

**Neskowin  
Tillamook County**



**Testimony, House Veterans' and Emergency Preparedness Committee  
May 12, 2015**

Neskowin motel being impacted by ocean wave



Today's population is about 200 full time and lots of people in the summer months





Motel

The  
aftermath

Hawk Cr. Cafe

Ocean

Hawk Cr.





Coastal Erosion at the Capes, in Tillamook County near Netarts, was first noticed in 1997 by local home owners

Lawns dropped vertically some 18 inches in January 1998. Five more feet of drop were added a few weeks later.

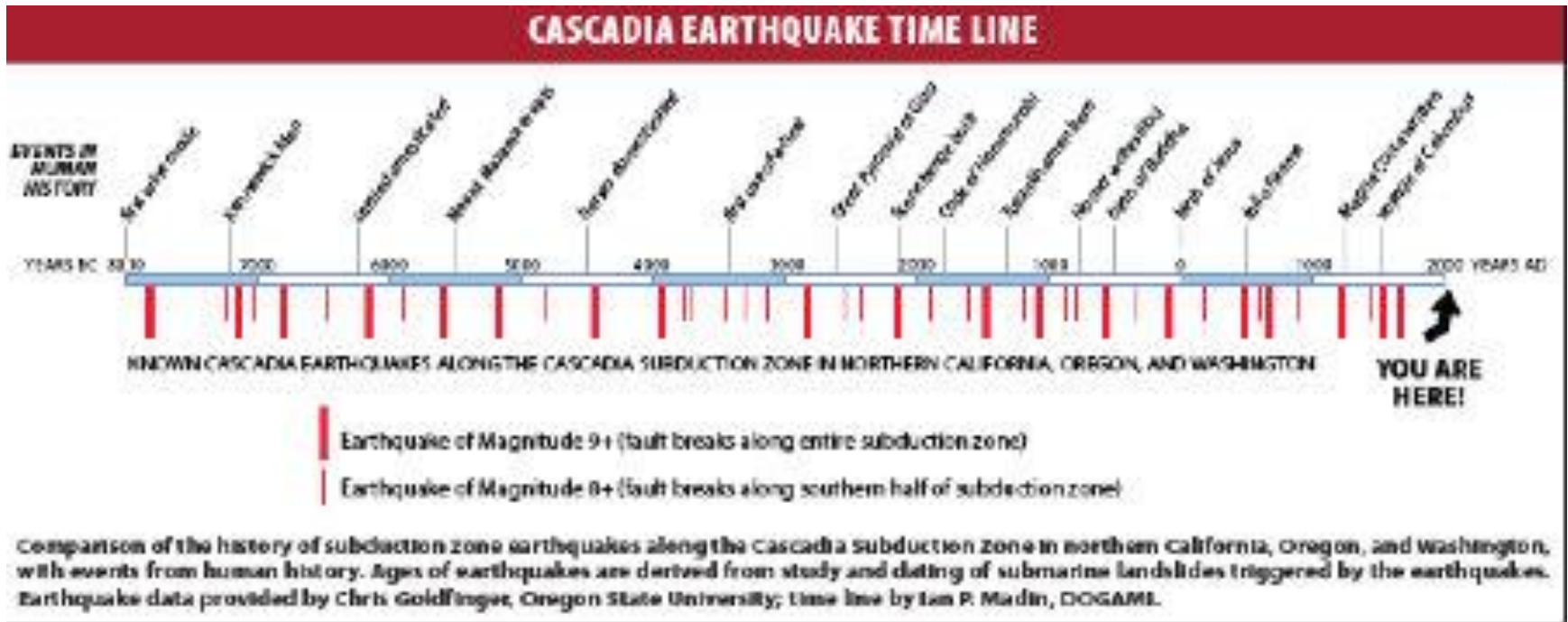
2002 Entry: The main area of movement is presently 900 feet long and 500 feet wide, endangering 10 houses, with 10 more at risk.

### **2002 DOGAMI Report**

The Capes private housing community experienced landslide and coastal erosion damage associated with the 1997-8

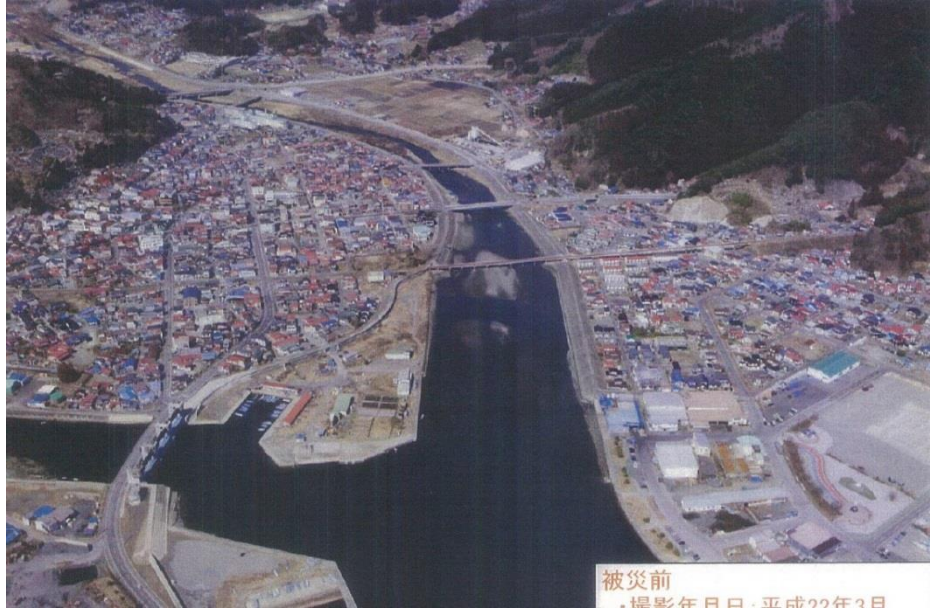
El Nino event. Residents were evacuated and short-term mitigation was implemented. Long-term mitigation options, which need to accommodate coastal building regulations, are still being evaluated.

# Chris Goldfinger - Oregon State



## We are passed the 75% Recurrence Intervals

# 30% chance of a Magnitude 9.0 in the Next 50 Years



← Japan city before Tsunami

Japan city after Tsunami



This could be Seaside, Cannon Beach,  
Rockaway Beach, Pacific City, etc.





Sewer manhole pops out of ground

## Waste Water Systems Fail



## Electrical Systems Fail



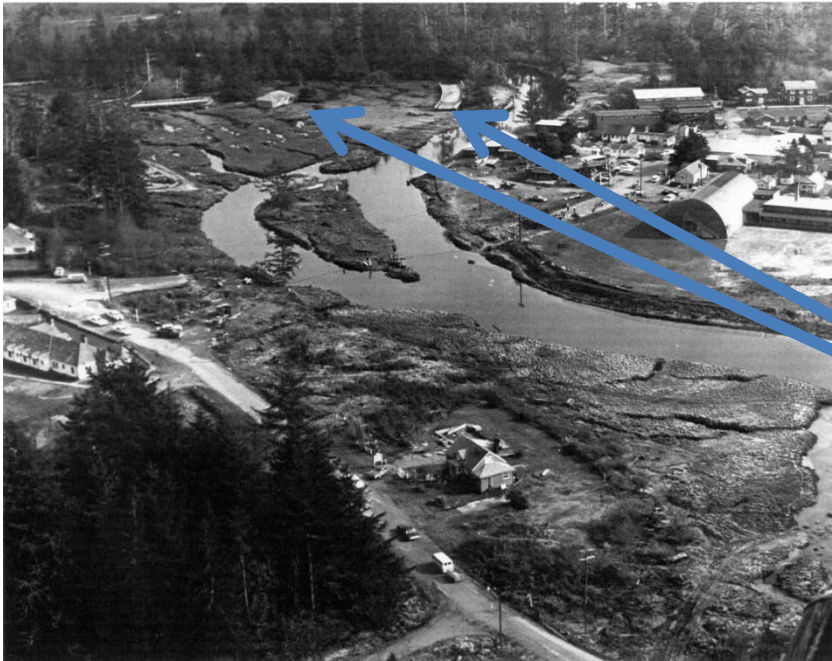
## Liquid Fuel Systems Fail



## Road Systems Fail



**Ports are damaged**



**1964 Cannon Beach Bridge hit by tsunami  
from Alaska**

**Bridge Pieces**



	OR Total	WA Total	OR and WA Total
Land area (square miles)	98,386	71,303	169,689
Miles of coastline	296	157	453
Population	3,421,399	5,894,121	9,315,520
Population exposed to tsunami	22,200	50,190	72,390
Residential buildings damaged (slight to complete damage)	453,206	507,701	960,907
Short-term human sheltering requirements	523,027	410,127	933,154
Short-term pet sheltering requirements	315,071	254,357	569,428
Mass feeding and hydration requirements (people)	1,146,608	1,274,327	2,420,935
Mass feeding and hydration requirements (pets)	699,433	777,340	1,476,773
Deaths	4,226	8,440	12,666
Injuries	15,261	12,114	27,375
Hospital patient evacuation requirements	8,948	15,501	24,449
Nursing home patient evacuation requirements	30,144	65,249	95,393
Building debris (Cubic Yards)	18,747,845	13,174,243	31,922,088

**Ok, you made your point. We know it's going to be bad.**

**We know, it will be the disaster of all disasters for the US.**

**We know there will be a major disaster after the disaster.**

**We know we are going to be on our own for awhile.**

**So what are you doing about all this??**



# The Oregon Resilience Plan

Reducing Risk and Improving Recovery  
for the Next Cascadia Earthquake and Tsunami

Report to the  
77<sup>th</sup> Legislative Assembly

from  
Oregon Seismic Safety Policy  
Advisory Commission (OSSPAC)



Salem, Oregon  
February 2013

We all need to work together  
to begin to implement the  
provisions in the Oregon  
Resilience Plan that we can  
afford to implement

# The Neskowin Coastal Erosion Adaption Plan June 2013



**Tillamook County**

**Department of Community Development**

**1510 B Third Street, Tillamook, OR 97141**

<http://www.co.tillamook.or.us/gov/ComDev/>

Tillamook County has implemented some of the provisions derived from a three year community driven effort called the Neskowin Coastal Erosion Adaptation Plan

While it specifically deals with coastal erosion, many of the provisions also could apply to future development along Oregon's coast.



So here's what the Ordinance does. DLCD is considering using this Ordinance as a template for the rest of the Oregon Coast . We as elected officials need to not only deal with our day to day issues but look to the eventual future and we know what the future holds for our coastline .

- Requires a certified engineering geologist (CEG) to certify the safest site on a property
- Requires that any structure be set back 50 times the annual erosion rate, plus 20 feet (provides ability to reduce front setback by right to accommodate this)
- Limits density to one single-family dwelling in the zone, regardless of underlying zoning (on the ground, this means no two-family residence can be built)
- Requires that in any land division, at least a 1,500 square foot building pad be provided OUTSIDE the zone. Properties fully within the zone are not eligible for division.
- Requires movable structure design in the zone.
- Requirement that the CEG certify the development to be within the acceptable level of risk.

- Provides guidance for minimal disturbance of the lot during development.
- Allows staff the discretion to contract out a peer review of the submitted report in instances where the CEG's report might be in question

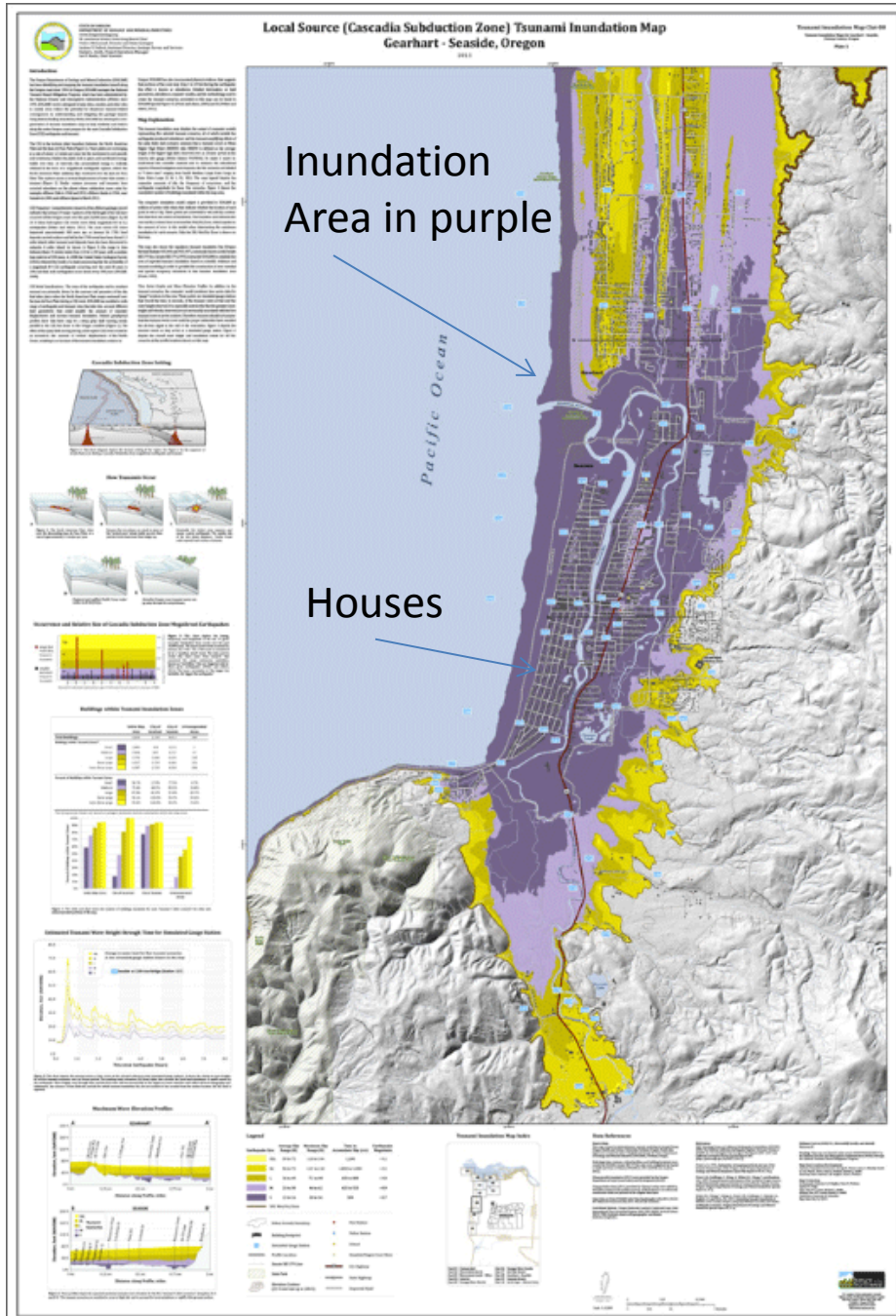
**So, nearly every bullet point here could be translatable to tsunami planning.**



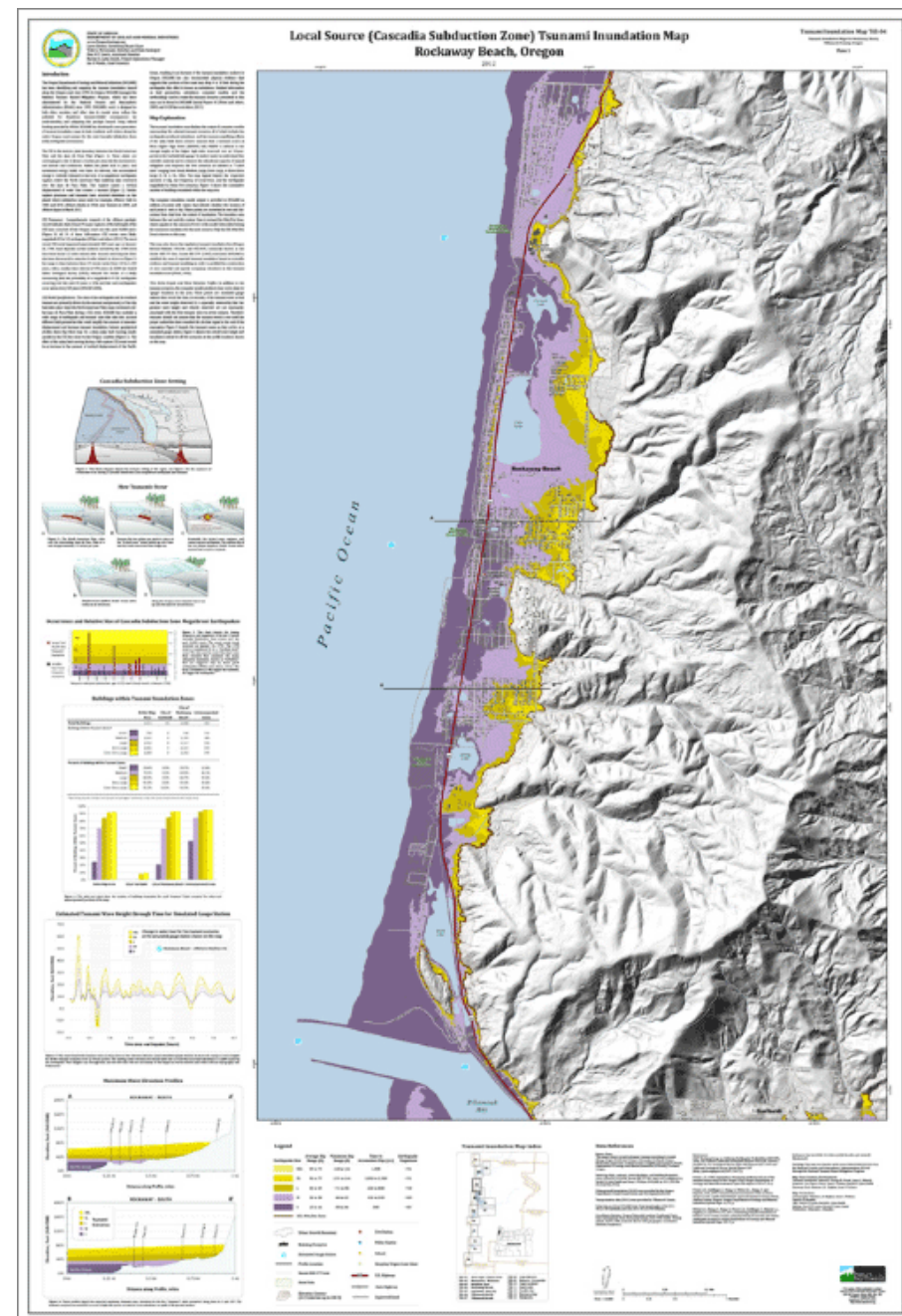
It needs to be made clear that the tsunami inundation area is much larger (and higher in elevation) than the Neskowin Coastal Hazards Overlay Zone and so more work is needed.



# Seaside



# Rockaway Beach



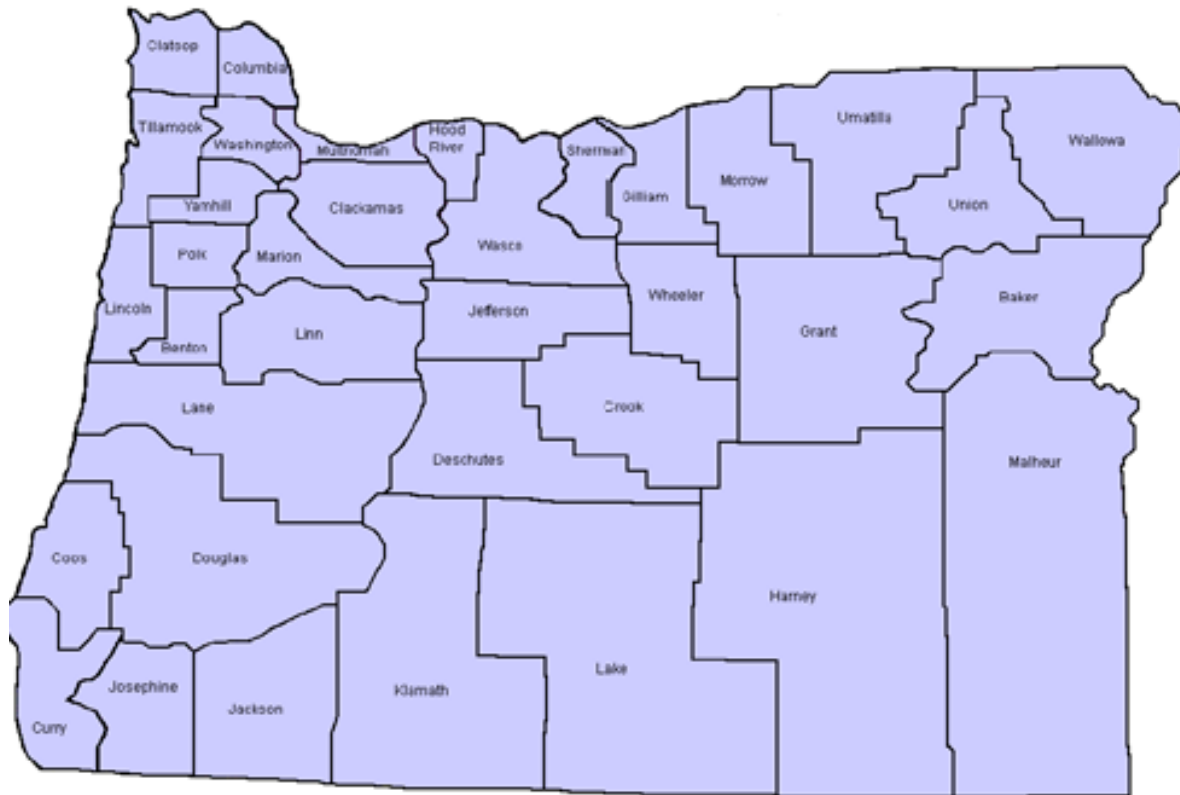
# So what else are you doing?

## Develop Sister County Relationships

- 2014 – Develop 5 Sister County relationships
- 2015 – County's/City's work with their Boards/Councils to communicate this initiative
- 2015 – Sister Counties meet annually with their respective Board of County Commissioners
- 2015 – Develop Memorandum of Understanding of each County's leadership needs and resources
  - Develop and commit to yearly resource estimate to sustain Sister relationships
  - Find and obtain resources to sustain relationships
  - Annually and officially submit PWD's helicopter priority names and contact information to OEM and FEMA.
  - Sign Mutual Aid Agreements
  - Confirm all PWD staff meet ICS training requirements



## Counties and Cities currently interested in participating



- Benton
- Lincoln
- Clackamas
- Marion
- Clatsop
- Tillamook
- Coos
- Umatilla
- Douglas
- Union
- Deschutes
- Wasco
- Jackson
- Lane
- City of Astoria
- Linn
- City of Redmond



**DLCD has prepared guidance to assist local governments (and associated communities) in becoming more resilient to a catastrophic tsunami.**

**Preparing for a Cascadia Subduction  
Zone Tsunami:  
A Land Use Guide  
for Oregon  
Coastal  
Communities**

DLCD has been a good partner in this work and would provide valuable technical assistance and support but as usual financial resources would also be needed. Providing DLCD with grant resources to pass on to local governments will likely be critical for any of this resilience work to be accomplished.

**The land use guidance focuses on three areas:**

1. Life safety and adequate tsunami evacuation facilities:
2. Zoning/limiting uses: Encourages some community facilities and uses to be located out of harm's way (emergency service uses, hospitals, schools, potentially high density uses, and other key facilities).
3. Incentives: Provides options to provide land use incentives to develop in a more resilient way.

# Emergency Volunteer Corps of Nehalem Bay

***“The Emergency Volunteer Corps of Nehalem Bay is a deeply committed core of like-minded volunteers that have forged a remarkable private-public coalition in three small coastal towns which is one of the most visionary, innovative, and organized local emergency preparedness groups in the United States.”***

- James Roddey, previous Earth Sciences Information Officer, Oregon Dept. of Geology and Mineral Industries



# Emergency Volunteer Corps of Nehalem Bay

## Started from nothing and now

- 112 trained **Community Emergency Response Team** members  
(CERT - skilled support for first responders)
- 160 teen CERTs trained at Neahkahnne High School
- 133 **Map Your Neighborhood** Captains and Co-Captains  
(community based neighbor to neighbor program)
- 42 **American Red Cross** volunteers (critical for our shelter operations)
- 54 **ham radio operators** (our emergency communication)
- 33 Registered **Medical Reserve Corps** members  
(trained medical personnel)

# **Emergency Volunteer Corps of Nehalem Bay**

## **Funded by:**

The Cities of Manzanita, Nehalem and Wheeler  
Nehalem Bay Fire & Rescue

## **Partners with:**

Nehalem Bay Fire & Rescue  
American Red Cross  
Neahkahnie School District  
Adventist Health and Rinehart Clinic  
Tillamook County Emergency Management  
Nehalem Bay State Park

# **Emergency Volunteer Corps of Nehalem Bay**

## **Infrastructure Emergency Plan**

- Shelters stocked and volunteers trained.
- Supplies prepositioned.
- Water and Sanitation back up preplanned.

### **Leadership**

Worked with communities throughout Tillamook County to support community preparedness efforts

In partnership with Tillamook County and American Red Cross helped to fund an AmeriCorps member to focus on preparedness efforts

Helped to initiate the Tillamook County Citizen's Corps Council (TC4) to support those efforts



**Please consider funding portions of the Oregon Resilience Plan**

**We are talking about Oregon's Future .**

**This about your family. Your children. Your grandchildren.**

**It would be so easy to just say we can't afford it and let it go.**

**They did that in Nepal.**





## Survivors

**I'd be happy to answer  
questions you may have**

