

# Improving the Health of California's Headwater Forests

September 20, 2017

Van Butsic, Henry McCann, Jodi Axelson, Brian Gray, Yufang Jin, Jeffrey Mount, Scott Stephens, William Stewart

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Supported with funding from the S. D. Bechtel, Jr. Foundation and the US Environmental Protection Agency

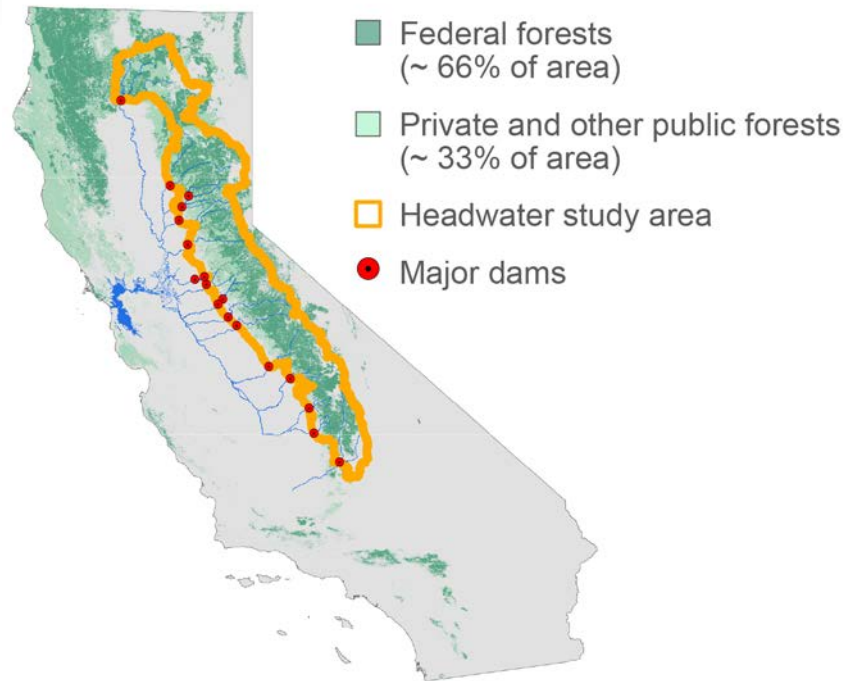


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# Why focus on headwater forests?



## Benefits of headwater forests:

- Source of 2/3 of state's surface water
- Habitat for endangered species
- Timber production for rural development and urban housing
- Recreation

# Key takeaways for improving headwater forests

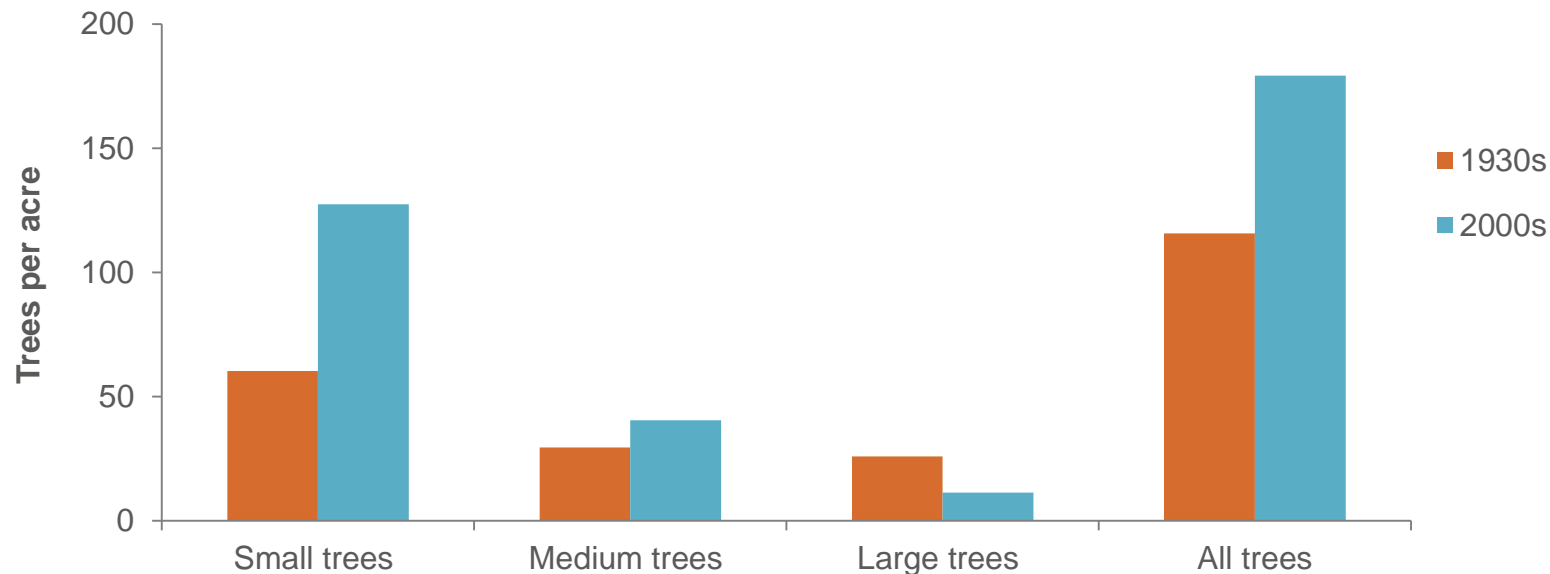
- Decades of fire suppression made forests too dense, vulnerable to die-offs and catastrophic wildfires
- Treatments to improve forest resilience are difficult to use in complex management environment
- Suggested reforms:
  - Manage for long term and over large scales
  - Bundle treatments with revenue generating projects
  - Enhance cooperation between various types of landowners and other stakeholders

# Outline

- Forest health is in decline
- Treatments for improving forest health
- Reforms for increasing the pace and scale of action

# Headwater forests too dense, with many small trees

Tree density in the headwater forests



# The drought accelerated forest health decline



Recent tree die-off in the Sierra Nevada

## Latest drought impacts:

- 15 million more dead trees per year, most from bark beetle outbreak
- Two of largest wildfires in state history

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# Removing forest fuels will improve forest health



Prescribed and managed wildfire



Mechanical thinning



# Barriers to increasing use of these treatments

- Focus on avoiding short-term impacts limits ability to manage for long-term health
- Treatment needs are poorly understood
- No single formula for funding expansion of treatments
- Many parties across a patchwork of landownership need to coordinate to be effective at large-enough scale

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# Make forest health a top priority

## Actions:

- Use broader permitting tools to support long-term forest health on federal lands
- Level playing field between fire suppression and other management actions
- Embed forest health objectives into state forest management practices



Smoke from a Sierra wildfire

# Define needs and make the most of available funding

## Actions:

- Improve and standardize forest treatment accounting practices
- Bundle harvesting with other treatments to help cover costs
- Collaborate for funding



Idaho sawmill

# Utilize new and existing tools that facilitate collaboration

## Actions:

- Long-term and financially viable stewardship contracts on national forests
- Federal and state collaboration through the Good Neighbor Authority
- Private forest owner collaboration through forest health districts



Malheur National Forest, Oregon

# Solutions are not easy and not one-size-fits-all

- It took decades to create poor conditions in today's forests, and will take decades to improve their health
- Barriers to improving forest health are not technical—they are legal, social, and financial
- Reforms will require determined leadership at local, state, federal levels
- Forest health should be a common goal for all Californians



# Thank you!



## About these slides

These slides were created to accompany a presentation. They do not include full documentation of sources, data samples, methods, and interpretations. To avoid misinterpretations, please contact:

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Thank you for your interest in this work.

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