

Resilient Lands and Waters Initiative - Sierra-Cascade California Headwaters Overview

[The Resilient Lands and Waters Initiative](#) is a key part of the [Climate and Natural Resources Priority Agenda](#) a comprehensive commitment across the Federal Government to support resilience of vital natural resources. It also addresses the [National Fish, Wildlife, and Plant Climate Adaptation Strategy](#) goal to conserve habitat that supports healthy fish, wildlife, and plant populations and ecosystem functions in a changing climate.

Federal agencies worked with state, local, and tribal partners to select a suite of geographic areas that will demonstrate the feasibility, practice, and benefits of landscape-scale management approaches toward building climate resilience through the use of existing, cooperative, inter-agency institutions and partnerships. These Resilient Lands and Waters represent a range of scales, geographies, and ecological stressors such as fire, sea-level rise, changing ocean conditions, and drought, and will focus on multiple community and ecosystem needs, such as coastal resilience, protecting drinking water for urban areas, improving wildlife habitat connectivity, and preventing threats like wildfire and invasive species.

The California Headwaters is an area that contributes greatly to state's water supply where the Sierra-Cascade watersheds provide drinking water to 25 million people, almost two-thirds of the California population, and the majority of water for irrigated agriculture. The California Headwaters Partnership will take a watershed and landscape-level approach to restoration and the partnership will build upon and unify existing collaborative efforts to identify areas for restoration that will help improve water quality and quantity, promote healthy forests, and reduce wildfire risk.

All stakeholders and governments, including scores of Native American Tribes within the region, share in the desire to reduce the risk of wildfire and restore healthy forests in the headwaters of California. These efforts will provide the information needed to improve water quantity and quality, protect important wildlife habitat, and provide jobs to local communities. Some of the specific implementation goals that will be supported by this effort include:

- Restoring meadows through removal of invasive species and improvement of hydrologic function to enhance groundwater recharge; e.g., CDFW awarded \$6 million dollars in its first year of grants from state cap-and-trade revenues.
- Restoring stream channels and maintaining roads to reduce sediment, slow flood water, improve habitat, and increase groundwater recharge; e.g., California will implement a \$200 million instream flow program using 2014 water bond funds.
- Restoring forest health to improve snow and water capture and storage, enhance habitat function, and stabilize greenhouse gas emissions; e.g., CALFIRE will award \$42 million in grants for forestry projects designed to reduce greenhouse gas emissions.
- Preventing further forest fragmentation and degradation, for example through working forest conservation easement programs at CALFIRE, the CWCB, and several California land trusts.
- Enhancing forest resilience to reduce the risk of high severity wildfire and allow a more natural fire regime through reduction of uncharacteristic fuel loads; e.g., the USFS plans to reduce forest fuels on 20,000 acres per year in the 3 CFLRP projects.
- Strengthening collaborative actions to help maintain and develop the capacity of local communities and reduce wildfire risks to communities and natural resources.

- Improving fish and wildlife habitat health and function; e.g., an effort by a California LCC considered future environmental conditions in developing adaptation strategies and actions for ecosystems that will benefit species and habitats.

ACWA has developed a policy document with recommendations designed to create more resilient water resources through effective headwaters management. The document, "[Improving the Resiliency of California's Headwaters](#)," builds on ACWA's Policy Principles on Improved Management of California's Headwaters and details the role that headwaters play in California's water management system, outlines the benefits of healthy headwaters, identifies current challenges and provides a brief history of headwaters management. The framework makes nearly 30 specific recommendations in the areas of improved planning, coordination and implementation, managing headwaters resources, research and financing headwaters improvements.

Highlighted recommendations:

- Improved headwaters management must become a high priority for state, federal and local agencies.
- Agencies at all levels should find ways to help public and private landowners restore meadows and watersheds to improve their critical functions and reduce wildfire impacts.
- More resources should be targeted by federal, state and local governments to address environmental effects of illegal marijuana cultivation.
- Stakeholders at all levels should invest and participate in landscape-level research that explores water and forestry relationships, including ecological forest thinning which can have multiple benefits for water supply reliability, water quality and ecosystems.
- The state should pursue actions such as biomass management and removal that can provide a potential source of revenue for headwaters protection.

Recommended Viewing:

- View "[The Fire Next Time](#)," a 13-minute video examining the Rim Fire of 2013 and how factors such as policies, fuel build-up, and climate change are putting forests at risk.
- View the special [Headwaters Plenary Session](#) held May 7 at the ACWA 2015 Spring Conference & Exhibition.

Recommended Reading:

- The [Nature Conservancy's new report](#) is the first ever assessment to estimate the link between ecological forest management, water quantity, and potential economic benefits for water agencies and utilities in the northern Sierra Nevada.
- The [Sierra Nevada Conservancy's Watershed Improvement Program](#), launched in partnership with the U.S. Forest Service on March 4, is a coordinated program to restore the health of California's primary watershed through increased investment and needed policy changes. The program also focuses on large scale restoration designed to address a variety of ecosystem health issues in the Sierra Nevada.

