

EARTHQUAKE HAZARDS IN THE NORTHWEST

These questions are for the article "Was Last Year's Nisqually Quake 'the Big One'? Hardly". Answer these questions on a separate sheet of paper to turn in next period.

First part of article

1. Up until recently, how has the Pacific NW designed their earthquake codes and emergency management plans?

"Tectonic Squeeze Play"

2. What did the construction of the Satsop Nuclear Plant reveal about NW geology?

"Ghost forest yields clues"

3. What clues did the Ghost forests in Copalis and Willapa Bay provide about NW earthquake history?
4. When did Atwater/Yamaguchi/Jacoby determine the trees died from a "catastrophic event"? How did they determine this?
5. What evidence did Kenji Satake provide to seal the evidence that a megathrust quake hit Puget Sound on 1/27/1700?

"Seattle finds its fault"

6. Name three pieces of evidence that point to a catastrophic earthquake that occurred around 1100 years ago.
7. If an event of such magnitude were to happen today, what areas would be hardest hit? How much ground movement could occur?

"Devastating triple threat"

8. What does the triple threat consist of?
9. What two questions still need to be addressed about mega thrust events?

"Quake Scenarios: Type determines extent of damage" (one of the graphics at the end of the article)

10. What type of earthquake was the Nisqually quake?
11. Describe how Deep, Shallow, and Subduction (megathrust) quakes differ in where they occur within a tectonic setting.
12. Why would subduction zone earthquakes be far more powerful than deep quakes? (hint: what kind of rock is being displaced?)
13. Which type of quake would result in the most structural damage? Why?