

# Pacific Northwest Advisory Committee

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are needed to see this picture.

- Agenda
- Introductions - **Bill Steele**
- 10:10 - 10:45 Current status - **Bodin**
- 10:45 - 1:45 Strategic discussion - **Vidale**
- 1:45 - 2:00 Calling out action items - **Crouse**
  
- Following week, **Vidale** writes up recommendations, then
- **CB** circulates them for modification and approval.
- June 16 - **John-Paul** talk with ANSS AC
  - **Archuleta, Crawford, Crouse, Hartzell, Hashash, Johnston, Maison, Matthews Simpson, Wallace, Weaver**

# Strategic considerations

1. NetQuakes
2. Structural Monitoring
3. Early Warning
4. GPS data in monitoring
5. *Aftershock probabilities*
6. *ETS monitoring*
7. Oregon contributions
8. Dam instrumentation
9. Use of ANSS products

# SESAC report conclusions

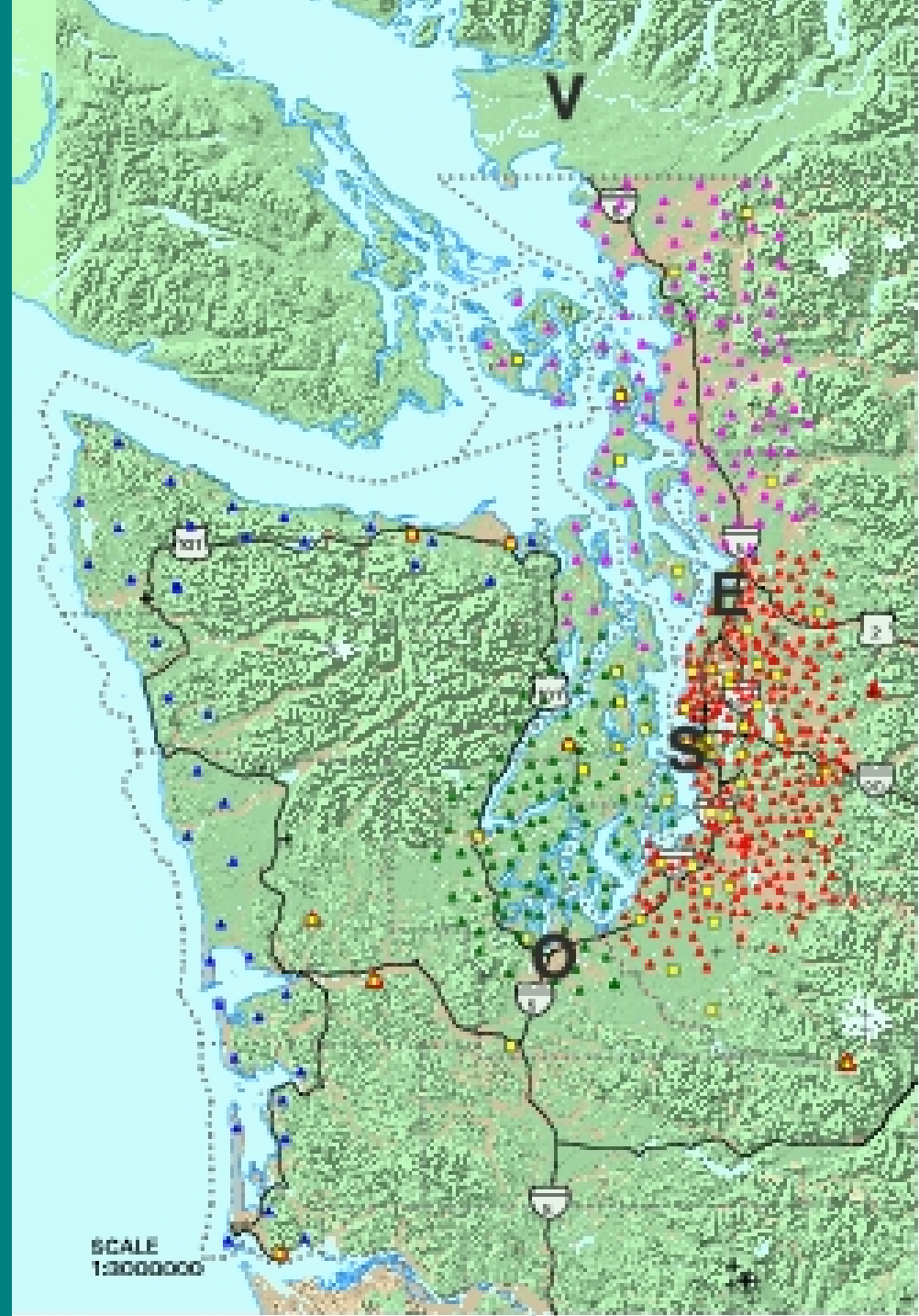
- Scientific earthquake studies advisory committee to the USGS
- Finish ANSS
- Do Multi-hazard project in SoCal
- Understand ETS
- Replenish USGS research scientists

# Item #1 NetQuake

USGS-State plan to  
place 100 to 1000  
sensors on I-5 corridor  
and coast -

highways, schools,  
hospitals, ...

some instruments are  
incoming soon.



# Item #2 Structural instrumentation.

- My view (Vidale)
  - Some instrumentation
  - Existing data not comprehensively evaluated
  - Usefulness of extending instrumentation not clear
- Current status
  - Recorded 6 months in SafeCo tower
  - Just putting 2 sensors on viaduct
  - NRB building showed 30+% period lengthening in Nisqually
  - Waiting for encouragement from experts
  - Also waiting for NetQuakes instrument boost

# Item #3 Earthquake early warning

- 20s warning for Chengdu in Sichuan earthquake, for example

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# EEW pros and cons

- A natural for big Cascadia earthquakes
- Already implemented in 5 countries, under development in 6 others
- Motivates upgrading coverage, telemetry, robustness
- ANSS does not consider it yet ripe for a big push.

# Item #4 - Need for Geodesy

- Will come, called out by SESAC
- Monitoring large earthquakes
- Monitoring volcano deformation
- Monitoring accelerated slip episodes
- Landslides
- Structures

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# Ways to get GPS monitoring

- Proposed some ideas to EMC this year
- Proposed addition to UW faculty this year
- CWU has ongoing effort we could use
  - CWU lost Meagan Miller to UNAVCO this year
- Geodesy is rising on ANSS radar
- There is GPS data flowing to UNAVCO we can directly collect

Item # 5  
Implemented  
in California,

tougher here,  
and not yet  
done

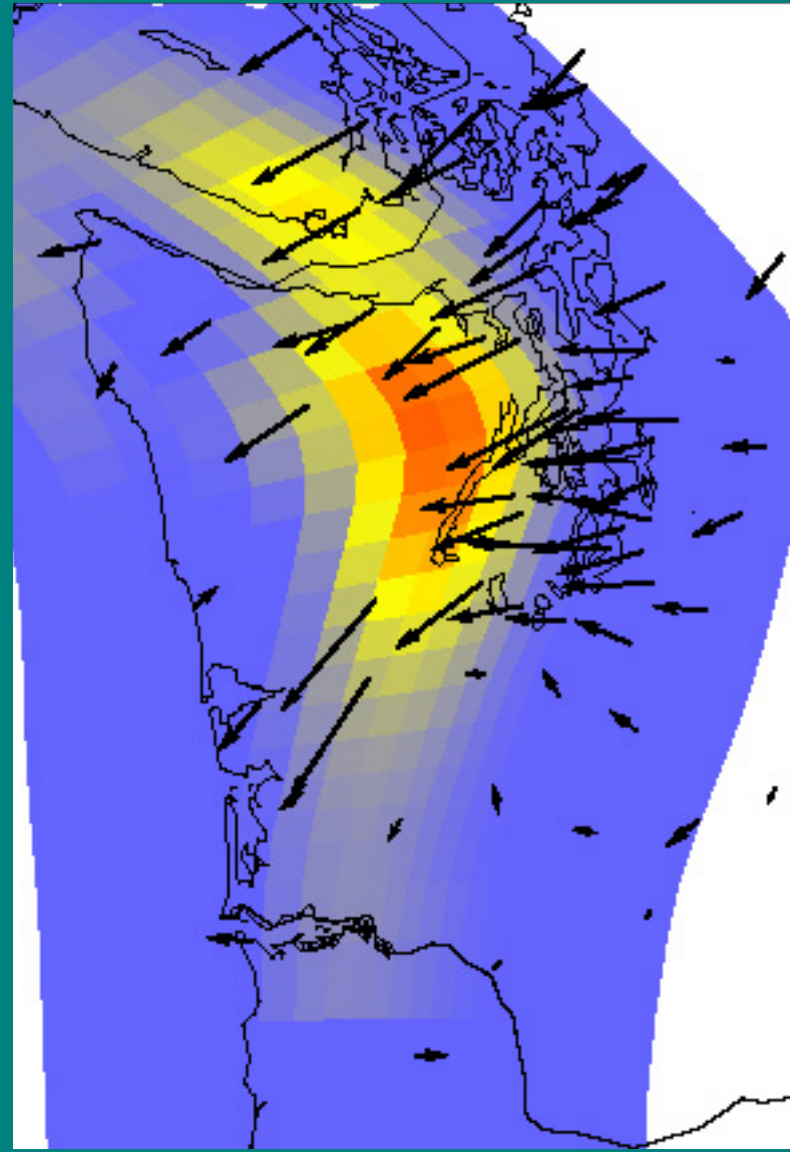
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# #6 ETS example, our fault quivering from the Sichuan quake

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# ETS episodes

- SESAC conclusion - Imperative to study and assess influence on earthquake probability.
  - (3rd point, behind completing ANSS and conducting Southern California multi-hazards studies.)
- Active programs at UW, CWU, and Berkeley.



Melbourne, yesterday,  
note western edge of ETS

## Item #7:

# PNSN funding from the State of Oregon?

- DOGAMI obtained ~\$100K this year, bought 3 TA stations.
  - We sent portables to Maupin swarm
- State support still small - ideas?
  - Field tech at the U of O: 0.5 to 1 FTE
  - Portable network ~\$100K
  - Telemetry support useful on any scale

## Item #8: Expansion of dam instrumentation

- has been suggested, we're just pondering at this point
- requires effort and funding, would provide useful information about dam vulnerability in earthquakes

# Item #9:

## Use of PNSN products

- Sound Shake '08 tested earthquake response.
  - Not everyone quickly examined the ShakeMap to get global picture of event
  - Partly due to exercise ground rules
  - Partly due to ShakeMap not being at fingertips
- To improve effectiveness of PNSN and response
  - Another round of visits to cities and counties
  - Concentrate on integration with GIS and duty officer training
  - Develop and present ShakeCast to them, plus interested companies

# Resource considerations

1. NetQuakes
2. Structural Monitoring
3. Early Warning
4. GPS data in monitoring
8. Dam instrumentation

Impediments - not a plush year economically, retirements of State personnel, SSC is in flux, recent local earthquake activity has been mild.

We must remain opportunistic.



# Committee membership

- Depends on next direction, and many are possible
- NetQuake would be siting
- Geodesy is another matter
- Response is a third, and omnipresent
- Structures
- Connections with WA and OR also critical

# Current PNSN-AC

- **States and cities**

- Steve Bailey (Luke Meyers)
- Timothy Walsh
- Ray Cakir
- Vicki McConnell (Ian Madin)
- Dave Nelson
- Doug Johnson (Gus Ordonez)
- TJ McDonald
- Susan Chang
- Jay Wilson

- **Industry**

- C.B. Crouse
- Leon Kempner (conflict)
- Bill Perkins
- Robert Zimmerman (Gary Gordon)

- **DOTs**

- Harvey Coffman
- Dwayne Wilson

- **Related experts**

- Tim Melbourne
- Kathy Troost
- Craig Weaver
- Ray Weldon (Doug Toomey)
- Eric Holdeman
- Steve Palmer
- Marc Eberhard

- **Rarely appear**

- Rosemary Gentry
- Ken Campbell
- John Hooper
- Paul Grant