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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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

- Small trees
- Medium trees
- Large trees
- All trees

Trees per acre

- 1930s
- 2000s
The drought accelerated forest health decline

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

Recent tree die-off in the Sierra Nevada
Outline

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

- Forest health is in decline
- Treatments for improving forest health
- Reforms for increasing the pace and scale of action
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 leadership and risk taking at local, state, federal levels.
- Forest health should be a common goal for all Californians.
Thank you!
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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