



FORGOTTEN FORESTS: HEALING THE SIERRA IN TIMES OF CLIMATE CHANGE

CALIFORNIA ADAPTATION FORUM PANEL SESSION
LONG BEACH, CALIFORNIA
SEPTEMBER 8, 2016

RAMBOLL

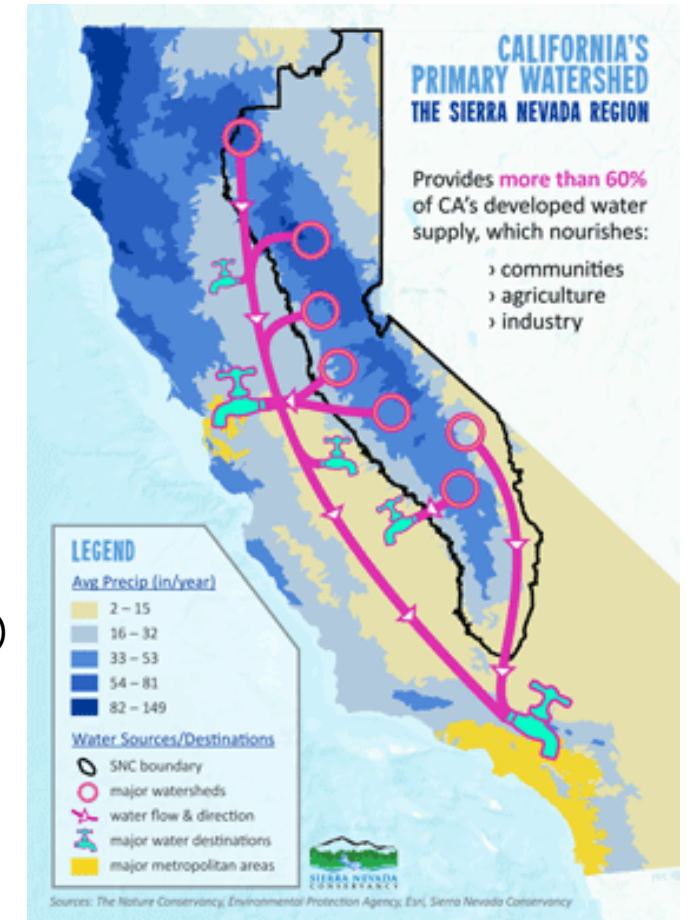


State of California
Sierra Nevada Conservancy



KEY FACTS ABOUT THE SIERRA NEVADA / CALIFORNIA NEXUS (E.G., WHY ARE WE HERE TODAY?)

- California is:
 - The most populous U.S. State
 - A Top Ten Global Economy
 - The largest agricultural (and manufacturing) state in the U.S.
 - A most diverse geography
 - Population-heavy (**urban**) where water resources are scarce (**rural**)
 - Historically the most forward-moving state with regards to environmental action (water, air, climate, construction standards, etc.)
 - Reliant on the water resources and environmental conditions of the Sierra Nevada range and watershed for its modern existence.
 - **Reliant on a healthy forest ecosystem to provide the water resources for all of the above!**



<http://www.sierranevada.ca.gov>

KEY FACTS ABOUT THE SIERRA NEVADA / CALIFORNIA NEXUS (E.G., WHY ARE WE HERE TODAY?)



- The Sierra Nevada is:
 - The “*snowy range*” and “*range of light*”
 - Approximately 400 miles north to south, 70 miles east to west
 - The highest (14,505 ft. Mt. Whitney) and lowest (-282 ft. Death Valley) points in the Continental U.S.
 - A massive area with a very low population and very high ecological diversity
 - Most known for Yosemite, John Muir, Mt. Whitney, Sequoias
 - Less known for its influence on California’s economy, water resources, and environment
 - **Facing a dramatic attack from climatic change**
 - drought, tree mortality
 - loss of and shifting habitat,
 - fire and erosion, rising snow line



KEY FACTS ABOUT THE SIERRA NEVADA / CALIFORNIA NEXUS (E.G., WHY ARE WE HERE TODAY?)

- The Sierra Nevada also:
 - Provides approximately 2/3 of California's developed water supply
 - Has natural storage capacity to offset the annual CO2 emissions from nearly 110 coal-fired power plants
 - Suffered a 500-year low in snow pack (in 2015)
 - Has seen more frequent severe fires in the last decade than in the previous century
 - Appears to be warming quicker than any other part of California
 - Will cause a domino impact to the whole of California's (and the U.S.'s) ecosystem if over-stressed
 - Will cause a domino impact to the whole of California's (and the U.S.'s) economic health if not healthy

RAMBOLL



CALIFORNIA STATE OF EMERGENCY TREE MORTALITY – JANUARY 17, 2014

Tens of millions of Sierra Nevada trees are dying annually

This dramatic tree loss severely damages ecology and habitat and leads to a greater number of severe uncontrollable fires

...catastrophically reduces the watershed's ability to capture and store fresh water for California cities – urban and rural



...so what can we do.....

Executive Department
State of California

PROCLAMATION OF A STATE OF EMERGENCY

WHEREAS the State of California is experiencing record drought conditions, which have persisted for the last four years; and

WHEREAS on January 17, 2014, I proclaimed a State of Emergency to exist throughout the State of California due to severe drought conditions; and

WHEREAS a lack of precipitation over the last four years has made trees in many regions of California susceptible to epidemic infestations of native bark beetles, which are constrained under normal circumstances by the defense mechanisms of healthy trees; and

WHEREAS these drought conditions and resulting bark beetle infestations across broad areas have caused vast tree mortality in several regions of the state, with the United States Forest Service estimating that over 22 million trees are dead and that tens of millions more are likely to die by the end of this year; and

WHEREAS recent scientific measurements suggest that the scale of this tree die-off is unprecedented in modern history; and

WHEREAS this die-off is of such scale that it worsens wildfire risk across large regions of the State, presents life safety risks from falling trees to Californians living in impacted rural, forested communities, and worsens the threat of erosion across watersheds; and

WHEREAS such wildfires will release thousands of tons of greenhouse gas emissions and other harmful air pollutants; and

WHEREAS the circumstances of the tree die-off, by reason of its magnitude, is or is likely to be beyond the control of the services, personnel, equipment and facilities of any single county, city and county, or city and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the California Government Code, I find that conditions of extreme peril to the safety of persons and property exist within the State of California due to these events; and

WHEREAS under the provisions of section 8571 of the California Government Code, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay the mitigation of the effects of the drought.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the State Constitution and statutes, including the California Emergency Services Act, and in particular, section 8625 of the California Government Code, **HEREBY PROCLAIM A STATE OF EMERGENCY** to exist within the State of California.

PRESENTERS AND PANEL TOPICS

- MODERATOR

Scott D. Warner, CHG, CEG – Principal Hydrogeologist Ramboll Environ

swarner@ramboll.com

(Topic: The Sierra Nevada Affect: Setting the Stage)

- PANELISTS

Elizabeth Betancourt, Policy Analyst, Sierra Nevada Conservancy

Elizabeth.Betancourt@sierranevada.ca.gov

(Topic: Watershed Improvement Program)

Rosemarie Smallcombe, Supervisor District 1, Mariposa County

rsmallcombe@mariposacounty.org

(Topic: Tree Mortality Task Force)

Vance Russell, Director California Program, National Forest Foundation

vrussell@nationalforests.org

(Topic: Treasured Landscape Initiative)

Diana Madsen, Director Sierra Climate Adaptation and Mitigation Partnership (Sierra CAMP)

dmadsen@sierrabusiness.org

(Topic: Policy and Advocacy through Sierra CAMP)

PANEL ORGANIZATION

PRESENTATIONS

DISCUSSION

CLOSING MESSAGE



President Barack Obama at the Tahoe Summit (08/31/16) paraphrasing from a Washoe Tribal Leader:

"...[we] live or die by the health of our natural resources...the health of the land and the health of the people are tied together..."

"When we protect our lands, it helps us protect the climate for the future"

President Barack Obama, August 31, 2016

RAMBOLL



State of California
Sierra Nevada Conservancy

