



State of Alaska

Department of Military and Veterans Affairs

Division of Homeland Security and Emergency Management

R. Scott Simmons

State Hazard Mitigation Officer,

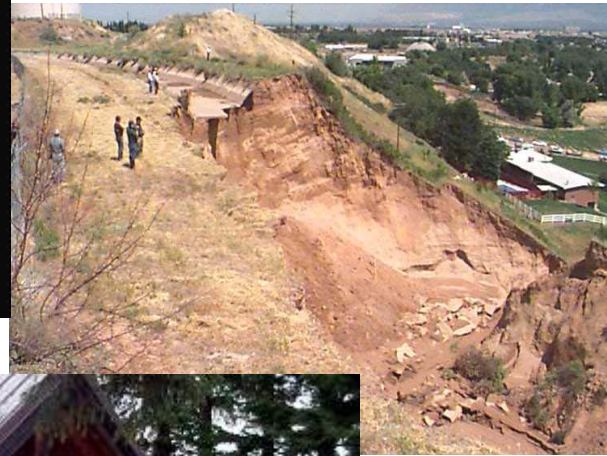
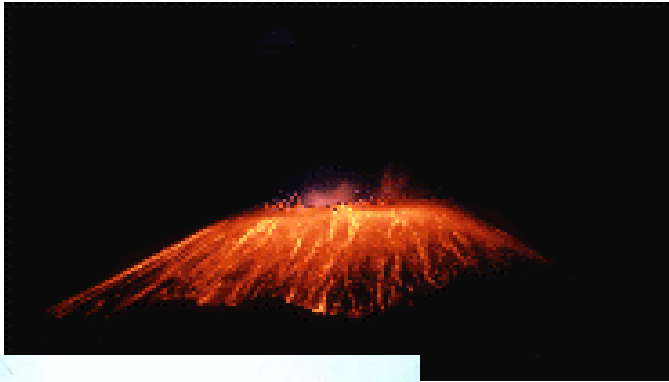
EQ Program Manager, Tsunami Program Coordinator,

Presented to the Alaska Seismic Hazards Safety Commission

December 6, 2006

Our Partners:





Our Mission

Alaska's Division of Homeland Security and Emergency Management provides critical services to the State of Alaska to protect lives and property from terrorism and all other hazards, as well as to provide rapid recovery from all disasters.

Alaska's Uniqueness - Exposure to Hazards

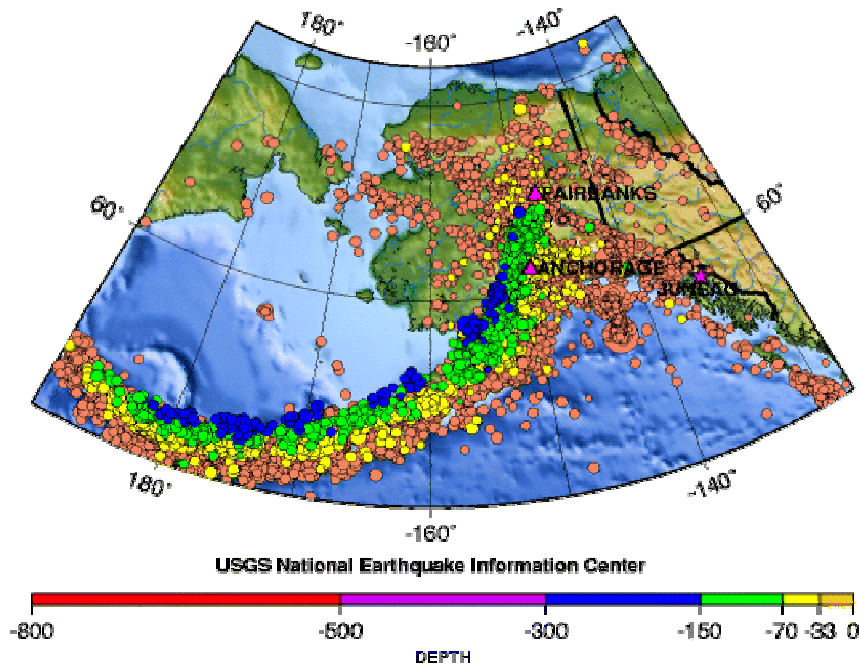


Alaska's Hazards Equate to Risk to the Built Environment



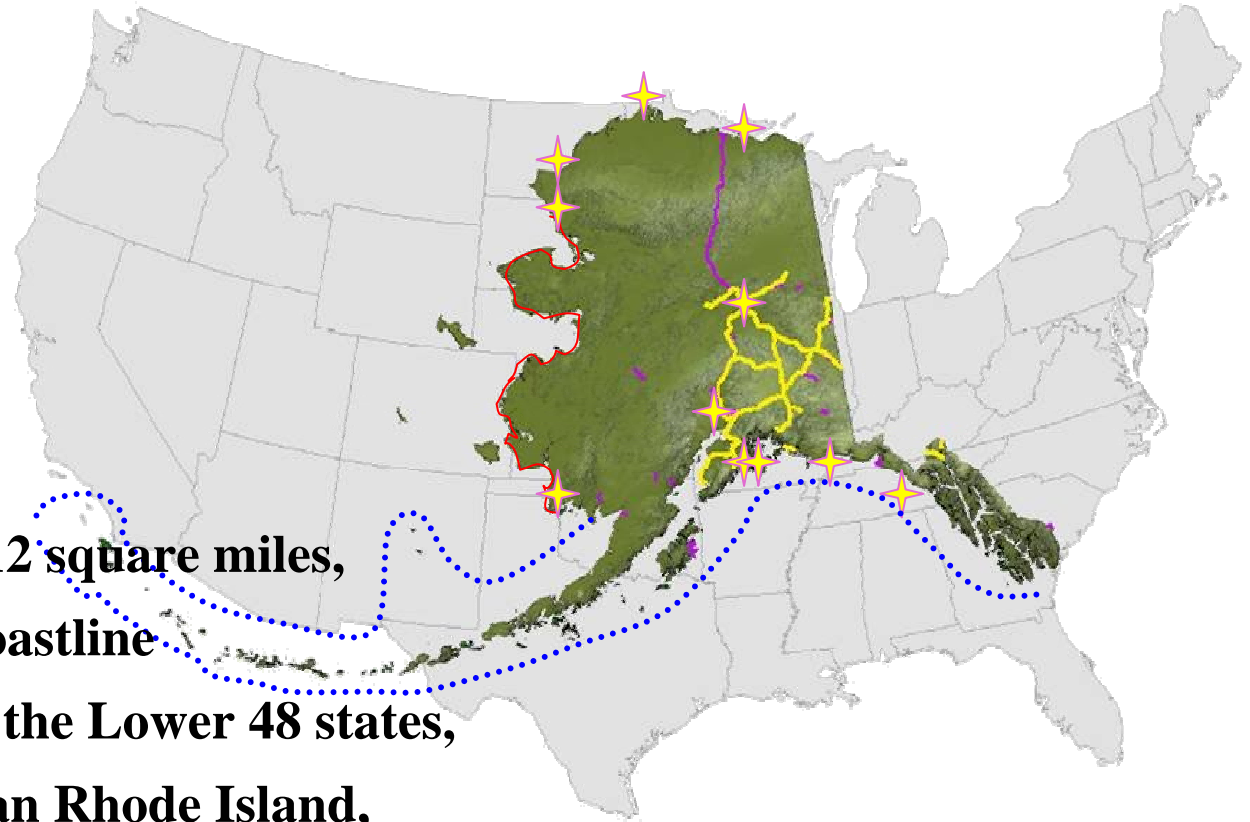
This is the extent of only one hazard, Earthquakes

1990 - 2001
Seismicity of Alaska



- We have the smallest population base in FEMA Region 10
- Yet, we also have the greatest number of natural hazards:
 - Typical: Flood, Wildfire, Earthquake, and Landslide
 - High Winds (Hurricane class), Blizzards, Tsunamis, Avalanches, Storms, Sea Storm Surges, Extended Extreme Cold Weather, River Ice Break-up and others
 - Our seven most recent disasters include the ones indicated in White above

A Myriad of Complexities Facing Alaska



- Alaska contains **586,412 square miles**,
- Has **47,300 miles of coastline**
- Is **one-fifth the size of the Lower 48 states**,
- Is **488 times larger than Rhode Island**,
- Is **two and a half times larger than Texas; and larger than Texas, California, and Montana combined.**



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Current DHS&EM Disaster Activities



■ Working Seven (11) Open “Federal” Disasters (21 open State disasters)

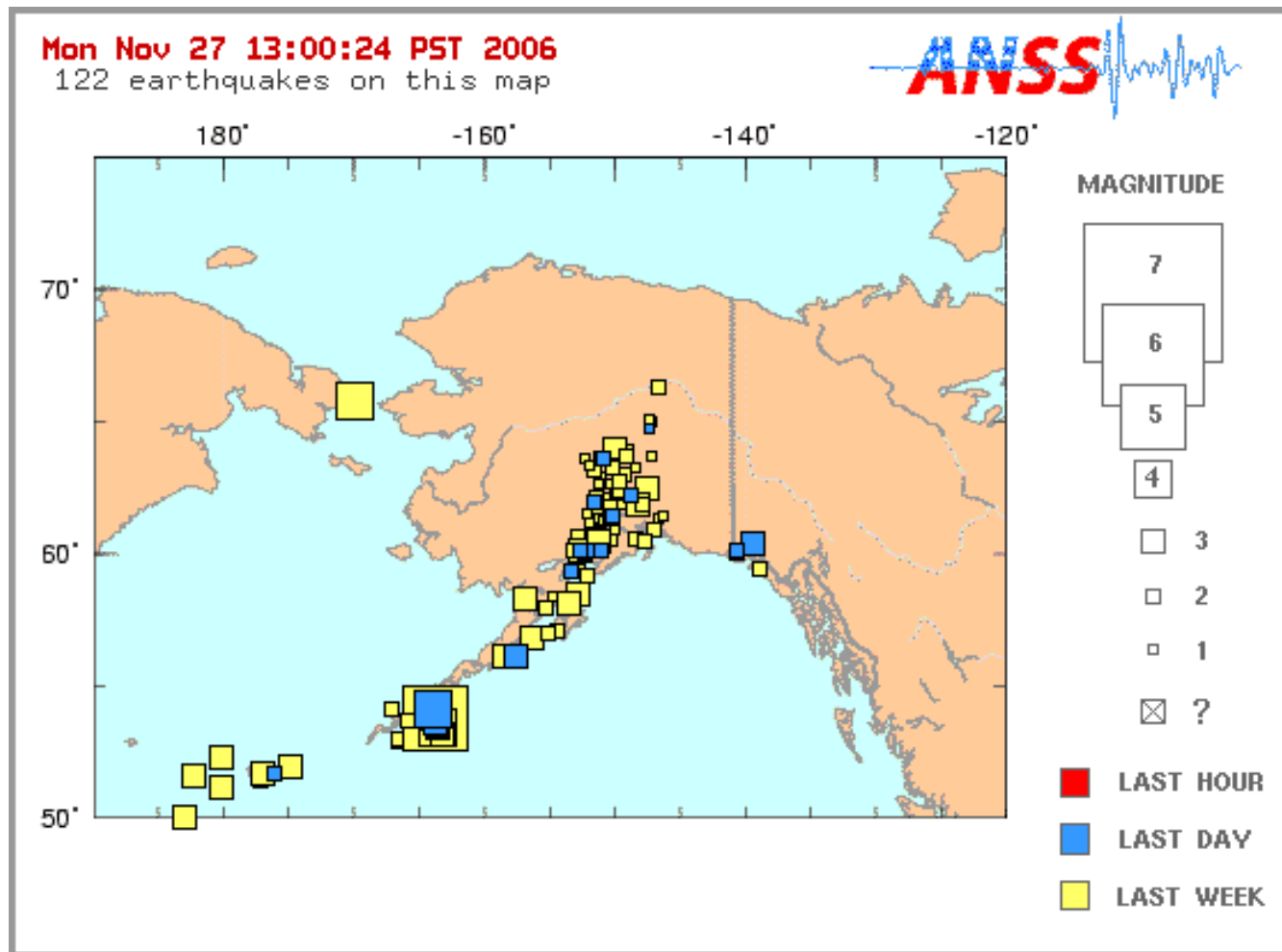
- FEMA-1423-DR-AK, Interior Spring *Flood*
- FEMA-1440-DR-AK, Denali 7.9 *Earthquake*
- FEMA-1445-DR-AK, KPB Fall *Flood*
- FEMA-1460-DR-AK Southcentral *Windstorm*
- FEMA-1571-DR-AK Bearing Straits *Sea Storm*
- **FEMA-1584-DR-AK North Slope Borough *Winter Storm***
- **FEMA-1618-DR-AK West *Coast Storm***
- **FEMA-1657-DR-AK 06 *Ice Jams, Land Slides, and Floods***
- **FEMA-1663-DR-AK 06 August Mat-Su *Flood***
- **FEMA=1666-DR-AK Hooper Bay *Fire***
- **FEMA-16xx-DR-AK 06 October *Flood***



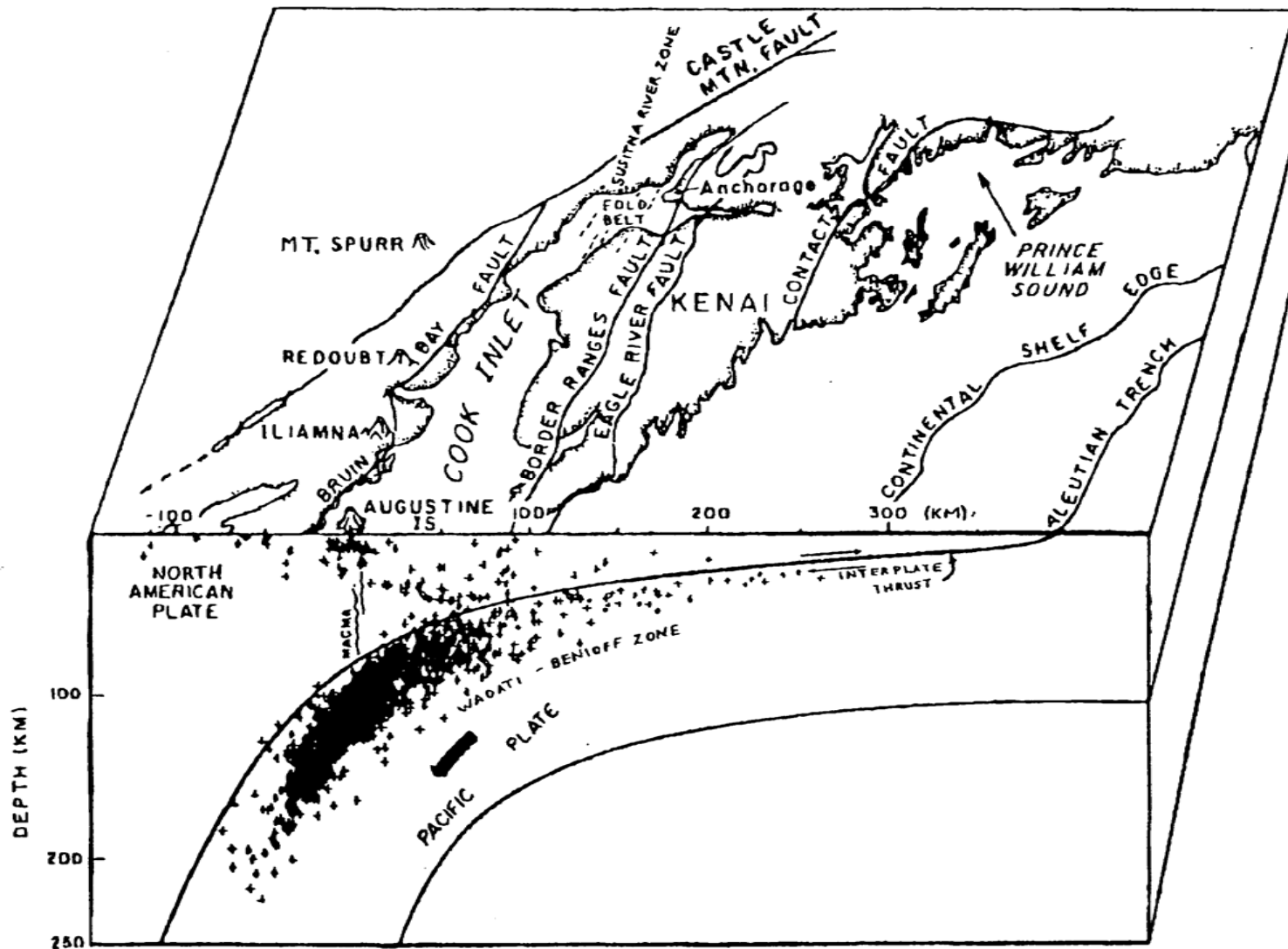
Real Life: Anchorage, '64 Earthquake



Weekly Seismic Activity



Oblique View of Earthquakes and Fault Zone Interaction



Risk and Vulnerability Assessment Tools

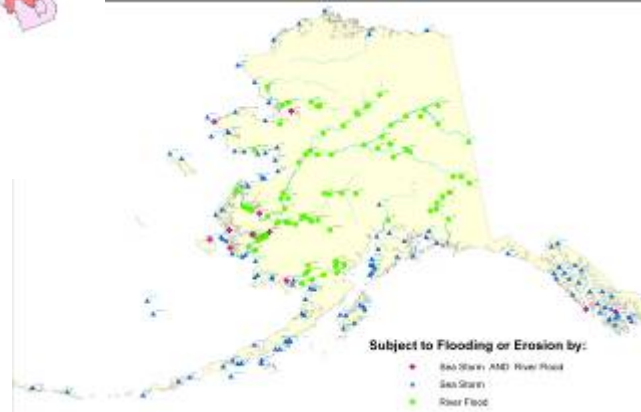
"Ineffective Hazard Maps"



- Hazards confined to census area boundaries or scatter maps
- Information not specific to determine risk or vulnerability



Earthquake Hazard



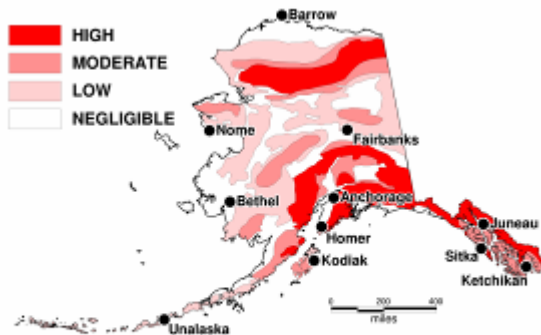
Flooding or Erosion Hazard



Landslide Hazard

Assessment Tools (cont.)

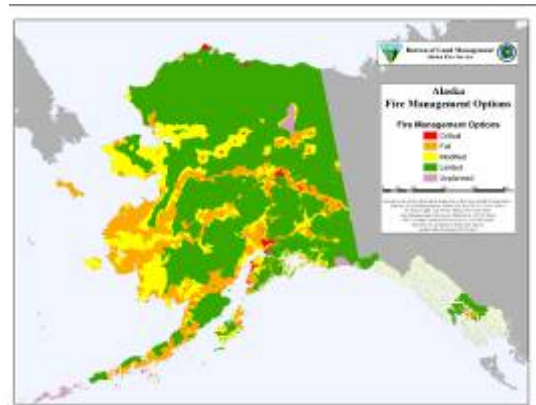
“Essential - Geo-Referenced Hazard Maps”



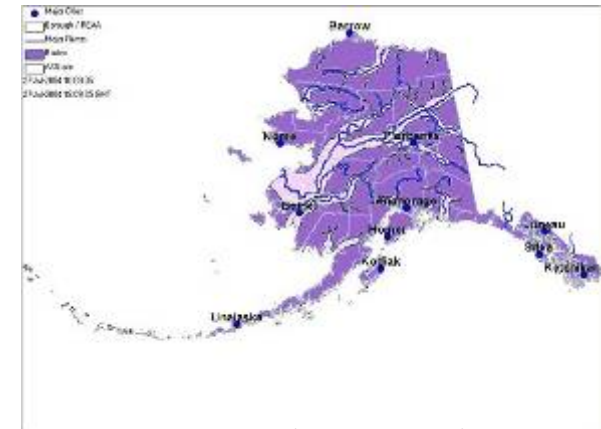
SNOW AVALANCHE POTENTIAL IN ALASKA

Adapted from Hackett, S.W., and Santeford, H.S., 1980, *Avalanche Zoning in Alaska: Journal of Glaciology*, v. 26, no. 94, p. 385.

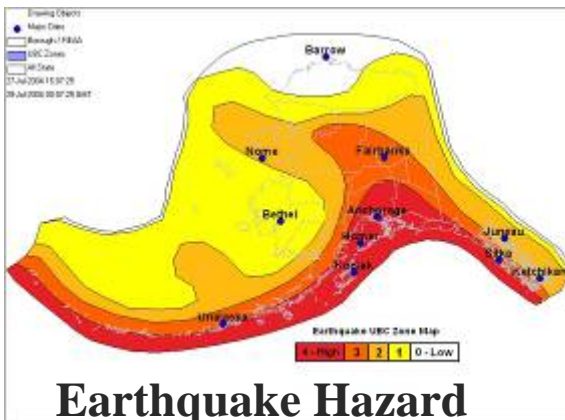
Avalanche Hazard Zones



Wildfire Hazard



Flood – River Basin

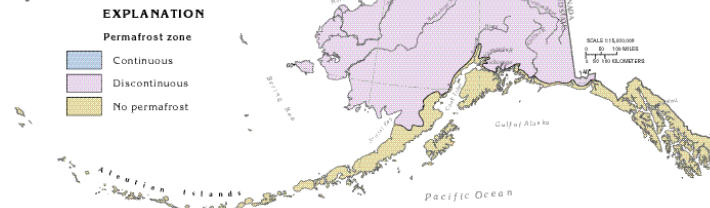


Earthquake Hazard

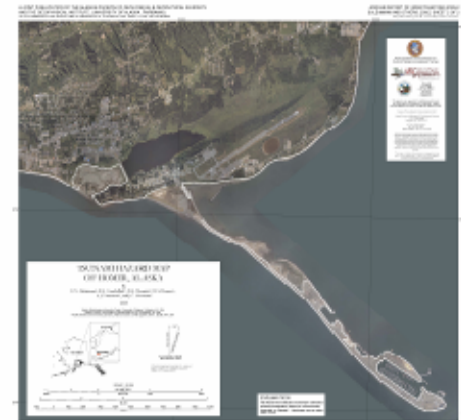
Zone – Building Code

Figure 5. Permafrost, or perennially frozen soil and rock, is continuous in northern Alaska, discontinuous in a wide band in the central part of the State, and absent in southern and southeastern areas near the coast.

Modified from Ferriana, O.J., Jr., 1985, Permafrost map of Alaska: U.S. Geological Survey Miscellaneous Geographical Investigations Map I-445, scale 1:2,500,000, 1 sheet. Base modified from U.S. Geological Survey digital data.



Permafrost Hazard



Tsunami – Homer

Community Visits



- **Homeland Security, Preparedness, Earthquake and Tsunami Focused**
- **Austere and Unique Weather and Living Conditions**
- **Limited Modes of Transportation Between Communities**
- **i.e.~25 Tsunami Visits since 1999:**
(Cordova, Craig, Chenega, Chignik Bay, Elfin Cove, Homer, Hydaburg, Ketchikan, Klawock, Kodiak City, Juneau, Port Alexander, Perryville, Metlakatla, Sand Point, Seward, Sitka, Tatitlek, Thorne Bay, Valdez, Unalaska, Valdez, Yakutat, Whittier.)



Earthquake / Tsunami Outreach



- Quake Cottage, EQ Resistant Model Home, and table top displays dramatically increased tsunami and earthquake focused outreach initiatives

- Quake Cottage simulates an estimated 5.0 M EQ
- Used at Public and Private Events
- Schools, Businesses and Organizations
- State Fairs
 - Distribute outreach materials
 - Teach mitigation methods
- Community EQ Mitigation Visits
 - Affected Area Outreach Effort



Earthquake and Tsunami Outreach Products and Activities



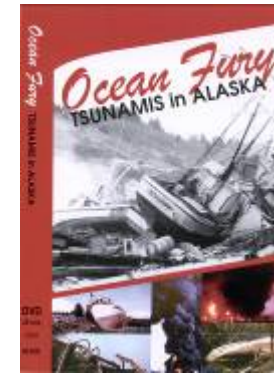
Hazard Specific Booklets



Tsunami Hazard Modeling



Alaska Tsunami Video



DHS&EM and UAF/GI Joint Venture Tsunami Warning Systems for Communities



Grant Opportunities



- **Hazard Mitigation Grant Program (HMGP)**
 - Open Disasters Only
 - Kodiak Borough Schools - Seismic Retrofit (2)
 - UAF/GI Real-Time Displays for Selected EOCs
- **Pre-Disaster Mitigation Grant Program (~\$32 million)**
 - Nationally Competitive Grant
 - Anchorage School District Gas Shut-Off Valves
 - Kodiak Island School – Seismic Retrofit (Ranked Number One in the Nation)
- **National Tsunami Hazard Mitigation Program**
 - Must be Tsunami Related
 - Tsunami Hazard Signs
 - Sand Point, Seward, Sitka, Homer, Valdez, Kodiak City
 - Evacuation Route Planning
 - Sand Point, Seward, Sitka, Homer, Valdez, Kodiak City
 - Local Hazard Risk Mitigation Planning
 - Kenai Peninsula Borough
 - Tsunami Siren Purchase and Installation (State & TWEAK Partnership)
 - Perryville, Chignik, Valdez, Sitka, Others

Post Disaster Damage Assessment Course



- Classroom and field exercise to develop skilled assessors for statewide emergency response.
- Handouts with additional details
- Cost per person ~\$75.00
- Duration: 16 hours.
- Contact MOA Emergency Operations Center
 - Vince McCoy, 343.1403
 - mccoyvg@ci.anchorage.ak.us



"Outside" Training Opportunities



EMI: All Hazards

- Earthquake, Floods, Tsunami, Wildfire, etc. (Naturally Occurring Disasters)
- ***Emergency Management Institute*** offers the mandatory National Incident Management System (NIMS) training, Incident Command System (ICS), National Response Plan (NRP), Disaster Basics, Continuity of Operations (COOP), and several other disaster preparedness courses. Both online and Resident classes.
- *Noble Training Center* is Associated through EMI located in Anniston, Alabama designed to offer training about medical training.

CDP: Weapons of Mass Destruction (WMD)

- Chemical, Biological, Radiological, Nuclear, high Explosives (CBRNE)
- Man Created Disasters

Federal Emergency Management Agency (FEMA)



Emergency Management Institute (EMI)

- *EMI* offers the mandatory National Incident Management System (NIMS) training, Incident Command System (ICS), National Response Plan (NRP), Disaster Basics, Continuity of Operations (COOP), and several other disaster preparedness courses. Both online and Resident classes.

Noble Training Center (NTC)

- Associated through EMI located in Anniston, Alabama designed to offer training about medical training.

EMI Resident and Non-Resident Courses:



- Natural and technological hazards (professional development, leadership, instructional methodology, exercise design and evaluation, information technology, public information, integrated emergency management, and train-the-trainers.)
- Instruction focuses on the four phases of emergency management: mitigation, preparedness, response, and recovery.



The Center for Domestic Preparedness (CDP):



- Began operations in June 1998
- Federal Department of Homeland Security's only all-hazards training center federally chartered WMD training center.
- Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) weapons.



CDP Training Partners



- ***New Mexico Institute of Mining and Technology (NMIMT)
National Energetic Materials Research and Testing Center***
- ***Louisiana State University (LSU) Academy of Counter-Terrorist Education:***
- ***Texas A&M University National Emergency Response and Rescue Training Center***
- ***U.S. Department of Energy's Nevada Test Site (NTS)
National Exercise, Test, and Training Center***

Training Websites



- EMI: <http://www.training.fema.gov/>
- NTC: <http://www.training.fema.gov/EMIweb/NTC/>
- CDP: <http://cdp.dhs.gov/>
- TEEX: <http://www.teex.com/>
- NMIMT: <http://www.emrtc.nmt.edu/>
- LSU: <http://www.ace.lsu.edu/>
- NTS: <http://www.nv.doe.gov/nationalsecurity/homelandsecurity/responder.htm>

Training Application Process



- Go to the agency web site offering the class you wish to attend.
- Research which the specific class.
 - Make sure you satisfy any class prerequisites.
- Return to the agency's home page and follow their application process. *(Fill out the application completely.)*
- Get proper signatures at your work site.
- Submit all completed applications to DHS&EM:
 - FAX: Training Officer, 428-7009
 - E-Mail: Training Officer, doug_lewis@ak-prepared.com or Roy (Buzz) Bainbridge, roy_bainbridge@ak-prepared.com, or
 - Snail Mail: Training Officer, P.O. Box 5750 Ft. Richardson, AK, 99505-5750.

(All applications must have the State Point of Contact signature to be eligible to attend.)

National Outreach Efforts – consistent messages across the country.



- ***During***
 - Drop / Cover / Hold – (National Initiative)
 - Drop under something solid-*Desks or Tables*
 - Hold on and prepare to move with the item
 - Remain where you are until shaking stops
 - Stay clear of windows, stove pipes and tall heavy furniture
- **If in a Tsunami Area - After an Earthquake**
 - If you feel the earth moving from the earthquake and it lasts for more than 3 minutes. . .
 - Move Inland more than 1 mile, to Higher Ground, or Vertically Evacuate if in a building with several stories above sea level.



Questions?

