

The background image shows a geological field site. In the foreground, a person wearing a white hard hat and an orange safety vest with "U.S. GEOLOGICAL SURVEY" printed on the back is visible. To the right, another person is operating a surveying instrument on a tripod. The middle ground shows a large, flat, light-colored area, possibly a dry lake bed or a construction site, with some structures and equipment. In the background, there are hills and a clear sky.

Keith L. Knudsen USGS Earthquake Science Center

WSSPC Board Meeting

Thursday, November 15, 2018



What's New?

- Ground Failure Product
- OAF Product
- 2PAGER Product
- EEW Implementation Plan Updated
- EEW Research Plan Published
- EEW Hiring in key positions
- EEW “soft” Rollout begins Fall ‘18
- Haywired Rollout (April) and Vol. 2
- Hayward quake 150th anniversary

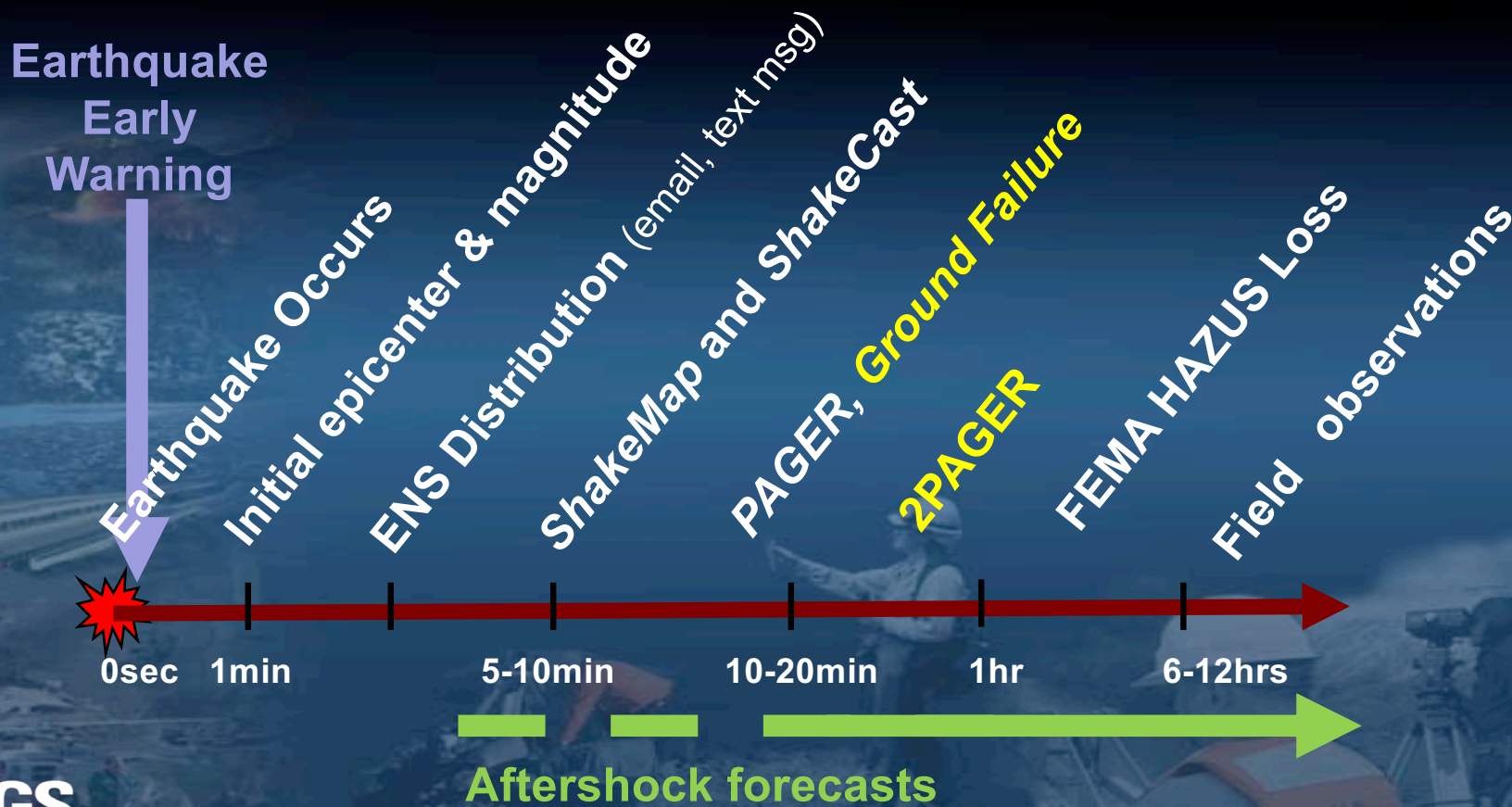
- SESAC – Beroza to Chair
- ANSS SC – Aster to Chair
- NEHRP Bills in House & Senate
- Move to Moffitt / Ames



Senior Advisor for Earthquake and Geologic Hazards. Program Coordinator for the Earthquake Hazards Program, the Global Seismographic Network Program, and the Geomagnetism Program.

An Earthquake Information Timeline

(Domestic earthquakes)



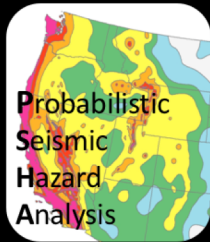
USGS Earthquake Information System

Pre- Earthquake

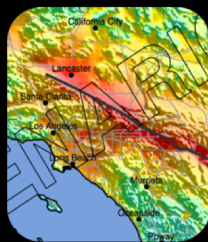
Earthquake

Post-Earthquake

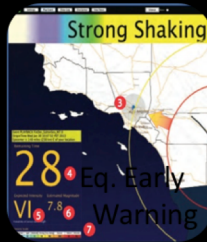
PSHA



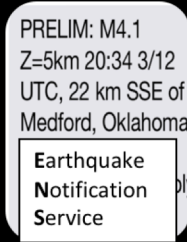
Scenarios



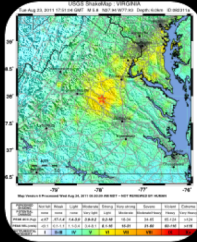
EEW



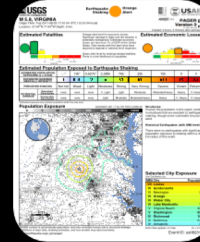
ENS



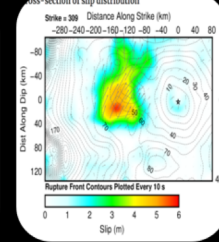
ShakeMap



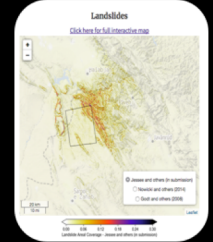
PAGER



Finite Fault



Ground Failure



Years before

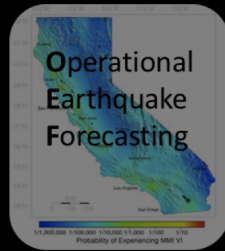
0.0 sec

3 Minutes

10 Minutes

30 Minutes

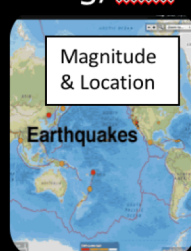
OEF



TED



Mag/Loc



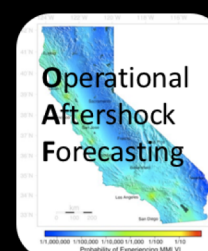
DYFI?



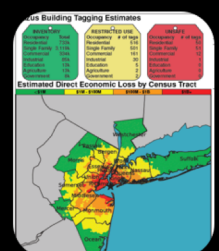
ShakeCast



OAF



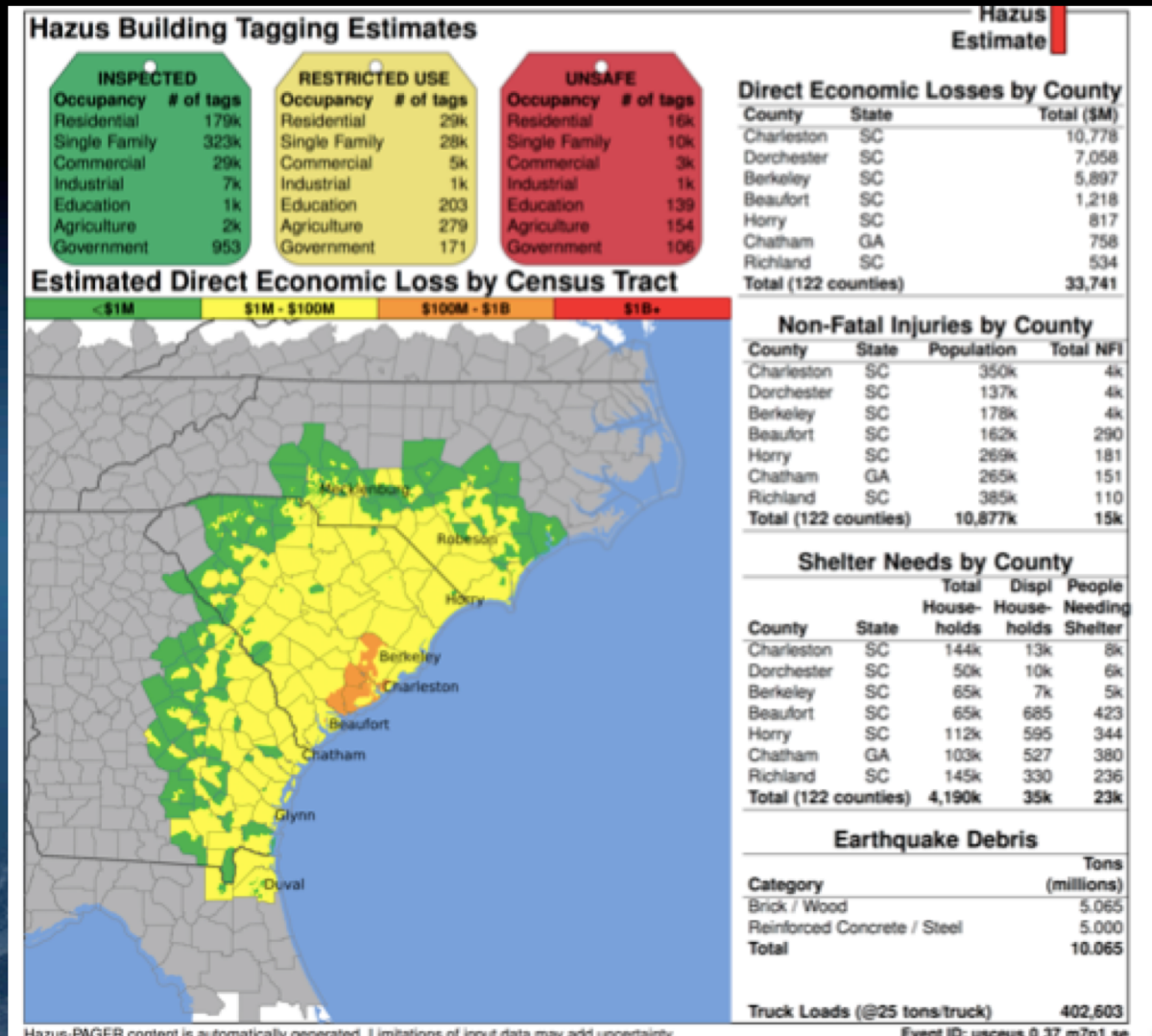
2PAGER



2PAGER

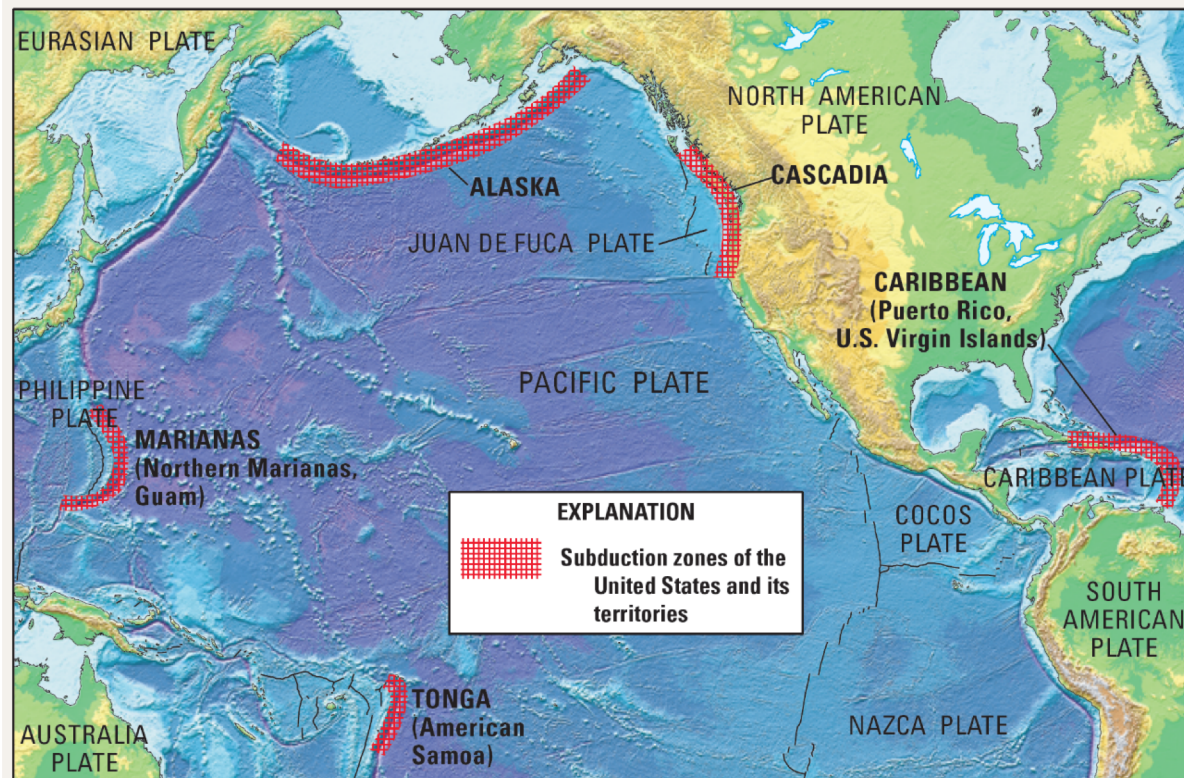
Links PAGER's ground motion-based loss estimates to HAZUS inventories and post-earthquake assessments, county by county

Charleston
M7.1 scenario

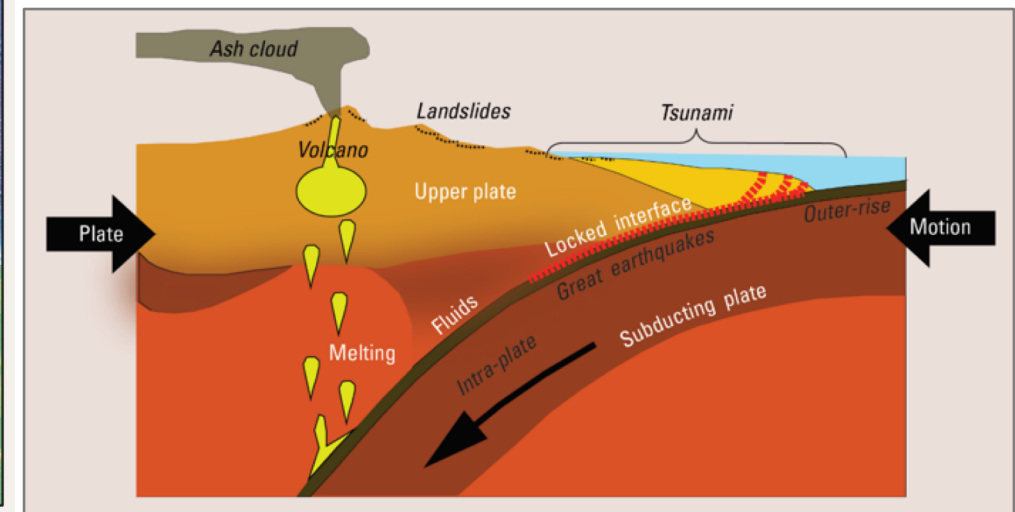
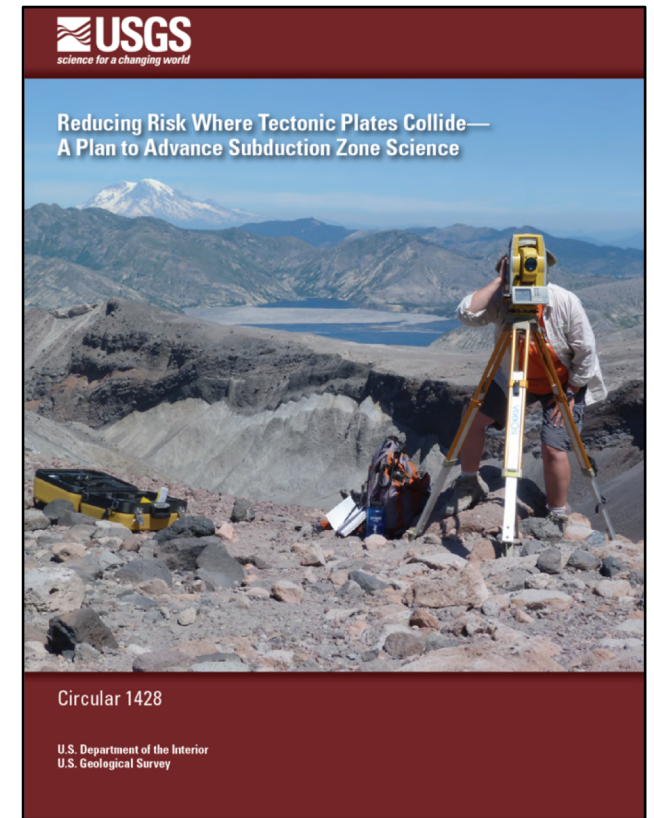


Subduction Zone Science

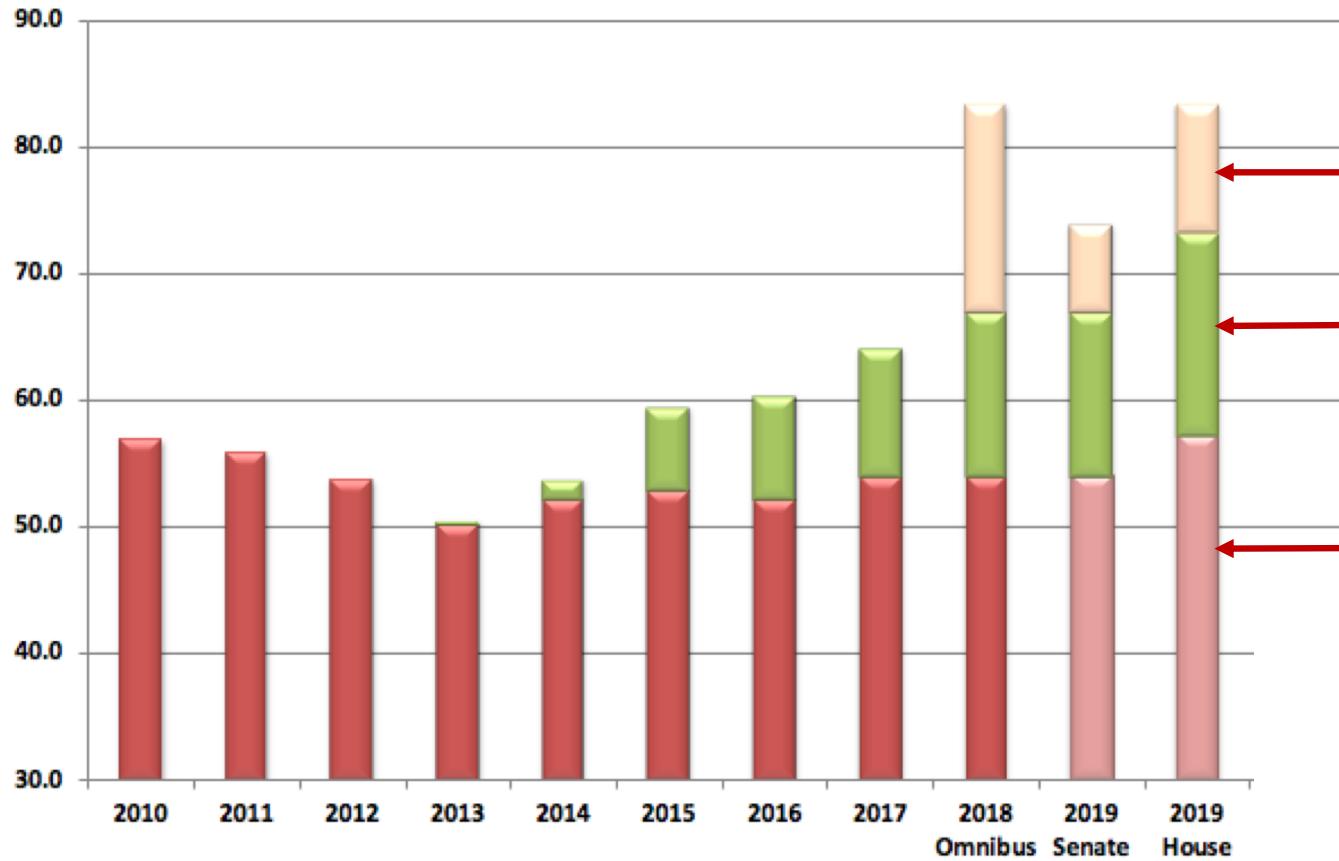
- Initial discussions started with other federal agencies
- Ongoing work in EHP: Cascadia Recurrence Project, Queen Charlotte Fault mapping (with offshore work by USGS Coastal/Marine Program)
- Continued good coordination within NHMA & NSF (universities)



America's Subduction Zones



USGS Earthquake Hazards Program, Funding \$M



“one-time” funds
(EEW and ANSS)

EEW-operations
(directed funds)

EHP core program
(including ANSS)

Comparison of House and Senate Marks for FY19

<i>gross funds \$M</i>	<u>FY17</u>	<u>FY18</u>	<u>FY19 H.R.</u>	<u>FY19 Sen.</u>
EHP Base (incl. ANSS)	53.1	53.1	53.1	53.1
ANSS staffing	-	-	3.2	-
EEW base	10.2	12.9	16.1	12.9
Alaska RN ops.	1.0	1.0	1.0	1.0
EEW 1-time	-	10.0	5.0	-
ANSS 1-time	-	5.0	5.0	5.0
Alaska 1-time	-	1.4	-	2.0
	<u>64.3</u>	<u>83.4</u>	<u>83.4</u>	<u>74.0</u>

Earthquake Hazards Program Regional & Topical Coordinators

ConUSGS

Peter Haeussler - Alaska (AK)

Brian Sherrod - Pacific Northwest (PNW)

Kate Scharer - Southern California (SC)

Ryan Gold - Intermountain West (IMW)

Tom Pratt - Central & Eastern U.S. (CEUS)

Mark Petersen - National, hazard, and ground motion (NAT)

Nick Beeler - Earthquake] hysics research (EP)

David Wald - Engineering • eismology and ãmpacts (ESI)

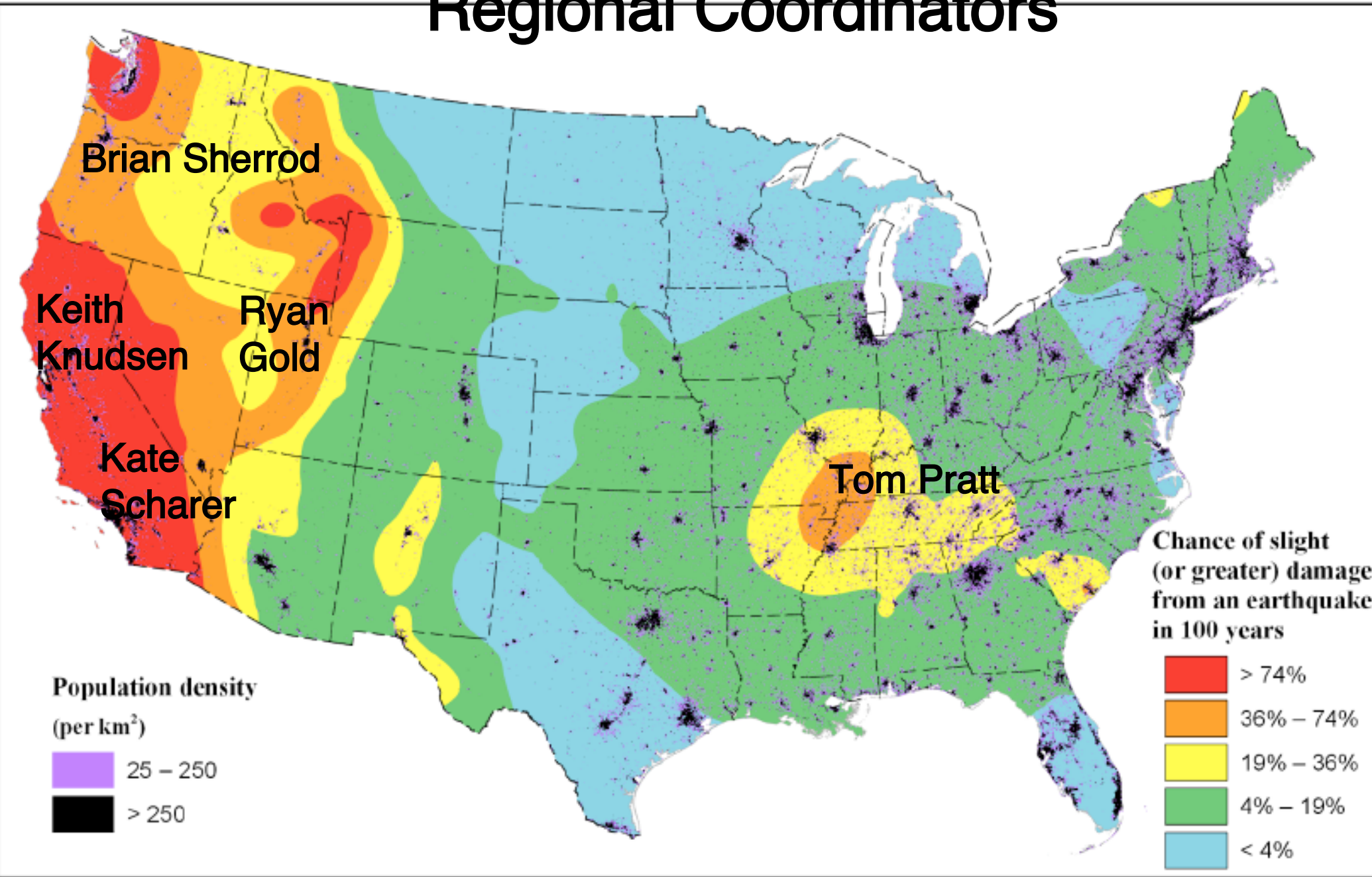
Ben Brooks - Geodesy (GN)

Keith Knudsen - Northern California (NC, acting)

Cecily Wolfe - ANSS



Regional Coordinators



Thank You

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