3 IA 3 – Tsunami

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IA 7 Tasked Agencies	
Primary Agencies	County Emergency Management
Supporting Agencies	Lincoln County Auxiliary Communications Service (ACS) American Red Cross (Red Cross) City Emergency Preparedness Coordinator City Public Works Department Oregon Central Coast Community Emergency Response Team (CERT) County Sheriff's Office Yachats Rural Fire Protection District

1 Purpose and Scope

Tsunamis are a series of waves generated when geologic events cause large, rapid movements in the seafloor that displace the water column above. Locations nearest to the source of the tsunami can be impacted in minutes. On average, Oregon receives one distant tsunami warning, advisory, or watch per year.

The purpose of this incident annex is to provide guidelines for the City of Yachats warning and response to a tsunami. In the event of a distant tsunami, a warning will be issued by one of the National Oceanic and Atmospheric Administration (NOAA) Tsunami Warning Centers. The City emergency management organization, as outlined in the Basic Plan of this EOP, is designed to provide support to local emergency services agencies through assistance in accessing needed resources and coordination in more complex incidents and events. In the event of a tsunami, command and control would be established as it is outlined in the Basic Plan. Nothing in this annex is meant to replace or supersede the standard operating procedures (SOPs) of local response agencies. This annex establishes guidelines for:

- The provision of emergency warning in the event of a local tsunami or a credible tsunami warning issued from a Tsunami Warning Center;
- Action levels for areas that are likely to be affected by flooding; and
- Additional preparedness, response and recovery actions that may be required of the City in the event of a tsunami.

Emergency services information that is specific to an earthquake can be found in IA 2 – Earthquake.

2 Policies and Agreements

- None at this time

3 Situation and Assumptions

3.1 Situation

Due to its geography and location in relation to the Cascadia Subduction Zone fault, the City may be affected by a tsunami. Damage from a tsunami can range from minor to major property loss and death. The City may also be affected if roadways to and from the City become impassable and/or bridges become damaged due to an earthquake or tsunami in a neighboring jurisdiction. City water tanks may also be compromised. The tsunami threat is based upon two possible events: a local generated tsunami and a distant generated tsunami.

A tsunami could be generated by a Cascadia Subduction Zone earthquake. Due to the location of the Cascadia Subduction Zone (approximately 200 miles off the Oregon coastline), a local generated tsunami would have little warning time (5–15 minutes). The second type of tsunami event, a distant generated tsunami, could be caused by an earthquake on a subduction zone elsewhere in the Pacific Ocean. An earthquake off the coast of China or Japan could result in a tsunami that would reach the Oregon coastline in approximately 7 to 10 hours.

3.2 Assumptions

3.2.1 General

- Areas within the inundation zone as mapped for Senate Bill 379 by Oregon Department of Geology and Mineral Industries are most susceptible should a tsunami reach the City. (ORS 455.446-7)

3.2.2 Local Generated Tsunami

- The earthquake or seismic event may be felt by the City and result in damage (refer to IA 2 – Earthquake). Secondary hazards such as fire, building collapse, search and rescue, or hazardous materials release may occur.
- The City will activate the EOP, issue emergency alerts, and notify responders until a Tsunami Warning Center issues a bulletin as conditions warrant continuing, expanding, restricting, or ending the warning.
- The first surge of a locally generated tsunami will reach the City within minutes following an earthquake and may have a wave run-up that exceeds 100 feet.
- Warning from official sources will be too late, and citizens will need to react spontaneously following an earthquake to evacuate to safe locations.

3.2.3 Distant Generated Tsunami

- Tsunami warning time will be dependent on the distance from the earthquake or seismic event to the City. The closest distant source is a tsunami generated in the Gulf of Alaska
- The first surge of a distantly generated tsunami may reach the City within 4 or more hours following an earthquake and may have a wave run-up of approximately 30 feet.
- A Tsunami Warning Center will issue a tsunami warning, watch, advisory, or information bulletin.
- Due to limited resources and the warning time available the City may be required to prioritize warning resources to the most vulnerable locations.
- Damage will be limited to coastal areas within the inundation zone.

4 Pre-Incident Phase

This section identifies emergency guidelines for the pre-incident phase of a distant generated tsunami. Refer to Section 5 for actions that may be required of the City emergency management organization during response and recovery phases.

4.1 General Concept of Operations

Threat Notification	• Determine credibility of threat • The Governor may declare a state of emergency • Activation of the Emergency Coordination Center • Consider an evacuation order • Identify area to be evacuated • Assess consequences • Deploy first responders to evacuation points
Partial or Full Activation of the Emergency Coordination Center	• Establish ECC Coordinator and consider implementing Unified Command with a command post at the evacuation point
Alerting First Responders	• Stage emergency responders and equipment outside of the vulnerable area • Continue to monitor the threat
Issue Public Information	• Issue public information messages • Alerts and warning effectiveness may be greatly reduced at night or due to poor weather

4.2 Alert and Warning

The National Weather Service operates several Tsunami Warning Centers with the objective of detecting, locating, and determining the magnitude of potential tsunamis generated by earthquakes. If the location and magnitude of an earthquake meet the known criteria for generation of a tsunami, a tsunami warning, watch, advisory, or information bulletins may be issued for the City. Refer to Appendix A of this IA for further information on the Tsunami Warning System.

4.2.1 Action Levels

Refer to the table below for suggested actions for each Tsunami Warning system message. The City will consider these action levels in conjunction with historical records and event-specific projected models to aid in making decisions at the time a tsunami system message is issued.

Tsunami Warning System Message	Meaning	Suggested Action
Warning	Inundating wave possible	Full evacuation suggested[1]
Watch	Danger level not yet known	Stay alert for more information activate emergency responders
Advisory	Strong currents are likely	Alert population to stay away from the shore and advise emergency responders
Information Bulletin: No Tsunami	Minor waves at most or an event in another ocean basin	No action suggested

[1]At a minimum, evacuate inundation zone as mapped for Senate Bill 379 by the Oregon Department of Geology and Mineral Industries. See Appendix C of this IA

4.2.2 Tsunami Warning Times

For the purpose of guiding City response actions, tsunami warning times are divided into the following general categories. During the tsunami travel time, the Tsunami Warning Center may adjust the arrival time, wave heights, or warning locations.

- **Zero Time to 1 Hour – A locally generated tsunami.** All locations may be alerted by general methods, including Emergency Alert System (EAS), broadcast TV and radio. Command and control are decentralized, and warning occurs as time and resources are available. If time permits, the Emergency Preparedness Coordinator should coordinate messages with neighboring jurisdictions. For safety, emergency responders should minimize travel.

- 3–5 Hours. All locations may be alerted by general methods; targeted locations may be warned by fire district vehicle public address systems and sirens, as well as limited City personnel and volunteer support. Area command and control are initiated. The Emergency Preparedness Coordinator coordinates volunteers, amateur radio operators, and external requests. For safety, emergency responders should limit travel at night or in poor weather; if at all possible. Use of volunteers should be limited, due to risk.

- 7–10 Hours. All locations may be alerted by general methods; targeted locations may be warned by vehicle public address systems and sirens, as well as on-site expanded City department and volunteer support. Initiate area command and control. The Emergency Preparedness Coordinator activates the Emergency Coordination Center and coordinates volunteers, amateur radio operators, and external requests. For safety, emergency responders should use caution when traveling at night or in poor weather. Use of volunteers in unfamiliar areas should be limited.

- More than10 Hours. All locations may be alerted by general methods: vehicle public address systems and sirens, as well as on-site expanded City department and volunteer support. Area command and control are initiated. The Emergency Preparedness Coordinator activates the ECC, coordinates volunteers, amateur radio, external requests, and the Red Cross. For safety, emergency responders should use caution when traveling at night or in poor weather; use of volunteers in unfamiliar areas should be limited, due to risk.

4.3 Recommended Tsunami Assembly Areas

Evacuations may occur spontaneously following an earthquake or may become necessary if tsunami-related information is received. Individuals located within an area designated for evacuation will most likely be recommended to evacuate to a pre-designated assembly area. All individuals on beaches, at ocean vista points or traveling next to the coast in low lying areas, will be recommended to go to high ground. (See Tsunami Evacuation Map below)


TSUNAMI EVACUATION MAP
YACHATS, OREGON
TSUNAMI EVACUATION ROUTE
MAP LOCATION OREGON
IF YOU FEEL AN EARTHQUAKE:
• Drop, cover, and hold
• Move immediately inland to higher ground
• Do not wait for an official warning
SI USTED SIENTE EL TEMBLOR:
• Tírese al suelo, cúbrase, y espere
• Diríjase de inmediato a un lugar más alto que el nivel del mar
• No espere por un aviso oficial
ASSEMBLY AREA A REUNIÓN
OUTSIDE HAZARD AREA: Evacuate to this area for all tsunami warnings or if you feel an earthquake.
ZONA DE PELIGRO EXTERIOR: Evacue a esta área para todas las advertencias del maremoto o si usted siente un temblor.
LOCAL CASCADIA EARTHQUAKE AND TSUNAMI: Evacuation zone for a local tsunami from an earthquake at the Oregon coast.
MAREMOTO LOCAL (terremoto de Cascadia): Zona de evacuación para un tsunami local de un temblor cerca de la costa de Oregon.
DISTANT TSUNAMI: Evacuation zone for a distant tsunami from an earthquake far away from the Oregon coast.
MAREMOTO DISTANTE: Zona de evacuación para un tsunami distante de un temblor lejos de la costa de Oregon.
LOCAL TSUNAMI EVACUATION ZONE
DISTANT TSUNAMI EVACUATION ZONE
YACHATS
OUTSIDE HAZARD AREA
OUTSIDE HAZARD AREA
MAP SYMBOLS / SÍMBOLOS DEL MAPA
Evacuation route / Ruta de evacuación
Assembly area / Área reunión
Bridge / Puente
Fire Department / Bomberos
City Hall / Municipalidad
Trail / Sendero
+ 35' Elevation, in feet / Elevación, en pies
N
SCALE / ESCALA
0.25 mile
0.25 km
NOTICE
This tsunami evacuation zone map was developed by DOGAMI for the purpose of evaluating the most effective means to guide the public in the event of a tsunami evacuation. The map is based on preliminary data and should not be used for site-specific planning. This map adopts recommendations from the Oregon Tsunami Advisory Council. The evacuation routes were developed by local emergency officials and reviewed by the Oregon Department of Emergency Management.
MAP REVISED 04-25-13
ADDITIONS TO ORIGINAL MAP
Existing Signs
Suggested Assembly Areas
Smelt Sands State Park
Yachats State Park
Yachats Ocean Road State Natural Site
Yachats River
Yachats River Rd
Horizon Hill Rd
Cape Ranch Rd
Reeves Circle
Diversity Dr
101

5 Response and Recovery Phase Checklist

Action Items	Supplemental Information
RESPONSE PHASE	
☐ Activate the EOP, if not activated during the Pre-Incident Response Phase.	
☐ Activate the ECC and establish Incident Command, if not previously activated during the Pre-Incident Response Phase. For tsunamis affecting multiple jurisdictions, establish a Unified Command with neighboring jurisdictions. ■ Notify supporting agencies and appropriate officials ■ Estimate emergency staffing levels and request personnel support. ■ Develop work assignments for ICS positions (*recurring*) ■ Establish communications links between the City ECC, County EOC and other jurisdictions EOC/ECCs.	*FA 1, Emergency Services, ICS Form 203, Organization Assignment List*
☐ Ensure that action is taken to protect personnel and emergency equipment from possible damage by high water.	
☐ Determine the type, scope, and extent of the incident (*recurring*). Verify reports and obtain estimates of the area that may be affected. Obtain status of impacts within the City.	*ICS Form 209, Incident Status Summary*
☐ Initiate a phone bank to process requests for assistance as well as receive situation reports from the public	
☐ Notify Command Staff, support agencies, adjacent jurisdictions, ESF leads/ coordinators, and liaisons of any situational changes.	
☐ Develop and initiate shift rotation plans, including briefing of replacements during shift changes. ■ Dedicate time during each shift to preparing for shift change briefings	*ICS Form 201, Incident Briefing*
☐ Implement plans and procedures to handle water inundation and agency-specific protocols and SOPs	*Local, agency, and facility-specific SOPs*
☐ Conduct emergency inspections of all bridges	*See Appendix B of this Incident Annex*

Action Items	Supplemental Information
☐ Determine the need to conduct an evacuation (*recurring*) ■ Determine the time it takes to fully evacuate. A minimum of four (4) hours should be allowed to evacuate the affected population ■ Evacuate and keep beaches clear (if applicable lock gates at beach access points) ■ Evacuation should be completed one (1) hour prior to the estimated arrival time of the initial wave to ensure that all emergency personnel are clear of the area. ■ If time permits, public messaging should be coordinated between neighboring counties and communities ■ Initiate and notify the public of reception and care centers	
☐ Determine the need for additional resources and request as necessary. ■ Consider activating mutual aid agreements ■ Coordinate with private-sector partners, as needed ■ Access to County resources will require a Declaration of Emergency	*See Appendix A of the Basic Plan, Sample Declaration of Emergency*
☐ Coordinate resource access, deployment, and storage in the operational area, including equipment, personnel, facilities, supplies, procedures, and communications. Track resources as they are dispatched and/or used.	
☐ Establish a JIC or coordinate with JIC(s) established by other jurisdictions.	
☐ Formulate emergency public information messages and media responses using "one message, many voices" concepts (*recurring*). Message content may include expected magnitude of tsunami, expected duration, instructions for public protection, planned activities to address the emergency, and protection orders such as an advisory to boil water. ■ Public information will be reviewed by the Incident Commander or designee. Information will be approved for release by the Incident Commander and Lead PIO before dissemination to the public.	

Action Items	Supplemental Information
☐ Record all ECC and individual personnel activities (*recurring*). All assignments, persons responsible, and actions taken should be documented in logbooks.	*FEMA EOC Planning Section job action guide*
☐ Develop and update the IAP (*recurring*). The IAP is developed by the Planning Section and approved by the on-scene Incident Commander/ECC Coordinator. The IAP should be discussed at regular intervals and modified as the situation changes. ▪ Implement objectives and tasks outlined in the IAP (*recurring*).	*ICS Form 202, Incident Objectives*
☐ Ensure that reports of injuries, deaths, and major equipment damage accrued during response activities are communicated to the on-scene Incident Commander/ECC Coordinator and/or the Safety Officer.	
RECOVERY/DEMOBILIZATION PHASE	
☐ Ensure orderly demobilization of emergency operations. ▪ Release mutual aid and private resources as soon as possible.	
☐ Once the threat to public safety is eliminated, conduct cleanup and recovery operations.	
☐ Damaged structures will need to be inspected to determine if they are safe for public re-entry or if they should be condemned or demolished.	*Personnel may be obtained through the OEM mutual aid system*
☐ Conduct a post-event debriefing to identify success stories, opportunities for improvement, and development of the After-Action Report/Improvement Plan.	
☐ Deactivate/demobilize the ECC.	
☐ Correct any response deficiencies reflected in the Improvement Plan.	
☐ Revise any applicable emergency response plans based on the success stories and/or lessons learned during the response.	

6 Public Education and Outreach

Due to the severity of the tsunami hazard the City will undertake ongoing public education and outreach. Outreach includes establishing relationships with local news media during non-emergency times to build trust and cooperation. The city utilizes various drills, public awareness meetings and emergency preparedness publications made available by the State of Oregon and Lincoln County Emergency Operations Management (EOM) to motivate citizens and visitors to

take all precautions and to educate the public on tsunami hazards, warning and evacuation procedures. For example: it is important not to return to the beach for many hours after the first tsunami wave arrives, because the first run-up of a tsunami is often not the largest. Turn-key programs such as Tsunami Ready/Tsunami Prepared may be used to assist the City in developing effective grassroots public education and outreach programs

During an emergency, depending on the level of the incident and potential danger to the public, immediate notification of people in tsunami inundation zones may be needed. If necessary, the City may utilize coastal warning sirens, emergency vehicle public address systems, door-to-door contact, and the EAS, in order to issue public alerts. To avoid confusion and conflicting information, all public warning information for all participating agencies should be coordinated, approved by the ECC Coordinator and disseminated through one primary information officer. Refer to Appendix D for further information Tsunami Crisis Communication Guidelines.

7 Supporting Plans and Procedures

- City of Yachats
  - IA 2 – Earthquake
- Lincoln County
  - Emergency Operations Plan
    - IA 2 – Earthquake
    - IA 6 – Tsunami
- State of Oregon
  - Local Planning Guidance on Distant Tsunami Response, Oregon Tsunami Working Group, 2012
  - Emergency Operations Plan
    - IA 2 - Earthquake
    - IA 4 - Tsunami

8 Appendices

- Appendix A – Overview of Tsunami Warning System
- Appendix B – Guidelines for Emergency Level 1 Bridge Inspections
- Appendix C – Map of Tsunami Inundation Zone
- Appendix D – Tsunami Crisis Communication Guidelines

Appendix A Overview of Tsunami Warning System

As part of an international cooperative effort to save lives and protect property, the National Oceanic and Atmospheric Administration's (NOAA) National Weather Service operates the Alaska Tsunami Warning Center (ATWC). The ATWC is responsible for tsunami bulletins in Oregon.

Tsunami Advisory, Watch, and Warning Determination

The objective of the Pacific Tsunami Warning System (PTWS) is to detect, locate, and determine the magnitude of potential tsunamis generated by earthquakes occurring in the Pacific Basin or its immediate margins. If the location and magnitude of an earthquake meet the known criteria for generation of a tsunami, a tsunami warning is issued to warn of an imminent tsunami hazard.

The advisory bulletin is issued to areas not currently in either warning or watch status when a tsunami warning has been issued for another region of the Pacific. An advisory indicates that an area is either outside the current warning and watch regions or that the tsunami poses no danger to that area. The ATWC will continue to monitor the event, issuing updates at least hourly. As conditions warrants, the advisory will be continued, upgraded to a watch or warning, or ended. A tsunami advisory indicates that a tsunami, which may produce strong currents and is dangerous to those in or very near the water, is expected. Large inundations are not expected in areas under advisory status. Advisories are issued when the expected tsunami amplitude is in the range of 0.3 to 1 meter. A meter is 39.37 inches.

The warning includes predicted tsunami arrival times at selected coastal communities within the geographic area defined by the maximum distance the tsunami could travel in a few hours. A tsunami watch with additional predicted tsunami arrival times is issued for a geographic area defined by the distance the tsunami could travel in a subsequent time period. If a significant tsunami is detected by sea-level monitoring instrumentation, the tsunami warning may be extended to the entire Pacific Basin.

Tsunami Warning Dissemination

Tsunami warning, watch, advisory, and information bulletins are disseminated to appropriate emergency officials and the general public by a variety of communication methods.

- Tsunami warning, watch, advisory, and information bulletins issued by the PTWC and ATWC are disseminated to local, state, national, and international users, as well as the media. These users, in turn, disseminate the tsunami information to the public, generally over commercial radio and television channels.

- The NOAA Weather Radio System, based on a large number of VHF transmitter sites, provides direct broadcast of tsunami information to the public.
- The US Coast Guard also broadcasts urgent marine warnings and related tsunami information to coastal users equipped with medium frequency (MF) and very high frequency (VHF) marine radios.
- Local authorities and emergency managers are responsible for formulating and executing evacuation plans for areas under a tsunami warning. The public should stay tuned to the local media for evacuation orders should a tsunami warning be issued. Also, the public should not return to low-lying areas until the tsunami threat has passed and a "cautionary re-entry" is announced by the local authorities.

How the System Works

The Oregon Tsunami Warning Network consists of the National Weather Warning System (NAWAS), NOAA Weather Wire/Radio, Oregon Emergency Response System (OERS), and EAS. The tsunami warning/watch from the West Coast/Alaska Tsunami Warning Center (WC/ATWC) is received over NAWAS to the Primary State Warning Point (OERS) located in Salem. The NAWAS broadcast may also be accompanied by a Law Enforcement Data System (LEDS) teletype via NOAA Weather Wire or phone call to specific individuals. The warning/watch from the WC/ATWC is also retransmitted by the National Weather Service over NOAA weather radio along with a specific tone alert that triggers EAS.

OERS then sends out the warning/watch message over state NAWAS to the coastal public safety answering points (PSAPs). Upon receipt of a NAWAS message, County and local emergency managers are to disseminate the information to their own public officials according to agency policy.

Message Definitions

Tsunami Warning: Indicates that a tsunami is imminent and that coastal locations in the warned area should prepare for flooding. A tsunami warning bulletin, initially based only on seismic information without tsunami confirmation, is issued as a means of providing the earliest possible alert to at-risk populations. Warnings initially place a restricted area in a condition that requires all coastal areas in the region to be prepared for imminent flooding. Subsequent bulletins are issued every 30 minutes, or as conditions warrant, to continue, expand, restrict, or end the warning. The warning will be extended in the event that a tsunami has been confirmed that could cause damage outside the source region.

Tsunami Watch: An alert issued to areas outside the warned area. A tsunami watch bulletin, usually based only on seismic information without tsunami

confirmation, is issued to alert the population located within one to three hours of tsunami travel time beyond the tsunami warning area of an earthquake with the potential to have generated a tsunami that may affect the watch area. Subsequent bulletins are issued every 30 minutes, or as conditions warrant, to expand the watch area, upgrade it to a warning, or cancel the watch and warning. A Tsunami Watch is normally included in the text of the message that disseminates a Tsunami Warning.

Tsunami Advisory: A message issued when the PTWS has issued a warning for an event outside the WC/ATWC area of responsibility that poses no imminent threat to the area of responsibility. A tsunami advisory bulletin issued to areas not currently in either warning or watch status when a tsunami warning has been issued for another region of an ocean. An advisory indicates that an area is either outside the current warning and watch regions, or that the tsunami poses no danger to that area. The WC/ATWC will continue to monitor the event, issuing updates at least hourly. As conditions warrant, the advisory will be continued, upgraded to a watch or warning, or ended.

Tsunami Information Bulletin: Informational bulletins issued for earthquakes that are not likely to trigger a tsunami dangerous to the area of responsibility. A tsunami information bulletin is issued to advise participants that an earthquake has occurred that has not generated a potentially destructive tsunami, or that an earthquake has occurred outside the ATWCs area of responsibility and could potentially generate a tsunami. If the evaluation indicates the possible generation of a destructive or nondestructive tsunami, an investigation will be initiated and additional tsunami information bulletins will be issued as warranted until the investigation is concluded.

Tsunami Information Message: Information messages issued when smaller earthquakes (less than the warning threshold) may be felt near coastal areas. These messages are issued to assure coastal residents and emergency managers that there is no tsunami danger.

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Appendix B Emergency Bridge Inspections

Purpose

During a major earthquake event, there will not be enough bridge inspectors available to meet the immediate need for emergency bridge inspections. Many bridges may be on evacuation routes people are using, or need to use, and a rapid judgment call is necessary to keep them open or close them down. The purpose of this guideline is to establish a standardized process for all agencies to use to determine emergency-use bridge integrity.

Guidelines for Emergency Level 1 Bridge Inspections

- ❑ Ensure safety of your own family.
- ❑ Assess the area for scene safety, e.g., downed power lines, fuel spills, landslides, aftershocks.
- ❑ Control traffic hazards while inspecting.
- ❑ Look for obvious freshly broken/hanging concrete or wood on ground near/under structure.
- ❑ Look for structural misalignment, dips or bows by sighting down hand-railing.
- ❑ Look along the deck and points of support for misalignment, cracks, splits, pulled apart, or crushed.
- ❑ Check footings for sinking; avoid walking under the structure.
- ❑ After inspection and actions, mark bridge facing in a visible location, as below:

  Red Color indicates closed, Green Color indicates open. If you do not have colored markers, use triage flagging (red or green) to clearly identify bridge status near your markings.

AGENCY	*INITIALS*
DATE	TIME

- ❑ Report your findings/actions to the County EOC.

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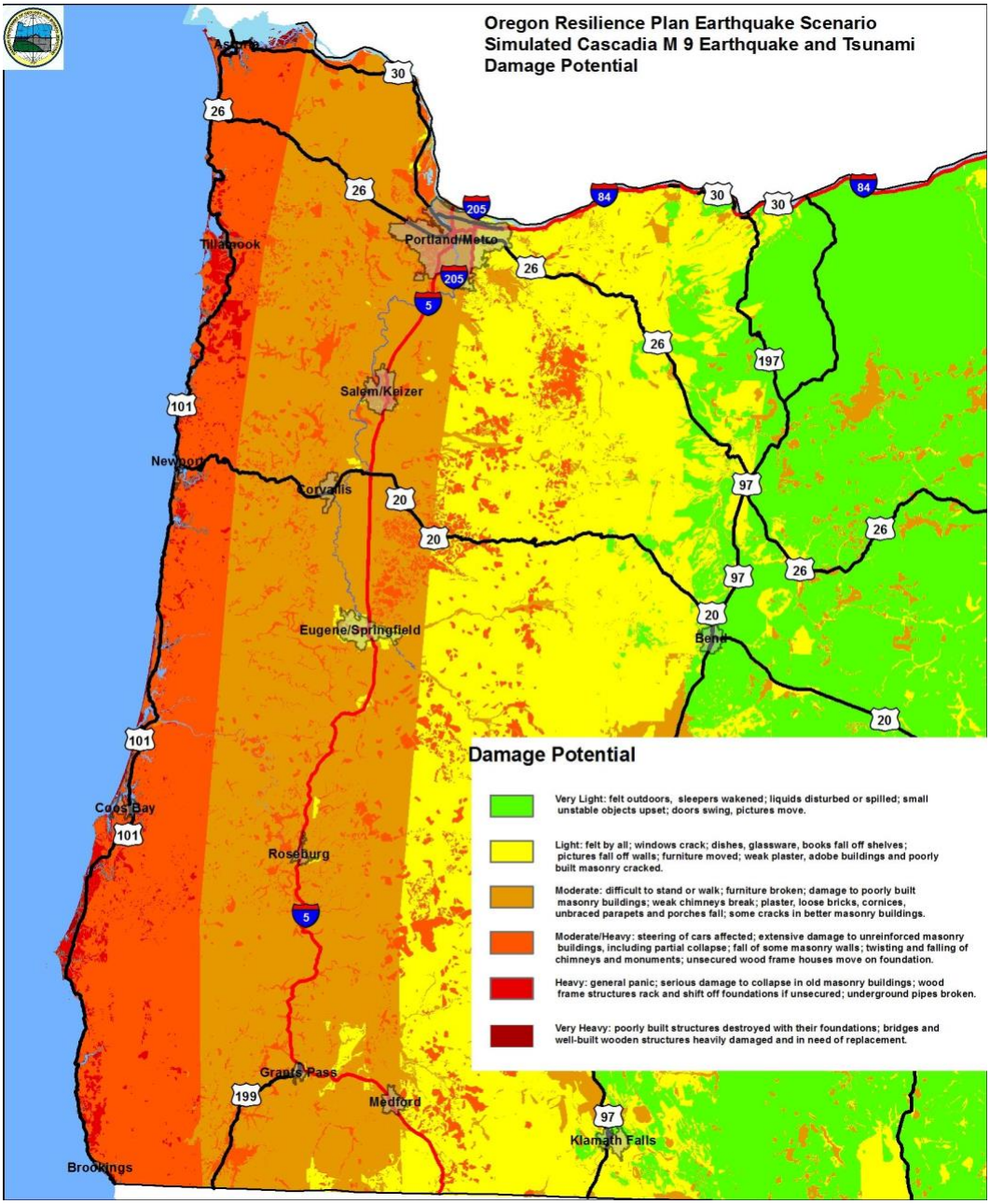
Appendix C Map of Tsunami Inundation Zone



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Appendix D Tsunami Crisis Communication Guidelines

Crisis Communication and Notification Methods for Local Communities

Incorporate layers of redundancy into any system of notification of public officials and first responders. Local jurisdictions can tailor the information to their needs.

- Use mass notification technologies (email, text, and/or voice) to provide notification in as many channels as possible.
- Pre-designate an email distribution list for various groups and make list easily editable.
  - Media
  - Visitor services
    - Motels
    - RV parks
  - Vulnerable populations groups
  - Public safety agencies
  - Elected officials
- Prepare and update regularly a pre-designated call-down telephone list. Make sure to get primary and secondary numbers. Examples of telephone numbers to include:
  - ECC staff
  - Utility companies
  - Public safety agencies
  - Elected officials
  - Support organizations
    - Bus companies
    - Schools
    - American Red Cross, etc.

Create a description of procedures in case of system breakdown and you are unable to reach specific individuals, such as elected officials or other key decision

makers. This can include physically dispatching law enforcement personnel to individual's residences.

Oregon Emergency Management (OEM) will establish a schedule of teleconference calls as early as possible to relay information to locals. OEM conference calls will be used to gather impact information and tsunami observations and to disseminate information to county emergency operations. Situation reports will be distributed to the County EOCs and PSAPs.

Public Information and Dissemination

Using the school closure system as a model, the City, in coordination with local emergency operations, will collect and distribute information on when/where evacuations are called for, and when they are to be completed by, and provide to local media and community contacts.

Messages should be distributed in a Media Release (see Functional Annex 1 – Emergency Services, Appendix A). A pre-scripted media release can be tailored to specific emergency situations. Once it is tailored with relevant local information, it should be disseminated as widely as possible using many different channels including:

- Call-in telephone line for the public
- Post on local community and media websites
- Mass public communication systems

Establish citizen information lines that offer prerecorded messages to the public.

- Establish public information call-in numbers
- Establish phone bank to manage calls with sufficient phone lines and operators, and where possible, provide non-English information.
- Post call-in numbers on appropriate electronic sites and printed materials.
- Use the 211 service, where available.
- Use call-in line to disseminate locations of Tsunami Evacuation and Information Centers.

If the City uses mass notification technologies, adopt processes so that those within the distant tsunami inundation zone are contacted pursuant to information provided by the NOAA warning statement and under the direction of the presiding local public safety official(s).

Warning Sirens

- Educate the public that NO tsunami sirens will be used as notification of a distant tsunami event. City of Yachats does not have any sirens.
- Adopt a Uniform Tsunami Warning Signal. (http://www.oregon.gov/OMD/OEM/plans_train/Tsunami/oar_10_15_09.pdf?ga=t)
- The timing of when to set off sirens, should they be acquired, should be based on the readiness of the local public safety agency to assist the public and answer questions / phone calls. Possible schedule:
  - 4 Hours before
  - 3 hours before
  - 2 hours before
  - 30 minutes before
  - 15 minutes before
  - At estimated arrival times
  - Once an hour for the duration of the Tsunami Warning
- ⊗ Do not use the tsunami siren as a cautionary re-entry signal

Public Information Officer Responsibilities

- Meet regularly with the media to build relationships before the event occurs.
- Offer regular briefings, which could be for command staff or media.
- Establish schedule and location early in the event.
- Include OEM, adjacent counties, and communities 911 Call Centers & PIO/JIC in any media distribution lists.
- Create a pre-recorded message available to the media for download from your website.

Marine / Harbor / Port Issues

- Have someone from each individual USCG stations and/or Port (if no USGS representation) in County EOC as part of incident command team in order to ensure information gets pushed out within the marine / harbor / port community.

- Educate the marine community so boaters know that if they go out during a tsunami event, they need to be prepared to stay out to sea for an extended period of time, or to find an alternative port of refuge.

⊗ Don't make blanket statement that boats should go to sea. The PIO needs to provide information so that boaters can make their own decisions.

Tsunami Evacuation and Information Centers

The Tsunami Evacuation and Information Centers may be co-located with assembly areas or a Red Cross Shelter. Use the chart below to evaluate potential site locations:

	Assembly Areas	Tsunami Evacuation Information Center	Red Cross Shelter
What (Facilities)			
When (Activated)			
Who Authorizes/Staffs			
Liability and Resources			

- Encourage local volunteer groups, such as CERT, faith-based organizations, and civic groups to be trained in Red Cross shelter operations and management. This will increase the number of Red Cross Volunteers available to open and run a shelter.

- If you don't have enough Red Cross volunteers, you can open up Tsunami Evacuation and Information Centers with other volunteers. (There are, however, liability issues with this option.)
  - This requires pre-planning and training.
  - Consider discussion with Red Cross

Tsunami Warning and Advisory Cancellation Process

NOAA will issue a cancellation of a warning or advisory. They will not issue an "all-clear". For planning purposes, the time that beaches and public access to marine facilities are closed should be a minimum of 12 hours or up to a full tidal cycle after cancellation of the Warning or Advisory Bulletin by the National Weather Service's West Coast and Alaska Tsunami Warning Center. NOAA recommends that public beaches and public access to marine facilities remain

closed for 24 hours after the canceling of the Warning or Advisory by the West Coast and Alaska Tsunami Warning Center.

⊗ Do not use "All-Clear"

✓ Use phrase "Cautionary re-entry".

The timing of when to issue a cautionary re-entry is a local decision and may or may not coincide with the cancellation of a Warning or Advisory for the community. Public safety personnel use this time to assess damage and identify and correct safety hazards. Develop a template for PIO for public consumption messaging, put a "why" waves could be dangerous for a period of up to 24 hours after the cancellation.

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