

2012 Pacific Northwest Advisory Committee

Agenda

11:00 Overviews

11:25 Reports— Weaver, Madin, Schelling, Walsh, Steele

?? Working Lunch

1:20 Earthquake early warning – Vidale

1:55 Numerous efforts underway – Bodin

2:20 Japan lessons, hazard workshop – V for Frankel

Ensuing 2 weeks, PNSN compiles notes and recommendations, then Steele circulates for correction and approval.



Overview



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2006-7 John-Paul
Orientation



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2007-8

Broadband expansion

Visiting cities and counties

promoting products, soliciting feedback



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2011-12 Software switch, new web site, netquakes.



Ongoing developments



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State budget →



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Federal budget ?



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CREST funding gone



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Geodesy possibilities ↑

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Early warning prototyping ↑

Last year's topics that are less emphasized this year



DEVIL

DEEP BLUE SEA

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Stimulus - moving past



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Portland monitoring - done



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Portland monitoring - done

New web site and software -
now down to details



DEVIL

DEEP BLUE SEA

Notable quakes two years ago

Notable quakes last year

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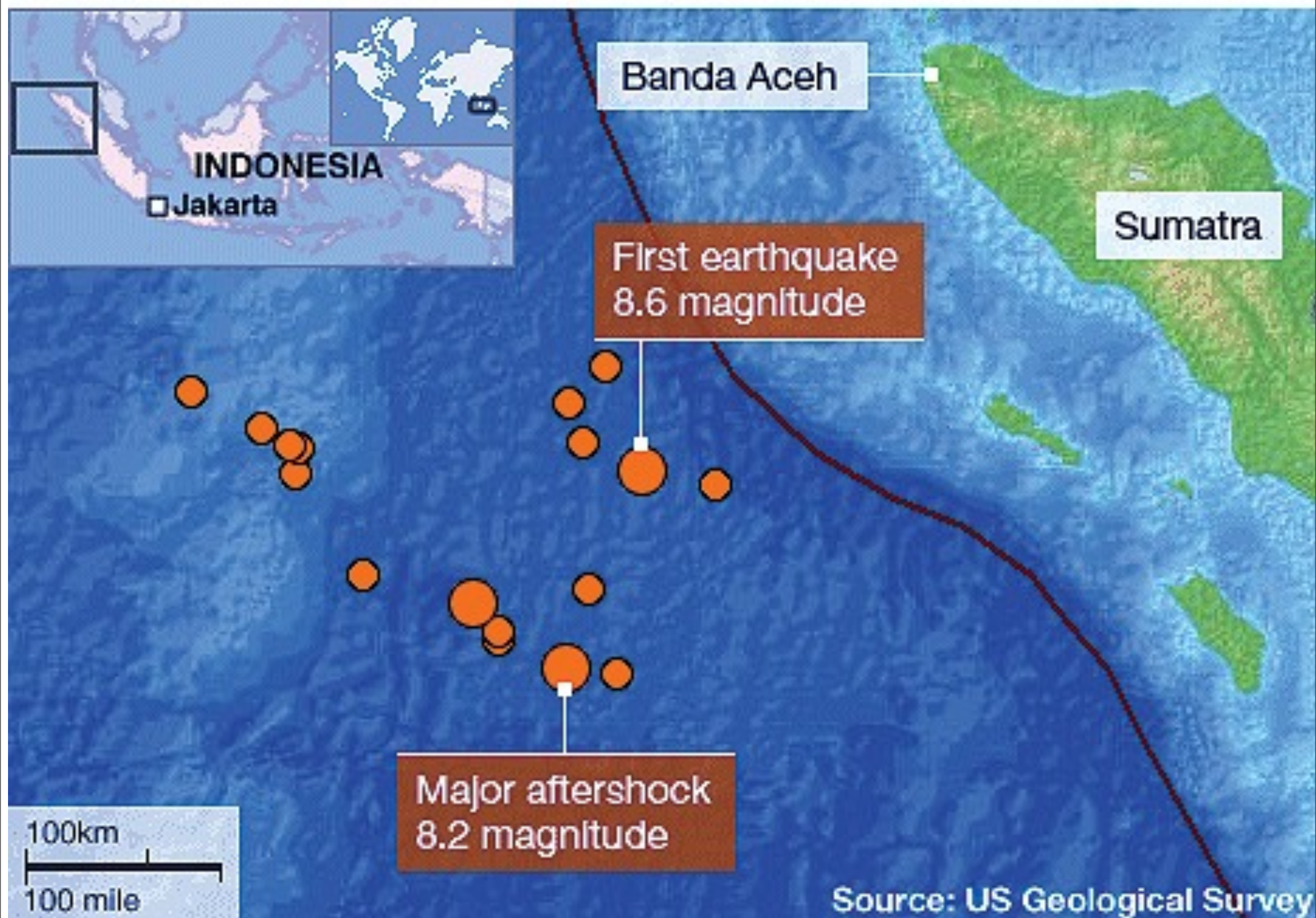
Notable quakes last year

- **Japan** - M9! 3/11 (Art will discuss)
- **Sumatra** - M8.6, M8.2 last month

NOT on megathrust complicated, strike-slip

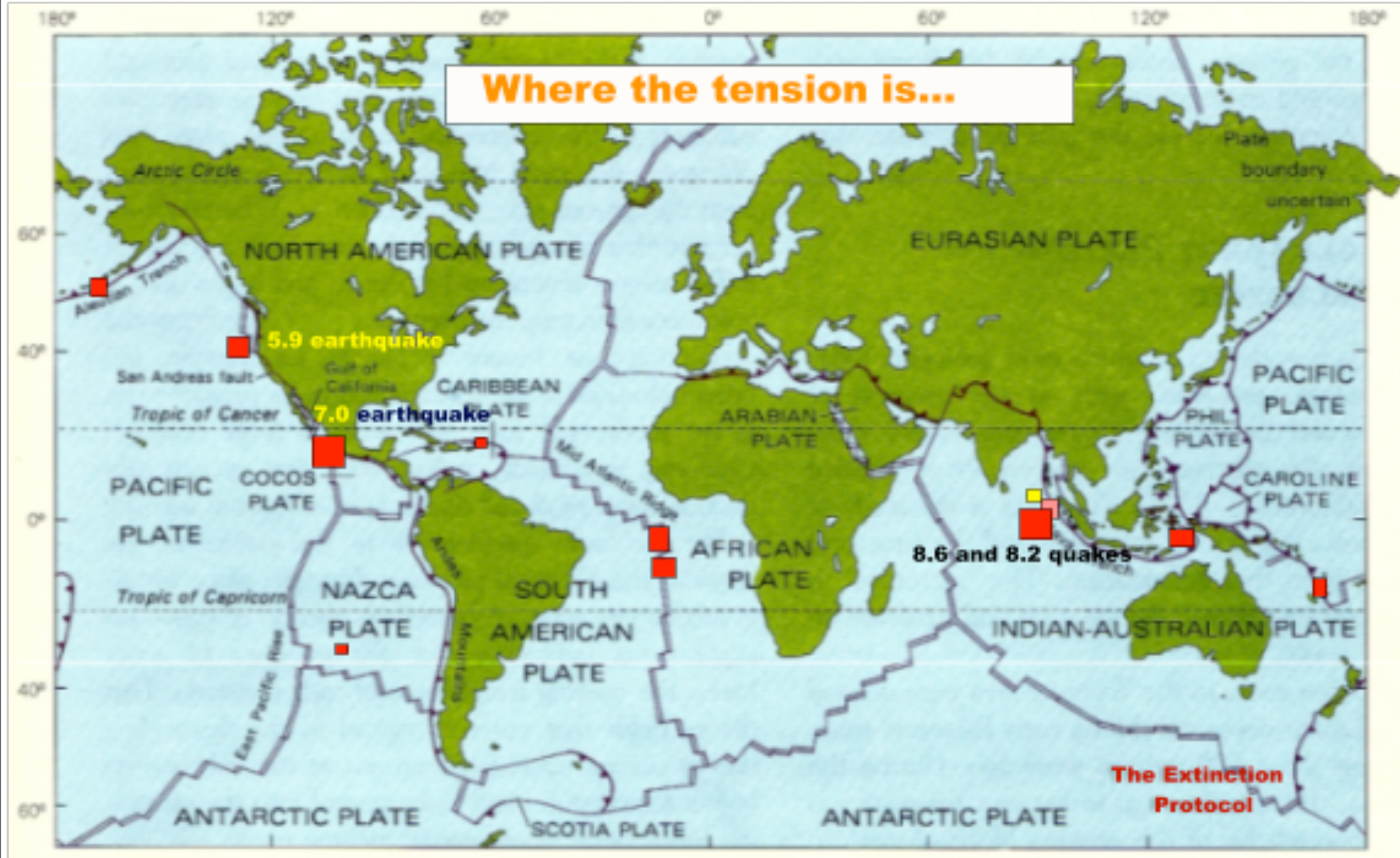


Earthquakes off Sumatran coast 11 April 2012



New boundary, triggering

Where the tension is...

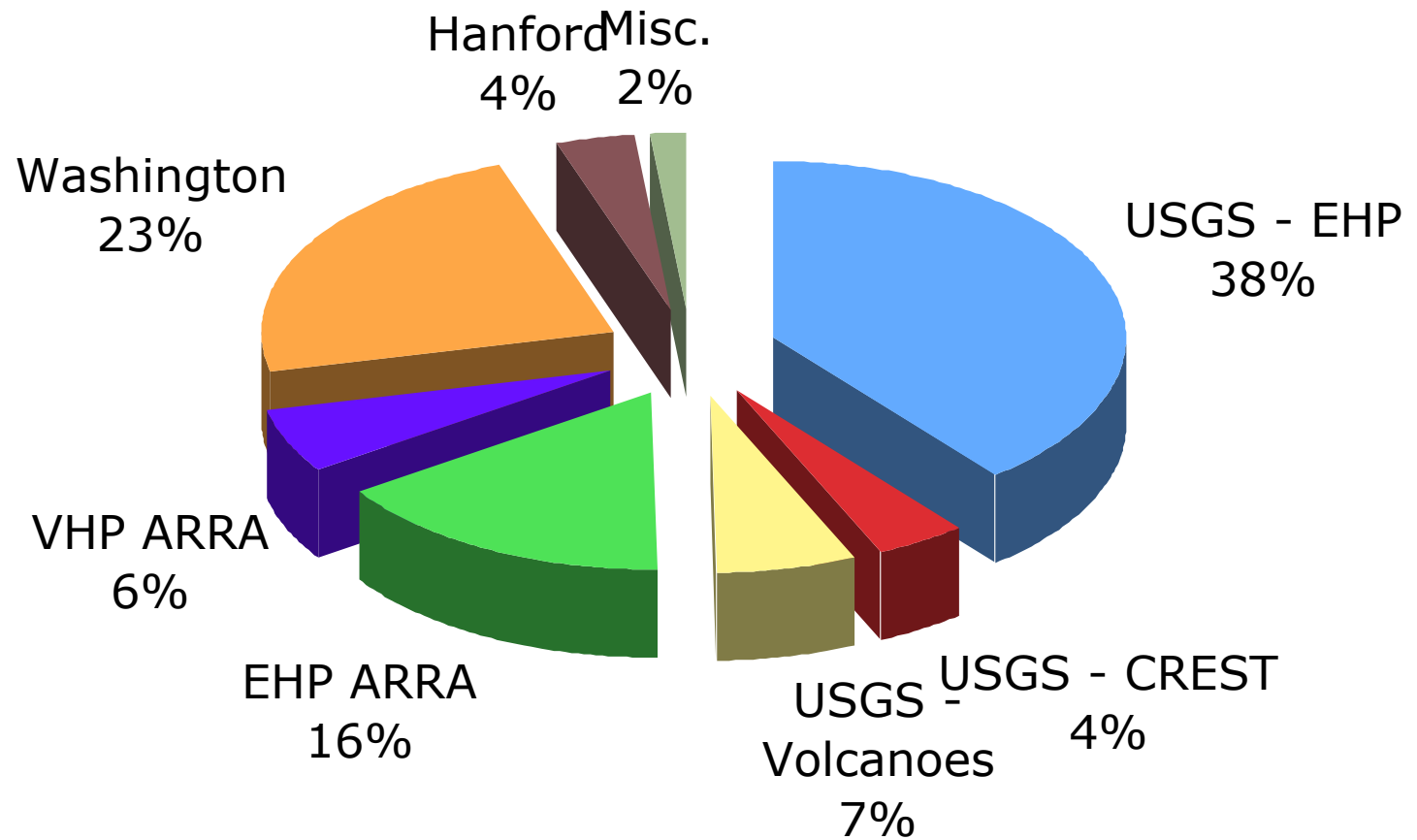


Potential lessons

- Strike-slip events can be much bigger than expected.
- Big events in the middle of oceanic plates are possible, although very rare.
 - Not so much tsunami danger, however.
- Perhaps more global triggering than expected, not yet rigorously tested.

2010 \$\$, this year is different

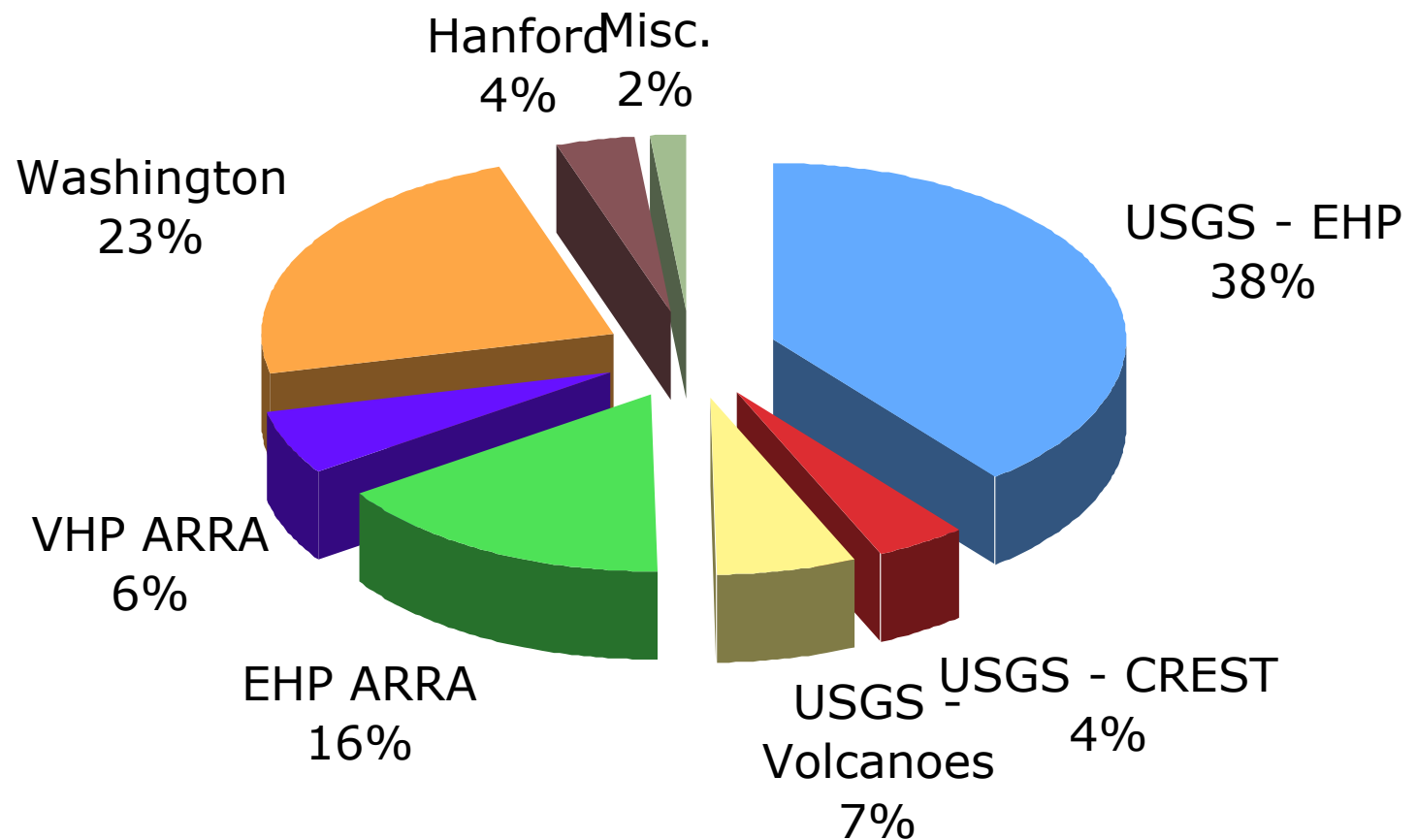
PNSN 2010 Budget (~\$1.92M)



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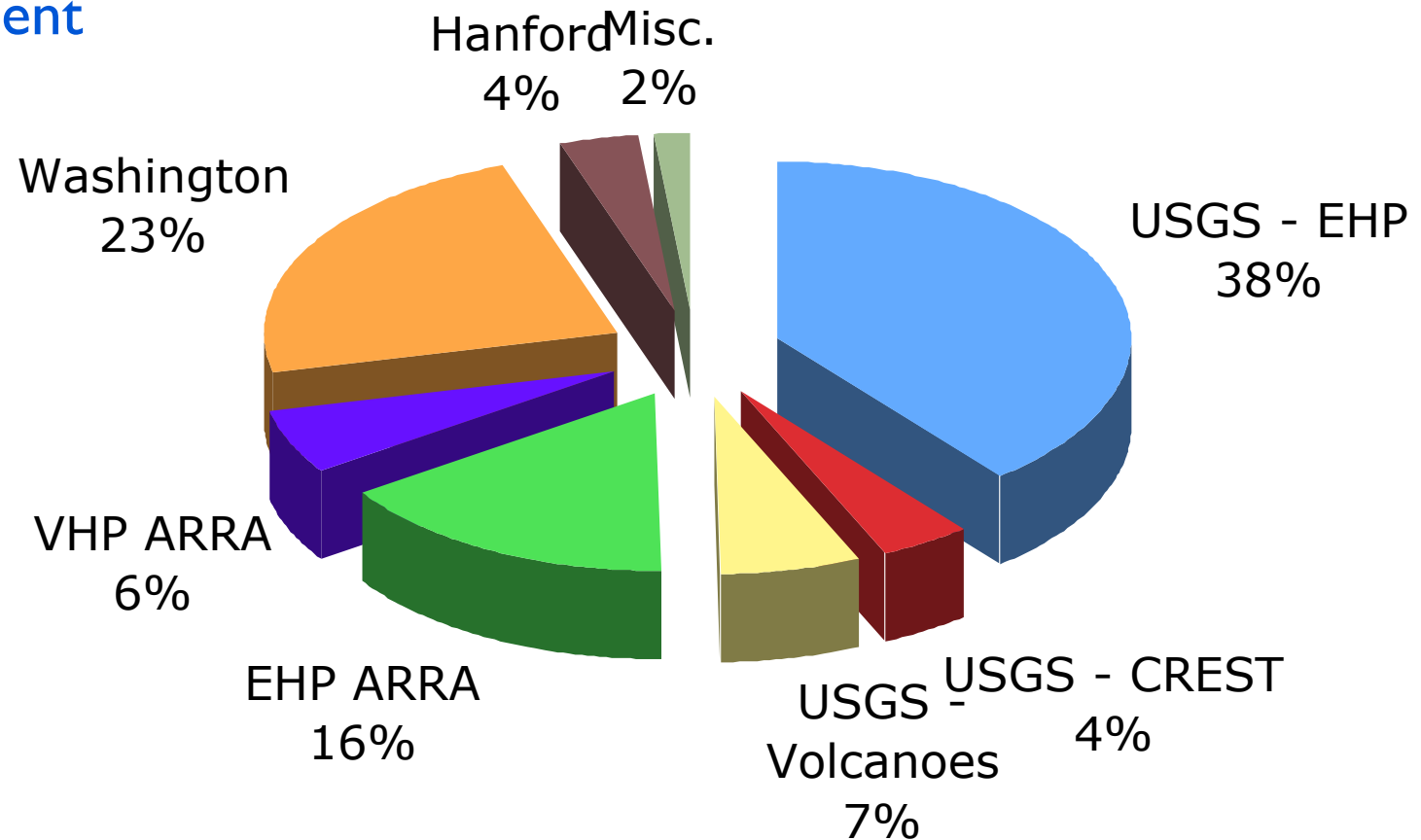
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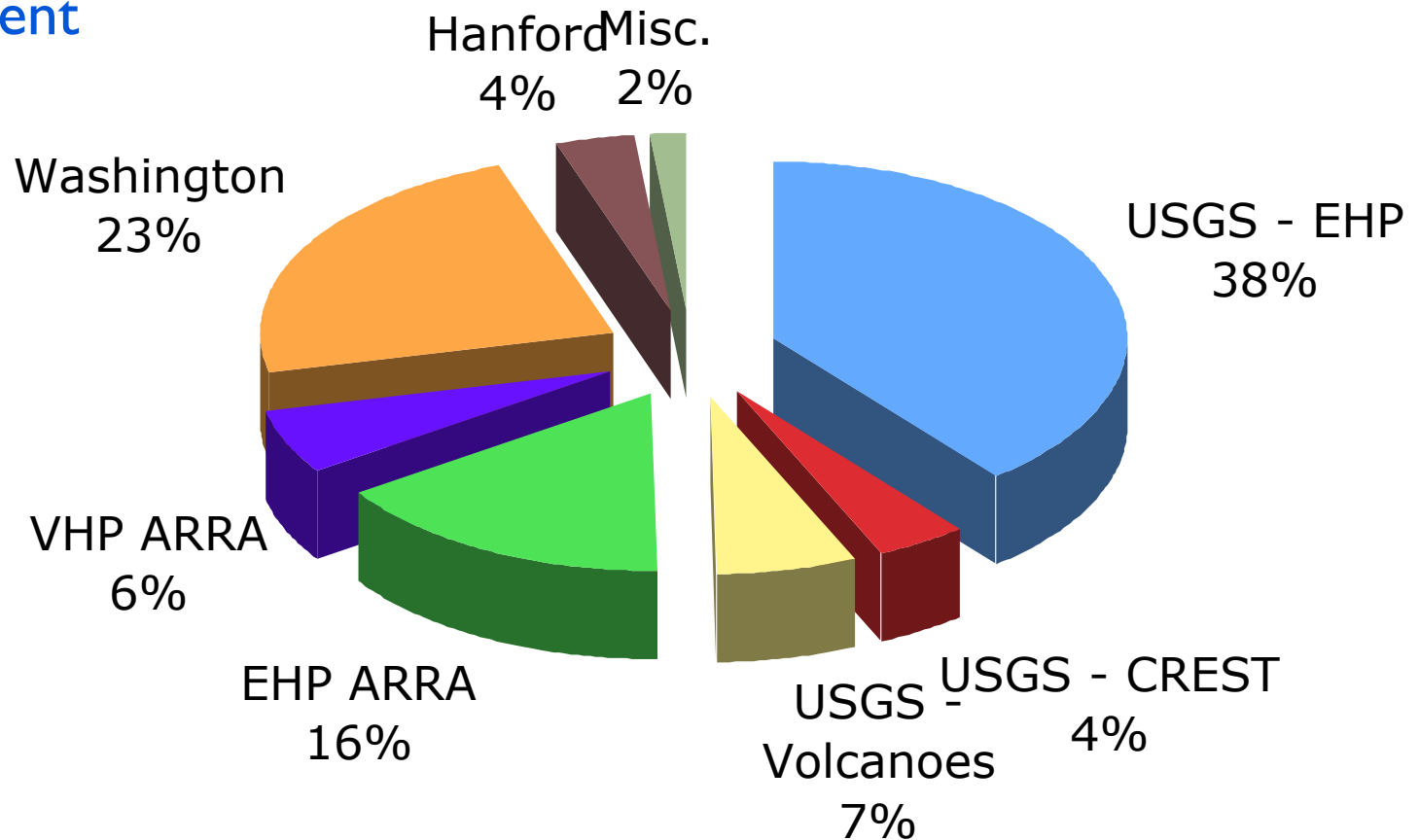
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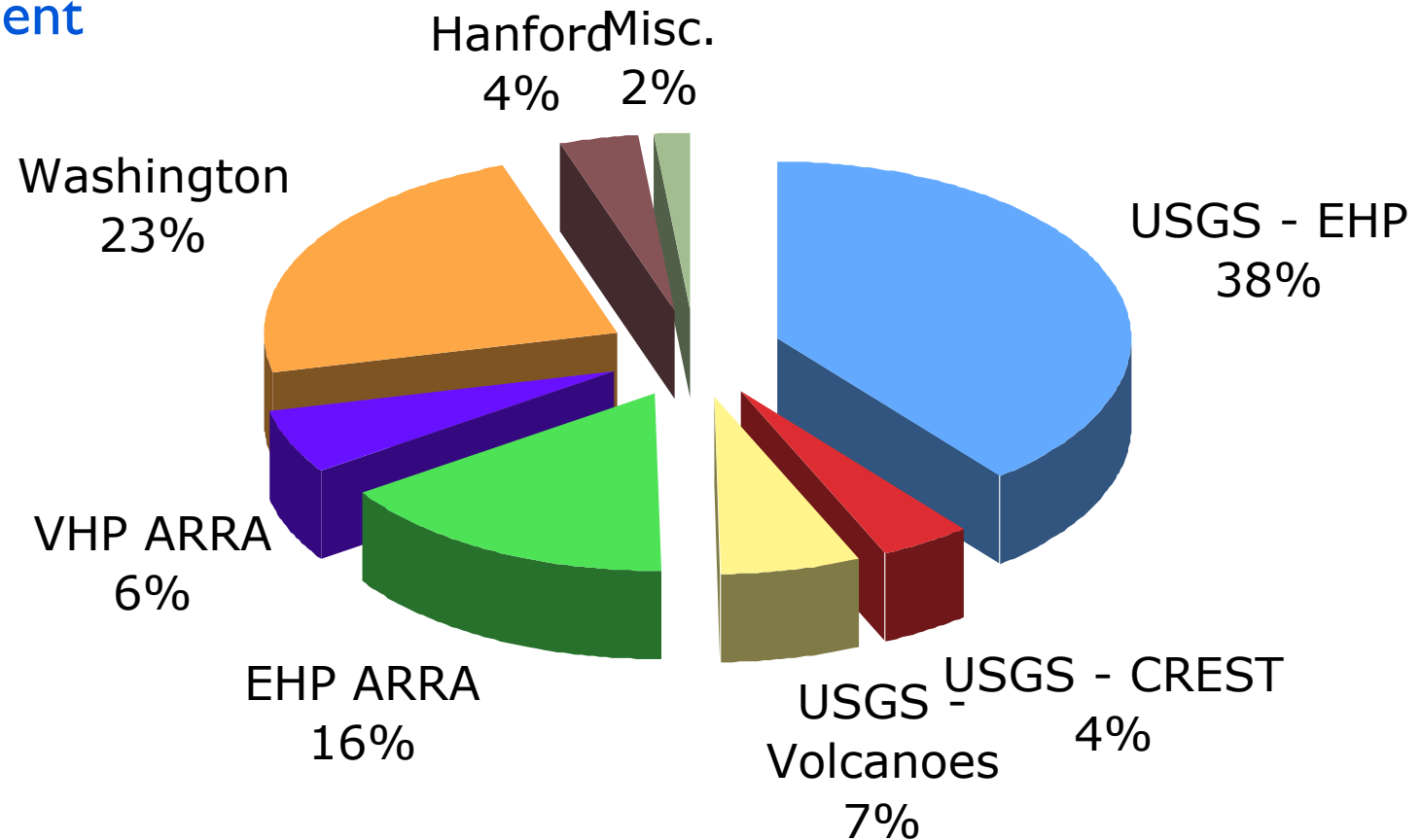
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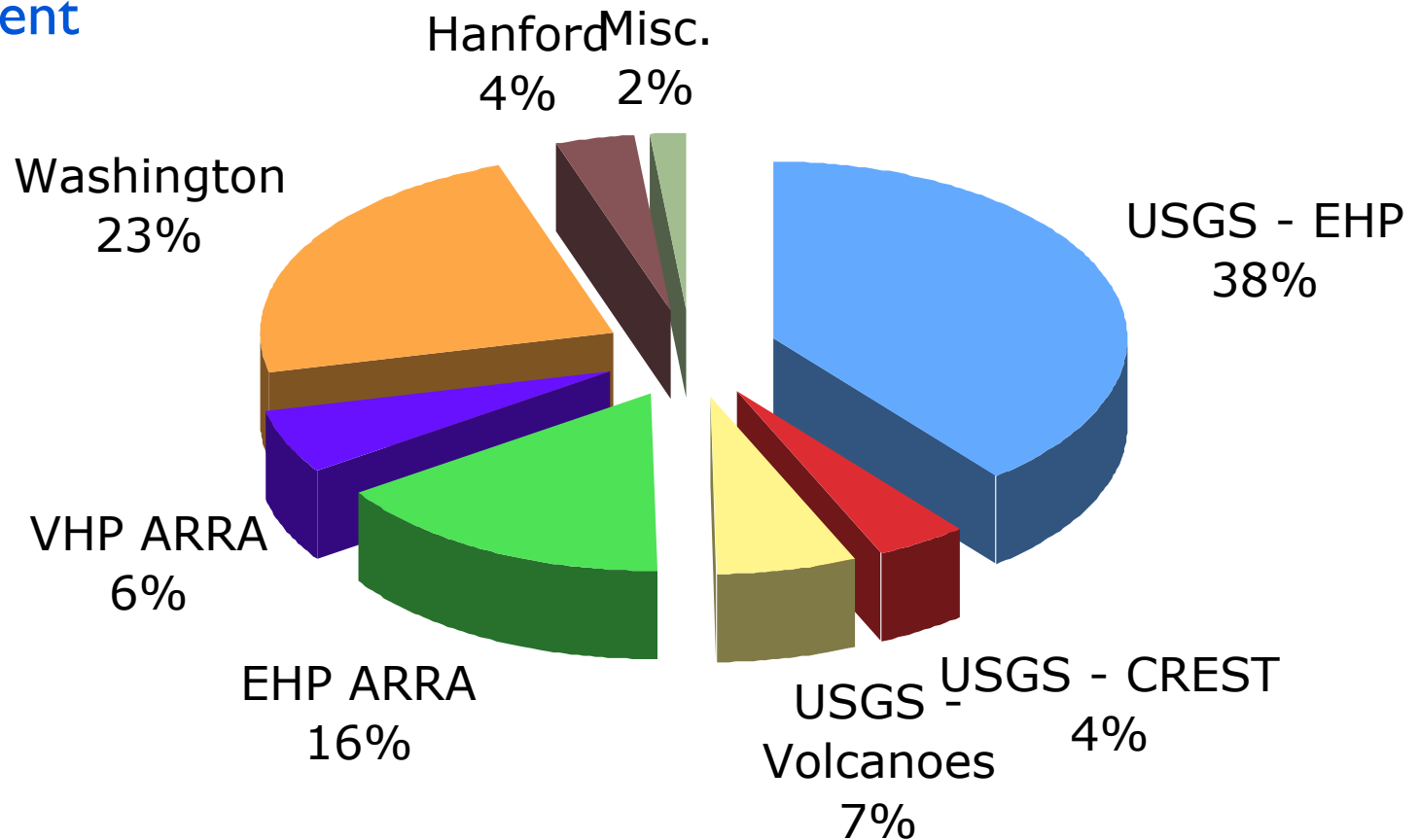
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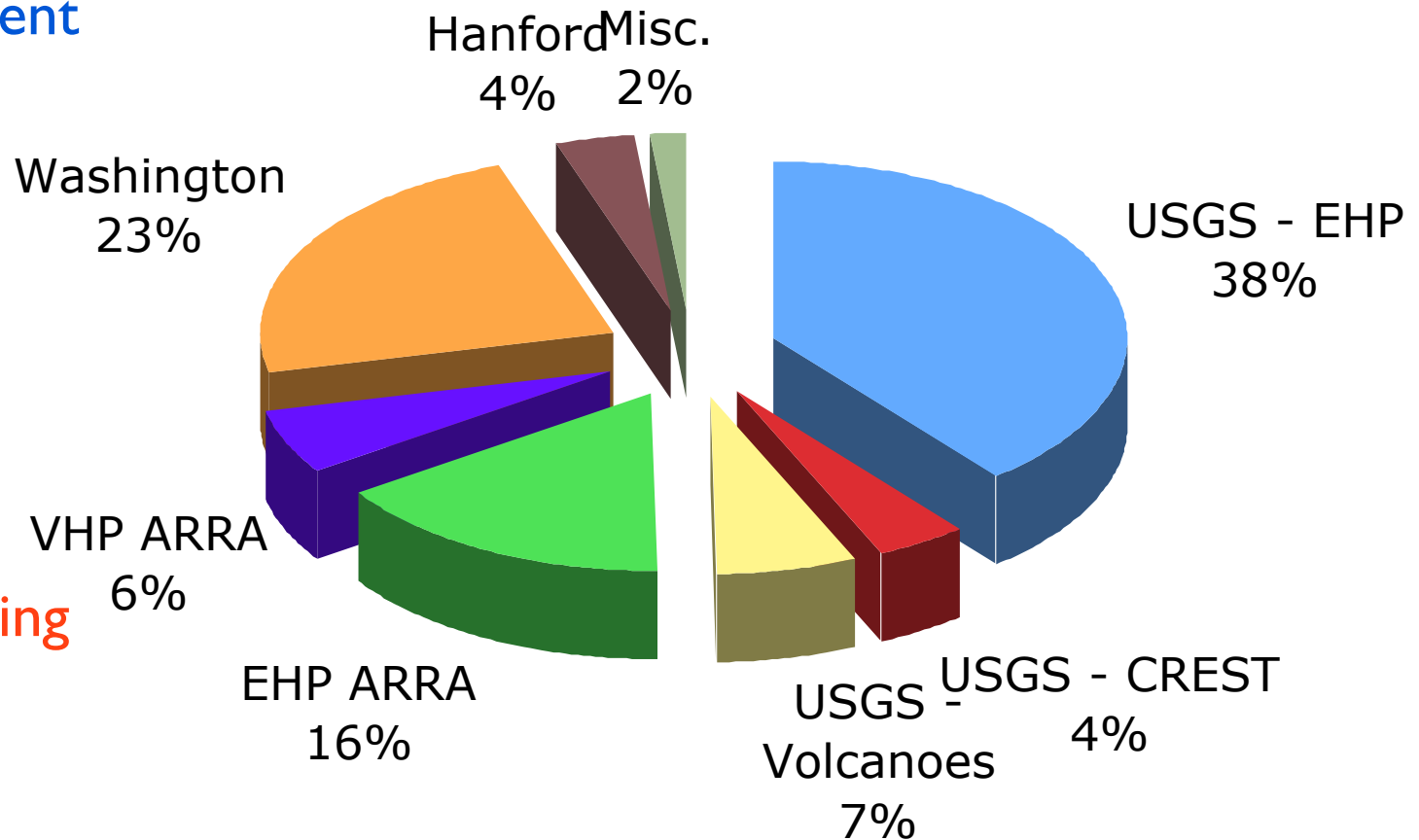
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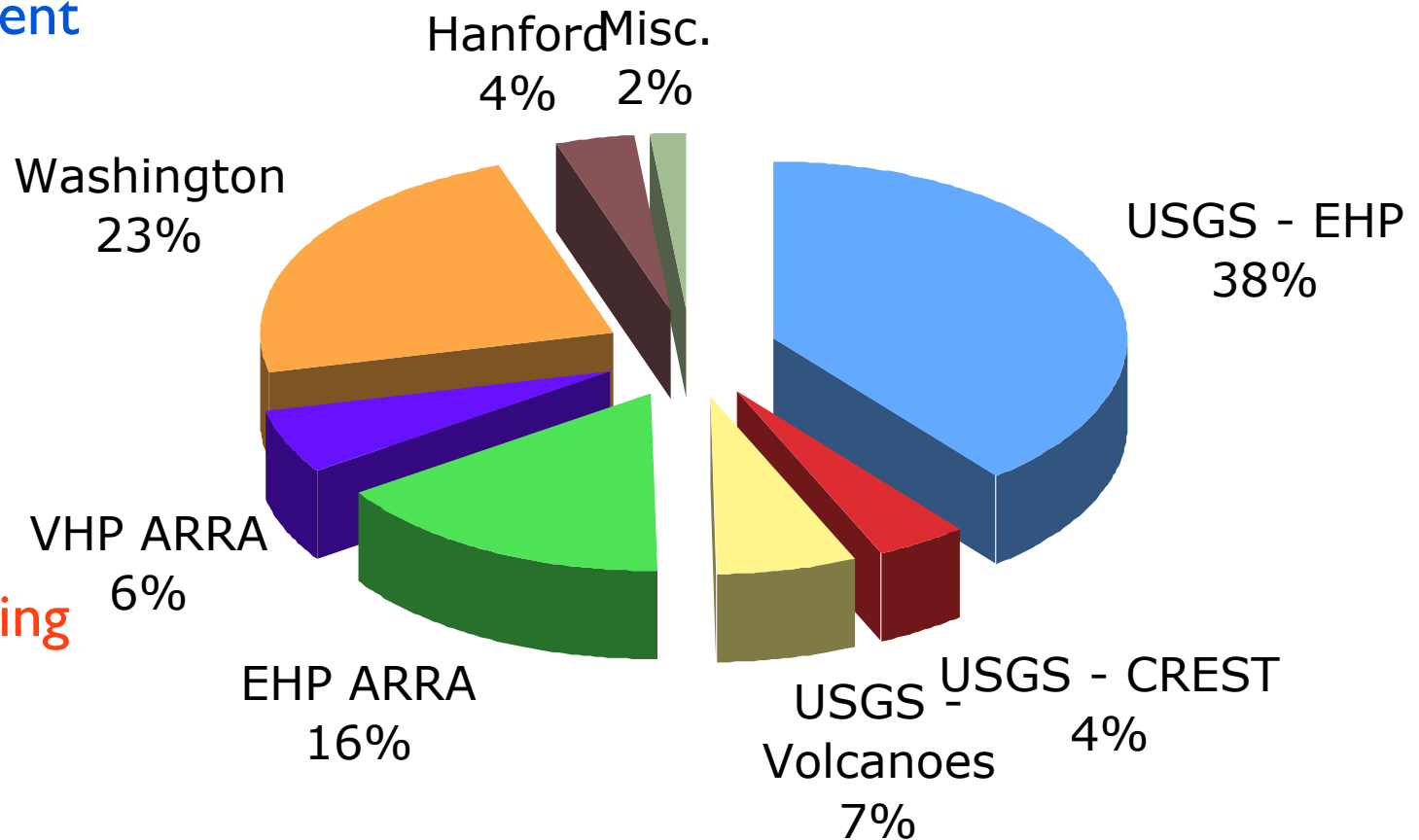
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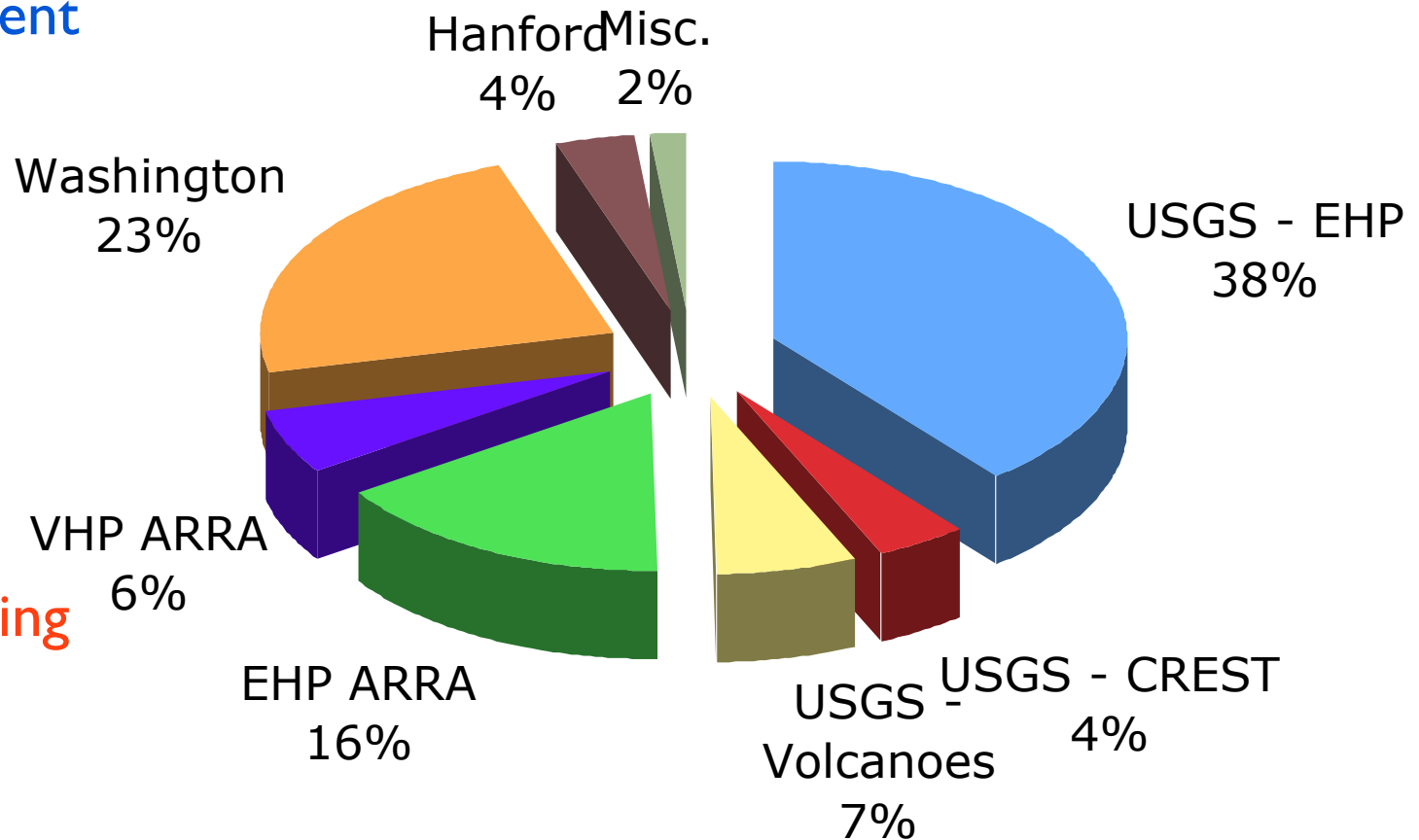
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 - Hanford?





USGS funding





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3rd year in 5-year contract from ANSS

level funded





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Volcano Hazards funding

\$120K/yr, including a grad student

Should be more



NOAA and Hanford



Pacific Northwest
NATIONAL LABORATORY

NOAA and Hanford



Changed NOAA deal to 2-year,

\$112K/yr, this is the last year, if indeed money is forthcoming.



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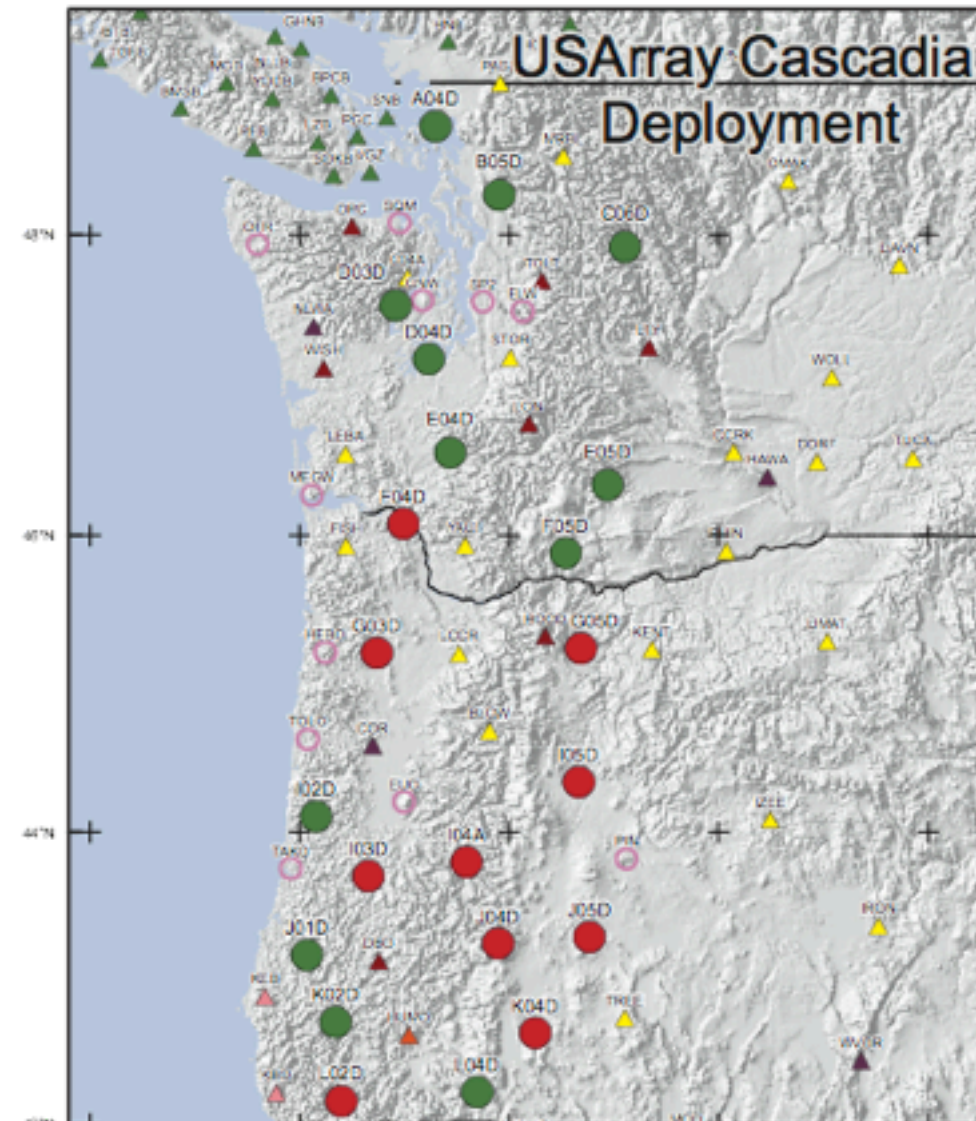
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Hanford - Paul will discuss this turmoil



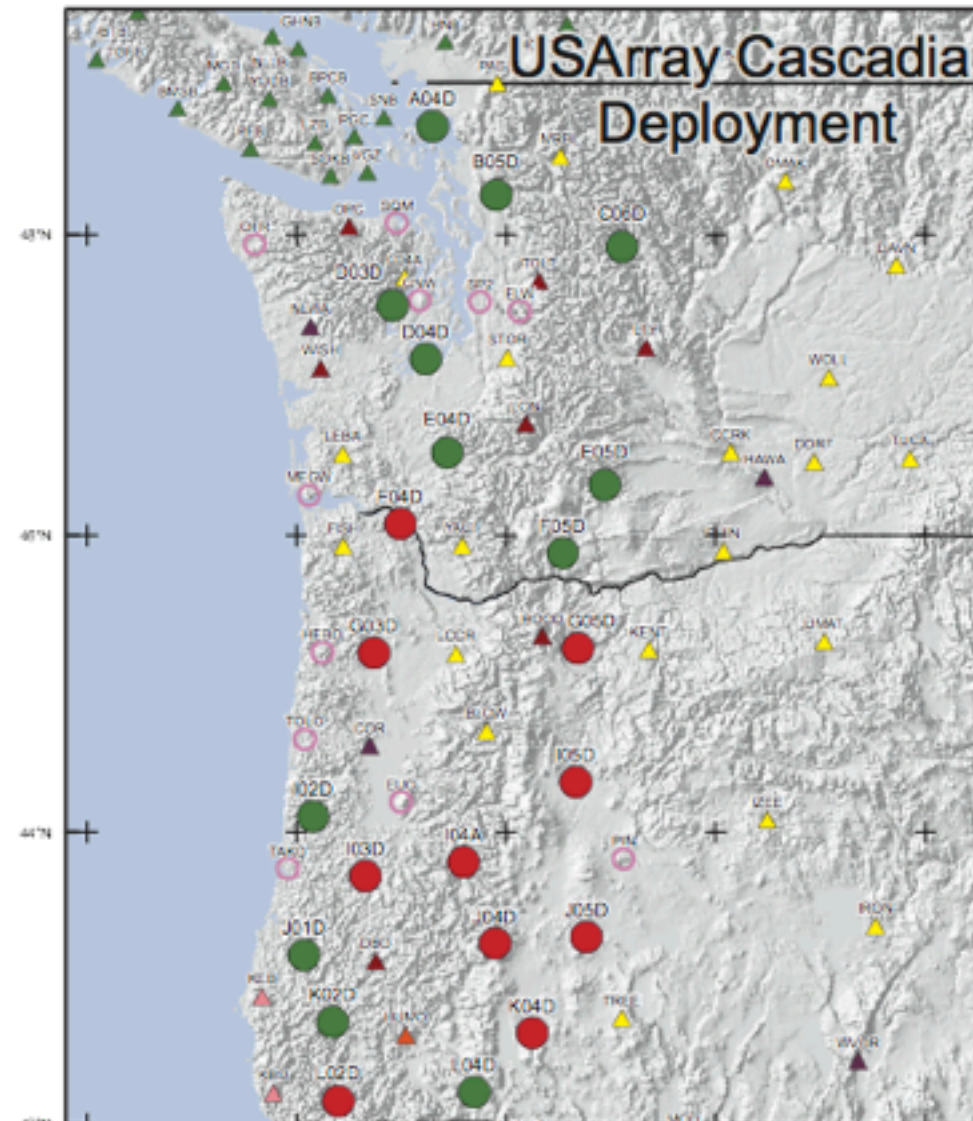
NSF EAR/OCE Cascadia Initiative



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Model for portable onshore/offshore capability

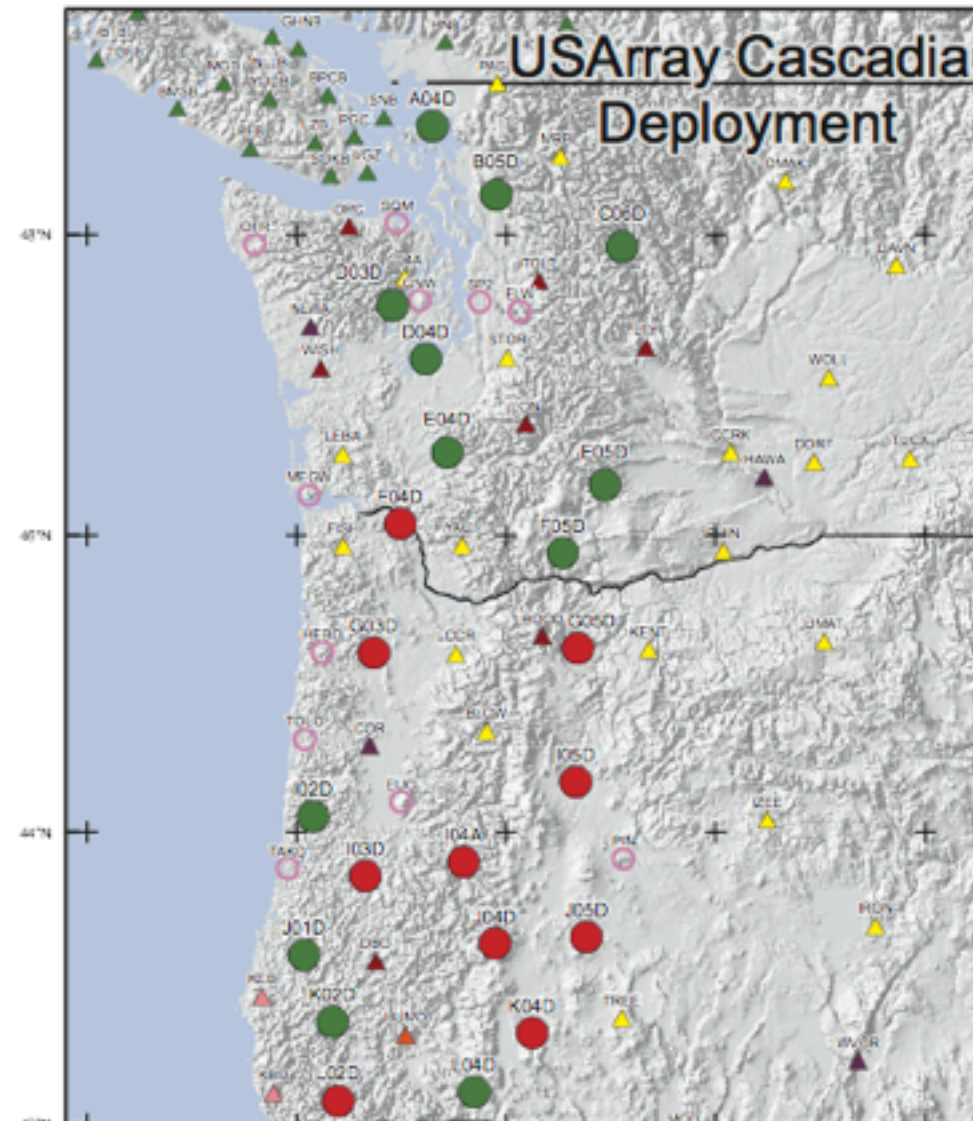


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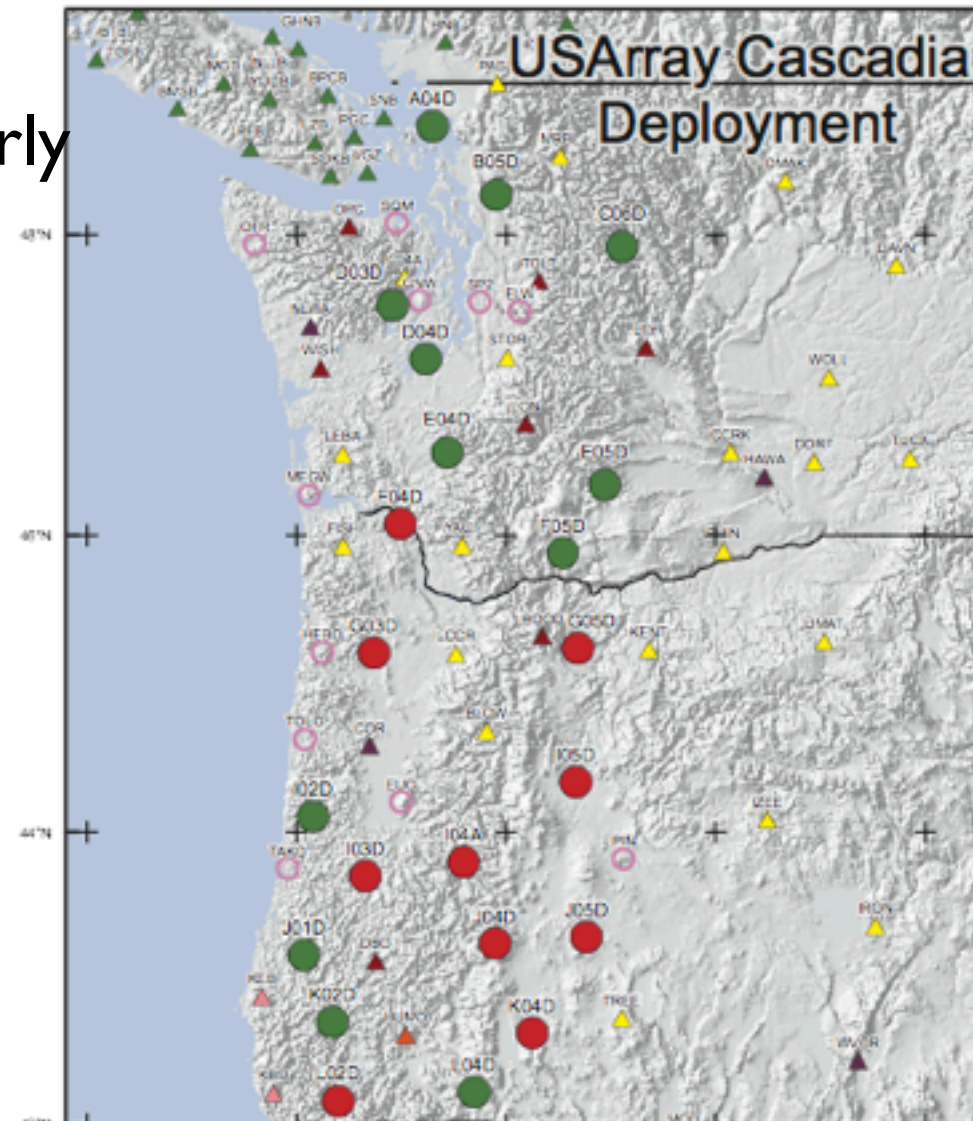
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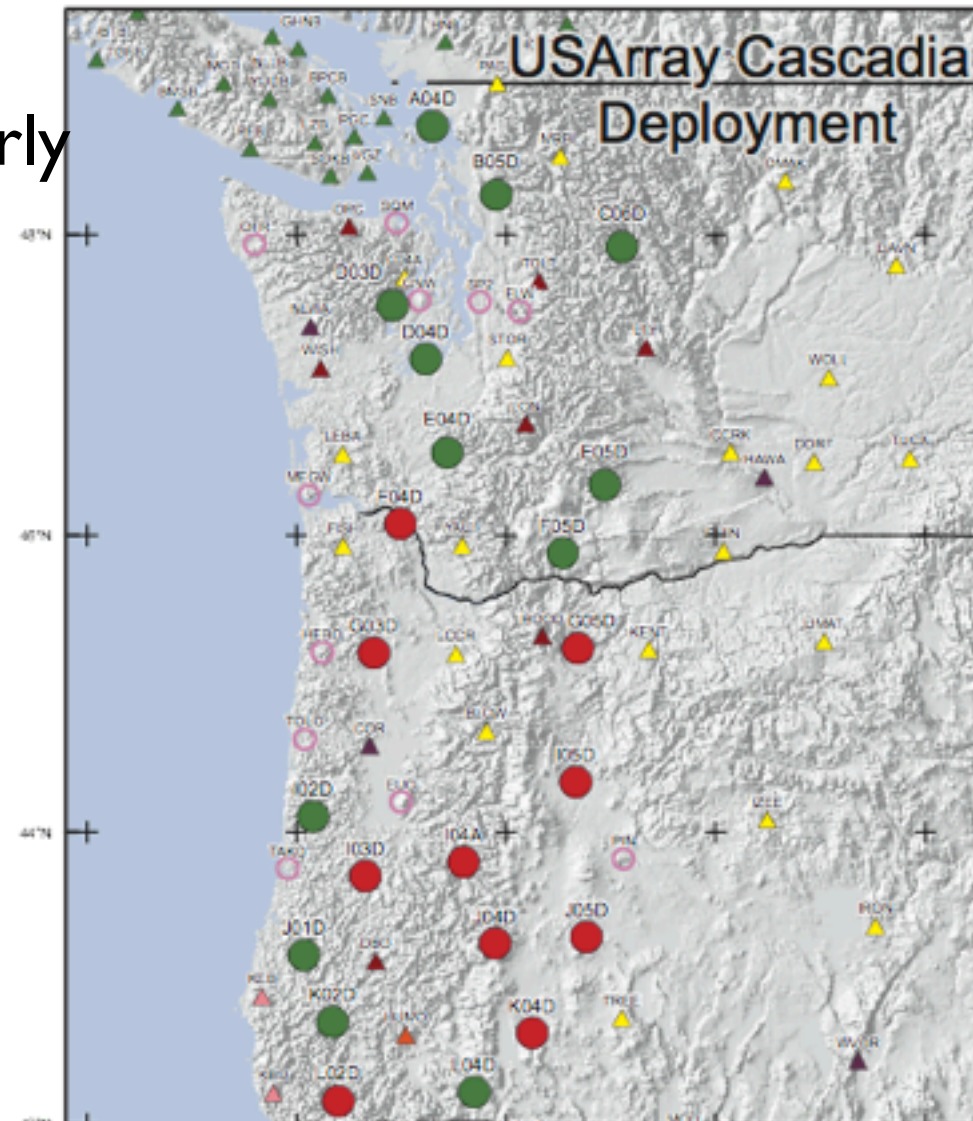


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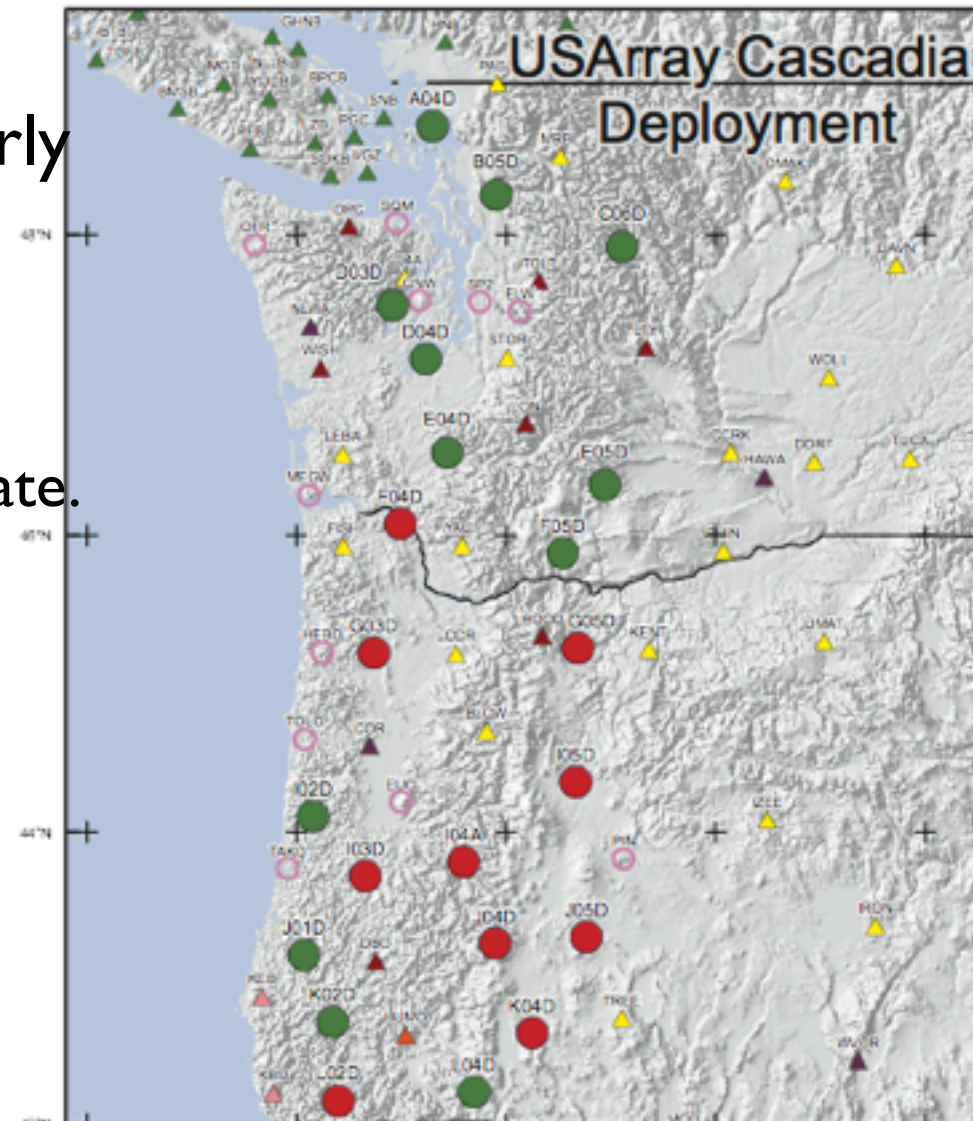
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Onshore, upgraded 230 GPS stations

Permanently realtime and high sample-rate.



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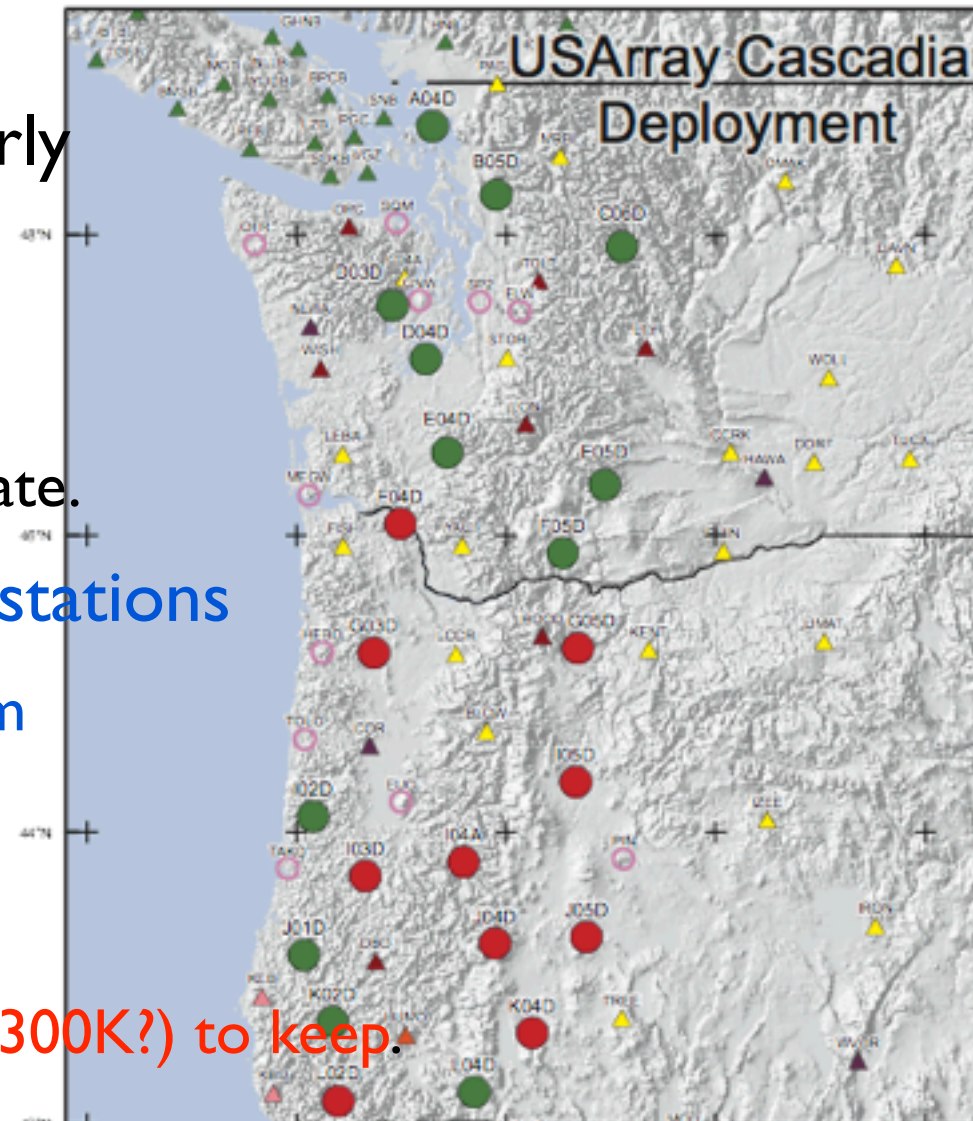
Onshore, re-occupy 3 columns of TA stations

Although we already retained 15 of them

Re-plants 25 or so additional stations

Duration will be several more years

Have strong motion, may cost \$750K (\$300K?) to keep.



Earthquake early warning

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- \$2M Moore Foundation grant
 - Details this afternoon, just a prototype.

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 - Details this afternoon, just a prototype.
- Full and long term
 - We're saying it costs \$65M for first 5 years
 - and would take 5 years to implement for PNW.

ShakeCast



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- Implementing with Hanford now.
- Puget Sound Energy, WA-DOT may be working with Wald to explore implementation.



Seafloor deformation workshop

- mid-June at UW.
- Supported by PNSN and John Delaney.
- Exploring GPS, tilt, pressure, seismic, ... instrumentation on the seafloor.
- Cables, gliders, ships, ... ?
- Usefulness, cost, potential funding sources.
- Intriguing signals seen 2 days and 2 weeks before M9 Tohoku earthquake.
- Oceanography might hire in this area soon.

Potential action items



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1. Opinions on coastal strong motion stations according to Moore plan.
2. General feedback on Moore EEW plans.
3. Issue of retaining Cascadia Initiative stations.
4. Newberry geothermal and importance of monitoring and magnitudes
5. Dissing of regional web pages
6. Planning in the face of potential large budget fluctuations

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