



Photos by Colin Murphey/The Daily Astorian

The Broadway Street bridge in Seaside has been identified as particularly vulnerable in case of an earthquake.

BROADWAY BOUND

New tsunami model ranks risk of bridges, roads in Seaside

By **BRENNA VISSER**
The Daily Astorian

SEASIDE — A new computer simulation by Oregon State University identifies bridges and roads in Seaside that would have higher mortality rates in an earthquake and tsunami.

The bridge on Broadway Street over Neawanna Creek would result in the most fatalities and should be prioritized for improvement, researchers found. Other critical locations at the two bridges on 12th Street, the bridge on Sundquist Road and Ocean Vista Drive in the Cove were also flagged.

“The real issue with Broadway is there is really nowhere else to go, but by the time you get to that bridge you have very little time to do anything else,” said Dan Cox, an Oregon State civil engineer who created the model with Haizhong Wang. “It’s a combination of what options you have and how much time you have to do it.”

The bridges and roads are high priorities to retrofit not because of structural integrity issues or age — metrics most often considered when replacing city infrastructure. The mortality rate spikes because of relative proximity to areas where people live and gather, making them some of the most populated evacuation routes. They also fall in the path of where tsunami inundation will most likely occur.

Thousands of scenarios were run through the model based on the starting points of 4,500 imaginary people, distributed to resemble where most people would be on a busy, summer day: on the beach and shopping downtown.

“As engineers, we’re interested in



Multiple bridges and roads in Seaside have been deemed problematic during a recent study of the effects of an earthquake and tsunami in the area.



One of the bridges over 12th Street in Seaside is an example of infrastructure in the area that could fail in an earthquake.

infrastructure and what can be done to have more lives saved,” Cox said.

The goal was to provide Seaside a simulation that would support evidence-driven decision-making when it

comes to addressing the city’s infrastructure needs, Wong said. Without assigning specific dollar amounts, researchers also simulated how the mortality rate might change depending on how many resources were allocated to what structure to make it more likely to withstand an earthquake.

They found that the bridge on Broadway should have the highest priority for retrofitting due to the fact it was the most traversed bridge in their simulation. The study also recommended investing resources in building highly resistant vertical structures inside the inundation zone as a more economical choice than spending greater amounts of resources on retrofitting multiple bridges.

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Dan Cox | an Oregon State civil engineer who created a new computer simulation

Knappa graduate enjoyed freedom of online school

Rethati likes to play softball, photo concerts

By **EDWARD STRATTON**
The Daily Astorian

KNAPPA — As a kindergartner at Hilda Lahti Elementary School in Knappa, Mikayla Rethati said, she was academically in second grade, having fun at school then going home to an advanced



curriculum with her mother.

After learning she couldn’t skip grades, her mother asked her whether she wanted to stay in kindergarten or try to learn from home. The deciding factor in choosing to stay at home, Rethati said, was being able to hang out with her pets.

Now 16, Rethati graduated Saturday in Salem from the Oregon Connections Academy, part of about 400 students who finished high school this year through the online charter school.

“It’s a really easy school to be in, because you can do whatever class you want,” she said. “I don’t think I’d do as well in an environment where I wasn’t allowed to control what I was learning.”

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Brenna Visser/The Daily Astorian
Corey Heikkila of Portland works on the finishing touches of his sandcastle for his team Tie Dye in the Masters Division.

‘THE SAND TRAP’

Sandcastle Contest keeps family connected

By **BRENNA VISSER**
The Daily Astorian

CANNON BEACH — Thousands came out on Saturday to watch people of all ages transform piles of sand into intricately-sculpted flying saucers, Egyptian pyramids and, of course, the humble but classic sandcastle.

The Sandcastle Contest, now closing the chapter on its 54th year, began in 1964 as a way to boost spirits after a tsunami hit the Oregon Coast. The contest was sandwiched in between the annual Sandcastle Parade on Friday and a 5K fun run on Sunday.

About 32 teams from across the country competed — a number consistent with last year but lower than the average of 50 the contest expects. Debbie Nelson, the chief organizer, attributes the low number to the fact the contest fell on the same weekend as many school graduations and the Grand Floral Parade in Portland.

As the day unfolded, crowds ebbed and flowed on and off the beach as the weather alternated from bright sun to epic rain. Despite the chaotic weather, builders remained steadfast, peeling and putting on layers of rain gear as they crafted.

One of those teams was the Jessop family, a Masters Division team who in their ninth year is considered to be one of the Sandcastle Contest’s longest-running competitors. The team out of Monmouth placed third this year with a full-on miniature golf course replica called “The Sand Trap,” with windmill structures stacking up past 6 feet tall.

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Brenna Visser/The Daily Astorian
Isaac Linville of Lacey, Wash., catches a clump of sand that a teammate shovels at him during the Cannon Beach Sandcastle Contest on Saturday.



Andrea Weaver
Mikayla Rethati, who graduated this year at 16 from Oregon Connections Academy, has played for Knappa High School’s varsity softball team since 13.

