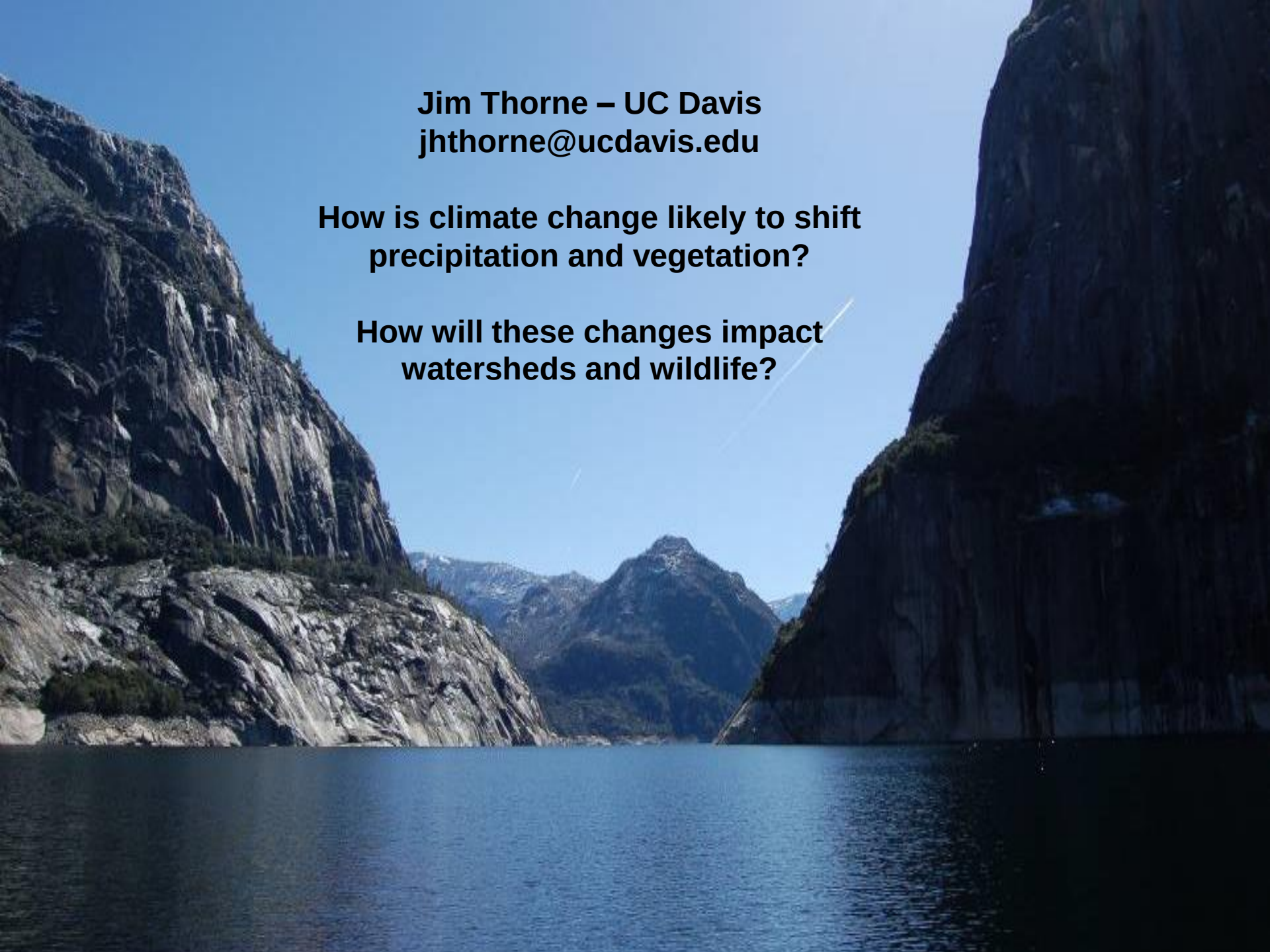




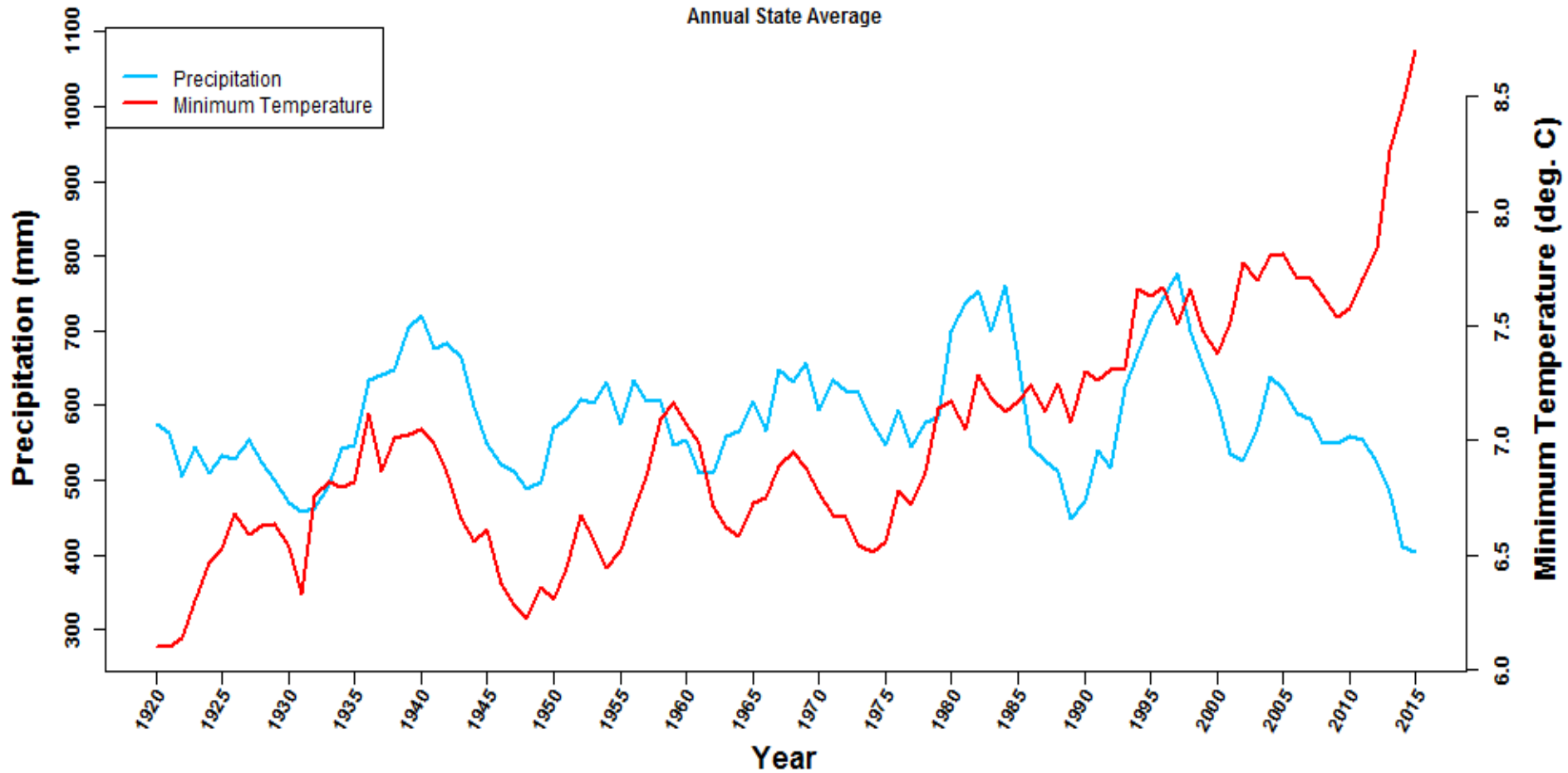
Jim Thorne – UC Davis
jhthorne@ucdavis.edu

**How is climate change likely to shift
precipitation and vegetation?**

**How will these changes impact
watersheds and wildlife?**

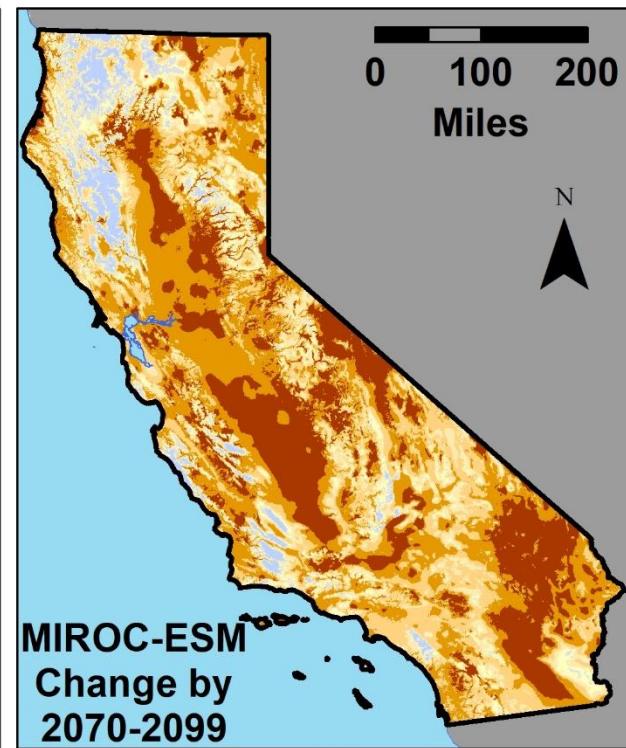
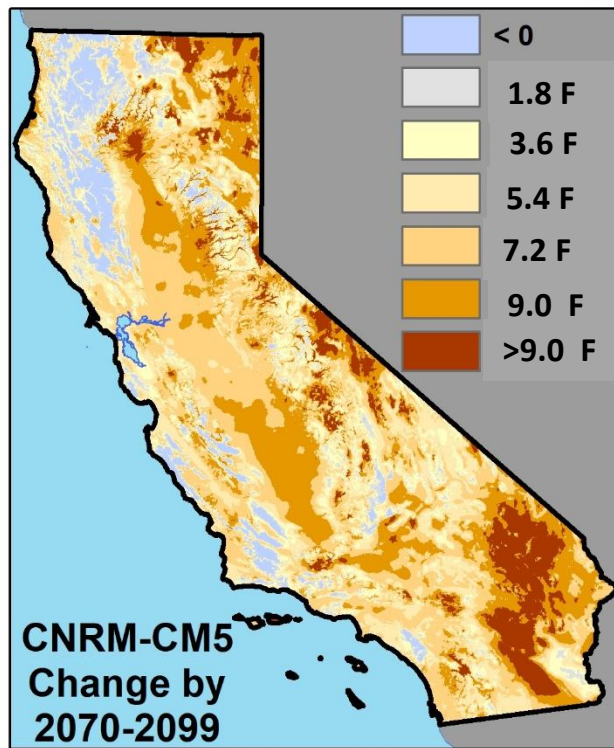
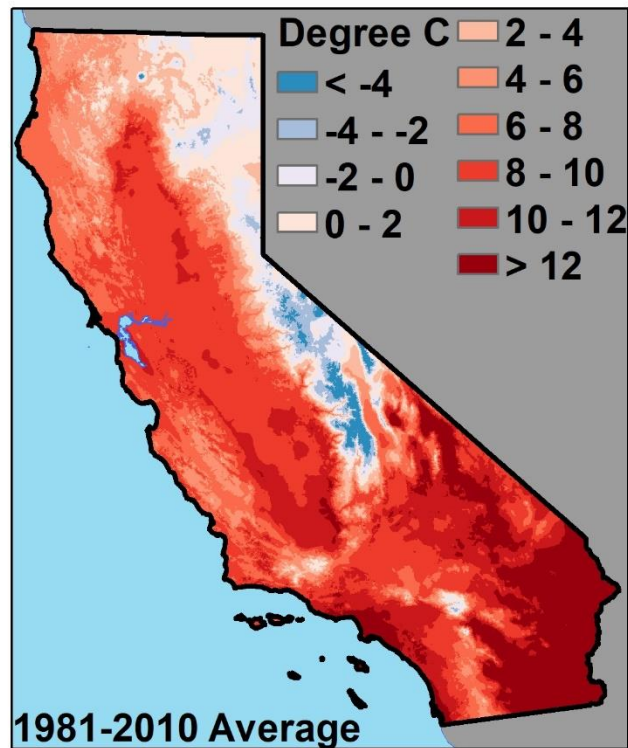
Precipitation & Minimum Temperature

Annual State Average

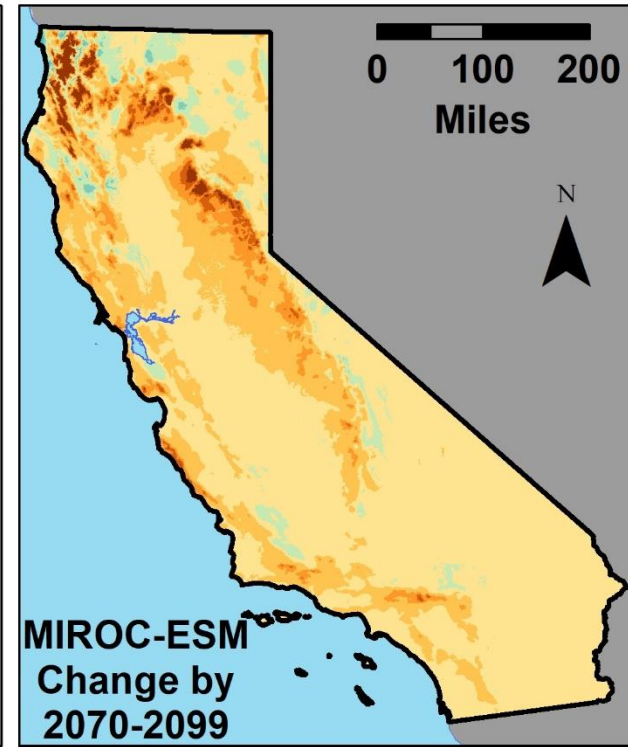
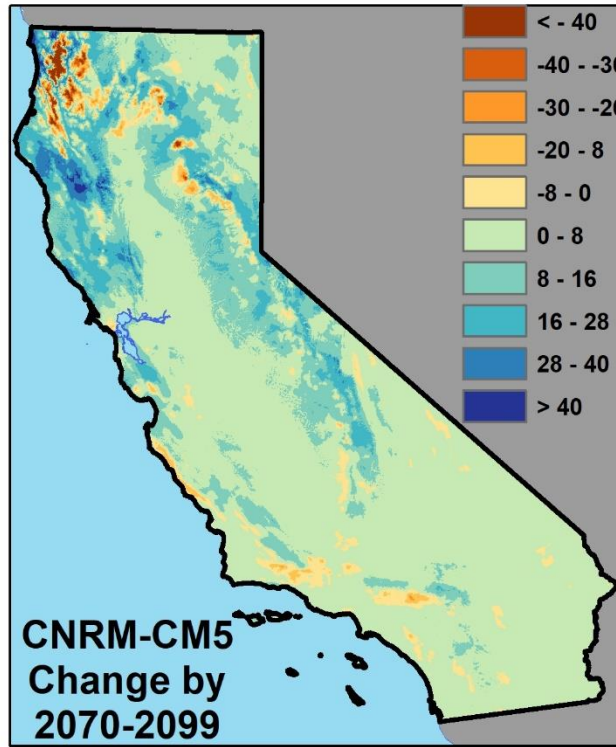
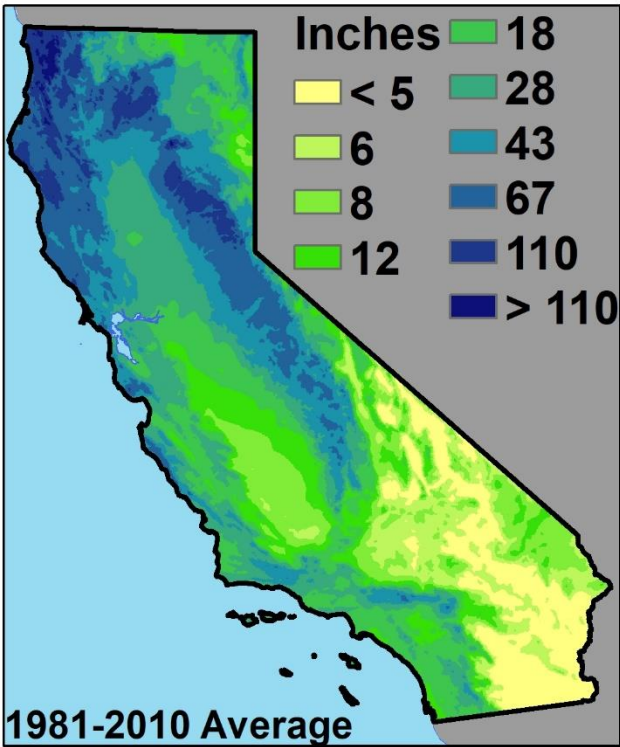


Annual Average Precipitation and Temperature for California

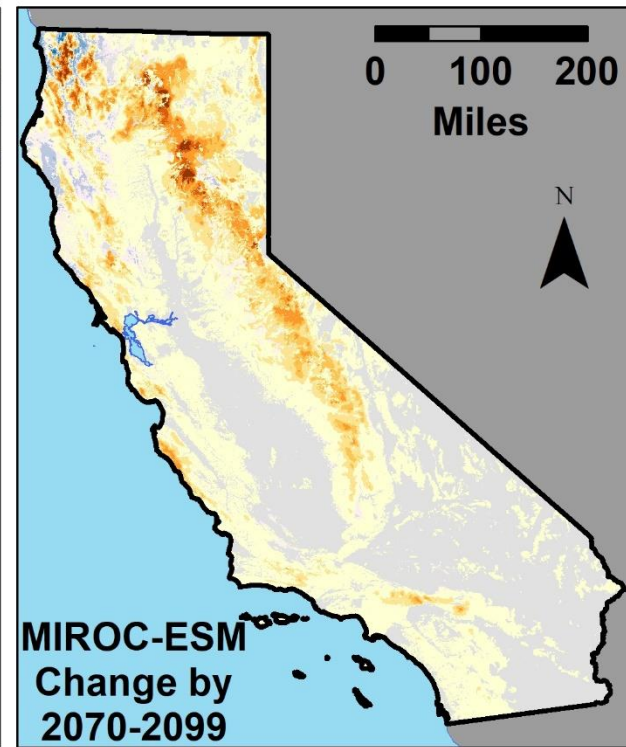
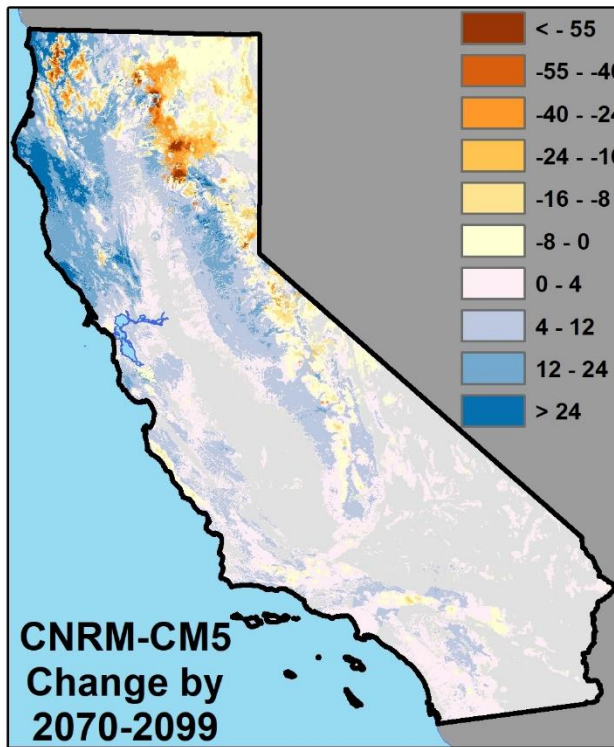
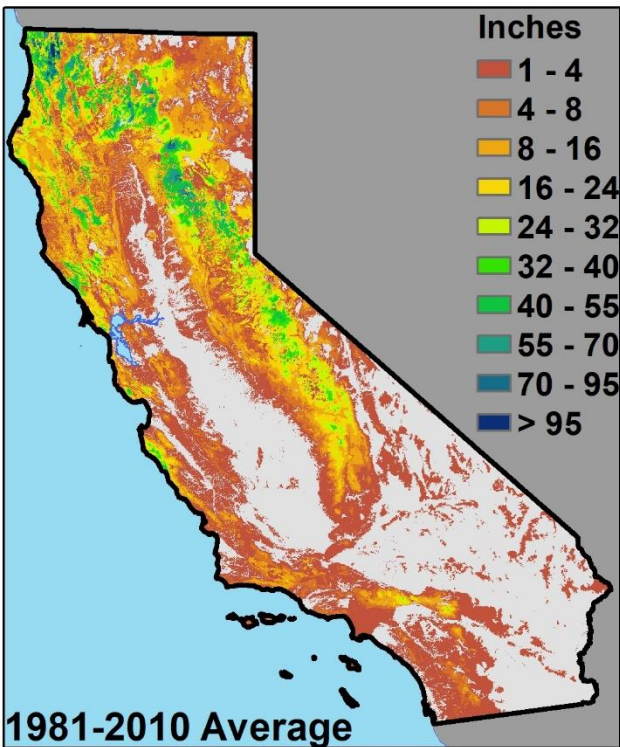
Mean Annual Minimum Temperature

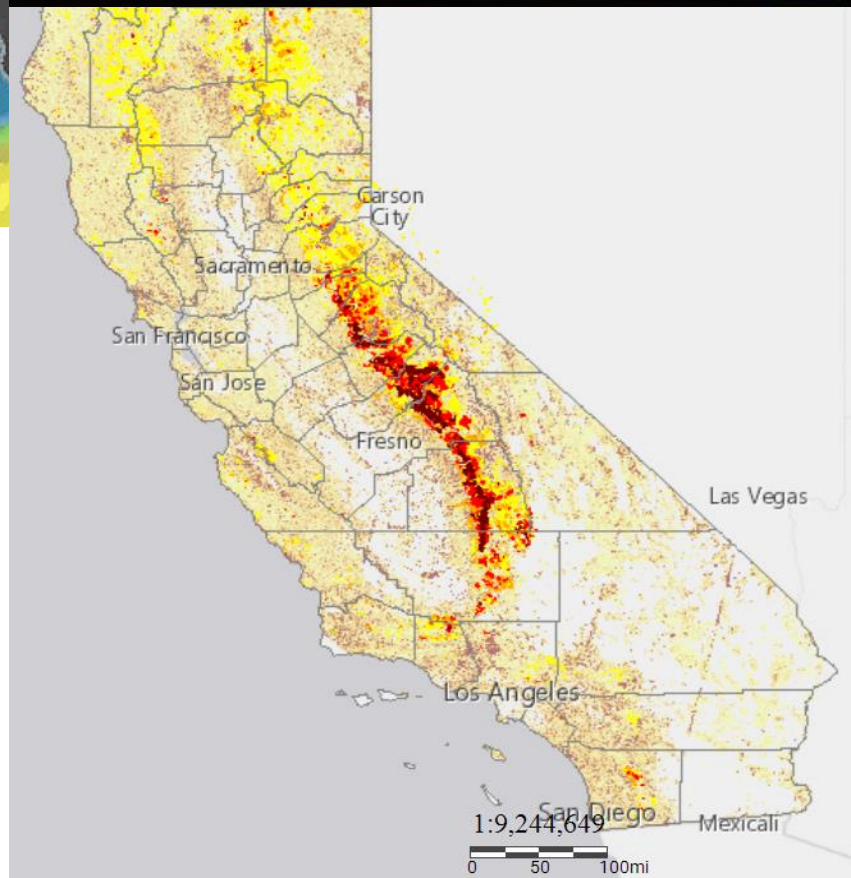
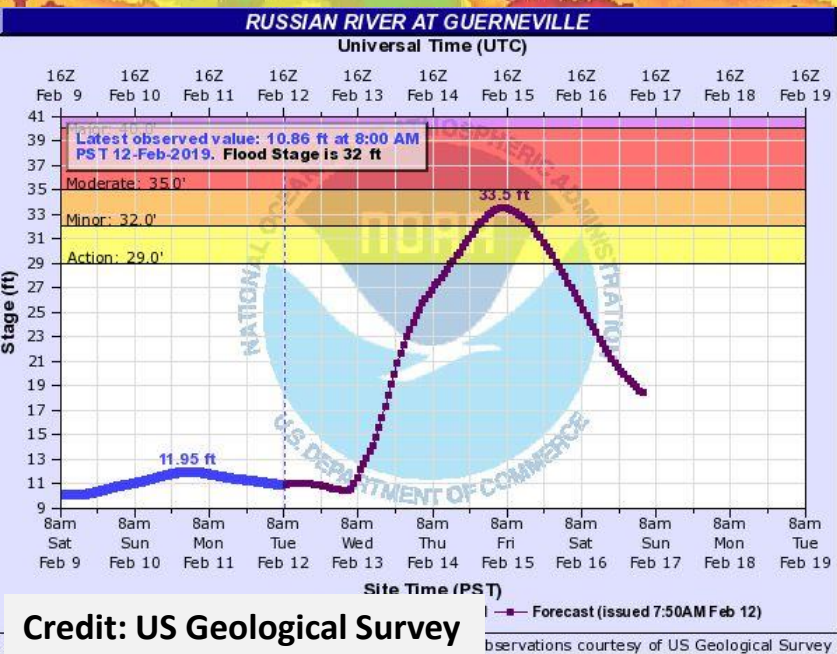
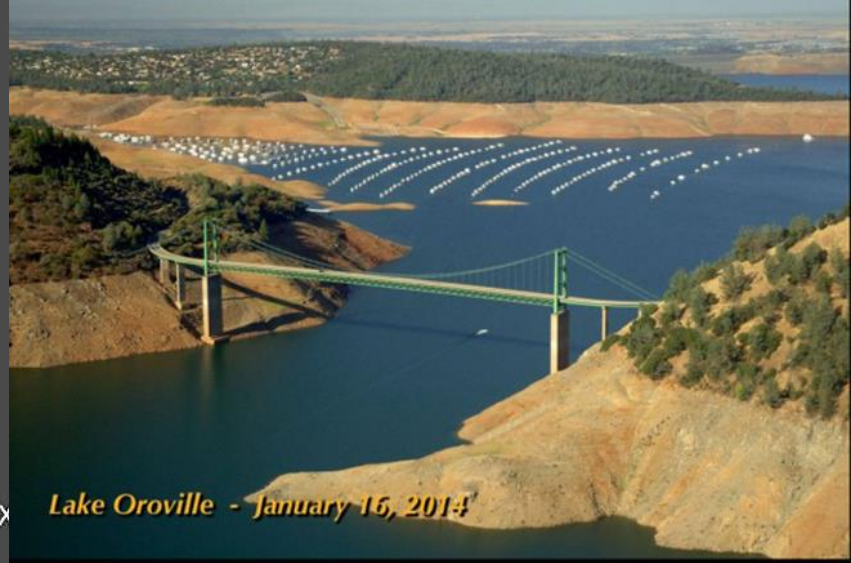
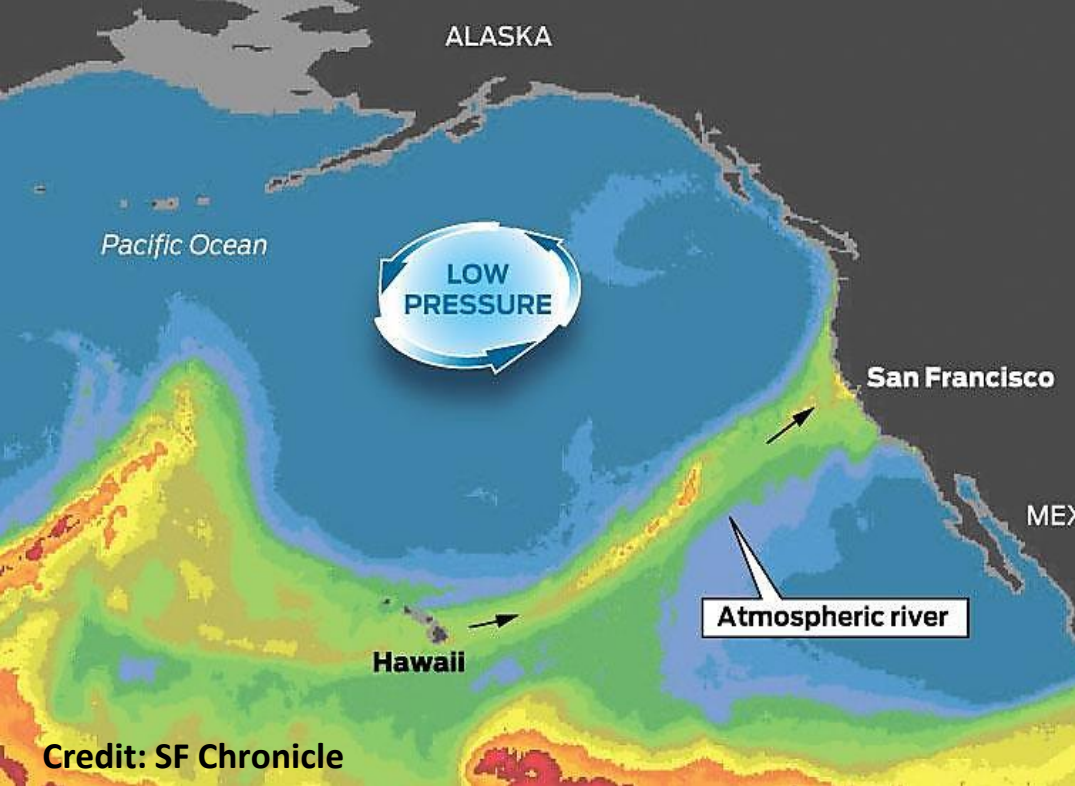


Mean Annual Precipitation

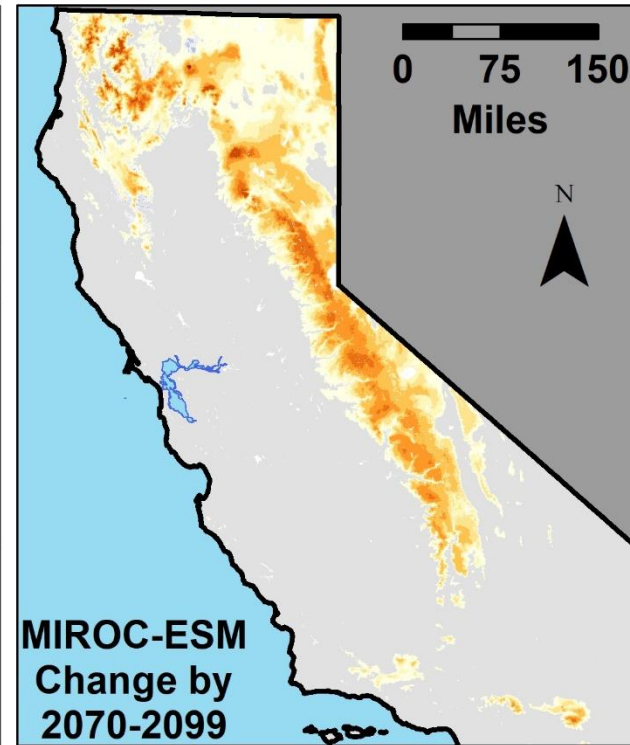
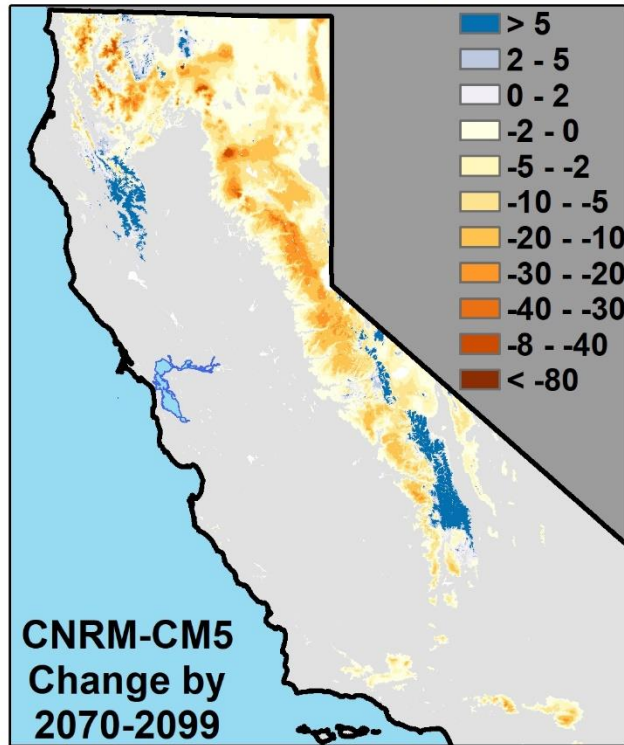
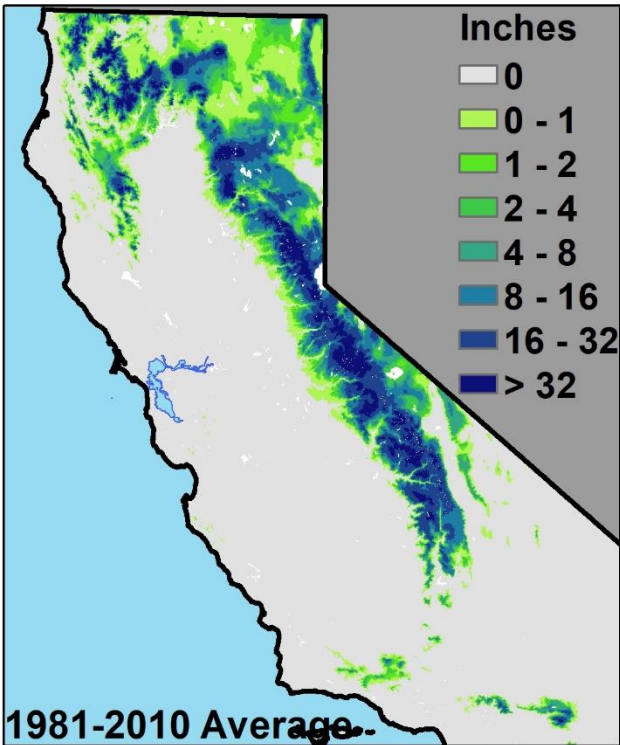


Mean Annual Runoff

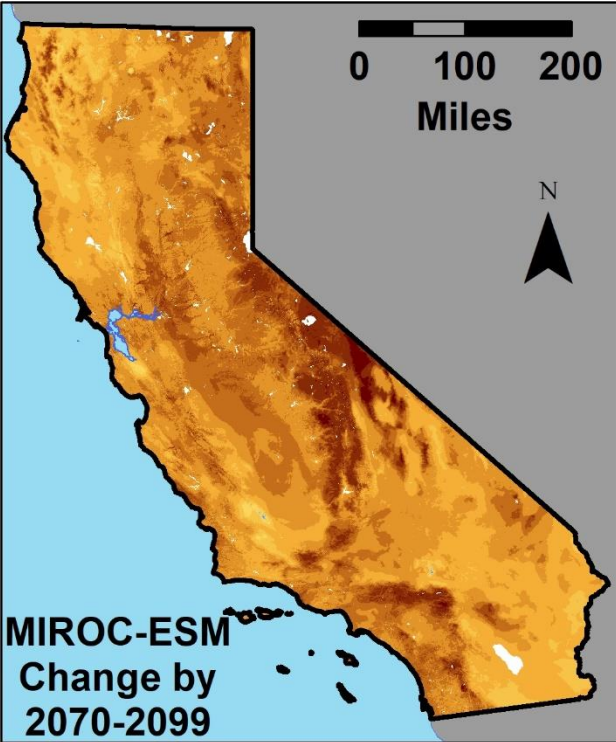
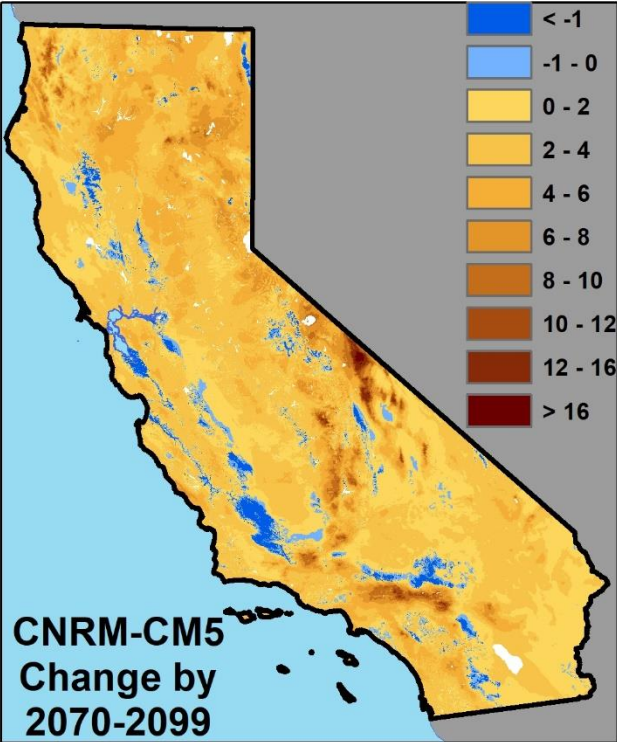
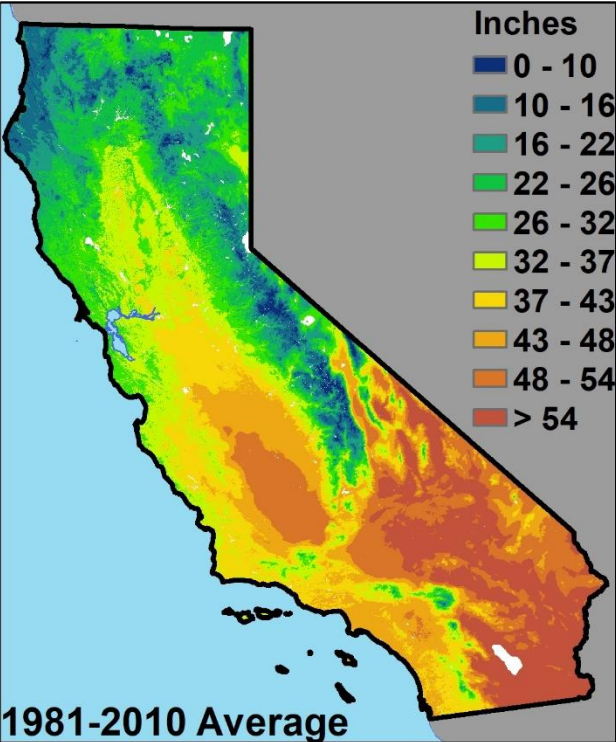




April 1 Snowpack

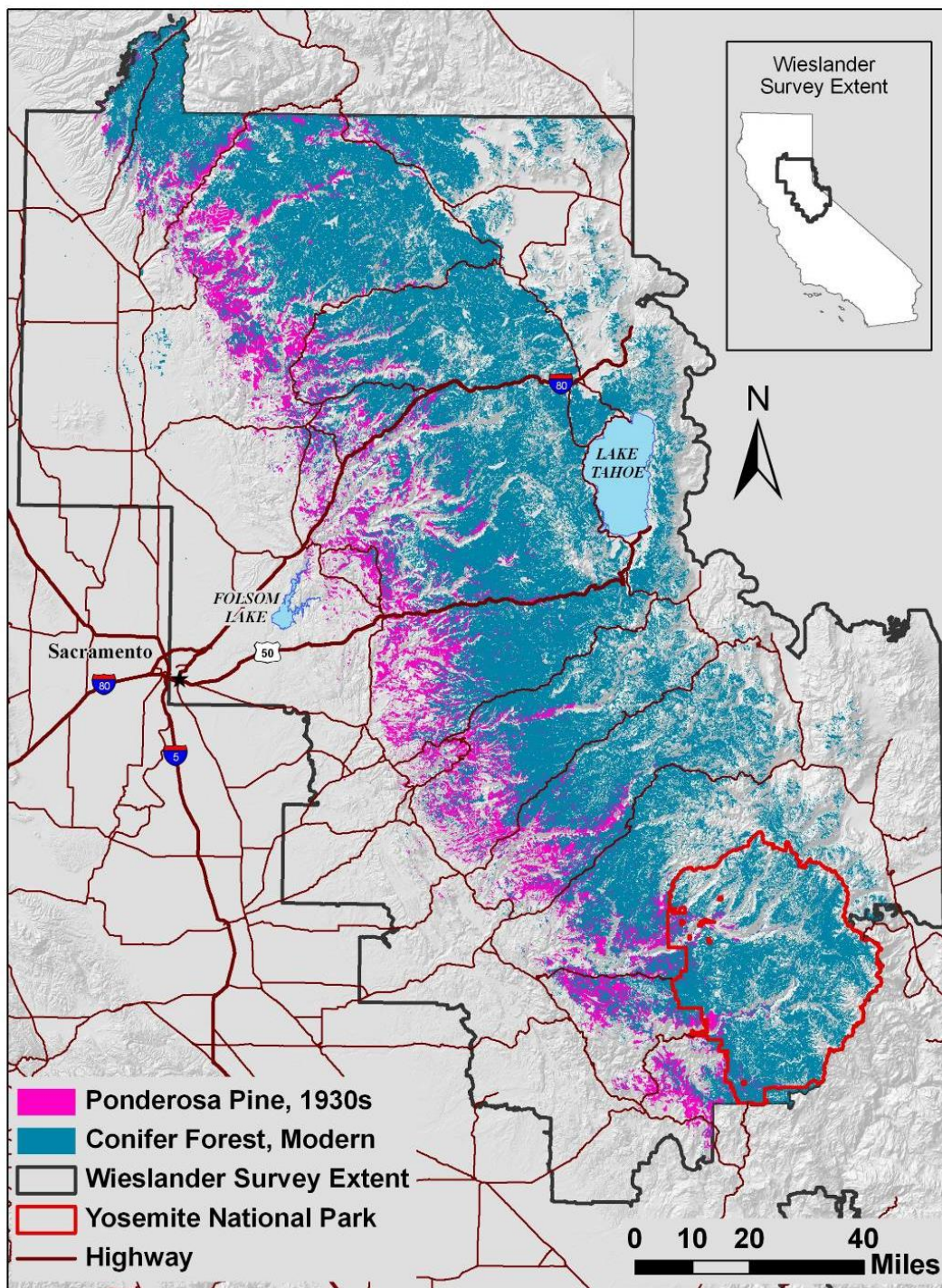


Mean Annual Climatic Water Deficit



Ponderosa Pine Transition

Lower Edge



Generally less water to work with

As pressures mount..

All aspects of water retention need work – starting with our watersheds

Snowpack

Meadows

Riparian areas to reduce erosion and landslides

Hill slopes – woodlands and forests

Valleys

Need to optimize the functioning of the watersheds to get more water –

People

Ecosystems

Wildlife & Habitats

Need to slow water across the landscapes.

Manage Watersheds holistically –

Green

Black

Particularly in Watersheds that are important for drinking and supply.

California is a Biodiversity Hotspot

Vegetation

Changes in species mix

Species will change locations

Zones of stability (climate refugia)

Zones of transition

Wildlife

Zones of stability (climate refugia)

Corridors/connectivity



(Whitney Albright)



Thank you!



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Questions – Challenges – Risks – Actions

Water

Landscapes

Manage the green for risk reduction

Manage the black for resilience

Agriculture

Urban, People, Infrastructure

Forests and Ranchlands

Biodiversity