

How does the damage of landslides compare to other natural disasters?

GREATER THAN ALL OTHER NATURAL DISASTERS COMBINED

What is the type of slide that causes the problem on Bainbridge Island?

STEEP CLIFFS BATTERED BY RAIN AND CUT BY WAVES

What is overriding cause of landslides?

GRAVITY—IT IS INEXORABLE

In Vista Royale, what conditions contribute to landslide dangers?

PREVIOUS LANDSLIDE DEPOSITS, RESERVOIR ABOVE LEAKING WATER AND ADDING WEIGHT, SPRINKLERS FROM LANDSCAPING ADDING WATER AND MASS

What method was researched in Oregon to prevent landslides?

COMPACTION OF SOILS

What ingredient is common to most landslides? WATER

How do structures react to slow landslides? POORLY

List signs that are used to identify areas prone to landslides:

SHAPE OF LANDSCAPE: DRAINAGE IS DISRUPTED WITH FORMATION OF PONDS, CHANGE IN DIRECTION OF STREAM AT THE BOTTOM, BULBOUS TOE OF SLIDE, CLIFF ESCARPMENT AT TOP, 'RAILROAD TRACKS' OF THE SLIDE IN THE CANYON

In the Los Angeles area, why are the mountain ranges so prone to landslides?

VERY STEEP SLOPES OF SAN GABRIEL MOUNTAINS CREATED BY THE TECTONIC INTERACTION OF THE PACIFIC PLATE AND THE NORTH AMERICAN PLATE, WITH LOTS OF UNCONSOLIDATED MATERIAL

What was done to minimize the danger to residences in landslide paths?

CONSTRUCTION OF DEBRIS-CATCHMENT BASINS

Does this help? OFTEN, BUT NOT ALWAYS Explain?

THE DEBRIS FLOW CAN OVERTOP IT, BECAUSE IT FLOWS IN SUDDENLY, OR IS TOO MASSIVE. THIS HAPPENED IN 1978 WHEN THERE WERE EXTREME RAIN STORMS

What differences affect coastal Washington?

AREA BUILT ON ANCIENT GLACIAL DEPOSITS, LOTS OF WATER AVAILABLE, CLAY LAYER BELOW THE UNCONSOLIDATED MATERIAL

What methods are used to study the Washington coast slide area?

DRILL HOLES TO PLACE INCLINOMETERS, EXPLOSIVES AND GEOPHONES (MOTION SENSORS) TO MEASURE ACOUSTIC WAVE TRIGGERED BY THE EXPLOSIONS

What is the “most extreme landslide hazard of all”? STRATOVOLCANOES

These create a type of landslide called: LAHAR: VOLCANIC DEBRIS FLOW

Which mountain is considered the most dangerous in the United States for this type of landslide?

MOUNT RAINIER

How is it that these types of landslides are created?

OFTEN VOLCANIC ERUPTION MELTS SNOW AND ICE, LIBERATING LIQUID WATER TO LUBRICATE THE UNCONSOLIDATED DEBRIS. HOWEVER, SUDDEN SNOWMELT FROM RAINFALL CAN CAUSE IT TO OCCUR ALSO—AS IS EVIDENCED IN THE PHILIPPINES LATER IN THE FILM

What evidence is there that this has happened before?

CONSTRUCTION OF WASTELINE UNEARTHED ANCIENT TREE TRUNKS IN LAHAR DEPOSITS. THE MOST RECENT TREE UNEARTHED WAS ABOUT 600 YEARS OLD. IT SEEMS THEY OCCUR ABOUT EVERY 500 YEARS

How is the date of the event determined? TREE-RING CHRONOLOGY: MATCHING RING PATTERN TO KNOWN AGE OF TREES

Is it likely that another event will happen in the Orting area?

VERY LIKELY

What processes may cause Mount Rainier to have landslides?

VOLCANIC ERUPTION LOOSENING ROCK OR MELTING SNOW, OR EARTHQUAKE LOOSENING ROCK, OR LOTS OF RAINFALL. CHEMICAL WEATHERING CREATING CLAY, WHICH IS SLIPPERY WHEN WET

What new method has been developed to detect landslide potential on Mount Rainier?

MAGNETOMETER SURVEY DETECTING ALTERED ROCK THAT IS ALTERED AND LOOSENED BY CHEMICAL WEATHERING

Could the people of Armero, below Nevado del Ruiz, have been safe? YES How?

A WARNING OF LESS THAN 5 MINUTES WOULD HAVE ALLOWED THEM TO WALK TO SAFE HIGH GROUND

How much time would acoustical flow monitors (AFMs) give to the town of Orting?

AN HOUR OR MORE

Why do people live in these kinds of areas anyway?

SCENIC PROPERTY, FERTILE SOILS, PROXIMITY TO URBAN AREAS, LOW PROPERTY COSTS