**Cascadia Subduction Zone Earthquake Documentary Viewing Questions**

<http://www.youtube.com/watch?v=vEgLjgnv_3c>

*Some of the questions below will reappear in similar form on upcoming exam.*

How many miles long is the Cascadia Subduction Zone?

Originally, why was the Cascadia Subduction Zone identified as not having earthquakes?

But what local group of people may have known otherwise? Explain.

Summarize: a) what geologist Brian Atwater learned, b) in what part of what state he worked in, and c) his methods/source of data.

Under the salt marsh layers, what new type did he find? (after 9 minutes into the video) And what about the beach sand layer(s) - explain why these findings are evidence of a tsunami.

Approximately when did carbon dating suggest the tsunami happened?

From what part of the world did the next line of evidence of a tsunami originating near the PNW coast happen?

What is an orphan tsunami? At least how many total written accounts exist of the event described?

What is the final piece of evidence? (two word term). Describe why they are named as they are, and what caused them to be what they are today. How many miles of coast have these peculiar characteristics?

What does Professor Yamaguchi do to investigate the age of these remnants?

What year does Yamaguchi come up with as the year of death?

What was the exact date and time that has been worked out for the last Cascadia subduction quake?

What was the magnitude of the Kobe earthquake that devastated the Japanese economy and killed thousands?

A Cascadia quake of magnitude 9 would be more than \_\_\_\_\_\_\_ times bigger than the Kobe quake.

Summarize the damage of a Cascadia quake-generated tsunami on the major cities of the PNW, such as Portland, Seattle and Vancouver, and explain why.

A full rupture of the Cascadia subduction zone would last approximately how many minutes?

What are URM buildings and why are they particularly at risk?

Approximately how many years of earthquake history does Atwater find on the Washington coast?

In a Cascadia subduction zone quake, describe what actually lifts up the water. By how many meters might the water be expected to lift up?

How fast do tsunami waves travel?

What advice is given to people in buildings, vs. people outside, when the earth starts shaking?

While the tsunami wave far offshore is a few meters at most in height, what causes the wave to rise up as it approaches the beach? How long is the wave near or at peak height, in minutes?

If you are at the coast, what is your first clue that a tsunami might be coming?