



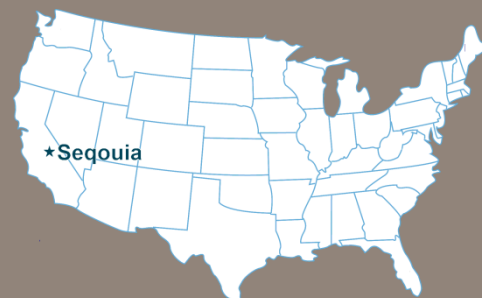
# Sequoia

California projects that natural visibility will be achieved at this national park in...

# 2096

## Haze is Damaging.

Haze pollution limits views of our most valued national parks and wilderness areas, affecting not just how far we can see, but also the color, sharpness, and quality of the view. It also makes the air unhealthy for people, wildlife and natural resources.



View With Pollution: 25 miles

View Without Pollution: 112 miles

## Sequoia Visibility

California estimates that it will take until 2096 to reach natural visibility at Sequoia at projected pollution cleanup rates.<sup>1</sup> When skies at the park are most polluted, visitors are unable to see 87 miles of landscape that would be visible under natural conditions. To restore the skies, the law requires industries to clean up if their pollution is harming the parks.

## Want Cleaner Air?

A few immediate opportunities stand out for reducing human-made haze pollution at Sequoia, known for having the worst air pollution problems of any national park. California's geography and wind patterns mean that locally-produced pollution has disproportionately high impacts, and must be reduced for Sequoia's air to clear.

## This Haze Isn't Natural.

Some haze is natural, but much of what's seen today is not. Natural fires, wind-blow dust, and vegetation can result in "natural" haze, and precipitation can also obscure the view naturally. Clean air laws only require reductions from controllable sources of pollution, like power plants and other industrial sources. Cost effective, efficient reductions in human-caused pollution are routinely accomplished with the use of modern technologies.

In particular, vehicle emissions have a major impact on Sequoia's air quality. Stronger emissions controls for passenger cars and trucks, known as Tier 3 standards, have been proposed nationally. Finalizing these standards – or stronger ones – is imperative to restoring clean, clear skies at Sequoia.

## Controllable Sources of Haze at Sequoia

The primary human-made cause of haze at Sequoia is nitrates, formed in the atmosphere from emissions of nitrogen oxides (NOx). Originating almost entirely from within California, NOx emissions are primarily released from vehicles, with contributions from industrial sources and more widespread sources like agriculture.

Sulfates, formed from sulfur dioxide (SO<sub>2</sub>), also add to haze at Sequoia. SO<sub>2</sub> comes from a variety of places, with the highest state contributions from California, and from a mix of sources.

## Getting to Clear Skies?

Sequoia's visibility has improved somewhat in the last decade. While all improvements are important to acknowledge, significant improvement is needed to reach natural conditions. <sup>2</sup>

**\$100 million**

Visitor Spending, 2010<sup>3</sup>

**1,107,000**

Visitors per year<sup>4</sup>

**306**

Days above the national ozone standard at two locations in the park, 2011-July 2013.<sup>4</sup>

**1,714**

Jobs Supported, 2010.<sup>3</sup>

**1890**

The nation's second national park, Sequoia was established in 1890.



Layered haze at Sequoia. NPS.

## What is the Status of the Haze Cleanup Plan for Sequoia?

The Environmental Protection Agency approved California's haze cleanup plan in May 2011. California's progress report is due to the Agency in March 2014. NPCA supports inclusion of additional emissions reductions to protect Sequoia.

Sources: 1. Visibility and haze source information derived from California's January 2009 and other regional haze submissions to EPA (see <http://www.arb.ca.gov/planning/reghaze/reghaze.htm>), along with EPA's proposed and final actions on California's plan (76 Fed. Reg. 13951, 76 Fed. Reg. 34608). 2. IMPROVE Monitoring Network. 3. Headwaters Economics. 4. NPS.