan and develops the portions of the Plan that are specific to the community as directed by Pierce County Department of Emergency Management staff. This portion of the Plan must meet the requirements of the current FEMA Local Multi-Hazard Mitigation Planning Guidance including a public process.
4. The new jurisdiction submits its portions of the Plan to the Pierce County Department of Emergency Management and the new jurisdiction Plan is forwarded to the State Hazard Mitigation Program Manager for review and compliance with current FEMA Local Multi-Hazard Mitigation Planning Guidance.
5. The State Hazard Mitigation Program Manager reviews the new jurisdiction Plan for compliance with current Local Multi-Hazard Mitigation Planning Guidance in conjunction with the **Region 5 Hazard Mitigation Plan**. If the new jurisdiction Plan does not meet the required standard, the State Hazard Mitigation Program Manager will work with the jurisdiction to resolve issues until it meets the requirements.
6. The State Hazard Mitigation Program Manager forwards the new jurisdiction Plan to FEMA Region X for review and approval.
7. Upon approval from FEMA Region X, the new jurisdiction is considered part of the **Region 5 Hazard Mitigation Plan** and will comply with the update schedule of the Plan and the Region 5 Hazard Mitigation Planning Forum.