

Pacific Northwest in fear of massive earthquake, tsunami

CBS News, 1-22-16

In the Pacific Northwest, communities are debating how to save lives from a tsunami triggered by a massive earthquake that's overdue.

During their regular earthquake and tsunami drills, students at an elementary school in Westport, Washington, practice going to the top floor. But with the Pacific Ocean just a few thousand feet away, scientists say these drills might be futile — because the inevitable tsunami could be higher than the school.

“Scientists tell us it will happen at some point,” school superintendent Paula Akerlund tells CBS News. “It’s very unpredictable as to when. So we, we need to be prepared.”

Akerlund says construction workers are racing to finish a vertical evacuation structure — the first of its kind in North America. The shelter sits on the roof of a new school, rising 44 foot high with 14 inch thick walls. Thousands of students and residents seeking refuge could be saved.

Like the Japanese earthquake and tsunamis in 2011 that killed nearly 16,000 people, seismologists say there is an impending disaster coming this way.

Seventy miles off America’s Pacific Northwest — from Northern California To Vancouver Island — is the fault line known as the Cascadia Subduction Zone, where the Oceanic Plate is slowly being forced beneath the North American Plate.

“It buckles upward and it gets pushed backward like a spring until eventually, after a few hundred years, it just has to let go,” Oregon State earthquake geologist Chris Goldfinger explains.

For 25 years, Goldfinger has warned of the possibility of disaster. He and other scientists have been collecting core samples of sediment from the ocean floor.

They’ve discovered that major earthquakes happen here an average of every 240 years. The last major Cascadia earthquake was 315 years ago.

The “Big One,” scientists say, is overdue.

“There’s nothing that compares to a magnitude 9 earthquake that North America has experienced in human history,” Goldfinger says.

Similar to what happened in Japan, FEMA estimates in that case, a tsunami could hit some areas within 15 minutes.

Collapsed roads and bridges could cut off coastal towns and major cities like Portland, Olympia and Seattle, potentially stranding seven million people.

“I would never say we are ready,” FEMA’s regional administrator Kenneth Murphy tells CBS News.

The predictions are grim.

“At least 10,000 plus that would be killed from the tsunami” if a magnitude 8.0 quake hit, Murphy says.

“They tremendously go up” from a magnitude 9.0 quake, Murphy says. “We’re talking numbers that this nation, I’m not sure, is really prepared to deal with.”

Some cities in the Northwest require new buildings be constructed to withstand a major earthquake, but most of those laws don’t apply to older buildings.

Federal, state and military officials say they do have response plans in place.