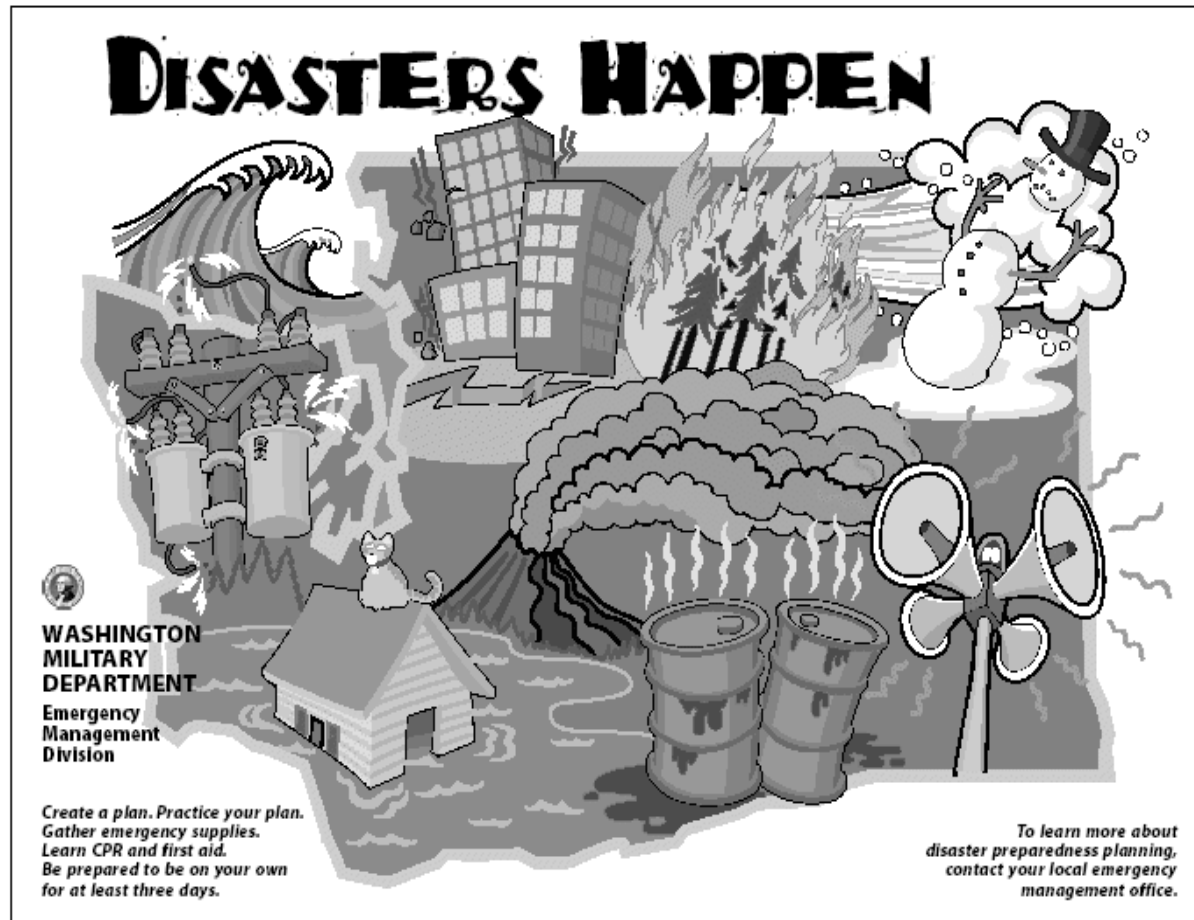


Risk Communication (Public Awareness and Education)



George Crawford
Washington Emergency Management Division

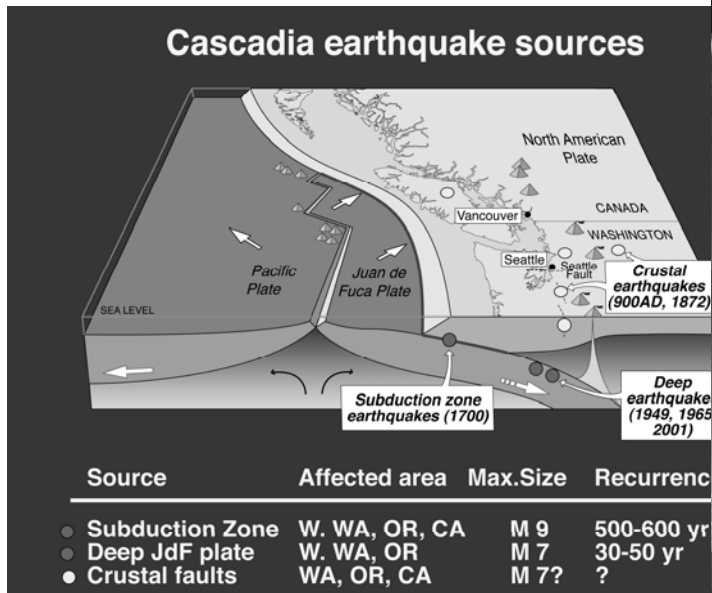
Consequences of Worst-Case/ Alternative Scenarios and Likelihood of a Disaster

Public gives little or no thought of disasters occurring -
typical questions asked by the community are:

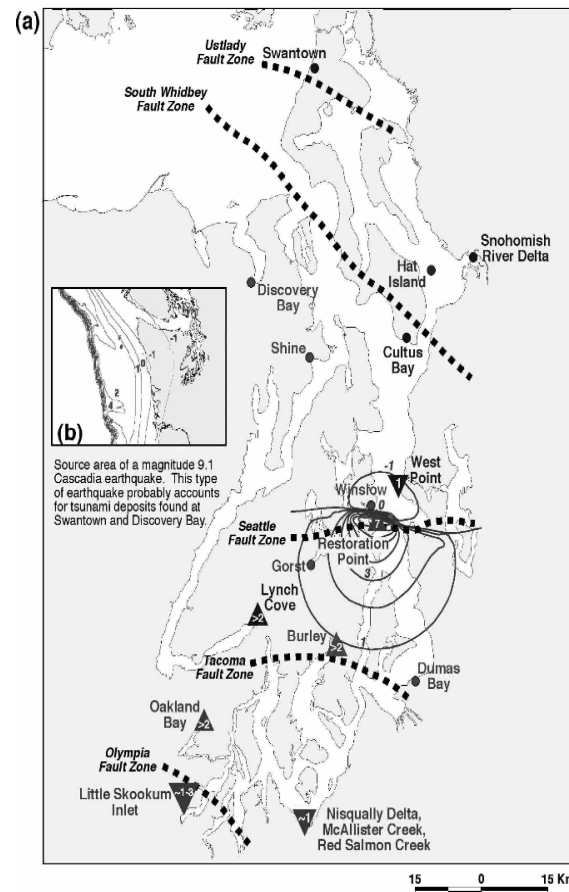
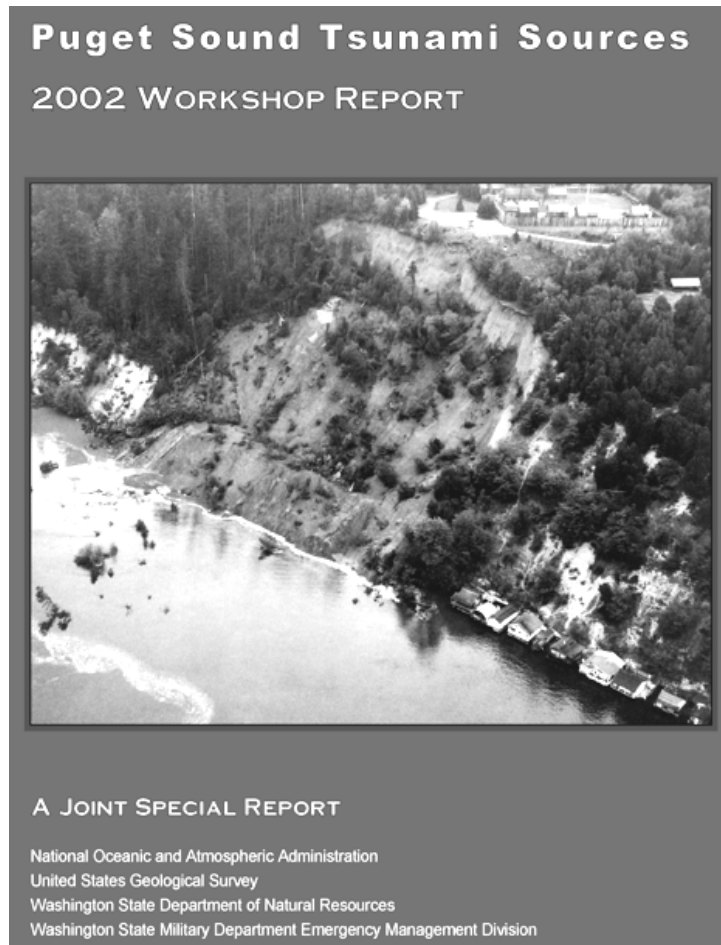
- *“What’s is the worst thing that can happen?”*
- *“What is the likelihood of a major earthquake/tsunami?”*
- *“Do I live in the hazard zone?”*
- *“How do I know my child is safe in this school or daycare?”*
- *“Would you live here?”*
- *“What did you do in considering worst-case scenario?”*
- *“What have you done to protect me?”*

**“You must address these issues directly and use the opportunity to
present information about mitigation and other preparedness features in
the simplest possible language”**

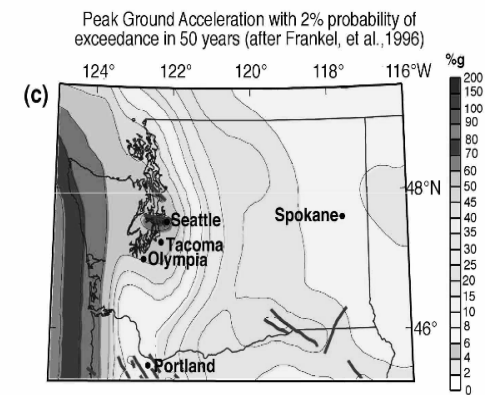
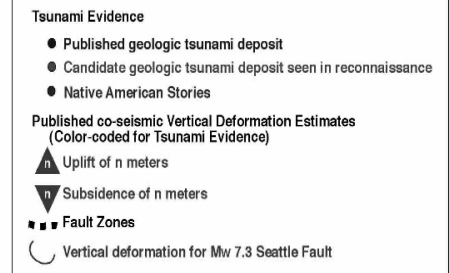
Threat Assessment



Bridge the Gap between Science and Emergency Management



Earthquakes




Map (a) is based on discussions held during the Puget Sound Tsunami Sources workshop held in Seattle, Washington on 10 June 2002, and on subsequent reviews and discussion by workshop participants. Contributing institutions included Kent State University, National Oceanic and Atmospheric Administration (NOAA), University of Nevada, University of Washington, U.S. Geological Survey (USGS), and Washington Division of Geology and Earth Resources. The workshop was organized by NOAA's Center for Tsunami Inundation Mapping Efforts (TIME), the USGS, Washington's Department of Natural Resources (WADNR) and Washington's Emergency Management Division (WAEMD).

Program Based on Comprehensive Approach

Earthquake	Immediate (0 to 30+ minutes)	Organized Response 30 min to 12+ hours
Cascadia mag 9	Education & Training	Education, Seismic data, Buoy data
Cascadia mag 8+ (away from rupture)	Education, Seismic data, Buoy data (rupture is like mag 9)	Education, Seismic data, Buoy data
Distant (Alaska, Japan, other)	Education, Buoy data	Education, Buoy data
Nisqually-type or crustal	Seismic data, Education	Seismic data, Education

Educate Local Officials and Responders



APRIL 2005

APRIL IS EARTHQUAKE MONTH !!!!

April 21st
Drop, Cover, and Hold Day

Statewide Hazard Statistics MARCH 2005

- CSEPP = 4
- DOE = 0
- FIRE = 36
- HAZMAT = 166
- OTHER = 23
- 911 OUT = 3
- SAR = 41
- TERROR = 0
- WEATHER = 7
- CGS = 0
- TOTAL = 280

Monthly Hazard Risk Assessment

Executive Summary

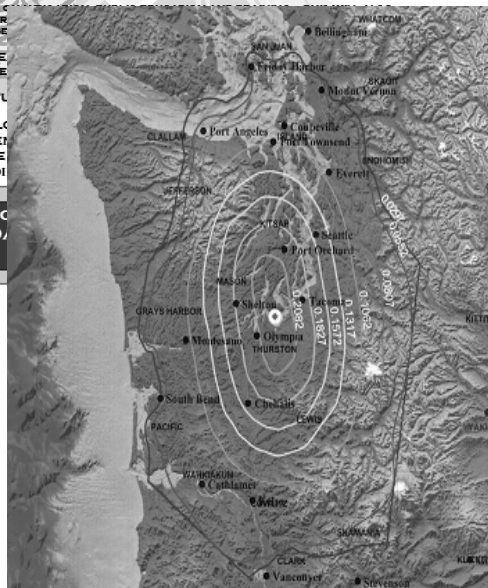
This summary provides a general assessment of the hazards that are believed to present the greatest risk at this time and for the next few months. It is intended to provide emergency managers, planners, officials, and the public advance notice of potential hazards to enable them to initiate appropriate mitigation and preparation actions. Local conditions are shown as they are. Prepared by: [illegible]


QUINALT INDIAN NATION HOSTS EARTHQUAKE WORKSHOP FOR TRIBES

JUNE 21-22, 2004
QUINALT BEACH RESORT
OCEAN SHORES, WASHINGTON

PURPOSE: TO BRING TRIBAL REPRESENTATIVES TOGETHER TO PARTICIPATE IN PRESENTATIONS OF THE LATEST UPDATES ON SEISMIC AND OTHER NATURAL HAZARDS WITH CURRENT INFORMATION. BE AN OPPORTUNITY FOR TO BEGIN WORKING TOGETHER

- ✓ KEYNOTE SPEAKER LIAISON FOR DEPARTMENT OF COMMERCE
- ✓ LODGING IS FULLY AVAILABLE
- ✓ ON THE ENCLAVE THE REPRESENTATIVE MAIL. WE WORKSHOP DISCUSS





TsuInfo Alert

National Tsunami Hazard Mitigation Program
by the Washington Department of Ecology (WEDnet)

Volume 1, Number 4, April 1999


Contents

1. Prepare...Because You Care
1. Tsunami inundation map: A status report
4. New Program Participants
- Bibliographies
3. New Tsunami Mitigation Materials Added to the Library
7. Book Review
8. Reports About Coastal Engineering for Tsunami Mitigation
- Preparedness Tips and Websites
4. Canadian Tsunami and Emergency Preparedness Websites (Part II)
5. People With Special Medical Needs
6. Disaster Preparedness for The Elderly, Disabled, and Mentally Ill
8. Infrequently Asked Questions

Prepare...Because You Care!
APRIL IS DISASTER PREPAREDNESS MONTH IN WASHINGTON

The packets for Disaster Preparedness Month are now available from the Washington Emergency Management Division. The theme for this year's event is *Prepare...Because You Care!* Governor Gary Locke signed a proclamation designating April as Washington State Disaster Preparedness Month.




If your state or jurisdiction is planning a preparedness event, please send an announcement to TsuInfo@ecy.wa.gov for publication.








Seattle Fault Earthquake Scenario


Public Officials Briefing

February 10, 2005



Earthquake Engineering Research Institute

Media

Major partner in awareness education

 **Newspaper**

 **Radio**

► TV

Thursday
April 23, 1998
Olympic Peninsula,
Washington
35 cents

Purely cloudy
High 68, Low 47
Weather / C1

Peninsula Daily News

Good Morning
■ Nation: Holocaust remembered. / C1
■ Sports:
Peninsula College hosts
Kenyan basketball team. / B1

Officials plan for tsunami threat

Workshop: County and park will cooperate to install warning signs on beaches

BY IRIS LINCOLN
PENINSULA DAILY NEWS

PORT ANGELES — Scientists can't predict when the next tsunami will hit the coast or the Strait of Juan de Fuca, but they say a wave will eventually come for that event. Clallam County and Olympic National Park plan to work together to install reader boards along beaches on the east side summer.

The signs will help people be aware of the hazards tsunami pose and help peo-

ple to go to higher ground in the event one should happen, said Joe Clark, Clallam County Emergency Management coordinator.

He and about 100 other officials met at a tsunami workshop in the Clallam County Courthouse Wednesday to talk about tsunamis, which are essentially a series of sea waves caused usually by an earthquake beneath the sea floor.

"Clark said the county is well prepared to deal with tsunamis generated a long distance off — such as near Hawaii or Alaska. When a warning is issued by the West Coast/Alaska Tsunami Warning Center, the county would activate its emergency operations center.

The emergency alert system would be activated by the National Weather Service, either through TV or radio, would be sent a few minutes by evacuation information.

The county would set up evacuation routes and shelters.

Information could be passed to residents in La Puja, Clallam Bay-Sekiak and Neah. But before a long-distance wave hit, Clark said.

However, the agency wouldn't have enough time to issue warnings to people along the coast and the restriction to the Strait of Juan de Fuca if a wave was generated by an earthquake off the coast.

People would have to look for higher ground after feeling an earthquake, Clark said.

Other officials and scientists said there are systems in place to warn people of tsunamis.

Thomas Sakonaka, director for the West Coast/Alaska Tsunami Warning Center and an earthquake of 7.1 magnitude or above along the West Coast or British Columbia coast would trigger a warning by the agency.

If the quake was less than 7.1 magnitude the center would issue a tsunami advisory.

Information would be sent over the National Coastal and Atmospheric Administration's National Weather Radio, said Ted Hanson, National Weather Service warning coordination meteorologist.

People can key hand-held weather radios at electronic stores.

Several stations on the Peninsula would broadcast a two-tone warning alarm for watches and warnings. A watch is to raise awareness; a warning is issued when a tsunami is expected, Hanson said.

The warning or watch would be

The Seattle Times

Monday

Seattle Post-Intelligencer

FEBRUARY 20, 2005
\$1.50

seattletimes.com

Back on track: Huskies rout Cougars in Pullman

Impointing devastation if Seattle Fault ruptures

From a devastated economy to thousands of deaths or injuries, the effects of a potential earthquake are mapped out in the most detailed study of its kind in the country. Its conclusion: We must act now to minimize the damage.

BY RANDI ROSSOFF

The most devastating earthquake in state history arrives on a weekday, shortly before noon. The 9.0 quake is felt in the entire Puget Sound area, and the low-lying lands perform like a giant spring.

By the time the shaking stops, the city of Seattle has lost 1,600 people and the Puget Sound area has lost 10,000 people. The city of Seattle has lost 10,000 people and the Puget Sound area has lost 10,000 people.

More than 100,000 people are injured, and 100,000 people are injured. The city of Seattle has lost 10,000 people and the Puget Sound area has lost 10,000 people.

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The scenario

Shaking after a historic quake in the Cascadia area along the Seattle Fault, the scenario plays out as follows:

- 1. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 2. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 3. A 9.0 quake strikes the Seattle Fault, the Cascadia area.

The impacts

- 1. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 2. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 3. A 9.0 quake strikes the Seattle Fault, the Cascadia area.

TRANSPORTATION

- 1. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 2. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 3. A 9.0 quake strikes the Seattle Fault, the Cascadia area.

UTILITIES

- 1. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 2. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 3. A 9.0 quake strikes the Seattle Fault, the Cascadia area.

ENVIRONMENT

- 1. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 2. A 9.0 quake strikes the Seattle Fault, the Cascadia area.
- 3. A 9.0 quake strikes the Seattle Fault, the Cascadia area.

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SUICIDE BOMBERS KILL 55 WOUND 150

Fewer casualties than a year ago

BY DEBBIE RUSKIN

AT 10:30 A.M. on Feb. 19, 2005, a suicide bomber killed 55 people and wounded 150 in a crowded shopping mall in London.

The attack was the deadliest in the history of the city, and the deadliest in the history of the city.

New State support of Thai farmworkers

Thousands of Thai farmworkers in the United States are being treated unfairly, and the new state support is a step in the right direction.

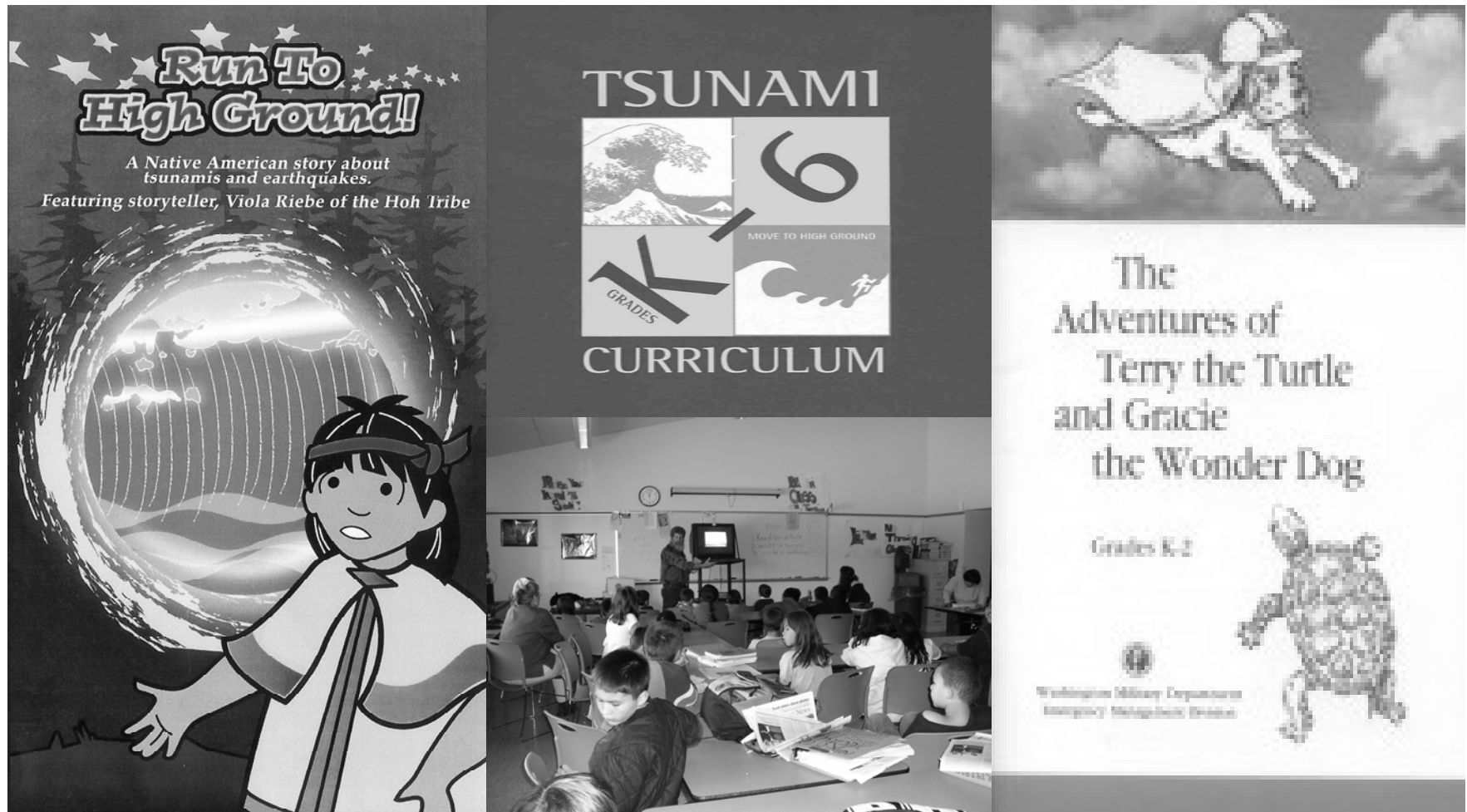
The new state support is a step in the right direction. The new state support is a step in the right direction.

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The new state support is a step in the right direction. The new state support is a step in the right direction.

Outreach To Schools



“The training we give our children today will provide us an informed and prepared adult population tomorrow”

Educate the Adults



Tsunami!

Safety Tips
for the
Washington
Coast!

Evacuation Map for
Grays Harbor and
Pacific Counties



VOLCANIC ASHFALL

HOW TO BE
PREPARED FOR
AN ASHFALL



NOAA WEATHER RADIOS *save lives* for the cost of a pair of shoes



NOAA Weather Radio is Washington's
All-Hazards Warning System
NOAA Weather Radio is a warning system used not only
for flood and weather-related events, but also
for hazards like tsunamis, volcanic activity,
hazardous releases, and Amber Alerts.

NOAA Weather Radio automatically
relays lahar and volcano warnings
direct from volcano monitors to you.

- NOAA Weather Radio is a major part of the
Emergency Alert System (EAS).
- Now "EAS-type" weather radio models permit you
to alarm only the warning messages you want
for your area.



- Weather Radios have a
warning alarm feature that
instantly alerts you to fast
breaking events around
the clock.
- Weather Radios are battery-
operated in the event of
power outages.
- Weather Radios are
available at most radio
electronic retailers and
Internet outlets.

NOAA
Weather Radio
enables you to monitor
weather-related
Forecasts, Watches and
Warnings — 24 hours
a day direct from the
National Weather Service.

Recreated jointly by:

 **National Oceanic and
Atmospheric
Administration (NOAA)**
National Weather Service

 **Washington Military
Department**
Emergency Management Division

 **Pierce County**
Emergency Management Division

A Roadmap to Emergency Preparedness in Washington



2001-2003 Official State Highway Map

Presented by
Washington Military Department
Emergency Management Division



Semi-Annual Drop, Cover, and Hold Drill

Washington is Earthquake Country!

Participate in the Statewide **DROP, COVER AND HOLD EARTHQUAKE DRILL**

APRIL 21, 2005
9:45 a.m. to 10:00 a.m.

Washington, especially the Puget Sound basin, has a history of earthquakes.

You can protect yourself by knowing how to **DROP, COVER and HOLD!**

DROP — When the ground begins to shake, drop down on the floor.

COVER — Take cover under a sturdy desk, table, or piece of furniture. If this is not possible, take cover against an interior wall and protect your head and neck with your arms. Avoid danger spots near windows, hanging objects, mirrors or tall, unsecured furniture.

HOLD — If you take cover under a piece of furniture, hold on to it and be prepared to move with the furniture. Hold that position until the ground stops shaking and it is safe to move.



**WASHINGTON
MILITARY
DEPARTMENT**
*Emergency
Management
Division*

For more information about earthquake safety, contact your local emergency management office or the state Disaster Preparedness Month Coordinator at (253) 512-7047.

Tips!

- When in a **HIGH-RISE BUILDING**, if you are not near a desk or table, quickly move against an interior wall. Protect your head and neck with your arms. Do not use the elevators.
- When **OUTDOORS**, move to a clear area away from trees, signs, buildings, or downed electrical wires and poles.
- When on a **SIDEWALK NEAR A BUILDING**, move into a doorway to protect yourself from falling bricks, glass, plaster and other debris.
- When **DRIVING**, pull over to the side of the road and stop. Avoid overpasses and power lines. Stay inside your vehicle until the shaking stops.
- When in a **CROWDED STORE or OTHER PUBLIC PLACE**, move away from display shelves containing objects that could fall. Do not rush for the exit.
- When in a **STADIUM or THEATRE**, stay in your seat, get below the level of the back seat, and cover your head and neck with your arms.



It Saves Lives

Technology Increases Your Information Flow, Exponentially



---EMD DIRECTORY---

Reaching EMD

Search Our Site

Topics

Organization



Emergency Management Division

NOW IS THE TIME TO GET ORGANIZED AND PREPARED FOR THE NEXT

Stay Informed - Subscribe to [DISASTERINFO](#) Today

DISASTERINFO

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- [Disast](#)
- [For Ki](#)


o T

Step-by-Step Help After a Disaster

After the initial post-disaster shock, you will come face-to-face with practical considerations. *What do you need? Who can help? What should you do first?*

Emergency Assistance		
Need immediate help?	1	Listen to your radio- or TV-broadcast Emergency Alert System for critical information. The American Red Cross, Salvation Army or other voluntary organizations will help with food, shelter, health care and immediate medical needs.
Insurance		
What does your insurance cover?	2	Contact your insurance agent to check policy coverage and file claims.
Call FEMA (the Federal Emergency Management Agency) to find out what help may be available in your area -- and how to proceed.		
Recovery Assistance		
Register with FEMA	3	Call FEMA's toll-free information and registration line: 1-800-462-9029 or TTY: 1-800-462-7585 if you are speech or hearing-impaired. YOU MUST APPLY WITHIN THE 60-DAY APPLICATION PERIOD.

You must register in order to get any government benefits in a Presidentially-declared disaster.



Washington State Emergency Management Division

EMD - A Division of the Washington Military Department

This site is for OFFICIAL PURPOSES ONLY

Use the most recent version of this page, press **SHIFT+RELOAD** or **SHIFT+REFRESH**

has been established for the use of local, county, state and federal government agencies and organizations to share current operational information about major events impacting, or of Washington State jurisdictions. Please help safeguard this Website URL (Web Address) by not indiscriminately and then only to those agencies with a bonafide need-to-know.

MEDIA CENTER

Public Information Office (PIO) has established a **Media Center** to respond to questions from the media regarding current incidents. To handle media inquiries in a timely manner, we ask you to call **the center** at the following number:

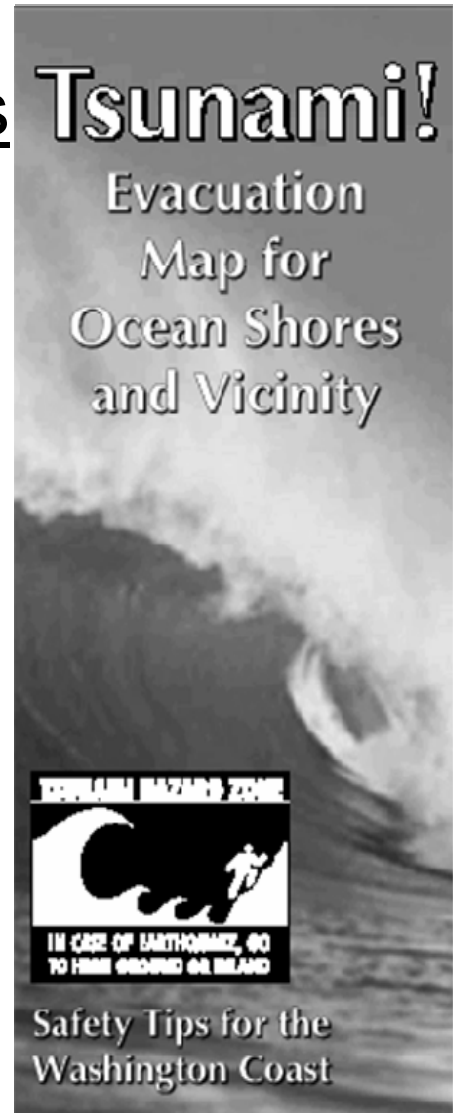
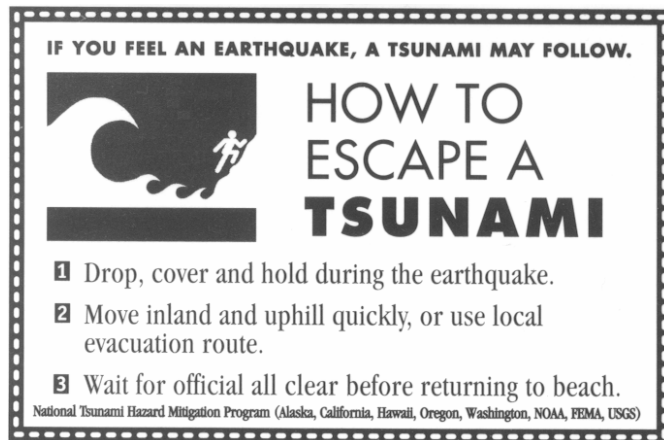
1-800-688-8955

The media will be able to talk to EMD media relations staff 24-hours a day during this emergency.

Engaging Business

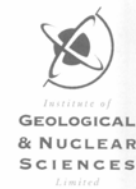
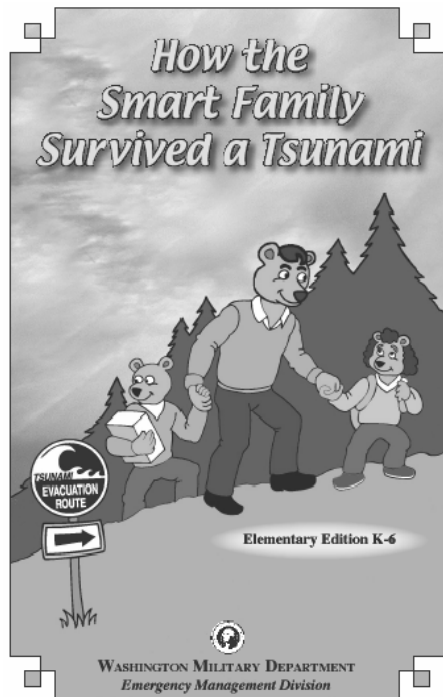
Engaging business community saves lives

- Tourist must be aware of tsunami issues and evacuation procedures
- Educate and train business on tsunami contingency planning and train staff on what to do for a tsunami



Social Science Studies

Children's risk perceptions and preparedness: A hazard education assessment in four coastal communities in Washington – September 2004

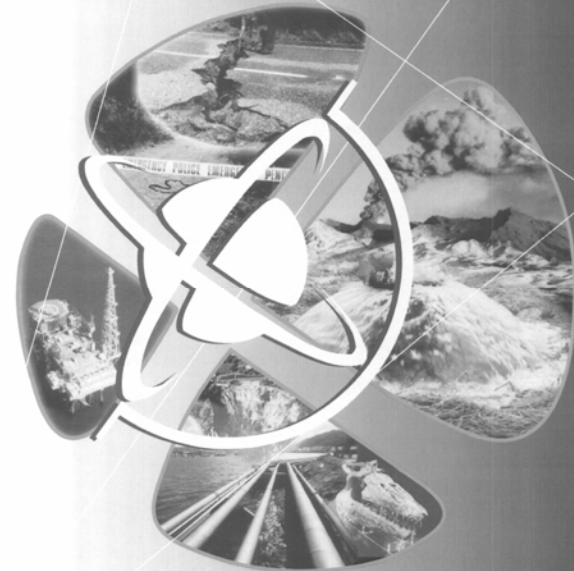


Children's risk perceptions and preparedness: A hazard education assessment in four coastal communities

Science Report

By D. Johnston, B. Houghton, K. Ronan & D. Paton

2004/026
September 2004



Tsunami Ready Program



Benefits of Risk Communication

- **Improve** the ability of the community to react to emergency management/responder directions
 - ✓ Shelter-in-place or evacuation
- **Improve** community's understanding of their potential risks
- **Improve** community understanding & support of your activities
- **Reduce** the impact of a community disaster
- **Decrease** the potential for legal action by the community

“If a risk to the community exists, the community has the right to be informed and consulted”

No Overnight Solutions

Accept and Embrace Generational Lessons



“Become the change you want to see in the world”