



National Tsunami Hazard Mitigation Program | Oregon

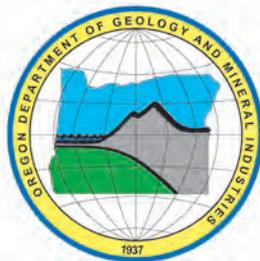
TsunamiReady, TsunamiPrepared
Outreach and Education Program
Year Four, 2012-2013

Prepared by staff of the Oregon Department of Geology and Mineral Industries (DOGAMI)

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OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

OREGON EMERGENCY MANAGEMENT

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We wish to thank all the individuals and organizations involved with Tsunami Outreach Oregon, and especially the National Tsunami Hazard Mitigation Program for funding this important work.

Without the participation and services of the many organizations, businesses, and government agencies, our outreach strategies would not have been possible. Participating groups included all those listed in the following pages, from local steering committees and emergency managers to civic groups, businesses, schools, and preparedness advocates.

Finally, we extend our appreciation to the dedicated volunteers of these communities whose hard work exemplifies this program's goal of building a culture of tsunami preparedness. These volunteers truly make Oregon's coast a special – and a safer – place.

Cover photo credits: At left: Peter Ovington, DOGAMI. At right: Linda Tudico.

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INTRODUCTION

The Oregon Department of Geology and Mineral Industries (DOGAMI) was funded to conduct tsunami hazard mapping and preparedness outreach along the Oregon coast through a four-year grant from the National Tsunami Hazard Mitigation Program (NTHMP), formed in 1995 by Congressional action. This report summarizes year four of DOGAMI's Tsunami Outreach Oregon (TOO), conducted from August 2012 to July 2013. This phase included work in five counties. From north to south, these were Clatsop, Lincoln, Lane, Douglas, and northern Coos counties.

Year four of the grant was led by DOGAMI staff members George Priest (principal investigator), Rachel Lyles Smith (project operations manager), and Peter Ovington (geologic hazards outreach specialist), in partnership with Althea Rizzo (geologic hazards program coordinator, Oregon Emergency Management) and Tyree Wilde and Ryan Sandler (warning coordinator meteorologists, National Weather Service). DOGAMI also hired three temporary community organizers (one each in Clatsop, Lincoln, and Douglas/Coos counties). These local residents coordinated outreach to their respective counties.

Tsunami Outreach Oregon was conceived as a locally-driven education and outreach program, giving each community the ability to design how best to achieve agreed upon objectives. Based on successful components of the City of Seaside's 2005 Tsunami Awareness Program, priorities for each community included active support by local and county governments; targeted neighborhood campaigns in evacuation zones; distribution of tsunami evacuation and preparedness information; engagement of local schools; and a community-wide tsunami evacuation drill. An essential part of the program is involving local volunteers and community groups to foster self-sustaining, volunteer-based outreach. An additional long-term goal is to increase the number of *TsunamiReady* communities on the coast over the four years of the grant. The *TsunamiReady* program, developed by the National Weather Service, is designed to help cities, counties, and other large sites in coastal areas to reduce the potential for disastrous tsunami-related consequences.



Residents in Lincoln City examine tsunami inundation maps, the basis of the evacuation brochures distributed for free in coastal communities. *Photos: Peter Ovington, DOGAMI*

DOUGLAS COUNTY (Reedsport, Gardiner, Winchester Bay) and northern COOS COUNTY (Lakeside, Hauser)

Overview

DOGAMI community organizer (CO) Terry Plotz led a very effective outreach effort in a coastal county with little prior awareness of the tsunami threat. Terry's experience as a church pastor, school board member, and CERT volunteer served him well in conducting grassroots outreach to communities.

Each year at the beginning of Tsunami Outreach Oregon, a local steering committee is formed to provide guidance to the COs and participate in various outreach activities. Terry began as a committee member, then was hired in January for the CO position. A resident of Reedsport, he was responsible for outreach to all five communities listed in the heading above.

Steering committee

This group brought local knowledge to the overall outreach effort. They also assisted in identifying candidates for the community organizer position and participated in both the community rally and evacuation drills.

The committee included local leaders ranging from volunteer first responders to city and county staff. A particular challenge in this area was that the fire departments have no paid staff, meaning that some volunteer fire chiefs with other jobs couldn't always attend. Meetings were led by DOGAMI's Peter Ovington and Rachel Lyles Smith.

Steering committee members

| Name | Affiliation |
|----------------------|--------------------------------|
| Wayne Stinson | Douglas County Emergency Mgr. |
| Glenda Hales | Coos County Emergency Mgr. |
| Kent Abendroth | KDUN Radio, CERT, ham radio |
| Chief Tom Anderson | Reedsport Volunteer Fire Dept. |
| Chief Scott Anderson | Winchester Bay Fire Dept. |
| Ron Eberlein | Lower Umpqua Hospital |
| Chief Mark Fandrey | Reedsport Police Dept. |

| | |
|---------------------------|---------------------------------|
| Ernie Fegles | Lower Umpqua Hospital |
| Madeline Gonsalves | Lakeside CERT |
| Rita Harte | CERT / ARES (amateur radio) |
| Tony Hernandez | American Red Cross |
| Dave Hudson | CERT, Coos County |
| Dan Loop | CERT, Reedsport area |
| Terry Plotz | DOGAMI community organizer |
| Chief Ted Ross | Lakeside Fire |
| Asst. Chief John Steinger | Reedsport Volunteer Fire Dept. |
| Andrea Stone | Douglas County |
| Chief John Swann | Gardiner Fire Dept. |
| Supt. Jim Thomas | Reedsport School District |
| Jeff VanderKley | Salmon Harbor Marina |
| Charmaine Vitek | Port of Umpqua |
| Jonathan Wright | City of Reedsport |
| Andrea Zielinski | Douglas County Sheriff's Office |

After an initial planning meeting, the committee met six times, plus an evacuation drill planning session. Many also attended separate meetings to review draft tsunami evacuation maps.



Steering committee member and Reedsport fire chief, Tom Anderson (at right), talking with Lee Bridge, a volunteer with CERT and ARES ham radio.
Photo: Peter Ovington, DOGAMI

Door to door outreach

The purpose of this activity is to have face-to-face conversations with residents in the tsunami inundation zones. The community organizer and local volunteers delivered small bags of informational materials including an evacuation map brochure, tsunami fact sheet, evacuation drill flier, *Living on Shaky Ground* booklet, and in some cases, the Winter 2012 edition of DOGAMI's newsletter, *Cascadia*, featuring articles on Japan's 2011 tsunami.

The CO assigned "area captains" to conduct this outreach, and in some neighborhoods the local residents themselves led the outreach, as in the case of River Bend mobile home owners association in Reedsport.

Reedsport CERT volunteers, firefighters, and several churches worked together to distribute info bags in Reedsport's distant and local tsunami hazard zones. Teams distributed a total of 711 bags



Door-to-door outreach bags contained an evacuation map, a drill flier, and other resources.

and spoke to 328 individuals, which is 46 percent of the households in the hazard zone. Of that number, 78 businesses were given information, and 90 percent of those were spoken to.

Almost all homes and businesses were contacted except for some obviously empty dwellings, homes where dogs made it unsafe to approach, and a small neighborhood of about 45 homes. Efforts are still underway to reach these last few homes.

Gardiner Volunteer Fire Dept. distributed bags to all the homes in the Gardiner inundation zone. A total of 83 homes were contacted, of which 41 residents were personally spoken to, or about half.

Winchester Bay Volunteer Fire Dept., with support by their fire district volunteers, contacted all of the homes and businesses in Winchester Bay's hazard zone. They reached 105 homes and businesses, of which 50 were spoken to, totaling 48 percent.

Lakeside Fire Chief Ted Ross led outreach to 250 homes in his district. He maintains regular contact with those homeowners, and holds several campaigns annually and drills actively for a number of emergencies.

Hauser CERT leaders requested a supplemental evacuation map showing Hauser, for use in door to door outreach. DOGAMI printed 250 such maps.

Volunteers made contact with 230 homes in the hazard zones and about 100 homes just outside. They also had North Bay Fire Department make door to door contact with homes off East Bay Drive that are in the inundation zones in their fire district, totaling about 300 more homes.

Hauser CERT volunteers remain active by giving presentations to the community and enrolling students in their training class at the community college. They have also added North Bay School to their local assembly areas.

Community rallies

Reedsport, Gardiner, and Winchester Bay

A Tsunami Readiness Rally for coastal Douglas County was held on April 25, 2013, at 6:30pm at the Reedsport Community Charter School. Rallies educate the public on the earthquake and tsunami hazard, unveil the new inundation maps for the area, distribute new evacuation brochures to residents, and generate interest in the area's evacuation drill.

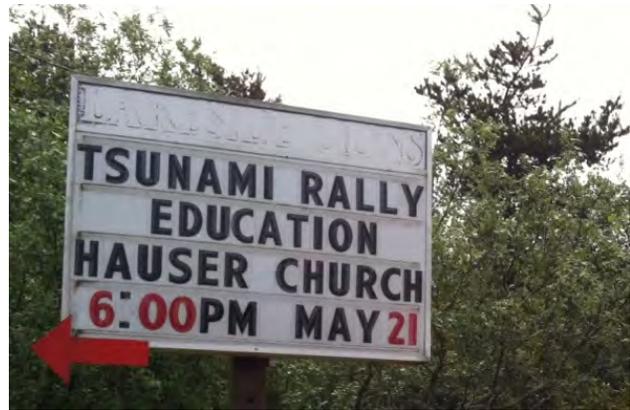
The rally was a success, attended by about 170 people, including some families with children (thanks to fliers distributed in advance through the schools). Turnout was also helped by the placement of electronic roadside reader boards loaned by Douglas County, placed along Highway 101 in the days prior.

The rally's focus was a slide presentation by DOGAMI staff George Priest and Peter Ovington, with time for questions. Local speakers included Reedsport police chief Mark Fandrey, Douglas County emergency manager Wayne Stinson, and community organizer Terry Plotz. Twenty-six volunteers helped to set up and staff the event. The rally was a success in bringing together residents and local emergency management officials.

Media coverage was thorough (see appendix), with articles in *The Umpqua Post* leading up to the event and a cover story afterwards.

The following information booths were on hand before and after the presentation:

- Fire departments of Reedsport, Gardiner, and Winchester Bay, with evacuation maps for each area
- Community Emergency Response Team (CERT)
- Map Your Neighborhood
- Business readiness
- Grab and go bags for people and pets
- Medical records and special needs
- American Red Cross



- ARES (amateur radio group)

Eighteen volunteers were recruited at the event, and another 8-9 signed up for a CERT class.

Lakeside and Hauser

On May 21 another rally was held at Hauser Church between Lakeside and North Bend. Following the same format and staffing as the Reedsport rally, there were about nine info booths staffed by CERT, Coos County Emergency Management, some preparedness groups, and fire departments, which also had their fire trucks outside to draw attention.

Over 100 people attended the presentation and took home lots of maps and materials. All of the Lakeside and Hauser maps were distributed and many residents looked up their homes and neighbors' homes on the tsunami inundation maps (TIMs). There had been a lot of promotion, but there were few attendees under age 40 or families with children, an ongoing challenge when conducting outreach using public meetings.

Evacuation drills

The evacuation drills were held May 31 at 10:00 am in coastal Douglas and northern Coos counties. Because the planning and volunteers were split between the counties, they are summarized separately below.

Turnout at both drills was not as high as organizers would have liked. This can be attributed in part to

Tsunami Evacuation Drill
Friday May 31 at 10am
 Reedsport, Gardiner, Winchester Bay, Lakeside, Hauser, North Bay



Practice your route. Your loved ones are counting on you!



ASSEMBLY AREA A REEDSPORT

OUTSIDE HAZARD AREA: Evacuate to this area for all tsunami warnings or if you feel an earthquake.

LOCAL CASCADIA EARTHQUAKE AND TSUNAMI: Evacuation zone for a local tsunami from an earthquake at the Oregon coast.

DISTANT TSUNAMI: Evacuation zone for a distant tsunami from an earthquake far away from the Oregon coast.



Detail of Reedsport evacuation map

- ✓ Follow tsunami evacuation routes on the new maps.
- ✓ Time how long it takes to walk to your nearest assembly area or other high ground nearby.
- ✓ Ask your friends and neighbors to join you.
- ✓ Take along your "grab and go" bag of emergency supplies.

Free evacuation maps at www.OregonTsunami.org or your local fire station.

Questions? Call Terry at (503) 307-5734.

State of Oregon Department of Geology and Mineral Industries
 Douglas County Emergency Management
 Coos County Emergency Management



Evacuation drill fliers and advertisements appeared in local newspapers and elsewhere.

the need to balance convenience and visibility with the safety of participants. Given that some evacuees had to navigate a busy Highway 101 on foot, the weekday morning drill time was chosen by local police specifically to avoid traffic safety risks, which would be greater if kids were out of school and the busy summer weekend season were underway. To be successful, a drill must first ensure that no one gets hurt.

Reedsport, Gardiner, and Winchester Bay

This drill was originally organized based on the approach used in Coos Bay in 2012. As people took ownership of the program it was adapted to fit Douglas County. Community organizer Terry Plotz was primarily responsible for publicity and assembly areas. Wayne Stinson, Douglas County Emergency Manager, coordinated public safety and communications.

The drill went very smoothly. Overall, 92 people and six dogs came to the eight staffed assembly areas. While turnout was not as high as organizers had hoped, a key success of the drill was in bringing together the myriad agencies and partners. Drill partners included ODOT, Douglas County Sheriff, Douglas County Public Works, Reedsport Public Works, Reedsport Police, Reedsport Fire, Reedsport CERT, Umpqua Valley CERT, ARES/RACES, Winchester Bay Fire, Winchester Bay Merchants, Salvation Army Roseburg and Coos Bay, and St. Mary's Episcopal Church in Gardiner. Over 50 individuals helped run the drill.

No sirens or signals were used. This did cause some to wonder whether the drill was occurring. The surveys showed that most participants were in the 50+ age range, unsurprising given local demographics and the weekday morning drill time. Participants appreciated the drill, but many were disappointed in the low turnout and planned to talk to neighbors and family to share tsunami readiness information. Drill surveys were conducted at assembly areas; for a summary, please see the appendices.

Following the drill, staff returned to the Reedsport Community Center for a debrief and lunch provided by the Salvation Army. Public safety representatives were happy that there were no injuries and assembly area staff was very encouraged by those who participated. An added bonus was having ham radio leaders from ARES/RACES and the new Reedsport Police mobile communications trailer,

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since both groups were looking for a way to test their new equipment.

The feeling after the event was that more training is needed for volunteers and the community at large. People still want someone to lead them and are hesitant to move out on their own. There are also many disabled people who will have a difficult time getting to assembly areas and will not even practice due to age or health reasons. The consensus of the group was that additional drills should be held at least every other year, perhaps connected to the Great Oregon Shakeout in October.

Lakeside and Hauser

Coos County had a very similar operations plan, schedule, and group of volunteers, though they didn't have all the highway crossings that Reedsport and Winchester Bay faced, nor involvement by the Salvation Army or ARES/RACES ham radio folks.

Nearly 50 volunteers turned out to support the effort in Lakeside and Hauser. Coos County Emergency Management took the lead, assisted by Lakeside, Hauser, and North Bay fire departments; Lakeside and Hauser CERT; and North Bend Police. Red Cross provided some supplies and the local

Lions Club provided a venue for lunch and the post-drill debriefing, known as a "hot wash."

Drill organizers staffed four assembly areas and had plenty of help to provide information to cars passing through. About 35 people officially came to the assembly areas. This was a reasonable turn out for the area considering the high number of elderly, disabled, and low-income residents. Unfortunately, even after door to door outreach, no one came from the mobile home park that is the most exposed in the case of a Cascadia event and which was the focus of a new emergency evacuation trail across the Port of Coos Bay rail line and heading east to Wind Song Lane (see Lakeside evacuation map near Tenmile Creek).

In all, the Coos County crew felt the drill was a success. They recognize the need to do more education and plan to have drills in the future, perhaps during the Great Oregon Shakeout. One assembly area seems to be very close to private property and may need to be adjusted in the future. Coos Emergency Management will look into it. They are also concerned about the trailer park mentioned above, and would like to brainstorm



Incident commander for the drill was Wayne Stinson (far left), Douglas County emergency manager. Also pictured are George Roth, ham radio and Red Cross volunteer (in yellow vest), and DOGAMI's community organizer Terry Plotz.

Photos: Andrea Zielinski, Douglas County Sheriff's Office

how to reach them more effectively.

The main organizers of the drill were Glenda Hales, Coos County Emergency Management; fire chiefs Ted Ross of Lakeside Fire, Jerry Wharton of Hauser Fire, and Jim Aldrich of North Bay Fire; and CERT coordinators Dave Hudson and Madeline Gonsalves.

Schools outreach (K-12)

As a longtime school board member in Reedsport, community organizer Terry Plotz actively engaged all the schools in tsunami preparedness by giving presentations, printing materials about the rallies and drills to send home with kids, and talking with educators. Presentations were age-appropriate and included a focus on earthquake and tsunami response, grab and go kits, and sharing what they learned with friends and family.

CERT leaders in Hauser also assisted North Bend School District #13 in developing their evacuation plan based on the information from the outreach program, an impact of about 1,400 students. The Bay Area school districts are having students build and bring to school 72 hour “go kits” for each student, reaching about another 2,600 students.

Presentations to schools

| <i>School audience</i> | <i>Attendees</i> |
|--|------------------|
| Highland Elementary teachers, Reedsport | 15 |
| Highland Elementary, 4th Grade | 29 |
| Hauser North Bay School staff | 17 |
| Reedsport Community Charter School, 7th Grade | 24 |
| Reedsport Community Charter School, 7th Grade | 23 |
| North Bay and Lighthouse schools, North Bend (students and teachers) | 275 |
| Lighthouse school, North Bend (students and teachers) | 79 |
| Total | 462 |

Media coverage

To get the word out, the project used both paid ads and “earned media” in the form of newspaper and radio coverage. This included several articles in *The Umpqua Post*, Reedsport’s main newspaper, including front page articles (see appendices). DOGAMI also placed paid ads in the *Post* to promote the rallies and drills.

Radio coverage included three 10-minute interviews in Coos County with Terry Plotz to promote the Tsunami Readiness Rallies, as well as appearances on KDUN radio to promote the evacuation drills. This coverage also reached listeners in Lane County who participated in the Florence drill. Some paid radio ads were also used to announce events.

Workshops and events for key audiences

Targeted outreach was also conducted with key audiences via one-on-one meetings, workshops, presentations, and at community gathering places. These included briefings to local government leadership at city council meetings and presentations to large employers and other businesses located in the inundation zones. While there are not many Spanish speakers in coastal Douglas County, the CO also had outreach materials in Spanish available during door to door efforts and



The Umpqua Post provided thorough coverage of tsunami outreach and events, as in this front page story.

at events.

Below is a summary of all outreach presentations, leaving out the school meetings already listed above.

Outreach presentations and other events, 2013

| <i>Date</i> | <i>Organization or event</i> | <i>Attendees</i> |
|-------------|--|------------------|
| 2/19 | Gardiner Fire Dept. | 11 |
| 2/25 | Winchester Bay Fire Board | 6 |
| 3/5 | River Bend Homeowners Assn. officers | 9 |
| 3/14 | Reedsport Chamber of Commerce | 18 |
| 3/21 | Reedsport Rotary | 16 |
| 4/1 | Reedsport City Council | 35 |
| 4/7 | Reedsport Christian Church | 30 |
| 4/9 | Lower Umpqua Hospital | 22 |
| 4/12 | Episcopal Ladies Group | 15 |
| 4/17 | Economic Development Forum | 10 |
| 4/17 | Soups On | 17 |
| 4/25 | Tsunami Readiness Rally, Reedsport | 170 |
| 4/29 | Reedsport Fire Dept. | 38 |
| 4/30 | American Bridge employees | 48 |
| 5/2 | Door to door outreach training | 13 |
| 5/7 | Door to door outreach training | 6 |
| 5/9 | Lakeside City Council | 16 |
| 5/10 | Umpqua Bank employees | 4 |
| 5/11 | River Bend Homeowner's Association | 23 |
| 5/13 | Reedsport Fire Dept. | 30 |
| 5/14 | Gardiner Fire Dept. | 9 |
| 5/21 | Tsunami Readiness Rally, Hauser | 101 |
| 5/31 | Evacuation drill: Reedsport, Gardiner, Winchester Bay | 92 |
| 5/31 | Evacuation drill: Lakeside/Hauser | 35 |
| 6/5 | Reedsport Assembly of God Church | 26 |
| 6/10 | Bank of America employees | 6 |
| 6/11 | Hauser Fire and Hauser CERT | 20 |
| | <i>Total</i> | <i>826</i> |

Map Your Neighborhood

In a disaster, the most immediate source of help is the neighbors living around you. Map Your Neighborhood is a program designed to help neighbors prepare for disasters and is offered as part of a simple, nine-step booklet and 90-minute video that anyone can initiate in their neighborhood. The program is an easy way for people to dip their toes into preparedness before

moving on to the bigger commitment of CERT training.

In Lakeside and Hauser, two MYN sessions were held with about 30 attendees, of which 10 were from the Coos Bay / North Bend area.

CERT training

Community Emergency Response Teams in both Douglas and northern Coos counties formed the backbone of volunteer support for many activities. They staffed information booths at tsunami rallies, helped coordinate door to door outreach, and staffed assembly areas and more at evacuation drills, among other activities.

New CERT volunteers were recruited during the outreach program. At the Reedsport tsunami readiness rally, seven new recruits signed up for CERT training. In Hauser and Lakeside, eight new CERT members have been recruited since the start of 2013 (not to mention about 35 from the Coos Bay area just south). In addition, 15 new faces have signed up to take CERT training in autumn 2013, having heard about it through tsunami outreach.



CERT members, led by steering committee member Dan Loop, were vital to events like the rally and door to door outreach. Here, they explain readiness for pets. *Photo: Peter Ovington, DOGAMI*

DOUGLAS and northern COOS

One CERT leader commented that as a result of Tsunami Outreach Oregon, they now have stronger relationships with the fire departments, with many firefighters asking for more info and how they can help grow CERT membership.

Signage

Using grant dollars, DOGAMI purchased and delivered roadway and assembly area signs for local jurisdictions to use and install as needed. These included 18" round evacuation route signs with matching arrows to be used to identify the direction to high ground, and 24" x 36" assembly area signs to indicate the location of high ground for evacuees.

Signage purchased for communities

(corresponding to photos below)

| <i>Community</i> | <i>Evacuation route sign + arrow</i> | <i>Assembly area sign</i> |
|--------------------------------------|--------------------------------------|---------------------------|
| Reedsport /Gardiner / Winchester Bay | 20 | 8 |
| Lakeside | 5 | 4 |
| Hauser | 3 | 0 |
| Railroad emergency trail, Lakeside | 3 | 0 |
| Total | 31 | 12 |



TsunamiReady certification

The TsunamiReady program, developed by the National Weather Service, is designed to help cities,

towns, counties, universities and other large sites in coastal areas reduce the potential for disastrous tsunami-related consequences. TsunamiReady communities are better prepared to save lives through planning, education and awareness. Communities have fewer fatalities and property damage if they plan before a tsunami arrives.

Prior to this outreach phase, TsunamiReady requirements had already been met at the *county* level (by Coos County in 2006 and by Douglas County in 2007). In 2013, the city of Reedsport earned its TsunamiReady designation thanks to DOGAMI's outreach and the good work of city manager Jonathan Wright and NOAA's Ryan Sandler. Other communities in the region are closer to meeting requirements but will need assistance completing the necessary paperwork. In the coming years, this should be considered for follow up by local jurisdictions and by Oregon Emergency Management.

Surveys

Please see the appendices for results from pre- and post-outreach surveys, as well as the post-evacuation drill surveys discussed below.

Drill surveys were conducted at assembly areas after the evacuation drill in coastal Douglas County (no surveys were used in coastal Coos County). In addition to drill data, the surveys provided names and contact info of 23 participants who would like to receive tsunami readiness info in the future, and who are potential future volunteers and preparedness advocates. This list is being turned over to local fire districts' CERT teams to help grow their network.

Grab and go kits: Two questions were asked about whether respondents had a "grab-and-go bag" of emergency supplies ready before the drill and whether they brought it with them as practice. To the first question, about half had such a bag prepared, while about a quarter then brought it on

DOUGLAS and northern COOS

the drill. One strategy for improving these results might include partnering with other organizations and businesses to make more grab and go bags available for sale at reduced cost, pre-assembled with supplies. These bags could be made available at disaster preparedness fairs and other outreach events.

Evacuation signage: Two-thirds said the signs were easy or very easy to follow, while one-third said there were no signs in their area.

Evacuation time and difficulty: The good news is that 85 percent said they reached their assembly area in under 20 minutes, and 97 percent in under 40 minutes. Only 12 percent said they needed assistance reaching an assembly area.

Age: Three-quarters of respondents were over age 50. Of those, 30 percent are age 65 or older. A common worry of drill organizers is that the most vulnerable and those with mobility challenges sometimes participate the least, as in the case of the mobile home community in Lakeside who were

a focus of door to door outreach. Convincing these most vulnerable that they can make it farther on foot than they might think is an ongoing challenge. But every step higher and inland is a step toward safety.

Assembly area choice: When asked why they chose an assembly area, 58 percent said it was closest to where they began the drill, in addition to other reasons, including 12 percent who said they were most familiar with and felt safest at a particular assembly area.

Conclusion

A primary goal of Tsunami Outreach Oregon is the sustainability of readiness. The community organizer worked hard toward this goal in Douglas and northern Coos counties and, as a resident of Reedsport, will continue to be a preparedness ambassador in his role as a church pastor and community leader.



Drill participants complete surveys at the Lake Marie assembly area near Winchester Bay.
Photo: Andrea Zielinski, Douglas County Sheriff's Office

LANE COUNTY

Overview

Coastal Lane County includes the communities of Florence (population 8,500) and Dunes City (1,300). The area enjoys a relatively strong level of readiness thanks to the leadership of its fire department, local CERT team, city officials, county emergency manager, and a diverse set of local leaders known as the West Lane Emergency Operations Group (WLEOG, pronounced WEE-log), a collaborative effort of local government and residents to coordinate disaster readiness and response.

Because of this strong foundation and limited funding in year four of Tsunami Outreach Oregon, DOGAMI and its Lane County steering committee chose not to hire a community organizer. Still, much of the hard work of organizing door to door outreach and evacuation drills was taken on by Siuslaw Valley Fire and Rescue, including Chief John Buchanan, Marvin Tipler, and especially the fire district's Florence CERT coordinator Frank Nulty, a tireless readiness advocate who dedicated countless hours to this work. Frank is a retired geologist with a passion for tsunami science and preparedness.



Frank Nulty, CERT coordinator, talks with a resident at the community rally in Florence.

Photo: Peter Ovington, DOGAMI

Steering committee

This group met six times in Florence to help plan outreach and provide important feedback on draft evacuation maps and other project elements. It was led by DOGAMI staffer Peter Ovington and included elected officials, police and fire, tribal government representatives, local amateur (ham) radio group representatives, and other preparedness advocates. The group brought invaluable local knowledge to the outreach effort. Members are listed below.

Door to door outreach

The purpose of this activity is to have face-to-face conversations with residents in the tsunami inundation zones. Frank Nulty, the CERT coordinator, led this effort with technical assistance

Steering committee members

| <i>Name</i> | <i>Affiliation</i> |
|---------------------------|---|
| Linda Cook | Lane County Emergency Management |
| Chief John Buchanan | Siuslaw Valley Fire and Rescue |
| Marvin Tipler | Siuslaw Valley Fire and Rescue |
| David Davis | CERT, Siuslaw Valley Fire |
| Deputy Paul Vitus | Lane County Sheriff's Office |
| Chief Ray Gutierrez | Florence Police |
| Lt. John Pitcher | Florence Police |
| Frank Nulty | CERT, Florence |
| Henry Hanf | Western Lane Ambulance |
| Fred Hilden | City of Dunes City |
| Councilor Jamie Mills | City of Dunes City |
| Dave Haberman | Mapleton Fire District |
| Ken Hill | Port of Siuslaw |
| Jacque Betz | City of Florence |
| Jan Kinney | Peace Harbor Hospital |
| Pat Kirby | Peace Harbor Hospital |
| Police Chief Brad Kneaper | Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians |
| Paula Williams | Confederated Tribes of Coos, Lower Umpqua & Siuslaw Indians |
| Supt. Jeff Davis | Siuslaw School District |
| Mike Rivers | Oregon State Parks |
| Ken Quiner | Oregon Health Authority |
| Mike Miller | Florence Public Works |

LANE COUNTY

from the City of Florence public works department, whose director Mike Miller and GIS specialist Ron Miller provided GIS-based walking maps to make it easier for volunteers to track their progress.

Another goal of door to door outreach is to notify residents of an upcoming evacuation drill.

CERT teams and local volunteers delivered small bags of informational materials including an evacuation map brochure, tsunami fact sheet, evacuation drill flyer, and *Living on Shaky Ground* booklet. Of the 956 homes they targeted in the inundation zones, they reached nearly all (only 90 door bags were leftover).

CERT teams of two were found to be most efficient. One exception, Joan Edwards, WLEOG Public Outreach Coordinator, visited all of the Old Town Florence businesses on her own to help them prepare their evacuation plans. Multiple CERT teams were in charge of visiting all of the residents in Old Town's inundation zone. CERT members living in the Greentrees area conducted outreach to their neighbors in the inundation zone. A separate team visited residents along low lying areas of



The City of Florence provided walking maps of door to door outreach areas – showing tax lots, addresses, and the yellow tsunami inundation zone – making it easier for volunteers to track their progress.



Evacuation drill participants gather at the Florence Events Center assembly area. *Photo: Frank Nulty*

Rhododendron Drive. Multiple teams visited residents in the Heceta Beach Area where they found that at least 50 percent of the dwellings are vacation rentals.

Community rally

A Tsunami Readiness Rally for coastal Lane County was held on Tuesday, May 14, 2013, at 7:00pm at the Florence Events Center. Rallies educate the public on the earthquake and tsunami hazard, unveil the new inundation maps for the area, distribute new evacuation brochures to residents, and generate interest in the area's evacuation drill.

The rally drew only about 35-40 attendees, far fewer than organizers had hoped for. This was despite the extensive door to door outreach, a paid ad in *The Siuslaw News*, and some radio coverage. The warm, sunny weather may have been a factor, but a bigger reason was likely the presentation by DOGAMI's Dr. George Priest two months earlier, in which he debuted the draft evacuation map. That event drew a total of 135 people to two sessions (see below, *The Siuslaw News*, "Hey, what's shakin'?" March 13, 2013). Many of those residents may have decided they already had the new information.

The rally's focus was a slide presentation by DOGAMI staff Laura Stimely and Peter Ovington, with time for questions. Local speakers included Lane County emergency manager Linda Cook and

WLEOG chair Henry Hanf. Information tables were on hand from CERT, ham radio operators, American Red Cross, and others. Despite low turnout, the event put new maps into many hands and created new ambassadors for preparedness who will spread the word.

Evacuation drills

A drill was held May 30, 2013, at 10:00am, with about 50 participants in Florence and four reporting that they evacuated in Dunes City (an area with much less inundation). Assembly areas in Florence were staffed by Siuslaw Valley Fire staff and CERT volunteers, with the largest turnout at the Florence Events Center location. Despite the disappointing turnout, CERT members and others felt upbeat about having laid a foundation for future drills. And media coverage was broad enough – including local TV news – that many residents learned of the drill.

A “reverse 911” call was set up by Lane County Emergency Management to notify all landline and cell phones in the inundation zones of the drill. This was a good test for their “AlertMe” Community Emergency Notification System (CENS). Some evacuees reported receiving a call but others didn’t. The emergency manager plans to use DOGAMI’s map data, once formally published, as part of her



A local TV reporter discusses the evacuation drill while holding a bag of outreach materials from the door to door outreach campaign.

alert system for various tsunami scenarios.

An after-drill debriefing, known as a “hot wash”, was held the same day. Drill organizers decided to invite local media to add their perspective and to work as partners in getting the word out in future drills.

Following the drill, CERT also contacted all vacation rental companies and insurance agents in the area, supplying them with bulk copies of the Florence evacuation map for distribution to their customers.

Lastly, Siuslaw Valley Fire and Rescue, as part of a communications grant, included a GMRS repeater and antenna on the 188’ tower on Herman Peak. A base station is located in the emergency operations center and at Dunes City’s city hall, among other locations in Florence. The system is supplemented by 23 handheld radios strategically located throughout the area. The local ham radio club administers the operation and training. CERT members are being trained to expand the network providing vital information to the emergency operations center (EOC) during disasters.

Schools outreach (K-12)

Dunes City has no schools, and all of the schools in Florence lie outside the tsunami hazard zone. Even so, without a paid community organizer in Lane County, there was not enough time and resources to do much outreach to K-12 students and teachers.

Still, the school district has active involvement in WLEOG meetings and has discussed completion of emergency planning to include tarps, school disaster supply kits, and evacuation plans in case a building is damaged during an earthquake or major winter storm. There has been an open line of communication between CERT coordinator Frank Nulty and the schools’ WLEOG representative. In April, Frank was contacted by an eighth grade teacher asking him to answer questions and assist students with an extra credit project which would

enhance their recently completed module on earthquakes.

Media coverage

Highlights from news coverage included two front page stories in *The Siuslaw News*, a story on KEZI TV about the drill, radio coverage by KLCC and KCST, and articles in the *Albany Tribune*, *Eugene Register-Guard*, and *Lane Today*. For news clips, please see the appendix. For the KEZI story, please contact DOGAMI to request the video file.

A paid newspaper ad was also placed in *The Siuslaw News* announcing the evacuation drill.

Workshops and events for key audiences

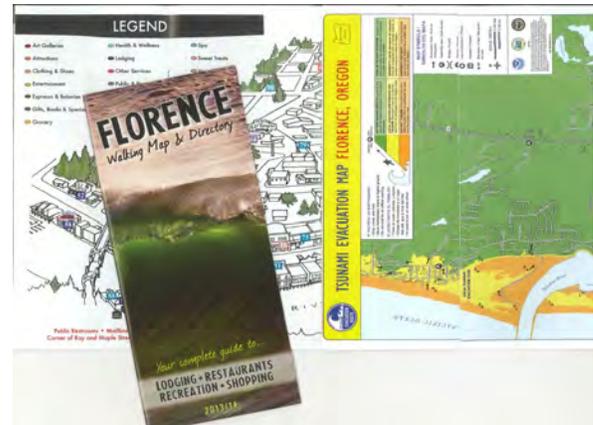
Other events aimed at key audiences were limited due to not having a full-time community organizer. Nonetheless, examples of awareness among key groups included a local motel owner who participated in the evacuation drill and said he is training his staff on evacuation protocols and is putting informational tent cards in guest rooms.

Perhaps the biggest success in reaching visitors to Florence was the decision to print an evacuation map in the 35,000 copies of the free *Florence Walking Map and Directory*, which is the most visible handout at lodging facilities and visitor centers (see photo). A local business, the Shipping Shack, offered the opportunity and WLEOG used their funds to purchase the space at a special price.

Workshops and presentations included the following conducted by Frank Nulty of CERT:

Chamber of Commerce: Feb. 22, staffed info booth at Chamber-sponsored Building Bridges to Business. Used projector to show coastal interactive website and Florence tsunami inundation map.

Map your Neighborhood seminar, March 2, with 62 North Florence residents attending. Provided 125



35,000 copies of the *Florence Walking Map and Directory* feature DOGAMI's tsunami map as a foldout to educate visitors about evacuation routes.

MYN booklets to the three neighborhoods which were starting to organize.

Homeowners association: On March 16, presented a tsunami awareness briefing at Heceta South Home Owners Association annual meeting at Driftwood Shores Resort. Emphasized importance of knowing where high ground is when recreating. Assisted HOA president in setting up the Disaster Preparedness page on their website by providing PDF files of key DOGAMI publications.

Health fairs: Staffed an info booth at one event sponsored by a faith-based group, at Florence Events Center on April 5, and another sponsored by the casino on April 11.

Surfrider Foundation: Attended monthly chapter meetings, recommending they use the evacuation zone map viewer on OregonTsunami.org when scheduling and conducting their environmental clean-up activities. Partnering with Surfrider is part of an effort to get younger people involved in CERT and WLEOG.

Map Your Neighborhood

In a disaster, the most immediate source of help is the neighbors living around you. Map Your Neighborhood is a program designed to help

neighbors prepare for disasters and is offered as part of a simple, nine-step booklet and 90-minute video that anyone can initiate in their neighborhood. The program is an easy way for people to dip their toes into preparedness before moving on to the bigger commitment of CERT training. DOGAMI has a supply of MYN booklets, available upon request.

Map Your Neighborhood has been offered twice since October 2012 with 59 attendees. It is combined with Disaster First Aid as part of the “Neighbor Helping Neighbor” class.

CERT training

CERT basic training classes are offered in the spring and fall. The spring class graduated 11 with the majority directly involved in the door to door campaign and evacuation drill. There are 31 signed up for the fall class. Frank Nulty coordinates professional first responders as instructors for the training modules.

WLEOG’s “Living on Shaky Ground” program has provided disaster preparedness training for 775 attendees since October 2012 when Joan Edwards began as Public Outreach Coordinator.

Signage

Using grant dollars, DOGAMI purchased and delivered roadway and assembly area signs for local jurisdictions to use and install as needed. These included 18” round evacuation route signs with matching arrows to be used to identify the direction to high ground, and 24" x 36" assembly area signs to indicate the location of high ground for evacuees.

Signage purchased for communities

| <i>Community</i> | <i>Evacuation route sign + arrow</i> | <i>Assembly area sign</i> |
|------------------|--------------------------------------|---------------------------|
| Florence | 7 | 10 |
| Dunes City | 0 | 4 |

In addition, DOGAMI and Oregon Emergency Management continue to work with Florence and Dunes City to provide evacuation maps as permanent signs at key beach access points or other high pedestrian traffic areas.

TsunamiReady certification

The TsunamiReady program, developed by the National Weather Service, is designed to help cities, towns, counties, universities and other large sites in coastal areas reduce the potential for disastrous tsunami-related consequences.

The city of Florence became TsunamiReady in July 2010 through WLEOG’s efforts. A follow up item for this area would be for Lane County to consider pursuing its own designation for the county.

Surveys

The program conducted three surveys per region to measure awareness of tsunamis: before the outreach program began, after outreach was completed, and after the tsunami evacuation drill.

The pre- and post-outreach surveys were conducted via the Internet for simplicity, on a Web survey site. Questions and methodology were based on the City of Seaside’s 2005 tsunami outreach pilot project. The post-evacuation drill surveys were conducted in person at assembly areas.

Please see the appendix for detailed survey results.

Conclusion

As for lessons learned, both CERT and WLEOG public outreach are exploring ways to reach younger members. The survey results reflect a community made up of 80+ percent retirees. CERT plans to continue working to help faith-based groups prepare for disasters through partnerships aimed at building stockpiles of emergency supplies. CERT will continue being responsive to requests for

interaction with K-12 students. WLEOG public outreach is considering joining local organizations which feature a younger demographic, plus exploring different time slots for offering mini-classes designed to reach working parents.

While coastal Lane County was already in better shape than some communities – thanks to an active fire district, WLEOG, and CERT – the outreach program increased the public’s awareness while promoting collaboration among local stakeholders.

The evacuation drill was a helpful learning experience for local officials and the county emergency manager. It laid a foundation for improving drill turnout and coordination in the future.

WLEOG staff set an October 2013 date for the next emergency operations center (EOC) tabletop exercise. CERT coordinator Frank Nulty

recommended to Chief Buchanan that they contact the Emergency Management Institute to sign up for their Virtual Tabletop Exercise (VTTX 0002). They are signed up to join with 10 other communities across the US to participate in this exercise, which is conducted via video teleconference.

Coastal Lane county continues to build on its own readiness work and the momentum brought by Tsunami Outreach Oregon and the new evacuation maps.

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 WEDNESDAY
 SERVING THE COMMUNITIES OF FLORENCE • DUNES CITY • WESTLAKE • MAPLETON • SWISSHOME • DEADWOOD • YACHTS AND ALL POINTS BETWEEN
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Hey, what's shakin'?
It could be Florence and surrounding areas, and now is the time to prepare.

No one who is staying remotely in touch with the community can say, "I didn't know. Nobody told me," after the glut of information that has been flooding print and air media in past months about emergency preparedness, particularly for the looming dangers of tsunamis and earthquakes.

Locally a team of information experts, Western Lane Emergency Operations Group (WLEOG), has been offering a steady stream of meetings and classes to teach residents how to be prepared in case of such major disasters, and last weekend the group refocused on earthquakes, even while tsunamis have been holding onto the headlines in recent years.

Near the second anniversary of a magnitude 9 earthquake in Japan that preceded a tsunami more than 40 feet high, a famed Oregon geologist and a team of certified emergency responders presented two workshops on Saturday, March 9, to drive home the point of "being prepared."

Introduced as a scientific "rock star," pun intended, Dr. George Priest, noted geologist for the Oregon Department of Geology and Mineral Industries (DOGAMI), led the multi-faceted discussion Saturday, that blurred the line between earthquakes and tsunamis, a little bit like which comes first, the chicken or the egg?

Perhaps because tsunamis have taken the forefront in worldwide news, many have lost sight of that which precipitates the disastrous event, a high-magnitude earthquake.

The entire coast of Oregon, as well as territories from Vancouver Island, British Columbia, through Washington state to just past Eureka, Calif., sit in what is called the Cascadia Subduction Zone.

Scientists say this area is due for an earthquake. A big one.

According to Priest, the area is rated at a 10 percent chance of such an event in the next 50 years.

The positive side of that statistic is that there is a 90 percent chance that it won't happen. Regardless, now is the time for policymakers and the rest of government to ensure that their constituents and their infrastructure are prepared.

Priest stated that a "great" earthquake, in or around a magnitude 9.0, and of a duration of two minutes or longer, will be utterly life-changing.

"This experience will be unmistakable," he said. Bridges will fail. Expect to have to walk to high ground because the terrain will be undrivable and in 15 to 20 minutes a tsunami will follow. Waves will continue for at least four hours, he said.

Geologist Dr. George Priest describes how the earth reacts during a major earthquake.

See **PREPARE 7A**

Dr. George Priest of DOGAMI discussed Cascadia earthquakes and new tsunami maps for an audience of 135 residents in Florence on March 9, 2013.

LINCOLN COUNTY



Community organizer Lynda Engle, with Seal Rock Fire Chief Tracy Shaw, speaking to Bayshore homeowners near Waldport. *Photo: Patty Benjamin*

Overview

Lincoln County spans a large coastal area and is home to many residents and visitors, from Lincoln City to Newport to Waldport. The county has a very active and engaged emergency manager who works to coordinate readiness activities among all the players, from fire districts to city staff and schools. Lincoln County’s teamwork earned them the unique achievement of more TsunamiReady designations than any other county in Oregon.

Community organizer Lynda Engle was DOGAMI’s point person in this county which has had activities in the past, from ongoing preparedness fairs to the 2010 tsunami evacuation drill in south county spanning 17 miles (see Tsunami Outreach Oregon Year 1 report for details).

Despite some residents’ previous understanding of tsunamis, the new evacuation maps made it easier for Lynda to explain what was different and why it matters. A resident of Seal Rock, Lynda is a CERT volunteer and has work experience with assisted living facilities, a background that enabled her to educate some of those vulnerable populations. Her position with DOGAMI began in January and ended in July 2013.

Steering committee

A local steering committee was formed to provide guidance to DOGAMI and to participate in various outreach activities. The group met four times in person and once via conference call to help plan outreach and provide important feedback on community rallies and other project elements. It was led by DOGAMI staffers Rachel Lyles Smith and Peter Ovington. The committee included fire and police, city managers and planners, and other preparedness advocates. They brought invaluable local knowledge to the outreach effort. Members are listed below.

| <i>Name</i> | <i>Affiliation</i> |
|-----------------------|---------------------------------------|
| Jenny Demaris | Lincoln County Emergency Mgr. |
| Tami Atkinson | WVCC Newport |
| Lt. Mike Baird | US Coast Guard |
| Chief Don Baker | North Lincoln Fire & Rescue |
| Cdr. Helen Ballantyne | NOAA - MOC-P |
| Sue Bolstad | CERT, Seal Rock/Waldport |
| Maryann Bozza | Hatfield Marine Science Center |
| Annette Brooks-Flatt | CERT, East Lincoln County |
| Rick Brown | NOAA - Hatfield Marine Science Ctr. |
| Captain David Clark | North Lincoln Fire & Rescue |
| Chief Derek Clawson | Central Oregon Coast Fire & Rescue |
| Chief Dave Enyeart | Toledo Police |
| Chief Will Ewing | Toledo Fire |
| Sgt. Tony Garbarino | Newport Police |
| Sue Graves | Lincoln County School District |
| Asst.Chief Doug Kerr | North Lincoln Fire & Rescue |
| Captain Jim Kusz | North Lincoln Fire & Rescue |
| Casey Miller | Lincoln County |
| Rob Murphy | Newport Fire |
| Pery Murray | City of Depoe Bay |
| Mark Nicholson | City of Lincoln City |
| Lt. Jerry Palmer | Lincoln City Police |
| Chief Frankie Petrick | Yachats Rural Fire Protection Dept. |
| Ceci Pratt | American Red Cross |
| Dean Sawyer | Confederated Tribes of Siletz Indians |

| | |
|-----------------------|------------------------------|
| Chief Tracy Shaw | Seal Rock Fire Department |
| Anthony Vendetti | Lincoln County Public Health |
| John Waffenschmidt | Lincoln County |
| Chief Joshua Williams | Depoe Bay Fire District |
| Mayor Sue Woodruff | City of Waldport |
| Kay Wyatt | CERT, Depoe Bay Fire |

Door to door outreach

This activity aims to have face-to-face conversations with residents in the tsunami inundation zones and to notify them of evacuation drills (where applicable). Each city and/or fire district led this outreach with support and coordination from the community organizer.

In addition, a smaller core group made up of DOGAMI, the county emergency manager, county public information officer, and a few fire district staff and CERT leaders met by phone weekly for a period of time to coordinate activities in more detail.

DOGAMI also held meetings with local officials over the winter to review draft evacuation maps.

CERT teams, firefighters, and other volunteers delivered small bags of informational materials including an evacuation map brochure, tsunami fact sheet, evacuation drill flyer, and *Living on Shaky Ground* booklet. Below is a summary of where outreach was done and how many households were targeted.

Overview of door to door outreach

| <i>When</i> | <i>Where</i> | <i>Neighborhood</i> | <i>Households</i> | <i>Map delivered</i> | <i>Status</i> |
|---------------------------|---------------------|------------------------------|-------------------|----------------------|---|
| North county | | | | | |
| Aug and Sep 2013 | Lincoln City | Roads End | Approx. 200 | Linc. City North | Completed (except Cutler City, to be in September) |
| | | NW 34 th St. Area | 600 | Linc. City North | |
| | | Cutler City | 500 | Linc. City South | |
| June 8, 2013 | Depoe Bay | Depoe Bay (South Point area) | 100 | Depoe Bay | Completed 68 out of 98. |
| Oct, 2013 | | Gleneden Beach | 300 | Gleneden Beach | Opted instead for delivery of 600 fliers promoting Oct. drill |
| Central county | | | | | |
| Scheduled for autumn 2013 | Newport | Southbeach | 200 | Newport South | Before Great Oregon Shakeout drill, October |
| | | Nye Beach | 250 | Newport North | |
| | | Bayfront | 200 | Newport North | |
| Summer and autumn 2013 | Toledo | Hidden Valley Road | 50 | Toledo | Held a town hall meeting and two info sessions. |
| | | Sturdevant Road | 250 | Toledo | |
| South county | | | | | |
| May 11 2013 | Seal Rock | Bayshore, Sandpiper | 800 | Waldport | Complete. 77 bags leftover. |
| May 2013 to early June | Waldport | Old Town Waldport | 450 | Waldport | Complete. 177 bags leftover |
| | | Uptown Waldport | 250 | Waldport | |
| May 2013 onward | Yachats | Main City Area | 500 | Yachats | Nearly complete. 150 more outside city. |
| TOTAL | | | 4,650 | | |

Toledo: The fire department held one town hall meeting and two other outreach sessions to inform the public of the map changes, reaching over 100 people from several areas of the county. They are planning another outreach event in late September for the Hidden Valley Road area. Their door to door campaign will begin during their next CERT training session in autumn 2013.



Door to door outreach prep meeting in Depoe Bay fire district. *Photo: Kay Wyatt*

Community rallies

Tsunami readiness rallies educate the public on the earthquake and tsunami hazard, unveil the new inundation maps for the area, distribute new evacuation brochures to residents, and generate interest in the area’s evacuation drill. Local speakers included the county emergency manager, Jenny Demaris, and local hosts from the fire districts. Three rallies were held, as described below:

Lincoln City: May 7 at the Cultural Center, with two presentations. The 3pm presentation was attended by 57 people and the 7pm brought just 37. Two couples from the local Kiwanis Club assisted with set-up and as greeters. DOGAMI presenters were Peter Ovington and George Priest.

Waldport: May 9 rally at Waldport High School. This was the only rally where we had several info booths, since local partners preferred not to use this format at other rallies. Tables included Red Cross, CERT, business resiliency, and general earthquake/tsunami information. DOGAMI presenters were Peter Ovington and Laura Stimely. Attendance was a disappointing 28, a reflection of what some local leaders have said is a high level of apathy among residents, even after door to door outreach in the past.

Newport: May 11, a Saturday morning, in Newport at the Agate Beach Inn. Attendance was 65. Depoe Bay CERT leader and seismologist, Kay Wyatt, also set up a table for this rally to help educate the public on earthquake resiliency. Members of Depoe Bay CERT, identifiable by their vests, were in attendance to help funnel people to the auditorium where the presentation was held. DOGAMI presenters were Rachel Smith and George Priest.

Posters advertising the rallies were put up in some Newport and South County areas. But altogether, only about 187 attended the rallies, a modest turnout. Some speculated that it was because we didn’t purchase ads in the local newspapers, at the request of local partners who preferred instead to rely on earned media and save those funds for a countywide postcard mailer. Despite modest turnout, the events put new maps into many hands



Rally attendees in Waldport discuss new maps with Yachats fire chief Frankie Petrick (middle). *Photo: Linda Tudico*

and created new ambassadors for preparedness who will spread the word.

Evacuation drills

Seal Rock Fire District: A drill was held in the Bayshore/Sandpiper area north of Waldport on Saturday, May 18 at 10:30am. Three assembly areas were activated and a total of 79 participants came to those areas, bringing with them 13 pets (including a parrot). A total of 24 officials helped out with the drill: Seal Rock Fire Chief Tracy Shaw, Lincoln County Emergency Manager Jenny Demaris, Sheriff's department, CERT and Fire volunteers, ARES ham radio operators, American Red Cross, and DOGAMI community organizer Lynda Engle.

Scheduling the drill posed some challenges due to a conflict with the Bayshore homeowners association's annual meeting. The drill time was rearranged to avoid this conflict, but some other community events could not be avoided, such as a Waldport fishing contest for young people, spring clean-up day throughout Bayshore, and the town-wide garage sale weekend. This illustrates a constant challenge between scheduling drills when the weather is nicer to encourage turnout, yet avoiding the early summer season of activities.

A "reverse 911" call was set up by Lincoln County Emergency Management to notify all landline and cell phones in the inundation areas of the drill. This was a good test for their Citizen Alert system. The emergency manager plans to use DOGAMI's map data, once formally published, as part of her alert system for various tsunami scenarios.

Planning prior to the drill included several components. Two planning meetings were held at the Seal Rock Fire Station. A few days prior to the drill, organizers held a town hall meeting in Bayshore to cover tsunami basics and to let the neighborhood know what to expect on drill day.



Drill participants (and pets) in the Bayshore and Sandpiper areas north of Waldport. *Photo: Linda Tudico*

After the drill a debriefing, or after-action meeting, was held on May 21 and Chief Shaw said he felt the drill was a success. As a relatively new fire chief at the coast, this was his first evacuation drill since moving to Seal Rock.

Depoe Bay Fire District: After the grant period had ended, a successful "Tsunami Stroll" was held in Gleneden Beach on October 17, 2013, as part of the Great Oregon Shakeout. A total of 97 residents participated, exceeding organizers' expectations.

Local readiness champion and CERT leader Kay Wyatt reported that it was helpful to share DOGAMI's message of "Every step higher and inland increases your chances of survival," especially in this community of mostly retired folks.

"It was was the most inspiring moment of my life," she said. "Without DOGAMI's maps, science, and encouragement, this event would not have happened!" Wyatt added.

Organizers gave out 25 five-gallon buckets for emergency supplies, as well as 75 headlamps provided by a generous donor. The event was supported by 17 CERT volunteers, ham radio operators, and public safety staff from the fire district, sheriff's office, state police, and ambulance.

Because many participants were elderly, when they arrived at a tsunami assembly area, organizers

greeted them with a hug, a raffle ticket, and a shuttle that took them to the Community Hall for a celebration event. There were even shuttles to take them home afterwards. This kind of hospitality and savvy event planning can make a big difference in promoting turnout and ensuring a successful drill.

Drills in other fire districts: Of the county's five other fire districts at risk of tsunami inundation, none chose to hold drills during the grant period. Newport chose to schedule theirs during the Great Oregon Shakeout in October, since their staffing and responsibilities at that time of year make it more feasible. (The City of Newport and the Hatfield Marine Science Center will host their third annual South Beach evacuation drill that week.)

The City of Lincoln City held an evacuation drill in the Cutler City area in March 2012, and North Lincoln Fire and Rescue has no drills planned. Yachats and Waldport fire districts have elected not to hold a drill for now after having conducted a large scale one in 2010, instead focusing on door to door outreach and evacuation map distribution. Yachats is also planning a tabletop exercise for a distant tsunami scenario, slated for February 2014.

Schools outreach (K-12)

Outreach to students was limited as Lynda focused on other deliverables and trusted the helpful hand of Lincoln County School District's safety coordinator, Sue Graves, and the schools' existing preparedness curriculum. DOGAMI was asked to provide laminated evacuation maps for all the district schools as permanent displays. Unfortunately, it was not in the budget and timeframe to complete this, but it's a task we hope to include in the coming year's outreach materials budget.

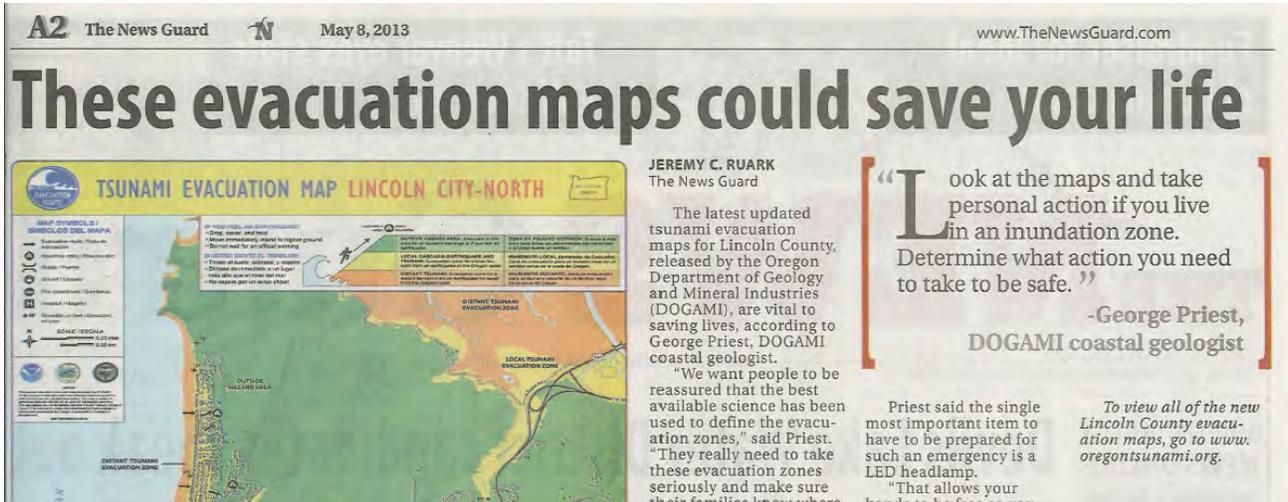
Media coverage

News reporting was fairly extensive and helpful in generating interest in the new maps. Highlights included newspaper cover stories and reprints of the actual maps, multiple radio talk show appearances, and a media outreach effort based on release of the Hollywood disaster film *The Impossible*.

Media relations were handled primarily by DOGAMI staffer Peter Ovington, Lincoln County's emergency manager, Jenny Demaris, and county public



In Gleneden Beach, a "Tsunami Stroll" attracted 97 participants, including many seniors who previously didn't think they could reach high ground on foot. **Left:** Mr. Lee Hood won the "Best Decorated Go Bag" prize. **Middle:** Sheriff's Lt. Curtis Landers, Asst. Fire Chief Hank Walling, and a readiness leader from PAC West Ambulance. **Right:** Ms. Nellie Jaujou celebrates her arrival at an assembly area. *Photos: Kay Wyatt (left and middle); Karen Shafer (right).*



The News-Guard's coverage included a reprint of the two maps for the Lincoln City area.

information officer, Casey Miller. The community organizer and many partner staff, from fire districts to CERTS, supported the effort by appearing on radio shows and talking with reporters. To see the news clips, please turn to the appendix.

Newspaper and website coverage included articles on release of the new maps, community rallies, door to door outreach, the Bayshore evacuation drill, and the awards ceremony for TsunamiReady designations. No newspaper ads promoting the rallies were purchased because local partners felt that earned media coverage would be sufficient and the funds better spent on a countywide postcard mailer.

Radio coverage included several talk shows, most lasting at least 30 minutes, summarized below:

| Date | Radio show | Guest spokespersons |
|--------|--|--|
| Apr 10 | Waldport Today and Seal Rock Too | Jenny Demaris , Chief Shaw |
| May 2 | Lincoln County Connections (with Casey Miller), KNPT AM 1310 | Kay Wyatt, Lynda Engle |
| May 8 | Roll Call with Sheriff Dennis Dotson, KNPT AM 1310 | Jenny Demaris, Peter Ovington |
| May 9 | Lincoln County Connections (with Casey Miller), KNPT AM 1310 | Peter Ovington, Rob Murphy of Newport Fire |

| | | |
|--------|---|--|
| May 21 | Hotline with Kiera Morgan, KNPT AM 1310 | Lynda Engle, Chief Tracy Shaw |
| May 22 | KBCH radio | Chief Keith Kilian, Lincoln City Police |

A small news conference was held on May 1 in Newport to announce the release of all the Lincoln County maps at once.

The Impossible: This Hollywood film tells the true story of a family who survived the 2004 tsunami in Southeast Asia that claimed 230,000 lives. The film stars Ewan McGregor and Naomi Watts, who was nominated for an Oscar for Best Actress. DOGAMI and local partners used this opportunity to reach moviegoers with a tsunami readiness message.

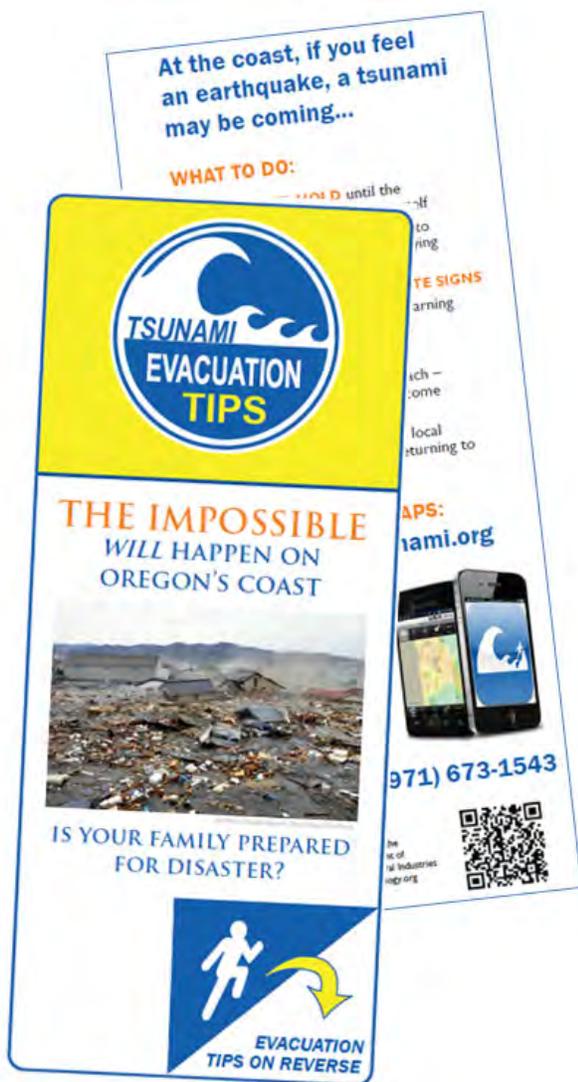
When the film screened in the Northwest in February and March 2013, DOGAMI partnered with Jim Kusz at North Lincoln Fire and Rescue to encourage Lincoln City's locally-owned Bijou Cinema to screen the film and feature DOGAMI's outreach materials and a pre-show, on-screen slide with tsunami readiness tips. DOGAMI and Jim also worked with Sue Graves at Lincoln County Schools on a special screening for two busloads of local high school students, followed by a discussion and readiness information.

DOGAMI created a small flier with tsunami tips, printing hundreds of them for distribution at theaters screening the movie. These included not only the Bijou, but Regal Cinemas and the Laurelhurst Theater in the Portland area, plus Coming Attractions Theaters in Newport, Astoria, and North Bend.

Altogether, this was a unique opportunity to leverage a moment in popular culture, making the connection between an emotional film and tsunami readiness in Oregon.



Ceci Pratt of the American Red Cross distributes meals ready to eat (MREs) to residents at a tsunami rally in Waldport. Photo: Peter Ovington, DOGAMI



DOGAMI printed hundreds of fliers for distribution at Oregon cinemas screening *The Impossible*.

Workshops and events targeting key audiences

Targeted outreach was also conducted with key audiences via one-on-one meetings, workshops, presentations, and at community gathering places. These included briefings to local government leadership at city council meetings and chambers of commerce, primarily staffed by local partners.

Below is a summary of all outreach presentations. Note that events with attendance marked as “n/a” reflect presentations given by local partners where a count wasn’t recorded.

Vulnerable populations are those who, during a disaster, have special needs and greater difficulty in responding or evacuating. While there are varying definitions, these populations can include children, the disabled, the elderly, the homeless, and those with limited English proficiency.

These were a particular interest of the community organizer, who had outreach materials in Spanish available at events, including a presentation to staff of The Worldmark Resort in Depoe Bay, where they had an interpreter for the 15 or so Spanish-speaking

Outreach presentations and other events, 2013

| <i>Date</i> | <i>Organization or event</i> | <i>Attendance</i> |
|-------------|---|-------------------|
| Mar 30 | SOLVE's Oregon Beach Cleanup | n/a |
| Apr 5 | Seashore Family Literacy, Waldport | 17 |
| Apr 6 | Bayshore and Sandpiper homeowners | 37 |
| Apr 8 | City Council, Yachats | 12 |
| Apr 11 | Chamber of Commerce, Waldport | 5 |
| Apr 11 | City Council, Waldport | 13 |
| Apr 11 | City Council, Siletz | 12 |
| Apr 12 | WorldMark, Depoe Bay | 54 |
| Apr 12 | Chamber of Commerce, Newport | 80 |
| Apr 13 | Hatfield Marine Science Ctr, Newport | 300 |
| Apr 15 | City Council, Newport | 30 |
| Apr 15 | Chamber of Commerce, Depoe Bay | 30 |
| Apr 16 | City Council, Depoe Bay | 25 |
| Apr 17 | Lincoln County Board of Commissioners | 14 |
| Apr 17 | Rotary Club, Lincoln City | 28 |
| Apr 17 | Business resiliency, Lincoln City | 12 |
| Apr 17 | City Council, Toledo | 16 |
| Apr 18 | Chamber of Commerce, Toledo | 15 |
| Apr 18 | Kiwanis Club, Lincoln City | 24 |
| Apr 19 | Chamber of Commerce, Lincoln City | 50 |
| Apr 20 | Moose Lodge, Waldport | 3 |
| Apr 22 | City Council, Lincoln City | 10 |
| May 7 | Tsunami readiness rally, Lincoln City | 65 |
| May 7 | Tsunami readiness rally, Lincoln City | 35 |
| May 9 | Tsunami readiness rally, Waldport | 35 |
| May 11 | Tsunami readiness rally, Newport | 64 |
| May 18 | Tsunami evacuation drill, Bayshore, Sandpiper | 79 |
| May 25 | Yachats Fair | 200 |
| June 13 | Port of Newport marinas staff | 23 |
| June 13 | Seal Rock Water District staff and board | 16 |
| June 14 | Aging Wisely (in-home caregiving), Newport | 1 |
| June 18 | Bayside Assisted Living Facility staff | 4 |
| June 18 | Angell Job Corps Camp safety staff | 33 |
| June 18 | Adeo (in-home caregiving), Newport | 3 |
| June 20 | Sea Aire Assisted Living Facility | 28 |
| June 26 | Driftwood Mobile Home Park | 36 |
| June 29 | Newport Farmers Market | 100 |
| June 30 | Yachats Farmers Market | 50 |
| | <i>Total</i> | <i>1,559</i> |

staff and a sign language interpreter for a deaf employee.

Lynda also reached out to assisted living facilities, having had experience as a hospice care worker. She gave presentations to staff at two such facilities in the tsunami hazard zones and met with the manager of a Lincoln City facility outside the hazard zone interested in earthquake readiness. Lynda also met with two Newport in-home caregiving agencies (Adeo and Aging Wisely). As a result, they made plans to look up each client’s address and print out evacuation maps that can be added to the clients’ books for future reference. With each agency having about 100 clients and 25-30 caregivers, it reached a good number of these vulnerable residents.

Map Your Neighborhood and CERT training

Map Your Neighborhood booklets were given out at rallies and other events where DOGAMI had materials. Many drew interest in MYN and CERT.

Lincoln County CERT has six geographic teams spread around the county. Lynda attended several CERT meetings to support their work and to enlist their help with tsunami outreach activities. These included conducting surveys, supporting door to door bag stuffing and outreach, attending community rallies to staff info tables, taking photos at events, and staffing assembly areas at the evacuation drill. Lynda also attended meetings of the Lincoln County Citizen Corps Coordinating Council (LC5), where countywide coordination and support for CERTs took place.

CERT teams were strengthened as a result of the tsunami mapping and outreach. A new CERT team in Waldport held its first meeting in February, at which DOGAMI presented. Also in the Waldport area, six residents at Driftwood Village Mobile Home Park signed up for CERT training. In Newport’s South Beach at the Bayside assisted

living facility, four of the 10 caregivers attending Lynda’s presentation signed up for CERT training.

Signage

Using grant funds, DOGAMI purchased and delivered roadway and assembly area signs for local jurisdictions to use and install as needed. These included 18” round evacuation route signs with matching arrows to be used to identify the direction to high ground, and 24" x 36" assembly area signs to indicate the location of high ground for evacuees.

Signage purchased for communities. “County designates signs in unincorporated areas.

| | <i>Evac. route sign + arrow</i> | <i>Assembly area sign</i> |
|-------------------------|---------------------------------|---------------------------|
| Lincoln City North | 8 | 5 |
| Lincoln City South | 7 | 5 |
| Gleneden Beach (County) | 5 | 8 |
| Lincoln Beach (County) | 3 | 8 |
| Depoe Bay | 5 | 5 |
| Toledo | 5 | 5 |
| Newport North | 6 | 6 |
| Newport South | 3 | 6 |

| | | |
|------------------------|-----------|-----------|
| Waldport | 9 | 10 |
| Yachats North (County) | 5 | 10 |
| Yachats | 7 | 10 |
| Seal Rock (County) | 8 | 10 |
| <i>Total</i> | <i>71</i> | <i>88</i> |

TsunamiReady certification

The TsunamiReady program , developed by the National Weather Service, helps cities, towns, counties, universities and other large sites in coastal areas reduce the potential for disastrous tsunami-related consequences. The city of Lincoln City became TsunamiReady in 2005, but prior to 2013 no one else in the county had earned this badge.

Thanks to the leadership of county emergency manager Jenny Demaris working with local fire districts, cities, and others, new TsunamiReady designations were awarded to the following in July 2013. They also became StormReady.

Businesses, schools, and other non-governmental entities often establish tsunami safety plans and take part in awareness activities. An entity that



Lincoln County's public safety leaders celebrate their TsunamiReady and StormReady designations at a ceremony in Newport. Photo: Casey Miller, Lincoln County

Pictured left to right are: Sgt. Tony Garbarino, Newport Police | Liz Martin, Lincoln County School Board | Assistant Chief Rob Murphy, Newport Fire | Chief Derek Clawson, Central Oregon Coast Fire | Chief Joshua Williams, Depoe Bay Fire | Chief Will Ewing, Toledo Fire | Mayor Sue Woodruff, City of Waldport | Chief Tracy Shaw, Seal Rock Fire | Mayor Ronald Brean, City of Yachats | Maryann Bozza, Hatfield Marine Science Center | Mayor A.J. Mattila, City of Depoe Bay | Chief Don Baker, North Lincoln Fire | Jenny Demaris, Lincoln County Emergency Management | Commissioner Terry Thompson, Lincoln County Board of Commissioners

promotes the principles and guidelines of the TsunamiReady program may apply to become a "Supporter."

This is a unique achievement because no other county in Oregon has so many TsunamiReady designations, and only one other TsunamiReady Supporter designation has been made in the U.S.

TsunamiReady designations during grant period

| <u>TsunamiReady</u> | <u>TsunamiReady Supporters</u> |
|---------------------|--|
| Depoe Bay | Lincoln County School District |
| Lincoln County | Hatfield Marine Science Center |
| Newport | Central Oregon Coast Fire District |
| Toledo | Depoe Bay Fire District |
| Waldport | North Lincoln Fire and Rescue District |
| Yachats | Seal Rock Fire District |
| | Yachats Rural Fire Protection District |

Surveys

For a summary of surveys conducted before outreach, after outreach, and the day of Seal Rock Fire’s evacuation drill. please see the appendices.

Conclusion

Community organizer Lynda Engle will continue to be a preparedness ambassador as a CERT member and south county resident. She and the Seal Rock fire district are exploring grant funding opportunities for more preparedness outreach to keep the momentum going.

A primary goal of Tsunami Outreach Oregon is the sustainability of readiness. Lincoln County has strong public safety leadership in place across the fire districts, the county, and the municipalities. More work remains to be done to reach vulnerable populations, to engage more business owners, to break through apathy in some areas, and to conduct more frequent tsunami evacuation drills.

But the broad impact of door to door outreach, the countywide postcard mailer, the media coverage, and the streamlined public safety infrastructure reflected in the TsunamiReady designations are signs of a safer, more resilient county.



Gleneden Beach’s evacuation drill was branded as a "stroll" and a "celebration," an effective message for reaching seniors who worry they can’t reach high ground quickly enough on foot. Participants were awarded prizes in categories such as oldest and youngest participants, largest family group and cutest couple! Prior to the event, 600 copies of this mailer were printed and either delivered using the US Postal Service’s “Every Door Direct” option or distributed via the local post office (for residents without home delivery).

CLATSOP COUNTY

Overview

DOGAMI community organizer (CO) Lianne Thompson led the outreach effort in a coastal county that has had its share of tsunami outreach in the past, notably a 2005 outreach pilot project in Seaside and a limited 2010-2011 outreach effort in Warrenton and Astoria. While this meant there was occasionally a “been there, done that” attitude among some local partners, Lianne’s experience as a volunteer CERT coordinator for Clatsop County served her well in conducting grassroots outreach, and her strong ties to local media helped in earning excellent news coverage. Lianne’s position began in March and ended in July 2013.

The mapping and outreach in Clatsop County was on a shortened timeframe, due to availability of model data. DOGAMI held meetings with local officials in February through April to review draft evacuation maps. A decision was made not to conduct pre- and post-outreach surveys in this condensed timeframe.



Lianne Thompson of Arch Cape worked as DOGAMI's community organizer in Clatsop County.

Photo: Lianne Thompson

Steering committee

A local steering committee was formed to provide guidance to DOGAMI and to participate in various outreach activities. The group met four times to help plan outreach and provide important feedback on community rallies and other project elements. It was led by DOGAMI staffers Rachel Lyles Smith and Peter Ovington, with special science presentations by Dr. George Priest. The committee included fire and police, city managers and planners, and other preparedness advocates. They brought invaluable local knowledge to the outreach effort. Members are listed below. A smaller core group of members came to most meetings.

| <i>Name</i> | <i>Affiliation</i> |
|-----------------------------|-------------------------------------|
| Chief Ted Ames | Astoria Fire Department |
| Chief Pete Curzon | Astoria Police Department |
| Deputy Chief Brad Johnston | Astoria Police Department |
| Paul Benoit | City of Astoria |
| Superintendent Craig Hoppes | Astoria School District |
| Herb Florer | Port of Astoria |
| David Wolfram | Oregon Military Department |
| Sgt. Daniel Cleveland | Oregon Military Department |
| James Miller | Oregon Military Department |
| Chief Mike Balzer | Cannon Beach Fire and Rescue |
| Chief Jason Schermerhorn | Cannon Beach Police |
| Rich Mays | City of Cannon Beach |
| Bill Vanderberg | City of Cannon Beach |
| Dean Perez | Clatsop County Emergency Management |
| Tiffany Brown | Clatsop County Emergency Management |
| Hiller West | Clatsop County Planning |
| Sheriff Thomas Bergin | Clatsop County Sheriff's Office |
| Ed Wegner | Clatsop County |
| Scott Somers | Clatsop County |
| Caren Black | Clatsop County CERT |
| Bruce Francis | Clatsop County Planning Commission |
| Tom Bennett | Clatsop County |
| Jennifer Bunch | Clatsop County Planning |

CLATSOP COUNTY

| | |
|-----------------------------|---|
| Patrick Wingard | Oregon Dept. of Land Conservation and Development |
| Chief Bill Eddy | Gearhart Volunteer Fire Dept. |
| Chief Jeff Bowman | Gearhart Police Department |
| Chad Sweet | City of Gearhart |
| Chief Jeff Golightly | Lewis & Clark Fire & Rescue |
| Duane Mullins | MEDIX |
| Tad Pedersen | OSFM Astoria |
| Patrick Corcoran | Oregon Sea Grant |
| Cecilia Pratt | American Red Cross |
| Chief Joey Daniels | Seaside Fire and Rescue |
| Asst. Chief Chris Dugan | Seaside Fire and Rescue |
| Chief Robert Gross | Seaside Police Department |
| Mark Winstanley | City of Seaside |
| Dr. Douglas Dougherty | Seaside School District |
| Kevin Cupples | City of Seaside |
| Jon Rahl | City of Seaside |
| Chris Penno | US Coast Guard |
| LCDR Brenda White | US Coast Guard |
| Chief Tim Demers | Warrenton Fire Department |
| Chief Matthew Workman | Warrenton Police Department |
| Kurt Fritsch | City of Warrenton |
| Superintendent Mark Jeffery | Warrenton-Hammond School District |
| Susana Gladwin | CERT, Jewell, Elsie-Vinemaple |
| Lianne Thompson | DOGAMI community organizer |

Community rallies

Tsunami Readiness Rallies educate the public on the earthquake and tsunami hazard, unveil the new inundation maps for the area, and distribute new evacuation brochures to residents. Four rallies were held in Clatsop County, summarized below:

| Where | When | Attendance |
|-----------------------------------|---------------------|------------|
| Warrenton Community Center | Thu June 20 7pm | 110 |
| Astoria Clatsop Community College | Sat June 22 10am | 75 |
| Seaside Broadway Middle School | Thu June 27 7pm | 140 |
| Arch Cape Fire station | Sat June 29 10am | 40 |
| | <i>Total</i> | 365 |



Evacuation maps were a big attraction at all rallies, including here in Arch Cape. *Photo: Peter Ovington*

DOGAMI and local partners were satisfied with the turnout, which was helped by extensive local media coverage. The rally's focus was a slide presentation by DOGAMI staff Rachel Lyles Smith and Peter Ovington, with time for questions. The events put new maps into many hands and created new ambassadors for preparedness who will spread the word.

A more detailed summary of each rally is included below.

Warrenton: The Community Center was standing room only, with city manager Kurt Fritsch, Fire Chief Tim Demers, and Police Chief Matthew Workman all attending. In addition, private sector attendees included the Asst. Manager Jeff Hazen of Costco and the Manager of The Home Depot. Volunteer Red Cross and CERT member Dean Peterson assisted with room setup and distributed emergency food supplies to start "grab and go" bags, a big hit with attendees.

Astoria: This venue was filled to capacity, with City Councilor Drew Herzig, Fire Chief Ted Ames, and Clatsop County Emergency Services Manager and Commander of Camp Rilea Lt. Col. Dean Perez attending. Red Cross staffer Ceci Pratt distributed

food and information. Astoria CERT volunteer Amy staffed the sign-up sheets and provided information about CERT and community preparedness.

Seaside: The Cafeteria of Broadway Middle School had a few empty seats, but attendance of 140 people exceeded expectations of city staff. City Manager Mark Winstanley came, as did senior planner Kevin Cupples, Fire Chief Joey Daniels, and many CERT, ham, and Tsunami Advisory Group (TAG) members and its chair, local geologic hazards expert Tom Horning. We were speaking to people who had a long-term interest in the topic and were actively involved in community preparation and response, but they still came to hear new information.

Arch Cape: Local partners at this rally included Cannon Beach Fire Chief Mike Balzer, County Commissioner Debra Birkby, and Cannon Beach City Manager Rich Mayes. Ceci Pratt distributed personal toiletries kits, again for “go bag” supplies. Several CERT and ham radio operators attended, too. Participants were eager to move forward and develop a cache container program, similar to Cannon Beach’s. Attendees agreed at this rally to schedule a special meeting to follow up on this idea. Chief Balzer’s plan is that the CERT team will work on this project, which also makes it a natural part of door to door outreach. As the South Clatsop County CERT leader, DOGAMI’s community



About 140 people came to the tsunami readiness rally in Seaside. *Photo: Peter Ovington*

organizer Lianne Thompson says she is committed to doing a drill during the Great Oregon ShakeOut, Map Your Neighborhood, and other outreach before then.

Door to door outreach, Map Your Neighborhood, and CERT

The steering committee decided not to conduct door to door outreach or an evacuation drill during the grant period, because the summer season is busy with vacationers and heavy retail sales on the North Coast, dependent as the area is on tourist dollars for fueling the local economy.

DOGAMI provided local partners with bulk print orders of evacuation maps and door to door outreach bags and materials, with the understanding that they would distribute these after summer. Also provided was a toolkit with planning guidance and a sample door to door script. Some fire districts and communities have already committed to door to door outreach and drills as part of the Great Oregon Shakeout in October 2013. Commitments have come from the City of Astoria’s fire chief and the City of Gearhart’s administrator and fire chief.

DOGAMI’s community organizer, Lianne Thompson, spent much of her energy building relationships around the county to nurture the formation or growth of Map Your Neighborhood programs and CERT teams, the goal being to create the grassroots structure for readiness activities to live on. MYN is a first, easier step for getting involved, while CERT training asks for more time and commitment.

In Surf Pines (between Warrenton and Gearhart), the homeowners association and resident Susan Holloway are planning to work with Lianne on Map Your Neighborhood and perhaps CERT later on. In Gearhart, city manager Chad Sweet and Mayor Widdop have put city funds toward formation of a CERT team and are eager to establish a readiness

structure. In Seaside, CERT appeared to be a possibility, but it wasn't clear whether the fire chief and CERT training officer were prepared to do door to door.

The City of Cannon Beach has been one of the most active communities on the coast, given DOGAMI's past and ongoing work there on tsunami science, mapping, and more recently a pedestrian evacuation model. Some of Cannon Beach's volunteer leaders are eager to proceed with door to door. City manager Rich Mays, his emergency services consultant, Bill Vanderberg, and the volunteer E-Prep Committee are guiding decisions on next steps. In Arch Cape and Falcon Cove, CERT members are eager to demonstrate the benefits of door to door. They have also requested technical support from Cannon Beach in establishing a cache barrel program of their own.

Lianne and others initiated a Map Your Neighborhood for businesses in Astoria and another for staff of Cannon Beach Vacation Rentals.

Evacuation drills

Apart from planning for larger scale drills this fall and beyond, as discussed above, three small



Community organizer Lianne Thompson and Cannon Beach Emergency Preparedness Committee member Les Wierson (far left) joined the Haystack Rock Awareness Program for a small, informal evacuation drill. These four coastal visitors (at right) joined in the drill. *Photo: Nala Cardillo*

evacuation drills occurred in Cannon Beach. Nala Cardillo, coordinator of the Haystack Rock Awareness Program (HRAP), conducted two of them on May 25, one at 8:00am, another at 8:00pm (after the local media misprinted the correct time). A third drill was conducted by CERTs in the northwest end of Cannon Beach, from Breaker's Point Condominium to the high ground at CERT members Les and Myrna Wiersons' house. Turnout at these smaller, informal events was limited, more akin to walking groups practicing evacuation routes. But it's good practice until local fire districts can schedule larger-scale drills in autumn, 2013.

Schools outreach (K-12)

The county includes Seaside, Warrenton, and Astoria school districts. The timing of outreach, so close to the end of the school year, made it challenging to get much participation from schools. Still, DOGAMI advertised its Tsunami Readiness Rallies to students and staff by printing and distributing 5,250 half-sheet color fliers. A more detailed assessment of schools is below.

Seaside, Gearhart, Cannon Beach, Arch Cape: Dr. Doug Dougherty, Seaside Director of Public Schools, has indicated general support and high awareness of the issue. In June, 2013, Seaside Schools closed Cannon Beach Elementary School while the city council continued discussions with a local group aiming to form a construct a new charter school in Cannon Beach, outside of the inundation zone. In addition, Dr. Sheila Roley, Principal of Seaside High School and Broadway Middle School, has agreed to work with Lianne on the founding of a Teen CERT program at Seaside High School in the fall of 2013.

Warrenton: Schools superintendent Mark Jeffery agreed to donate \$1,000 to buy more maps for this area. Further, city manager Kurt Fritsch and his police and fire chiefs agreed that Warrenton's residents are best reached using a dual focus on senior citizens and families with school-aged kids.

Astoria: Superintendent Craig Hoppes is capable and responsive, and his staff was helpful in distributing rally fliers. More work is likely needed with this school district in the future.

Falcon Cove has a small private cooperative grade school, Fire Mountain School, which is a designated shelter area.

Overall, schools in Clatsop County continue to practice tsunami awareness, including drills and instructions for youth to carry home to their families.

Beyond the K-12 level, Lianne met with two vice-presidents at Clatsop Community College, JoAnn Zahn and Donna Larson. Both were eager to have the college involved in preparedness, including having one building designated as a Red Cross shelter, providing emergency communications for the area, and other activities.

Media coverage

News reporting on DOGAMI's work was extensive, positive, and very helpful in generating turnout at rallies and interest in the new maps. Lianne Thompson worked closely with local reporters and played a large part in this success. To see the news clips, please turn to the appendix.

Newspaper coverage included eight articles in *The Daily Astorian*, including two prominent front-page stories, as well as an excellent front-page article in *The Seaside Signal*, with a reprint of the tsunami evacuation map. *Coast River Business Journal* and *Hipfish Monthly* are two publications deserving future media outreach; their less frequent publication schedule didn't allow for timely coverage of the tsunami maps' release. No newspaper ads promoting the rallies were purchased in Clatsop County because the earned media coverage was so extensive.



Front page newspaper coverage like this was very helpful in generating turnout at rallies and getting map information into the public's hands.

Other coverage included a reprint of evacuation maps in the *Cannon Beach Gazette* and *The Columbia Press* (Warrenton) and an Associated Press story reprinted by *The Oregonian*, as well as OPB News coverage.

Radio coverage included five stories from KAST Radio in Warrenton, one of which was an extended interview with DOGAMI's Peter Ovington. Coast Community Radio (KMUN in Astoria) featured two 30-minute interviews, one with Peter Ovington on "Talk of Our Towns" and another with both Peter and Lianne Thompson on *The Daily Astorian's* "After Deadline" with reporter Nancy McCarthy. Two of these three interviews are available upon request from DOGAMI as audio files. Lastly, public service announcements aired on KQCB radio.

Workshops and events targeting key audiences

Targeted outreach was also conducted with key audiences via one-on-one meetings, workshops, presentations, and at community gathering places. These included briefings to local government

leadership at city council meetings and presentations to large employers and other businesses located in the inundation zones. The CO also had outreach materials in Spanish available at some events.

Below is a summary of all outreach presentations:

| <i>Date</i> | <i>Organization or event</i> | <i>Attendees</i> |
|-------------|--|------------------|
| 5/7 | Business Map Your Neighborhood | 3 |
| 5/13 | Cannon Beach Rural Fire Protection board | 9 |
| 5/17 | TeenCERT planning mtg, Cannon Beach | 1 |
| 5/18 | Map Your Neighborhood, Surf Pines | 7 |
| 5/23 | City of Seaside dept. leaders | 9 |
| 5/25 | Tsunami evacuation drill, Haystack Rock | |
| 5/28 | Cannon Beach Rural Fire Protection board | 10 |
| 6/1 | SEA-PAC Hamfest (amateur radio convention) | 130 |
| 6/5 | Gearhart City Council | 30 |
| 6/7 | Seaside Chamber of Commerce | 4 |
| 6/8 | STARS Ham Radio, Seaside | 17 |
| 6/10 | CERT, Seaside | 9 |
| 6/10 | Seaside City Council | 30 |
| 6/11 | Warrenton City Council | 30 |
| 6/11 | Cannon Beach City Council | 40 |
| 6/12 | Clatsop County Board of Commissioners | 10 |
| 6/13 | Seaside Downtown Development Assn. | 23 |
| 6/13 | Cannon Beach Chamber of Commerce | 31 |
| 6/15 | CERT, Astoria | 25 |
| 6/20 | Tsunami Readiness Rally, Warrenton | 110 |
| 6/22 | Tsunami Readiness Rally, Astoria | 75 |
| 6/25 | American Red Cross | 15 |
| 6/26 | Cannon Beach Chamber of Commerce | 9 |
| 6/27 | Tsunami Readiness Rally, Seaside | 140 |
| 6/29 | Tsunami Readiness Rally, Arch Cape | 40 |
| 7/1 | Astoria City Council | 30 |
| 7/9 | NW Senior and Disability Services | 14 |
| 7/10 | TLC Credit Union, Astoria | 4 |
| 7/17 | TLC Credit Union, Seaside | 5 |
| 7/18 | Astoria Senior Center | 40 |
| 7/25 | Coast Rehabilitation Services | 35 |
| 7/27 | Home Depot, Warrenton | 55 |
| | <i>Total</i> | <i>990</i> |

Amateur radio: Ham radio operators are a vitally important communication link in this rural area, as became evident in the winter storm of 2007. Lianne

is a licensed ham operator (KF7SBQ) and participates sporadically in their various group meetings. Many say it is the ham operators who will likely conduct door to door outreach in Seaside, as well as performing vital communications functions during any tsunami. At their urging, Lianne attended their convention in Seaside on June 1 and 2 to distribute literature. Groups include Clatsop County ARES, SEARC in Astoria, STARS in Seaside, and CBARS in Cannon Beach, including Arch Cape. There is overlap in membership and coverage areas.

American Red Cross: Ceci Pratt is their outreach specialist from Lincoln County up to Clatsop County. She coordinates an amazing variety of effective community preparedness activities for tsunamis and other situations. She was a key partner for DOGAMI’s community organizers in both counties.

Other: Lianne conducted outreach to other constituencies, including Astoria Senior Center, chambers of commerce in Seaside, Cannon Beach, and Astoria-Warrenton, and the lodging industry, including a firm in Cannon Beach that manages 90



Community organizer Lianne Thompson speaks with a resident at a Map Your Neighborhood meeting in Surf Pines. *Photo: Lianne Thompson*

rental homes. In rural, unincorporated areas, efforts were made to reach home owners associations.

All of these are existing social networks that provide structure and strong personal relationships, essential to the continuing effort to maintain tsunami readiness.

Signage

Using grant dollars, DOGAMI purchased and delivered roadway and assembly area signs for local jurisdictions to use and install as needed. These included 18” round evacuation route signs with matching arrows to be used to identify the direction to high ground, and 24" x 36" signs to indicate the location of assembly areas.

Signage purchased for communities

| | <i>Evac. route sign + arrow</i> | <i>Assembly area sign</i> |
|---------------------------|---------------------------------|---------------------------|
| Arch Cape | 5 | 7 |
| Cannon Beach* | 0 | 0 |
| Seaside/Gearhart | 15 | 13 |
| Sunset Beach/Delray Beach | 15 | 4 |
| Youngs River Valley | 5 | 3 |
| Warrenton | 15 | 10 |
| Astoria | 5 | 12 |
| <i>Total</i> | <i>60</i> | <i>49</i> |

*Note: Cannon Beach already had sufficient signage in place.

In addition, DOGAMI and Oregon Emergency Management continue to work with Clatsop County communities to provide evacuation maps as permanent signs at key beach access points or other high pedestrian traffic areas.

TsunamiReady certification

The TsunamiReady program, developed by the National Weather Service, is designed to help cities, towns, counties, universities and other large sites in

coastal areas reduce the potential for disastrous tsunami-related consequences.

The city of Seaside became TsunamiReady in August 2013. Clatsop County was already designated in 2011 and Cannon Beach in 2002. Astoria, Warrenton, and Gearhart should consider pursuing TsunamiReady designations when they feel they have met enough of the criteria.

Conclusion

Lianne Thompson, as a resident of south Clatsop County, will continue to be a preparedness ambassador and CERT member.

A primary goal of Tsunami Outreach Oregon is the sustainability of readiness. Clatsop County has some strong public safety leadership but, like many, wrestles with limited resources in funding and staffing to carry on this work. More work remains to be done to complete door to door distribution of evacuation maps and for fire districts to hold evacuation drills.

But the broad impact of the media coverage, the grassroots relationships cultivated by Lianne, the interest shown at readiness rallies, and the time that public safety officials spent around the table together are signs of a safer, more resilient county to come.

Conclusion and next steps

After recent years of this work, DOGAMI made a list of outreach challenges and requests from local communities.

Challenges

- Reaching the younger population
- Convincing people the risk is real
- Convincing people they can save their lives (disaster psychology)
- Options for vulnerable populations in the inundation zones
- Getting local communities to volunteer time for the outreach campaign
- Finding the right community organizers for the job
- Finding local tsunami readiness champions
- Getting elected and institutional ownership
- Dependency on new maps and information (scheduling, time constraints)

Requests

- More tsunami signs, with coordinated statewide inventory and installation
- More detailed information (critical facilities) – flow

depths, flow velocities, subsidence

- What are long-term effects of subsidence? The new high tide and what that could mean for coastal communities.
- Multi-hazard approach to planning and outreach
- Guidance for mariners
- Best practices guidance for evacuation drills (for the State)
- Continuance of outreach presentations by the scientists (provides validity)
- Continuance of local grass-roots and K-12 (school curriculum) outreach

Outreach and new maps increased the public's awareness and preparation for earthquakes and tsunamis, while promoting collaboration among local agencies and stakeholders. The primary goal of the TOO program is the sustainability of readiness. While coastal communities are now more prepared, thanks to maps and an extended community conversation, it is ultimately up to each coastal resident and visitor to take responsibility for his or her safety. Many communities now have a greater ability to do just that.

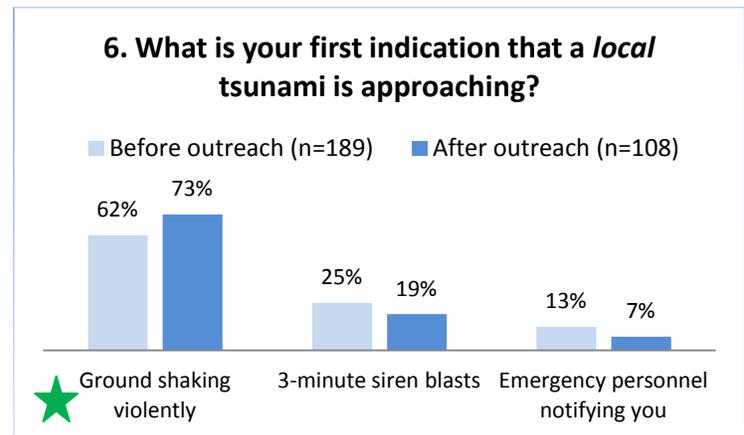
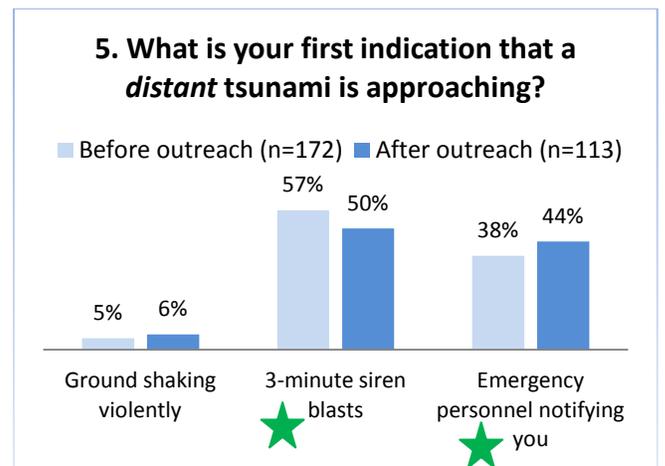
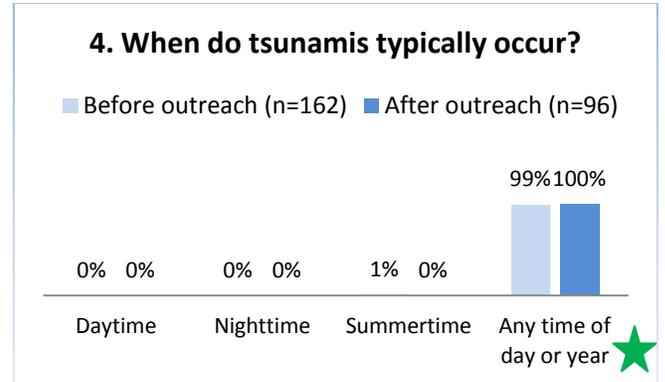
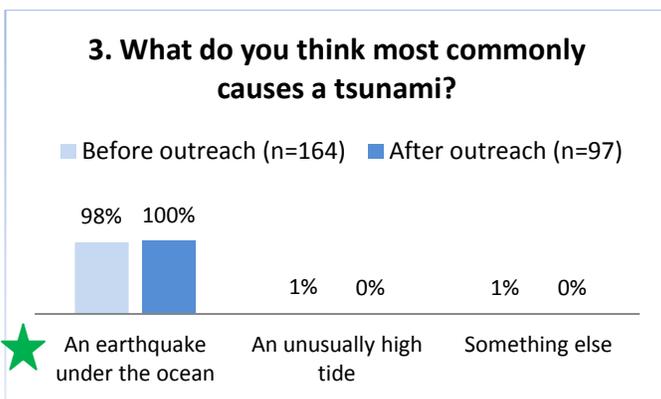
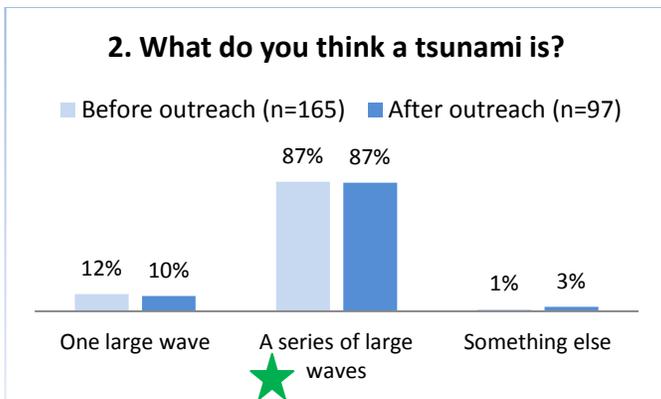
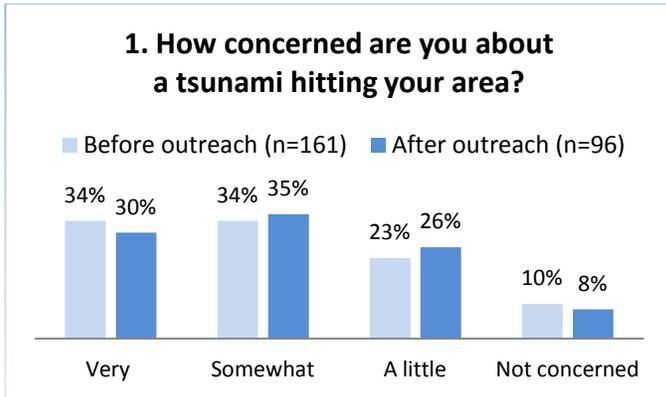


Waldport mayor Sue Woodruff reviewing evacuation maps at a May 1 news conference in Newport.
Photo: Courtesy of Oregon Coast Daily News.

APPENDIX A: DOUGLAS and northern COOS COUNTIES
PRE- AND POST-OUTREACH SURVEY COMPARISON

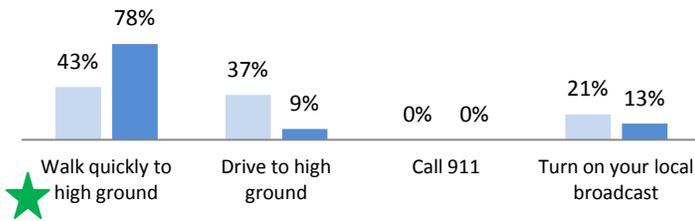
Below is a complete summary of survey responses; *n* is the number of respondents, which does not include the “no answer” category of those who skipped a question, unless otherwise noted.

★ = correct answer



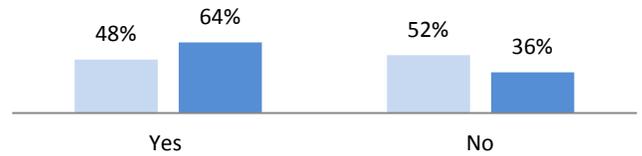
7. Let's say the ground shakes strongly, indicating that a *local* tsunami is on the way. What would be your first response?

Before outreach (n=189) After outreach (n=91)



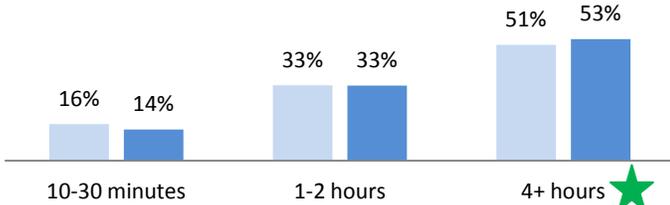
11. Have you and your household developed an emergency plan for a tsunami?

Before outreach (n=154) After outreach (n=96)



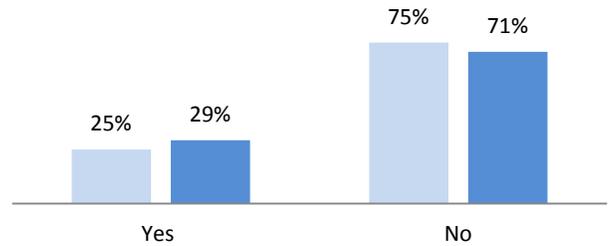
8. For a *distant* tsunami, what is the estimated time you will have to reach high ground?

Before outreach (n=163) After outreach (n=103)



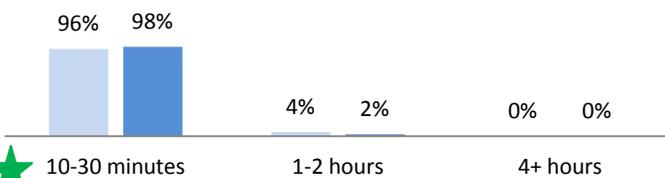
12. Do you have children in school?

Before outreach (n=155) After outreach (n=95)



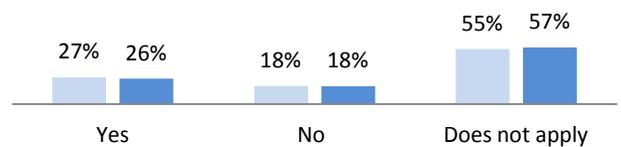
9. For a *local* tsunami, what is the estimated time you will have to reach high ground?

Before outreach (n=161) After outreach (n=98)



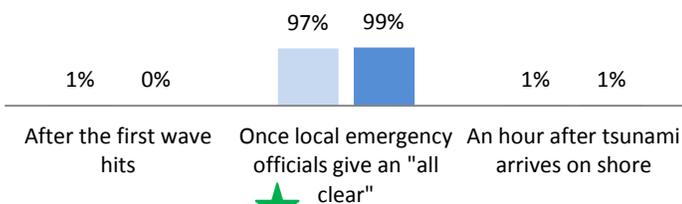
13. If yes, are you familiar with the school's emergency plan and evacuation procedure?

Before outreach (n=138) After outreach (n=90)



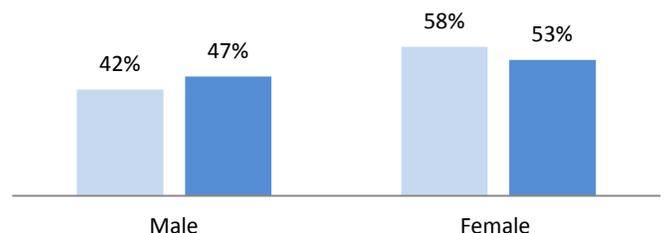
10. Once the tsunami, distant or local, hits shore, when is it safe to return to low-lying areas?

Before outreach (n=158) After outreach (n=96)

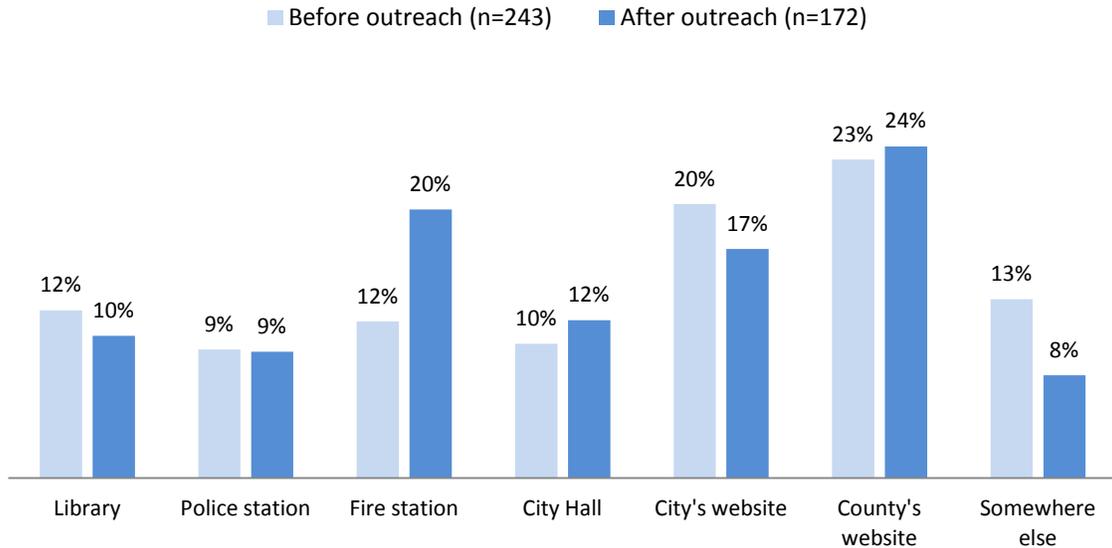


15. Are you male or female?

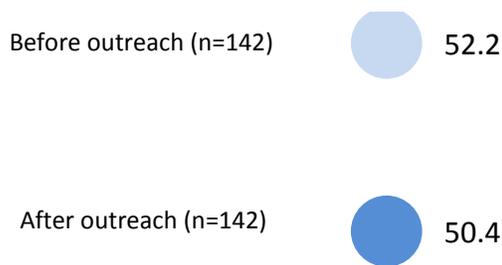
Before outreach (n=156) After outreach (n=92)



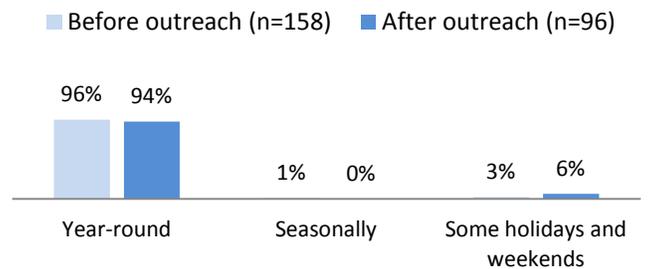
14. If you wanted to get more information on tsunamis, where would it be most convenient to do so?



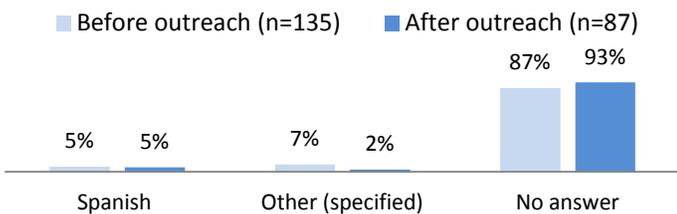
16. What is your age? (average shown)



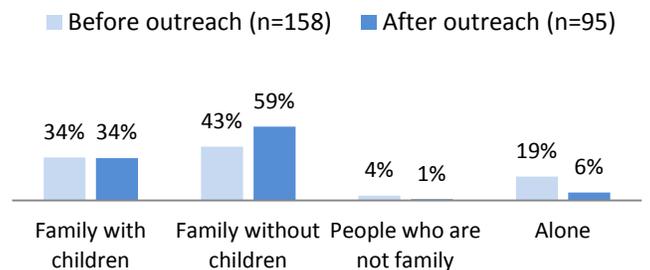
18. How much time do you spend on the Oregon coast?



17. Would anyone in your household or neighborhood benefit from tsunami preparedness information in a language other than English?



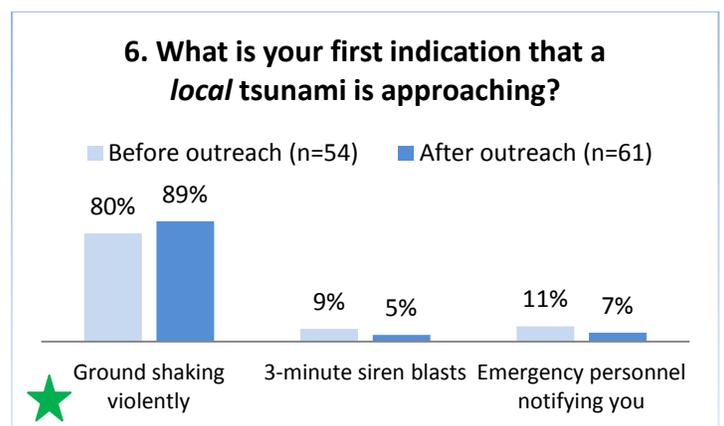
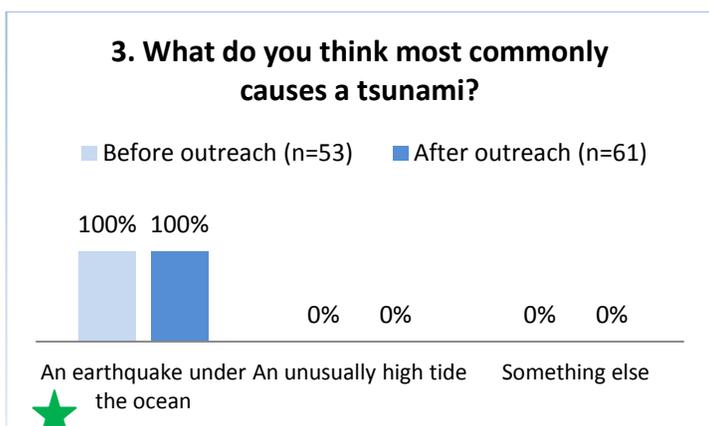
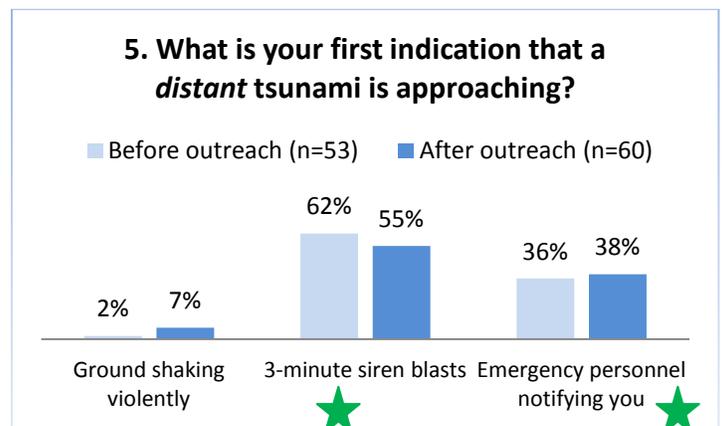
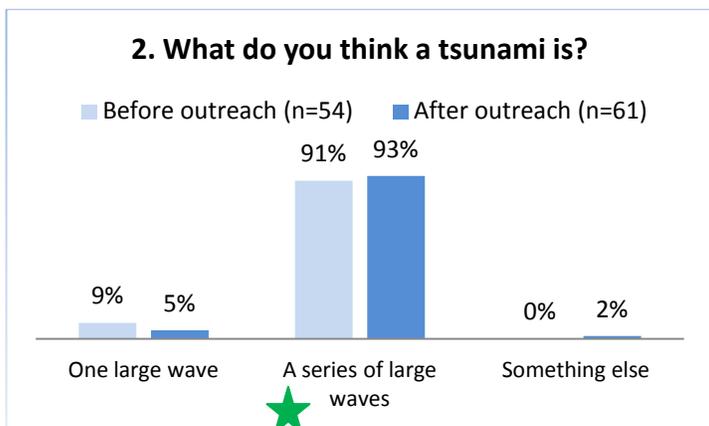
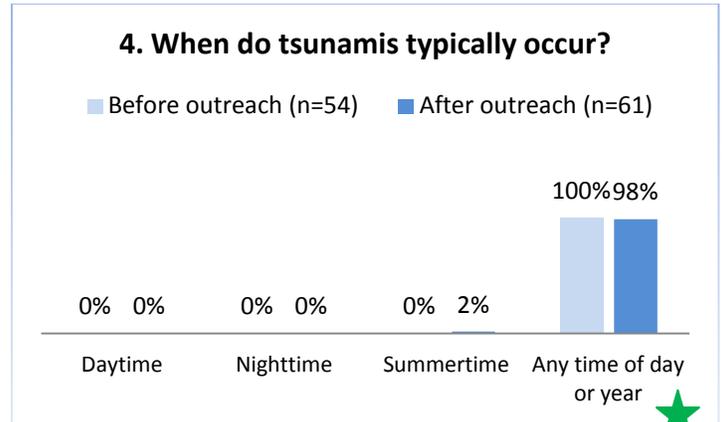
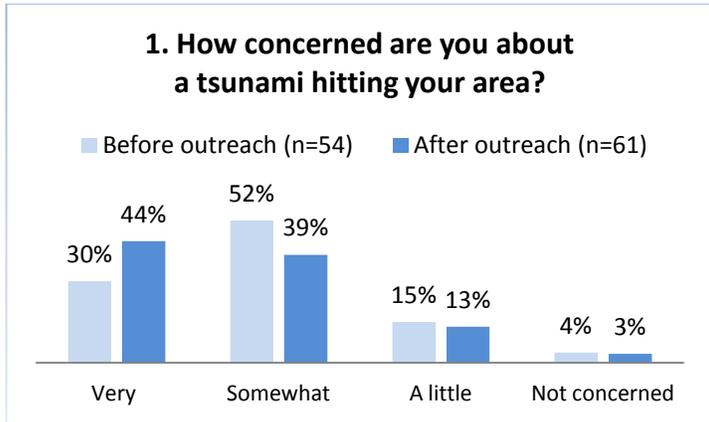
19. What type of household do you live in?



APPENDIX B: LANE COUNTY
PRE- AND POST-OUTREACH SURVEY COMPARISON

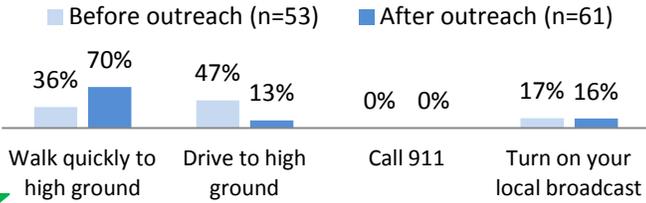
Below is a complete summary of survey responses; *n* is the number of respondents, which does not include a “no answer” category of those who skipped a question, unless otherwise noted.

★ = correct answer

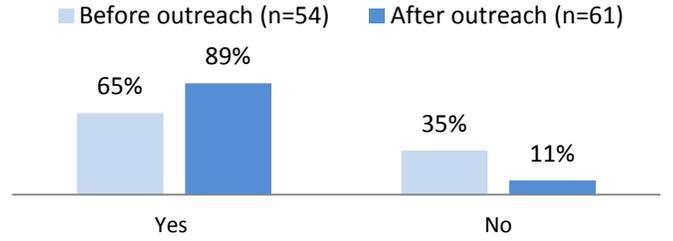


7. Let's say the ground shakes strongly, indicating that a *local* tsunami is on the way.

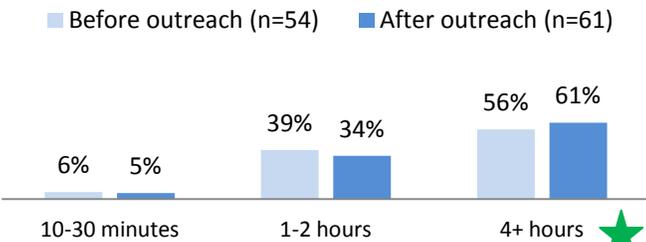
What would be your first response?



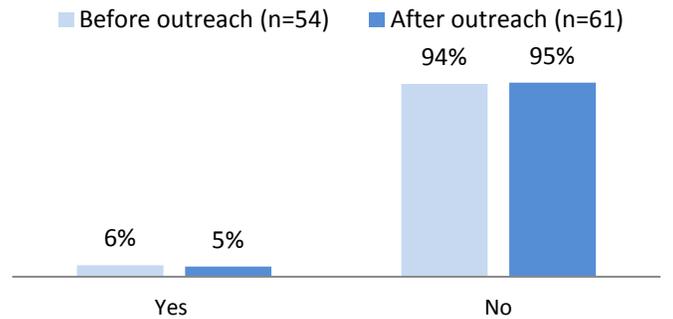
11. Have you and your household developed an emergency plan for a tsunami?



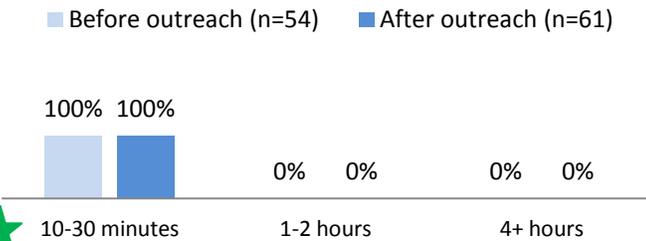
8. For a *distant* tsunami, what is the estimated time you will have to reach high ground?



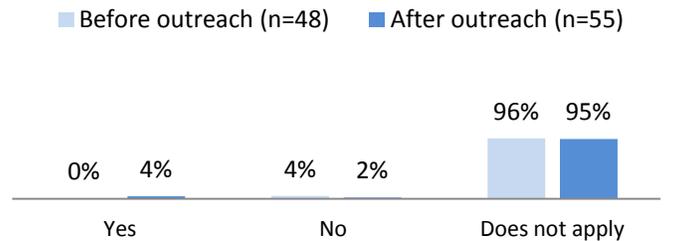
12. Do you have children in school?



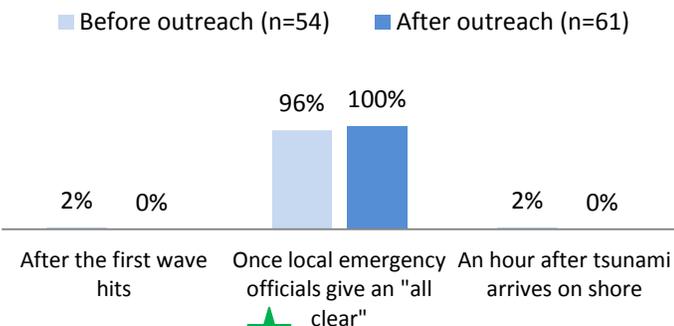
9. For a *local* tsunami, what is the estimated time you will have to reach high ground?



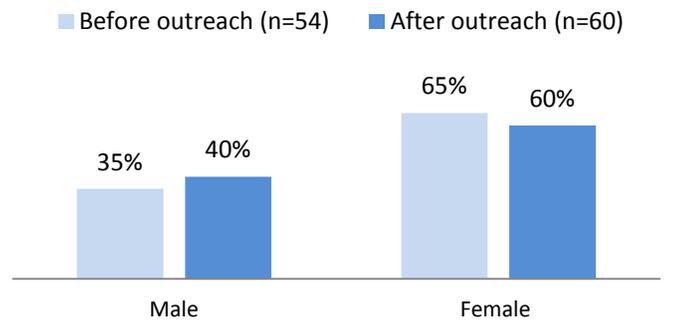
13. If yes, are you familiar with the school's emergency plan and evacuation procedure?



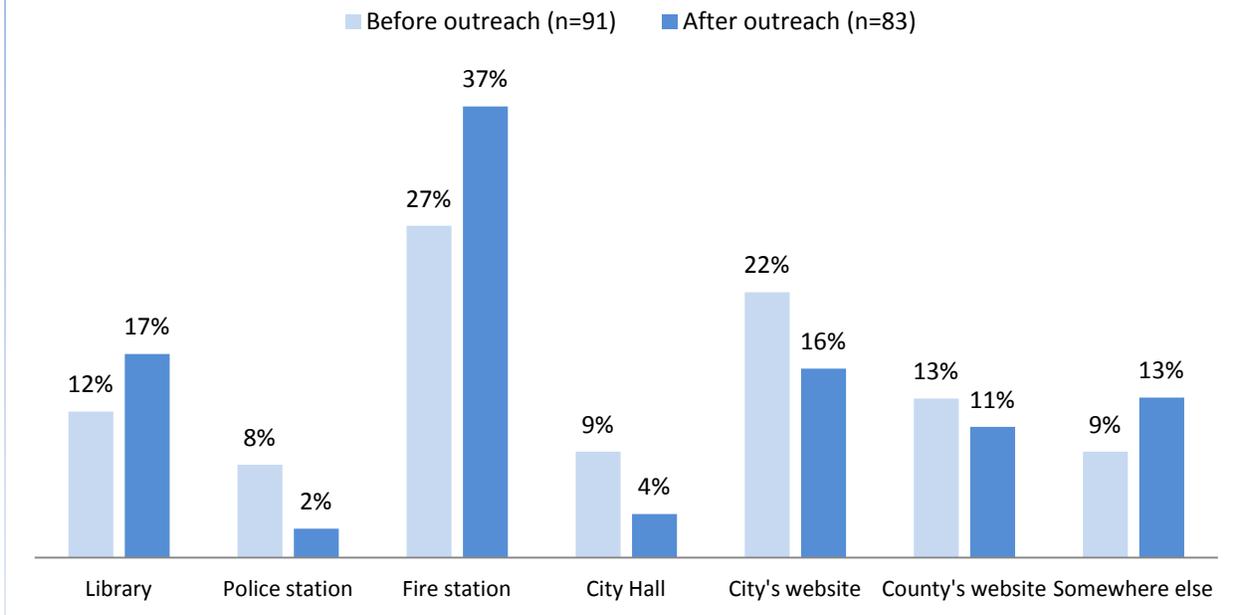
10. Once the tsunami, distant or local, hits shore, when is it safe to return to low-lying areas?



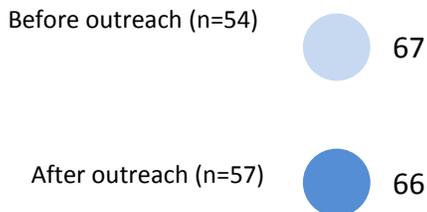
15. Are you male or female?



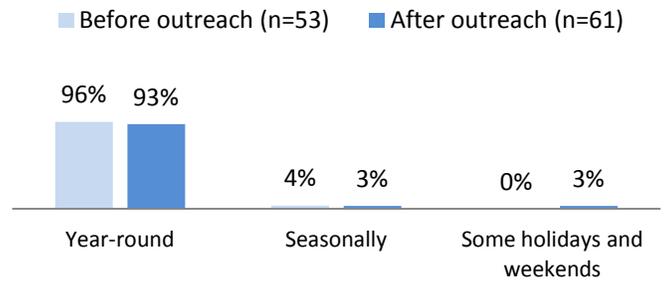
14. If you wanted to get more information on tsunamis, where would it be most convenient to do so?



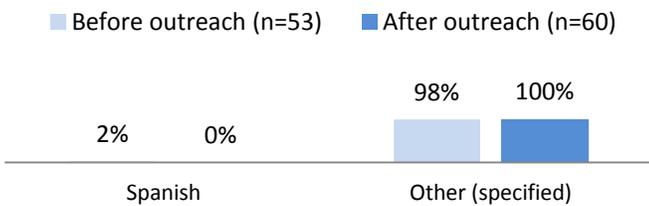
16. What is your age? (average shown)



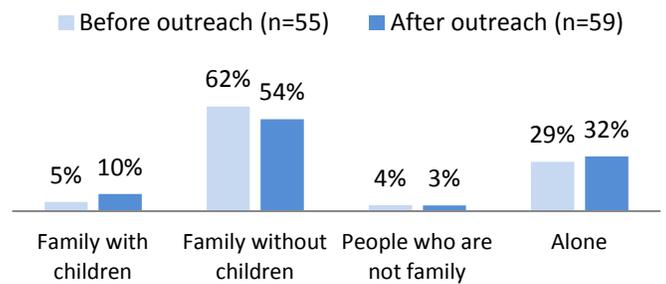
18. How much time do you spend on the Oregon coast?



17. Would anyone in your household or neighborhood benefit from tsunami preparedness information in a language other than English?



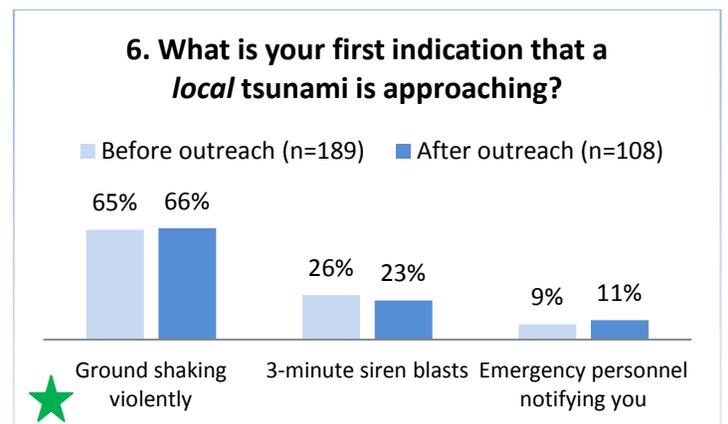
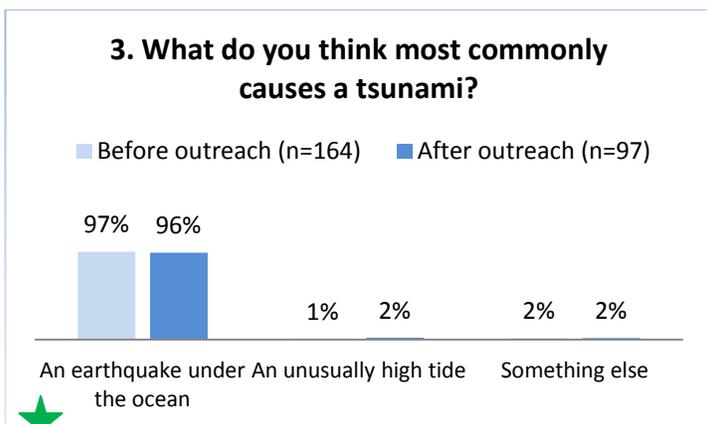
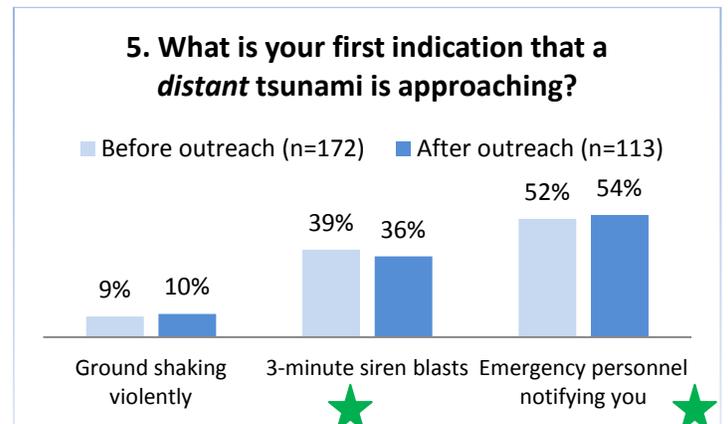
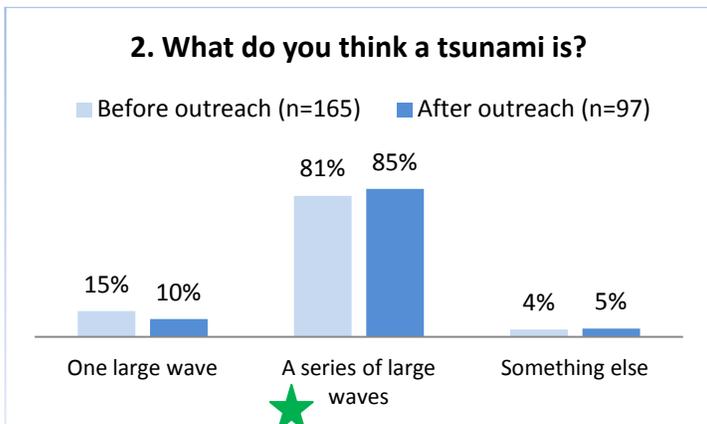
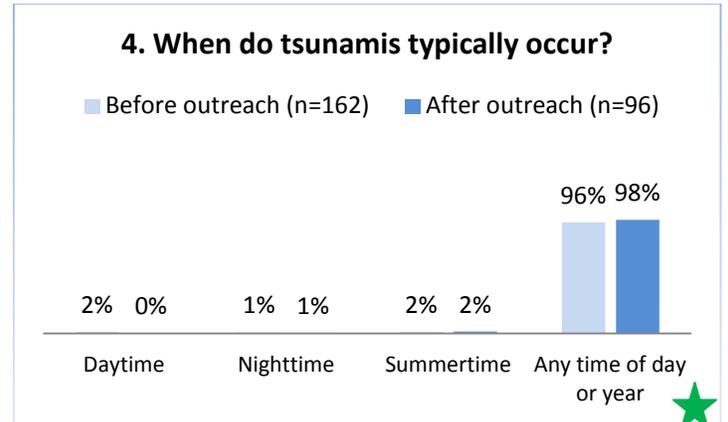
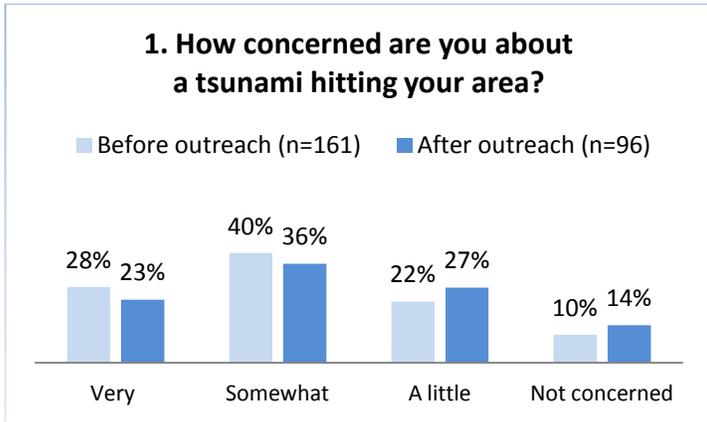
19. What type of household do you live in?



APPENDIX C: LINCOLN COUNTY
PRE- AND POST-OUTREACH SURVEY COMPARISON

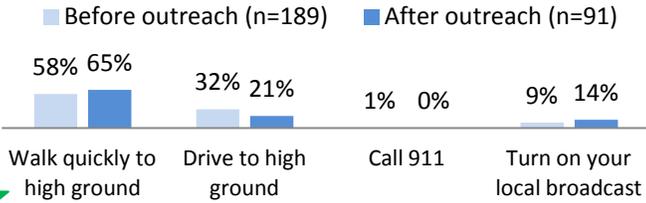
Below is a complete summary of survey responses; *n* is the number of respondents, which does not include a “no answer” category of those who skipped a question, unless otherwise noted.

★ = correct answer



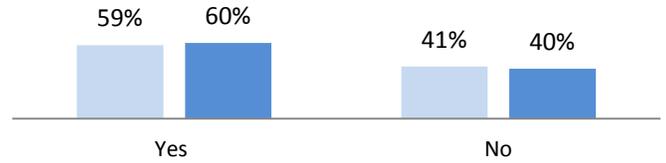
7. Let's say the ground shakes strongly, indicating that a *local* tsunami is on the way.

What would be your first response?



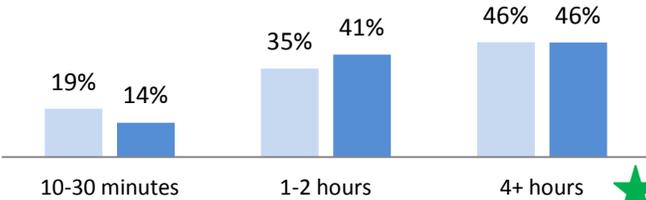
11. Have you and your household developed an emergency plan for a tsunami?

■ Before outreach (n=154) ■ After outreach (n=96)



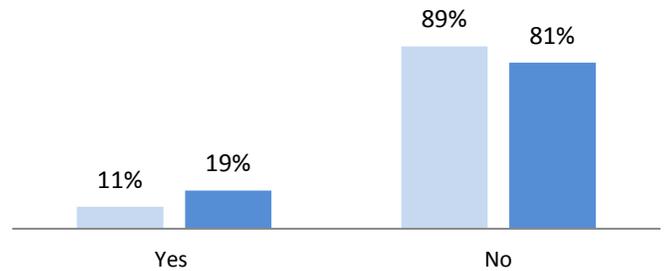
8. For a *distant* tsunami, what is the estimated time you will have to reach high ground?

■ Before outreach (n=163) ■ After outreach (n=103)



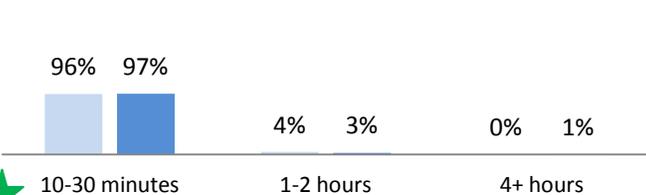
12. Do you have children in school?

■ Before outreach (n=155) ■ After outreach (n=95)



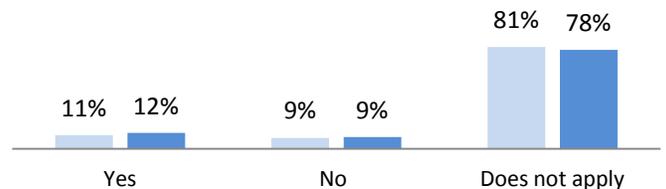
9. For a *local* tsunami, what is the estimated time you will have to reach high ground?

■ Before outreach (n=161) ■ After outreach (n=98)



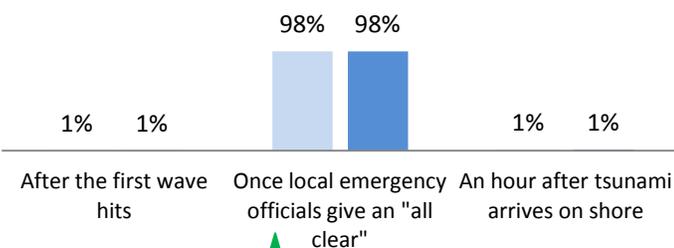
13. If yes, are you familiar with the school's emergency plan and evacuation procedure?

■ Before outreach (n=138) ■ After outreach (n=90)



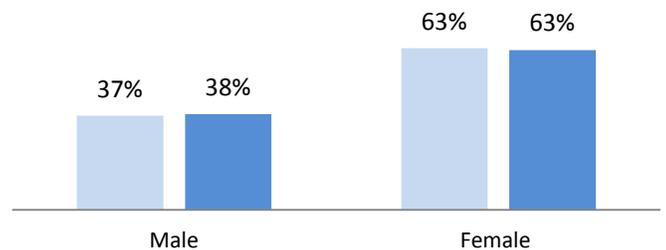
10. Once the tsunami, distant or local, hits shore, when is it safe to return to low-lying areas?

■ Before outreach (n=158) ■ After outreach (n=96)

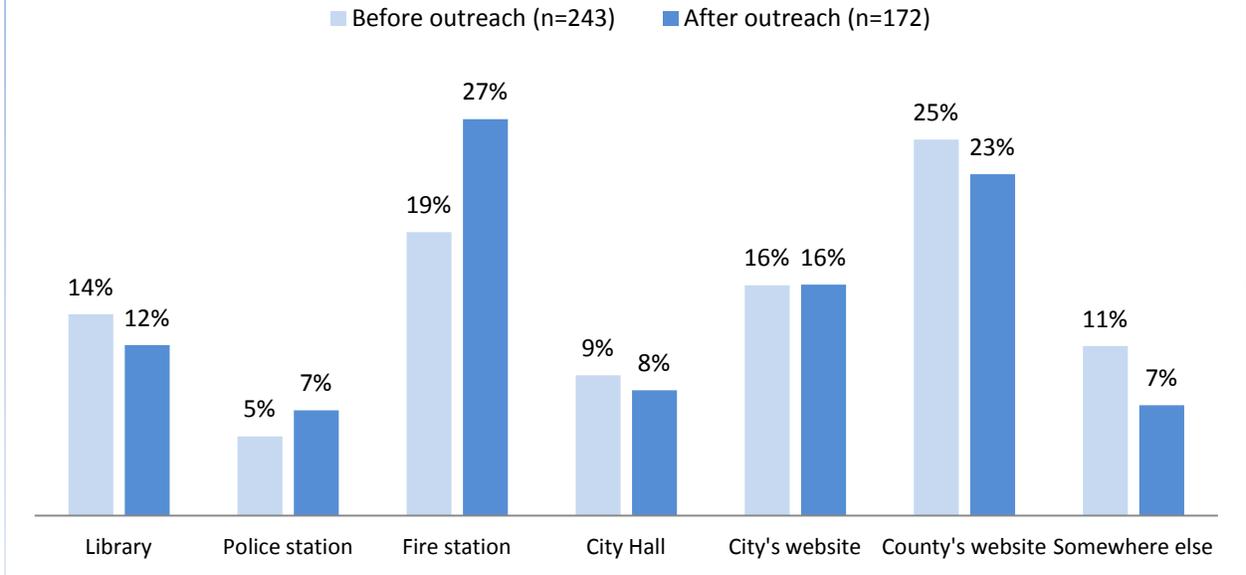


15. Are you male or female?

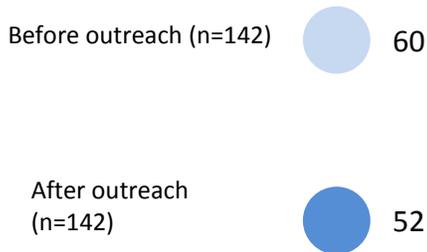
■ Before outreach (n=156) ■ After outreach (n=92)



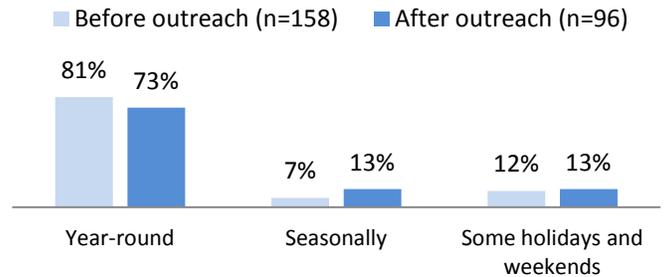
14. If you wanted to get more information on tsunamis, where would it be most convenient to do so?



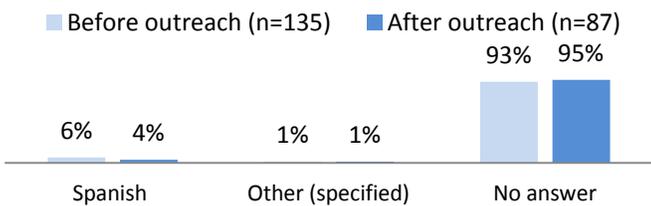
16. What is your age? (average shown)



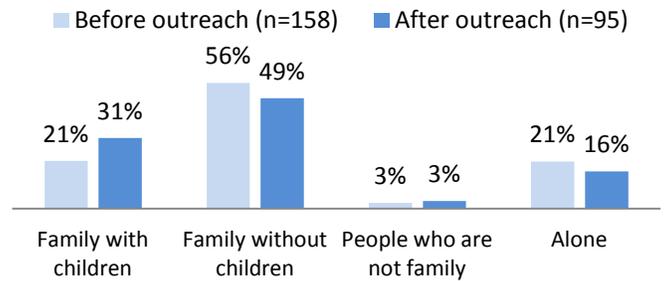
18. How much time do you spend on the Oregon coast?



17. Would anyone in your household or neighborhood benefit from tsunami preparedness information in a language other than English?



19. What type of household do you live in?

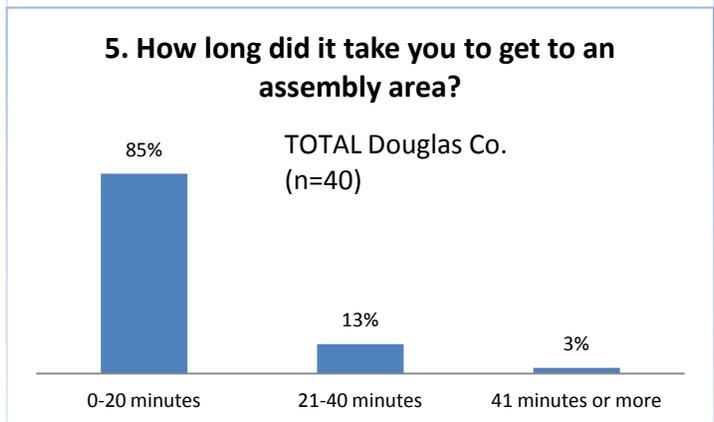
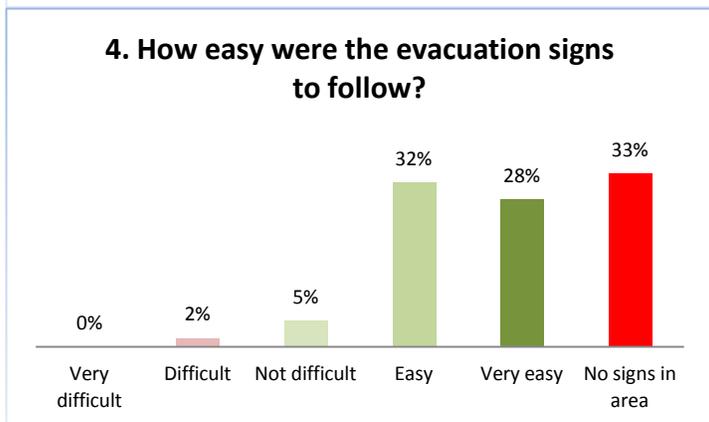
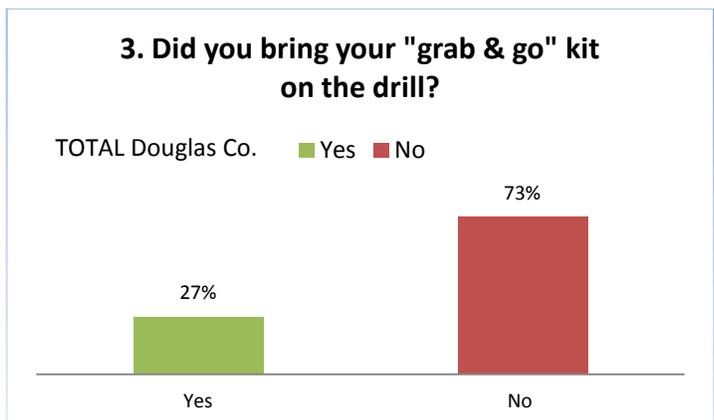
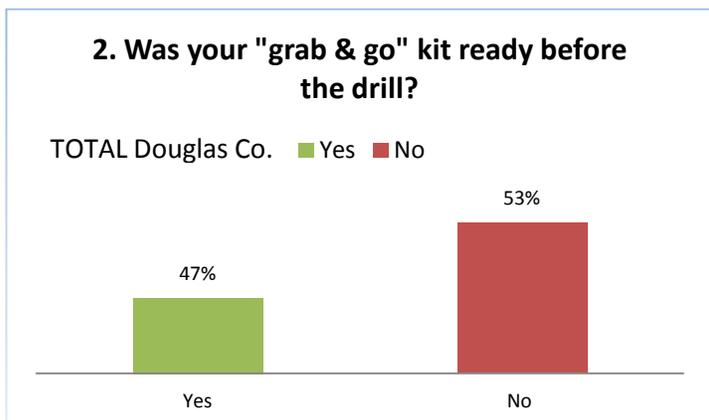
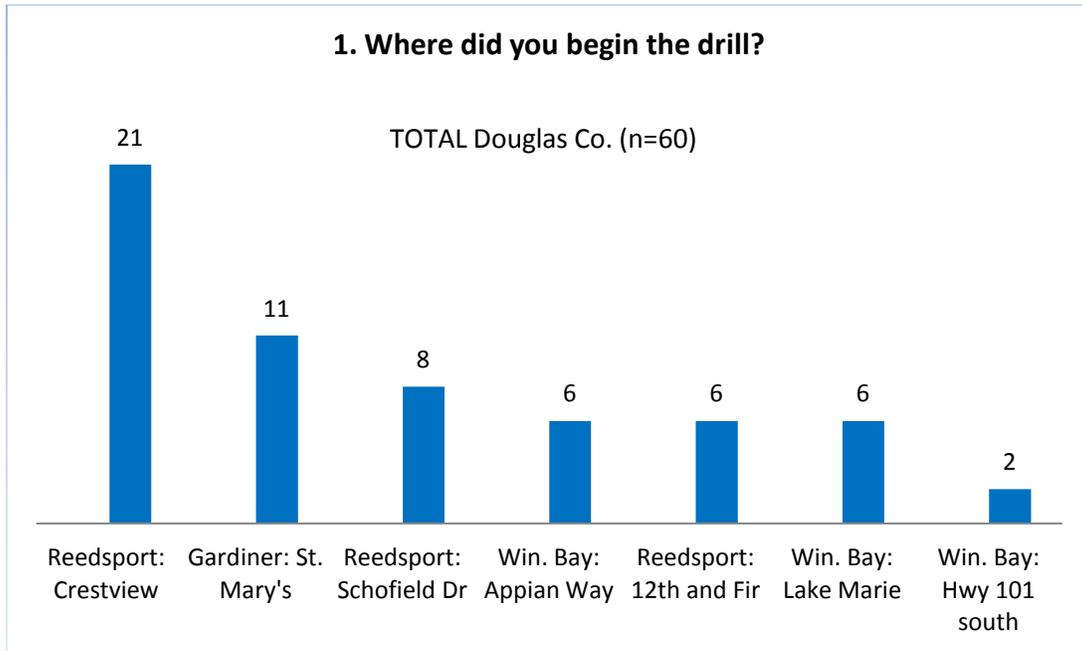


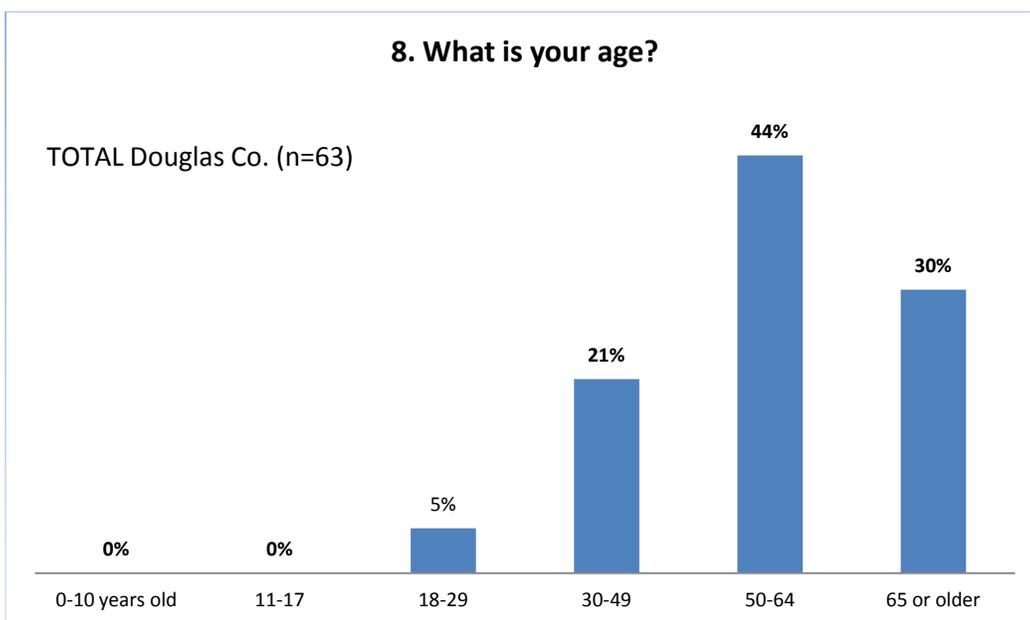
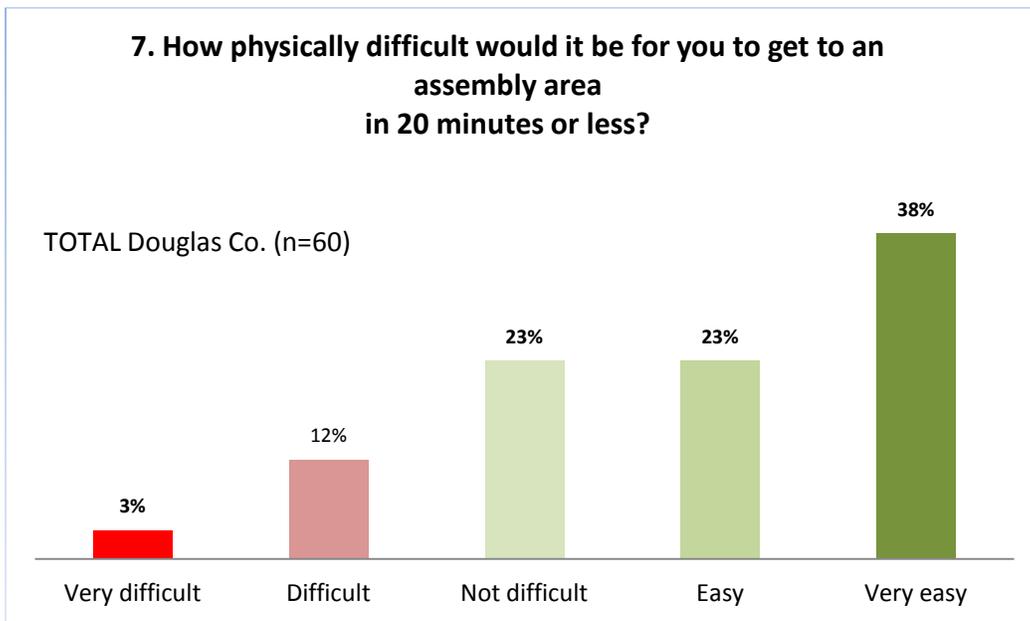
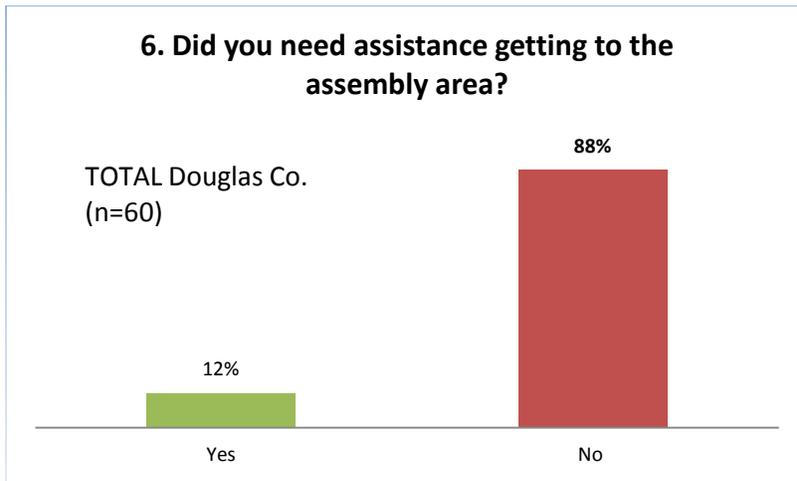
APPENDIX D: DOUGLAS COUNTY*

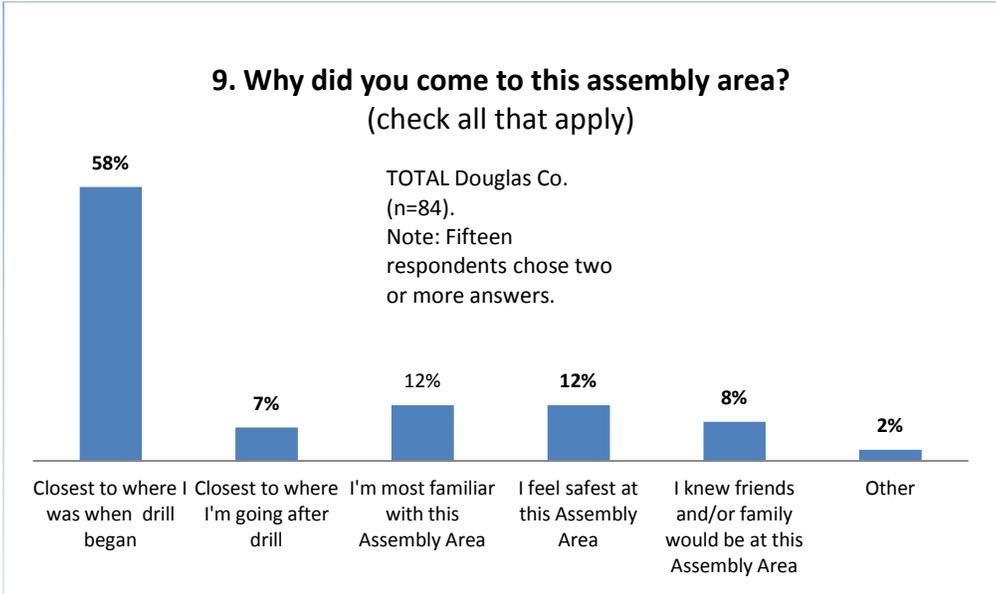
TSUNAMI EVACUATION DRILL SURVEY

This survey was conducted immediately *after* the evacuation drill in Douglas County, mostly in designated assembly areas. Below is a complete summary of survey responses; *n* is the number of respondents, which does not include the "no answer" category of those who skipped a question, unless otherwise noted.

*Note: Northern Coos County did not conduct surveys.







10. If you would like more information on disaster preparedness, please share your contact information. (Optional)

Of those who responded, 23 provided contact info including mailing addresses or email or both. This contact information will be kept on hand for potential future updates and outreach.

11. Please use this space to share comments, suggestions or more about your experiences during today's tsunami evacuation drill.

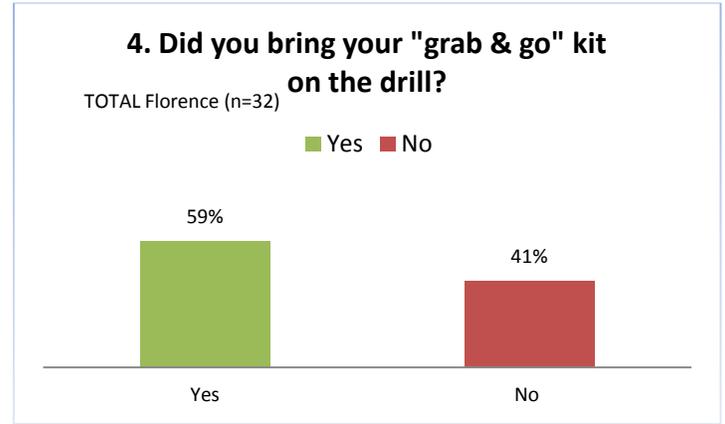
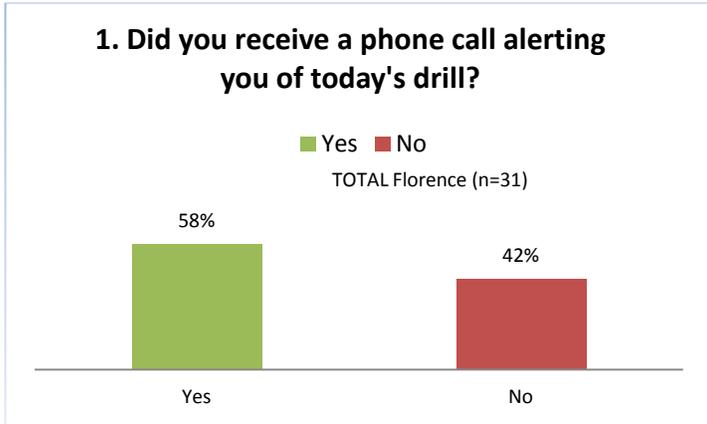
Eight handwritten comments were provided, as follows:

- *Why no siren?*
- *Why no siren?*
- *walked*
- *Biked with do from motorhome*
- *Need signs at street, more public info, no vehicle info, use sirens*
- *Thanks for holding the drill*
- *Thanks for the drill, we will make a pack for the car.*
- *Woman and husband could not walk far due to disability and dementia*

APPENDIX E: LANE COUNTY (Florence)*
TSUNAMI EVACUATION DRILL SURVEY

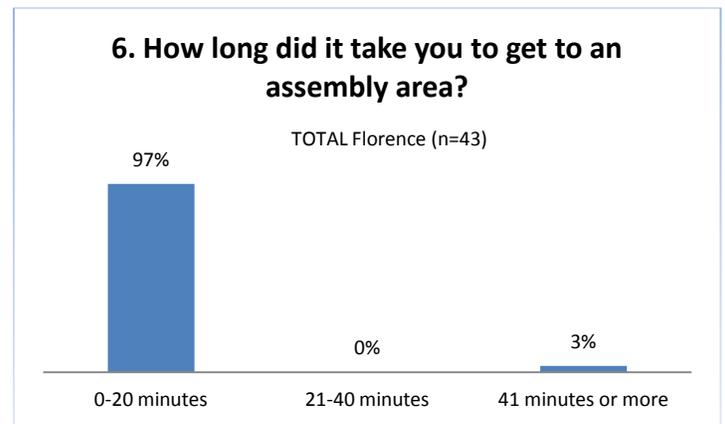
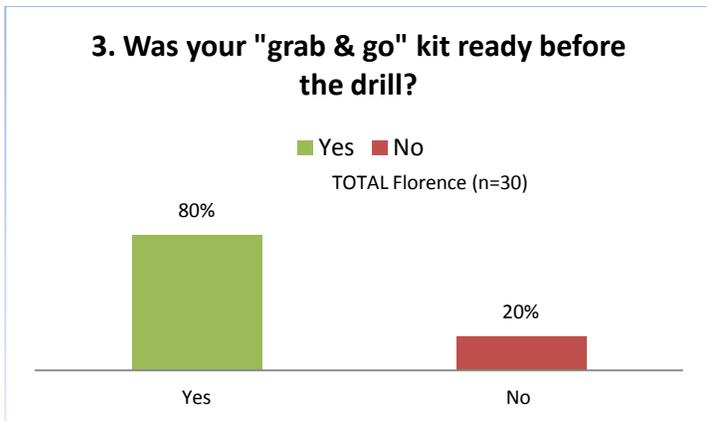
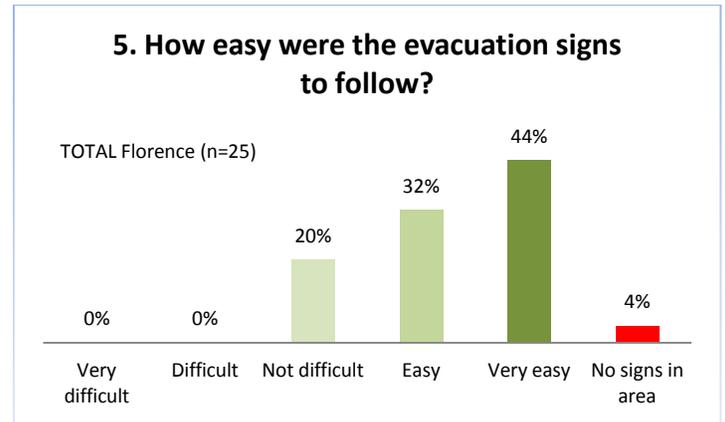
Below is a complete summary of survey responses; *n* is the number of respondents, which does not include the “no answer” category of those who skipped a question.

*Note: Dunes City did not conduct surveys.



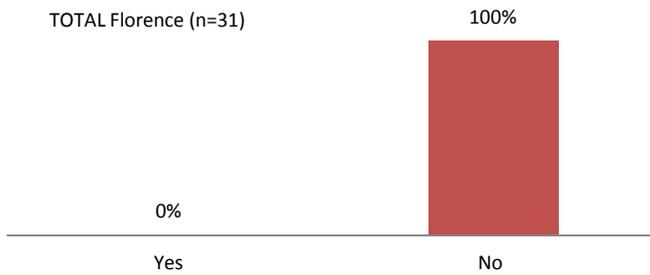
2. What is the closest intersection to where you began today's drill?

These responses corresponded mostly to the pre-designated assembly areas, so the responses were not analyzed.



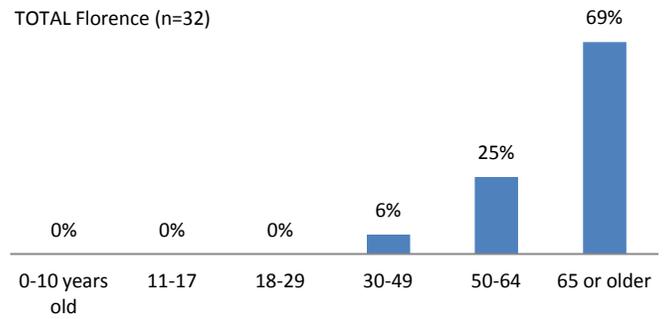
7. Did you need assistance getting to the assembly area?

TOTAL Florence (n=31)



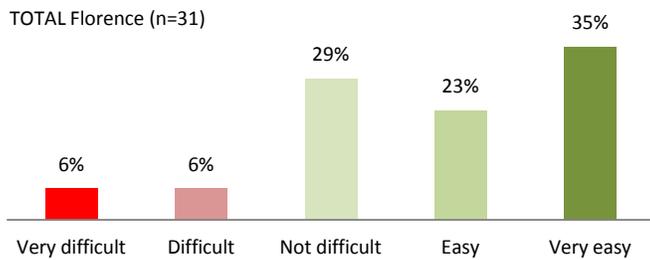
9. What is your age?

TOTAL Florence (n=32)



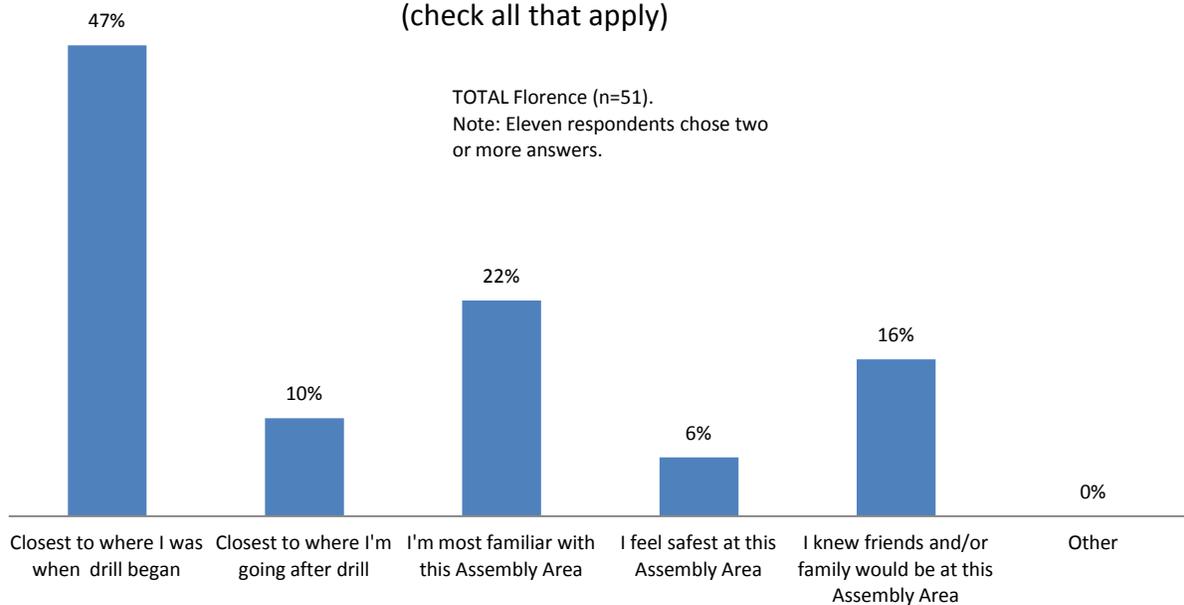
8. How physically difficult would it be for you to get to an assembly area in 20 minutes or less?

TOTAL Florence (n=31)



10. Why did you come to this assembly area? (check all that apply)

TOTAL Florence (n=51).
Note: Eleven respondents chose two or more answers.



11. If you would like more information on disaster preparedness, please share your contact information. (Optional)

Of those who responded, 21 provided mailing addresses and/or email addresses This contact information will be kept on hand for potential future updates and outreach.

12. Please use this space to share comments, suggestions or more about your experiences during today's tsunami evacuation drill.

- *This was a good drill in that it made me more aware of what I need to put in my kit. Also,*

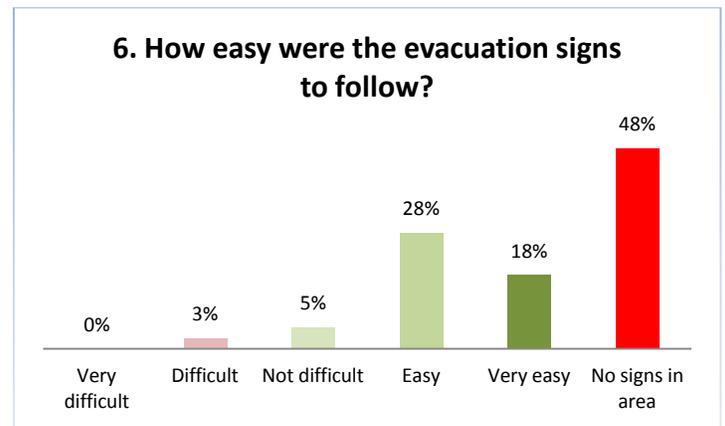
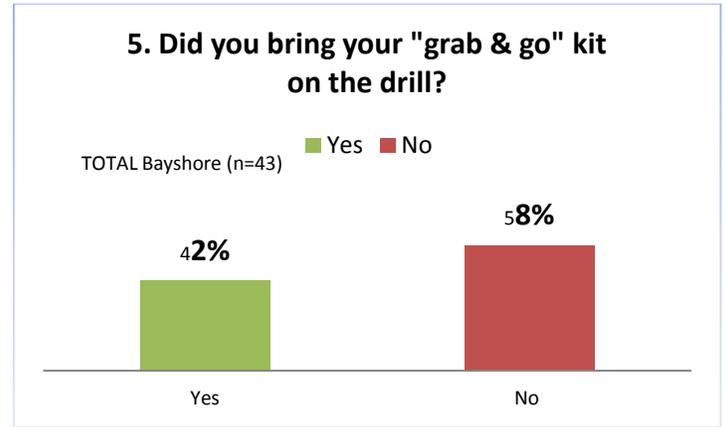
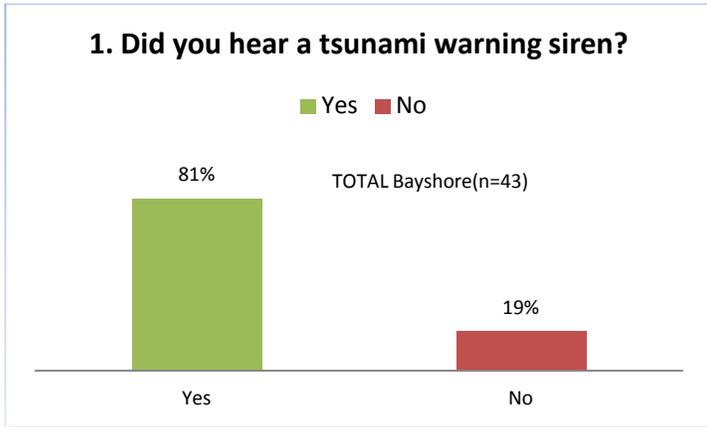
neighbors sharing their ideas helps me figure out my own needs.

- *Came prepared with water and meds.*
- *What if handicapped or physically impaired? Drove out as if people walking from Klahanee in road very slow in 3 mins. Make sure cell phone is charged!*
- *Shelter Cove*
- *Really appreciated the call -- very effective and well worded. Mayor Braebaker gave us excellent information throughout the Japan tsunami ordeal. His constant updates was calming. The delicious scones were provided by Red Rose's Catering free of charge <-- Japanese tsunami*

APPENDIX F: LINCOLN COUNTY (Bayshore, Seal Rock Fire District)

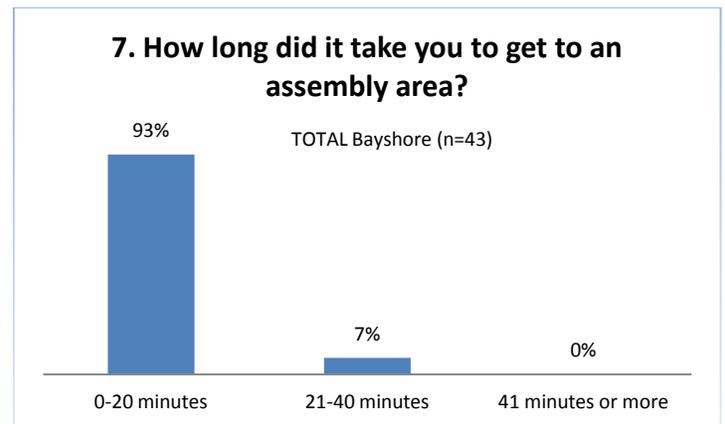
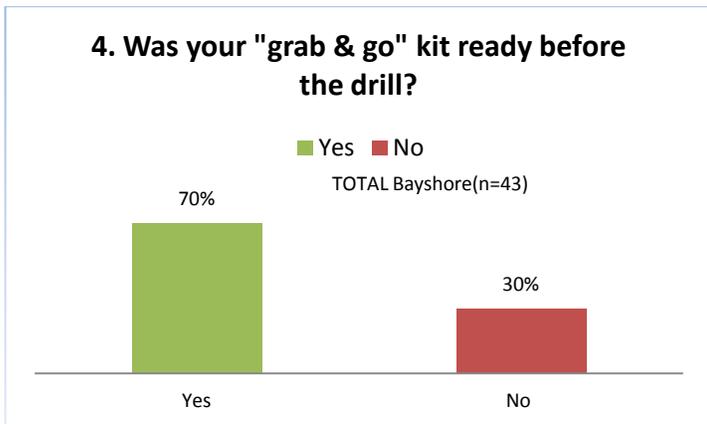
TSUNAMI EVACUATION DRILL SURVEY

Below is a complete summary of survey responses; *n* is the number of respondents, which does not include the “no answer” category of those who skipped a question.



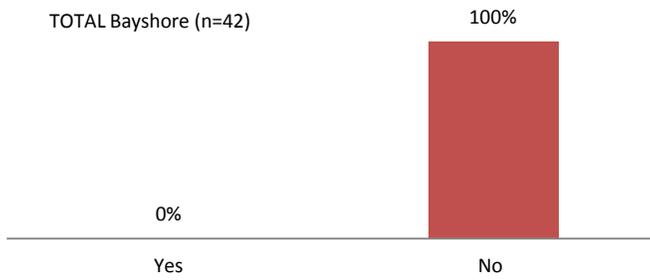
3. What is the closest intersection to where you began today's drill?

These responses corresponded mostly to the pre-designated assembly areas, so the responses were not analyzed.



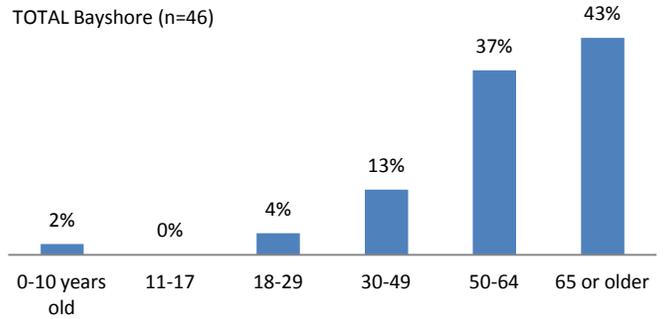
8. Did you need assistance getting to the assembly area?

TOTAL Bayshore (n=42)



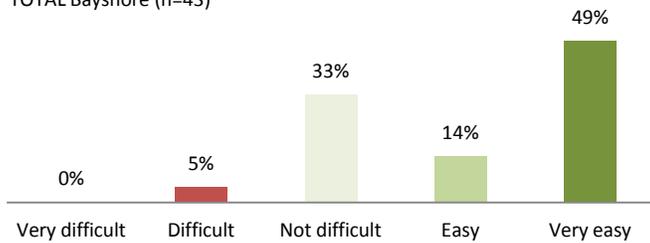
10. What is your age?

TOTAL Bayshore (n=46)



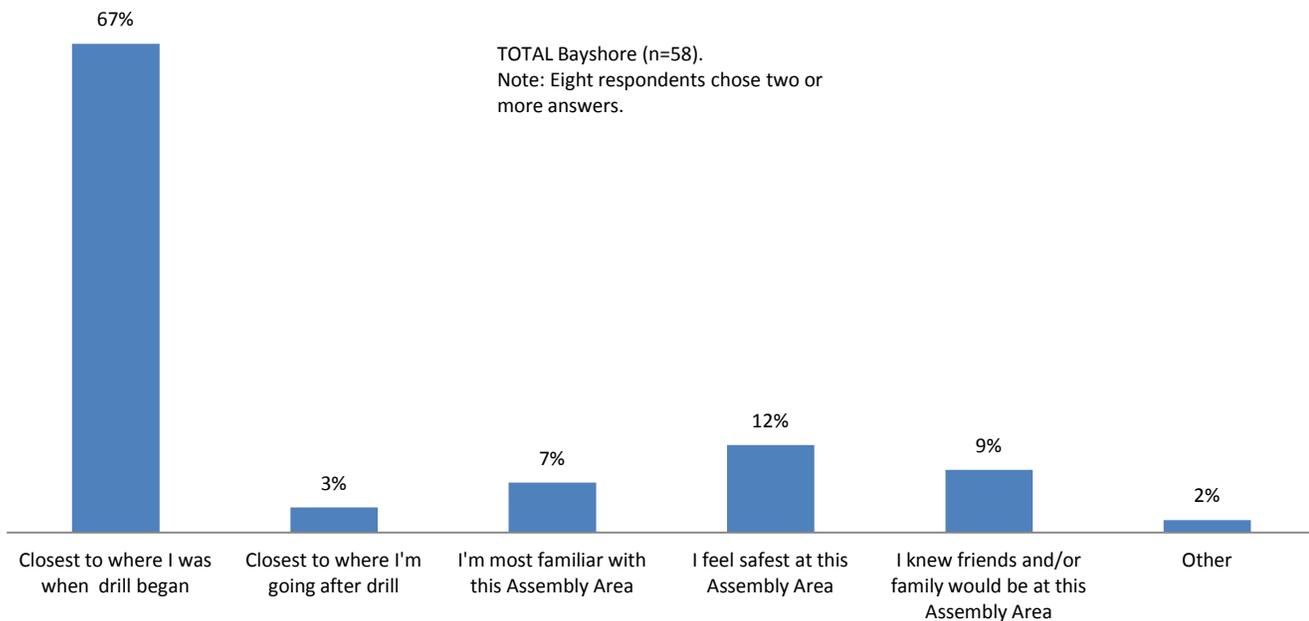
9. How physically difficult would it be for you to get to an assembly area in 20 minutes or less?

TOTAL Bayshore (n=43)



11. Why did you come to this assembly area? (check all that apply)

TOTAL Bayshore (n=58).
Note: Eight respondents chose two or more answers.



11. If you would like more information on disaster preparedness, please share your contact information. (Optional)

Of those who responded, 13 provided mailing addresses and/or email addresses. This contact information will be kept on hand for potential future updates and outreach.

12. Please use this space to share comments, suggestions or more about your experiences during today's tsunami evacuation drill.

- *Glad this is taking place for Bayshore residents!*
- *We need more CERT folks. Encourage training.*
- *Emergency alert system not loud enough (voice). Didn't respond when I first answered [phone].*
- *I was part of Team 6. Numerous people stated that they didn't hear the siren or receive phone call.*
- *No phone call received (neighbors alerted us).*
- *Even though we were waiting for it, we never heard the siren and never got the emergency phone call.*
- *This is a great service to us all. Thank you to all the volunteers and civil servants.*
- *I was actually surprised how helpful this was for me.*
- *Keep the siren and make louder.*
- *Thanks! This got me thinking about preparedness.*

APPENDIX G

MEDIA COVERAGE of outreach in DOUGLAS and northern COOS COUNTIES

National Tsunami Hazard Mitigation Program | Oregon

Tsunami Outreach Oregon

Year Four, 2013-2014



NOAA: Coos Bay/North Bend are 'Tsunami Ready'

By KCBY News | Published: Mar 25, 2013 at 7:00 AM PDT | Last Updated: Apr 26, 2013 at 1:53 PM PDT

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PLAY VIDEO

COOS COUNTY, Ore. -- Both Coos Bay and North Bend are officially 'Tsunami Ready' according to the National Oceanic and Atmospheric Administration.

Representatives from the National Weather Service awarded signs to both cities on Friday.

PHOTOS



The Coos Bay sign will be displayed as you drive north into the city on Hwy 101.

Fire Chief Stan Gibson says that over the last five years, a strong effort was made to be tsunami and storm ready. "We recognize that a tsunami and earthquake are one of the biggest hazards that we

face, and so to be prepared for that, we made sure that everybody is aware of it," he said. "Then we look at what are we doing, what should we be doing, where are the gaps, how do we fill those gaps?"

Gibson says officials have noticed the improvement in readiness. "We're much better prepared than we were five years ago."

Port Orford, Gold Beach and Coos County as a whole were also named 'Tsunami Ready' by the NOAA.

Group urges: Don't let Japanese devastation happen on South Coast

A rally to encourage area residents to prepare for a tsunami will happen at 6:30 p.m. Thursday, April 25 at Pacific Auditorium in Reedsport. Doors will open at 6 p.m.

Terry Plotz is the local tsunami outreach coordinator with the Oregon Department of Geology and Mineral Industries (DOGAMI).

"We are almost a mirror image of the subduction zone in Japan," Plotz told the council. He said a lot was learned from the 2011 tsunami in Japan.

"People underestimated the power of the quake," Plotz said. "The waves went several miles upriver. They went higher than expected. Their defenses failed."

The Reedsport event will include a presentation by DOGAMI staff, a question and answer session, information booths and representatives from the American Red Cross and other emergency responders will be on hand.

Plotz said he hopes people will get ready before the quake and

tsunamis hit.

"Make a 'go' bag of some of the things you could use to survive for at least a couple of days,"

SEE TSUNAMI, PAGE A12



6 08805 93126 0

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Tsunami

FROM PAGE 1

Inundation maps will be available at the tsunami prep rally

he explained, "until you can get to an evacuation area."

Plotz said there also will be an explanation of the evacuation areas.

"People will be able to walk up and say 'I live in

this spot. Where do I go?' We'll have folks there that will say, 'Here's where you're at and here's where you'll go.'"

Plotz also said new maps, including tsunami inundation maps, will be available at the rally.

He said, when the big quake hits off the Oregon Coast, people on the beach will have eight to 10 minutes to get to high ground.

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*The Umpqua Post
Reedsport, Ore.*

Wave of tsunami prep sweeps in

BY STEVE LINDSLEY
The Umpqua Post

REEDSPORT — Residents of Reedsport should expect to hear more about tsunami readiness on the way to a readiness rally April 25 at 6:30 p.m. at Pacific Auditorium and evacuation drills at 10 a.m., May 31.

There will also be a door-to-door outreach over the next two months, along with new maps and brochures.

And, there are also presentations by the local tsunami outreach coordinator, Terry Plotz.

Plotz has made presentations to local groups, and made a presentation to the city council on April 1.

"It's been part of a plan since 1995," Plotz told the council. "Just so everybody knows, if we were to have that Cascadia Subduction

Zone quake right now, we would all duck, cover and hold under our desks, or wherever we could get, and then head up to Elm Street and over to Crestview Road and that would be our assembly area."

Such evacuation routes are part of the campaign for coast residents and visitors to escape "inundation zones."

"What would be the size of the tsunami surge on that event," Mayor Keith Tymchuk asked.

"It varies, based on the topography," Plotz said. "The simulations, now, run anywhere from 25 to 55 feet."

Plotz said the state and local plans are being updated, after the deadly quake and tsunamis in Japan in March, 2011.

He says they're also learning more after earthquakes and tsunamis in Chile, Alaska and Indonesia.

"We're fortunate that, because of those events, we've been able to do a lot of mapping."

Plotz showed a map that showed the "tsunami outflow" from the Japan events.

"We are almost a mirror image of the subduction zone in Japan," he continued, "with it running from, roughly, Eureka, Calif. to the north end of Vancouver Island, well over 600 miles, 50 to 100 miles offshore."

He said much was learned from the 2011 event in Japan.

"Most of all that people underestimated the power of the quake," Plotz said. "The waves went several miles upriver. They went higher than expected. Their defenses failed. They tried seawalls, pine forests and concrete obstructions to reduce the power and strength

SEE DISASTER, PAGE A7

FROM PAGE 1

of the tsunami. But, they had forgotten, culturally, that in the past there were such huge tsunamis."

He said infrastructure failed along the coast of Japan, including bridges.

He also said debris killed a lot of people.

"There's the potential for a great deal of destruction," Plotz continued.

He said the Oregon Department of Geology and Mineral Industries, the lead agency in tsunami readiness, is oiling up the information machine.

"Make your plan now," Plotz said. "Don't wait until the ground shakes. Make your plan now. Make a 'go' bag of some of the things that you could use to survive for at least a couple of days, until you can get to an evacuation area."

He said, if the ground shakes hard for an extended amount of time, you should be ready to evacuate immediately to high ground on foot.

"Don't count on being able to drive, because of debris, buckling of roads, etc.," he said.

Waves after an earthquake, he said, may last for several hours.

"The first wave may not be the biggest," he reminded. "They will last for several hours. Most of the buildings may survive the earthquake, if they're a single-story framed structure that's

anchored well, but they won't survive the tsunamis."

He also said help for local communities may be several days away after an event.

"What should we expect in Oregon," he asked? "Well, when the Cascadia Subduction Zone does decide to break, we'll experience around a 9.0 earthquake that will be a strong earthquake that could shake anywhere from two to six minutes. If you're used to a California quake, or some of those places where it might be up to 30 seconds, three minutes is a long time."

He said people on the beach when the quake hits will have eight to 10 minutes to get to high ground.

"If you're here in Reedsport," he continued, "you have 30 to 35 minutes."

He said DOGAMI, Oregon Emergency Management and National Oceanic and Atmospheric Administration are working together to create a "culture of preparedness and response."

"Japan is the most prepared country in the world for earthquakes," Plotz said. "Yet, they weren't ready because they forgotten the stories in their culture. One of the things we need to do is to prepare a culture that says 'stuff happens.'"

Plotz says they're completing new maps for coastal areas. This year the maps will be complete from Habser to Gardiner and from Yachats to Lincoln City.

Those maps include Tsunami Inundation Maps (TIMS) and tsunami evacuation brochures. He said those brochures should be available by the end of April.

You can get more information at oregontsunami.org.

Plotz said he hoped the community would turn out to the Tsunami Readiness Rally on April 25.

"The doors will be open at 6 and there will be all kinds of booths, there, and maps," he said. "People will be able to walk up and say 'I live in this spot. Where do I go?' We'll have folks there that will say, 'Here's where you're at and here's where you'll go' or 'here's where you're at, stay home.'"

He said they also plan to knock on doors in the inundation zone to give out information, including free maps with evacuation routes.

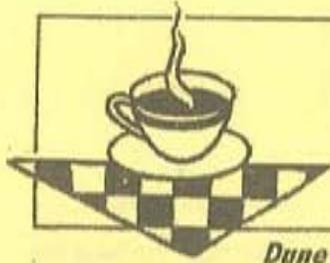
The evacuation drill will be May 31.

"At that time, our plan is, with everyone working together," he said, "we want to staff every assembly area. At 10 a.m., we will encourage everyone that can to talk a walk to their local assembly area, if they're in the inundation zone."

He said people who don't live in the inundation zone should also take note.

"I was talking to a man at Sugar Shack (Bakery)," Plotz said. "He said, 'I can't live in it! I said, 'You're eating a sandwich at Yachats. You know where to go.'"

The Umpqua Post
April 3, 2013



Coffee Break DAILY NEWS

Dune Country Publications - 464 Fir Ave - Reedsport, OR 97467 - 271-3512

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TUESDAY, APRIL 9, 2013

Want To Talk About Tsunamis?

That's the topic in Lower Umpqua Hospital's "Care To Talk About" series of programs, and it's happening tonight, April 9th at 5:30pm in the lower level conference room at the hospital. Terry Plotz is the outreach coordinator who will have the latest information to help you prepare for a tsunami event, and answer your questions.

A tsunami has been called a tidal wave but has nothing to do with the tide. Tsunamis are most always caused by earthquakes occurring near to, or underneath the ocean. The earthquakes are the result of sudden movements in the earth's crust that effectively transmit energy to the ocean causing a tsunami.

A tsunami is not a single wave but a series of long period waves that can cause havoc along the coastline, in harbors and bays, and move up coastal rivers. The unusual, wild oscillations of sea level caused by the tsunami can last for hours following arrival of the first wave. In 1964, many people in Crescent City, California, thought it was safe to return to the harbor area only to be killed by later arriving tsunami waves. The same happened in Hilo, Hawaii, in 1960. In both of these instances, people received ample warning of the arriving tsunami but did not heed the instructions of local emergency management authorities.

People located in low-lying areas near the ocean are at greatest risk from tsunami flooding. The tsunami can flood (inundate) inland areas, well beyond the range of normal high water. For this reason, scientists are developing numerical simulations of tsunami that will help define areas where it will be safe to evacuate in advance of the tsunami's arrival. Come to the presentation and learn where to gather in the event of a tsunami and how you can keep your family safe. Everyone is welcome.

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The Umpqua Post

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AN EDITION OF
The World

Wednesday, May 1, 2013 | Serving the Reedsport area since 1996 | theworldlink.com/reedsport | \$1.00

Rally is a wave of information



BY STEVE LINDSLEY
The Umpqua Post

About 125 people came to Reedsport's Pacific Auditorium to find out what they should do if a big wave hits the Oregon coast.

It was a "tsunami rally," hosted by the Oregon Department of Geology and Mineral Industries as part of an education effort on the coast.

Peter Ovington is a geologic hazards outreach specialist for DOGAMI and gave a hour-long presentation on what residents of Reedsport, Winchester Bay and Gardiner can expect when a Cascadia Subduction Zone earthquake happens off the Oregon coast.

"If you do feel the ground start to shake, please drop, cover and protect yourself and hold on tight," Ovington said to begin his talk.

He explained tsunamis are not just a wave, but a series of waves, or surges of water, created during an earthquake.

"They can travel the open ocean at about the speed of a jet plane, about 500 miles per hour," Ovington said.

Ovington says the tsunamis in Japan in 2011 showed the world the destruction and death they could cause.

He brought the possibility to the local area.

"We, in the northwest, are really a geological mirror image of Japan," he said. "We've got a subduction zone off our coast."

Ovington said the quake, when it comes, will be about a 9.0.

"Extended shaking," he pointed out, "two to five minutes. Drop, cover and hold on and then find your way to high ground."

Japan suffered some waves that were nearly 40 feet high.

Locally, he said, things will happen quickly after the quake.

"Fifteen to 30 minutes later, depending where you are on Oregon's coast, the first tsunami surge will arrive," Ovington said. "Those waves will continue for, at least, four hours."

The first wave, he said, is not always the biggest.

DOGAMI Coast Geologist George Priest asked the group if they had taken action to be prepared for the quake and tsunamis that follow.

"To protect your own family," he said. "That's really what this is all about."

He showed the tsunami inundation maps for the area, showing

By Lou Sennick, The World

Peter Ovington, an outreach coordinator with the Oregon Department of Geology and Mineral Industries, talks about what residents could expect from a Cascadia Subduction Zone earthquake off the coast.

Information, maps are helpful for meeting attendees

There were some favorable comments to Thursday's tsunami rally in Reedsport. The event featured information about emergency preparedness, tsunami evacuation maps and a presentation about what might happen to the area if a big quake would hit off the Oregon coast.

"I was more interested in the maps," Reedsport's Christina Herrera said, "and seeing which parts were going to be in the inundation zones. See, you know, where to go if it does happen."

She said she was impressed with event, but wished more younger people would have attended.

"It was informative," she said.

"It was well done," Judy Souther, of Reedsport, said. "It was organized well and it was clear; what to do and where to look."

While her house isn't actually in an inundation zone, Souther said she wondered about what would happen if a tsunami hit Reedsport.

"I've lived here two years and I was more afraid before tonight," she said. "I'm not as nervous about it now. More information really helps."

"I think it was very helpful," said Norman Morrison, of Reedsport. "I think it shows there's been a lot of planning and preparation and so, if people will become informed, they'll know where to go and know what



By Lou Sennick, The World

Before the start of the Tsunami Rally at Pacific Auditorium Thursday evening, Sunnie Hadden, left, shows Norman Floyd her "grab and go bag" she has ready in case of an emergency. It all fits into a two-wheeled shopping cart with floats to take care of her and her pet. Floyd said he was "just gathering information as much as I can" to be prepared.

SEE REACTION, PAGE A9

SEE TSUNAMI, PAGE A9

LOCAL

Rally

FROM PAGE 1

Principal urged the students to attend a budget meeting

for other activities, why online classes were a concern.

"The graduation rate for the schooling program that they want to put in is 38 percent," King said. "Here at Reedsport, we had a 72 percent graduation rate. And, the world's already so technical that they don't need to be putting our kids in front of computers all day."

King said she'd rather be talking to a teacher, than listening to "an animated voice on the computer."

Superintendent Jim Thomas showed up at the school about an hour after the protest started. He said he

grew up in the 1960s and understood

"I'm not going to tell you to go in," Thomas said as he tried to gather the students around him. "I respect what you're doing. I mean, I'm a 60s generation guy, myself."

"I think it's really good that you're being involved and really taking a position."

He said, however, the students should really be protesting against the state.

"What I would also like," Thomas continued, "is to get the message out that the state Legislature needs to provide adequate funding for schools. Because, unless they provide the funding for schools, we're not going to have the ability to offer programs the way we've always done in the past. That's reality."

He also urged the students to attend the budget hearing.

Thomas said the district wasn't planning to send all students to online school.

"We are looking at having to do some electives and some advance-placement (classes) only," Thomas told the students. "We're not looking at everyone being online for your program, here. OK? Just so you know that."

Students stayed out of school for the entire day.

Some of the students did attend a school district budget committee meeting that night. The meeting site was changed from the school's library to Pacific Auditorium to handle the numbers of people.

Editor Steve Lindsley can be reached at 541-271-7474 ext. 203 and steve.lindsley@theworldlink.com.



By Lou Sennick, The Umpqua Post

Residents look over the latest tsunami maps for the Winchester Bay, Gardiner and Reedsport areas Thursday evening.

Know where you're going before a quake

"There's not going to be time to listen for a siren or wait for police or fire to come to your house and knock on your door and tell you that you need to go."

Reedsport Police Chief Mark Fandrey showed new assembly area maps in case a tsunami hits the area. His presentation was part of a tsunami rally at Pacific Auditorium Thursday, April 25.

The three assembly areas in Reedsport are the intersection of 11th Street and Fir Avenue, just up Schofield Lane from Winchester Avenue and Crestview near Sixth Street. Those who assemble there will then make their way, on foot, to higher ground above the

downtown area.

In Gardiner, the assembly area is designated at High and Second streets near St. Mary the Virgin Episcopal Church.

There are assembly areas designated in, and near, Winchester Bay. One is on Apian Way, east of Broadway Avenue. The others are near the Lake Marie picnic area, up the Clear Lake trail from the dunes No. 3 parking area to U.S. Highway 101 and the other is on top of the hill on U.S. Highway 101, just south of Winchester Bay.

"Citizens have to be aware," Fandrey said, "that when they feel that earthquake, they have to move to the assembly areas."

Fandrey said, even if citizens don't live in an inundation zone, they may be in one at the time a quake hits, and they need to know where the assembly areas are.

"Just because you live in Reedsport," he said, "doesn't mean you don't need to know where they're at in Winchester Bay, because we all go down there and we crab and we fish and ride the dunes."

"The more you know about the assembly areas, the more you know about where the general high-ground areas are and where the (inundation) zones are, the more prepared you're going to be."

Tsunami

FROM PAGE 1

A drill is scheduled for Friday, May 31 at 10 a.m.

where the high water could come. Downtown Reedsport is at risk, as is the Gardiner area.

"Of course, Winchester Bay gets pretty well slammed," he said.

In the worst case scenario, Preist said, Winchester Bay could be hit with waves 60 - to 70-foot high.

"It's more likely ... closer to 20 feet," he continued.

And, he said, the first wave, in a worst-case scenario, is likely to hit 23 minutes after the quakes begin.

Reedsport would see the first wave, which could be 16-foot high, about 40 minutes after the quake begins.

He said that worst case happens once or twice every 10,000 years.

The presentation includ-

ed a look at brand new maps to show tsunami evacuation areas. Those maps are available from DOGAMI and will be distributed door-to-door through May.

Reedsport School Superintendent Jim Thomas also addressed the crowd.

"It's really exciting and informative work that has been done," Thomas said. "It's a serious work. The DOGAMI maps. The plans for evacuation."

The night also included information tables staffed by emergency-response agencies, communications groups and a booth showing how to create a "go" bag to carry along in case of evacuation.

Another rally is scheduled on Tue., May 21, at the Hauser Community Church. The doors will open at 6 p.m.

A tsunami drill is scheduled on May 31 at 10 a.m. It's hoped people will walk to assembly areas and then to higher elevations, to simu-

late an actual earthquake and tsunami.

Editor Steve Lindsley can be reached at 541-271-7474 ext. 203 and steve.lindsley@theworldlink.com.

Reaction

FROM PAGE 1

resources they need to have and what they need to be doing."

Tsunamis are classified as distance events, such as the 1964 Alaska earthquake, and a local event, which could hit off the Oregon coast.

"It doesn't scare me," Morrison said of a local event. "There's not much you can do about it, just be prepared and practice and talk to all your family and act when it comes."

The Umpqua Post

Tsunami drill is Friday

MAY 22, 2013 7:00 AM

A Tsunami Evacuation Drill is set for 10 a.m. Friday, May 31.

"We will be staffing assembly areas hoping people will take advantage of the opportunity to practice evacuation routes and how long it would take to get to a safe place if a 9.0 local earthquake caused a local tsunami," Reedsport-area organizer Terry Plotz said. "County emergency management and CERT are busy planning. New assembly area signs should be up by the end of next week."

Also, crews are busy delivering tsunami information door-to-door.

"Currently teams of folks are going door-to-door in the inundation zone areas of Winchester Bay, Reedsport and Gardiner to deliver information including the new maps," Plotz explained. "Nearly 2,000 info bags will be distributed by volunteers between Hauser and Gardiner by Memorial Weekend."

Local Community Emergency Response Team members are doing some of the work. He credited local CERT leaders Dan and Connie Loop in getting teams out.

"It really shows the effectiveness of neighbors being trained to help neighbors," Plotz said.

Local firefighters also are working door-to-door.

"Reedsport fire used their drill night to pick up the area around the fire hall downtown last Monday," Plotz continued.

"Winchester Bay and Gardiner will use their drill nights this coming Tuesday and Wednesday to hit their communities. These volunteers are what are making the difference in making Reedsport really stand out in its tsunami education efforts."



Coffee Break DAILY NEWS

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THURSDAY, MAY 30, 2013

Tsunamis Can Happen Any Time – Are You Prepared?

On Friday, May 31st at 10am, residents from Gardiner to Hauser will participate in an area-wide tsunami evacuation drill. Organized by Tsunami Outreach Oregon and executed by local police, sheriff, and fire departments up and down the coast, Friday's evacuation drill will stimulate the response to a 9.0 magnitude Cascadia Subduction Zone earthquake and the ensuing tsunami.

This kind of local earthquake will someday cause a local tsunami that will affect many areas along the coast and inland as well as it follows low lying rivers and shoreline. Individuals in the inundation zones will have 15-20 minutes to make it to high ground before the wave reaches them.

The Dept. of Geology and Mineral Industries, through its Tsunami Outreach Program, has produced new Tsunami Evacuation Maps that show the hazard areas for both a local and a distant tsunami. Residents need to remember that a distant earthquake causes a distant tsunami. These distant events will affect many areas, but not with the same effect as the local Cascadia event.

What should people do for the drill on Friday? First of all, recognize this as a local earthquake of 9.0 and drop, cover, and hold 2-5 minutes for the simulated shaking of the quake. If you are not in the inundation zone you would just move to a safe location where nothing would fall on you. If you are in the inundation hazard zone you would move to the nearest assembly area. Remember that after the quake, chances are you will not be able to drive, so practice by walking to the assembly area. Please be careful crossing streets as the rest of the traffic may not know about the drill.

Assembly Area information Continued on page 2

Full-Service

Tsunami Evacuation Drill! Fri May 31, 10am Reedsport, Gardiner, Winchester Bay, Lakeside, Hauser, North Bay

- ✓ Follow tsunami evacuation routes on the new maps
- ✓ Time how long it takes to *walk* to your nearest assembly area **A**
- ✓ Ask your friends and neighbors to join you
- ✓ Take along your "grab and go" bag of emergency supplies

You or your group can get involved. Call Terry at (503) 307-5734.
Free evacuation maps at fire stations or www.OregonTsunami.org

ASSEMBLY AREA **A** AREA REUNION

GREEN

YELLOW

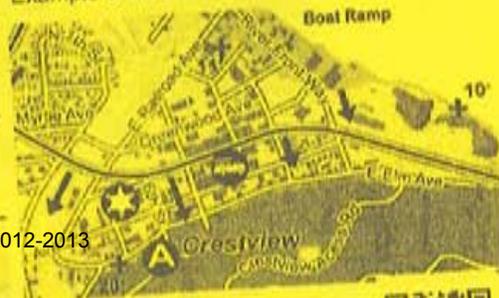
ORANGE

OUTSIDE HAZARD AREA: Evacuate to this area for all tsunami warnings or if you feel an earthquake.

LOCAL CASCADIA EARTHQUAKE AND TSUNAMI: Evacuation zone for a local tsunami from an earthquake at the Oregon coast.

DISTANT TSUNAMI: Evacuation zone for a distant tsunami from an earthquake far away from the Oregon coast.

Example of an evacuation map (Reedsport)





Coffee Break DAILY NEWS

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WEDNESDAY, MAY 29, 2013

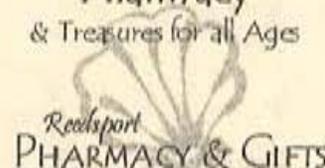
Tsunamis Can Happen Any Time – Are You Prepared?

In March 2011, on a Friday afternoon at 2:46pm, a magnitude 9 megathrust earthquake occurred 80 miles off the coast of Japan. Displaced ocean tsunami waves began inundating the coast within 15 minutes, with waves ranging from 35 feet high and reaching run-up elevations of 135 feet. 15,845 people died and 3,380 are still missing. The same thing could happen on our coast at any time and be just as deadly.

This Friday from Gardiner to Hauser, residents will be participating in an area-wide tsunami evacuation drill. Organized by Tsunami Outreach Oregon and executed by local police, sheriff, and fire departments up and down the coast, Friday's evacuation drill will stimulate the response to a 9.0 magnitude Cascadia Subduction Zone earthquake and the ensuing tsunami.

In the drill, residents will be asked to go to their nearest assembly area and take their 'grab and go' bag of emergency supplies. Tsunami outreach coordinators have been going door to door to provide information and evacuation maps to residents and we'll list those locations again tomorrow. Meanwhile, this is the minimum you should have in your grab and go emergency bag:

Medications, prescription list, copies of medical cards, doctor's names and contact information; Medical consent forms for dependents and copies of personal identification; First aid kit and handbook; Non latex gloves and dust masks; Spare eyeglasses or contact lenses and cleaning solution; Whistle (to alert rescuers to your location); Sturdy shoes, change of clothes and a blanket; Emergency cash (ATMs require power and might not work); Local road maps; List of emergency out-of-area contact phone numbers; Bottled water, snack foods high in water and calories; Flashlight with extra batteries and light bulbs; Comfort items for children such as games, crayons, writing materials, stuffed animals; Toiletries and personal care supplies; Extra keys for car, home, office, safe deposit box, etc. For more information go to www.OregonTsunami.org or call Terry at 503-307-5734.

| | |
|---|---|
| <p>Full-Service Pharmacy & Treasures for all Ages</p>  <p>Reedsport PHARMACY & GIFTS</p> <p>Umpqua Shopping Center HWY 101 541-271-3631 Mon-Sat 9am-6pm</p> | <h2>Dad's & Grad's Sale</h2>  <ul style="list-style-type: none">- Picture Frames & Photo Albums- Coffee Mugs - Travel Mugs & Insulated Beverage Cups- UO & OSU Collegiate Gear & Accessories- All Hats <p>Sale Good Thru June 8th</p> |
|---|---|



Tsunami Evacuation Drills

Fri, May 31 2013, 10:00 am - 11:00 am PDT

Voluntary tsunami evacuation practice drills for Reedsport, Gardiner, Winchester Bay, Lakeside, Hauser and North Bay. For more information, contact your local fire district.

Website: <http://www.OregonTsunami.org>

Schedule

May

Friday, May 31, 10:00 am

More Community Events

[Board Game Night](#)

[Board Game Night](#)

[Roleplaying Game Night](#)

[Bear Claw's 5k](#)

[Mural Dedication Ceremony](#)

[Diabetes and You Workshops](#)

[Clothes Closet Open Hour and Tour](#)

[FREE garden seminar](#)

Students aren't shaky on disaster safety

Meetings

MONDAY

Parks and Recreation Advisory Board - 4:30 p.m., city hall, council chambers, 835 California St., North Bend; regular meeting.

Reedsport Urban Renewal Agency Committee - 7 p.m., city hall, 451 Winchester Ave.; regular meeting.

Oregon Coast Technology School - 7 p.m., North Bend Middle School, tech lab, 1500 16th St., North Bend; regular meeting.

Coquille City Council - 7 p.m., city hall, council chambers, 581 N. Central Blvd., Coquille; regular meeting.

Coquille Urban Renewal Agency - 7:30 p.m.; city hall council chambers, 581 N. Central Blvd., Coquille; regular meeting.

Reedsport City Council - 7:15 p.m., city hall, 451 Winchester Ave.; regular meeting.

Myrtle Point City Council - 7:30 p.m., Flora M. Land Memorial Library, 435 Fifth Street, Myrtle Point; regular meeting.

TUESDAY

Oregon Dungeness Crab Commission - 9 a.m., Port of Charleston, recreation room, 63402 Kingfisher Lane, Charleston; regular meeting.

By **THOMAS MORIARTY**
The World

HAUSER - Students in Gabe Short's third-grade class were studying model rocket trajectories when the earthquake struck.

At the sound of a horn, Colleen Reeves, principal of North Bay Elementary School, directed students under their desks. A few minutes later, staff hurried them outside to the emergency assembly area on the school's baseball field.

"Can I take my rocket with me?" one student asked.

Of course, there was no real danger.

At 9:55 a.m. Friday, North Bay and Lighthouse School students and staff were among hundreds of residents north of the bay who participated in an earthquake and tsunami drill organized by the Oregon Department of Geology and Mineral Industries.

Reeves said although the building is outside the inun-

dation zone for a tsunami event, they still need to practice for how to respond to an earthquake.

Glenda Hales, program manager for the Coos County Sheriff's Emergency Management division, said the county has been working with DOGAMI's tsunami awareness program for the past four years.

Coos Bay and North Bend participated in a mass tsunami drill in 2012, which drew more than 9,000 participants.

Both cities were certified Tsunami Ready by the National Weather Service in March.

"The thing we want people to understand is the difference between a local tsunami event and a different tsunami event," Hales said.

An earthquake far out in the Pacific could give the National Oceanic and Atmospheric Administration's tsunami warning center in Alaska enough time to notify local residents.



Annika Simpson takes cover under her desk in Gabe Short's third-grade classroom at North Bay Elementary School in North Bend during a earthquake and tsunami drill Friday morning.

By Alysha Beck, The World

But a mega-thrust earthquake along the Cascadia Subduction Zone - just off the Oregon Coast - could produce a tsunami without time to issue a formal advi-

sory. The shaking of the earth would be residents' only warning.

"You're not going to hear a siren," Hales said.

Reporter Thomas Moriarty

can be reached at 541-269-1222, ext. 240, or by email at thomas.moriarty@theworldink.com. Follow him on Twitter at @ThomasDMoriarty.

Opening Doors and Closing Deals

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The Umpqua Post

Weekly news from the Heart of the Dunes

AN EDITION OF The World

Wednesday, June 5, 2013 | Serving the Reedsport area since 1996 | theworldlink.com/reedsport | \$1.00

Rollover wreck



Photos by Steve Lindsley, The Umpqua Post

Crews on scene of a rollover crash that happened Saturday, June 1 at the intersections of U.S. Highway 101 and state Highway 38. Crews from Reedsport, Gardiner and the Douglas County Sheriff's Office were on scene.

Future of mascot bill murky

BY STEVE LINDSLEY
The Umpqua Post

A controversial bill designed to let some schools keep their Native American mascots is headed for another Oregon House committee where its fate is uncertain.

Senate Bill 215, which passed the Senate 24-4 on April 10, received a courtesy hearing in the House Committee on Education on Wednesday, May 29.

That bill would allow local school districts to keep a mascot, such as Braves or Indians, if schools negotiate and get approval from a local tribe.

Rep. Sherrie Sprenger, R-Scio, is trying to get the bill approved in the House before the 2013



SEE SB 215, PAGE A6

Two Californians sustain injuries

THE UMPQUA POST

A rollover crash, Saturday, injured two people from California.

According to a press release from the Reedsport Police Department, the accident happened about noon at the intersection of Highways 101 and 38.

When police and fire arrived they found a Toyota Rav4 lying on its side in the landscaping next to the Dunes National Recreation Area building.

The driver was identified as Michael Jenner, 58, of Eureka, Calif. The passenger was identified as Walter Stevens III, 68, of Pittsburg, Calif. Both occupants were helped out the vehicle by bystanders.



Two people went to the hospital following a rollover crash Saturday, June 1 at the intersection of highways 101 and 38.

SEE ROLLOVER, PAGE A6

School braces for trimmed down budget

Undecided Legislature leaves school board to squirrel away funding

BY STEVE LINDSLEY
The Umpqua Post

The Reedsport school board is wrestling with more cuts as it struggles to put together a budget without knowing how much money the Oregon Legislature will send to schools.

The board held a special meeting Wednesday, May 29.

In addition to \$309,785 already trimmed in the proposed 2013-2014 budget, the district is now trying to cut an additional \$94,663 after the May revenue forecast given to the Legislature.

"After we heard more about the additional reductions, and gathered more suggestions, we moved forward with a prioritization of the cuts suggested by the administration," board chair Kerrie Palermo said after the meeting. "The final list provided by the administration included some input from the teachers and community. We also added a couple of additional spending needs. The prioritized list will provide direction to the superintendent in the event we do not need to cut as drastically as anticipated after the Legislature adopts a final budget."

The district budgeted based on the \$6.55 billion the Legislature has said is the target of funding. Superintendent Jim Thomas says they can't depend on the Legislature to come up with more.

At the special meeting, Thomas addressed the further reductions.

"We found that because of the May adjustments," Thomas told the board, "we'd have to cut

Tsunami drill attracts small crowd

THE UMPQUA POST

There was no earthquake or tsunami, but some residents of the region acted like one was coming during a drill Friday.

Local volunteers staffed assembly areas in Reedsport, Winchester Bay, Gardiner, Lakeside and Hauser in an event sponsored by the Oregon Department of Geology and Mineral Industries (DOGAMI). It was part of a months-long process that included a tsunami readiness rally and a door-to-door effort to pass out tsunami packets.

"We didn't know what to expect," local organizer Terry Plotz said. "More would have been nice, but our turnout was better than many other drills up and

"More would have been nice, but our turnout was better than many other drills up and down the coast."

— Terry Plotz, tsunami drill organizer

down the coast."

Plotz report 92 people and six dogs were counted at assembly areas. Those who agreed to participate were asked a series of questions about the drill and how accessible the assembly areas would be in an actual emergency.

Plotz said the effort was aided by an army of volunteers. "Over 50 people helped put it on," he

said. The Community Emergency Response Team "staffed the assembly areas and surveyed folks when they showed up."

Plotz said a number of other agencies were on hand, including Reedsport police and fire, Gardiner fire, Winchester Bay fire, Douglas County

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013
SEE DRILL, PAGE A6

Drill

FROM PAGE 1

Organizer urges residents to be ready just in case

Emergency Management and Sheriff's Office, Oregon Department of Transportation and Oregon State Police.

The Salvation Army from Roseburg and Coos Bay participated by preparing a meal out of their mobile kitchen.

"The Ham radio people kept us connected while law enforcement kept walkers safe," Plotz said. "There were signs everywhere thanks to state and county workers."

At one assembly area, close to downtown Reedsport, at least 40 people assembled.

Plotz said he still wants to get the word out about the devastation that could come from a major earthquake off the Oregon coast,

followed by tsunami.

"I am still available to do presentations for groups, businesses and organizations regarding the earthquake and tsunami risks and response," he said.

He said such an event could come at any time and people need to be ready for it.

It's estimated that, in event of a tsunami, people in the so-called "inundation zones" will have 15 to 20 minutes to make it to high ground before the first wave hits.

"We do a lot of things just in case," he said. "We wear seatbelts, we carry chains, check the weather or take an umbrella. Learning about tsunamis and earthquakes is not any different than learning what Smokey Bear has to say about fires.

"This big Cascadia Subduction Zone event may occur in our lifetime," Plotz said. "So why not learn about it and spend a few minutes planning what to do? It may save some lives."

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The Umpqua Post

Weekly news
from the Heart
of the Dunes

AN EDITION OF
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JULY 5, 2013

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July 13th to 27th*

*for tickets and concert details go to
www.oregoncoastmusic.com*

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*Volunteer Event Coordination by
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5-7:30 p.m. - \$10 Donation



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Care to Talk About...

Tuesday, July 9, 2013

5:30 - 6:30 pm

Lower Umpqua Hospital

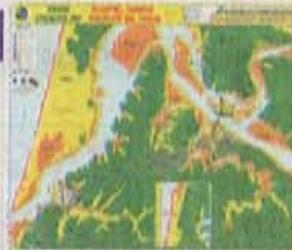
Tsunami Preparedness

*Go Bags and What to
Prepare*

Tsunami Outreach Coordinator,

Terry Plotz

*will present information on preparing
for a tsunami in the Reedsport area.*



*(Enter through "Receiving" door in
lower parking lot)*

*Healthy refreshments and good
information brought to you free of
charge by Lower Umpqua Hospital.*

■ June 25, 1:31 p.m., trespass, Elm Avenue, Reedsport. Caller reported harassment. Investigation continues.

■ June 25, 11:58 p.m., harassment, 2600 block of Frontage Road, Reedsport. Douglas County 9-1-1 Communications reported a possible injury after an argument.

■ June 26 8:07 p.m., public assist, Alder Avenue, Reedsport. Caller requested a welfare check on her daughter. Officer responded and found nothing out of the ordinary.

■ June 26, 9:42 p.m., suspicious circumstances, 1400 block of Hawthorne Avenue, Reedsport. Douglas County 9-1-1

■ June 26, 10:23 p.m., disturbance, 2700 block of Frontage Road, Reedsport. Caller reported a loud gathering.

■ June 27, 4:28 p.m., welfare check, 1100 block of Winchester Avenue, Reedsport. Douglas County 9-1-1 Communications reported husband was concerned for wife at home after some statements were made. Officers

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The Umpqua Post

The city of Reedsport is TsunamiReady



September 25, 2013 7:00 am • [By Steve Lindsley, The Umpqua Post](#)

http://theworldlink.com/reedsport/news/the-city-of-reedsport-is-tsunami-ready/article_a5e549e6-255d-11e3-b16e-001a4bcf887a.html

Representatives of the National Oceanic and Atmospheric Administration National Weather Service recognized Reedsport and the surrounding area for tsunami preparedness at a presentation on Thursday, Sept. 19, at Reedsport City Hall.

“It’s appropriate that this month is National Preparedness Month,” said Ryan Sandler, a warning coordination meteorologist with the Weather Service. “We can’t prevent earthquakes and tsunamis, but we can be prepared for them. The protection of life and property is one of the most important parts of the National Weather Service mission. Typically, our mission relates to weather disasters, but we’re also responsible for issuing tsunami warnings and making sure these warnings reach the people who need them the most.”

Reedsport, and the surrounding area, was cited for the work of community leaders and volunteers in tsunami readiness.

“Reaching the people impacted by tsunamis starts long before the warning goes out,” Sandler said. It begins with years of community outreach and education, which I believe is the most important part of the tsunami warning system.”

Sandler highlighted some of the community’s accomplishments.

“There was a tsunami readiness rally, a map-your-neighborhood program and a tsunami evacuation drill,” he told a crowd at the Reedsport Community Center. “This past year, through a NOAA grant given to the Oregon Department of Geology and Mineral Industries, Terry Plotz was hired as a tsunami outreach public affairs specialist. He was able to evaluate surveys, recruit numerous volunteers, lead a door-to-door campaign, meet with emergency services partners, provide outreach and education for schools and other organizations and carry out a community-wide tsunami evacuation drill.”

Sandler also cited a DOGAMI effort to create new and more accurate inundation maps. State and local governments have added tsunami evacuation and assembly-area signs.

“The tsunami warning system is truly a team effort that consists of local volunteers businesses,” Sander said. “Our team has accomplished much and I look forward to our future achievements made possible by our partnerships.”

John Lovegrove is the meteorologist in charge of the Medford NOAA National Weather Service office.

“The National Weather Service is proud to recognize the city of Reedsport as TsunamiReady,” he said. “TsunamiReady is a National Weather Service program that promotes a well-designed tsunami emergency response plan for your community.”

He explained the city has demonstrated both tsunami and severe weather readiness in a number of areas.

“By operating a 24-hour warning point and emergency operations center,” he explained, “having multiple ways of receiving tsunami and severe weather warnings and forecasts and alerting the public; creating an alert system that monitors local weather conditions; promoting public readiness through outreach and education and developing a form hazardous weather and tsunami plan.”

Lovegrove said they understand large earthquakes and tsunamis are very rare compared to other hazardous weather events.

“As a result,” he continued, “tsunami hazard planning along much of the west coast has been inconsistent and, in many cases, insufficient. An adequate level of awareness and preparedness is difficult to achieve and sustain over time. The TsunamiReady program was created to help meet the needs of communities that are at risk of tsunamis.

“We congratulate you for making your community better educated and prepared for earthquakes and tsunamis.”

A certificate was awarded to the city, accepted by Reedsport City Manager Jonathan Wright.

“I accept this on behalf of the city,” Wright said. “More so on behalf of the efforts of other people. This is, in no way, representative of a stopping point in our efforts to be prepared for natural disasters. It’s simply a milestone in our efforts.”

Wright said special recognition needed to go to Plotz and his efforts on behalf of DOGAMI, NOAA, Douglas County Emergency Services Coordinator Wayne Stinson, the Reedsport Volunteer Fire Department and Community Emergency Response Team volunteers.

“They were really the ones who went out there and beat the streets and went door-to-door and picked up the extra personnel that we didn’t have. They’re a definite asset and ally.”

Wright said the certificate was really being accepted on behalf of the late police chief, Mark Fandrey “who was the reason we have an emergency-operations plan. He’s the reason that when we actually met with Ryan that we could actually go through the checklist and say ‘we got it. We’ve done it. It’s there.’”

APPENDIX H

MEDIA COVERAGE of outreach in LANE COUNTY

National Tsunami Hazard Mitigation Program | Oregon

Tsunami Outreach Oregon

Year Four, 2013-2014

Siuslaw News

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WEDNESDAY



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MARCH 13 • 2013

75 CENTS

Honor and tradition

Saturday's event, open to the public, at Siuslaw Middle School attracts drummers and dancers from throughout the Pacific Northwest.

"It's traditional. It is very special. It means a lot to me to be able to do this," said 9-year-old Wallace Cox before he began practice for the men's traditional dance. Cox is one of many students who were scrambling Thursday to don regalia in preparation for Saturday's 20th annual powwow hosted by the Indian Education program.

Drummers and dancers from throughout the Pacific Northwest, and representing many different tribes, will participate in the cultural, spiritual and social event held at Siuslaw Middle School, which begins with the first grand entry at 1 p.m., during which an honor guard carries in flags of the state and national governments, the POW-MIA flag, and an eagle staff representing all Nations, from a design created before the U.S. flag.

Prayers are said and elders and veterans are honored. A potluck dinner break is scheduled for 4



Rosa Velasco-Mendez allows a friend to touch one of the metal cones on her jingle dress. The dancer is one of a select group who will perform the healing jingle dress dance during Saturday's powwow.

p.m., to which the public is invited to bring a dish, followed by a second grand entry at 6 p.m. The

event usually continues until about 10:30 p.m. To raise funds for the program,

there will be a raffle drawing of a
See POWWOW 6A

STORY AND PHOTOS
BY AMY BARTLETT
Siuslaw News

School board to announce new superintendent

BY AMY BARTLETT
Siuslaw News

School staff will soon receive memoranda informing them of the new superintendent chosen to lead Siuslaw schools.

According to Paul Burns, school board chairman, the public and press will be notified of the choice at Wednesday's school board meeting, after the staff has been informed.

"We didn't want them to read about our decision in the paper. We wanted them to hear about it from us," he said.

Hiring of the new superintendent is subject to formal approval.

Current Superintendent Jeff Davis is retiring June 30. The new superintendent will begin the position July 1.

Last month a field of 14 candidates was pared down to three finalists: Susan Follmer, Curtiss Scholl and Shawn Wiencek.

Follmer is a principal at the International School of Monagas, Maturin, Venezuela. Formerly from the Seattle area, she earned her Bachelor of Arts degree from Pacific Lutheran University and a master's degree in education at the University of Washington. Her experience includes K-12 school administration, district and college administration, consultant to the state school directors' association, school counselor and high school teacher in the state of Washington.

See BOARD 7A

Hey, what's shakin'?

It could be Florence and surrounding areas, and now is the time to prepare.

No one who is staying remotely in touch with the community can say, "I didn't know. Nobody told me," after the glut of information that has been flooding print and air media in past months about emergency preparedness, particularly for the looming dangers of tsunamis and earthquakes.

Locally a team of information experts, Western Lane Emergency Operations Group (WLEOG), has been offering a steady stream of meetings and classes to teach residents how to be prepared in case of such major disasters, and last weekend the group refocused on earthquakes, even while tsunamis have been holding onto the headlines in recent years.

Near the second anniversary of a magnitude 9 earthquake in

Japan that preceded a tsunami more than 40 feet high, a famed Oregon geologist and a team of certified emergency responders presented two workshops on Saturday, March 9, to drive home the point of "being prepared."

Introduced as a scientific "rock star," pun intended, Dr. George Priest, noted geologist for the Oregon Department of Geology and Mineral Industries (DOGAMI), led the multi-faceted discussion Saturday, that blurred the line between earthquakes and tsunamis, a little bit like which comes first, the chicken or the egg?

Perhaps because tsunamis have taken the forefront in worldwide news, many have lost sight of that which precipitates the disastrous event, a high-magnitude earthquake.

The entire coast of Oregon National Tsunami Hazard Mitigation Program, Oregon, 2012-2013 as well as territories from

Vancouver Island, British Columbia, through Washington state to just past Eureka, Calif., sit in what is called the Cascadia Subduction Zone.

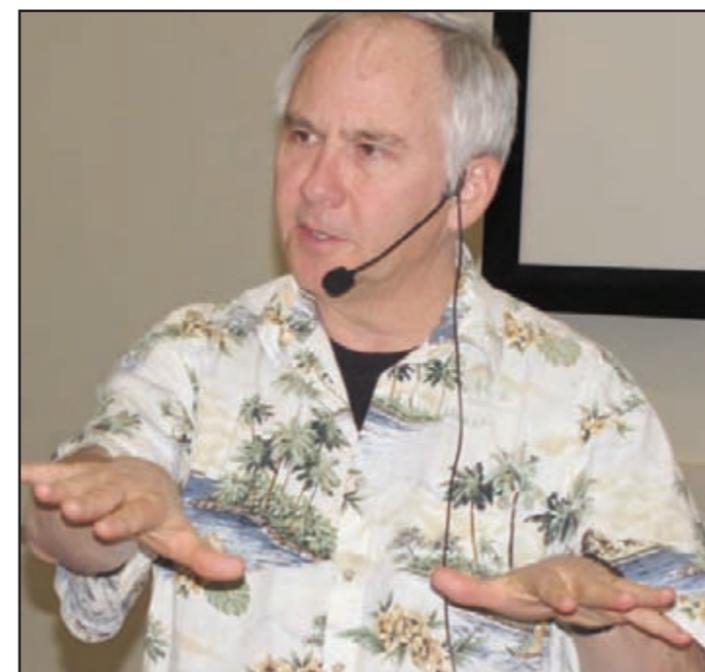
Scientists say this area is due for an earthquake. A big one.

According to Priest, the area is rated at a 10 percent chance of such an event in the next 50 years.

The positive side of that statistic is that there is a 90 percent chance that it won't happen. Regardless, now is the time for policymakers and the rest of government to ensure that their constituents and their infrastructure are prepared.

Priest stated that a "great" earthquake, in or around a magnitude 9.0, and of a duration of two minutes or longer, will be utterly life-changing.

"This experience will be unmistakable," he said. Bridges will fail. Expect to have to walk to high ground because the ter-



Geologist Dr. George Priest describes how the earth reacts during a major earthquake.

rain will be undriveable and in at least four hours, he 15 to 20 minutes a tsunami will follow. Waves will continue for

See PREPARE 7A

STORY AND PHOTOS
BY THERESA BAER
Siuslaw News

CYAN MAGENTA YELLOW BLACK

Prepare

from 1A

described.

Priest said the Willamette Valley will be hard hit, too, because it is made up of soft soil and is more populated and developed.

In the most technical segments of Saturday's discussions, Priest explained how slippage and liquefaction in and around the subduction zone will have far-ranging effects on transportation that will cut communities off from each other, as well as from resources and emergency services.

"You're all going to come to this earthquake," he said.

The earthquake will be the tsunami warning, no need to wait for a newscast or emergency phone call.

"We don't know what's going to happen with bridges. Jetties and estuaries will definitely be affected and changed."

And in such a big quake, high magnitude aftershocks can continue for up to 18 months.

Tsunamis potentially could dip and spread offshore, across the states as well as far to the west.

Priest showed DOGAMI's latest maps that place Old Town in the worst inundation zones out to about Ninth Street, along with the Heceta Beach area. Water will settle in estuaries and will last at least a day. The hospital and events center lie just yards outside the zone.

He said that even though only 15 percent of Florence's buildings and homes are in a tsunami inundation zone, 100 percent of the community will be affected by the earthquake that starts it all.

"If you're not in the inundation zone, you're still in the earthquake zone."

The earthquake, for the scare factor, means "you're not going to be able to drive and you won't be able to see the ground," so be prepared to have



Dr. George Priest explains the newest inundation map to a class participant at On Shaky Ground, held at the Siuslaw Fire and Rescue Station Saturday. The maps will soon be widely available throughout Florence.

to walk out.

"Get a walking stick," he said.

Windows will be broken, chimneys destroyed, sheetrock cracked, and water and sewer mains broken. Groundwater and water from the pipelines will surge up from the ground, creating the "liquefaction" that breaks down roads and foundations, and ends any source of fresh water.

The presentation included videos of the 2011 New Zealand earthquake. The WLEOG crew stressed the similarities between this area and New Zealand as far as makeup of the land, and the devastation in New Zealand was widespread, eating up homes and vehicles by the thousands. (If you're curious, go online to www.YouTube.com and search New Zealand earthquake for incredible videos that depict the results of an earthquake in

an area similar geographically to ours.)

For all the power of the videos and descriptions of the potential hazards of an earthquake followed by a tsunami, the WLEOG crew focused on handing over only the straight facts, and how residents can be prepared and informed before such disasters.

WLEOG is sponsoring a series of classes through spring and summer to help residents be prepared for potential natural disasters. The classes are free and are held from 9:30 a.m. to 12:30 p.m. at the Siuslaw Valley Fire and Rescue Station, 2625 Highway 101, on the following dates:

April 13: Post-disaster Recovery, Documentation, Insurance and Pets

May 11: Are You Ready? Introduction to Living on Shaky Ground and Emergency Prep

June 15: Safe Water and Sanitation

July 15: Neighbor Helping Neighbor, Disaster First Aid, Map Your Neighborhood

Aug. 10: Emergency Food Planning and Preparation

To sign up for any or all of these classes (registration is required), call the fire station at 541-997-3212.

In April, members of the

Certified Emergency Response Team will be going door-to-door in areas specifically labeled Inundation Zones with information about emergency preparedness and evacuation.

The message is loud and clear: Be Prepared.

"Do your homework," said WLEOG personnel.

"If (an earthquake or tsunami warning) happens at 1 o'clock in the morning, you're not going to be able to see where high ground is, and it's going to be dark because the power will be out.

"It's hard to look up things on your Smartphone when the earth is shaking. When you're under the table, holding on for dear life — that's not the time to be thinking about what you're going to do during an earthquake."

On March 19, the Oregon Office of Emergency Management is offering a "Tsunami Prep Talk," from 6 to 7:30 p.m. at the Siuslaw Public Library.

A ton of information about emergency preparedness can be found online at www.oregongeology.org. Copies of tsunami inundation zone maps will be widely available throughout the towns of Florence and Dune City in the coming months.



Audrey Creak, AVP
LPL Registered Principal
Dan Armstrong
Client Service

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[Music for Mom? Inaugural Dunes City Triathlon; New tsunami maps available.](#)

[Bob](#) May 10, 2013 10:45 pm [Uncategorized](#)



Local News

10 May 2013

Tsunami Rally To Distribute Evacuation Maps

Up until now, the latest versions of tsunami evacuation maps for the central Oregon Coast have only been available for viewing online. But next week residents will be able to pick up a paper copy that is small enough to fit in a pocket or purse. Peter Ovington is the outreach director for the Oregon Department of Geology. Along with local officials, he'll be hosting a tsunami rally at the Florence Events Center Tuesday

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013

evening.

Peter Ovington – “We’ll be giving away free paper copies of the new tsunami evacuation maps for the first time. There’s one map for Florence and a separate one for Dunes City.”

This will be the latest version of the map. It will show inundation zones, evacuation routes and shelter locations.

Peter Ovington – “What’s new here is that we really have the best and latest science. And we’re also showing not only a change in the area of tsunami inundation, but we’re showing two zones and that’s important.”

Those two zones are for distant generated tsunamis... like the one following the March 2011 Japanese earthquake. The other would show the possible run-up of water following a near-shore earthquake. Ovington says doors open at 6:30 Tuesday with the rally itself getting underway at seven.

Inaugural Dunes City Triathlon

If you’re going to be on Clear Lake or Canary Roads tomorrow you’ll want to watch out for congestion.

Dozens of volunteers and race officials, along with about 50 competitors will be there for the first ever [US Bank Oregon Dunes Triathlon](#).

It is the brain-child of Dunes City officials who, two years ago, wanted to promote an event that would not only attract visitors, but show off the many recreational activities offered here.

There are two lengths... the Olympic distance begins with a one-mile swim in Woahink Lake then moves on to a 25-mile bike ride that makes a loop to Darlings Resort on Clear Lake Road before going over some major hills out Canary Road to Ada and back.

It wraps up with a six-mile run through Honeyman State Park.

Dozens of volunteers are required to keep competitors on course and safe, but there will be one less than initially planned.

70-year old Dick Shores had a nagging hip injury that was going to keep him out of the race so he signed up to volunteer. He’s feeling better this week so yesterday he went ahead and signed up for the intermediate or so-called “sprint” version. That’s a half-mile swim followed by a 12-mile bike ride and three mile run.

The race starts 8 AM at East Woahink. The finish line is at the Sand Dunes Day Use Area of Honeyman.

Music for Mother

What to do for mom?

How about the gift of music?

A series of concerts set for this weekend will offer a wide variety of styles. First up tomorrow is the Oregon Coast Wind Ensemble... equal parts of brass and woodwinds... performing in a benefit for the Oregon Coast Military Heritage Museum.



CERT to begin door-to-door safety campaign

Timely evacuation drill is planned for May 18

Community Emergency Response Team (CERT) members will begin a door-to-door safety campaign in Siuslaw May 18.

The public contact campaign will include door-to-door visits to homes in the Siuslaw National Recreation Area.

Each home is expected to be visited by a CERT member within 10 days of the start of the campaign.

Each home will be visited by a CERT member who will provide information on fire safety, earthquake safety, and other disaster preparedness information.

The CERT members will also provide information on how to sign up for the CERT program.

The CERT program is a voluntary program that provides training and equipment to community members.

The CERT program is a voluntary program that provides training and equipment to community members.

Spruce Street repairs scheduled for June

By Elizabeth

The Oregon Highway Dept. is planning to begin repairs on Spruce Street in June. The repairs will include repaving the road and widening it to 36 feet.

The repairs will be completed by the end of the summer. The Highway Dept. is also planning to begin repairs on other roads in the area.

The Highway Dept. is also planning to begin repairs on other roads in the area.

The Highway Dept. is also planning to begin repairs on other roads in the area.

The Highway Dept. is also planning to begin repairs on other roads in the area.

Presenting Queen Rhododendra



The Rhododendra Chapter of Siuslaw is presenting the Queen Rhododendra, a young woman who has been crowned for the year.

PeaceHealth launches new electronic record system

PeaceHealth Medical Group (PHMG) has launched a new electronic record system.

The new system will allow patients to access their medical records online.

The new system will also allow patients to schedule appointments online.

The new system will also allow patients to view test results online.

The new system will also allow patients to communicate with their doctors online.

The new system will also allow patients to view their medical history online.

The new system will also allow patients to view their insurance information online.

The new system will also allow patients to view their contact information online.

The new system will also allow patients to view their billing information online.

The new system will also allow patients to view their prescription information online.

From the mind of Max Klump come fanciful figures, amazing facts and fun

Max Klump is a young boy who has created a series of fanciful figures.



Max Klump is a young boy who has created a series of fanciful figures. His figures are made of cardboard and are very creative.



Max Klump is a young boy who has created a series of fanciful figures. His figures are made of cardboard and are very creative.

| JUSTICE MEMORANDUM | |
|--------------------|-----------------------------------|
| Case No. | 12345 |
| Date | 5/10/80 |
| Author | J. Doe |
| Reviewer | J. Doe |
| Subject | Community Emergency Response Team |

| 4-day weather | |
|---------------|--------------|
| Today | Partly Sunny |
| Tomorrow | Partly Sunny |
| Day after | Partly Sunny |
| 4 days out | Partly Sunny |



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Oregon Coast To Hold Tsunami Evacuation Drills This Week

By **Albany Tribune** -- (May 29, 2013)



Eight coastal communities will hold voluntary tsunami evacuation drills this week. Residents and visitors will “scout their route” to high ground using new evacuation maps recently published by the Oregon Department of Geology and Mineral Industries (DOGAMI). All eight communities, like so many on Oregon’s coast, are at risk from earthquake and tsunami hazards.

Organizers say drill participants should join their neighbors and local businesses in taking along a “grab and go” bag of emergency supplies, following evacuation routes on the new maps, and timing how long it takes to walk to the nearest assembly area, since many roads and bridges will be impassable to cars after a Cascadia subduction zone earthquake.

“Two years after the 2011 Tohoku earthquake and tsunami, Japan is still working through their recovery and we in Oregon are still preparing for our local Cascadia subduction zone earthquake and tsunami,” said Vicki McConnell, State Geologist. “We at DOGAMI have created state-of-the-art tsunami inundation zone maps, worked with local community officials to design and produce effective tsunami evacuation brochures, and helped build a culture of preparedness to make Oregon safer where we work, live and play.”



WAVES CRASHING ON ROCKS ON THE SOUTH COAST

Drill details:

Thursday, May 30 at 10am

Coastal Lane County (Florence and Dunes City)

More info: Frank Nulty, Florence CERT, Siuslaw Valley Fire and Rescue: (541) 999-8234

Friday, May 31 at 10am

Coastal Douglas County (Reedsport, Gardiner, Winchester Bay)

More info: Terry Plotz, DOGAMI outreach coordinator, (503) 307-5734

Coastal northern Coos County (Lakeside, Hauser, North Bay)

More info: Glenda Hales, Coos County Emergency Manager, (541) 404-5385

Tsunami evacuation drills on the Oregon coast are a collaborative effort with many partners, led by local fire and police departments, county and city emergency management, tribes, Community Emergency Response Teams, Red Cross, ham radio operators, US Coast Guard, Oregon Emergency Management, and the many volunteers who have helped make the Tsunami Outreach Oregon program successful.

Voluntary tsunami evacuation drills are part of the Tsunami Outreach Oregon program that began in 2010 with a goal of enhancing earthquake and tsunami readiness efforts in as many Oregon coastal communities as possible over a four year period, while building sustainable, grassroots volunteer efforts revolving around disaster preparedness. The program has reached dozens of communities and school districts.

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8 Oregon Coast Communities To Hold Tsunami Evacuation Drills

May 29, 2013
By Angela Kellner

Eight coastal communities in Oregon will take part in tsunami drills Thursday and Friday. The Lane County Sheriff's Office will use the Community Emergency Notification System Thursday to send a message to about 800 phone lines located in the worst case scenario tsunami inundation zone. The phone message will tell people to grab their survival kit and follow a tsunami evacuation route on foot to higher ground. It's important for residents to walk and time themselves to know how long it takes them to reach safety.

Florence and Dunes City will do the drill Thursday. The coastal areas of Douglas and northern Coos County will hold their drill Friday. Using the latest technology, the Oregon Department of Geology and Mineral Industries has published new evacuation maps. The department encourages coastal residents and visitors to know which zone they are in and which evacuation route they should take.

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To listen to audio, visit
National Tsunami Hazard Mitigation Program, Oregon, 2012-2013
http://www.klcc.org/FeatureAudio/5-30_TSUNAMI_DRILLS.mp3



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Published On: Wed, May 29th, 2013

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Florence-Dunes City To Hold Tsunami Drill Thursday



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The Lane County Emergency Management is informing the cities of Florence and Dunes City of a voluntary tsunami drill occurring Thursday, May 30 from 10:00 – 11:00 a.m.

The drill will begin with Lane County Sheriff's Office launching a text message using the Community Emergency Notification System, which will go out to about 800 phones linked to addresses that lie within the worst case scenario tsunami inundation zone. The zone is defined by the Department of Geology and Mineral Industries.

If it is safe to do so, coastal residents and visitors are asked to participate in the drill by using extreme caution and at their own risk. Emergency Management officials say the goal of the tsunami drill is to ensure all people within the tsunami inundation zone know how to get to high ground and designated tsunami assembly areas.

To find out if you or anyone you know lives in a tsunami inundation zone, please go to the [Oregon Tsunami web site](#). This website has a tsunami evacuation map, and a feature where people can enter their address into the Tsunami Evacuation Zone Map Viewer.

The Register-Guard



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NEWS LOCAL NEWS

OREGON COAST

Tsunami drill planned for Florence and Dunes City

BY THE REGISTER-GUARD

PUBLISHED: 4:16 P.M., MAY 29

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Cor-o-nation

Family: 'Beautiful' life stolen

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Skagit River I-5 bridge work waiting on NTSB approval

FLORENCE — The cities of Dunes City and Florence will participate in a tsunami drill from 10 to 11 a.m. on Thursday.

The Lane County sheriff's office will kick off the drill by launching a test message using an automated notification system that sends a message to about 800 phones linked to addresses "within the worst-case scenario tsunami inundation zone" as defined by the state Department of Geology and Mineral Industries, sheriff's officials said in a news release.

The goal of the drill is to ensure that people who live within the zone know how to get to nearby high-ground locations, officials said.

Travelers to the Florence and Dunes City areas may encounter higher than usual pedestrian traffic during the drill, officials said.

To view or download a statewide tsunami evacuation map in order to learn if a particular address is within a tsunami inundation zone, go to www.oregontsunami.org.

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Florence Holds Tsunami Drill

by Lauren Mickler

Published May 30, 2013

FLORENCE, Ore. — Residents in Oregon coastal cities will be more prepared for a tsunami after attending drills Thursday and Friday.

Organizers distributed packets to residents all over Florence, but mainly those in the inundation zone, which is the part of town closest to the water that's most likely to be affected if a tsunami were to hit. Florence's inundation zone includes right around 1,000 people, which is a small portion compared to other coastal cities.



“Florence is lucky in that only 11 percent of the population is in the inundation zone, but the farther down the coast you go, there's more and more and more,” said CERT volunteer Nancy Fullmer.

But of those hundreds of residents only about 50 participated. It's not what organizers were hoping for, but those who did come out took it seriously.

“Our bags were already packed. We had one by the door, which I took and he took the other,” said Debbie Lobey.

And for those who participated in Thursday's drill, they're even more in tune with their tsunami strategy or maybe what tweaks need to be made.

Though participation wasn't at where organizers were hoping it would be, it still provided the opportunity to identify the kinks in their system and work on those for the next drill.

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ARE YOU IN THE ZONE?

Tsunami drill yields small turnout, big lessons.



PHOTOS BY AMY BARTLETT AND THERESA BAER
SIUSLAW NEWS

John Carnahan, Western Lane Ambulance paramedic and Siuslaw Valley Fire and Rescue battalion chief, along with two additional firefighters, manned a stretch of Highway 101 on Thursday during the tsunami evacuation drill. Some drivers stopped to ask what was going on. Some stopped to ask directions to their designated assembly areas.

All had questions about the inundation zone, emergency procedures and supplies and the drill itself. Carnahan also described the potential hazards and situations that will be experienced when the coast is hit by an earthquake or tsunami. "People need to have a plan," he said.

By THERESA BAER
Siuslaw News

In spite of a door-to-door campaign, a front-page story in the Siuslaw News, almost 900 robo-telephone calls to residents, and emergency vehicles parked in the middle of town on Highway 101 draped with a huge banner announcing it, residents' response to Thursday's tsunami evacuation drill was low key, at best.

But as Marvin Tipler said, "We learned that about 60 more people now know what to expect, and that's more than did before."

Tipler, division chief of operations at Siuslaw Valley Fire and Rescue, was part of the team that organized the drill.

"This is why we have drills," he said, during a briefing after the event where organizers discussed the turnout, their observations and residents' questions, what

worked and what did not.

Members of the fire district, Lane County Emergency Management, the Oregon Department of Geology and Mineral Industries (DOGAMI) and local members of the Community Emergency Response Team (CERT) and Western Lane Emergency Operations Group (WLEOG) met for months planning the exercise. Communication among team members and the community remained at the top of the list of "things to work on."

Between May 16 and May 29, CERT and WLEOG members went address-by-address through the mapped tsunami inundation zones, talking with residents and business owners (77 in Old Town alone) and distributing packets of information about emergency evacuation. The information included a tsunami zone map, booklets on surviving earthquakes and tsunamis, and lists of

other resources.

Tipler said 90 to 95 percent of residents living in the designated tsunami inundation zones were contacted.

At 10 minutes before 10 a.m. May 30, the CENS (Citizens Emergency Notification System) calls went out asking the public to participate, at their own risk, in the drill.

Linda Cook, emergency program manager for the county, said 894 calls were made through CENS, although some people stated that they did not receive telephone calls.

"No one called me," said one shop owner who has a business next to the Siuslaw River in Old Town. She did say that CERT brought her information about the drill last week. Cook said she will look into improving the call lists.

Bay Street in Old Town was silent and empty on drill day, shop owners just beginning their

workday. Later that day, one restaurant owner said that she always keeps food and water on hand. "If there is a warning, we will just lock up and go to the FEC," she said.

Many employees did not seem to know whether their employers had an "official disaster plan" and most had not considered that they would be directing visitors as well as staff in the case of an earthquake or tsunami.

Bob Forsythe, manager at the Port of Siuslaw, however, is confident that his staff is trained and prepared for such emergencies, and for handling the port's RV campground.

"We all know what to do if there is an earthquake today," Forsythe said.

Tipler pointed out that he knew of at least two motels in the area that were working out emergency plans on Thursday to prepare staff

Drill

from 1A

to handle guests and property.

Organizers, mainly CERT and WLEOG members, were stationed throughout Florence and Dunes City during the hour-long drill at areas that had been designated to those in the inundation zone as "assembly areas," or high ground. They included the Florence Events Center, Dairy Queen, Greentrees, Jerry's Place, Grocery Outlet and Fred Meyer. More than 20 people gathered in Greentrees; as

many as 17 went to the FEC. Only a few brought their "grab-and-go" kits as urged as part of the drill.

At the FEC, Renee Hansen showed up on foot carrying a backpack. She was not sure what was in her kit since she had packed it so long ago, but was happy to have participated in the drill.

"I was a CERT," Hansen said, "but I haven't had time lately to do the programs. I'm hoping I'll learn more."

According to emergency teams, the most common comment from the public was, "Nobody told me about the drill," but there were plenty of questions, like "how do I know if I live in the inundation zone?" and "how am I supposed to get to an assembly area?"

Much of this information is readily available in free literature from Florence and Dunes City halls and Siuslaw Valley Fire and Rescue depart-

ment and online (start with www.OregonTsunami.org and OregonGeology.org; city websites also offer a wealth of information).

Most important is having a plan, emergency teams say.

"There will always be really tough questions (when disaster strikes)," Tipler said. "Most of the questions don't have definitive answers now. That will depend on how much time you have."

Those who are ready to truly be informed and practiced for a coastal emergency should attend the free classes regularly offered by WLEOG. The next class is June 15, Safe Water and Sanitation, followed by July 13, Neighbor Helping Neighbor: Disaster First Aid/Map Your Neighborhood. They are held at the Siuslaw Valley firehouse, 2625 Highway 101, from 9:30 a.m. to 12:30 p.m. Registration is required; call 541-997-3212 to sign up.

APPENDIX I

MEDIA COVERAGE of outreach in LINCOLN COUNTY

National Tsunami Hazard Mitigation Program | Oregon

Tsunami Outreach Oregon

Year Four, 2013-2014

New tsunami evacuation maps to be released at local rallies

Saturday, April 20, 2013 12:00 pm | Updated: 2:10 pm, Mon Apr 22, 2013.



EDITOR'S NOTE: *On April 22, a presentation is scheduled for the Lincoln City City Council concerning new tsunami evacuation maps and a month-long tsunami preparedness outreach campaign to begin in May. The Lincoln City City Council meets at 6 p.m. at the Lincoln City City Hall. The following is information outlining local rallies to be held to review the new maps.*

LINCOLN CITY - In May, Lincoln County will have 12 new and improved tsunami evacuation maps covering the most populated areas of its coastline. Maps will be available free to residents and visitors, published by the State of Oregon.

The new maps are based on the very latest tsunami science and use cutting-edge mapping technology known as lidar (similar to radar but using light pulses instead of radio waves). They show two evacuation zones – one for a local tsunami generated by a nearby Cascadia earthquake – “the Big One” – and another for a distant tsunami caused by an undersea earthquake far away from Oregon’s coast.

The maps are easy to understand, with helpful preparedness tips that could save your life.

While the evacuation maps show the worst-case scenarios for local and distant tsunamis, Oregon Department of Geology and Mineral Industries (DOGAMI) also publishes more detailed tsunami inundation maps (known as TIMs). These technical maps showing multiple scenarios are intended for planners, scientists, emergency managers, elected officials, and others to help mitigate risk and reduce the loss of life and property to tsunamis.

Evacuation maps are printed as pocket-sized brochures and will be available for free through local public safety agencies such as fire stations. Maps will also be given away at Tsunami Readiness Rallies in May (see public outreach events listed below).

Maps will also be available online at www.OregonTsunami.org. Some are sized for easy printing at 11x17”, while others are quite a bit larger. The Web site features an interactive map viewer where you can type in an

address and customize your view. Smartphone users can download TsunamiEvac-NW, a free mobile app for iPhone and Android featuring the same interactive map technology.

DOGAMI and Lincoln County are working to spread the word about the new maps, encouraging residents and visitors to attend presentations, learn more, and practice their evacuation routes. Many communities in the tsunami inundation zone will be visited by door-to-door outreach teams giving away free evacuation maps and talking face-to-face about tsunami readiness.

May 1

12 p.m. News conference announcing new tsunami evacuation maps and outreach campaign After Board of County Commissioners meeting Lincoln County Courthouse, 225 W. Olive Street, Newport

May 7

3 p.m. and 7 p.m. Tsunami Readiness Rally
Lincoln City Presentation on new tsunami maps and preparedness; with staff of the Oregon Department of Geology.
Lincoln City Cultural Center, 540 N.E. Highway 101, Lincoln City

May 9

6:30 p.m. Tsunami Readiness Rally
Waldport Waldport High School, 320 S. Crestline Drive, Waldport

May 11

10 a.m. Tsunami Readiness Rally
Newport Best Western Agate Beach Inn, 3019 N. Coast Highway, Agate Ballroom, Newport

May 18

10:30 a.m. Tsunami Evacuation Drill
South Lincoln County Bayshore and Sandpiper communities north of Waldport will conduct a tsunami evacuation drill with guidance from Seal Rock Fire District

More events are being scheduled. Tsunami Outreach Oregon partners are also spreading the word about the new maps via local news media, community group presentations, info displays, fairs and festivals, and more.

To schedule a presentation or other outreach event, please contact Lynda Engle, tsunami outreach coordinator, at lynda.engele@dogami.state.or.us or (503) 936-7767.

TsunamiReady certification

Becoming TsunamiReady™ certified is an important way for any vulnerable coastal community to save lives through better planning, education, and awareness. The TsunamiReady™ program, developed by the National Weather Service, helps community leaders and emergency managers strengthen their local operations and response to tsunamis. It can also offer a financial incentive for participating, in the form of possible reduced flood insurance rates through the National Flood Insurance Program.

For more information, visit www.tsunamiready.noaa.gov or contact Tyree Wilde, National Weather Service, at (503) 326-2340 or tyree.wilde@noaa.gov

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Sandy Gruber used a Newport tsunami map to show Lincoln City Council members Monday what to expect when Lincoln City receives 28,000 long-awaited emergency maps. Officials are hopeful the two-sided schematics will be ready for a May 7 tsunami readiness rally at the Lincoln City Cultural Center. (Photo by Rick Beasley)

Without its own, Lincoln City unveils Newport tsunami map

By Rick Beasley
Of the News-Times

LINCOLN CITY — Municipal disaster coordinators here have their fingers crossed that a tsunami readiness rally slated

for Tuesday, May 7, won't turn into a catastrophe.

Still lacking 28,000 revised Lincoln City tsunami maps that have been promised by the state agency in charge of creating them, Mark Nichols and Sandy

Gruber used a Newport map, instead, to show city councilors Monday what to expect when the new schematics arrive. North Lincoln County is among the few Oregon coast regions still waiting on the maps whose updated inundation zones will render previous official underestimates of high water dangerously obsolete.

“It's important that people realize they won't be the same.”

Crafshack, LLC

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013

The maps that could save your life

Posted: Wednesday, May 1, 2013 12:15 pm | Updated: 11:17 am, Thu May 2, 2013.

By Jeremy C. Ruark |

NEWPORT - The latest updated tsunami evacuation maps for Lincoln County released today by the Oregon Department of Geology and Mineral Industries (DOGAMI) are vital to saving lives, according to George Priest, DOGAMI coastal geologist.

"We want people to be reassured that the best available science has been used to define the evacuation zones," said Priest. "They really need to take these evacuation zones seriously and make sure their families know where they need to evacuate to."

The maps redefine evacuation routes in two different zones.

"The real challenge will be the tourists," said Priest. "People in the valley are not thinking of the danger. Local coastal residents are probably the best hope because they will be the leaders on how and where to evacuate. They are almost deputized by nature to be a leader and help show the way to safety during one of these big tsunamis when there are only moments to make a decision on where to go."

Priest said a series of public awareness rallies to be held in Lincoln County this month are designed to deliver one main message:

"The core message is that people need to take action to protect their own family and themselves," said Priest. "Look at the maps and take personal action if you live in an inundation zone. Determine what action you need to take to be safe," said Priest.

DOGAMI officials said coastal residents need to understand and prepare for the danger of local tsunamis which are far more devastating than distance events.

"You have maybe 15 or 20 minutes to get to high ground," said Priest. "You have to instinctively know where to go and how to get there. There is more than 50 percent chance the event will be in the dark. So you need to think a magnitude nine earthquake and all the power is off. It can be an amazing challenge."

Priest said the single most important item to have to be prepared for such an emergency is a LED headlamp.

"That allows your hands to be free so you can grab your go kit and get to safety quickly," he said.

DOGAMI will hold two Tsunami Outreach Rallies in Lincoln City, one at 3 p.m. the other at 7 p.m. on May 7 at the Lincoln City Cultural Center to present the new evacuation maps and outline a door-to-door education campaign.

The maps will also be available for Smart phones.

To view the news maps, click on the attached PDFs, or go to www.oregontsunami.org.



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May 02 2013 Dogami officially delivers new tsunami inundation zone maps

Uncategorized Add comments



Tsunami Maps debuted Lincoln County Courthouse



Peter Ovington DOGAMI



are also online at www.OregonTsunami.org

The long awaited updated tsunami inundation zone maps for the Oregon Coast were debuted Wednesday at the Lincoln County Courthouse, with a message that all old inundation maps should be discarded/recycled.

Oregon Department of Geology's Peter Ovington said the new maps reflect a major change as to the estimated height of tsunami flood waters should the Cascadia Subduction Zone trigger an earthquake off the coast.

After visiting Japan following their big earthquake and tsunami that occurred in March of 2011, state geologists changed the estimated water height for a similar earthquake along the Oregon Coast from an earlier estimate of 50 feet to 70 to 80 feet. That means considerably more real estate would be covered by an incoming tsunami.

The maps show evacuation routes to higher ground from all inundation zones. The new maps will be available later this month up and down the coast of Lincoln County at local fire departments and city halls as well as the Lincoln County Courthouse in Newport. They

One thing that DOGAMI and emergency management officials wanted to emphasize is that because no one knows when the "big one" will hit, we should all be ready for it, day or NIGHT. That's right, NIGHT. They say everyone in the family should have a pair of shoes, a jacket and a HEADLIGHT HELMET located near your bed so when the shaking is done you can put them on. You'll want to have both hands free while navigating your exit and your way toward an evacuation area or some other secure location. There will be no street lights to help orient you. If it's cloudy without a moon, it's likely to be pitch black outside. Even with the moon behind the clouds it'll be rough going.

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be areas affected by what's caused liquefaction. DOGAMI's George saw a lot of liquefaction where the shaking allowed groundwater up into a slippery and treacherous mush. Priest said what looks like bottomless pits as the ground creates a big sink hole and allows through the surface. So, get a headlight helmet for each member of their batteries are always fresh.

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one to have an emergency kit at the ready and at least a two week food. Remember, there won't be any electricity for an extended period needs to be refrigerated or frozen.

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Are YOU In The Zone? New Tsunami Maps Have Arrived



Waldport Mayor Woodruff examines the Waldport Map

During a news conference in Newport the Oregon Department of Geology and Mineral Industries (DOGAMI) released the new tsunami evacuation brochures for 12 communities in Lincoln County. This is an effort according to county emergency manager Jenny Demaris to inundate Lincoln County with the information they need to be prepared in. The idea is that everyone will know where to go and what to do in the event of a tsunami.

According to Peter Ovington with DOGAMI the maps were made based on the latest science and sophisticated new mapping technology. He said they have used science and information learned from the earthquake and tsunamis over the past several years and the newest mapping technology LIDAR to give an accurate snapshot of where the water will travel. The maps show worst-case scenario evacuation zones for both local-source and distant-source tsunamis. The maps also show evacuation routes and assembly areas, and contain readiness tips for protecting yourself and your loved ones.



To help spread the word local emergency planners, fire department, CERT and volunteers will be going door to door with green bags containing

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National Tsunami Hazard Mitigation Program, Oregon, 2012-2013

the maps and information so residents know where to go and what to do. There will also be rallies held starting next week in Lincoln City, Newport and Waldport. These events will include a slide presentation by DOGAMI staff and scientists, with a focus on what the new maps tell us and how to prepare for an earthquake and tsunami.

New map brochures for each area will also be distributed at the rallies. It is important for families to have a plan and to practice a couple of times a year. In a local tsunami event the earthquake will be your warning. As soon as the ground stops shaking get your to go kit, and head to an assembly area as indicated on the maps. Once there it is important to stay where you are as tsunami waves come in surges and can last for several hours and become higher with each surge. There is also danger of debris. For more information or to view the maps go to www.Oregontsunami.org



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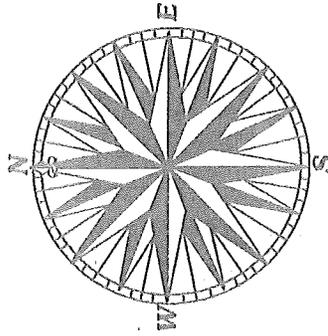
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Are you in a zone? – Lincoln County kicks off tsunami awareness campaign

By *Larry Coomrod*
Of the News-Times

LINCOLN COUNTY — Imagine a near shore earthquake violently shakes your house at 4 a.m., signaling that a tsunami is at that very moment racing toward the coast.

Are you in a tsunami zone? Do you know the evacuation route to higher ground and safety? Can you get there in the dark when there are downed power lines and darkened streetlights?

State and local officials kicked off a month-long tsunami awareness campaign Wednesday to answer those questions and more.

At the heart of the campaign are new tsunami inundation maps, the culmination of a four-year mapping and outreach project between the National Oceanic and Atmospheric Administration (NOAA) and the Oregon Department of Geology and Mineral Industries (DOGAMI).

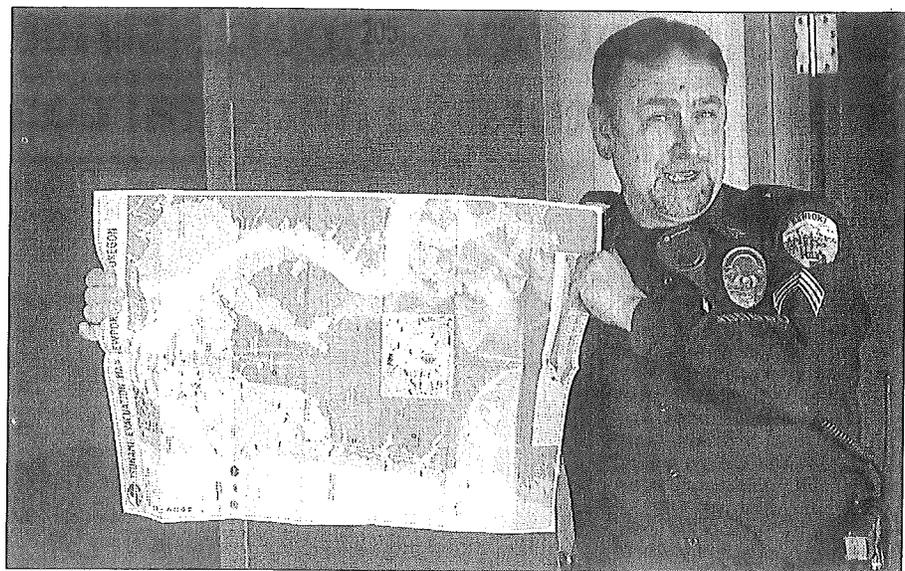
Twelve new maps cover the most populated Lincoln County areas from Lincoln City south to Yachats. The three-color maps show inundation zones for a distant tsunami (orange), a local tsunami (yellow) and safe zones (green) and evacuation routes to assembly areas.

A distant tsunami in Alaska or across the Pacific would take several hours to

reach Oregon and would inundate beaches and low-lying areas. A near shore earthquake can send a devastatingly large tsunami crashing ashore in as little as 15 minutes.

The takeaway for Lincoln County residents is that the inundation zones now stretch much farther inland than previously shown, and some evacuation rates have changed.

Geologists used computer modeling and advanced Light Detection and Ranging (LIDAR) that uses light pulses to create tsunami maps far more accurate than any created previously.



Newport Police Sgt. Tony Garbarino shows a new tsunami evacuation map to Nye Beach residents at a town hall earlier this week. State and local officials kicked off a month-long tsunami awareness campaign Wednesday to introduce the 12 new Lincoln County maps to the public. The maps are available online at www.oregontsunami.org and will be handed out in a door-to-door campaign and at tsunami readiness rallies in Lincoln City, Newport and Waldport. (Photo by Larry Coonrod)

TSUNAMI AWARENESS Continued from page A1

"The science behind the maps is quite robust," said Peter Orvington, DOGAMI tsunami outreach specialist.

Lincoln County Emergency Manager Jenny Demaris said Community Emergency Response Team volunteers plan a door-to-door campaign later this month to hand out maps and information to residents in inundation zones.

Public outreach also includes tsunami readiness rallies in Lincoln City, Newport and Waldport. Residents of the Bayshore and Sandpiper neighborhoods near Waldport will participate in an evacuation drill later this month.

Demaris said emergency responders familiar with each area's terrain lent their expertise to map out evacuation routes and assembly areas using inundation predictions of the new maps.

"We had local subject matter experts looking at the geography and knowing the neighborhoods and the best route to take," she said.

Demaris urged residents to know and practice evacuations from their home and work. Key, she said is having footwear to protect feet from broken glass and debris, a headlamp, and a poncho to protect from the rain quickly available. She suggested keeping the items secured to a bedpost so they don't get lost in the shaking of an earthquake.

"The number one thing you can do for that after hours evacuation is a headlamp, protect your feet, and something to

New tsunami maps

- Twelve new three-color maps cover Lincoln County population areas.
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- Available for download at www.oregontsunami.org. Android and iPhone users can download the "Tsunami Evacuation NW" app at the iTunes and Google Play stores.

Tsunami Readiness Rallies

- Lincoln City – Tuesday, May 7, 3 p.m. and 7 p.m., Lincoln City Cultural Center, 540 NE Hwy 101.
- Waldport – Tuesday, May 9, 6:30 p.m., Waldport High School, 320 S. Crestline Drive.
- Newport – Saturday, May 11, 10 a.m., Best Western Agate Beach Inn-Agate Ballroom, 3019 N. Coast Hwy.

protect you when you get out in the elements, especially if you can't take your readiness go kit with you for some reason," Demaris said.

Worst-case scenario

In the past 10,000 years, 19 major earthquakes originating in the offshore Cascadia subduction zone struck the U.S. West Coast. The last earthquake, a 9.0, hit in 1700. Using offshore landslide deposits, geologists determined the relative size of past earthquakes and gave them what they jokingly refer to as a T-shirt size rating of small through extra-extra large.

Scientists used the worst-case scenario of an XXL earthquake to plot inundation zones. The geological record shows one such quake occurring several thousand years ago. The major-

ity of Cascadia subduction zone earthquakes were in the medium and small category and produced smaller inundation zones.

With that in mind, DOGAMI geologist George Priest worries older residents may look at the new maps and "throw up their hands" mistakenly thinking they have no chance to reach a safe zone.

"Every step away from the ocean is a step to safety," Priest said.

The new tsunami evacuation maps and other information are available online at www.oregontsunami.org. An evacuation map smart phone app — Tsunami Evacuation NW — is available for Android and iPhones.

Contact Assistant Editor Larry Coonrod at 541-265-8571 ext. 211 or email larry@newportnewstimes.com.

These evacuation maps could save your life



JEREMY C. RUARK
The News Guard

The latest updated tsunami evacuation maps for Lincoln County, released by the Oregon Department of Geology and Mineral Industries (DOGAMI), are vital to saving lives, according to George Priest, DOGAMI coastal geologist.

"We want people to be reassured that the best available science has been used to define the evacuation zones," said Priest. "They really need to take these evacuation zones seriously and make sure their families know where they need to evacuate to."

The maps redefine evacuation routes in two different zones.

"The real challenge will be the tourists," said Priest. "The people in the valley are not thinking of the danger. Local coastal residents are probably the best hope because they will be the leaders on how and where to evacuate. They are almost deputized by nature to be a leader and help show the way to safety during one of these big tsunamis when there are only moments to make a decision on where to go."

Priest said a series of public awareness rallies to be held in Lincoln County this month are designed to deliver one main message:

"The core message is that people need to take action to protect their own family and themselves," said Priest. "Look at the maps and take personal action if you live in an inundation zone. Determine what action you need to take to be safe," said Priest.

DOGAMI officials said coastal residents need to understand and prepare for the danger of local tsunamis, which are far more devastating than distance events.

"You have maybe 15 or 20 minutes to get to high ground," said Priest. "You have to instinctively know where to go and how to get there. There is more than 50 percent chance the event will be in the dark. So you need to think a magnitude nine earthquake and all the power is off. It can be an amazing challenge."

"Look at the maps and take personal action if you live in an inundation zone. Determine what action you need to take to be safe."

-George Priest, DOGAMI coastal geologist

Priest said the single most important item to have to be prepared for such an emergency is a LED headlamp.

"That allows your hands to be free so you can grab your go kit and get to safety quickly," he said.

DOGAMI held two tsunami outreach rallies at the Lincoln City Cultural Center on May 7 to present the new evacuation maps and outline a door-to-door education campaign. Two other outreach sessions will be held in Lincoln County: 6:30 p.m. May 9 at Waldport High School, 320 S. Crestline Dr., and 10 a.m. May 11 at the Best Western Agate Beach Inn, 3019 N. Coast Highway in Newport.

The maps will also be available for Smart phones.

To view all of the new Lincoln County evacuation maps, go to www.oregontsunami.org.

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SOUTH LINCOLN COUNTY NEWS



Newport Police Sgt. Tony Garbarino shows a new tsunami evacuation zone at a town hall last week. State and local officials kicked off a month-long tsunami awareness campaign to introduce the 12 new Lincoln County maps to the public. The maps are available online at www.oregontsunami.org and will be handed out in a door-to-door campaign and at tsunami readiness rallies in Lincoln City, Newport and Waldport. (Photo by Larry Coonrod)

'Are you in a zone?' County kicks off tsunami awareness campaign

By Larry Coonrod
South Lincoln
County News

LINCOLN COUNTY — Imagine a near shore earthquake violently shakes your house at 4 a.m., signaling that a tsunami is at that very moment racing toward the coast.

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At the heart of the campaign are new tsunami inundation maps, the culmination of a four-year mapping and outreach project between the National Oceanic and Atmospheric Administration (NOAA) and the Oregon Department of Geology and Mineral Industries (DOGAMI).

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May
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Earthquake and Tsunami Public Information meeting offers strategies for survival

Uncategorized

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*Japanese Tsunami 2011
A similar wall of water could sweep through the
Oregon Coast*

It was probably due to the fact that earthquakes and tsunamis are not everyone's favorite topic coupled with the fact that it was a beautiful sunny day on the Oregon Coast that trimmed the number of Newport area residents attending a comprehensive tsunami information meeting Saturday at the Agate Beach Best Western.

But for those who attended, there was a lot to learn and some not-so-concealed-words of encouragement from state geologist George Priest. Priest said the big concern, of course, is the Cascadia Earthquake

waiting to happen off the Oregon Coast, with it's powerful shaking and following tsunamis. Priest said although there is ample evidence that some tsunamis in the distant past have been super-tsunamis with 80 foot tidal surges, there is an 80% chance that if we do get a tsunami, it's likely to be about half that high. But Priest quickly added, "that's still a large tsunami." Priest said distant tsunamis from Japan, Indonesia and Alaska offer sometimes many hours of warning for people to flee tsunami inundations zones and reach higher ground.

Priest explained that a Cascadia Subduction Zone Earthquake will shake violently for up to three minutes, which will seem like a lifetime time to most of us. But when it's over everyone should immediately head for higher ground. He said residents living in a tsunami zone will have 15 to 20 minutes to get to that higher ground and then make their way to official "Assembly Areas." Those

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Residents reviewing preparedness information



Attendance was less than expected despite major publicity campaign.

TVs, appliances and cupboard doors. There's a world of things we all can do to help us ride out "the big one."

They strongly urged having what are called "grab and run" kits which involve the bare necessities for getting out and up to higher ground. Priest said the most often overlooked "necessity" is a flashlight that you can strap to your head or a helmet. He said, "If the earthquake and tsunami strike at night, you're going to need to see. You'll need BOTH HANDS FREE to grab what you need and to guide loved ones, perhaps friends and neighbors, outside and uphill to higher ground.



For those who find themselves outside the tsunami inundation zone, a lot of the same issues face you in that you'll still need that flashlight to navigate your home, regardless of what shape it's in, and to ensure everyone's safe. But if there are injuries, the first aid kit will also come in handy. Because of all this, Priest said you must keep these emergency tools in a place that is likely to survive a big shaker. As for the flashlight strapped to your head, make sure it's velcro'd to your bedframe within easy reach because you'll need that FIRST after an earthquake.

Taking note that there were a lot of empty chairs at the tsunami meeting Saturday, Priest said "Those of you who came are basically responsible for sharing what you've learned here. Spread the word that surviving an earthquake and tsunami is easier if you prepare." He directed attendees to the statewide earthquake and tsunami preparedness website www.OregonTsunami.org.

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013

routes and locations are clearly indicated on the tsunami zone maps which are now available at Newport City Hall and at the main Newport Fire Station at NW 10th and NW Nye.

Priest said that if a tsunami rolls in and then recedes, by no means should people try to immediately return to their homes. He said the Japanese tsunami of 2011 was actually a series of tidal surges that stretched out for nearly 12 hours which gradually subsided. He said the biggest wave of the day was actually the second surge, not the first.

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The tsunami meeting also offered a wide array of earthquake preparedness devices from automatic natural gas shut-off valves to instructions on how to properly hang pictures and other wall decorations, properly secure bookcases, large screen

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The Mobile Guide
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There is also the Lincoln County Disaster Preparedness website at:

<http://www.lincolncountysheriff.net/emergency/>



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Residents are also encouraged to consider volunteering with the Community Emergency Response Team, or "CERT" for short. CERT volunteers learn it all and see it all by helping residents deal with emergencies, conduct community education and emergency and disaster preparedness. For information on becoming a Newport member of CERT call 541-265-8720 or via email at D.Sawyer@NewportOregon.gov



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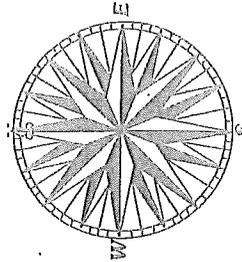


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Your information source for the Central Oregon Coast

Tsunami evacuation drill set for Waldport's Bayshore area

By Dennis Anstine
For the News-Times

Getting residents of the central Oregon coast to take seriously the possibility of a high-magnitude earthquake and its destruction isn't an easy task, says Peter Ovington, a tsunami outreach specialist for the state.

Still, the Oregon Department of Geology and Mineral Industries (DOGAMI) and several other local entities are in the middle of a month-long tsunami awareness campaign to prepare residents for such an event.

Ovington was disappointed by the small turnout of 30-35 people at a preparedness event held last Thursday at the Waldport High School gymnasium, but he hopes a door-to-door campaign later this month will be more effective.

"I was discouraged by the low turnout because in the worst case scenario of a distant tsunami, much of Waldport, the shores of Alsea Bay and the river would be fully inundated," Ovington said Monday. "We've got a lot of work to do."

South of Waldport, other areas that would be hit hard by a high-magnitude distant tsunami such as the 2011 event in Japan are the west parts of Beaver Creek, Yachats River, Big Creek and Little Creek.

Plus, much of the coast between just north of Waldport to south of Yachats would be hit hard by a tsunami, especially if a major Cascadia Subduction Zone earthquake occurred.

TSUNAMI *Continued from page A1*

A more concerted door-to-door outreach began last Saturday when information on this Saturday's (May 18) evacuation drill occurs in the Bayshore, Sandpiper and Seafarer communities northwest of Alsea Bay.

The door-to-door effort will include between 650-800 homes, said Ovington, with volunteers handing out information, including a new tsunami evacuation map and routes to the three assembly areas: the KOA Campground overlooking Alsea Bay; the Seal Rock Fire Station at NW Bayshore Drive; and the clubhouse at NW ShoreView Drive.

The evacuation drill will be held between 10:30 a.m. and 11:30 a.m. Saturday, and residents are being asked to time how long it takes them to walk to the assembly areas.

"We're asking them to get their grab-and-go bag and walk to the high ground, hopefully getting out of their inundation hazard zone within 15 to 20 minutes," Ovington said.

"Obviously, it depends on folks' agility," he added, "but we want them to realize that the time frame to get to a safe place will be brief. One of the problems is that a lot of people don't live there full time, but we've mailed out a lot of fliers, too."

He said the hazards of the earthquake itself could be extreme, beginning with between two to five minutes of shaking. With a local tsunami, the time to evacuate could be 15 to 20 minutes.

"The drills are important be-



Yachats Fire Chief Frankie Petrick assists a pair of curious Lincoln County residents interested in tsunami evacuation maps of the area that were made available to the public during Thursday's Tsunami Readiness Rally at Waldport High School. The event was a precursor for Saturday's evacuation drill for residents of the Bayshore, Sandpiper and Seafarer neighborhoods in Waldport. (Photo by Dennis Anstine)

cause they will stress the need to be prepared for such an event and then getting to the assembly areas as soon as possible," he said. "We hope they will practice in the future."

A door-to-door outreach event will be held later in the rest of Waldport, with volunteers for community emergency response teams covering the area, which includes some 700 buildings, Ovington said.

When asked if Waldport

was one of the most at-risk areas along the coast, he said it's impossible to gauge degrees of concern because so much of the area is vulnerable.

"I worry about all of it," he said. "I worry about residents who are exposed but don't believe that the threat is real. We have conversations about it, and they have all the information, but still don't take it seriously. It can be discourag-

ing, but our campaign is just beginning."

Considering the number of questions asked at last Thursday's event at Waldport High, Ovington said, the information provided and the visuals of the tsunami that destroyed much of Japan's northeast coast seemed to impress those in attendance that there's a need for serious preparedness.

For more information, visit www.OregonTsunami.org

Wednesday
May 15
2013

SOUTH LINCOLN COUNTY news

Serving the communities of Waldport, Yachats, Seal Rock, South Beach, Tidewater and Five P



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County News

Getting residents of the central Oregon coast to take seriously the possibility of a high-magnitude earthquake and its destruction isn't an easy task, says Peter Ovington, a tsunami outreach specialist for the state.

Still, the Oregon Department of Geology and Mineral Industries (DOGAMI) and several other local entities are in the middle of a month-long tsunami awareness campaign to prepare residents for such an event.

Ovington was disappointed by the small turnout of 30-35 people at a preparedness event held last Thursday at the Waldport High School gymnasium, but he hopes a

door-to-door campaign later this month will be more effective.

"I was discouraged by the low turnout because in the worst case scenario of a distant tsunami, much of Waldport, the shores of Alsea Bay and the river would be fully inundated," Ovington said Monday. "We've got a lot of work to do."

South of Waldport, other areas that would be hit hard by a high-magnitude distant tsunami such as the 2011 event in Japan are the west parts of Beaver Creek, Yachats River, Big Creek and Little Creek.

Plus, much of the coast between just north of Waldport to south of Yachats would be hit hard by a tsunami, especially if a National Tsunami Hazard Mitigation Program, Oregon, 2012-2013 Zone earthquake occurred.

A more concerted door-to-door outreach began last Saturday when information on this Saturday's (May 18) evacuation drill occurs in the Bayshore, Sandpiper and Seafarer communities northwest of Alsea Bay.

The door-to-door effort will include between 650-800 homes, said Ovington, with volunteers handing out information, including a new tsunami evacuation map and routes to the three assembly areas: the KOA Campground overlooking Alsea Bay; the Seal Rock Fire Station at NW Bayshore Drive; and the clubhouse at NW ShoreView Drive.

The evacuation drill will be held between 10:30 a.m. and 11:30 a.m. Saturday, and asked to time how long it takes

them to walk to the assembly areas.

"We're asking them to get their grab-and-go bag and walk to the high ground, hopefully getting out of their inundation hazard zone within 15 to 20 minutes," Ovington said.

"Obviously, it depends on folks' agility," he added, "but we want them to realize that the time frame to get to a safe place will be brief. One of the problems is that a lot of people don't live there full time, but we've mailed out a lot of flyers, too."

He said the hazards of the earthquake itself could be extreme, beginning with between two to five minutes of shaking. With a local tsunami, the first wave could arrive in 15 to 20 minutes.

Continued on page 3

Tsunami evacuation drill

Continued from page 1

"The drills are important because they will stress the need to be prepared for such an event and then getting to the assembly areas as soon as possible," he said. "We hope they will practice in the future."

A door-to-door outreach event will be held later in the rest of Waldport, with volunteers for community emergency response teams covering the area, which includes some 700 buildings, Ovington said.

When asked if Waldport was one of the most at-risk areas along the coast, he said it's impossible to gauge degrees of concern because so much of the area is vulnerable.

"I worry about all of it," he said. "I worry about residents who are exposed but don't believe that the threat is real. We have conversations about it, and they have all the information, but still don't take it seriously. It can be discouraging, but our campaign is just beginning."

Considering the number of questions asked at last Thursday's event at Waldport High, Ovington said, the information provided and the visuals of the tsunami that destroyed much of Japan's northeast coast seemed to impress those in attendance that there's a need for serious preparedness.

For more information, visit www.OregonTsunami.org

Tsunami maps inundate north county

By Rick Beasley
Of the News-Times

DEPOE BAY — The last cities on the list to receive new tsunami evacuation maps are now awash in the lifesaving fliers, said Depoe Bay Fire Chief Josh Williams on Monday.

The world's smallest navigable harbor, which took the brunt of a distant tsunami in March of 2011, when tidal waves from a Japanese earthquake reached across the Pacific to destroy a public dock in Depoe Bay, has 2,000 of the new brochures.

In Lincoln City, where large, low-lying sections of the city are vulnerable to both distant and near tsunamis, 28,000 fliers — half for the north part of town, half for the south — have been received from the Oregon Department of Geology and Mineral Industries (DOGAMI). In both towns, the updated maps are available at city halls, chambers of commerce, visitor information centers and local fire stations.

"I'm really impressed with the detail of these new maps and the technology that helped develop them," said Williams, who was a member of a team of emergency responders that assisted in the four-year mapping project. "The best part of these maps is it shows the difference between a distant and near tsunami, so people will know when to evacuate in either event."

Mark Nicholson, emergency preparedness director for Lincoln City, said the DOGAMI mapmakers used groundbreaking Light Detection and Ranging (LIDAR) technology and took cues from the Japanese earthquake to produce a detailed brochure that replaces rudimentary evacuation maps that are nearly two decades old.



On Monday, Depoe Bay Fire Chief Josh Williams went over new tsunami emergency evacuation maps with firefighters, left to right, Parker Jobe, Lt. Patrick Ganz and Josh Neahring. In both Depoe Bay and Lincoln City, the updated maps are available at city halls, chambers of commerce, visitor information centers and local fire stations. (Photo by Rick Beasley)

"It's worth people's time to take a look at the new maps because things have changed considerably," said Nicholson. "The lesson learned from Japan is don't underestimate. The worst case scenario is truly a worst case, and that's the model we see here."

Nicholson said that a useful feature of the new tsunami evacuation maps is found in the surprising detail of the charts, which in many cases shows individual homes and buildings located in the inundation zones. The maps are color-coded for two events — yellow for a local Cascadia earthquake and orange for a distant tsunami. Readers are advised to follow the black arrows to the green shade of the safety zones.

The Lincoln City maps were unveiled May 7 at the Lincoln

City Cultural Center. Dozens of people attended two events that day, far from the thousands who inhabit the most vulnerable pockets of town including Cutler City, Taft, the Nelscott neighborhood, Devils Lake and Roads End, to name a few locations.

"Complacency is sort of an inherent problem," reflected Nicholson, who is working with civic groups on a door-to-door campaign to distribute maps. "It's hard to imagine that everybody will stay fired up about an event that may not happen in their lifetimes when they have issues at school with their kids or are unemployed. The solution is to keep it in front of people, not in a scary or paranoid way, but just to remind people. This is a transient community, and we have new groups of people arriving here all the time."

Still, the spirit of readiness shown by north county citizens impresses Nicholson.

"I'm often struck by the number of people who are quite aware of the threat and have their emergency kits ready to go and their family plans in order," he said. "They don't spend a lot of time worrying about it, nor should they. It's enough to put a kit together and set some food aside."

Chief Williams said that volunteer firefighters and members of the local Community Emergency Response Team (CERT) would go door-to-door in the Southpoint neighborhood of Depoe Bay on June 8 to distribute maps. A regional drill in the Gleneden and Lincoln Beach areas is slated for Oct. 12, to coincide with the Great Oregon Shakeout, a statewide disaster drill.

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Jun
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NOAA Tsunami and Storm Ready Recognition Ceremony – OCCC South Beach Campus

Uncategorized

[Add comments](#)



*Tsunami & Storm Ready
Recognition Ceremony
OCCC*



*Sheriff Dennis Dotson
Welcoming address*

A Who's Who of Lincoln County politics, law enforcement and fire-rescue gathered at Oregon Coast Community College Tuesday to be awarded plaques and signs designating that Lincoln County and it's political and emergency services districts, have earned the NOAA designation as a Tsunami Ready and Storm Ready County.

Sheriff Dennis Dotson led off the welcome and discussions why the last year has been so critical for Lincoln County. In the face of a notable chance of a major earthquake hitting the Oregon Coast with an ensuing tsunami to follow, city, special district and county government officials banded together to ensure that every resident in Lincoln County knows of the threat and what to do about it in terms of self-sufficiency as well as mutual cooperation that can produce a meaningful margin between life and death during a major disaster.

City and county government leaders and members of law enforcement, their

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013

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Certification given to Depoe Bay City and Depoe Bay Fire and Rescue



Certification to Newport FD, HMSC, Newport Police and City of Newport



Certification to City of Waldport and Central Coast Fire and Rescue



Certification to North Lincoln Fire Rescue, Seal Rock Fire Rescue, Lincoln County Schools and Lincoln County Sheriff and Emergency Management

volunteer organizations along with fire departments and their volunteers as well, were honored by NOAA for aggressively informing their communities about where to go for information about a possible tsunami – where higher ground can be most easily accessed, and how to provide oneself and their families the food, shelter and medical supplies they'll need until the coast is rescued by outside help pouring in from the valley and from air drops and ships ferrying supplies ashore.

As has been said, it takes a village to raise a child, it also takes a village to save itself from needless injury and loss of life when we can all plan and prepare for such events. The NOAA TsunamiReady and StormReady program has been well learned by Lincoln County law enforcement and fire rescue agencies coupled with comprehensive coordination by Lincoln County Emergency Management. Community Emergency Response Teams (CERT), made up of citizen volunteers, are also a critical component in disaster response and recovery. Citizen and law enforcement Search and Rescue Teams along with citizens Amateur Radio Operators also play a crucial role in rescue operations and by supplementing radio communications within the county as well as throughout the region.

County and emergency services agencies in Lincoln County held numerous town hall meetings where residents were informed on what to have in their homes and businesses to help them survive severe storms as well as the notorious Cascadia Subduction Zone Earthquake and tsunami – what to store for emergency food, medical and other supplies – where established evacuation pathways lead to higher ground after a quake and what to bring with them.

But this public agency training and public education process doesn't end with the certificates issued on Tuesday. An ongoing program of disaster preparedness and

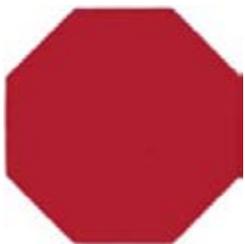
continual public education will remain in place to keep important information top of mind for all Lincoln County residents. Residents are encouraged to acquire Oregon Department of Geology maps and practice evacuation routes to higher ground so that if an earthquake happens at night, National Tsunami Hazard Mitigation Program, Oregon, 2012-2013

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Posted by admin at 11:23 AM

Leave a Reply

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House fire on Bear Creek Road, between Otis and Rose Lodge – man with an AK-47 standing in front of it

Fender bender in Depoe Bay

they can still make their way in the dark to their area's public gathering spot, or "assembly area," as they are officially termed. Evacuation maps are also available www.OregonTsunami.com on line.

And as always, the Lincoln County Emergency Management Office is available to answer questions and direct residents to resources that can make them Tsunami and Storm Ready as well. They're available by [clicking here](#).

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The Oregonian

Tsunami threat: Lincoln County schools leading Oregon coast in preparation for disasters



Workers put the finishing touches on the new Waldport High School and plan to have it ready for the start of the school year in September. With the completion of the new building, the Lincoln County School District can lay claim to being the first on the Oregon Coast to have all its schools out of tsunami zones. *(MaryJo Kerlin/Lincoln County School District)*



By [Lori Tobias, The Oregonian](#)

Email the author | [Follow on Twitter](#)

on July 25, 2013 at 5:29 PM, updated July 25, 2013 at 9:02 PM

Email

[WALDPORT](#) – Not so long ago when Sue Graves visited the Waldport High School, her advice to students on preparing for earthquakes and tsunamis was simple: Be prepared to climb landslides, dodge powerlines and expect injuries.

At the Taft Elementary School, she told teachers to be ready to leave trapped children behind so they could save those able to move.

Now, with the opening of the new school year in September, when students report to the new Waldport High School, it will be the first time in the [Lincoln County School District](#)'s history that not one student will be studying in a tsunami hazard zone.

"I am so excited," said Graves, safety coordinator for the school district. "It helps me sleep better at night knowing if an earthquake happens when school is in session, we're not going to lose kids" for lack of preparation. "And that is huge. That is huge."

When Graves came on the scene 13 years ago, Lincoln County schools had earthquake and tsunami drills in place, but Graves feared they might do little good. Because of their age and condition, it was likely three of the schools would collapse during an earthquake, and the tsunami escape routes led through landslide zones.

More

[Continuing coverage of the efforts to prepare for major earthquakes and tsunamis along the Oregon coast.](#)

Much has changed.

In 2006, the district reconfigured two schools on high ground to make room for students in two other schools that were in the tsunami zones. Those schools were closed. With the opening of the new \$15.3 million high school, all schools are in tsunami-safe areas.

It is one of only a few school districts on the Oregon Coast that can make that claim. Seaside is working to get a bond measure approved so it can build a new school campus and get students out of its tsunami zone.

The district closed the Cannon Beach elementary school in the tsunami zone earlier this year. Astoria and Warrenton both have schools in the tsunami zone as does Gold Beach and two schools in Coos Bay are in areas that are not technically tsunami but on low enough ground to warrant evacuation drills.

The Lincoln County District was able to finance the new 58,000-square-foot school through some special programs that made the project much more feasible than it might have been, said Rich Belloni, director of support services for the district. It qualified for \$15 million in federal Qualified School Construction Bonds, which are interest free for the life of the loan.

"That interest-free loan allowed us to do a lot more with the money than if we were paying interest," said Belloni "We've used about every avenue we could to save the taxpayers money."

The project is also part of the first [FEMA](#) pre-disaster mitigation project anywhere in the nation.

In exchange for the district's agreement to demolish the old high school and turn the property into open space, FEMA granted the district \$3 million.

"Now no one can build anything on that lot that we know is going to be destroyed by a tsunami some day," said Graves. "And so we are saving lives as well as the destruction of property."

FEMA chose Waldport based on a number of life-safety issues, including its location in an inundation zone, seismic concerns with the 53-year-old building and the fact that parts of the campus were in the 100-year-flood plain, said Dennis Sigris, state hazard mitigation officer with Oregon Emergency Management.

"A project can only be FEMA-approved when the benefits exceed the cost of the project," Sigrist said. "They got the maximum grant they could get."

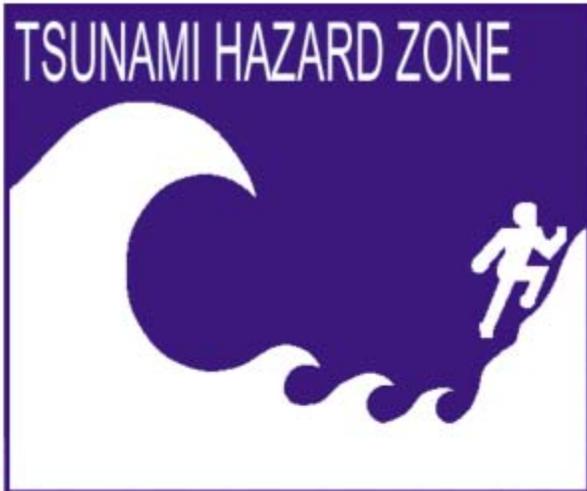
Talks are now under way in the community to decide how the 11.5 acres of open space will be used.

One idea would be to make it a multi-use community park with an athletic field, theater component, dog parks and community gardens, said Graves.

"People are excited," Graves said. "It's giving them a chance to create something beautiful and needed and useful in their community. This is an incredible opportunity for the community of Waldport to turn a previously dangerous situation where people could be trapped in a building into an opportunity for the community to use the site in a way that will benefit them and really reduce risk."

- Lori Tobias

Four-year tsunami mapping complete



Posted: Saturday, August 24, 2013 7:30 am | Updated: 7:36 am, Sat Aug 24, 2013.

PORTLAND - Beach goers this summer should pack not only their sunscreen and favorite novel, but also a tsunami evacuation map. For the first time, Oregon's entire coast has maps showing where to evacuate in the event of a tsunami. This information could save your life and those you love, according to state officials.

A catastrophic Cascadia earthquake and tsunami is a matter of when, not if. But Oregon is now more tsunami-ready than before. The Oregon Department of Geology and Mineral Industries (DOGAMI) has completed its work under a federal grant to create a new generation of tsunami maps and to educate vulnerable coastal communities how to prepare.

Mapping complete

"We're the first generation in Oregon to fully understand the threat from earthquakes and tsunamis," said Gov. John Kitzhaber. "This project has brought coastal communities together to become more prepared, thanks to federal funding, state expertise in mapping and outreach, and a local sense of responsibility. Coastal residents want to live with peace of mind and also let visitors know they're open for business and will know where to go if a tsunami strikes," Kitzhaber said.

Knowing where to go means understanding where high ground is, including the nearest tsunami assembly area. DOGAMI developed a total of 131 new maps, including 89 new tsunami inundation maps (TIMs) and 42 new evacuation maps are available free as pocket-sized brochures.

Forty-two brochures have been published, covering Oregon's coastal population centers. Those living outside the map areas can get this information via OregonTsunami.org by clicking on "Evacuation Zone Map Viewer."

"These new maps and the State's outreach have definitely made our county safer," said Gordon McCraw, Tillamook County emergency manager. "Several areas conducted their very first tsunami evacuation drill, and some have had more drills since then. Residents and visitors practiced their evacuation routes to high ground, and folks really worked well together," McCraw said.

The program has also helped an additional 14 communities to become TsunamiReady, a designation by the National Weather

Related Documents



 Lincoln City tsunami map
Map 1

-  Lincoln City tsunami map
-  Lincoln City tsunami map

Oregon Governor John Kitzhaber



"We're the first generation in Oregon to fully understand the threat from earthquakes and tsunamis."

Service recognizing cities and counties who strengthen their local tsunami plans and communications. Communities will have fewer fatalities and less property damage if they plan before a tsunami happens. (An additional seven entities, from fire districts to school districts, earned TsunamiReady Supporter status.)

"After Japan's devastating tsunami two years ago, we've been working hard to finish our maps and conduct outreach to coastal areas," said Vicki McConnell, State Geologist. "I want to thank NOAA for funding this work and our local partners - from fire chiefs to ham radio enthusiasts - for their leadership in getting our coast ready. We can't prevent a tsunami but we can prepare for one."

For more detailed information about Lincoln County's tsunami mapping, contact North Lincoln Fire & Rescue at 996-2233 or Lincoln County Emergency Services at 542-265-4199.

From: [Harriett Mathis - Your News Inc.](#)
To: [Carol DuVernois](#); [Deb Schueller](#); [Peter Ovington](#)
Subject: Media coverage
Date: Tuesday, September 03, 2013 8:00:18 AM

YOUR NEWS INC.
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Coast is tsunami ready
KEX RADIO PORTLAND
09/01/2013 14:03:00

NEWSCASTER: The Oregon coast is now a safer place to visit and live. KEX's Gail Cunningham reports the entire coast is more tsunami ready than ever before.

REPORTER: For the first time, the entire Oregon coast is mapped for tsunami dangers. The Department of Geology just completed the five-year project. State geologist Vicki McConnell says the maps contain inundation and evacuation information.

VICKI MCCONNELL, DEPT. OF GEOLOGY: Which shows you how far upland you need to go to get out of any potential impact from the water. And then it also shows you assembly areas that the communities have identified.

REPORTER: You can download evacuation maps as a brochure and there's also an app for that, all free, at OregonGeology.org.

JENNY DEMARIS, DIRECTOR, LINCOLN COUNTY EMERGENCY MANAGEMENT: The next step is beach access signs.

REPORTER: Lincoln County Emergency Management Director Jenny Demaris says signs will alert people without brochures or smart phones in an emergency.

[Repeated at 4:04 p.m. and 6:03 p.m.]

Speaker interjections not contributing to context may have been excluded from this transcription. Material may be used for internal review, analysis or research only.

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Gleneden Beach residents participate in Tsunami Stroll

People, pets and emergency kits turned out in unanticipated large numbers for Gleneden Beach's first Tsunami Stroll during the Thursday, Oct. 17, Great Oregon ShakeOut.

Ninety seven residents participated in the drill by walking from their homes to one of the two designated temporary tsunami assembly areas. Many turned out with their dogs, cats, and even a pet bird, as well as their custom-made emergency kits.

"It exceeded all of my expectations," said Kay Wyatt, president of the area's Community Emergency Response Team. Many residents commented on how much more positive and hopeful they felt after completing the stroll and indicated they felt empowered to "be prepared, not scared." After the drill, participants attended a celebration at the Gleneden Beach Community Hall. Prizes were given to the oldest and youngest participants, largest family group, the cutest couple and the best decorated go-bag. Twenty-five buckets packed with emergency gear were given out, and everyone received items to add to their personal emergency kits.

Earlier in the week, residents attended a Tsunami Town Hall at the Gleneden Beach Community Hall to learn about the tsunami risks to this area, how to be prepared and what to expect for the Tsunami Stroll. Participants were given new tsunami maps and encouraged to identify at least two different routes to high ground.

"I am very pleased with the participation from the citizens and all the hard work from the



Nellie Jaujou, of Gleneden Beach, celebrates her arrival at the tsunami assembly area during the Tsunami Stroll held Oct. 17. (Courtesy photo)

entities that made this happen," said Assistant Fire Chief Hank Walling.

For more information about these events, contact the Depoe Bay Fire District at

541-764-2202. Visit www.oregontsunami.org or www.Ready.Gov for more information on how to be prepared for earthquakes, tsunamis or other hazards.

APPENDIX J

MEDIA COVERAGE of outreach in CLATSOP COUNTY

National Tsunami Hazard Mitigation Program | Oregon

Tsunami Outreach Oregon

Year Four, 2013-2014

It takes 12 days to celebrate Earth Day in Cannon Beach



NANCY McCARTHY — The Daily Astorian

Lianne Thompson, who helps prepare coastal residents for natural disasters, including the potential Cascadia earthquake and tsunami, wore a salmon on top of her hard hat while she distributed emergency information at the Cannon Beach Earth Day street fair Saturday.

So many activities, so little time to celebrate Mother Nature

By NANCY McCARTHY
The Daily Astorian

CANNON BEACH — In Cannon Beach, Mother Earth is not taken for granted.

In a city that has reserved more than 1,000 acres of forestland, built trails from one end of town to the other, celebrates the salmon's homecoming and welcomes back

At first, many years ago, Earth Day was celebrated by a single day. But that didn't last for long. It soon became three days of Earth Day. That's about the time the Gaylor Nelson Award — named after the founder of Earth Day — was given out to a resident for concern for environmental protection.

Then, three years ago, Donna



of events ready

But Barb Knop – this year’s winner of the Gaylord Nelson Award – disagreed.

“We can’t stop now,” she said, recalling her enthusiasm for the project. “Now whenever things get a little rough, they remind me about what I said.”

During this year’s Gaylord Nelson presentation, Melissa Cadwallader, last year’s winner, reminded those attending the community potluck where the presentation was made, of the words of author and environmentalist Rachel Carson.

“If a child is to keep alive the inborn sense of wonder ... the child needs the companionship of at least one adult who can share it, rediscovering the joy, excitement and mystery of the world we live in,” Cadwallader quoted.

She went on to list Knop’s experience with children and the environment: She spent more than 20 years as a teacher; she chairs the SMART reading program at Cannon Beach Elementary; she chairs the city’s parks and community services committee; and she is board president of the Cannon Beach Preschool and Children’s Center.

Knop also served as vice chairwoman on the Ecola Creek Forest Reserve Advisory Committee, which wrote the stewardship plan for the 1,040-acre Forest Reserve Plan.

Following Cadwallader’s announcement, Knop was presented with the award that goes along with the honor – a hat with a stuffed salmon running through it. Knop wore the hat as she and City Manager Rich Mays, a previous Gaylord Nelson Award winner, led the People and Pets parade the next day.

Also recognized during the dinner Friday was Bob Reid, who, as chairman, steered the 10-member Ecola Creek Forest Reserve Advisory Committee through numerous difficult decisions in more than a year of meetings.

As he accepted a plaque, Reid told the audience, “I get so much more from Cannon Beach than I give.”

Reid also walked the short route along Hemlock Street during the People and Pets parade Saturday. Meant to celebrate life’s non-human creatures, the parade often includes more pets than people. This year, it included



NANCY MCCARTHY — The Daily Astorian
Cannon Beach City Manager (and former Gaylord Nelson Award winner) Rich Mays and Barb Knop, this year’s winner of the Gaylord Nelson Award, lead the People and Pets parade down Hemlock Street. Saturday’s parade, which celebrated Earth Day, was one of several activities planned throughout Cannon Beach’s Twelve Days of Earth Day event.

numerous dogs, horses, a Shetland pony and a papier mâché sea turtle.

During the street fair following the parade, several local environmental organizations set up informational booths. Two-year-old Emma Sherman was fascinated with the sea stars swimming in a container of water. Pearl Rasmussen, field organizer for the Clatsop County chapter of the North Coast State Forest Coalition, talked to those who stopped by her booth, while Marc Ward, of Sea Turtles Forever, who was dressed in a green costume resembling a sea turtle, gave a “thumbs up” to people stopping to look at him and read his display boards.

Meanwhile Lianne Thompson, representing the Department of Geology and Mineral Industries wore a paper salmon on top of her yellow hardhat and distributed information about preparing for earthquakes and tsunamis.

“I’m so happy that I can help save peoples’ lives,” she said.

Earth Day – all 12 days of it – ended Monday with the film, “Green Fire: Aldo Leopold and a Land Ethic for Our Time,” about environmentalist and scientist Aldo Leopold, author of “A Sand County Almanac.”

Although the Twelve Days of Earth Day might be over this year, Mother Earth won’t be forgotten. Cannon Beach residents will continue to embrace her every day.



NANCY MCCARTHY — The Daily Astorian
Ed Johnson, who founded Cannon Beach’s Earth Day celebration, gets a ride down Hemlock Street during the annual People and Pets parade Saturday. Pushing his cart is Bob Lundy, an active volunteer in local environmental efforts.

arrested May 4

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caused your own family,” said
Blaser.

Jarrett, who said Marcus
Foster was like a father to her,
told the court that she had
memories of him taking her to
softball games and to school,
even taking her to his family
reunions. But she said his
actions were like being
stabbed in the back.

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013



Tsunami drill planned on beach during Memorial Day weekend

Posted: Wednesday, May 22, 2013 5:51 am

By Cannon Beach Gazette

Beachgoers will have an opportunity to participate in a tsunami drill beginning at 8:15 a.m. Saturday, May 25.

Those interested in taking part should gather at the Haystack Rock Awareness Program truck in front of Haystack Rock at 8 a.m.

After a brief introduction from HRAP staff, participants will walk the evacuation route from Haystack Rock to the designated assembly area at the intersection of Arbor Lane and South Spruce Street.

There, HRAP staff members will answer questions from participants about the instructions they heard during the drill and the evacuation routes that will take people from the beach to high ground.

HRAP staff members are trained in proper beach evacuation and see the drill as an opportunity to share that awareness when beachgoers are out in larger numbers, said Nala Cardillo, coordinator of the Haystack Rock Awareness Program.

“It’s a chance to include visitors in preparing for an event,” Cardillo said. “The drill will be very low-key, and everyone can easily get back to the beach and their hotels afterwards.”

Note: The reporter printed the drill time incorrectly. It was actually scheduled for 8pm in the *evening*. Due to the error, drill organizers held *two* drills that day.

THE DAILY ASTORIAN

140th Year, No. 245

MONDAY, JUNE 10, 2013

ONE DOLLAR

THE DAILY ASTORIAN • MONDAY, JUNE 10, 2013

Map offers little high ground for Gearhart residents' escape

11

By NANCY MCCARTHY
The Daily Astorian

GEARHART — Gearhart has something that no other coastal town has: an "optional high ground assembly area."

It's a stretch of higher ground at the Gearhart Golf Links that, in 95 percent of the tsunamis, stays dry.

A new tsunami map for Gearhart, to be released publicly on June 18, shows that "optional" assembly point as a crosshatched strip running along either side of the golf course and bordered by Gearhart Lane and High-Lands Lane.

But, overall, "Gearhart doesn't really have any good options for high ground," Rachel Lyles Smith told the Gearhart City Council last week. Smith is project operations coordinator for the state Department of Geology and Mineral Industries.

"The city of Gearhart is really at a disadvantage," Smith said.

Based on updated research begun in 2009, the new tsunami map gives scientists a more detailed look at the topography of Gearhart. It is one of several new maps created for the entire Oregon Coast through lidar technol-

ogy, which uses ultraviolet or infrared light to display underground geological formations such as ancient streambeds or faults.

Four "tsunami readiness rallies" are planned along the North Coast later this month, and all of the local maps will be available. The Seaside-Gearhart area rally will be at 7 p.m. June 27 at Broadway Middle School, 1120 Broadway.

When state geology experts first brought the draft maps to City Administrator Chad Sweet, Fire Chief Bill Eddy and Police Chief Jeff Bowman, they worried that residents wouldn't even try to reach high ground if the map didn't show an assembly area. That's why, Smith said, an "optional high ground assembly area" was established.

The new map looks at where the worst case "distant" and the worst case "local" tsunami would reach. A distant tsunami would be the result of an earthquake elsewhere, such as in Alaska or Japan. In that scenario,

water would surge up to U.S. Highway 101 south of Fifth Street, surrounding Gearhart Elementary School. Water also is expected to follow Neacoxie Creek throughout town, north to Gearhart Lane.

The worst case — or an "extra-extra large" tsunami, which would occur after a magnitude 9.1 earthquake — is

A distant tsunami would be the result of an earthquake elsewhere, such as in Alaska or Japan.

expected to stretch way beyond U.S. Highway 101, past the end of Salmonen Road, where the city's water tank is located.

Another crosshatched "optional high ground" strip runs east of Doolley Lane north beyond East Pine Lane, but that strip is only a potential oasis in the middle of a tsunami sea.

After listening to Smith, City Councilor Al Carder asked her what the likelihood would be that someone would reach the "optional" area near the golf course. "If they're on the west side of the

Neacoxie, their access and egress is going to be gone," Carder said. "We're toast. We're toast."

Smith said she understood Carder's concern.

"Yes, I can't sugarcoat it," she said. "If's dire if (the tsunami) is an XXI. There will be a lot of fatalities in this area."

Asked by City Councilor Joy Sigler how Columbia Memorial and Providence Seaside hospitals would fare in a local tsunami, Smith said they both would be affected.

"Astoria definitely will be affected," said Smith, who noted that a ring of water would form around the city in a local tsunami. The city "may be challenged by landslides," she added.

Mayor Dianne Widdop said that, after hearing earlier about the new maps and what they predicted for Gearhart, she couldn't sleep that night. "I hope everyone will be able to sleep tonight," she said.

Brochures displaying the new tsunami maps and suggested assembly points and ways to prepare for tsunamis will be distributed throughout Gearhart, Smith said. Evacuation signs also will be posted throughout

town.

Councilor Dan Jesse also urged those attending the meeting to create a CERT group in Gearhart. The Community Emergency Response Team assists first responders in providing help in local emergencies.

"It's going to have to come from you folks; the city is not going to be able to help much," said Jesse, who is a member of CERT in the Lewis and Clark area.

A countywide effort to start CERT groups in local cities is underway, said Lianne Thompson, who is the outreach coordinator for the Department of Geology and Mineral Industries and who attended the meeting.

The other three tsunami readiness rallies are planned at 7 p.m. Thursday, June 20 in the Warrenton Community Center, 170 S.W. Third St.; 10 a.m. Saturday, June 22 in Clatsop Community College's Columbia Hall, room 219; and at 10 a.m. Saturday, June 29 at the Arch Cape Fire Station, 79729 U.S. Highway 101.

In other business, the council discussed requiring property owners to have mandatory trash pick up. However the councilors made no decision.

When the wave comes, who will be safe?

New detailed tsunami inundation maps sound warning about potential impacts on North Coast

By **CHELSEA GORROW**
The Daily Astorian

They say a failure to plan is a plan to fail.

So knowing the scenarios in the event of a Cascadia Subduction Zone earthquake and subsequently triggered tsunami can allow the community to not only plan but prepare for the worst.

But if you think you've seen what a tsunami on the North Coast would look like, you haven't seen anything yet. Because according to the new inundation zone maps for the city of Warrenton, released Tuesday at a City Commission workshop, the places residents were told were safe aren't safe any longer.

"The Grade School's gone," said Warrenton Commissioner Mark Baldwin, on reviewing the maps. Other assembly areas, like Juniper Avenue and Costco, remain.

The Oregon Department of Geology and Mineral Industries (DOGAMI) presented the maps.

The public will receive the maps Tuesday, after each of the city councils in the county have discussed the inundation zones but prior to community rallies to encourage preparedness.

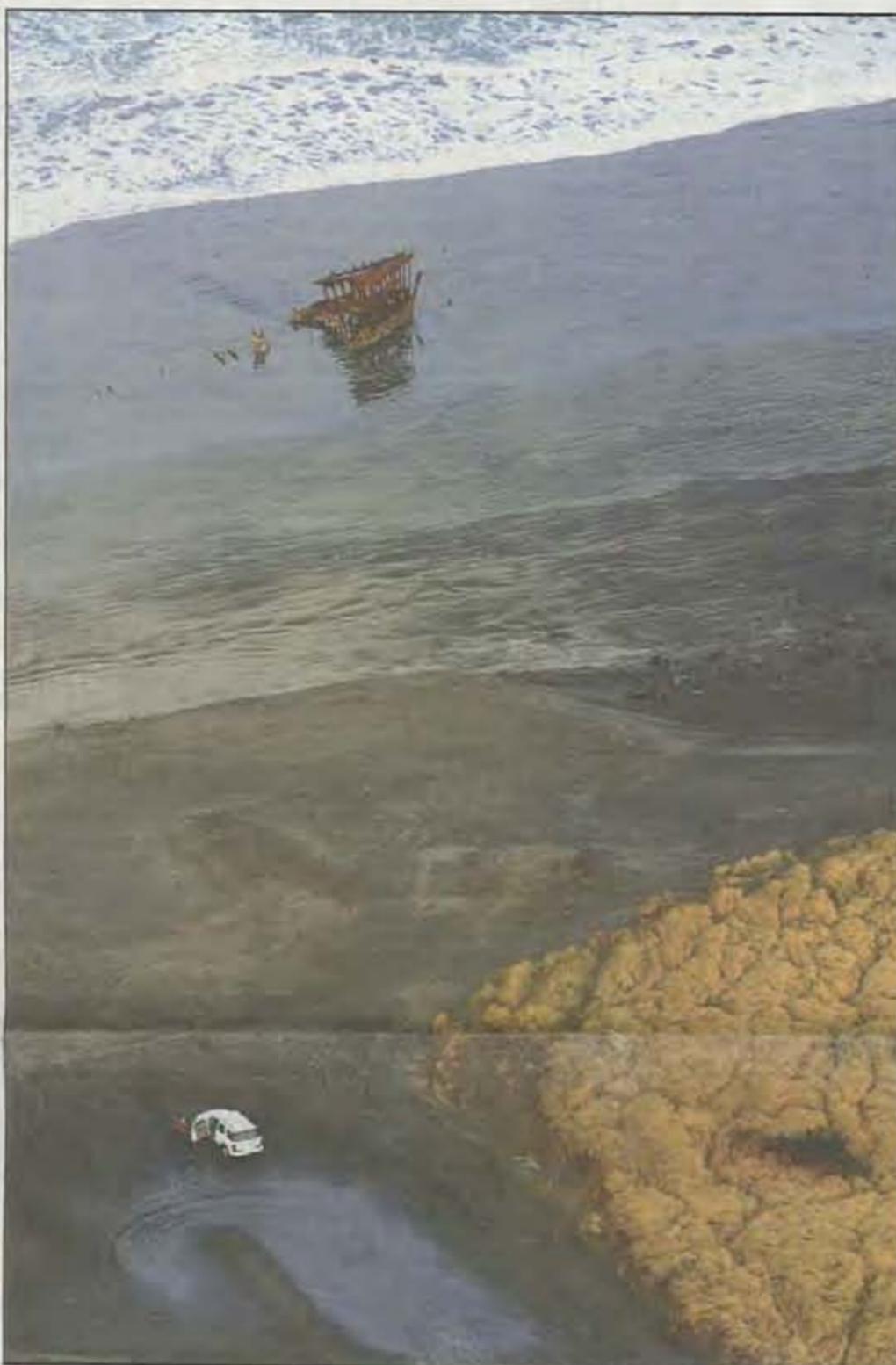
Gearhart City Council received the maps June 5; Seaside discussed them Monday. Warrenton and Cannon Beach both got the maps Tuesday. Clatsop County Commissioners will receive the maps today. Astoria is scheduled to receive its maps Monday.

"I know it looks kind of grim, lots of yellow and a lot of orange, but lucky for you, you do have green in spots that people can get to," said DOGAMI's Rachel Smith, a project operations manager, of the map's areas for inundation.

Yellow represents the area that could be inundated in a local Cascadia event; orange represents the areas inundated during a distant event, like one in Alaska in 1964. "Every community I've been to, there's always been someone who remembers the 1964 event. It was very memorable, a big earthquake out of Alaska."

Remembering what happened

Roble Anderson, a community member in the city of Warrenton, shared with the commission where he was in 1964 when the earthquake struck Alaska and sent a wave to the coast. "I was in Warrenton at Third



ALEX PAJUNAS — The Daily Astorian
A man observes the surf from the Fort Stevens parking lot next to the Peter Iredale shipwreck the morning a tsunami wave was anticipated to hit the shore of the North Coast March 11, 2011.

and Anchor and I was out in the middle of the street, we were playing baseball at the time," Anderson said. "And I saw it come up over the dike and go down Third Street to Main Street and flooded the gutters on both sides of Main Street. It was that close to being a disaster for downtown Warrenton."

Smith showed a DOGAMI presentation that included examples of tsunamis that could strike the coast — and have struck the area in the past — in what she compared to a T-shirt size scale. The tsunamis that could strike ranged from small, an 8.7 magnitude earthquake, to XX-large, being a 9.1 near-shore event that would send a wave to the coast

in minutes, and could measure 70 feet high in an area like Camp Rilea or anywhere on the beach.

"The XXL is what we plan for for life safety," she said. "What we model is a full rupture of the Cascadia Subduction Zone. Even if there is a segment rupture, even if only a piece of it ruptures, you will feel it. It will be felt, it will be noticeable, it will be that big because just the way the geology in the Cascadia Subduction Zone, the way it's working. We have modeled a full rupture and you can expect two to three minutes of violent shaking. It's very similar to what Japan experienced."

"The takeaway from that is that there is going to be shaking

felt pretty dramatically all the way to the I-5 corridor, so not only is the coast going to be affected, but Salem and Portland, which of course will probably affect the recovery and the expediency of emergency response from outside of the coast."

The good news, she said, is that a local earthquake and subsequent tsunami wave would take 40 minutes to reach downtown Warrenton, giving people more time to get out of town on foot. Those closer to the ocean may not be that lucky.

"Our message is that residents and visitors need to expect to

See TSUNAMI, Page 12

City to appraise Tansy Point

Warrenton leaders say they want to be open

By **CHELSEA GORROW**
The Daily Astorian

WARRENTON — The Warrenton City Commission's decision to have Tansy Point property appraised ruffled some feathers Tuesday night.

But the commission insists the city is not suggesting to sell or trade.

"I think that this is a good move," Commissioner Henry Balensifer said. "We should know what we have."

The city-owned property is leased by Warrenton Fiber and sits near the Warrenton Dog Park and Curuthers Memorial Park. In 2005, it was also a proposed location of a liquefied natural gas terminal.

"We want to look at this and be open. We don't have any offers on the property," City Manager Kurt Fritsch said. "We're not going to pretend there aren't people interested in Tansy Point, we're not suggesting that we sell Tansy Point at this point in time. That will all be done in the public."

"What we're asking for at this point in time is to do an independent appraisal of the property, paid for by the city, so we ensure that it is in our interest, our direction solely with

See TANSY, Page 6

Oregon LNG files new plan with feds

The Daily Astorian and The Associated Press

Oregon LNG has filed a formal federal permit seeking to pre-empt Clatsop County opposition to the proposed Warrenton liquefied natural gas terminal.

Meanwhile, local activists and conservation groups reiterated their opposition to LNG exports Tuesday after the company announced that it had filed with the Federal Energy Regulatory Commission (FERC) to construct an export terminal and pipeline in Oregon and Washington.

"Oregon LNG has faced strong and diverse opposition in Clatsop County since the project began in 2004 as an LNG import terminal," stated Brett VandenHeuvel, executive director of Columbia Riverkeeper.

"We are more resolved than ever to chart a better future for the Columbia than this polluting, destructive LNG export project."

The Columbia River terminal would cost an estimated \$6.3 billion.

In July 2012, Oregon LNG announced its plans to join with Williams Pipeline's proposed Washington Expansion Project — involving 140 miles of new pipeline construction through Washington — to ship natural gas overseas to Asia, where consumers pay much higher prices for energy.

According to the U.S. Energy Information Administration, the exportation of natural gas as LNG will increase energy prices in the U.S.

See LNG, Page 6

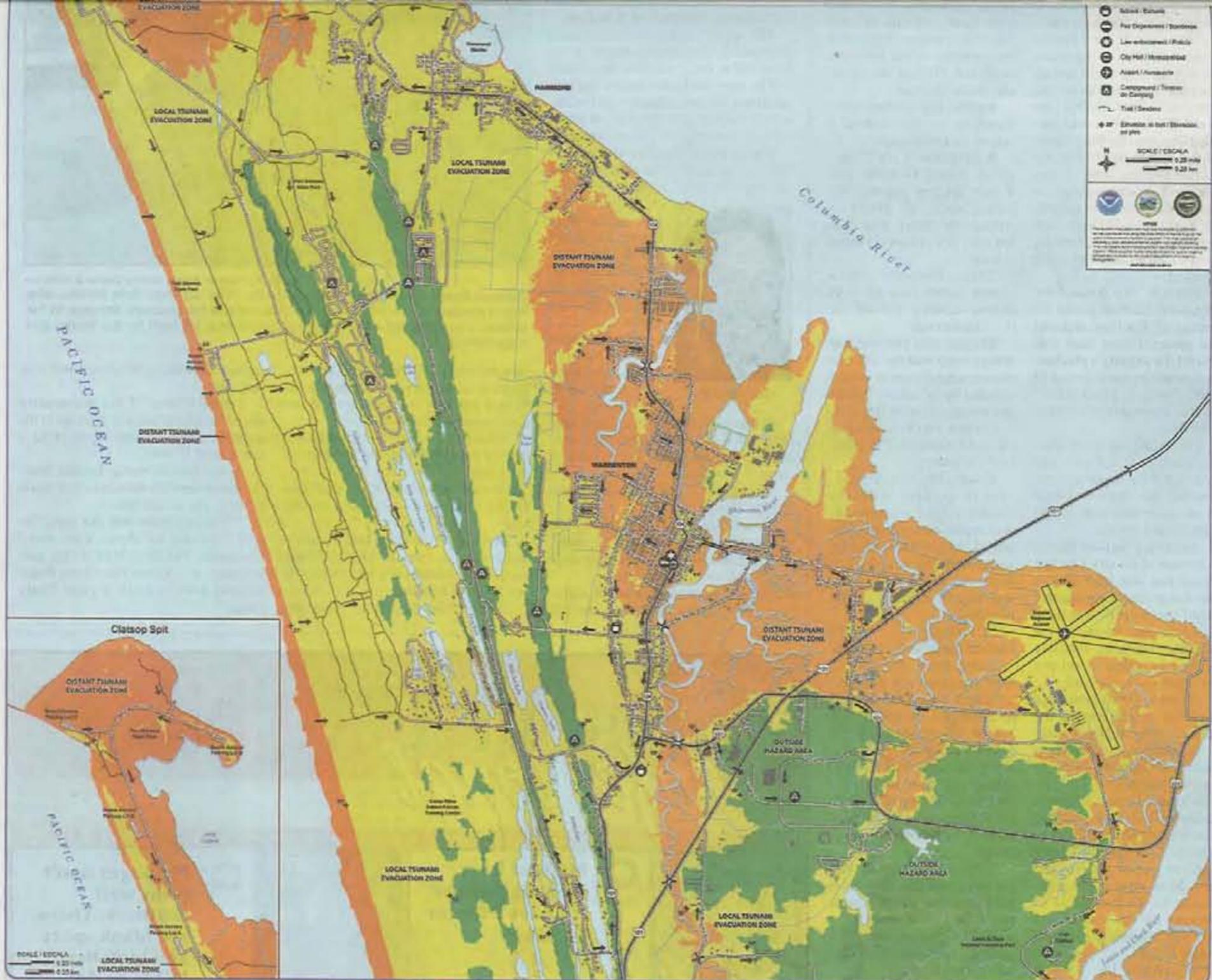
Cannon Beach Council decides to purchase 55 acres, which might be the site of a new school

By **NANCY MCCARTHY**
The Daily Astorian

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013
should purchase the forested property it has an option on. The Campbell Group, which owns the proper-

ty to bring land to the city. Truly we deserve to hear you say you will have a school there.

COMING THURSDAY



Map courtesy of RACHEL SMITH

Tsunami: All of the science is based on a 10,000-year history

Continued from Page 1

walk to high ground, not to drive," Smith said. "You'll probably reach congestion and won't be able to drive. And in 15 to 30 minutes, will be the start of the tsunami. ...

"It's about 40 minutes for the tsunami wave to actually come up the Columbia River and make it to where it gets into downtown Warrenton. That number is a lot different than our normal - what we normally say you need to evacuate in 15 to 20 minutes because a tsunami wave is going to get here. In downtown, as bleak as the picture looks, it takes some time for that wave to get to downtown Warrenton."

That wave that would get to the downtown, she added, would be 30 feet high.

"I know 30 is a big number," she said, "but 30 is not that bad. ... In that sense, it should make you sleep just a little bit better tonight, versus some communities."

But on the beach, she added, "we're serious about that 15 minutes." The wave will be large and fast.

All of the science is based on a 10,000 year history, Smith added. A tsunami has struck the area every 300 to 500 years. The last one was in 1700, putting the coast in a vulnerable position.

Subsidence left from a tsunami will become a "new normal" for the high watermark related to tides, City Manager Kurt Fritsch discussed. "It will be different, yes. There will be a new high tide," Smith said.

Police are prepared

The Astoria Police Department has been active in the discussions with DOGAMI leading up to the map debut. Deputy Chief Brad Johnston said the new maps could drastically change the way Astoria is affected, in the worst-case scenario near-shore event. He cautioned, however, that the worst-case scenario is the most significant of event that is the least likely to happen.

"It changes the paradigm for Astoria

related to tsunamis," Johnston said. "Astoria never had to worry about significant inundation zones and now we've started that conversation in a way we never had to before."

The Public Safety Building, which houses both police and fire, recently underwent \$1.5 million seismic upgrades to prepare the building for immediate occupancy in the event of an earthquake. With the new maps and the risk of a tsunami approaching the area near 555 30th Street, "it may be a little damp here," Johnston said. "But that's the worst case event. There are a whole lot of other events that it would be just fine in."

Johnston added, "The good news is we should be ready for immediate occupancy in that very worst, XX-large event."

Community rallies to encourage preparedness will take place throughout the county in the coming weeks, where Smith's slideshow will be shown.

Warrenton will host a rally 7 p.m. June 20 at the Warrenton Community Center. Astoria will host its rally 10 a.m. June 22 in Columbia Hall at Clatsop Community College.

Seaside and Gearhart's rally is scheduled for 7 p.m. June 27 at 7 p.m. at Broadway Middle School.

Arch Cape will host a rally at 10 a.m. June 29 at the Arch Cape Fire Station.

The events are free and open to the public. Maps for the specific areas will be available and two new evacuation zones will be introduced.

RIGHT: Bobby Custard, of Phoenix, Ariz., in orange, watches as his children Jillian, left, 6, and Tyler, 4, investigate the aquatic life growing on the base of the fishing bin that washed up on Sunset Beach in Warrenton, Ore. on Monday, June 11, 2012. Custard was also joined on the beach by his girlfriend Sarah Neverdal, top right, of Butte, Mont., and his mom Betsy Custard, of Prescott, Ariz. The bin, with Japanese writing on it, is believed to be among the debris washing up following the March 2011 National Tsunami Hazard Mitigation Program, Oregon, 2012-2013



Friday, June 14, 2013

County Commission Hears New Tsunami Update



The board heard a presentation from Peter Ovington of the Oregon Department of Geology and Mineral Industries on the agency's new tsunami evacuation maps. The maps, developed with new data on the destructive earthquake-generated ocean waves, show areas of the county subject to potential flooding by tsunamis originating both locally and in distant locations, and identify evacuation routes and assembly areas. The next step comes in getting that information out to the community. The county and DOGAMI have several ways they plan to do that including making that information readily available on line.

DOGAMI has an excellent website with all the information including city specific evacuation maps developed using new data and establishing some new safe places to gather in the event an evacuation is necessary. All that can be found at www.oregontsunami.org

The maps are slated to be officially released June 18. Four community rallies are scheduled to increase awareness of tsunami preparation: June 20 in Warrenton at the Community Center, June 22 in Astoria at Clatsop Community College, June 27 in Seaside at Broadway Middle School and June 29 in Arch Cape at the fire station.

Following the presentation, Emergency Management Director Dean Perez presented a certificate of appreciation to Lianne Thompson for her work as the county's Community Emergency Response Team (CERT) coordinator. Thompson also serves as the local community outreach coordinator for the Tsunami Readiness program.

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NEWS & TALK

Friday, June 14, 2013

Tsunami Readiness Meetings Planned



The Oregon Department of Geology and Mineral Industries is ready to offer local residents and visitors a clear picture of what to expect in the event of either a near shore or distant earthquake that would generate tsunami waves. The state agency has developed city specific evacuation route maps for the North Oregon Coast that shows which areas are likely to be above water if a tsunami were to impact Seaside, Gearhart, Cannon Beach, Warrenton, or Astoria. The maps are based on data collected to model what the wave heights might be and

how long those sets of waves would impact those coastal communities. The experts say that a near-shore quake could send the first big waves rolling in as little as twenty minutes from the first time ground movement is felt. In the case of distant events, those first waves could be as far away as 8 hours, or more. Since a tsunami is not just one large wave but a series of wave sets it could be as long as 24 hours before the danger subsides. These are educated guesses based on available data and what scientists already know about typical tsunami events. The data is getting better and more detailed. In the latest version presented to the Clatsop County Commission on Wednesday morning the experts are now able to estimate the percentage of structures that would be impacted given different circumstances and for low lying areas they have now identified a few more spots that people can go to to get out of danger.

All the information is available on a website that includes the maps for evacuation routes and gathering spots and can be found at www.oregontsunami.org along with details about community information meetings planned for next week.

The next job is getting that information out to the general public and working out how to get that information to visitors who may lease a house for the summer and not be aware of the plan. For locals the education process begins right away with public meetings planned to begin this month. June 20 in Warrenton, June 22 in Astoria, June 27 in Seaside and June 29 in Arch Cape.



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NEWS & TALK

OREGON

New Research, Maps Highlight Need For Earthquake And Tsunami Prep

Northwest News Network | June 13, 2013 10:40 p.m.

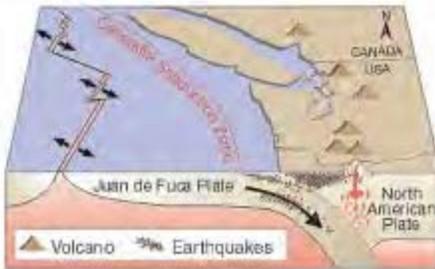
Like 6
 Tweet 10
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CONTRIBUTED BY:

Tom Banse

The earthquake and tsunami threat to the Northwest from the offshore Cascadia fault was in the news in multiple ways Thursday. Canadian researchers have reconstructed a prehistoric record of great earthquakes on that shared fault. It reconfirms that we're due for another Big One.



Coincidentally in Oregon, tsunami preparedness is getting a renewed look.

A team of researchers on Vancouver Island analyzed a sediment core taken from an inlet in Barkley Sound. They found evidence of 22 major earthquakes over the past 11,000 years -- an average of one about every 500 years. But radiocarbon dating shows the interval can be as little as 200 years.

That means the next Big One could strike any day now -- the last Cascadia megaquake happened in January 1700.

This research was published online in the Canadian Journal of Earth Sciences on the same day that Oregon legislators in Salem listened to ideas for how to better prepare for tsunamis. Emergency planner Jay Wilson says a top recommendation in the new Oregon Resilience Plan is to relocate coastal schools, hospitals, and fire stations to higher ground.

"We know you can't move all these homes off the beach and people don't want to live that far away. But if there is key infrastructure for there that they are going to have to rely on, relocation needs to be the first discussion point."

This comes just as the state of Oregon has completed a four-year process of remapping the tsunami hazard zone on its coast. In most places, the new maps show more streets and buildings at risk than previously thought.

On the Web:

[Study: Northwest paleoseismic event chronology](#) - *Canadian Journal of Earth Sciences*

[Oregon Tsunami Clearinghouse](#) - *DOGAMI*

[Oregon Resilience Plan](#) - *Oregon Office of Emergency Management*

[Resilient Washington State](#) - *Washington DNR*

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Article taken from <http://www.opb.org/news/article/npr-new-research-maps-highlight-need-for-earthquake-and-tsunami-prep/>



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Oregon Nation World Economy Environment Politics Health Education

NEWS

Be Tsunami Ready: New Research Shows Water May Surge Farther Than Originally Expected

Seaside Signal | June 13, 2013 6:06 a.m. | Updated: June 13, 2013 1:06 p.m.



CONTRIBUTED BY:

Nancy McCarthy

There's a new map in your future.

And, while it's a colorful map, those colors – primarily orange, yellow and a little green – carry a message.

Pay attention: It could be a matter of life and death.



Revised maps showing the latest research in the tsunami inundation zone are coming to Clatsop County beginning June 18. They will be the focus of interest in four “tsunami readiness” rallies planned along the North Coast from June 20 to June 29 (see accompanying information box).

Based on updated research begun in 2009, the new tsunami maps give scientists a more detailed look at the topography of Astoria, Warrenton, Gearhart, Seaside and Cannon Beach to the south.

Lidar ‘sees’ underground

The maps are among several created by the geologists and scientists in the state Department of Geology and Mineral Industries for the entire Oregon Coast through lidar technology. Lidar uses ultraviolet or infrared light to display underground geological formations such as ancient streambeds or faults.

Working with a four-year grant from the National Oceanic and Atmospheric Administration, the DOGAMI scientists have worked their way from the southern Oregon Coast and are wrapping up their study on the North Coast.

They have learned that every community is different in its knowledge about tsunamis and its preparation for survival.

“The Nehalem/Rockaway area has an active mindset; it’s a prime example of an active local citizenry,” said Rachel Lyles Smith, the project operations manager for DOGAMI.

“And then we have communities along the coast that have heard nothing about tsunamis.”

In South Clatsop County, Cannon Beach residents have more awareness because the town has become the go-to community to begin pilot research projects, Smith said.

“It has a leg up on communities that didn’t know they had a problem,” she added.

Seaside is threatened

While the new maps don’t show much change for Cannon Beach, in Seaside there appears to be a “very significant distant tsunami threat” that puts many people at risk, Smith said.

A distant tsunami is the result of a wave washing onshore after an earthquake has occurred elsewhere, such as in Alaska or Japan. While the size of the waves reaching Seaside could vary, depending on the magnitude and location of a distant earthquake, in the worst-case scenario portrayed on the new tsunami map, surges could reach up to and well past Wahanna Road.

Water would overtake 12th Avenue east of Wahanna, past where 12th becomes Ocean Avenue. Water also is expected on Broadway east of the intersection with Wahanna, according to the map.

Shore Terrace would feel the effects of the surge from a distant tsunami, as well as Lewis & Clark Road, just west of Thompson Falls Drive.

The Seaside Fire Department and the Seaside Municipal Airport also would be inundated in a worst-case distant tsunami. All of the schools, except Seaside Heights Elementary, would be surrounded by water.

Worst-case locally

But in the worst-case scenario for a local tsunami – when a Cascadia earthquake occurs just 50 to 75 miles offshore — even Seaside Heights and some property to the east of the school would be inundated, according to the new maps. The same is true for Providence Seaside Hospital.

Neighborhoods on Forest Drive, Skyline Drive and Hillside Loop also would be affected in a worst-case situation, and water would reach significantly east of Thompson Falls Drive, North Fork Road and quite a distance along Lewis & Clark Road.

Evacuation assembly areas have been designated at the east end of Huckleberry Drive, on Broadway at Hilltop Drive, at the east end of Skyline Drive, in the Thompson Falls area and at the east end of Royal View Drive, which is connected to Lewis & Clark Road.

City Council reaction

There was little discussion about the specific map during a Seaside City Council meeting Monday night. Although the new map hasn't been released to the public, Smith, who presented information about the rallies, distributed brochures to the City Council that will be given out at that time. The brochures contain the new map.

The map also was released early to the Seaside Signal.

While examining the map, City Councilor Randy Frank noticed a change.

"I used to be in a safe zone," he said. "Now it's not so safe."

Mayor Don Larson also noticed something different.

"I'm looking at a trail I would have used to evacuate. Now, it looks like I don't have that many minutes. It's in the orange."

The "orange" indicates an inundation from a distant tsunami.

Few options in Gearhart

But if the Seaside City Council noticed changes, the Gearhart City Council last week learned from Smith that residents have almost no place to run.

In fact, Gearhart has something that no other coastal town has: an "optional high ground assembly area."

It's a stretch of higher ground at the Gearhart Golf Links that, in 95 percent of the tsunamis, stays dry. It might stay dry in a large tsunami, but in an extra, extra large tsunami – where the magnitude of the Cascadia earthquake reaches 9.1 – even that wouldn't be available, Smith said.

The new tsunami map for Gearhart, shows that "optional" assembly point as a crosshatched strip running along either side of the golf course and bordered by Gearhart Lane and Highlands Lane.

But, overall, "Gearhart doesn't really have any good options for high ground," Smith told the Gearhart City Council last week.

"The city of Gearhart is really at a disadvantage," Smith said.

In a distant tsunami, water would surge up to U.S. Highway 101 south of Fifth Street, surrounding Gearhart Elementary School. Water also is expected to follow Neacoxie Creek throughout town, north to Gearhart Lane.

The worst case – or an "extra-extra large" tsunami, which would occur after a magnitude 9.1 earthquake — is expected to stretch way beyond U.S. Highway 101, past the end of Salminen Road, where the city's water tank is located.

Another narrow crosshatched “optional high ground” strip runs east of Dooley Lane north beyond East Pine Lane, but that strip is only a potential oasis in the middle of a tsunami sea. And that’s only in a “large” tsunami, not in the worst case, Smith pointed out.

After listening to Smith, City Councilor Al Carder asked her what the likelihood would be that someone would reach the “optional” area near the golf course.

“If they’re on the west side of the Neacoxie, their access and egress is going to be gone,” Carder said. “We’re toast. We’re toast.”

Smith said she understood Carder’s concern.

“Yes, I can’t sugarcoat it,” she said. “It’s dire if (the tsunami) is an XXL. There will be a lot of fatalities in this area.”

Hospitals affected

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Councilor Dan Jesse also urged those attending the meeting to create a CERT group in Gearhart. The Community Emergency Response Team assists first responders in providing help in local emergencies.

“It’s going to have to come from you folks; the city is not going to be able to help much,” said Jesse, who is a member of CERT in the Lewis and Clark area.

‘Lifesaving’ rallies

A countywide effort to start CERT groups in local cities is underway, said Lianne Thompson, who is the outreach coordinator for the Department of Geology and Mineral Industries and who attended the Gearhart and Seaside meetings.

Designed to help people become more aware of where a tsunami might reach them and how they can prepare for it, the “readiness rallies” will provide an opportunity to talk to scientists, view the new maps and ask questions. Local emergency personnel will discuss evacuation routes and survival tools.

“Our presentation isn’t a scare tactic,” Smith said. “It’s about how to save your life. You can take a map, make a plan, know your plan and practice your plan.”

Those attending the rallies in South Clatsop County may not be too surprised at the new orange and yellow lines, indicating where a distant and local tsunami might reach, Smith said.

But those in Warrenton may be surprised at how far inland the water might go.

“Astoria will probably be the most surprised, Smith added. “They may have thought they never had a problem before, but these maps will challenge their perception.”

This story originally appeared in [Seaside Signal](#).



Be tsunami ready

New research shows water may surge farther than originally expected

By Nancy McCarthy
Seaside Signal

There's a new map in your future.

And, while it's a colorful map, those colors — primarily orange, yellow and a little green — carry a message.

Pay attention: It could be a matter of life and death.

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as in Alaska or Japan. While the size of the waves reaching Seaside could vary, depending on the magnitude and location of a distant earthquake, in the worst-case scenario portrayed on the new tsunami map, surges could reach up to and well past Wahanna Road.

Tsunami readiness rallies planned on the North Coast

Four "tsunami readiness" rallies are planned in Clatsop County. During the rallies, residents will receive tsunami maps showing new inundation zones, and they can talk to earthquake and tsunami experts.

Suggestions about preparing for tsunamis also will be presented.

The rallies will be held at:

- Warrenton: 7 p.m. Thursday, June 20, Warrenton Community Center, 170 S.W. Third St.
- Astoria: 10 a.m. Saturday, June 22, Clatsop Community College, Columbia Hall, room 219. The main campus is at 1651 Lexington Ave.
- Seaside/Gearhart: 7 p.m. Thursday, June 27, Broadway Middle School, 1120 Broadway
- Arch Cape: 10 a.m. Saturday, June 29, Arch Cape Fire Station, 79729 U.S. Highway 101

For information, call Lianne at 971-221-2508 or visit www.OregonTsunami.org

In South Clatsop County, Cannon Beach residents have more awareness because the town has become the go-to community to begin pilot research projects, Smith said.

"It has a leg up on communities that didn't know they had a problem," she added.

Seaside is threatened

While the new maps don't show much change for Cannon Beach, in Seaside there appears to be a "very significant distant tsunami threat" that puts many people at risk, Smith said.

A distant tsunami is the result of a wave washing onshore after an earthquake has occurred elsewhere, such

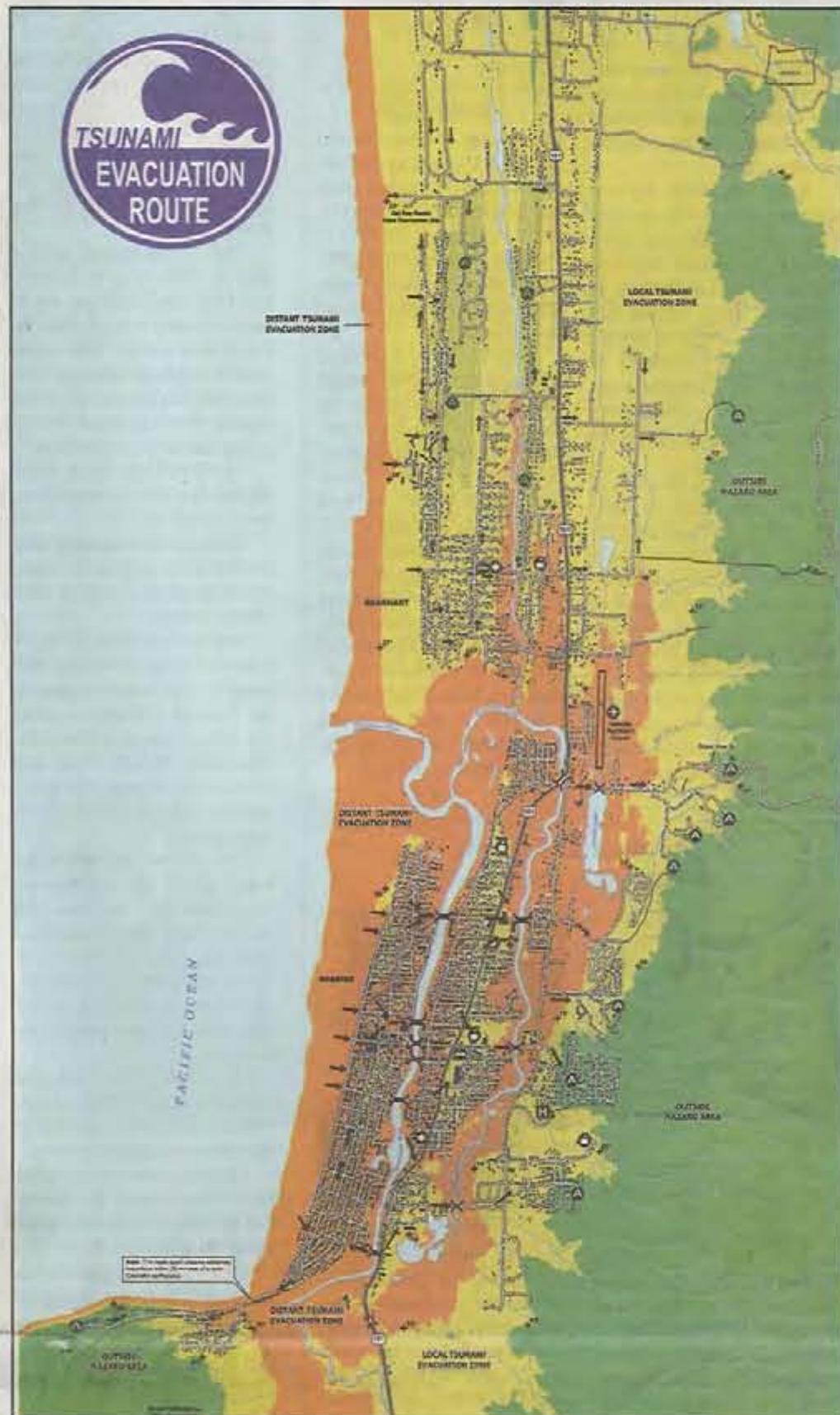
Water would overtake 12th Avenue east of Wahanna, past where 12th becomes Ocean Avenue. Water also is expected on Broadway east of the intersection with Wahanna, according to the map.

Shore Terrace would feel the effects of the surge from a distant tsunami, as well as Lewis & Clark Road, just west of Thompson Falls Drive.

The Seaside Fire Department and the Seaside Municipal Airport also would be inundated in a worst-case distant tsunami. All of the schools, except Seaside Heights Elementary, would be surrounded by water.

National Tsunami Hazard Mitigation Program, Oregon, 2012-2013

See Tsunami page 12



A new map of Seaside and Gearhart, showing where distant and local tsunamis could reach in a worst-case scenario, will be released by the state Department of Geology and Mineral Industries on July 18. The orange lines on the map show that, even if a distant earthquake occurs, a tsunami could spread water well east of Wahanna Road in some areas. Following a local, Cascadia earthquake, the yellow lines show that water could reach the east, possibly inundating Providence Seaside Hospital and Seaside Heights Elementary School. — MAP COURTESY OF DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

Tsunami:

Continued From Page 1

Worst-case locally

But in the worst-case scenario for a local tsunami — when a Cascadia earthquake occurs just 50 to 75 miles offshore — even Seaside Heights and some property to the east of the school would be inundated, according to the new maps. The same is true for Providence Seaside Hospital.

Neighborhoods on Forest Drive, Skyline Drive and Hillside Loop also would be affected in a worst-case situation, and water would reach significantly east of Thompson Falls Drive, North Fork Road and quite a distance along Lewis & Clark Road.

Evacuation assembly areas have been designated at the east end of Huckleberry Drive, on Broadway at Hilltop Drive, at the east end of Skyline Drive, in the Thompson Falls area and at the east end of Royal View Drive, which is connected to Lewis & Clark Road.

City Council reaction

There was little discussion about the specific map during a Seaside City Council meeting Monday night. Although the new map hasn't been released to the public, Smith, who presented information about the rallies, distributed brochures to the City Council that will be given out at that time. The brochures contain the new map.

The map also was released early to the Seaside Signal.

While examining the map, City Councilor Randy Frank noticed a change.

"I used to be in a safe zone," he said. "Now it's not so safe."

Mayor Don Larson also noticed something different.

"I'm looking at a trail I would have used to evacuate. Now, it looks like I don't have that many minutes. It's in the orange."

The "orange" indicates an inundation from a distant tsunami.

Few options in Gearhart

But if the Seaside City Council noticed changes, the Gearhart City Council last week learned from Smith that residents have almost no place to run.

In fact, Gearhart has something that no other coastal



Rachel Lyles Smith, project operations manager for the state Department of Geology and Mineral Industries, visited Seaside, Gearhart and Warrenton city councils recently to discuss the new tsunami maps that will be released on June 18. — NANCY McCARTHY PHOTO

town has: an "optional high ground assembly area."

It's a stretch of higher ground at the Gearhart Golf Links that, in 95 percent of the tsunamis, stays dry. It might stay dry in a large tsunami, but in an extra, extra large tsunami — where the magnitude of the Cascadia earthquake reaches 9.1 — even that wouldn't be available, Smith said.

"You can take a map, make a plan, know your plan and practice your plan."

Rachel Lyles Smith

The new tsunami map for Gearhart, shows that "optional" assembly point as a cross-hatched strip running along either side of the golf course and bordered by Gearhart Lane and Highlands Lane.

But, overall, "Gearhart doesn't really have any good options for high ground," Smith told the Gearhart City Council last week.

"The city of Gearhart is really at a disadvantage," Smith said.

In a distant tsunami, water would surge up to U.S. Highway 101 south of Fifth Street, surrounding Gearhart Elementary School. Water also is expected to follow Neacoxie Creek throughout town, north to Gearhart Lane.

The worst case — or an

"extra-extra large" tsunami, which would occur after a magnitude 9.1 earthquake — is expected to stretch way beyond U.S. Highway 101, past the end of Salminen Road, where the city's water tank is located.

Another narrow cross-hatched "optional high ground" strip runs east of Dooley Lane north beyond East Pine Lane, but that strip is only a potential oasis in the middle of a tsunami sea. And that's only in a "large" tsunami, not in the worst case, Smith pointed out.

After listening to Smith, City Councilor Al Carder asked her what the likelihood would be that someone would reach the "optional" area near the golf course.

"If they're on the west side of the Neacoxie, their access and egress is going to be gone," Carder said. "We're toast. We're toast."

Smith said she understood Carder's concern.

"Yes, I can't sugarcoat it," she said. "It's dire if (the tsunami) is an XXL. There will be a lot of fatalities in this area."

Hospitals affected

Asked by City Councilor Joy Sigler how Columbia Memorial and Providence Seaside hospitals would fare in a local tsunami, Smith said they both would be affected.

"Astoria definitely will be affected," said Smith, who noted that a ring of water would form around the city in a local tsunami. The city "may be challenged by landslides," she added.

Mayor Dianne Widdop said that, after hearing earlier about the new maps and what they predicted for Gearhart, she couldn't sleep that night.

"I hope everyone will be

able to sleep tonight," she said.

Brochures displaying the new tsunami maps and suggested assembly points and ways to prepare for tsunamis will be distributed throughout Gearhart, Smith said. Evacuation signs also will be posted throughout town.

Councilor Dan Jesse also urged those attending the meeting to create a CERT group in Gearhart. The Community Emergency Response Team assists first responders in providing help in local emergencies.

"It's going to have to come from you folks; the city is not going to be able to help much," said Jesse, who is a member of CERT in the Lewis and Clark area.

'Lifesaving' rallies

A countywide effort to start CERT groups in local cities is underway, said Lianne Thompson, who is the outreach coordinator for the Department of Geology and Mineral Industries and who attended the Gearhart and Seaside meetings.

Designed to help people become more aware of where a tsunami might reach them and how they can prepare for it, the "readiness rallies" will provide an opportunity to talk to scientists, view the new maps and ask questions. Local emergency personnel will discuss evacuation routes and survival tools.

"Our presentation isn't a

scare tactic," Smith said. "It's about how to save your life. You can take a map, make a plan, know your plan and practice your plan."

Those attending the rallies in South Clatsop County may not be too surprised at the new orange and yellow lines, indicating where a distant and local tsunami might reach, Smith said.

But those in Warrenton may be surprised at how far inland the water might go.

"Astoria will probably be the most surprised, Smith added. "They may have thought they never had a problem before, but these maps will challenge their perception."

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New northwest Oregon tsunami maps show less high ground for refuge than thought

AP

By [The Associated Press](#)

on June 13, 2013 at 12:41 PM, updated June 13, 2013 at 12:42 PM



Tsunami warning signs are a common sight in communities along the Oregon coast. Benjamin Brink/The Oregonian

[GEARHART, Ore.](#) — New maps show there's less high ground than previously thought for refuge from the most serious earthquake and tsunami projected along Oregon's northwest coast, leaving city officials unsettled.

Oregon geology experts have compiled the maps using laser-based remote sensing technology and have been showing them to city officials at council meetings.

They are to be released publicly on Tuesday, [the Daily Astorian reported](#). That's to be followed later this month by a series of community rallies to encourage preparedness.

In Gearhart, a city of about 1,500 south of Astoria, Mayor Dianne Widdop said she couldn't sleep after hearing what the maps showed: In the biggest of tsunamis, Gearhart residents wouldn't have anywhere they could be assured of safety.

"Gearhart doesn't really have any good options for high ground," said Rachel Lyles Smith of the state [Department of Geology and Mineral Industries](#) at a recent council meeting.

Questioned about one part of town, she used T-shirt sizes to describe the most serious tsunamis.

"I can't sugarcoat it," she said. "It's dire if (the tsunami) is an XXL. There will be a lot of fatalities in this area."

A key feature of tsunami planning along the coast has been identifying assembly areas on high ground and marking routes for residents to get there quickly, preferably afoot since traffic is expected to be disrupted.

In Warrenton, Commissioner Mark Baldwin reviewed the new maps and noted that while two refuge areas continued to be marked as above the highest expected water marks, another wasn't.

"The grade school's gone," he said.

In Astoria, Deputy Police Chief Brad Johnston said the new mapping "changes the paradigm for Astoria related to tsunamis. Astoria never had to worry about significant inundation zones, and now we've started that conversation in a way we never had to before."

When the Gearhart city administrator, police chief and fire chief got their first look at the new maps, they worried that residents wouldn't even try to reach high ground if the map didn't show something. So the state designated two "optional high ground assembly" areas, something that hadn't been done anywhere else.

One is a strip of ground by the local golf course that would be above water in an estimated 95 percent of tsunamis, and another is a narrow strip of ground that would be only a potential oasis amid the tsunami waters.

-- The Associated Press

THE DAILY ASTORIAN

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Get ready now

New tsunami maps provide more clarity on our vulnerability

New tsunami maps released to the public last week can at first appear to be a scary mystery to people they are meant to protect. But it's important to take the few minutes needed to thoroughly understand them.

It's vital to apply the lessons they contain by learning and practicing where to go during a tsunami. Green, yellow and orange shapes on a map won't mean a thing if there's a giant earthquake in the middle of the night. Two o'clock in the morning is no time to be figuring out for the first time which street or trail to run along toward high ground.

The outer coastlines of Oregon and Washington have grown accustomed in the past decade to the idea of a near-shore subduction-zone quake unleashing a series of giant ripples that will begin washing over the beach and dunes within 15 minutes. As soon as the shaking subsides enough to allow it, people along the shore must run away from the water and seek the nearest high ground. Any delay whatsoever could cost your life.

The new maps make it clearer that towns within the Columbia estuary and other coastal rivers are also highly vulnerable. The timing and depth of inundation will depend on various factors – including the tidal stage and local terrain – but it has become obvious since the 2011 Japanese tsunami that flooding can be appreciably deeper and encroach farther inland than previously believed. Estuary residents will have a little more time to get away, but will still have to escape 30 feet of onrushing water.

In the Warrenton area this means the grade school is no longer viewed as a safe retreat. In the westernmost part of War-

renton and Clatsop Plains, the safest areas will be the crests of the long north-south dunes – along Ridge Road, for one example. A better choice would be the extensive high ground in the region of Costco, though getting there could be a problem after a severe quake is finished with small local bridges.

Geological studies have found evidence of ground subsidence and tsunami flooding far to the east of even Astoria, which will experience inundation of much of the downtown.

Anyone living less than 50 feet above sea level should take time, sooner rather than later, to practice walking to the nearest area that is at least that elevation. It's also important to pack a small evacuation bag to grab on your way out the door, containing items such as matches, energy bars and essential medications. Coastal evacuees may get little help for several days, particularly if a major quake results in significant damage in major cities along the Interstate 5 corridor.

Although coastal planning has primarily focused on the series of tsunamis that follow a subduction seismic event, steps should also be considered for preparing for the quake itself. Fairly simple projects like anchoring heavy bookcases and water heaters to walls can alleviate the danger of major injuries. It will be impossible to run from a tsunami with a broken leg.

All this is manageable. Most coastal residents will survive even the worst of these events that happen every 200 to 500 years. You want to make sure you and your loved ones are among those who get to proudly wear "I survived the great tsunami" T-shirts.

THE DAILY ASTORIAN
MONDAY, JUNE 17, 2013
OPINION

The DAILY ASTORIAN

40 minutes — That's how long Astoria may have to escape tsunami

Posted: Wednesday, June 19, 2013 10:38 am | Updated: 11:11 am, Wed Jun 19, 2013.

By **CHELSEA GORROW**
The Daily Astorian

Astoria is in more trouble than initially predicted if and when an earthquake and subsequent tsunami strikes the North Coast, according to the newly released tsunami inundation zone maps for the city.

The news comes as the maps for all of Clatsop County were released to the public Tuesday, with Astoria being the last city to see its newly predicted fate.

“With the tsunami, it’s like most things in life, you have to balance things you can control and can’t control,” Astoria Mayor Willis Van Dusen said. “If there is an act-of-God tsunami, we can’t control that. But we can control the exit paths that people know to take in an emergency. It’s very similar to a fire drill in a school. The same thing can happen in our community.”

Compared with the maps that had been considered accurate until these were released, the picture is far bleaker than originally considered. Downtown, that inundation zone now goes from the river up to Exchange Street in the event of a 9.1 magnitude earthquake on the Cascadia Subduction Zone that would trigger a tsunami. That means Columbia Memorial Hospital, the Clatsop County Jail, Sheriff’s Office and Courthouse, and the Commercial Street and Marine Drive businesses would flood.



“This is all based on a somewhat higher tsunami than the old maps that were published back in the 1990s,” said Dogami Principal Investigator George Priest. “We are looking at a rare type of event on these new maps so the run up is a little bit higher, certainly up past the main highway there, and into the inner part of town, all the way to City Hall, I believe.

“But the event that’s mapped is a very rare event, that happens maybe only 5,000 to 10,000 years.”

Fire Chief Ted Ames said he wasn't surprised that the inundation maps had changed. The task at hand now is to get the word out and educate the city's residents.

"In a nearshore event, Astoria's maps have changed somewhat and I think that's something that the police department, fire department and the city will have to do due diligence in getting the word out to citizens," Ames said, having been involved in some of the steering committee meetings in preparation for the maps' release.

"I wasn't really surprised that (the inundation zone) changed. I've been keeping my finger on the pulse of the research going on up and down the coast. But the latest effort and latest modeling gave me a suspicion that things may change for Astoria and Warrenton, based on new science from Sumatra and Japan.

"I think it was to be expected."

Could take 40 minutes

The Astoria Public Safety Building that houses both police and fire is also located in the inundation zone. Alderbrook faces flooding dangers, as does Astoria High School, Tapiola Park and all of the Port of Astoria offices.

But a surge caused by the tsunami making its way up the Columbia River could take 40 minutes after an earthquake to reach Astoria. How deep that water will be however, is less predictable.

"People will have time to reach high ground," Ames said. Thankfully, he added, "it's not hard to reach high ground here."

Van Dusen said he does not want people to panic or try to outrun it.

"We will have a little bit of time," he said of reaching high ground. "I don't want anyone to panic. That is why it is so important to get the word out. I don't want people to outrun it – go to high ground. There is a lot of higher ground in the city and it's just as important that people know where not to go – the lower edges of town."

A community rally to present the maps to Astoria is scheduled for 10 a.m. Saturday at Clatsop Community College. The Astoria City Council will discuss the maps July 1, postponed from the June 17 council meeting originally announced. The Oregon Department of Geology and Mineral Industries (DOGAMI) will present the maps.

In other areas, rallies are scheduled for the Warrenton community at 7 p.m. Thursday at the Community Center, Seaside and Gearhart at Broadway Middle School at 7 p.m. June 27 for Arch Cape at the fire station at 10 a.m. June 29.

Distant tsunamis

In the event of a distant tsunami, the city of Astoria is in a less dangerous position. However, there are still several areas color coded orange that could be inundated in the event of a distant earthquake, in Alaska or Japan, for instance.

"I've seen the new draft maps of the distant event, and there's not much new. It's the same railroad tracks tsunami lines," City Manager Paul Benoit said. "They've done a worst-case scenario on a computer system and it shows most of downtown, the flat land, is part of the inundation zone."

But in a nearshore or distant tsunami, Benoit added, Astoria's situation will not be like the tsunami experience in Japan with a significant loss of life.

"On the one hand, it's concerning, but on the other hand, relative to life safety, there is ample notice and although there is a potential for flooding it will not be as catastrophic as the event in Japan," Benoit said. "It's not great news, but it is good news in that there will be awareness and time to reach high ground."

"Loss of property is certainly a concern but as for life safety, we're not in as bad of a position as many other places."

Anything bordering the Columbia River will likely see higher water levels. Anything on Youngs River or John Day River will be inundated, as well.

Rachel Smith, a DOGAMI project operations manager, presented the scale of events to the Warrenton City Commission last week. She will again conduct the presentations in Astoria in the near future. She compared the events to a T-shirt size scale. The tsunamis that could strike ranged from small, an 8.7 magnitude earthquake, to XX-large, being a 9.1 nearshore event that would send a wave to the coast in minutes, and could measure 70 feet high in an area like Camp Rilea.

"The XXL is what we plan for for life safety," she said at last week's commission meeting. "You can expect two to three minutes of violent shaking. It's very similar to what Japan experienced."

Van Dusen said he has learned from the tsunami videos of Japan's event from March 2011.

"I have watched films of the horrible tsunami in Japan and thousands of people were saved by going to higher ground," he said. "Some people tried to outrun it but their elevation of escape was no higher than where they started. Even the people who got upstairs, on top of a building, up a hill, were saved."

"We need to prepare as we do for a fire. Schools practice fire drills, families should practice fire drills. And in my opinion, our job is not much more complicated than that."

Earthquake's additional damage

Not highlighted on the map is the area near the Bear Creek Dam in Svensen, which city of Astoria leaders have discussed in the past. Although not an inundation zone in the event of a tsunami, the dam will likely fail in the event of a large earthquake.

The danger was announced in October, when the Astoria City Council discussed the emergency plan to address the dam.

If it fails it will take two minutes for the access road to flood, 16 minutes for the houses on Svensen Market Road and 37 minutes for U.S. Highway 30.



ALEX PAJUNAS — The Daily Astorian

New tsunami signs are on display throughout Clatsop County including this one alerting drivers on the Warrenton side of the new Youngs Bay Bridge that they are leaving a tsunami hazard zone. Although Astoria Engineer Jeff Harrington says a tsunami-triggering earthquake will likely cause bridges in the area to fail.

Buy this photo



that's what the evaluation will do. We have to look at the earth underneath. There is no positive evidence that the dam will fail but (the state rating) is based on the statistical likelihood. We want to reduce the likelihood, which is why we're having the evaluation."

The dam was built in the early 1910s, Harrington said. It was likely oversized with heavy concrete, common in those times.

For those in Astoria hoping to escape the tsunami or flooding, heading to high ground is your best bet, he said.

"It's not the best idea to think about getting out of town," he said. "Regardless of the dam or the tsunami, the bridges in the area will probably fail in an earthquake. Slides are going to happen."

For information on the Clatsop County tsunami inundation zone maps and how to prepare for that disaster, visit oregontsunami.org. There is also an application for mobile devices entitled Tsunami Evacuation NW.

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"Because it is rated a high hazard dam, we are as a city required to develop an emergency action plan," Benoit said late last year. "And that's a plan that, should there be a problem with the dam, people downstream would have protocols, we'd have notification procedures for the Sheriff's Department and the volunteer fire department in that area."

An emergency plan was adopted by the Astoria City Council last year, as the rating by the State of Oregon Water Resources Department gave the dam a high hazard rating, which stated, "This rating indicates that if the dam catastrophically fails there is a strong plausibility for a loss of life."

In the next month, the city will hire a consultant for a seismic evaluation, after the city council approved a request for qualifications.

"It will evaluate the stability and how well it will handle an earthquake," City Engineer Jeff Harrington said. "We don't know what size of an earthquake would effect the dam but

Wednesday, June 19, 2013

AUDIO- Interview On Tsunami Rally

KAST's Tom Freel interviews Peter Ovington, geological hazards outreach coordinator for the State Department Of Geology and Mineral Industries (DOGAMI) as communities along the coast hold events over the next few weeks to distribute new information to help people prepare their own plan in the event of an earthquake and tsunami warning. There are two information websites you may want to bookmark: www.oregontsunami.org and <http://www.oregongeology.org/hazvu/>

Oregon Tsunami is a site that has all the maps and other information anyone can use for planning evacuation routes, tips on how to put together a "grab and go" pack and information on local meetings. HAZVU is a mapping site that allows you to plug in your address and select from various hazards so you can see how things like potential landslides, flooding, and even volcanic eruptions might affect your home or business. Click "READ MORE" to hear the Ovington interview.



An audio player interface for an interview. On the left is the KAST 1370 AM logo. To its right is a play button icon and the text "OMG Radio KAST INTERVIEW...". Below this is a waveform visualization with a progress bar. The current time is 7:58 and the total duration is 16:34. At the bottom, there is a plus sign and the text "Add your comment at 7:58".

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A new tsunami map for Cannon Beach was released this week by the state Department of Geology and Mineral Industries. Unlike some cities on the North Coast, including Astoria and Gearhart, the lines denoting the distant (orange) and local (yellow) tsunamis changed only slightly from previous maps. Cannon Beach, which has been the site of several geology and tsunami studies for many years, received one of the state's first maps showing the inundation zones when geology experts began producing them. A "tsunami readiness rally" to discuss the changes in the maps and what residents, second-homeowners, visitors and business operators can do to stay safe is planned at 10 a.m. Saturday, June 29, in the new Arch Cape Fire Station, 79729 U.S. Highway 101. — MAP COURTESY OF THE STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

Cannon Beach Emergency Preparedness volunteers get businesses tsunami-ready

Sessions tailored to fit needs of business owners, employees

By Dan Haag
Cannon Beach Gazette

Volunteer members of the Cannon Beach Emergency Preparedness Committee are beginning to assist local businesses in being tsunami-ready. The first training session was held for tenants of Sandpiper Square recently. The 10-minute session, led by committee member Bob Mushen and the city's emergency consultant, Bill Vanderberg, offered business owners and employees insight into what to expect and how to react during an earthquake and tsunami.

"If we know we have done all we can to prepare, then we can relax," Mushen said. Attending the session were Sandpiper Square tenants Stephanie Ansley, Jeff and Carol Hull, Jacob Bond and Margo Dueber, who requested the session. Business operators who participate will receive a win-

Evacuation needs to be done quickly, he said. Estimates are that people have about 15 minutes after a major earthquake occurs to reach high ground.

"Don't take the time to save inventory or grab trinkets," Vanderberg said.

Several businesses are considering setting aside barrels in one of the three cache containers the city has provided in tsunami-safe zones.

"When people are in stress, a little guidance goes a long way," Vanderberg said. "But the clock is ticking, so they need to be shown the way."

Vanderberg stressed that expediency is important, citing examples from the 2011 Japan earthquake. There, many people lost their lives returning to homes and businesses looking for people who had stayed behind.

Tsunami readiness rallies planned on the North Coast

Four "tsunami readiness" rallies are planned in Clatsop County. During the rallies, residents will receive tsunami maps showing new inundation zones, and they can talk to earthquake and tsunami experts.

Suggestions about preparing for tsunamis also will be presented.

The rallies will be held at:

- Warrenton: 7 p.m. Thursday, June 20, Warrenton Community Center, 170 S.W. Third St.
- Astoria: 10 a.m. Saturday, June 22, Clatsop Communi-

City Council to consider supporting new school on city-owned property

City will purchase 55 acres south of town

By Nancy McCarthy
Cannon Beach Gazette

The Cannon Beach City Council will consider a resolution next month to support construction of a new school on property the city will purchase south of town.

The council decided at a special meeting June 11 to buy 55 acres south of town, to retain the trees on the property and to develop "zoning options" that will allow the city to cut the trees in the future.

In addition, the council directed the city's staff to write a resolution that expresses the council's support of a school on a portion of the property. That resolution will be considered in July.

About 40 people attended the special meeting to discuss whether the city should purchase the forested property it has an option on. The Campbell Group, which owns the property, has offered to sell it for \$359,000.

The council had the choice of harvesting some or all of the trees on the property and using the proceeds to buy the property or retaining the trees and using city funds for the purchase.

Those testifying seemed split on the issue of how to pay for the property, but they agreed on one thing: They wanted to hear the council express support for a school on the land.

"We need and we deserve for you to say yes," said Alaina Giguere, who, along with most of those in the room, is trying to create a charter school to replace Cannon Beach Elementary School, which is closed permanently June 12.

"The citizens worked really hard to bring land to the city. Truly we deserve to hear you say you will have a school there."

"We have no school here as of tomorrow. We have no school," Giguere said. "We're not asking for money from the city. We're simply asking for respect from the council. Our town will suffer and will change if we don't have a school here."

"We really need to hear you say, 'Give us the money, and you can build a school.'"

The property is outside of the tsunami inundation zone, but it is also outside of the city limits and the state's urban growth boundary. To construct a school, the city would have to take it out of the county's jurisdiction, annex it into the city limits and retain zoning on it that

was similar to its current forestry zoning. The closest zone the city has would be open space, but as it stands now, that zone prohibits any tree removal.

However, City Planner Rainmar Bartl told the council that the city could amend the existing zone to allow tree removal to that specific site only. Or, the city could create a new zone for the property that would enable the city to harvest the trees in the future. The zone change or new zone would be subject to public hearings and approval by the city planning commission and the City Council.

"Our town will suffer and will change if we don't have a school here."

Alaina Giguere

Several city councilors expressed a desire to cut 20 percent of the trees and add the proceeds from their sale toward the property's purchase or toward the construction of other "essential facilities," such as a new police station or City Hall.

Eventually, however, they decided that 20 percent wouldn't bring in enough revenue and that they didn't want to cut more than that, so the trees would remain.

But Marty Schwab Harris, a member of the city's budget committee and who also is the charter school committee, urged the council to remove some of the trees to pay for the property. The funds available in the city budget could pay for other costs, she said.

"Cannon Beach faces huge financial obligations in the future," Schwab Harris said.

In addition to anticipating increased property taxes to support the move of the Seaside School District's schools to higher land, taxpayers may also have to pay for the city to relocate City Hall and other facilities out of the tsunami area. More taxes could go to paying for the fire district to relocate its fire station and buy new equipment, Schwab Harris noted.

In addition, the city will need to pay to keep the existing school site from becoming an "eyesore," maintain and eventually replace the Fir Street bridge and upgrade the city's landscaping "to where it was 10 years ago," she added.

"The city is struggling to attract and keep younger families," Schwab Harris said. "A major factor in that struggle is the cost of living. Please do not take the approach that these trees are sacred and cannot be taken. The taxpayers cannot afford that."

Other speakers, including Phil Simmons, who has led the effort to replace Cannon Beach Elementary School and now heads up the charter school committee, supported the purchase of the land but expressed little or no opinion about the trees.

Instead, the speakers continued to say they wanted a school on the property.

In response, City Councilors Nancy Giasson and Wendy Higgins said they felt better about the effort to replace the school now that the goal is to create a charter school.

"If the community wants a charter school paid for with private funding, I'm all for it," Giasson said.

Higgins said that she had always supported the idea of a charter school over a school operated by the school district and susceptible to budget cuts.

"I think you're moving in the right direction," Higgins told the group.

Councilor Sam Steidel, who is working with the charter school committee, also expressed support for the school. Mayor Mike Morgan noted that the council had discussed relocating "critical and essential uses" to the property.

"Certainly that would include the school," he said.

After more discussion, Bartl suggested that the council might direct the city staff to develop a resolution that would affirm the council's intent to buy the property, retain the trees and develop zoning options to remove the trees in the future. The council unanimously approved a motion to request the resolution.

Steidel then moved that the city staff also draw up a resolution that would express the council's support of a school on the property. The council also adopted that motion unanimously.

Following the meeting, Giguere said it was the first time she felt the council supported having a school on the property.

"I actually think we'll have a school here," she said.

Simmons said he appreciated the support from the council.

"We're on our way," Simmons added. "It's one more step in a long journey. But it's exciting to see the community rally behind us."

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Alan Giff: The Story of the 1970s

North Valley Dancers of Astoria

Empire of Astoria: History and More!

Cherry and Steel



A new tsunami map for Cannon Beach was released this week by the state Department of Geology and Mineral Industries. Unlike some cities on the North Coast, including Astoria and Gearhart, the lines denoting the distant (orange) and local (yellow) tsunamis changed only slightly from previous maps. Cannon Beach, which has been the site of several geology and tsunami studies for many years, received one of the state's first maps showing the inundation zones when geology experts began producing them. A "tsunami readiness rally" to discuss the changes in the maps and what residents, second-homeowners, visitors and business operators can do to stay safe is planned at 10 a.m. Saturday, June 29, in the new Arch Cape Fire Station, 79729 U.S. Highway 101. — MAP COURTESY OF THE STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

Cannon Beach Emergency Preparedness volunteers get businesses tsunami-ready

Sessions tailored to fit needs of business owners, employees

By Dan Haag
Cannon Beach Gazette

Volunteer members of the Cannon Beach Emergency Preparedness Committee are beginning to assist local businesses in being tsunami-ready.

The first training session was held for tenants of Sandpiper Square recently.

The 10-minute session, led by committee member Bob Mushen and the city's emergency consultant, Bill Vanderberg, offered business owners and employees insight into what to expect and how to react during an earthquake and tsunami.

"If we know we have done all we can to prepare, then we can relax," Mushen said.

Attending the session were Sandpiper Square tenants Stephanie Ansley, Jeff and Carol Hull, Jacob Bond and Margo Dueber, who requested the session.

Business operators who participate will receive a window sticker signifying they have gone through the training.

"We hope to create a little competition," Mushen said. "We want everyone to want the sticker."

Participants were advised to evaluate their business's space and inventory that could be hazardous during an earthquake, including heavy glassware, ceramics, framed artwork and display racks.

"Take the time to look around and make sure these things are as secure as they can be," Vanderberg said.

He suggested that each business select a spot in their stores where people can go to be safe until the ground stops shaking.

Mushen stressed that when it came time to go, everyone should know where their evacuation route is and use it immediately.

For Sandpiper Square, that route is east to Spruce Street and south up the hill to the rally point at Cannon Beach Bible Church.

"Get to know your route," Mushen said. "Walk it a few times, even at night, and time yourself."

Evacuation needs to be done quickly, he said. Estimates are that people have about 15 minutes after a major earthquake occurs to reach high ground.

"Don't take the time to save inventory or grab trinkets," Vanderberg said.

Several businesses are considering setting aside barrels in one of the three cache containers the city has provided in tsunami-safe zones.

"When people are in stress, a little guidance goes a long way," Vanderberg said. "But the clock is ticking, so they need to be shown the way."

Vanderberg stressed that expediency is important, citing examples from the 2011 Japan earthquake. There, many people lost their lives returning to homes and businesses looking for people who had stayed behind.

Tsunami readiness rallies planned on the North Coast

Four "tsunami readiness" rallies are planned in Clatsop County. During the rallies, residents will receive tsunami maps showing new inundation zones, and they can talk to earthquake and tsunami experts.

Suggestions about preparing for tsunamis also will be presented.

The rallies will be held at:

• **Warrenton:** 7 p.m. Thursday, June 20, Warrenton Community Center, 170 S.W. Third St.

• **Astoria:** 10 a.m. Saturday, June 22, Clatsop Community College, Columbia Hall, room 219. The main campus is at 1651 Lexington Ave.

• **Seaside/Gearhart:** 7 p.m. Thursday, June 27, Broadway Middle School, 1120 Broadway

• **Arch Cape:** 10 a.m. Saturday, June 29, Arch Cape Fire Station, 79729 U.S. Highway 101

For information, call Lianne at 971-221-2508 or visit www.OregonTsunami.org

Vanderberg also suggested that each business owner keep copies of important records at a safe, off-site location.

"This will help you get your businesses back up and running when the time comes," Mushen said.

A significant part of the discussion centered on how to handle first-time visitors to Cannon Beach during a disaster. The emergency preparedness committee has suggested that each business designate a representative to act as a "guide" for people not familiar with the nearest evacuation routes and rally sites.

Guides would be given easily visible orange vests and would help get people to safety.

The session closed by reminding participants that preparation is vital.

"It could happen tomorrow or 50 years from now," Vanderberg said. "Being prepared is a fact of life of living here."

Mushen and Vanderberg also distributed pamphlets from the Federal Emergency Management Agency covering disaster planning for businesses.

The training sessions run about 10 minutes and can be tailored to fit the needs of specific businesses, including retail shops, restaurants and hotels.

To inquire about scheduling a session, call (503) 550-4063.

sidered in July. About 40 people attended the special meeting to discuss whether the city should purchase the forested property it has an option on. The Campbell Group, which owns the property, has offered to sell it for \$359,000.

The council had the choice of harvesting some or all of the trees on the property and using the proceeds to buy the property or retaining the trees and using city funds for the purchase.

Those testifying seemed split on the issue of how to pay for the property, but they agreed on one thing: They wanted to hear the council express support for a school on the land.

"We need and we deserve for you to say yes," said Alaina Giguere, who, along with most of those in the room, is trying to create a charter school to replace Cannon Beach Elementary School, which is closed permanently June 12.

"The citizens worked really hard to bring land to the city. Truly we deserve to hear you say you will have a school there."

"We have no school here as of tomorrow. We have no school," Giguere said. "We're not asking for money from the city. We're simply asking for respect from the council. Our town will suffer and will change if we don't have a school here."

"We really need to hear you say, 'Give us the money, and you can build a school.'"

The property is outside of the tsunami inundation zone, but it is also outside of the city limits and the state's urban growth boundary. To construct a school, the city would have to take it out of the county's jurisdiction, annex it into the city limits and retain zoning on it that

suffer and will change if we don't have a school here."

Alaina Giguere

Several city councilors expressed a desire to cut 20 percent of the trees and add the proceeds from their sale toward the property's purchase or toward the construction of other "essential facilities," such as a new police station or City Hall.

Eventually, however, they decided that 20 percent wouldn't bring in enough revenue and that they didn't want to cut more than that, so the trees would remain.

But Marty Schwab Harris, a member of the city's budget committee and who also is the charter school committee, urged the council to remove some of the trees to pay for the property. The funds available in the city budget could pay for other costs, she said.

"Cannon Beach faces huge financial obligations in the future," Schwab Harris said.

In addition to anticipating increased property taxes to support the move of the Seaside School District's schools to higher land, taxpayers may also have to pay for the city to relocate City Hall and other facilities out of the tsunami area. More taxes could go to paying for the fire district to relocate its fire station and buy new equipment, Schwab Harris noted.

In addition, the city will need to pay to keep the existing school site from becoming an "eyesore," maintain and eventually replace the Fir Street bridge and upgrade the city's landscaping "to where it was 10 years ago," she added.

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ASTORIA, OREGON USA: JUNE 21-23, 2013

2013 CLATSOP COUNTY FAIR

JULY 30th through AUGUST 3rd



City considering raising system development charges soon

By Gary Nevan

The Warrenton City Commission had been wrestling with system development charges for many years before implementing last year a base charge of \$2,000 a year for new single family residences.

Now, the commission has indicated a need to reexamine those rates and possibly raise them significantly.

At the June 11 commission meeting, City Manager Kurt Fritsch opened up the discussion about system development charges and recommended a new rate of \$3,000 for new single family home construction. He told the commission that new rates for both residential and commercial development "do and will have a very positive impact on resident rates."

Fritsch said, "If it's not new growth paying for it, then current residents will."

Commissioners agreed that a new rate might be in order.

"We have the lowest property rates around," said Commissioner Mark Baldwin. "If you want to be a part of our community, you're going to have to pay your part. I don't feel that people who have lived here their entire lives should have to pay for the growth."

Baldwin suggested that system development charges for new single family homes should go up to \$3,550, maybe higher.

"Taxpayers have been paying for infrastructure all these years and we haven't done anything," he said.

Mayor Mark Kujala agreed. "I like Commissioner Baldwin's numbers," he said. "Those are good numbers."

"I want to move quickly on this," said Fritsch. "The sooner I can get this done before the next big box store, the better for residents."

The commission instructed Fritsch to prepare a report showing the breakdown for system development charges at \$3,500, \$4,000 and \$5,000 for new single family residences. New commercial development SDC rates would also go up based on square footage.



Terry Arnall of Hammond found a treasure trove of remembrances in her late mother's attic.

Hammond woman finds family treasures hidden behind plywood wall in old home

By Pat Williams

The Warrenton-Hammond Historical Society has for the past couple years worked with Terry Arnall of Hammond on a couple of projects. Terry, a retired teacher, had gotten interested in history of the local area and was recommended to us by John Goodenberger as someone who might be able to help us identify the eras of homes in the Warrenton-Hammond area.

As a result of this, Terry kept our little museum in mind when she took a class on constructing museum displays this spring at the Columbia Pacific Heritage Museum in Ilwaco, Wash. Learning how to store and display materials, Terry found the class very interesting.

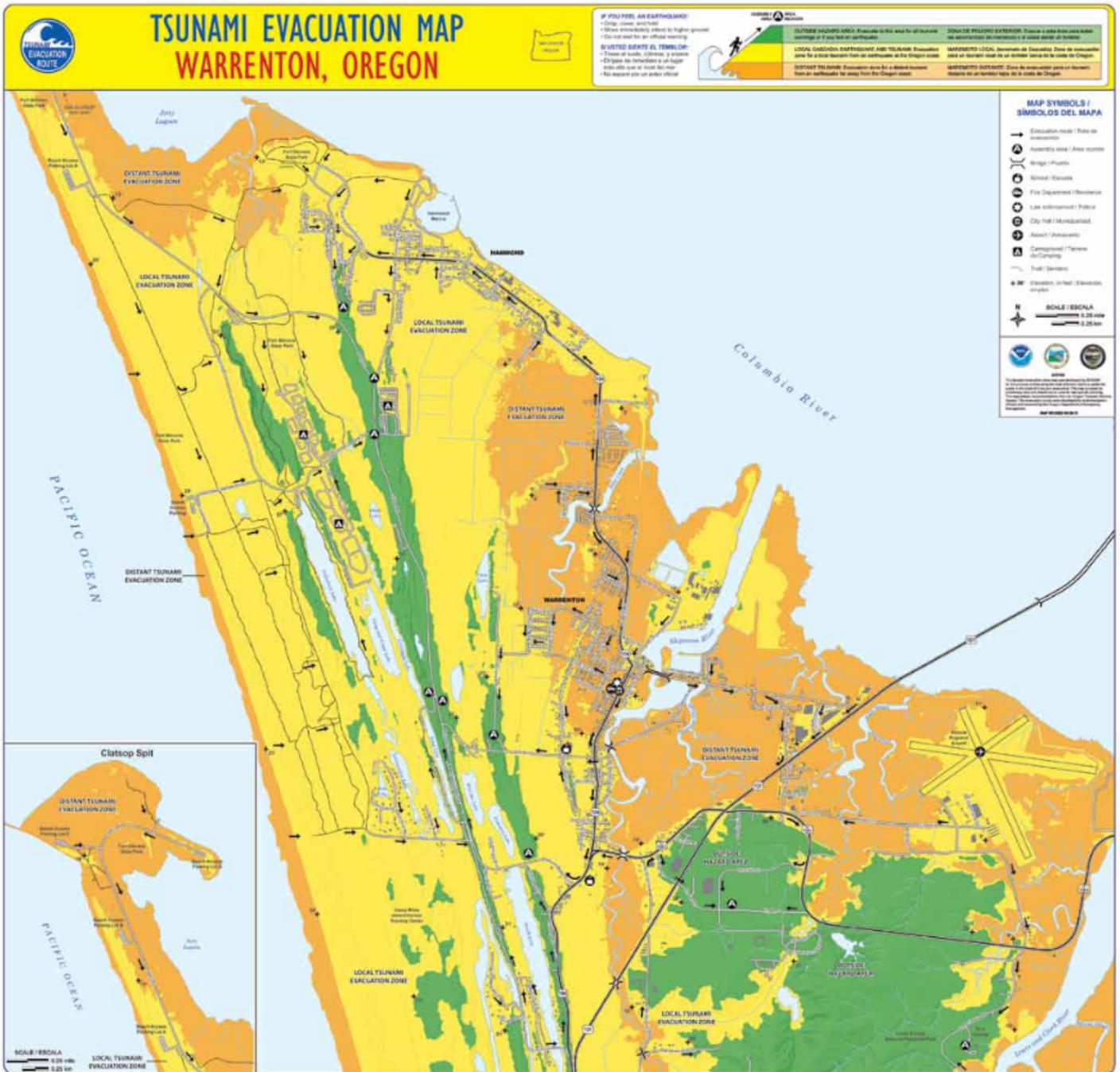
Following the class, Terry brought her project—a story-board about her parents' adventure during World War II when her father was stationed in Washington, D.C.—into the Warrenton-Hammond Historical Society's museum at Youngs Bay Plaza. We were so pleased with this very unique display, we talked her into leaving it with us to exhibit for a period of time.

Why and how did Terry get so interested in local history? Born to and raised by long-time local Hammond residents Walter and Bernice Enke, Terry and her sister, Trudy, grew up here. Terry went away to college and returned to this area to teach. She met and married a local boy, Doug Arnall, and they raised their three children: George, Katie and Elizabeth "Dee Dee" in Warrenton. Surrounded by her family's history and growing more and more interested, she began delving into her family's genealogy.

Growing up in Hammond, Terry and Trudy were surrounded by the former homes of long-gone family members, such as Bernice's mother and several of her relatives, great-grandparents Werner and Lena Storm, and great aunt and uncle Charles and Ida Storm, as well as a great-aunt and her husband, Louise and Don Shaw and cousin Bill. They all lived within shouting distance, and their home was one of those built for the enlisted Coast Guardsmen and was just a short distance from the U. S. Coast Guard Station where Walter was stationed.

When Bernice's mother, Esther Shea, died Walter cleared the house to make way for renters. There were things stored in the house that he and Bernice didn't want to dispose of, so Walter put them in the attic and nailed a plywood barrier in front of them. This plywood stayed there undisturbed until last fall when the current renters wanted to have a new circuit breaker installed in the house. Several years ago, Bernice had deeded the house to Terry when it became too much for her to deal with. As there were always renters in the house, there had been no opportunity for Terry to investigate the attic. So, the responsibility for clearing the way for electricians to work now fell on Terry and Doug. In doing so, they discovered a treasure trove behind the plywood. There were five mixers, a turkey roaster, a rocking horse, a very old typewriter from the another relative's home and, in a trunk, World War II war bonds, clothing from all eras, curtains, fabric, two Navy uniforms, documents and photographs of the family.

Continued on page 5



Map courtesy of State of Oregon Department of Geology and Mineral Industries. For more information go to: www.OregonTsunami.org

Tunnel Echoes

Arch Cape/Falcon Cove Beach Community

A Newsletter July 2013

Welcome to summer in Arch Cape

Happy Summer?

Seems as though it has come in fits and starts...hopefully the sun will arrive soon to stay.

Please read Bob's dog walk news. It may be his last one.

That picture to the right? That is the artists conceptual rendering of our new elementary school.

Who knew when we moved here I would be part of building a school. But it seems that is where we are.

With the support of over 30 members of our community, we have formed an Oregon non profit corporation. "The Cannon Beach Academy" is in negotiations with the Seaside School District to form a charter and allow us to open our doors in September of 2014, keeping our elementary school in our community.

A public charter school makes sense for many reasons. It will be



a tuition free school, a public school, and we get to pick its curriculum...heck, we get to pick everything about it. We currently have a group of folks working on a curriculum, another group working on our business plan, another group searching for a temporary location (while the school above is built) and one more group working on raising money to make all this happen.

And we have a long ways to go. But we have taken the start. It warms my heart to be part of a group of folks so dedicated to

making this vision happen.

I look forward to upcoming briefs on our progress.

Questions, comments, critiques? Have something you want to say, or something that needs to be said? A topic that needs covered, A restaurant or surf break that needs reviewed? A member of our community you

would like to see profiled? Can you write an article? Perhaps you just want to list your couch for sale (we can do that) Let us (let me) know.

philip.simmons@gmail.com

Phil

DON'T FORGET TO RENEW
YOUR COMMUNITY CLUB
MEMBERSHIP

Are You Tsunami Ready, Willing, and Able?

By Lianne Thompson

If you are, or if you are not, it is time to update your info. New maps, showing revised inundation zones for tsunamis of both local and distant origin have just been released. They also show recommended evacuation routes and assembly areas.

There are seven new evacuation brochures, showing populated areas from the south part of Falcon Cove Beach all the way to the Columbia River. The brochures will be available at Community Club potlucks or to download maps and brochures go to: <http://www.oregongeology.org/tsuclearinghouse/pubs-evacbro.htm>

Part of community readiness is the new scientific information. Readiness also involves preparation after we see the new maps. Efforts include Community Emergency Response Team (CERT) formation and training, which began for the South Clatsop

County CERT team earlier in 2013 and continue.

The South Clatsop County CERT team operates under the auspices



of the Cannon Beach Rural Fire Protection District, Chief, Mike Balzer, and Lt. Matt Gardner, Training Officer. Lianne Thompson is the local CERT leader. Local residents John and Helen Piatt were trained, as were Gil and Patty Kinch, and Debra Birkby in the first cohort, January through May of 2013. The first cohort also included new CERT participants from Cannon Beach and Seaside. Another cohort was trained in April and included residents of Cannon Beach, Seaside, and Astoria.

Since other residents have previously been trained as CERT

volunteers, we are looking for ways to integrate them into the local team. They include Dale and Mary Jo Mosby and Helen Chauncey. Others may have CERT training but be too busy to participate as a team member right now. In a disaster situation, when local fire, police, emergency medical, and utility personnel are overwhelmed, everyone's skills and abilities will be needed.

We can continue to prepare now, building on the CERT team and the other fine local work on the "Map Your Neighborhood" activities that Helen Chauncey and others have been conducting.

What works best is teamwork, since those who cooperate have a better chance of surviving than those who do not. We'll be looking for ways to integrate all emergency preparedness into a coherent whole that serves to provide the greatest good for the greatest number.

Call Lianne Thompson at 503-436-9013, or email liannegaea@gmail.com if you have questions or want to hear more.

Arch Cape eyes storing community emergency supplies

Isolation from disaster help after a tsunami spurs action

By NANCY MCCARTHY
The Daily Astorian

ARCH CAPE — Those attending a “tsunami rally” in Arch Cape Saturday will meet again July 24 to discuss how they might be able to permanently store emergency supplies outside the tsunami inundation zone.

The meeting will run from 10 a.m. to noon in the Arch Cape fire station, 79729 U.S. Highway 101.

About 35 attended Saturday’s rally, filling the fire station to standing room only. They came to hear more about the new map released by the State Department of Geology and Mineral Industries showing where “distant” and “local” tsunami might reach in Arch Cape.

The map isn’t much different than the previous map released in 2007, when research was done as a pilot project by state geology experts, said Peter Ovington, an outreach specialist for the geology department.

However, the new map focuses solely on Arch Cape, instead of including it as an accompaniment to Cannon Beach as the previous map did.

The Arch Cape map shows assembly areas on the east end of Shannon Lane at Arcadia Beach State Recreation site, on the east end of Buena Vista Drive, at the parking lot of St. Peter the Fisherman Church, east of Walsh Lane, on Clatsop Lane, at Ray Brown Road and Cove Beach Road and at Ray Brown Road and Columbia Street.

Those evacuating a tsunami should meet at those assembly areas to wait for emergency personnel, Ovington said.

The Arch Cape map is one of 10 drawn for Clatsop County. Like the other maps drawn for other areas on the North Coast, it shows where the “worst case” tsunami would go, according to the latest research.

A distant tsunami caused by an earthquake in Alaska, Japan or elsewhere on the Pacific Rim could reach close to Camahan and Pacific roads. In some areas, especially close to the Arch Cape tunnel, it would surge past Pacific Road and even beyond U.S. Highway 101.

On the south side of the tunnel, a distant tsunami could reach just west of Cove Beach Road and might even go to Ray Brown Road north of Clatsop Lane.

A local tsunami, caused by a Cascadia earthquake would go past the highway nearly everywhere north of the tunnel. Waves could reach as high as 70 feet.

Major portions of Buena Vista Drive, Hemlock Lane, East Ocean Lane and East Shingle Mountain Lane would be inundated by a local tsunami.

South of the tunnel, a local tsunami would go beyond Ray Brown Road and up a significant portion of Clatsop Lane. It would inundate a significant amount of Cove Beach Road and go past the south end of Ray Brown Road.

State geology and tsunami scientists worked for four years to deter-

mines where previous tsunamis have occurred and how far they extended over the coast. They were funded by a grant from the National Oceanic and Atmospheric Administration.

They used lidar technology, which uses sound waves to provide data on elevations. Lidar can also find where underground land slides have occurred, previously unknown faults and underground streambeds.

By taking core samples of the earth under the ocean and along the coast, researchers also could determine how many tsunamis have occurred and where they landed.

In the past 10,000 years, 19 earthquakes have occurred in the Cascadia subduction zone, 50 to 75 miles offshore of the Pacific Coast, from northern California to southern British Columbia. Their magnitude has ranged from 8.7 — considered “small” — to 9.1 — an “extra extra large.”

An “extra extra large” earthquake occurred in 7,000 BC and again in 4,000 BC. The last Cascadia earthquake happened in January 1700, and that was a medium sized quake, said Ovington.

Cascadia earthquakes appear to occur every 300 to 500 years, and it has been 313 years since the last one, Ovington said.

The Oregon coast is a geologic “mirror image” of the Japanese coast, where an “extra extra large” earthquake occurred two years ago, Ovington said. Among several lessons learned from that quake, was that the resulting tsunami travels

rapidly up river channels and sloughs. Seawalls and forests didn’t hold back the water, which can travel in the middle of the ocean at 500 mph, but slows down somewhat when it reaches shore.

Lianne Thompson, who lives in the Arch Cape area and works as a community organizer for DOGAMI, suggested people stop worrying by preparing themselves for the event.

“Take little bites of the preparation consistently and persistently,” she said.

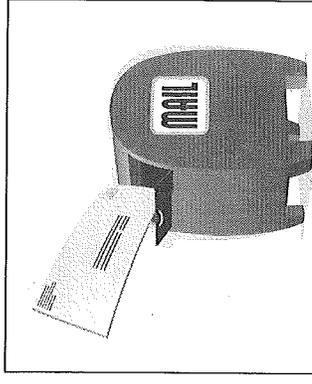
In addition to preparing a “go bag” with essential emergency supplies, people should walk the evacuation routes at their homes and along the rest of the coast. Regular hikes on the trails results in “tissue memory” that could kick in automatically if a tsunami is approaching, especially in the middle of the night.

Taking community emergency response training, or studying the recommendations of the American Red Cross or obtaining a ham radio operator’s license are other ways to prepare, she said.

Those attending the rally expressed concern about being isolated for days or weeks after a tsunami or other natural disaster, such as the “Great Coastal Gale” in 2007.

Several said they wanted to find out more about the “cache container” program that Cannon Beach began last year.

Cannon Beach bought two 8-foot by 20-foot shipping containers for residents and others to store barrels filled with personal supplies. The containers are on city-owned property just off of Elk Creek Road, east



LETTERS —TO THE— EDITOR

A good newspaper is a two-way street. You learn from us and we learn from you.

Open Forum • PO Box 210
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THE DAILY ASTORIAN

Hunter: Veterinarian make home visits

Continued from Page 1

CHINOOK OBSERVER

City lowers the flag on safety idea

By CHELSEA GORROW

The Daily Astorian | Posted: Tuesday, July 2, 2013 10:44 am

Pedestrian flags in the city of Astoria don't work.

That was the consensus at Monday's Astoria City Council meeting in which one-time outspoken proponent of the system, Councilman Drew Herzig, made the motion to abandon the experiment.

The rest of the City Council agreed and the flags will soon be removed – four months, more than 300 flags stolen, and several hundred dollars later.

“The flags just aren't getting used, and they are getting stolen,” Herzig said. “It seems pointless to continue something that's obviously not working.”

The city of Astoria voted to initiate the flag system as part of the new year's council goals that included the promotion of pedestrian safety.

The program was initially discussed with a consultant, who reported Sisters and Seattle were both using the orange flags to help pedestrians cross the street more visibly. Seattle quickly discontinued its program, however, citing a 7 percent usage rate and theft.

The flags in Astoria were placed at 10th and Commercial streets and at 10th Street and Marine Drive in mid-February. In March, the city reordered a set of 300 flags to replace the first 300 that were stolen or damaged. The flags cost 75 cents each, plus shipping.

“City staff, particularly with the Public Works Department of Engineering, teamed up with the Oregon Department of Transportation and placed video cameras at the 10th Street intersection,” City Manager Paul Benoit said. “You can look up the street and watch how the flags are being used. And it was actually at the time that the cruise ships were here, a lot of people were on the downtown streets.

“On the basis of the video analysis, we found very limited usage, at a rate of about 6 percent. In addition, the Oregon Department of Transportation staff has indicated that they're not seeing beneficial results in other communities across the state that are also using this program.”

The data was presented to the city's Traffic Safety Committee whose members recommended the council discontinue the system.

The City Council obliged.

In other city news:

- The city of Astoria swore in the newest deputy fire chief Paul Gascoigne, who has been acting in that role since the departure of Steve Straily last year. Straily resigned after it was discovered he had allegedly forged signatures and other documents, qualifying him for the job. Gascoigne, who has been with the department for 25 years, also received a pin for his years of service, and his official Deputy Chief badge.
- The late Don Webb – fondly referred to as the “community watchdog” – was honored with a moment of silence by Astoria Mayor Willis Van Dusen, the council and audience. Webb attended nearly every meeting for the last 50 years. His daughter, Diane Conely, attended Monday and thanked the Council for its respect for her father. “He really did care,” she said. Van Dusen recalled the April Fools prank the council played on Webb in 2011, when the city staged a special meeting to purchase a new Ford Mustang for the council members to run around in. The car purchase was a joke, but Webb, who was always interested in municipal spending, was honored as the city's official watchdog with a pewter plate of the city and a declaration. His regular seat at the council meeting Monday was draped respectfully in black cloth.
- The Council was briefed on the effects of a nearshore or distant tsunami by Rachel Smith of the state's Department of Geology and Mineral Industries. In a 9.0-magnitude earthquake on the Cascadia Subduction Zone, a wave in Astoria would be expected to hit in 42 minutes, thanks in part to the slowing effects of the Columbia River, and would measure at 33 to 34 feet. Councilor Herzig asked for the council to consider a plan to assist the city's seniors in evacuating in that event.
- With the additional funds raised for the Garden of Surging Waves last month at Jordan Schnitzer's Portland home – totalling more

than \$400,000 – the project will be completed by November, Benoit reported.

- The first meeting in September, which falls on Labor Day, has been rescheduled for Tuesday, Sept. 3. The second meeting this month, July 15, has also been cancelled because of the city's trip to its sister city in Walldorf, Germany, in honor of the 50th anniversary of that relationship.

Peter Ovington

From: Harriett Mathis - Your News Inc. [transcripts@yournewsinc.net]
Sent: Wednesday, July 03, 2013 12:30 PM
To: Carol DuVernois; Deb Schueller; Peter Ovington
Subject: Media coverage

YOUR NEWS INC.
PO Box 68
Dallas, OR 97338
www.yournewsinc.net

Tsunami maps presented to city council
KAST RADIO ASTORIA
07/02/2013 06:08:00

NEWSCASTER: The Astoria City Council meeting followed that. The council heard a presentation on the new tsunami evacuation maps available through the Oregon Department of Geology and Mineral Industries. A spokesman for DOGAMI was there to present the local maps and explain how they could be used by the general public. He also mentioned that map and other information are available on line at OregonTsunami.org.

[Repeated at 7:08 a.m.]

Speaker interjections not contributing to context may have been excluded from this transcription. Material may be used for internal review, analysis or research only.

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Gearhart finds way to ramp up safety

CERTS team will help in emergencies



Gearhart city manager, Chad Sweet

Posted: Thursday, July 4, 2013 9:35 am

By NANCY McCARTHY
The Daily Astorian | [0 comments](#)

GEARHART — A Community Emergency Response Team is coming to Gearhart.

Known as CERT, the team is composed of area residents who want to learn how to take care of themselves and others in natural disasters and other emergencies.

So far, 14 people have signed up for training, which begins on July 23, City Administrator Chad Sweet told the Gearhart City Council Wednesday night.

“We are looking for more volunteers,” Sweet said.

A sign-up sheet is available in City Hall. Some people signed up for CERT training after attending a recent “tsunami rally” in Seaside, Sweet said. The rally included new maps showing the inundation zones for “distant” and “local” tsunamis.

Much of Gearhart will be washed over in a tsunami generated by a distant earthquake, and water will surge

significantly past U.S. Highway 101 in a tsunami sparked by a local Cascadia earthquake offshore.

Although organization of a CERT group in Gearhart has been discussed for several years, it was at the urging of City Councilor Dan Jesse and Mayor Dianne Widdop that city officials began to investigate how residents could be trained.

Sweet said he and Fire Chief Bill Eddy discussed the possibility with Lianne Thompson, who recently helped to train CERT groups in South Clatsop County.

Sweet said the city could allocate \$3,000 toward materials and services – including \$50 an hour for Thompson and other trainers – and another \$2,000 to purchase equipment.

The nine-week CERT course includes training for disaster preparedness, fire safety, disaster medical operations, first aid and CPR, disaster psychology, incident scene management and other sessions. The training, which will be interrupted for a week or two a few times during the summer, will end in mid-November with an exercise drill.

While the city can provide funding and insurance, and the fire and police departments can offer some guidance, the CERT volunteers will have to run the organization and perform the administrative tasks associated with the organization, Eddy said.

There is no age limit, Sweet said, but CERT members must be “self-reliant and willing to help others.” Jesse pointed out that most CERT members in other parts of the county are retirees.

CERT members also won’t be expected to perform the tasks required of firefighters or police officers, Sweet said.

“They’re not there to do the heavy lifting,” Sweet said. “It’s about preparing your communities, mapping your neighborhood” to find resources that could be used in emergencies and residents who might need assistance.

“This can be something to help you bring your community back together again,” he said.

The city also is planning a “Gearhart Readiness Rally” from 10:30 a.m. to noon Sept. 7 in the fire department. Information will be available about CERT, the tsunami maps and emergency preparations people can make on their own.

Another preparedness event is planned by NW Natural from 11 a.m. to 1 p.m. Sept. 14 at Camp Rilea. Lunch will be provided.

On Oct. 17, Gearhart will participate in the “Great Oregon Shakeout,” a national event where people plan what they would do in an earthquake and practice their evacuation drills.

“It will be a nice time for us to shake out our emergency response,” Sweet said.

In another discussion, Sweet said the city recently started a blog at www.cityofgearhart.wordpress.com

“Gearhart has entered into the blogosphere,” Sweet said.

He said Widdop and others thought it would be a good way for those interested in Gearhart to stay informed on city issues and activities. Started recently, the blog contains information about the CERT training, some history about the town and Gearhart’s tsunami map. So far, it has three followers, according to the website.

Postings might include meeting announcements; updates on construction projects; information about the city’s water system; photos from city events; and even “how to remove skunk smell from a pet,” which Sweet said would be an upcoming topic.

People can make comments via email on the blog that goes to city officials. The comments aren’t posted on the blog.

“It’s not like Facebook,” where everyone can see each other’s comments, Sweet said.

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Seaside 'tsunami rally' draws crowd

New map shows water will go farther than expected

By Nancy McCarthy
Seaside Signal

Whether it was curiosity, fear or a desire to be prepared, at least 140 people turned out at a "tsunami rally" in Seaside recently.

The focus of the June 29 rally was a new Seaside-Gearhart map — one of 10 drawn for areas in Clatsop County — with revised tsunami inundation lines.

Covered in swaths of orange and yellow, the maps displayed areas where a "distant" (orange) and "local" (yellow) tsunami would wash over, according to the latest research. The Seaside-Gearhart map indicated that a worst-case "local" tsunami could reach considerably east of Seaside's Wahanna Road in some cases and would inundate most of Gearhart.

The new lines extend farther and contain more information about the potential reach of a distant tsunami than in previous maps, which showed only how a locally generated tsunami might affect Seaside and Gearhart.

Seaside's tsunami rally was the third of four rallies in Clatsop County sponsored by the state Department of Geology and Mineral Industries. State earthquake and tsunami experts developed the new maps by the use of lidar technology, which uses ultraviolet or infrared light to display underground faults and by studying soil samples that indicated how much land past tsunamis may have covered.

Researchers estimate that 19 tsunamis, generated by offshore earthquakes in the Cascadia subduction zone, have occurred along the North Coast in the past 10,000 years. The earthquakes have ranged from a "small" magnitude 8.7 to an "extra-extra large" 9.1.

"There has been an "extra-extra large" in our history," said Rachel Lyles Smith, project operations manager for DOGAMI. "It is possible for something really big to happen."

The last nearby earthquake and tsunami occurred in January 1700, and research shows that local events occur every 300 to 500 years.

"We believe we're in that window," Smith said.

'Subduction' defined

Smith explained that subduction earthquakes occur when a tectonic plate slips under another plate and gets stuck, then suddenly releases. The sudden release causes water to surge in many directions and creates a tsunami that washes ashore. In a worst-case situation, waves could get to be 80 feet high, she said.

The Pacific Coast subduction zone is a mirror image of the subduction zone running along the coast of Japan, where a "worst case" earthquake and tsunami occurred in 2011, said Peter Ovington, outreach specialist for DOGAMI.

From preparing emergency "go bags" that contain enough supplies to last for a few days, to wearing headlamps to see where to run if the earthquake and resulting tsunami occur in the middle of the night, the two speakers outlined the precautions people could take to save themselves.

People need to know how to reach assembly points on high ground along the coast, they said. Emergency responders will go to the assembly areas

first to help those who have evacuated, Smith said. The assembly points for all areas of Clatsop County are located on each of the new maps.

It will take a while for evacuation centers to be established after a tsunami, Smith said.

As the presentation ended, several people asked questions, ranging from how much contact Smith and Ovington had had with Providence Seaside Hospital to how a Cascadia earthquake would affect Portland and the Interstate-5 corridor.

The latest Seaside map shows that the hospital could be surrounded by water in a worst-case local tsunami, and that water could come close to the facility in a distant tsunami. Smith said she planned to talk to hospital officials soon.

When asked where to run to in Gearhart, Smith pointed out the green hatched areas on the Seaside-Gearhart map. Although the ground isn't especially high anywhere in town, strips of land along the Gearhart Links golf course will stay dry in at least 95 percent of the tsunamis, she said. Gearhart is the only area that has these "optional" assembly areas, according to Smith.

An audience member asked why Seaside's sirens couldn't be heard from inside a building, and Cupples told him that they weren't meant to be heard from inside.

"It's only an outdoor warning," said Cupples, who suggested people buy a weather radio available for \$15 at the city's community development office.

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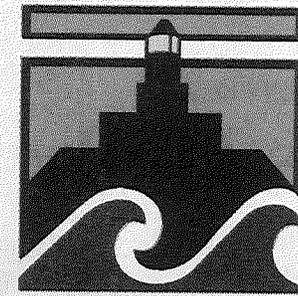
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Gearhart to learn how to prepare for disasters

Community response team is coming to town

By Nancy McCarthy
Seaside Signal

Gearhart residents will have a chance to learn more about preparing for an emergency through a new Community Emergency Response Team that is being offered.

Known as CERT, the team is composed of area residents who

want to learn how to take care of themselves and others in natural disasters and other emergencies.

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City Administrator Chad Sweet

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See Disasters, Page 11

CERT volunteers are 'self-reliant'

Disasters:

Continued from Page 1

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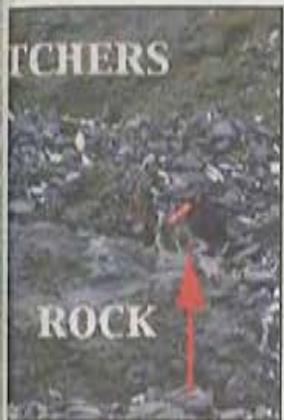
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Success

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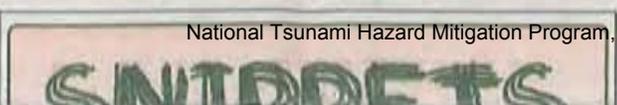
by Elleda Wilson

Fifteen years later, in June, she received a phone call from Seattle Officer MIKE SEVERANCE, asking her to come to Seattle to accept her grandfather's medal in a ceremonial presentation. "It was right out of the blue," she told DAN HAAG of the Cannon Beach Gazette. "They told me they'd been looking for me for quite awhile. I was completely surprised."
 Undeterred that she was unable to travel because of health problems, Officer Severance (pictured right) and Officer TIM OWENS (pictured left) came to Cannon Beach and, wearing dress uniforms and white gloves, presented the medal to Barbara in her kitchen. The photo is courtesy of Dan Haag/EO Media Group.
 "My heart and love is with you both and the Seattle Police Department," the Gazette reported she told Officers Severance and Owens. "My father would have been so proud. Thank you so much for finding me."



Pets to strut their stuff

Looking for something fun to do with the pooch at the beach this weekend? How about the SAND FLEA PET PARADE, which will be held at 12:30 p.m. Saturday during the Sandsations Sand Sculpture competition in Long Beach, Wash.?
 You can register at the South Pacific County Humane Society tent, which will be on the beach at the foot of Bolstad Avenue, starting at around 11 a.m. There is no cost to participate, but donations to the Humane Society would be appreciated. You could also help by buying raffle tickets.
 "Prizes and Notoriety Guaranteed!" the flyer says. The categories are Best Costume, Beachiest Pet, Best Pet Trick, Pet-Owner Lookalike, "and whatever else our wholly unqualified, volunteer judges might decide to award!"



changing my protocol (with my oncologist and naturopathic doctors' help), and have already begun new, more aggressive treatments. The estimated cost for the rest of this year (that is not covered by my Medicaid) is \$40,000."
 She has a fundraising page at <http://tinyurl.com/helpmegp>. For those who feel uncomfortable donating online, you can mail a check to the MEG PATTERSON CANCER FUND, in care of Clatsop Community Bank, 988 Commercial St., Astoria, OR 97103.
 "I asked MARK, my husband, what he wants for his birthday, and he said that he wants me alive more than anything," she said. "Won't you please help me give him the best birthday present ever?"



Map your escape

Most North Coasters are probably aware that the Oregon Department of Geology and Mineral Industries (DOGAMI) has updated the INUNDATION MAPS in the event of a Cascadia Subduction Zone earthquake and tsunami, but many probably wonder how the changes affect them.
 Thankfully, you can see it all online. To get a general idea of how far the anticipated flooding will go inland, and where, and to plan escape routes, check out DOGAMI's brochures (covering a large variety of locations) at the Oregon Tsunami Clearinghouse/Resource Library at <http://tinyurl.com/evacbro>
 Each brochure includes a detailed map and some preparedness information. A map of Astoria is shown. And yes, there is an app for that, too, for both Androids and iPhones - the caveat being that cell towers might be down, and it might be difficult (if not impossible) to access a map to look for an escape route in the case of an actual tsunami.
 Inundation mapping of the Oregon and Washington coasts can also be found at <http://nvs.nanoos.org/TsunamiEvac>. Just keep zooming in to see specific areas and details.
 So take heed, DOGAMI'S warning says it all: "We cannot prevent a tsunami but we can prepare for one."



Tsunami evacuation walks to resume

Participants can bring their pets

By Dan Haag
Cannon Beach Gazette

Practice makes perfect. It also can save lives

As part of Cannon Beach's push for emergency preparedness, the "tsunami walk" schedule has returned.

Running every other Tuesday July through November, the practice walks will be offered both in the morning and in the evening.

Begun in 2012 with Cannon Beach City Councilor Nancy Giasson, the walks familiarized residents and visitors with the proper evacuation routes throughout town.

They also served as an important focal point for emergency preparedness questions and answers. Giasson, who gained familiarity with emergency preparedness through various city projects, felt that more people in large groups were more comfortable discussing the subject.

"People won't necessarily go out and learn about EPREP unless they are around others," she said.

Giasson organized the series of walks in Cannon Beach and Seaside to help people who wanted to improve their ability to find assembly areas if an earthquake and resulting tsunami struck the North Coast.

In 2012, participants gathered every Friday morning at Cannon Beach Community Church, where Giasson works. The church will once again host the walks.

More than just a physical exercise, Giasson found that people opened up about their concerns and shared

knowledge with each other during the question-and-answer period following each walk.

"It was a great Q & A, probably the most valuable part of the exercise," she said. "The information exchange was very productive."

As more people took part, Giasson began documenting the comments and concerns raised and shared them with the city's emergency preparedness committee. She also supplied the information to the Oregon Department of Geology and Mineral Industries, which conducts research on the Cascadia subduction zone offshore and the extent of past tsunamis that have occurred on the North Coast.

The "field notes" showed that given the opportunity, participants were eager to learn more about emergency preparedness.

"People were learning about how to prepare for a disaster, where to go, what to bring and what to expect next," Giasson said. "They were asking and talking with friends and with strangers. The educational experience was huge."

Though Giasson's work schedule prevents her from participating in 2013, she was happy to see the walks had been revived.

Cannon Beach resident Jenee Pearce-Mushen has taken the reins in organizing this year's schedule and has added a few new tweaks.

Giasson's initial walks were largely informal affairs; the time they took wasn't recorded. The new walks will be timed to determine if participants can reach high land in enough time before a nearby tsuna-

'If it happens, people will need to have prepared themselves to move fast'

Jenee Pearce-Mushen

mi hits shore.

"Last year, we often stopped along the way when questions came up," Giasson said.

On the north end of town near Les Shirley Park, for instance, the road to the assembly area up Ecola Park Road steepens rapidly.

Participants would often stop and discuss what they were seeing along the way as a way to familiarize themselves with the route. The new emphasis on time will show people how rapidly they can reach designated assembly areas.

Studies suggest that people have 15 to 20 minutes to reach safety should a massive Cascadia event occur.

Pearce-Mushen added that discussion is still encouraged, but she wants people to come knowing it's more than a leisurely stroll.

"If it happens, people will need to have prepared themselves to move fast," she said.

Another new focus will be on pets, an issue that arose out of Giasson's field notes from 2012.

"A lot of people asked, 'What do I do with my pet?' They don't want to leave them behind," Pearce-Mushen said. "People are encouraged to bring their pets along this year and walk with them."

The new schedule alternates walks every other week between a morning walk and an evening walk, giving participants different perspectives on the escape

routes' terrain.

Finally, a push to include and inform the Hispanic community is being made, a major reason that the walks have been moved to Tuesday rather than Friday.

"Many people in the Hispanic community work on Friday and have Tuesday off," Pearce-Mushen said.

Posters with the walks' schedule and the marked routes have been distributed in both English and Spanish.

Pearce-Mushen, who is fluent in Spanish, hopes the Hispanic community will feel welcome to participate and ask questions.

"We've passed out special fliers and made a push at the Cannon Beach Bible

Church, which has a large Hispanic congregation," she said. "We really want to get the word out."

During the first walk July 9, Pearce-Mushen found there was more work to do. She came across a group of 10 Hispanic kids playing and asked them if they knew what to do during a tsunami evacuation.

"They didn't know, so I gave them the Spanish fliers and asked them to give them to their parents," she said. "I hope that gets it started."

For information on the 2013 evacuation walks, what to bring and meeting times, contact Pearce-Mushen at 503-436-9292 or by email at jenee@pacificalarmsystem.com

Wierson offers storage at safe house

By Dan Haag
Cannon Beach Gazette

Hoping to better prepare families on the north side of Cannon Beach for a natural disaster, Les Wierson has expanded the storage capabilities of his Oak Street home.

The Wierson home lies near a designated tsunami assembly area on Eighth Street. Because of its close proximity to that point, Wierson has volunteered the home as a "safe house." That means he will open his home to people displaced by a disaster.

Wierson's house has four bedrooms, three bathrooms, a large family room and kitchen and a deck. There is also a large driveway where Wierson envisions multiple tents set up as shelters.

A cluster of Wierson's neighbors, or "buddy houses," have similarly volunteered their homes to the program. Wierson estimates a combined capability of sheltering from 200 to 300 people in his immediate area.

"We've been blessed with a home large enough to accommodate a lot of people," Wierson said. "Our neighbors feel the same way. It's the right thing to do."

While opening his home to his neighbors in their time of need is easy, it is

not without its logistical challenges.

Wierson, who has served on the city's emergency preparedness committee and as a city engineer, is concerned that people in his neighborhood may find themselves cut off from the city's prepositioned cache containers in the event of an earthquake and tsunami.

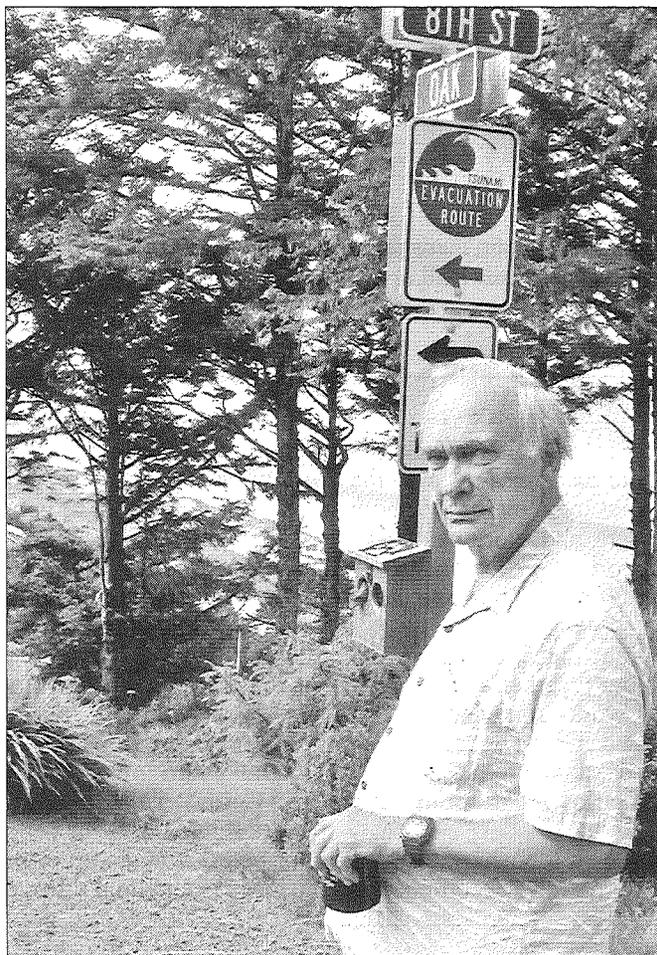
The cache container system, instituted last year, features three storage containers where people can store emergency supplies such as food, blankets, jackets and batteries. Each is situated above the inundation line.

They are located at three central points throughout town: Tolovana Park, Elk Creek Road and on the north side.

"All the previous evidence suggests our roads may be under water or at least clogged with debris," he said. "Although we are on high ground, we have to prepare for being on our own for awhile."

To that end, the Wierson family home features its own mini version of the cache-container system in the attic above the garage. The Wiersons hope it will encourage north side residents to preposition emergency supplies, free of charge.

The attic space measures 20 feet by 20 feet and



DAN HAAG PHOTOS

Les Wierson stands at the trail that leads up from houses on Oak Court to the front of his driveway. Wierson, whose house is part of the local "safe house" project, has recently cleared space above his garage to allow neighbors to store emergency supplies.

features a newly installed ground level door.

The garage below is 500 square feet large, and Wierson feels it can be used as an emergency shelter. It could offer much-needed

peace of mind, he said.

"Once the event is over, people will be wondering, 'We've evacuated, now what?'" he said. "Having warm clothes and shelter waiting alleviates some of

that."

Area residents have already gathered assorted supplies such as stoves, sleeping bags, tents and tarps. Wierson also is preparing a few small storage containers that can hold a limited amount of other essentials.

"People can certainly bring their own containers and put whatever they want in them," he said.

Wierson hopes to reach neighbors with this information but understands that many people who visit from out of town may not know the basics of emergency preparedness.

He is particularly concerned about residents of Breaker's Point condominiums, which lie below his property and to the south. With a population that fluctuates during the year, he worries that many tenants may not be as prepared as regular homeowners.

"What about the family that visits once a year, or once every other year?" he asked. "They are not necessarily thinking about bringing emergency supplies because their visits are so few and far between."

Wierson has met with the board at Breaker's Point and made sure it is aware of not only his safe house's location, but that residents can place supplies in the storage building.

He has also tried to make

the passage to his house as easy as possible by maintaining a clearly marked trail that leads up the hill from Oak Court to his driveway.

On Memorial Day Weekend 2012, Wierson helped organize a hike from Breaker's Point up to his property. The walk was timed, and Wierson said people ages 6 to 80 took part.

"I'm trying to encourage people to walk the trail a couple of times to gain familiarity with the land and my home," Wierson said. "That will help limit panic. We want to be as welcoming as possible."

Wierson said these exercises are essential in getting to know one's neighbors and what they bring to the table.

"I've met nurses, doctors and mechanical engineers who live in this part of town," he said. "It's good to know what we have to work with and what we still need."

While Wierson is happy to open his home to friends and strangers, he worries about the continuity of the safe house project and having places to store emergency supplies.

"Each year, a lot of our volunteers are getting older," he said. "We have a good beginning but can only keep this up if there's sustained interest."



Experts say "Pack A Tsunami Map"



August 26, 2013 - Beach goers this summer should pack not only their sunscreen and favorite novel, but also a tsunami evacuation map. For the first time, Oregon's entire coast has maps showing where to evacuate in the event of a tsunami. This information could save your life and those you love.

A catastrophic Cascadia earthquake and tsunami is a matter of when, not if. But our state is now more tsunami-ready than before. The Oregon Department of Geology and Mineral Industries (DOGAMI) has completed its work under a federal grant to create a new generation of tsunami maps and to educate vulnerable coastal communities how to prepare.

"We're the first generation in Oregon to fully understand the threat from earthquakes and tsunamis," said Governor John Kitzhaber. "This project has brought coastal communities together to become more prepared, thanks to federal funding, state expertise in mapping and outreach, and a local sense of responsibility. Coastal residents want to live with peace of mind and also let visitors know they're open for business and will know where to go if a tsunami strikes," Kitzhaber said.

Knowing where to go means understanding where high ground is, including the nearest tsunami assembly area. DOGAMI developed a total of 131 new maps, including 89 new tsunami inundation maps (TIMs) and 42 new evacuation maps; the latter are available free as pocket-sized brochures. The attached fact sheet explains where to get new maps and how they were developed.

Forty-two brochures have been published, covering Oregon's coastal population centers. Those living outside the map areas can get this information via OregonTsunami.org by clicking on "Evacuation Zone Map Viewer."

"These new maps and the State's outreach have definitely made our county safer," said Gordon McCraw, Tillamook County emergency manager. "Several areas conducted their very first tsunami evacuation drill, and some have had more drills since then. Residents and visitors practiced their evacuation routes to high ground, and folks really worked well together," McCraw said.

The program has also helped an additional 14 communities to become TsunamiReady, a designation by the National Weather Service recognizing cities and counties who strengthen their local tsunami plans and communications. Communities will have fewer fatalities and less property damage if they plan before a tsunami happens. (An additional seven entities, from fire districts to school districts, earned TsunamiReady Supporter status.)

"After Japan's devastating tsunami two years ago, we've been working hard to finish our maps and conduct outreach to coastal areas," said Vicki McConnell, State Geologist. "I want to thank NOAA for funding this work and our local partners - from fire chiefs to ham radio enthusiasts - for their leadership in getting our coast ready. We can't prevent a tsunami but we can prepare for one."

Maps and more information at www.OregonTsunami.org