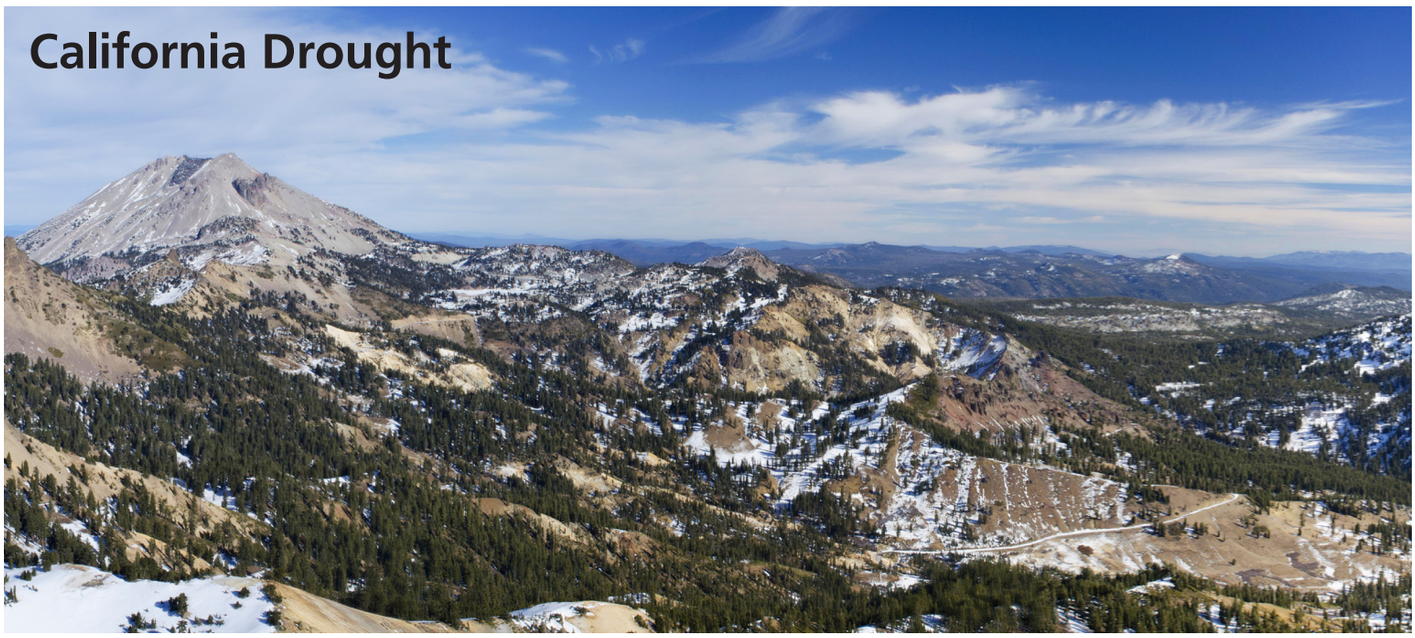
National Park Service
U.S. Department of the Interior

Lassen Volcanic National Park

California Drought



Lassen Peak looms over a snowless January landscape at Lassen Volcanic National Park

Water is everywhere at Lassen. This liquid life gives birth to rushing creeks and lush meadows, creates habitat out of dry volcanic soil, and supports the entire web of life. How does drought affect Lassen and what can you do to conserve this invaluable resource?

California Water Comes from Snow

Snowmelt contributes 75% of all water in rivers and streams throughout the west. Runoff from Lassen flows into four different watersheds: Upper Feather River, Mill Creek, Pit River, and Battle Creek. These watersheds are part of the California State Water Project which delivers water to two-thirds of California's population plus water to approximately 25 million Californians and about 750,000 acres of irrigated farmland. Reduced snowpack, warmer wintertime temperatures, and earlier melt dates will deplete these crucial snow-based reservoirs. What will California look like with less water?

How Does Drought Affect ...

Trees

Drought leaves trees thirsty and stressed. Warmer and drier conditions increase the chances that trees will become infected with insects. At Lassen, the native Jeffrey pine beetle bore into the trees and lay their eggs, eventually killing the trees. Drought affected trees are also more susceptible to fire and strong winds.

James A. Hicke, University of Idaho

Pines killed by mountain pine beetle in Colorado

Wildlife

Marmots, ground squirrels, and bears may come out of hibernation early due to warming temperatures, or not hibernate at all. Scarcity of food during dry winters can push these animals to the brink of starvation. A reduction in water can force animals to concentrate, leading to an increase in disease and predation.

NPS Photo

A black bear crosses a snow field in search of food

Fire

Hot temperatures and dry conditions are a major contributor to an increase in the likelihood and severity of wildfires. Lassen's snowpack normally provides moisture that helps reduce fire danger well into August. Without significant snowpack, Lassen can expect to see increased fire danger earlier in the year and for a longer period of time.

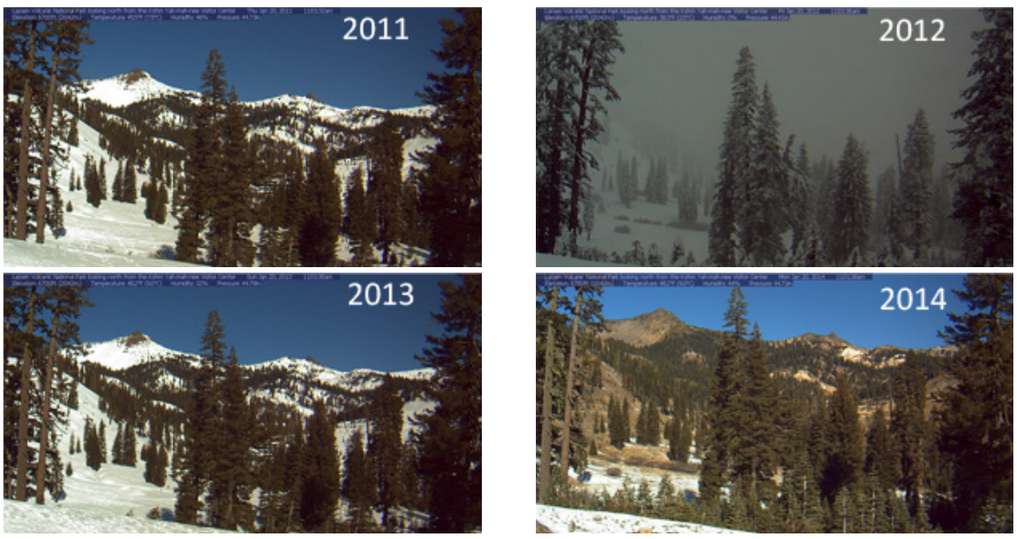
NPS Photo

Area severely affected by fire

Survey Says

You've probably noticed that California has received less precipitation than in prior years. California Governor Gerry Brown proclaimed a State of Emergency following the driest year on record in state history. Even Lassen's towering peaks were bare until mid-February.

The California State snow survey reported 14 - 16% of normal snowpack in the Northern Sierra Range. Although, as Governor Brown puts it, we can't make it rain or snow, but we can make choices that affect our water supply, our climate, and our future – today.



NPS Photo

The Kohm Yah-mah-nee Visitor Center webcam (elevation 6700 ft.) tracks the provides a snapshot from four winters. Each image was captured on January 20 in their respective years.

Drought and Climate Change

Climate patterns (e.g. temperature, precipitation) vary naturally, but modern climate changes are being intensified by human activity.

Scientists have not yet linked the California drought directly to climate change, but the drought will be examined by the American Meteorological Society to determine whether the cause is natural variability, human-caused climate change, or perhaps a combination of the two. A similar study found that the 2012 Midwestern drought was mainly due to natural variance, but that climate change played a factor in US heat waves that spring and summer.

What is *Lassen* Doing to Conserve Water?

Lassen is committed to sustainably managing your national park lands and taking action to respond to drought and climate change:

- Operating a water recycling car wash
- Participating in water conservation events:
- Installing of low flow or dual flow toilets in new buildings and replace older fixtures
- Developing plans to replace inefficient water systems at Mineral Headquarters
- Winterizing outdoor spigots to prevent pipes from leaking or bursting
- Washing vehicles sparingly
- Maintaining two historic lawns that are dormant in the winter
- Purchasing energy saving appliances for new buildings or to replace older fixtures
- Providing composting for employees (provides water-holding organic matter for gardens/landscaping)
- Sharing water saving tips in our employee newsletter
- Maintaining the water-efficient Kohm Yah-mah-nee Visitor Center (LEED Platinum rated)

What Can *You* Do to Conserve Water?

Every DROP Counts

NPS Photo

A family conserves water while camping by washing their dishes in a bucket.

It takes millions of little raindrops and snowflakes to fill our reservoirs. Millions of little actions can help keep them full. Here are a few ways we can all contribute:

- Turn off water when brushing your teeth, shaving, or washing you hands
- Collect water used while waiting for your shower heat up, then use the collected water for your plants or pour into your washing machine
- Try to keep showers under five minutes to save up to 1,000 gallons per month
- Wait until your dishwasher and washing machine are full before running a cycle
- Check shower heads and faucets for leaks One drip every second adds up to five gallons per day!
- Learn more ways to conserve at: wateruseitwisely.com

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