



# Oregon Coastal Notes

Oregon Coastal Zone Management Association

March 31, 2005

## **Tsunami Workshop Yields Consensus—Inundation Zone Mapping & Public Education Are Key to Saving Lives—*Onno Husing, Director, OCZMA***

The morning after the Indian Ocean Tsunami (which occurred on December 26, 2004), OCZMA Chairman Paul Hanneman e-mailed OCZMA Director Onno Husing. He wrote, “OCZMA should hold a Tsunami Summit.”

Paul Hanneman was right. OCZMA was the appropriate organization to take the lead. OCZMA’s members—the local government officials on the Oregon coast (counties, cities, ports, soil & water conservation districts, and the Coquille Indian Tribe)—are the people most directly responsible for the health and safety of residents and visitors to the coast. By seizing this unprecedented opportunity, OCZMA can ensure that the needs of our local emergency managers and first responders (police, fire, medical teams) get the fullest consideration.

A Steering Committee was formed to guide the process. Steering Committee members included Dr. George Priest of the Oregon Department of Geology & Mineral Industries (DOGAMI), Jay Wilson of Oregon Emergency Management (OEM) and Paul Klarin of the Oregon Department of Land Conservation & Development’s (DLCD) Coastal Management Program, and OCZMA Director Onno Husing. DLCD provided National Oceanic & Atmospheric Administration (NOAA) resources to fund the process.



A two-day Tsunami Workshop was held on March 1-2, 2005 in Salem, Oregon for coastal emergency managers, first responders, public health professionals and representatives of the tourism industry. About ninety people attended.

The objectives were:

- (1) Share what’s been learned from the Indian Ocean tsunami, and
- (2) Develop a coast-wide vision for Tsunami preparedness.

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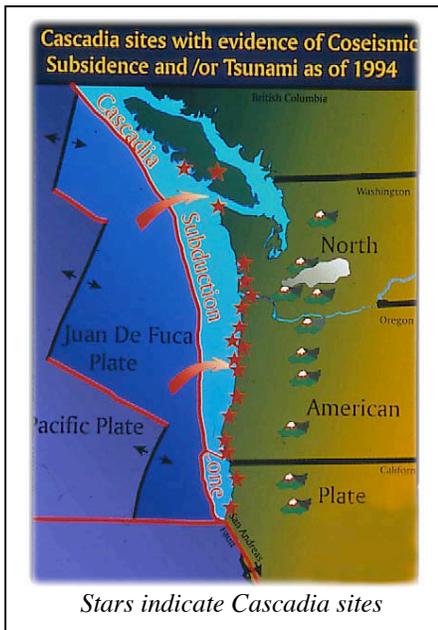
As a follow-up to the Tsunami Workshop, a Tsunami Summit is scheduled at the **Oregon State Capitol on April 7, 2005 (Hearing Room E) from 3:30—5:00 p.m.** The Tsunami Summit will be cosponsored by OCZMA, DLCD Coastal Management Program, DOGAMI and OEM. Purpose of the Summit will be to be brief the Governor and his staff, the Oregon Legislators, state agencies, Oregon congressional staff, public officials on the Oregon coast and elsewhere in Oregon, and the general public on the results of the March 1-2, 2005 Tsunami Workshop. **The agenda for the Tsunami Summit is included in the newsletter. Please feel free to detach the agenda and share a copy with someone you feel might be interested in attending.**

## *The Tsunami Workshop: The First Day—The Nature of the Event*



Pointing to the screen, George said, “As you can see, the wave was about 60 feet high.” (see photo to the right).

Dr. George Priest from DOGAMI’s Coastal Field Office presented what’s been learned from the Indian Ocean tsunami. He focused on Sumatra, where the most damage occurred. George showed photos of the impact of the tsunami on Sumatra. One photo (see photo at left) showed how the inundation zone was stripped clean, like a bomb hit it.



George noted that the subduction zone off Sumatra bears a striking resemblance to the Cascadia Subduction Zone seventy miles west of the Oregon coast (see graph to left).

The enormity of the event the Oregon coast faces began to sink in.

George distributed a table listing the estimated times when the first tsunami waves are predicted to strike the Oregon coast from a magnitude 9.0 Cascadia Subduction Zone earthquake. George said, “The shaking from the earthquake will last between one and four minutes. The earthquake will shake an area from the Cascades to the beach.” George continued, “On the South coast, the region closest to the epicenter of the earthquake, the waves will strike within 10 to 15 minutes. Our warning will be a large earthquake. The waves will strike the Central coast in about 20 minutes after the earthquake ends and about 30 minutes on the North coast.”

Here’s a shocker. George explained the tsunami waves don’t strike all at once. Waves will continue to strike the coast periodically over the next eight to ten hours. Many deaths caused by the Indian Ocean tsunami occurred when people entered the inundation zone after the first tsunami waves struck. They were attempting to rescue people when these later arriving waves came in. “Wow,” I thought, “How are we going to keep people out of the tsunami inundation zone in the hours after the first waves strike?”

George Priest’s message was clear. If you are in the path of the tsunami, you will almost certainly be killed. The National Oceanic & Atmospheric Administration (NOAA) will provide an “all clear” bulletin after the tsunami danger has passed. But, how will we get the word out that the danger has passed? After an event, conventional communications—cell phones, traditional phones, the

Internet—will be out. Satellite phones and battery-operated radios may be the only way to communicate to the outside world.

George held up a copy of a DOGAMI-produced tsunami inundation map for Lincoln City. George said, “The inundation maps we did for coastal towns are well kept secrets. They are not easy to find. People call me and complain they can’t get a copy of the tsunami map for their community. We need to make these maps easy to find. We need to create an instinctive response for residents and visitors. When the earth shakes, get to high ground! The education needs to continue for generations. We are not there yet. We are a long way from that.”

George continued, “We need to have ‘Tsunami Champions’ in each town. They are people who can organize CERT (Community Emergency Response Teams) teams, to get the word out door-to-door. That’s how to get people out of dangerous places, particularly the elderly. We need local cable TV stations broadcasting programs. We need school curriculum and drills. We need business outreach. We need more signs with better marking of evacuation routes, as well as assembly places.”

Jay Wilson of OEM showed a video he shot in Cannon Beach on Main Street. The video was taken before the Indian Ocean tsunami. Jay asked tourists if they knew about tsunamis, and, where they would go to get information. The people seemed indifferent. When pressed, they said they would probably go to the Chamber of Commerce. Then, for contrast, Jay showed a video taken of a tsunami evacuation drill being held in Yachats. You could see many folks trudging uphill to get east of Highway 101.

### ***Case Study: The City of Yachats***

Frankie Petrich from the Yachats Rural Fire Protection District described how, as a child in Waldport, she experienced a large flood. The bottom floor of her home became inundated and the family retreated upstairs. Frankie witnessed the distant tsunami that came down from the Great Alaska earthquake of 1964. She said, “We had no idea about the forces at work. There were large boulders on the beach, brought there from a quarry for a new development. I watched the waves roll them around like marbles.” Later, Frankie went to Anchorage and saw the damage that earthquake caused. Frankie said, “So, when George Priest began to talk about an earthquake and a tsunami, I didn’t need pictures to know the destructive power.”

Frankie said, “Today, on the Oregon coast, we have lots of new people, many of them retirees. We see them for five to ten years. They don’t have the inter-generational knowledge of these things. We have to educate people.” Frankie said the City of Yachats does drills and she thinks they can notify people at risk for a distant tsunami, when you have several hours. “But,” she said, “Not for the near tsunami from a Cascadia event.”

Frankie said several years ago their Fire District needed to pass a local option tax. Frankie stated, “I went door-to-door to explain the levy to people. The levy passed with a 72% vote. I knew that if I could get people to spend their money by going door-to-door, I could get them to save their lives by going door-to-door.” She continued, “Education is key. People need to know where they need to go. They need to know what to take with them. We need storage canisters up and down the coast with supplies, and we need continuity in our warnings and our responses, up and down the Oregon coast. This way, if I’m in Depoe Bay, I know there’s an evacuation plan in place and that there are signs big enough to be seen.”

Frankie explained, “My department’s a volunteer organization. We do it because we love our community. But, there is a limit to what we can expect volunteers to do. Having a little bit of financial assistance, so we can get some manpower behind this, is going to be key.”

Frankie said, “We do drills. We time the people, especially the seniors, to see if they can get to where they need to go. People must understand they only have time to grab their emergency kit, which should be by the coat rack, and leave immediately after the earth stops shaking. Having trusted local people doing the education is important. We also learned that once the community understands the threat, they will help pay for supplies.”

### **Case Study: The City of Seaside**

Darci Connor, the City of Seaside Tsunami Outreach Coordinator, (funded by NOAA through DOGAMI), described her program as a pilot project to determine the most effective local outreach strategies. Darci said surveys taken after the Indian Ocean event demonstrated people in Seaside are now much more concerned about tsunamis. The survey results also showed that people think they know a lot about tsunamis. But, when asked about the difference between a distant tsunami and a local tsunami—a key thing to understand—they were confused. Darci said it is helpful to know what the misconceptions are when putting together an education program.

Darci thinks it's important to address a wide range of audiences—schools, businesses, local residents, etc. Darci said, “Make people think through what their routines are. So, what happens if they are at work, or, what happens if the event happens when the kids are in school?” Darci shared, “The City of Seaside is developing a ‘Tsunami Certification’ program for businesses. The City certification will advise the customers, ‘This business cares about your safety. We are prepared.’” Darci reminded us to make education materials available in Spanish as well.

The main outreach strategy in Seaside is the “community educator”. They've divided the town into small community blocks. Darci said, “We are looking for one community educator per block. Each block has about 40 houses. We hold training classes for the neighborhood educators. They are just sharing information. Of 88 community blocks, we now have 34 blocks covered. Soon, every block will be covered and every household will be reached.” Darci continued, “The educators have been out there for about two weeks. They are now reporting back. Every community educator has a different approach. One guy held a potluck and invited his neighbors. People are talking, as a neighborhood, about how they can help each other. What are we learning? You need to have someone doing this full time. And, community ownership and trust is also key. Give responsibility to the community and the program can last and be sustainable. What's next? Continue the program in Seaside and set up similar programs in other communities.”

### **Case Study: The City of Coos Bay**

Stan Gibson, the Fire Chief at the City of Coos Bay, stressed the importance of working with kids. Stan said, “People who survive fires often say they survived because they remember what the fireman told them when they came to their third grade class.” Since the Indian Ocean event, Stan said he's spent 40% of his time on community education about tsunamis. “The opportunity is now. There are approximately 35,000 people living in the Bay Area. They will have very little warning. We must educate them. Many more lives will be saved by public education than by warning sirens. The DOGAMI inundation maps are fantastic. These maps are out in every home, our restaurants, the hotels and motel, our churches. Churches are key. We also work closely with the local newspaper.”

Stan said, “People want to know we are prepared. They want to know there will be a continuation of essential services and they want to know they can find and talk to their children.” Stan explained, “These days a lot of people from California are moving into Oregon. Down there they have done a lot of planning, especially around earthquakes and wildfires. We are a little behind them. The new residents are pushing us to provide packets of information on various hazards.” Stan is concerned that the large volume of press coverage on the Indian Ocean event focused on places hit by a distant tsunami. Stan said, “As a result, our people think they have a lot of time. They've lost sight of how quickly they need to evacuate when a near-tsunami event happens. We have a lot of work to do.”

### **Case Study: The City of Florence**

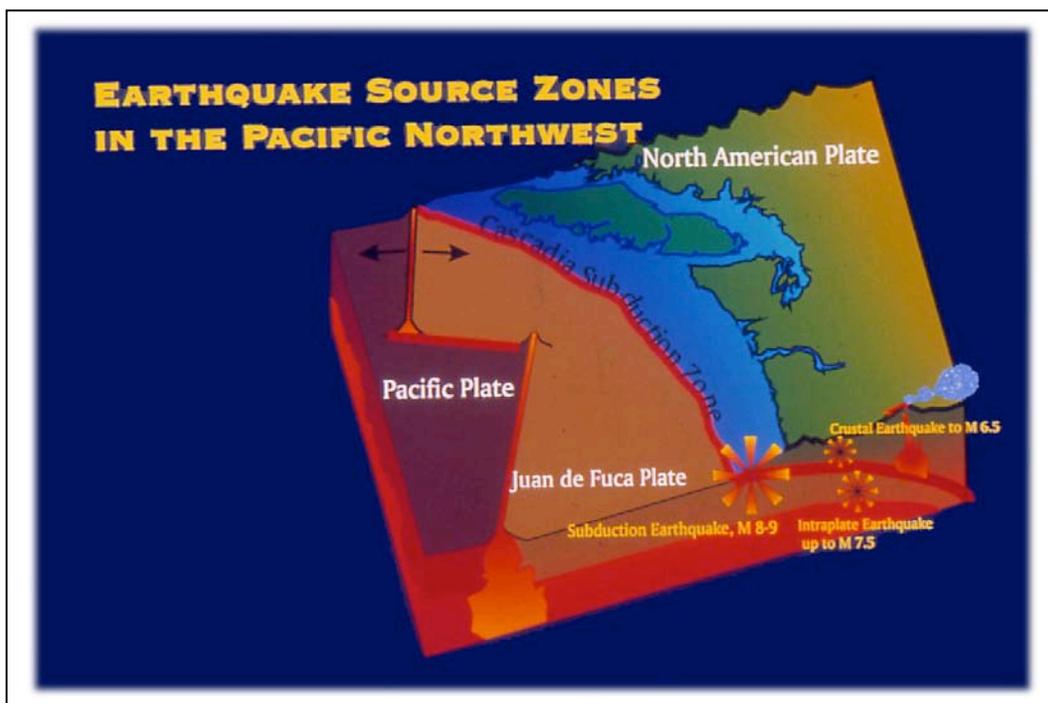
John Buchanan, the Fire Chief of Florence, is proud of Florence's Community Emergency Response Team (CERT). John said, “How did it happen? Dave Davis, a retired Fire Chief from Nevada, moved to Florence and set up our CERT program in 1999. There are 17 gated communities in Florence. They are always looking for some kind of mission. CERT is it! We have put over 200 people through CERT training, and 188 are still active.”

John explained that the City of Florence, like other communities, does not have enough personnel to respond to an event. John said, “We have to go to the local level.” John discussed the community notification system in Florence—reverse 911 calling. So, when NOAA notifies the City a tsunami is on the way, 4,000 phones a minute will ring in Florence with a canned message about the tsunami. John said, “This will work well for a distant tsunami, but not a Cascadia event. During a Cascadia event, the phones probably won’t be working.”

John believes the major benefit of CERT is to get people trained. John said, “They may not be an active responder, but they need to know what it takes to survive at home.” John questioned the value of sirens because, during a big earthquake, they are unlikely to work. Most others at the workshop agreed.

### **Case Study: The City of Cannon Beach**

Jay Raskin, who serves on the Cannon Beach City Council, said he’s been dealing with tsunami planning in Cannon Beach for 12 years as part of Cannon Beach’s Emergency Preparedness Committee.



Early on, Cannon Beach relocated the Fire Station to high ground. Jay said, “Most of the thinking has been about distant tsunamis—that’s why we have the siren warning system. More recently, though, we’ve focused on the Cascadia event. We figure if we are prepared for it, we are prepared for all emergencies.”

Cannon Beach has community meetings for each neighborhood, the business district, and the Spanish speaking community. They talk about the danger, and the evacuation routes for each neighborhood. Cannon Beach has two Emergency shelters, both on high ground. Cannon Beach stockpiles medical supplies and emergency supplies at the two shelters. They have a helicopter landing pad in a cleared area on high ground. They have two satellite phones. Several local contractors are trained to “tag buildings” after an event to signal the buildings are safe or unsafe to enter.

Jay said, “Is it enough? Seeing the Sumatra reports, have we done enough in Cannon Beach? I would say ‘No.’ Our planning is based on what we were told to do by FEMA (Federal Emergency

Management Agency) and the State of Oregon. We were told to only plan to take care of our full time residents. Cannon Beach has 1,600 residents. On any given weekend, we can have 6,000 people in town. On a summer weekend we get 10,000 to 15,000 people in town. On peak days, maybe 25,000 people.” Jay continued, “So, if an event happens, what are we going to do to take care of all these other people? How do we plan for them? We don’t have an answer for that.”

Jay shared, “Officially, we’ve been told help will arrive in 2 to 3 days. Frankly, we don’t believe this. Every road leading to Cannon Beach and the Oregon coast will be damaged or completely out. We will be isolated. There will be no telephones, no electricity. We do a disservice to ourselves when we only focus on tsunamis. The huge earthquake is the major thing.” Jay said, “We first need an accurate assessment of the regional damage from a Cascadia event. We need to know how big this thing is. After that, then we can actually do reasonable planning because we will know what we are up against. FEMA must understand this is a different beast. Unlike hurricanes, you don’t get ample warning for this.”

Jay continued, “People in the Valley are not taking the Cascadia event seriously. When I talk to people in Portland they think this is just a ‘coastal thing’. It’s not! A magnitude 9.0 earthquake will cause devastation in the Willamette Valley. Emergency managers in the Valley will have their hands full. I don’t see the step-by-step planning that makes me confident we are going to get help soon.”

Frankie Petrich called out, “The Red Cross told the City of Yachats, ‘We will see you in two weeks!’”

I asked people to comment when they think help will arrive. Everyone thinks help won’t arrive for at least a week—more likely, two weeks. A representative from the Red Cross agreed. They said, “If the roads are out, it will take time to get there. That’s why you need to have people ready, locally, to respond.”

I asked Jay Raskin, “Jay, when I met with you in Cannon Beach, you said FEMA told you the lodging industry is responsible for caring for visitors, right?” Jay responded, “Yes. That’s what they said.” I turned to Robert Eaton, the Manager of the Inn at Spanish Head, “Bob, is the lodging industry ready to care for all these people for a week or maybe two weeks, especially if your facility is damaged?” Bob Eaton looked shocked that FEMA is expecting the lodging industry to do this. Bob said, “We’re not ready to do that. We have not heard about that.”

Sheridan Jones from Lincoln City commented, “Our military is so spread out across the world. I think they are closer to the Indian Ocean than they are here. All the needed materials may be there if an earthquake/tsunami would strike here on the Oregon coast. The capability of moving it may not be there. That’s the purpose of this workshop. We need to wrestle with these questions. Then we need our Congressional Delegation to ask these tough questions.”

### **A Lodging Industry Perspective**

Bob Eaton said, “For the distant tsunami, I want all of you to do your job really well. Get the word out. Get those visitors off the Oregon coast. Because, if a tsunami is coming, I don’t want people milling around my hotel.”

Bob said, “Tourism is extremely important to the coastal economy. We have to be careful how we talk about the threat. Because of the Indian Ocean event, people will now pay attention. But, let’s not overdo it. To me, there are several phases. Phase 1—get people from the building, or, wherever they are, to an assembly area. Phase 2—get them to a shelter. Phase 3—the recovery phase. People in the tourism business, not just hotels, but the restaurants, small shops, big stores like Fred Meyer, service stations, the major attractions like the Oregon Coast Aquarium, are responsible for Phase 1. We don’t have the resources and knowledge to handle the other two phases.”

Bob continued, “Are we prepared? I don’t think so. After I was invited to this meeting, I called some hotel managers in the Lincoln City area. I asked them about their emergency plans. I asked, ‘Do you have literature in your rooms?’ I asked, ‘Do you have signage?’” Bob sighed and said,

“The response was not good. Some do have literature. The businesses that do have information; they all have different things. About half of the hotels have literature in their rooms. Half don’t. There was a lot of misunderstanding about the threat. I asked people what they think we need? They responded, ‘Well, we need sirens. We need offshore buoys.’ What they really need is education! Some knowledge. But they didn’t know that. I was disappointed.” Bob summarized, “So, it’s been said over and over again at this workshop, we need education and information. People in the lodging industry will respond if they know what to do.”

Bob said, “The DOGAMI maps are wonderful. But, they should be poster-sized, laminated, and posted in places where visitors are likely to go. We need a core of volunteers in our communities, get them trained, and have them work with the community. I’m not for more government regulations. But I think, in this case, posting information about tsunamis in a business should be required. I’m already required to post a fire exit in my hotel. The staff, which turns over every year, needs to be trained to help people know what to do.”

### ***A Medical Services Perspective***

Anne Steeves, Region 2 Regional Coordinator, of Samaritan Health Services said, “We need to start thinking about mass casualty planning. When you look at September 11, the SARS outbreak in Toronto, the Madrid bombing, and what we face with a Cascadia event, our hospitals are not equipped. Neither are our EMS (emergency medical services) systems. In Benton County, we estimate that 50 patients an hour will overwhelm the system. That’s a bus accident. For many years, in situations like this, hospitals have dealt with this by diverting patients to other hospitals. You can’t do that anymore. There’s a paradigm shift in progress. We need an inventory of resources. How many physicians are available? How many nurses? How many respiratory therapists.”

Ann continued, “The ICS (Incident Command System) is relatively new for hospitals. For doctors and hospital administrators, the bottom line is, ‘How am I going to get paid?’ People at the coastal hospitals have told me they are concerned about getting cut off from the pharmaceuticals, IV drugs, medications, and all the other things they need. Staffing and credentialing are key. Where does your staff live? Near the hospital? Can they get there after an event?”

Ann talked about the need for triage. She described what happened with the Indian Ocean event. “Two types of people are likely to show up at hospitals after an event: (1) people who really need medical attention, and (2) people who need grief counseling because they’ve lost family or friends.” Ann said, “Mass fatalities. What do we do if a bunch of people don’t make it through this event? What if power is out? We will have big public health issues. Sewers rupture. Drinking water? There are lots of things to deal with.”

Ann then said, “Surge capacity? We may have beds, but, we may not have the nurses and doctors to staff the beds. OEM should think about establishing another volunteer registry. Every hospital facility manager I’ve spoken to has said, ‘You call me, I will inspect the building, get the lights back on.’ We need a MASH-style tent system, and auxiliary system, if our hospitals are damaged. In Region 2 we have to meet a benchmark of adding 500 beds.” Ann concluded, “On the Oregon coast, we will need to stand on our own two feet for at least a week; probably two weeks. We need medical caches, food, blankets, cots, shelter to help people survive.”

### ***The Tsunami Workshop: Day Two***

The second day was largely devoted to open-ended discussion. The day started with several brief state agency presentations (Oregon Department of Transportation—ODOT, Oregon Emergency Management—OEM, Oregon Department of Environmental Quality—DEQ). Then, Ann Steeves led the Tsunami Workshop participants through a several hour “table top exercise”. We pretended we were experiencing a Cascadia event, step by step, together. We began, of course, at zero hour when the earth starts shaking. Ann began, “It’s a beautiful afternoon in the fall, on a Friday and it’s 2:00 p.m. It’s nice and sunny. There’s a fair number of people on the coast, squeezing in a

last visit before the weather changes. It's not peak season. A 9.0 earthquake erupts along the Cascadia Zone. The earth shakes violently for four minutes along the California, Oregon and Washington coasts. The waves are coming."

As we worked through the exercise, I was gratified by the honesty of the discussion. Based on everything we heard the day before, no one was going to say that their community was fully prepared for a Cascadia event. Indeed, it's hard to comprehend something like this—even if you're an emergency management professional who's experienced a major natural disaster.

Throughout the exercise, Ann peppered us with pointed questions. "Where are you? Where are the kids if you have kids?" Ann read from her scenario, "Visitors are stunned by the ground shaking and they are hit by falling debris from buildings. Many new residents are as confused as the visitors. Long time residents duck, cover and hold, and they begin to evacuate after the shaking stops. Some locals assist the injured and tell visitors to evacuate. What do they tell them?" Someone shouts in response, "Go high!" Another shouts, "Go East!" Ann asks, "Where's East? I'm a city girl. I don't know where East is. I'll probably head toward Mexico."



Ann asked, "Does every beach access have a tsunami warning sign?" "No!" a number of people responded. Ann asked, "Is every evacuation route marked by signs or other means?" "No!" a number of people answered. Ann asked, "Are evacuation signs big enough and numerous enough to do the job?" "No!" many called out. Ann asked, "Are assembly areas marked and stocked with supplies, and if so, for how long? We are now thinking about two weeks, not just 72 hours of supplies." Frankie Petrich said, "The answer is no!" Ann asked, "Is an evacuation map posted in public places?" "No!" people said. Ann asked, "How about motels? Do they have evacuation information posted?" "No."

we heard again. Ann asked "Are critical evacuation routes hardened to survive?" "No," was the answer. Ann then asked, "Does the local cable channel run a tsunami information public announcement every day, several times a day?"

Jay Raskin asked, "Are we still in the earthquake?" Ann replied, "The earth has just stopped shaking. That's all we know right now." Jay declared, "No electricity!" Ann agreed, "No power." Ann continued, "Workshops, media events, practice drills and school curricula, have they been implemented in your community? Are CERT teams or medical response corps in place in your communities? For the most part, 'Not yet', is what I'm hearing from you."

As the exercise continued, the emergency managers and first responders discussed the difficulties of mounting a response. The emerging theme was, "You will be on your own." The cavalry is not going to arrive to save people—be prepared to help yourself and people immediately around you. The limited network of paid professionals in coastal communities must, out of necessity, focus on saving themselves, their families, and people immediately around them. Jim Hawley, the Lincoln County Emergency Manager remarked, "If I am at work, chances are I'll be in the Courthouse. I may not survive because two stories of the Courthouse building may come down upon me."

During the exercise, over and over again, the value of public information, advanced planning, the strategic stockpiling of emergency supplies was driven home. I was proud of the workshop participants. They had the strength to talk about the weaknesses in the system. The workshop was an important step toward genuine planning for a Cascadia event.

### **What Can We Do To Be Safer?**

Near the end of the Tsunami Workshop the participants prioritized what needs to happen to make coastal communities safer. A consensus was reached. That consensus is perhaps best summarized as, “Develop a culture of preparedness and response.”

To get us there, the workshop participants are asking Congress to do the following things:

- (1) Institutionalize and increase the level of federal NOAA funding for the Oregon Department of Geology & Mineral Industries. This way, DOGAMI can accelerate their work to prepare the next generation of community tsunami inundation maps. These maps and evacuation brochures are the cornerstone of community tsunami hazard mitigation planning.
- (2) Establish a program to get federal funding (through NOAA) to the local level in Oregon (and other coastal states), to establish a network of “Tsunami Champions” in coastal communities. There are approximately 19 communities on the Oregon coast at high risk. A Tsunami Champion network would expedite the establishment of a robust neighborhood-by-neighborhood education and evacuation planning effort. Congress should authorize and appropriate money to go for staff, even part time staff. The program will leverage an enormous amount of volunteer labor and donations toward preparedness at the local level.
- (3) Establish a federally funded Block Grant Program, administered by the state (DOGAMI or OEM), to Boost Tsunami Preparedness at the Local Level. The program should have a minimal amount of paperwork and bureaucracy attached to it. The purpose of the block grants will be to allow local governments to get the ball rolling on soliciting private donations. Communities will determine what their most acute needs are. They will make their requests based on what will do the most good in their community.

### **What’s the State of Oregon’s Role?**

The participants of the Tsunami Workshop are aware of the State of Oregon’s difficult financial situation. Therefore, new funding requests are not being directed to the State of Oregon.

Having said that, there are many things the State of Oregon has done in the past to make coastal communities better prepared for a tsunami. The State of Oregon must keep doing these things. As described above, DOGAMI’s Coastal Field Office, based in Newport, provides vital information. When it comes to tsunami planning, the State of Oregon is substantially ahead of other West Coast states. Oregon lags California in earthquake planning, but, not tsunami planning.

OEM has a critical role to play. OEM provides the framework under which local emergency management departments and first responders operate. OEM will play a key role in securing major federal assistance after a Cascadia event occurs (or, for that matter, a distant tsunami). The Oregon National Guard will play a major role. DLCD’s Coastal Management Program has programmed federal NOAA dollars for tsunami education and will continue to play an important role.

We purposely avoided discussions about new, state-mandated land use planning measures in the coastal zone. Our focus was on the needs of local emergency managers, first responders, local governments, and local people. Discussions about coastal land use and tsunamis are likely to happen during the upcoming 30-year review of Oregon’s Land Use Program.

Workshop participants strongly believe that a public education program, at a neighborhood-by-neighborhood level, and, enhanced post-event planning (the stockpiling of supplies to support people for a week to two weeks) will save lives. Other things are secondary, at best.

## Closing Thoughts

According to the USGS, the Oregon coast, and, for that matter, all of Western Oregon, faces a 10% to 15% chance of experiencing a Cascadia earthquake event and tsunami in the next 50 years. That's the bad news.

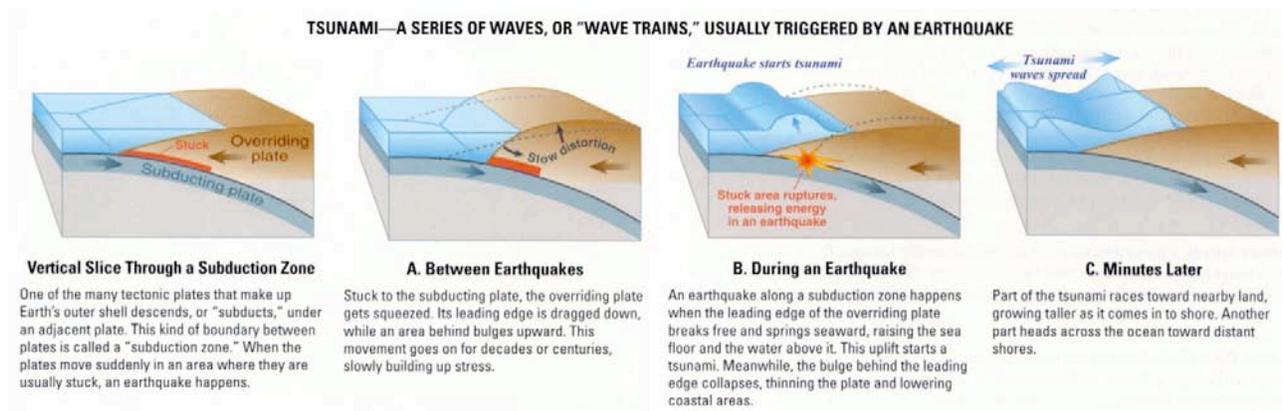
Here's the good news. If Congress appropriates two to three million dollars to the State of Oregon per year for several years for tsunami preparedness—we can save tens of thousands of lives! This is not an exaggeration. One person commented during the Tsunami Workshop, "Doesn't the Bush Administration understand a tsunami is a weapon of mass destruction?"

Given the enormous scale of the threat, this is wonderful news. We don't need billions of dollars to save tens of thousands of lives. In Hawaii, they've set a goal of avoiding any deaths from a tsunami. The State of Oregon should adopt the same policy. We should have a zero-tolerance for deaths caused by ignorance of the tsunami threat (distant tsunamis and near tsunamis).

After the workshop, George Priest calculated that it would take \$13 million to purchase the majority of equipment, staffing and training needs itemized by workshop participants. This begs the question: what should we, coastal residents, bring to the table? Don't we have some responsibility for providing the resources to enhance our safety and preparedness? I submit we do. That's why we are not asking Congress for \$13 million in the FY 06 federal budget. We believe, through a major education program funded by Congress, that people in coastal communities and others will respond and fill the gaps.

A Tsunami Champion program—a robust local program—will provide additional intangible benefits. It will prompt neighbors who presently don't know each other to become acquainted. Think about it. The guy who lives across the street, even part time, who you don't know today, may be the only person who can help you and your family after an earthquake. This may sound corny, but, an effective local preparedness program can foster a greater sense of community in our region. People will mingle and make new friends. More people will get to know who the seniors are in their neighborhood, check up on them, and help them from time-to-time.

Places like Seaside and Yachats have started down this road. It's time for the rest of us to catch up.





*Tsunami Summit*  
*Oregon State Capitol (Hearing Room E)*  
*Salem, Oregon*  
*April 7, 2005*  
*3:30 p.m.—5:30 p.m.*

**Revised Tentative Agenda**

- 3:30 p.m. Welcome, Introductory Remarks, and Introduction of Oregon Governor Ted Kulongoski—*Paul Hanneman, Chair, OCZMA*
- 3:35 ***Oregon Governor Ted Kulongoski's Remarks***
- 4:00 Key Findings of Tsunami Workshop (March 1-2, 2005 in Salem, Oregon)—*Onno Husing, Director, Oregon Coastal Zone Management Association (OCZMA)*
- 4:05 Overview of Oregon Department of Geology & Mineral Industries (DOGAMI) Preparedness Program—*Vicki McConnell, Director, DOGAMI*
- 4:10 Cascadia Subduction Zone Tsunamis and Distant Tsunamis—*George Priest, Geologist, Oregon Department of Geology & Mineral Industries*
- 4:30 Brief Remarks from Coastal Community-Level First Responders:
- *Frankie Petrich, Yachats Rural Fire Protection District*
  - *Darci Connor, Seaside Tsunami Outreach Coordinator*
  - *Stan Gibson, Fire Chief, City of Coos Bay Fire Department*
  - *John Buchanan, Fire Chief, City of Florence & CERT Team*
  - *Jay Raskin, Councilman, City of Cannon Beach*
  - *Robert Eaton, General Manager, Inn at Spanish Head*
  - *Ann Steeves, Regional Coordinator, Region 2, Samaritan Health Services*
- 5:00 Open Dialogue
- 5:30 Adjourn

*Tsunami Summit sponsored by:*  
*Oregon Coastal Zone Management Association (OCZMA)*  
*Oregon Department of Land Conservation & Development (DLCD) Coastal Management Program*  
*Oregon Department of Geology & Mineral Industries (DOGAMI)*  
*Oregon Emergency Management (OEM)*

## Information about OCZMA

The Oregon Coastal Zone Management Association (OCZMA), formed in 1976, is a voluntary association of coastal counties, cities, ports, soil & water conservation districts, and the Coquille Indian Tribe on the Oregon Coast established to provide a forum for the resolution of issues of particular concern to the local governments of the coast and the people they represent.

### Association Officers

**Paul Hanneman** • Chair (Tillamook SWCD)

**Lucie La Bonte** • Vice Chair (Curry County)

**John Griffith** • Secretary-Treasurer (Coos County  
FY 2004-05)

### Association Staff

**Onno Husing** • Executive Director

**Georgia York** • Executive Assistant

**Nancy Fitzpatrick** • Assistant

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**P.O. Box 1033; 313 SW 2nd, Suite C  
Newport, Oregon 97365**

## Association Membership

Clatsop County	Port of Alsea
Coos County	Port of Astoria
Curry County	Port of Bandon
Douglas County	Port of Brookings Harbor
Lane County	Oregon International Port of Coos Bay
Lincoln County	Port of Garibaldi
Tillamook County	Port of Gold Beach
City of Brookings	Port of Nehalem
City of Coos Bay	Port of Newport
City of Depoe Bay	Port of Port Orford
City of Florence	Port of Siuslaw
City of Garibaldi	Port of Tillamook Bay
City of Lakeside	Port of Toledo
City of Lincoln City	Port of Umpqua
City of Nehalem	Clatsop SWCD
City of Newport	Coos SWCD
City of North Bend	Curry SWCD
City of Port Orford	Lincoln SWCD
City of Reedsport	Siuslaw SWCD
City of Rockaway Beach	Tillamook SWCD
City of Tillamook	Umpqua SWCD
City of Toledo	Coquille Indian Tribe
City of Yachats	