



Greta Thunberg ✓

@GretaThunberg



"A top climate scientist is warning that climate change will wipe out all of humanity unless we stop using fossil fuels over the next five years."

gritpost.com/humans-extinct...

9:18 PM · 6/21/18

   31

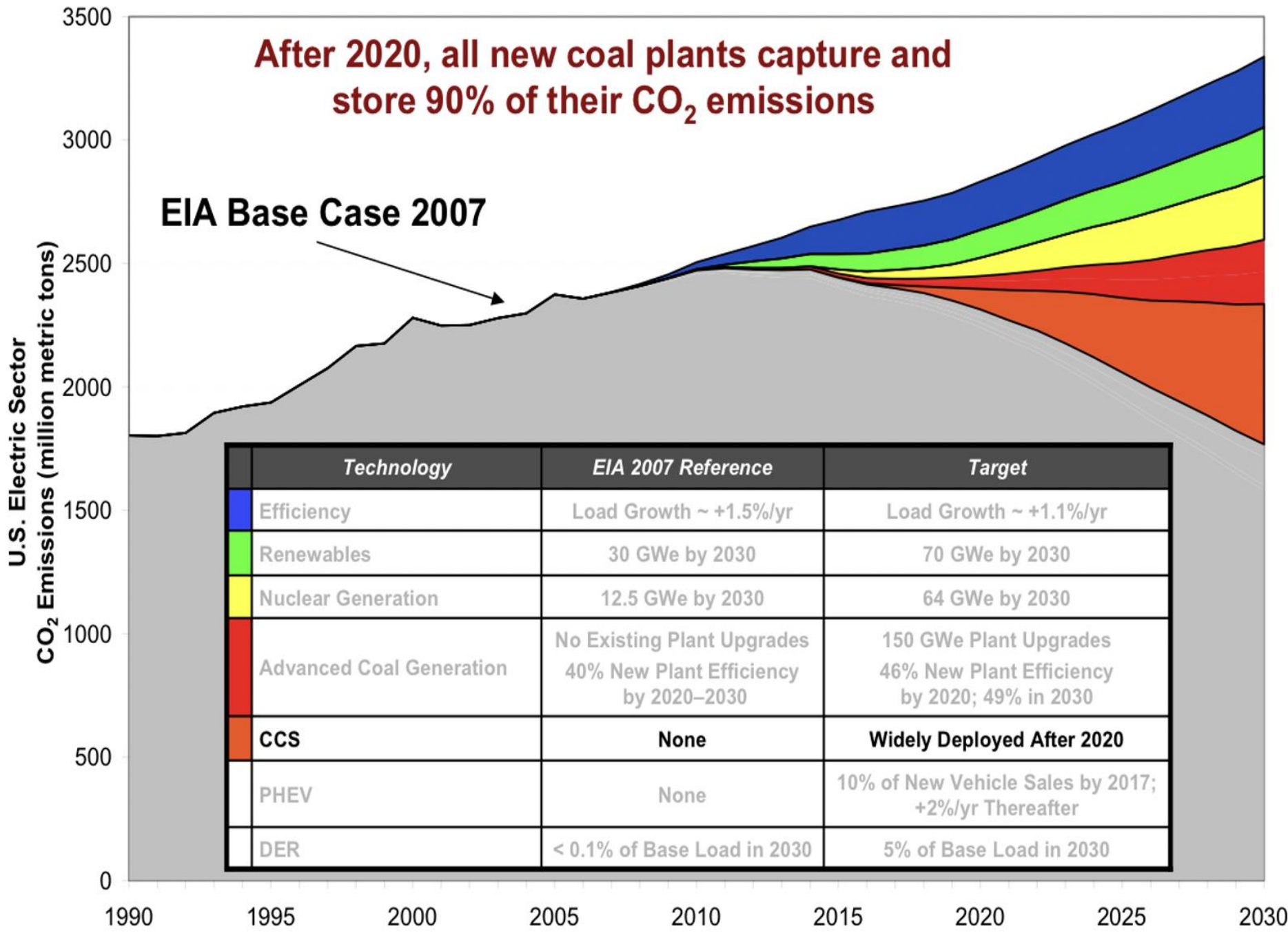
19 comments · 3 reposts

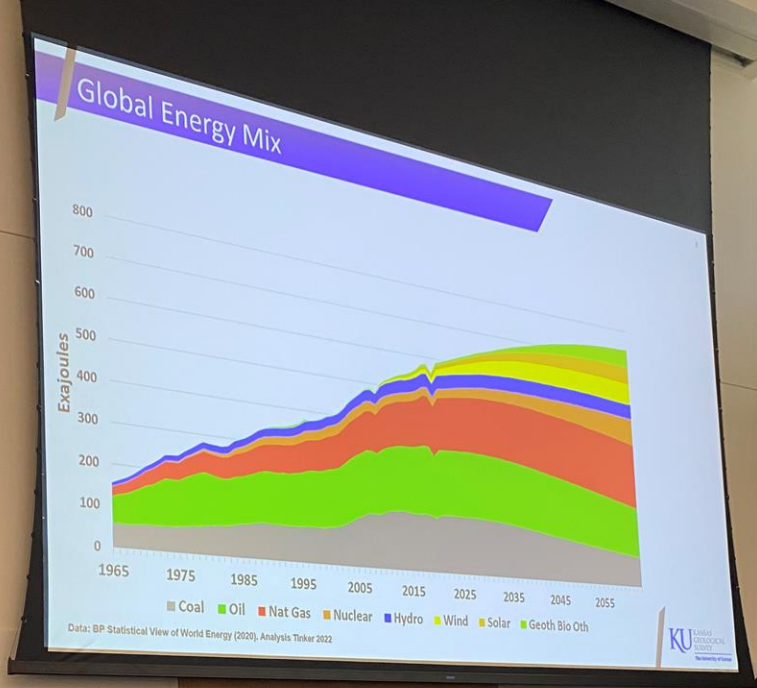


Upshot: you have till Friday, people.

In 2007, the Energy Information Administration was very, very bullish on CCS!

In 2023, the U.S. Dept of Energy is making good on the EIA's optimism with its rapidly-expanding portfolio of CCS projects.





A minimum 0.9 GtCO₂/yr of CO₂ sequestration is required to transition the economy to net-zero by 2050.

-Princeton Net Zero America Study (Dr. Eric Larson, Andlinger Center for Energy + Environment)

Carbon Solutions

CUSP Scientists are thinking out to 2050 and beyond.

Communities LEAP Pilot

Stockton, CA

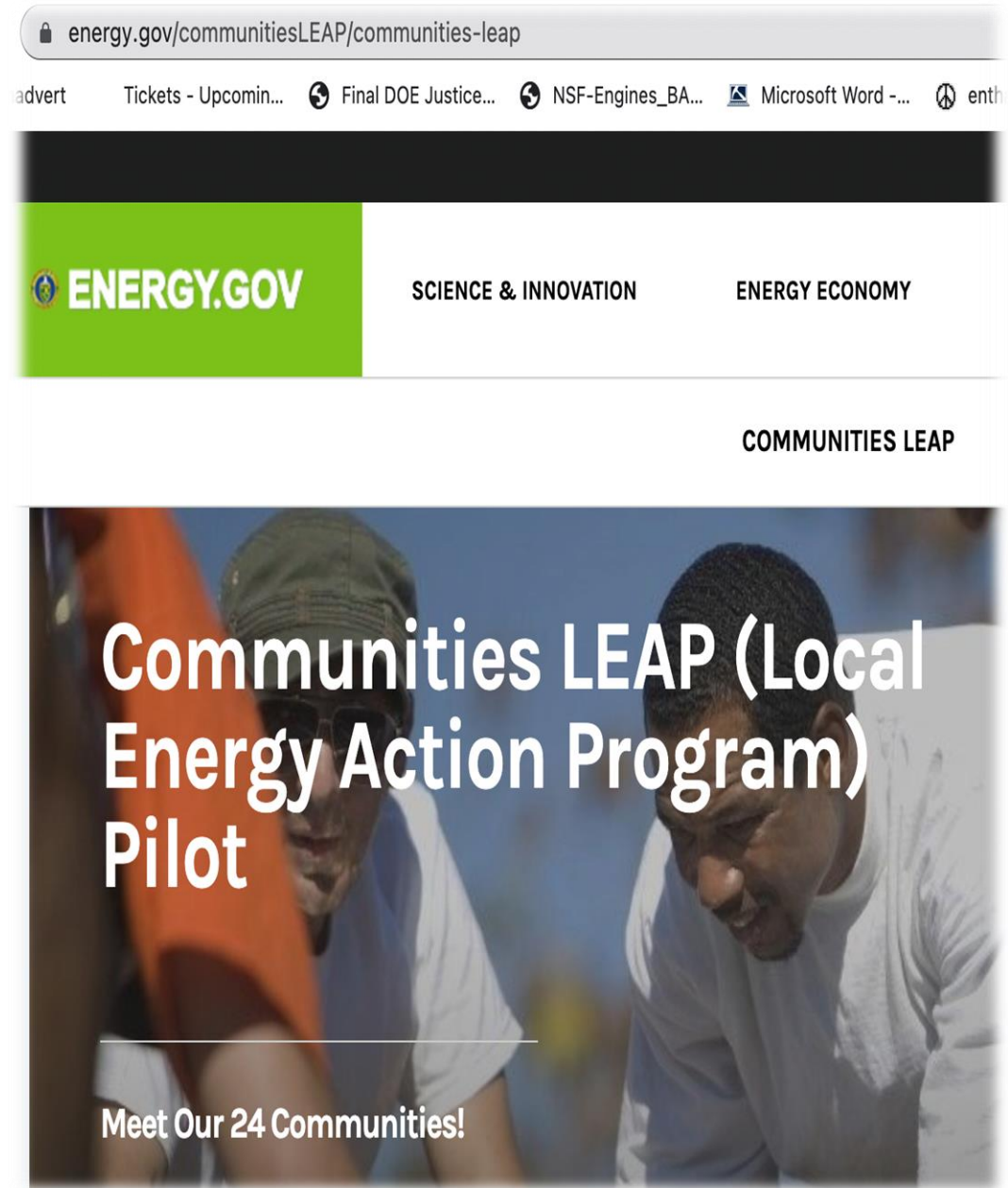
(Local Energy Action Program)

Summary by Brian McPherson
CUSP Annual Meeting
20 June 2024
Lawrence, KS



What is the C-LEAP program?

- Aims to facilitate sustained community-wide economic and environmental benefits
- Open to communities that are:
 - Low-income, energy-burdened
 - Experiencing either direct environmental justice impacts; or
 - Direct economic impacts from a shift away from historical reliance on fossil fuels
- 24 competitively-selected communities announced on March 29, 2022





For more information, visit energy.gov/communitiesLEAP or email CommunitiesLEAPinfo@hq.doe.gov

Produced for the U.S. Department of Energy by the National Renewable Energy Laboratory (NREL).
 DOE/GO-102023-5908 • April 2023

How C-LEAP works

- DOE provides customized, technical assistance to the selected communities to develop clean energy-related economic development pathways
- In each community, coalitions of local partners, including at least:
 - One local government partner
 - One community-based organization, contribute to project oversight and delivery.
- Opportunities include:
 - Lower local air pollution
 - High-quality, local jobs
 - Lower utility costs and energy burden
 - Enhanced economic productivity
 - Improved access to reliable energy
 - New clean energy supply supply chain demonstration and manufacturing opportunities



Stockton, CA

- Population ~320,000
- Largest deep water inland port in California, 75 miles from the ocean
- Largest river port in the Western U.S.
- High
 - Air pollution and related health effects
 - Poverty
 - Unemployment
- 1/3 of Stockton is documented as an environmental justice community with residents at the bottom 75-99 percentile for environmental health indicators
- High levels of water pollution
 - Drinking water and waterways
 - Selenium, mercury, arsenic, nitrates, E. coli, cyanotoxins





oehha.ca.gov/calenviroscreen/report/calenviroscreen-40

designadvert

Tickets - Upcomin...



Final DOE Justice...



NSF-Engines_BA...



OEHHA

California Office of Environmental
Health Hazard Assessment



Environmental Topics

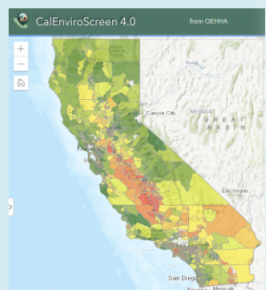
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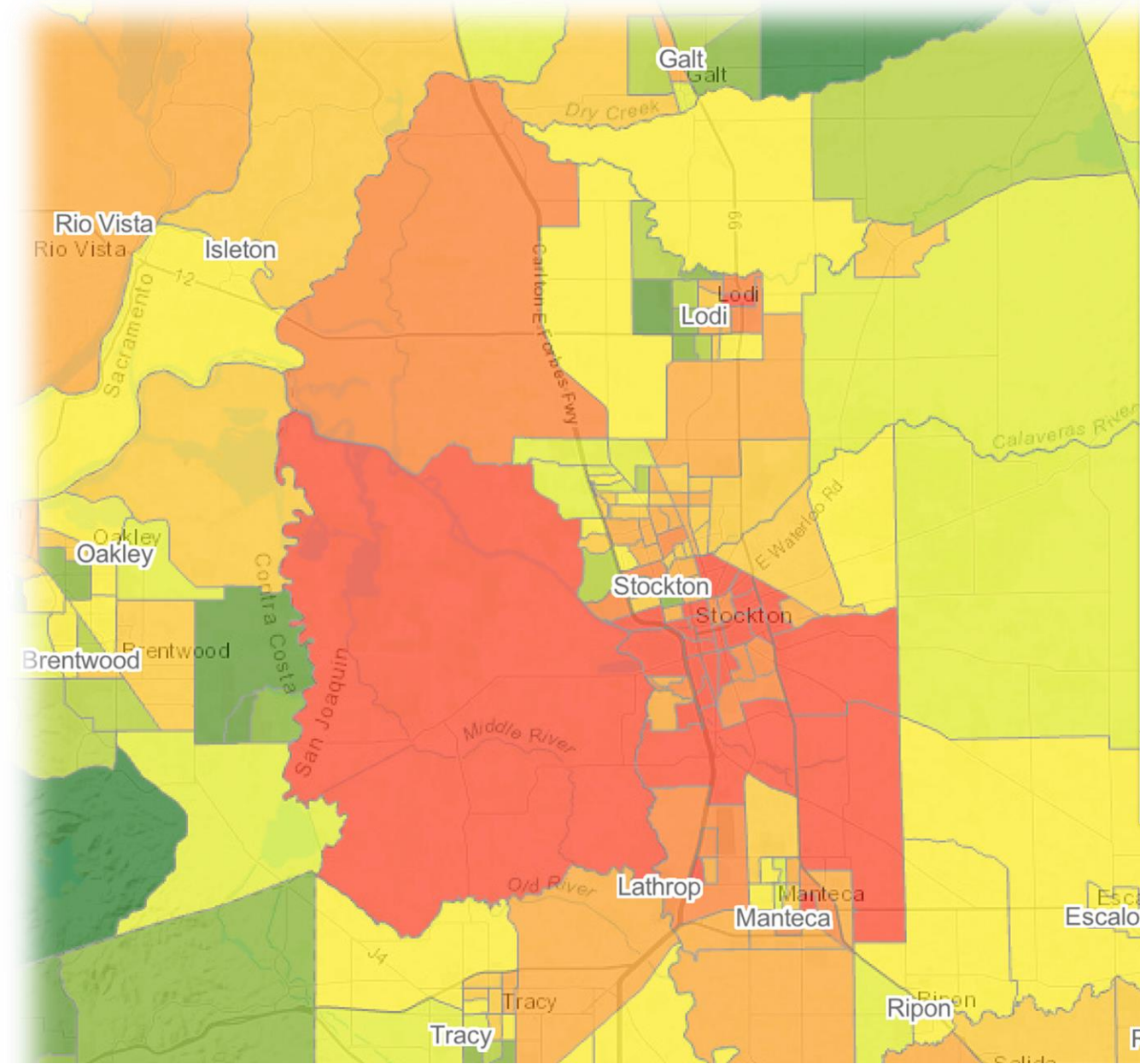
[CalEnviroScreen](#)



CalEnviroScreen 4.0



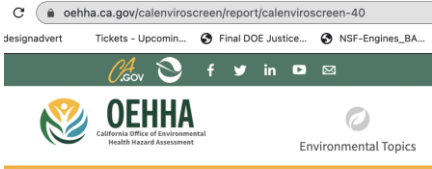
CalEnviroScreen 4.0



Overall Percentile

CalEnviroScreen 4.0 Results

- >90 - 100 (Highest Scores)
- >80 - 90
- >70 - 80
- >60 - 70
- >50 - 60
- >40 - 50
- >30 - 40
- >20 - 30
- >10 - 20
- 0 - 10 (Lowest Scores)

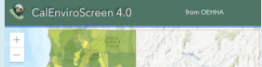


CalEnviroScreen 4.0

CalEnviroScreen 4.0 High Pollution, Low Population

May 1, 2023

A new version of the California Communities Environmental Health Screening Tool: CalEnviroScreen 4.0 was released in October 2021. CalEnviroScreen is a screening methodology that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution.



The Sacramento-San Joaquin Delta

- One of the largest estuaries in the United States
- Provides water to more than 25 million California residents and farmland
- Supports key fish and wildlife habitats
- Vital stopover for many migratory bird species and tens of millions of birds
- High landscape and recreational value
- Reclaimed wetland with sensitive peat soils that has experienced significant subsidence
- Subject to extreme flood threat and drought impacts



Stockton C-LEAP partners

- Edge Collaborative
 - A civic incubator that strives for a more inclusive and resilient economic reality
 - Seeks to drive more equitable outcomes with and for overlooked communities
- Restore the Delta
 - A grassroots campaign of residents and organizations seeking to restore the Delta so that fisheries, communities, and family farming can thrive together
 - Protect water quality and Delta environmental justice communities from flood and drought impacts related to climate change
- San Francisco Estuary Institute
 - A non-profit aquatic and ecosystem science institutes seeking to provide scientific support and tools for decision-making and communication to assess and improve the health of the waters, wetlands, wildlife and landscapes of San Francisco Bay, the California Delta and beyond.
- Resource Management Associates
 - A consulting engineering firm that develops and applies advanced numerical models and engineering software systems to help manage water resources and address environmental challenges.
- CUSP
- LLNL



Project Plan

- Considerable CCS project development interest and activity in the Stockton and Delta vicinity due to favorable geology and proximity to CO₂ point sources
- Help local partners address technical and regulatory questions on CCS
- **Conduct Delta CO₂ leakage impacts study**
 - Construct possible leakage scenarios
 - Select model locations based on human and ecosystem impacts
 - Study migration and impacts of CO₂ in the subsurface and in the surface waters of the Delta
 - Learn about the magnitude of potential impacts



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Project Plan

- Conduct Delta CO₂ leakage impacts study

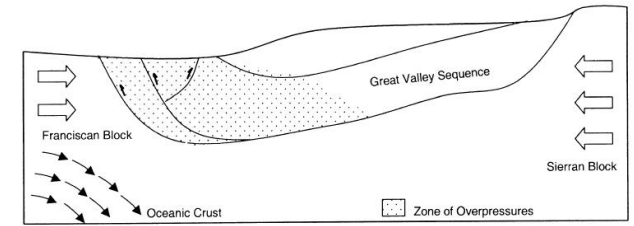
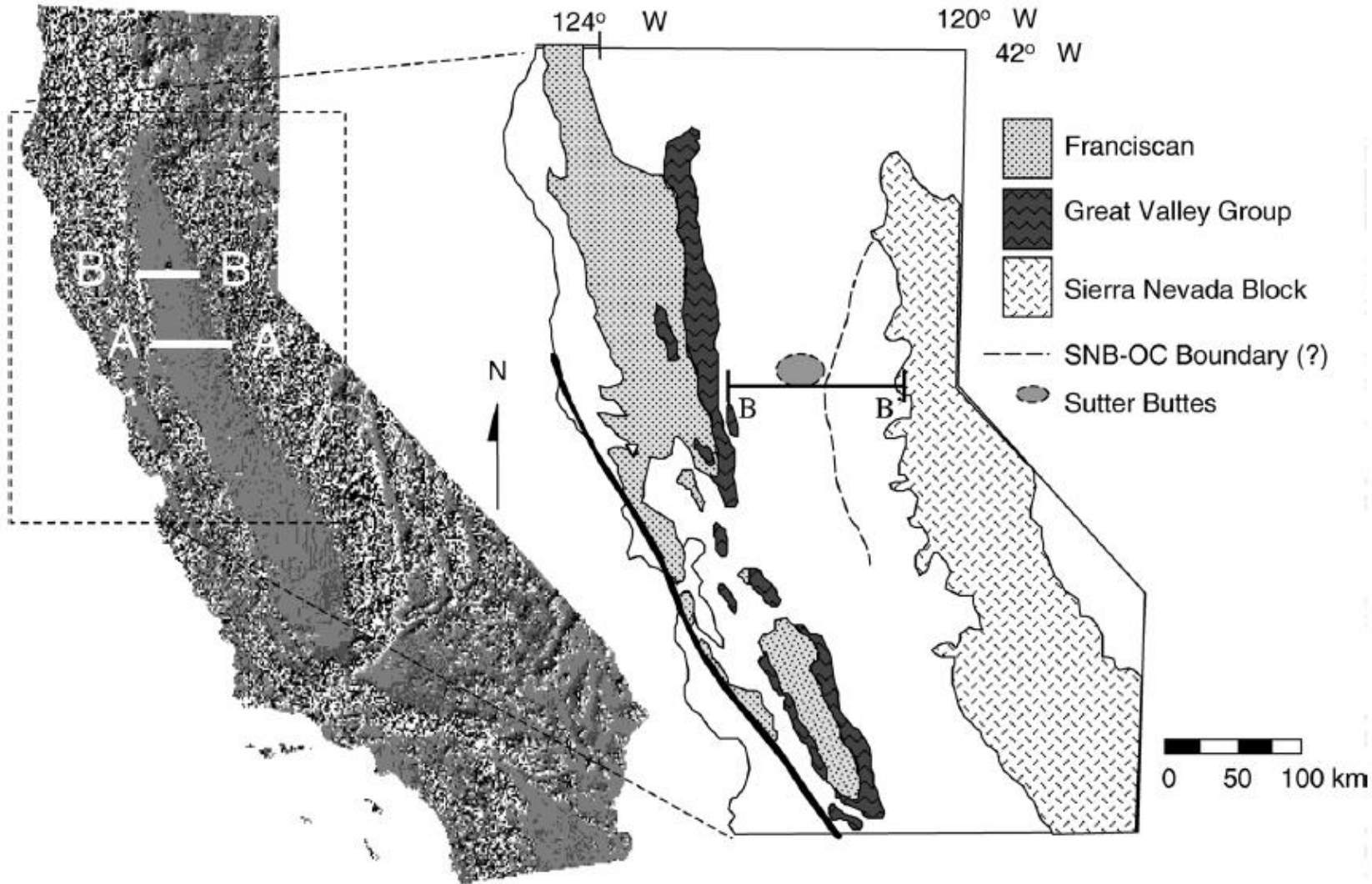


Fig. 2. Schematic cross section showing general structure at the regional scale. Also shown are the compressional forces (block arrows) that may occur in a transpressional tectonic regime. Observed overpressures inferred by Berry (1973) are also indicated.

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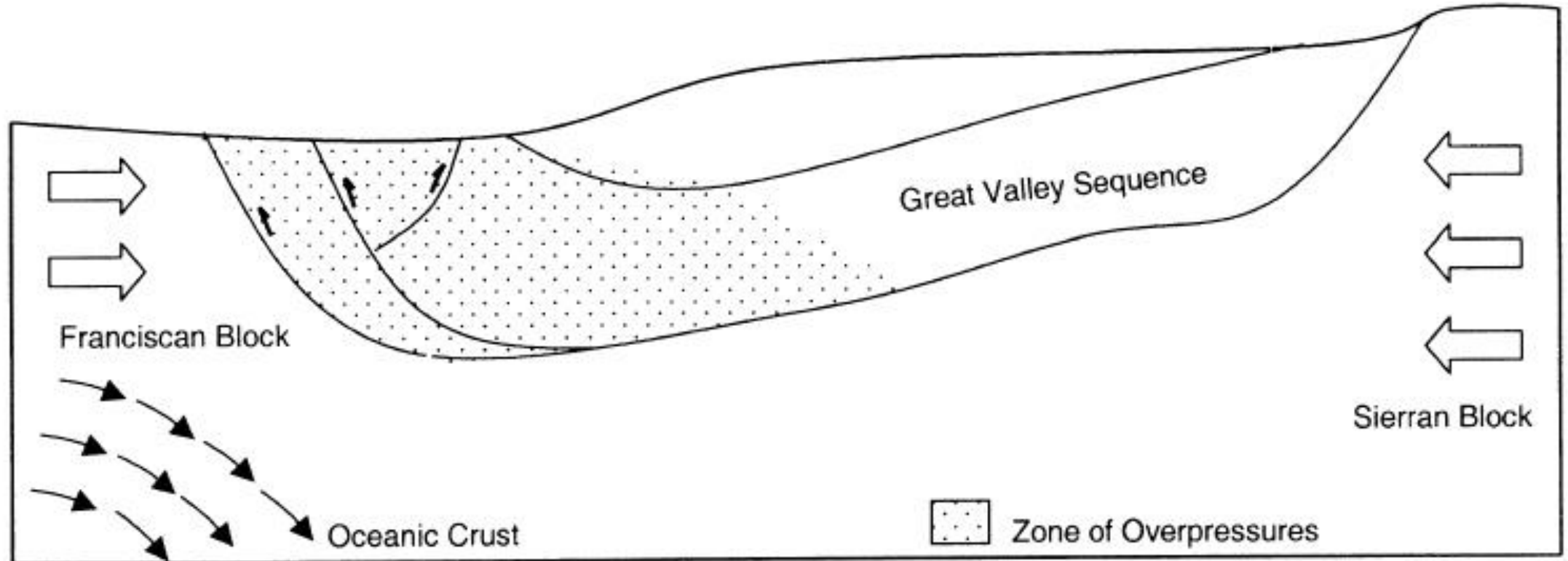
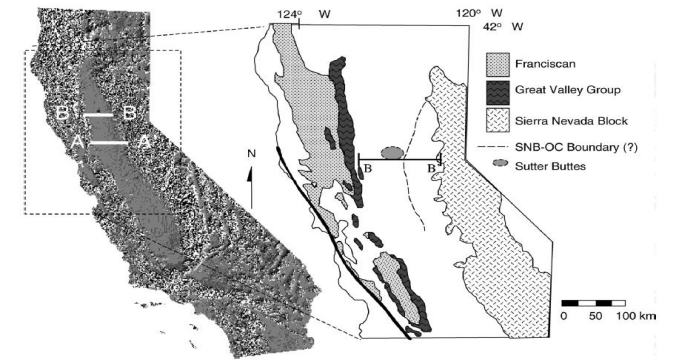


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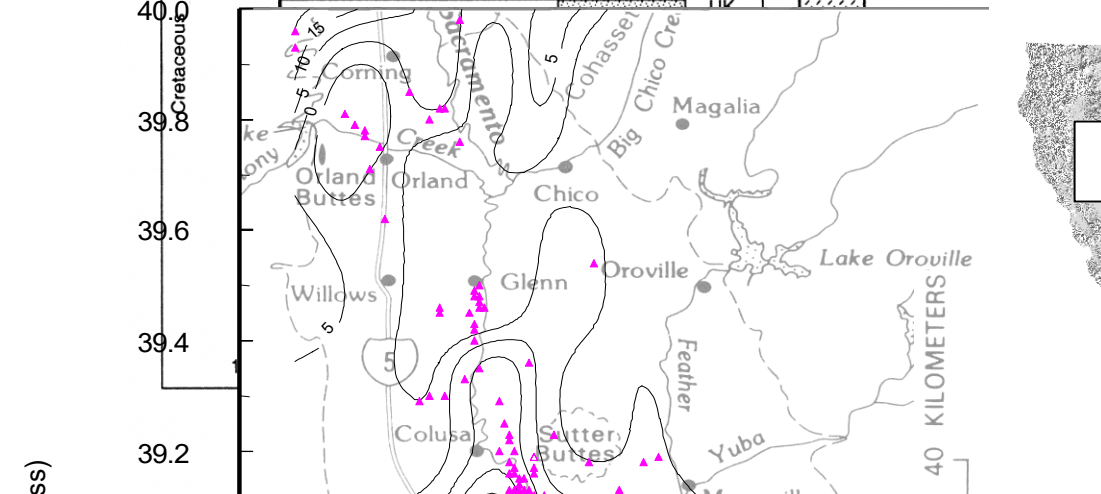
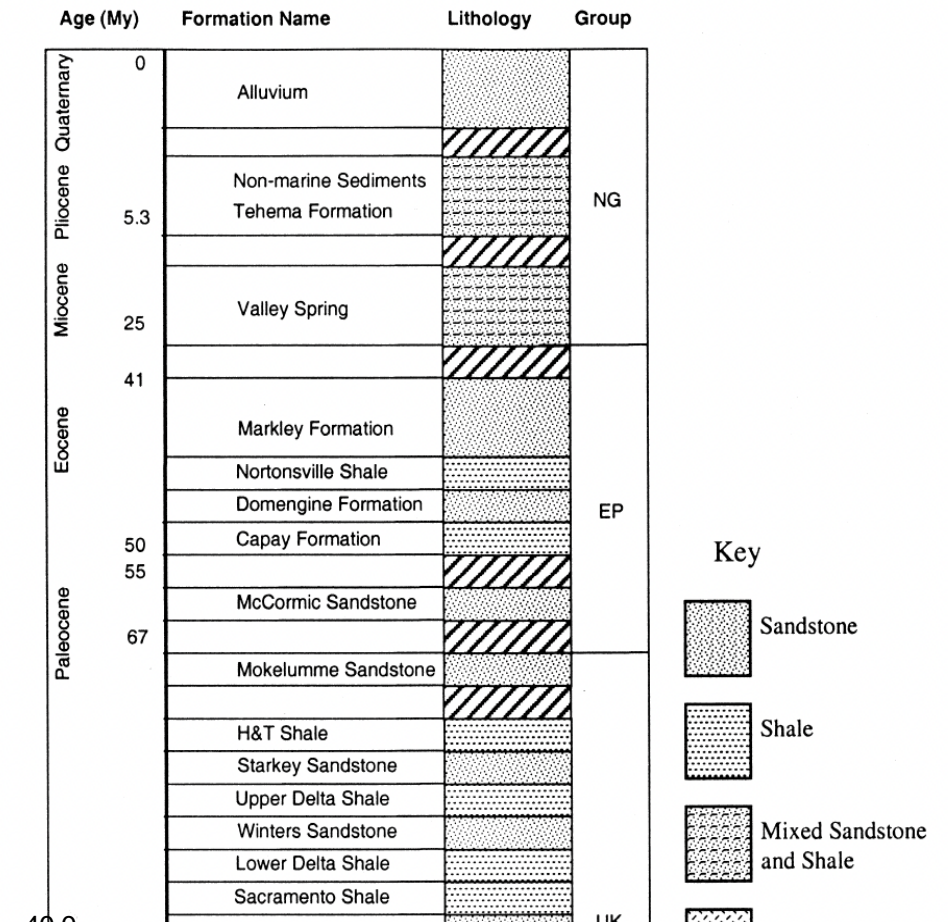
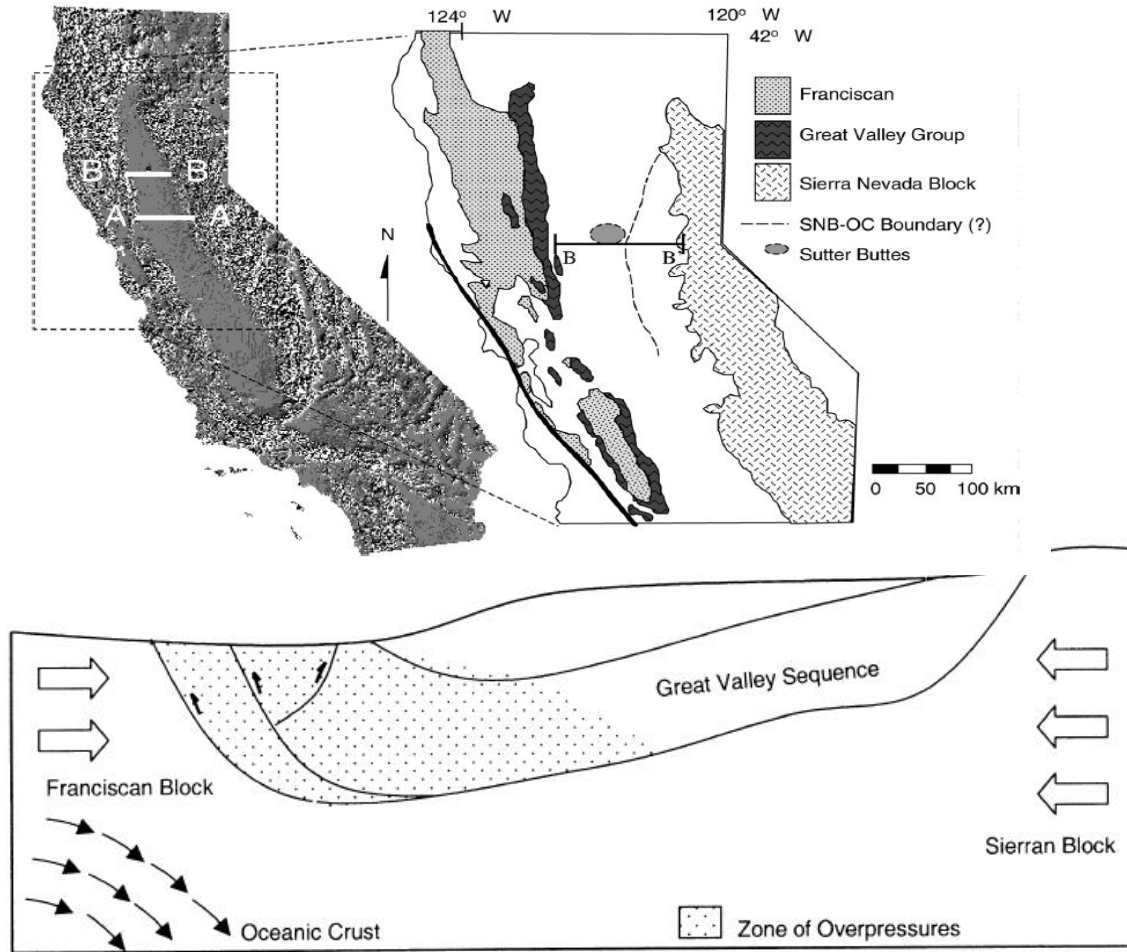


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- Conduct Delta CO₂ leakage impacts study
- Initial concern/issue: overpressures

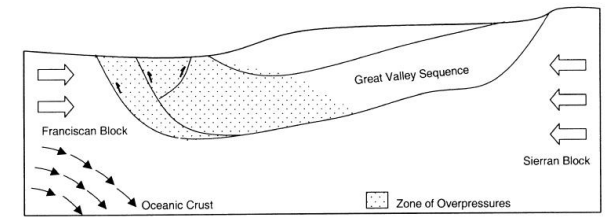
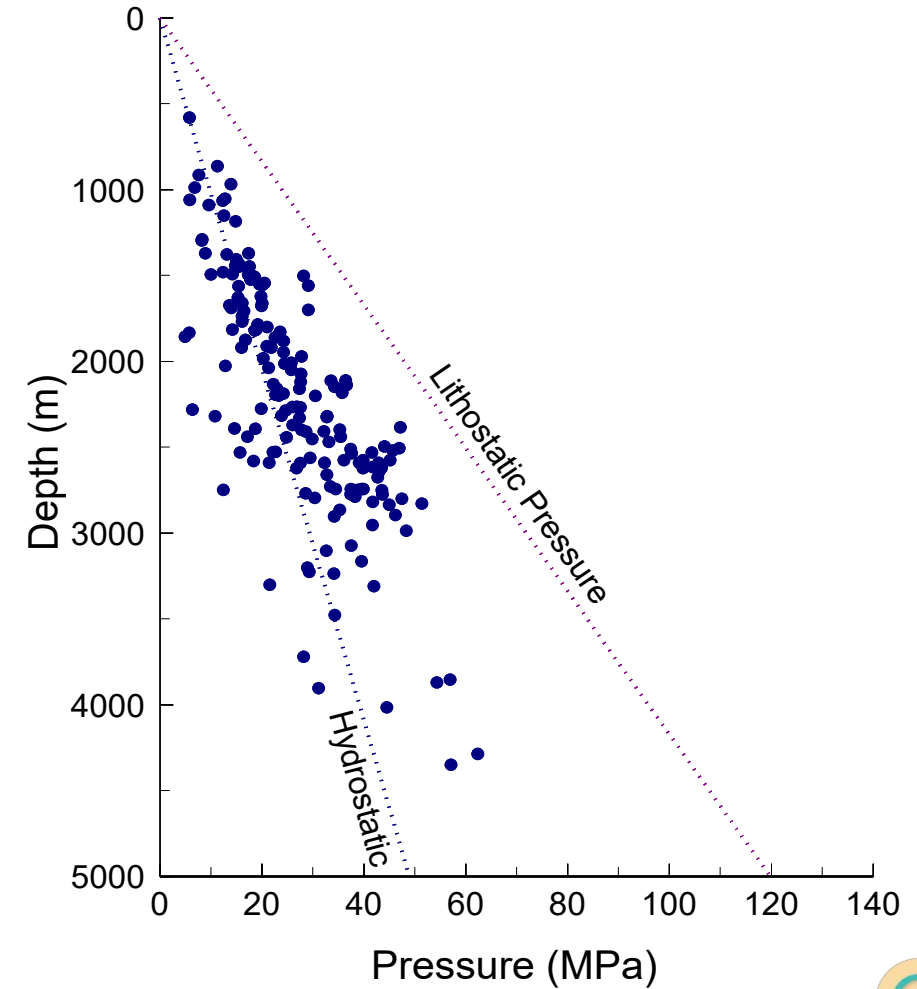
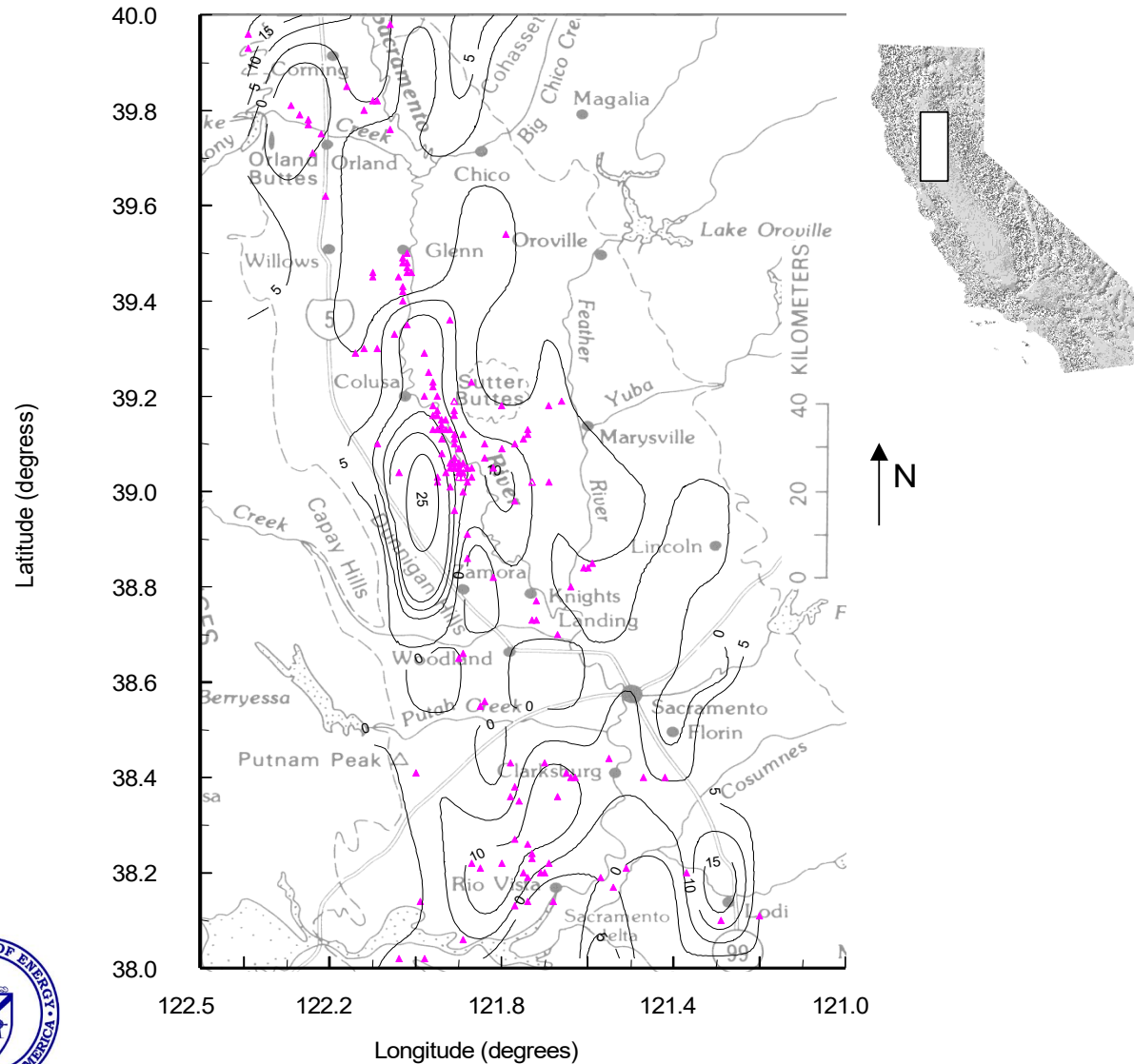


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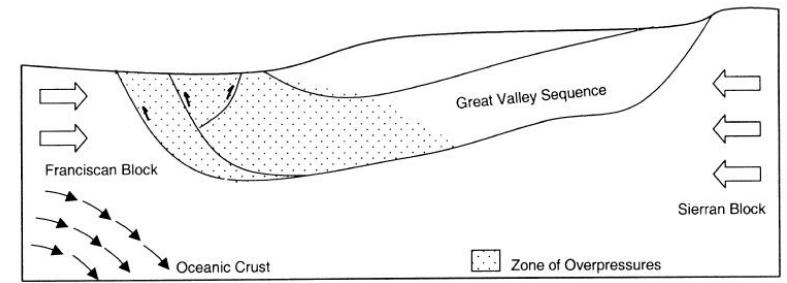


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Will update you about all things LEAP this time next year!



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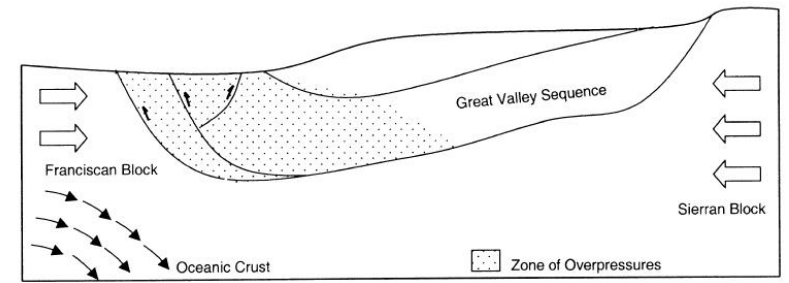


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