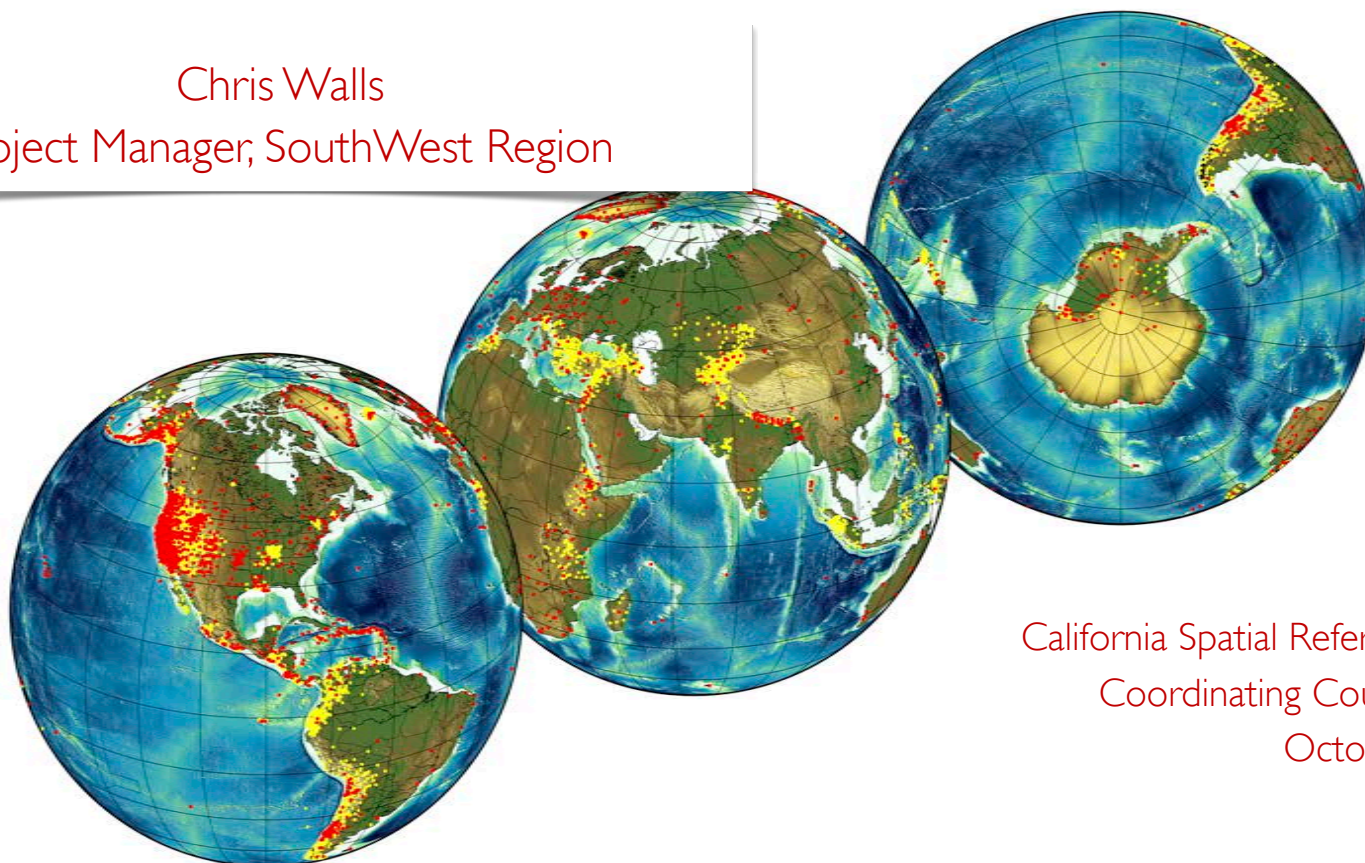


# UNAVCO & PBO Update

Chris Walls  
Project Manager, SouthWest Region



California Spatial Reference Center  
Coordinating Council Meeting  
October 24, 2013



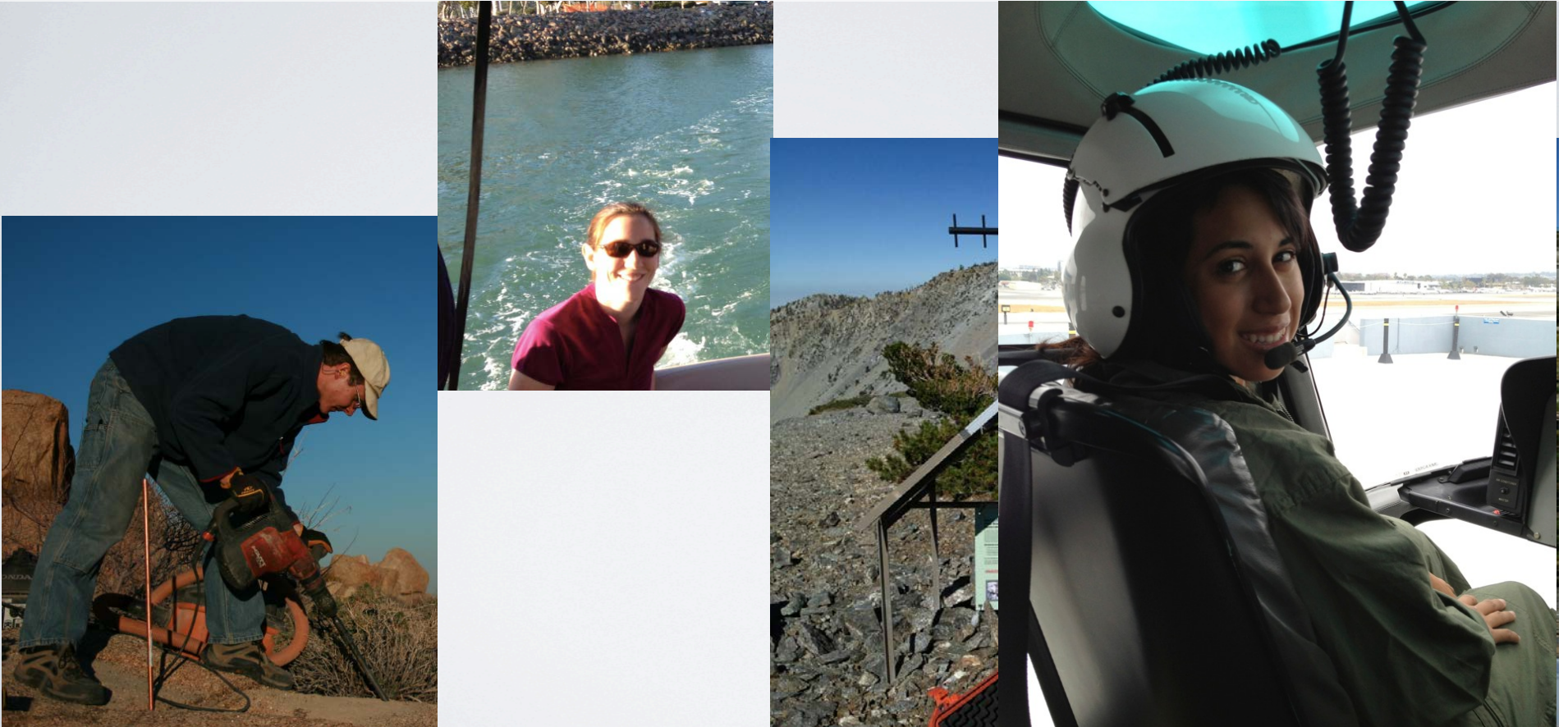
## Southwest Region Team – Full Time







## Staff – On Call, Part Time, Intern



## Thank You - Local Partners



7



41



6



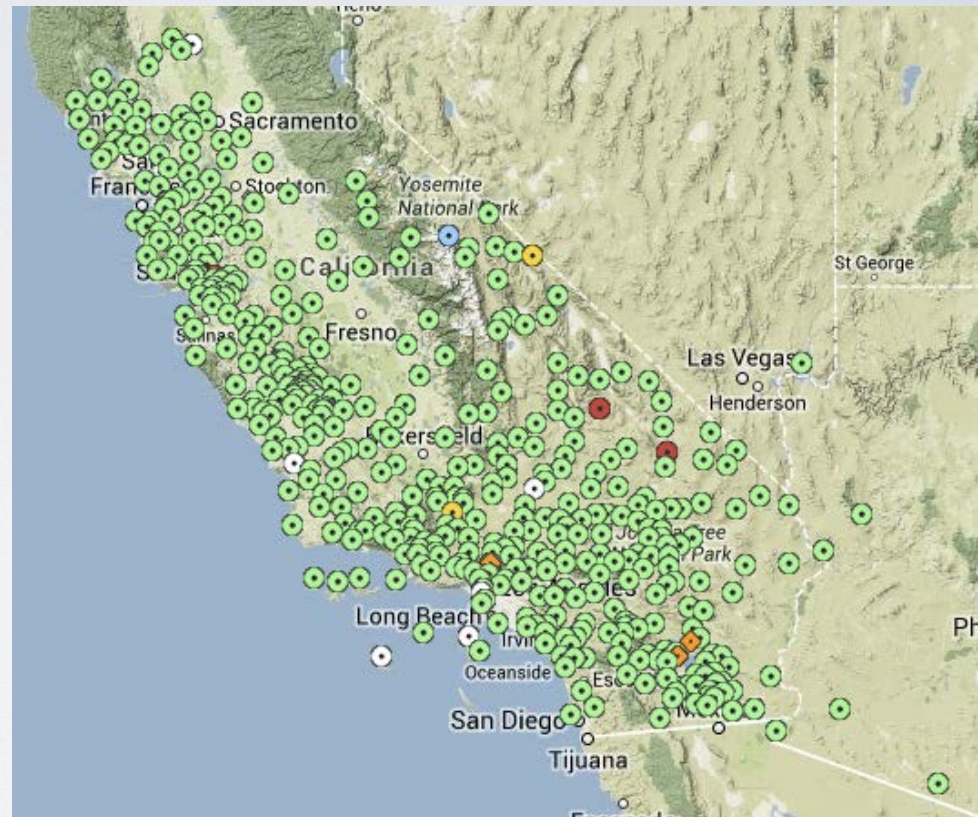
15



## SW Stats

Network uptime averaged 98% with greater than 99% data acquisition

Over 700 maintenance activities were performed during 340 onsite visits out of approximately 352 engineer field days



## Southwest Projects

- Cascadia Expansion
- Network Improvements
- Vandalism Repair
- Multi-Monument
- Edison/Geopentech



P812



P493



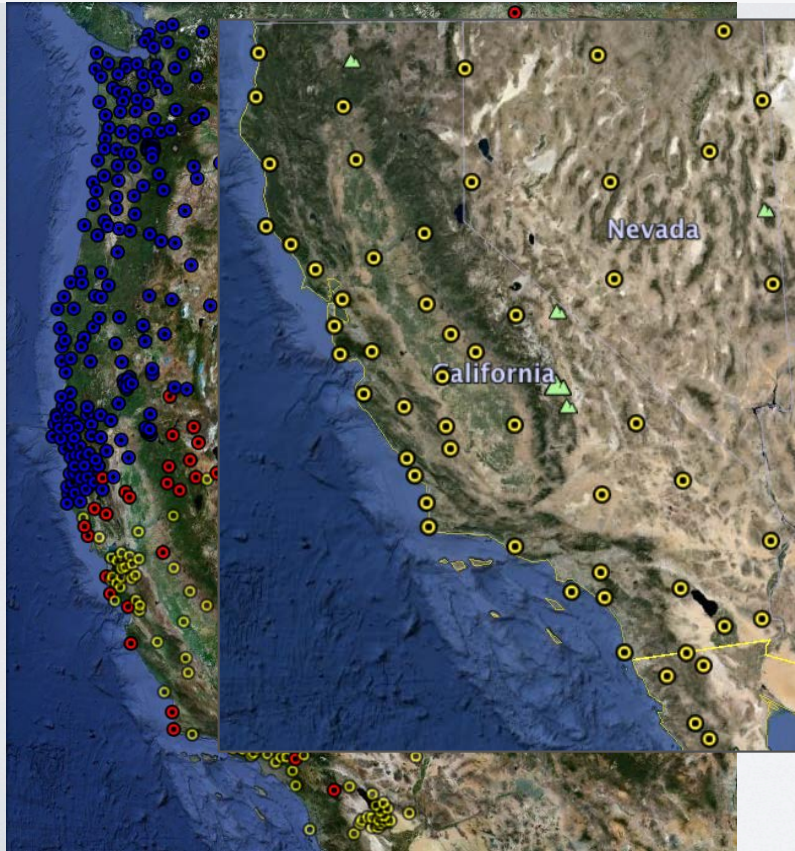
P299



P811



## Cascadia Expansion



- Original Cascadia RT upgrades: 230 sites – blue
- Cascadia RT expansion: 50 sites – red (44 completed)
- Other RT sites: ~130 – yellow
- 22 additional meteorological instruments (20 completed)
- In CA – 42 met with 4 in Baja – variety of projects

## SW Region: Network Improvements

Improvement of Data Communications, Power Systems  
(ongoing effort)

- Upgrade to High-Speed Cellular (3G & 4G)
- Upgrade slower radios (replace 900MHz with 5.8GHz)
- Additional solar panels/batteries

Data Communications in the South West region:

- Cell modems: 287 (86-4G, 167-3G, 34-1<sup>st</sup> generation)
- Radios: 110
- VSAT: 32
- DSL/T1/other: 25
- Manual downloads: 1

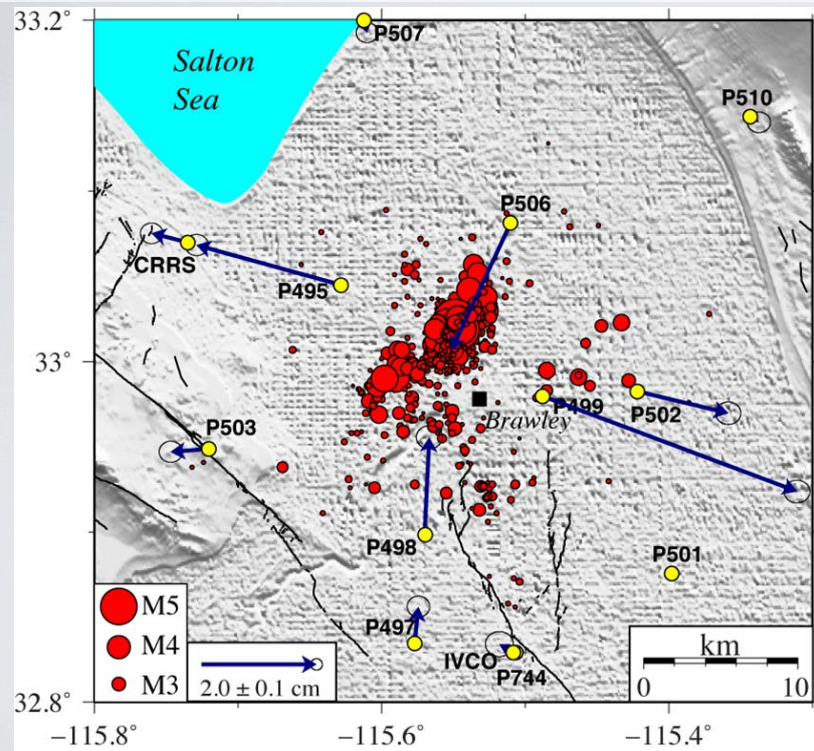


P493 Superstition Mountain radio tower install

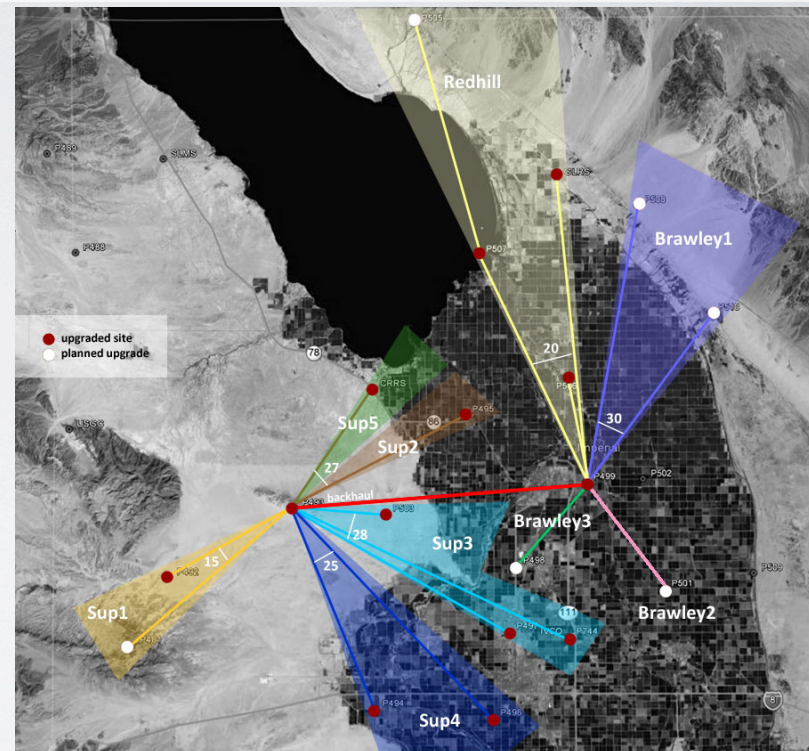




# Salton Trough Radio Network Upgrades

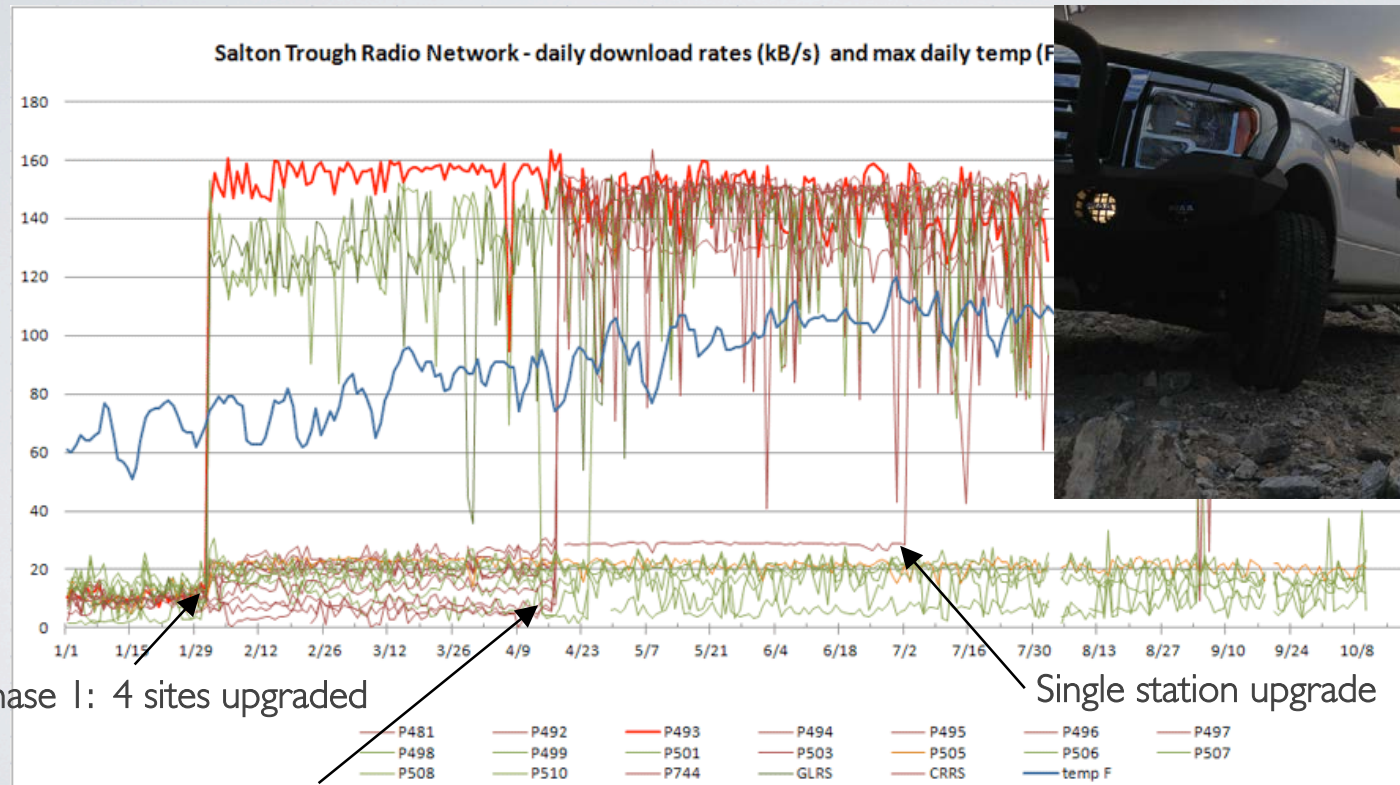


Brawley earthquake swarm August 2012



Salton Trough Radio network (19 stations)

# Salton Trough ~10x improvement

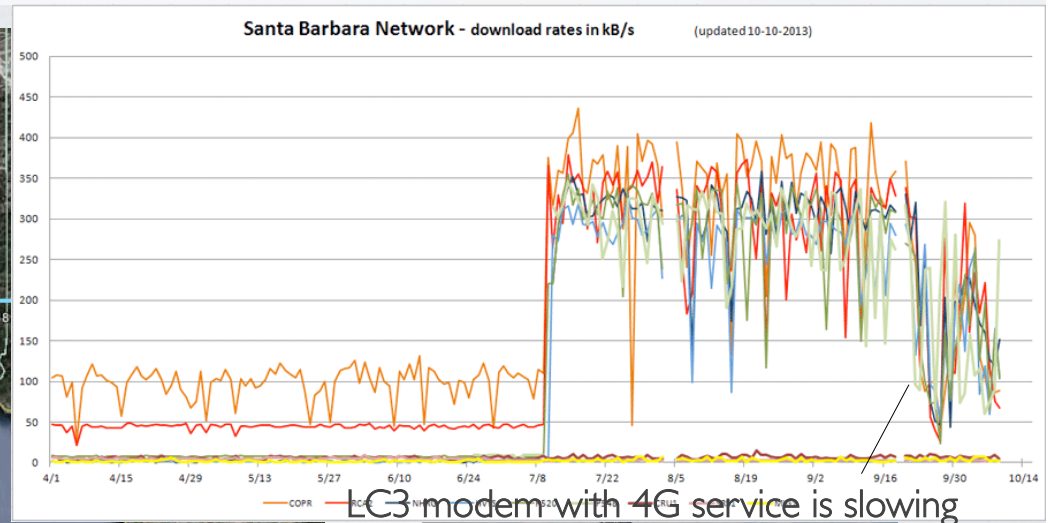
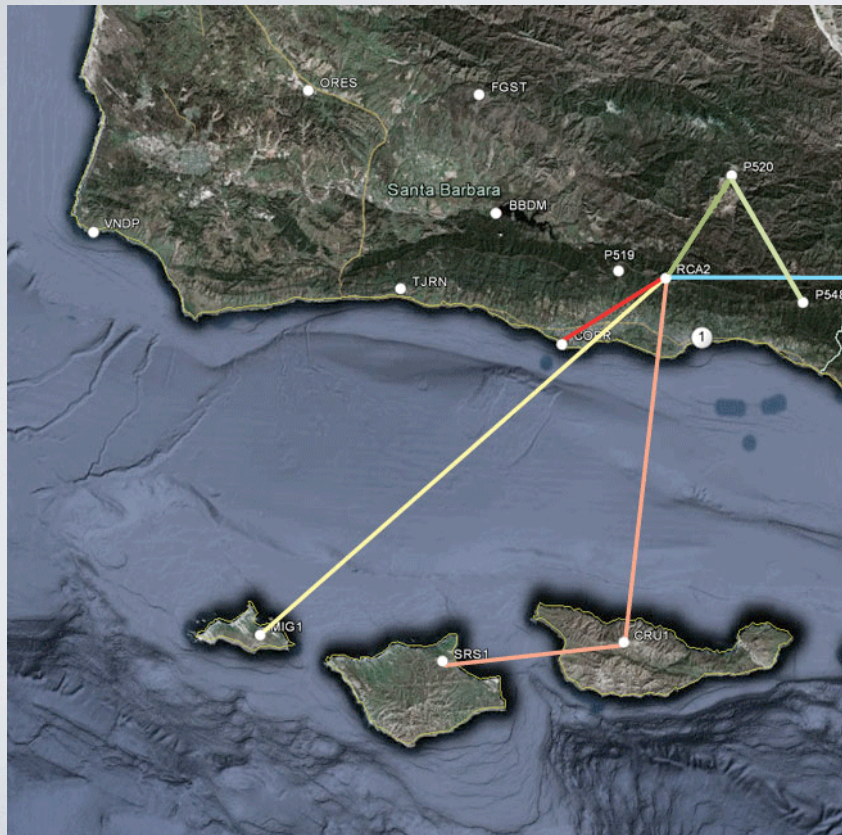


Phase 2: 8 additional sites upgraded





# Santa Barbara Network – 3-20x improvment



## RCA2-NHRG upgrades





## Vandalism



## Bear Damage – P520





# Multi-Monument Project

- Install 2 additional GPS monuments at 5 existing PBO sites
- Compare long-term monument stability of various types of monumentation
- 5 of 5 sites installed (The Rock, GA; Delano, CA; California City, CA, Forks, WA, and Wilbur, WA)



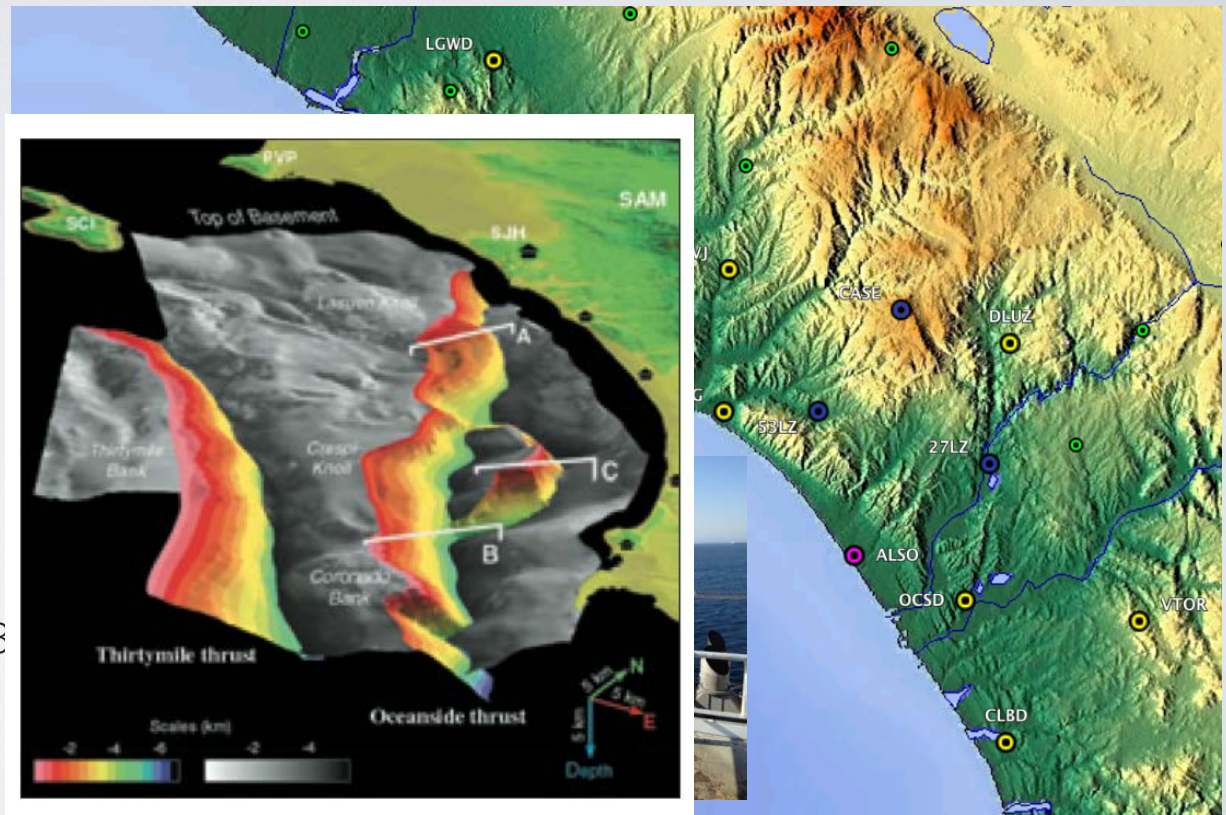
# GeoPentech-Edison

## Goals:

- 12-13 new stations
- Augment existing network (PBO, SCIGN-SIO, green)
- SONGS Seismic Source Characterization

## Progress:

- 9 Stations built (yellow)
- 4 Permits in process (Caltrans and 3 Pendleton – blue)
- Thank you District 11







## August Install - THMS – Laguna Unified School District



**UNAVCO**





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- Three high level meetings
- Three additional On Base meetings
- Environmental Assessments
- Range Safety Training
- RapidGate
- O&M Access – escort required



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The End

