

The Tahoe – Central Sierra Resilient Forest Initiative

Summary

Several years of drought, increased temperatures, and overgrown forests present an unprecedented threat of massive bark beetle infestations and highly destructive wildfires to the iconic forest landscapes and local communities of the Lake Tahoe Basin and central Sierra. Although tree mortality and other drought impacts have been much more severe to date in the southern Sierra, the central Sierra and the Lake Tahoe Basin are also likely to face devastating impacts without an aggressive coordinated effort among the Region's public agencies, the private sector, and key stakeholder groups.

Building upon the activities of the California Governor's Tree Mortality Task Force and several large-scale regional efforts, the Sierra Nevada and Tahoe Conservancies, in partnership with the U.S. Forest Service (USFS), are proposing a Tahoe-Central Sierra Initiative. The Tahoe-Central Sierra Initiative (Initiative) will seek to accelerate implementation of large-landscape forest health projects and the development of biomass utilization infrastructure, while providing the opportunity to explore innovative process, investment, and governance tools. The landscape is comprised of the Lake Tahoe Basin and the American, Bear, Carson, Truckee, and Yuba watersheds.

Why Here? Why Now?

There are a wide variety of local, state, and federal partners investing significant resources into this landscape. Many of the innovative projects underway in this landscape are designed to overcome obstacles to increase the pace and scale of watershed restoration but face a variety of challenges to get to scale. This location offers a sweet spot where the combination of partners, capacity, and appropriate scale could be used to actually increase the pace and scale of restoration in a real, demonstrable way. Breakthroughs are possible here that may not be in other locations, including establishing economic value for long-term carbon and water benefits, private sector investment to build infrastructure for biomass utilization, larger scale use of managed fire for ecological restoration, impacting ecological values at a meaningful scale, and establishing and implementing large-landscape cross-boundary strategies.

These watersheds are crucial for downstream communities, agricultural interests, and the environment. They provide flows critical to the Sacramento-San Joaquin Delta, California's water hub. The forests here contain large amounts of carbon, provide significant fish and wildlife habitat, and are a recreational playground for visitors year round. This location's proximity to urban areas provides the opportunity to demonstrate clear links between upstream and downstream watershed health, and also allows ease of access for key stakeholders and decision makers to see the impacts of restoration firsthand. It provides the opportunity to create a communication network of how to share successes, needs, and lessons learned across collaboratives, the rest of the Sierra Nevada Region, the State of California, and beyond.

Key Goals and Activities

The major goal of the Initiative is to improve the health and resiliency of the forest ecosystems and communities in the central Sierra and Lake Tahoe Basin by:

- Supporting, developing and implementing science-based large-landscape projects with integrated design, implementation, and monitoring
- Accelerating planning, permitting, and implementing high-priority projects
- Increasing and leveraging federal, state, local, and private funding
- Integrating research and monitoring into activities to guide creation of fire and climate resilient forests and fire-adapted communities across ownerships
- Developing a regional biomass utilization strategy, including the establishment of new wood and biomass processing facilities, to improve air quality, reduce greenhouse gas emissions, and offset forest restoration costs
- In concert with existing efforts, establishing a regional, science-based, conservation planning and implementation framework to improve forest health; protect/increase carbon storage; conserve biodiversity; address the major threats to the region's forests and watersheds, including drought, climate change, catastrophic fire, and invasive pests; and protect the drinking water supplies of millions of downstream users
- Developing a collaborative communications network which will share and amplify messages about successes, needs, lessons learned, and opportunities to duplicate innovative pilot approaches in other locations
- Developing a strong relationship between this landscape and nearby urban areas, especially Sacramento, so that downstream legislators and stakeholders can see firsthand the impact of restoration activities in their upstream headwaters
- Exploring a pilot to demonstrate the possibility of successful private investment in headwaters restoration to yield an improvement in ecological services for investors

Related Efforts

The Tahoe-Central Sierra Initiative will seek to address and help coordinate implementation of several state and federal planning priorities in the central Sierra, including the California Governor's state of emergency proclamation on tree mortality, the California Water Action Plan, the forthcoming California Forest Carbon Plan, and the USFS's National Cohesive Strategy and Region 5 Leadership Intent.

Consistent with the framework developed by the Sierra Nevada Watershed Improvement Program (WIP), a collaborative effort of the Sierra Nevada Conservancy, USFS, California Tahoe Conservancy and other partners, the Initiative will build upon and integrate several large-scale forest and watershed restoration efforts now underway in the central Sierra, examples of which include:

- The South Fork American River (SOFAR) Cohesive Strategy, which covers over 400,000 acres and seeks to establish resilient landscapes, fire-adapted communities, and safe and effective wildfire response

- The Fire Adapted 50 Project, led by CAL FIRE and the USFS, to create a series of fuel breaks using an all-lands approach to treat fuel across multiple jurisdictions in the Highway 50 corridor in the South Fork American River for community protection, emergency access and egress
- The French Meadows Project, led by Placer County Water Agency, the Nature Conservancy, American River Conservancy, Tahoe National Forest, University of California, and Sierra Nevada Conservancy, to restore the headwaters of the middle fork of the American River
- The Truckee River Watershed Restoration Project led by the National Forest Foundation as part of its Treasured Landscapes Program
- The Sagehen Experimental Forest, managed by the University of California, Berkeley, which is implementing collaboratively designed forest health projects and facilitating research to better understand the spectrum of opportunities and effects of innovative approaches to forest management
- Lake Tahoe West, a partnership between the National Forest Foundation, the California Tahoe Conservancy, CA State Parks, and the USFS Lake Tahoe Basin Management Unit and Pacific Southwest Research Station to develop an all-lands, landscape-scale strategy to restore and protect more than 80,000 acres on the West Shore of Lake Tahoe
- The West Carson Project, a large-scale forest health and habitat restoration project to improve aspen stands, reduce fuel loading, and restore functionality to the West Carson Watershed
- U.S. Forest Service's Landscape Management Demonstration Areas (LMDA) initiative, which was launched in 2013 to fast-track the development of effective planning and implementation of restoration projects through integrated science and management across large landscapes and diverse ownerships to enhance climate adaptation and ecosystem resilience. The SOFAR landscape is one of two LMDA project areas in California.

Key Elements

The Tahoe-Sierra Initiative will include six major elements:

1. Early detection/monitoring: Identify areas with the highest tree mortality and greatest potential for additional mortality, in coordination with the Tree Mortality Task Force.
2. Planning and regulatory: Identify shovel-ready projects where environmental processes are complete, as well as high-priority projects in the planning process. Pursue opportunities to expedite the planning and review process.
3. Implementation: Secure additional investments necessary to accelerate implementation of shovel-ready projects and large-landscape projects to improve forest health and resiliency. This includes mechanical thinning and harvest of forests, the use of prescribed and managed fire as appropriate and the restoration of meadows and streams, with integrated research and monitoring

efforts intended to test and validate effectiveness and to serve as an information feedback for project design and implementation.

4. Public information/outreach: Disseminate information to the public, key stakeholders, and decision makers as to the need to act now and the consequences of failing to do so.
5. Infrastructure/utilization: Develop a regional strategy to expand markets and create infrastructure for forest restoration byproducts, including bioenergy and wood product facilities.
6. Science-based conservation planning framework: Develop a comprehensive planning and evaluation framework to assess the condition of the central Sierra's forested landscapes; identify priority treatment areas and approaches through modeling, mapping, and decision-support tools; guide restoration projects; establish performance measures and evaluate their effectiveness; and pursue opportunities for adaptive management.

The Process

The Sierra Nevada Conservancy, the California Tahoe Conservancy, and US Forest Service Region 5 have agreed to provide the leadership and coordination of this Initiative. Local agencies, conservation organizations, the wood products industry, recreational organizations, and other partners will be key to successful implementation. The effort is intended to work with various existing efforts, support additional activity and explore creative and innovative ways to increase the pace and scale of restoration. The Initiative is collaborative in nature, but is not a formal "collaborative." As such, the structure will remain flexible and the effort is designed to be opportunistic in order to explore "new ways of doing business."

Conclusion

While it is impossible to predict exactly what will happen in this landscape in coming years and decades, the science is clear that without a significant effort to restore the health and resilience of these watersheds they remain at severe risk of large, severe wildfire and increased tree mortality. Taking the necessary actions now gives us the best opportunity to reduce the impact of such events and protect the many benefits that come from this area.