



Grand Canyon

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

2127

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: 78 miles

View Without Pollution: 120 miles

Grand Canyon Visibility

Arizona estimates that it will take until 2127 to reach natural visibility at Grand Canyon at projected pollution cleanup rates.¹ When skies at the park are most polluted, visitors are unable to see 42 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.

What Can We Do?

A few immediate opportunities stand out for reducing human-made haze pollution in the park's airshed. Coal-fired power plants are a large source of haze pollution impairing the park, and the largest coal plant west of the Mississippi – the Navajo Generating Station – sits just 12 miles from the Grand Canyon.

Reducing emissions from this plant is imperative to restoring clean, clear skies to the park. The Environmental Protection Agency has required modern pollution controls to reduce approximately 80% of the nitrogen oxide pollution from several of Arizona's older power plants: Cholla, Coronado, and Apache. However, these controls have been challenged.

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.

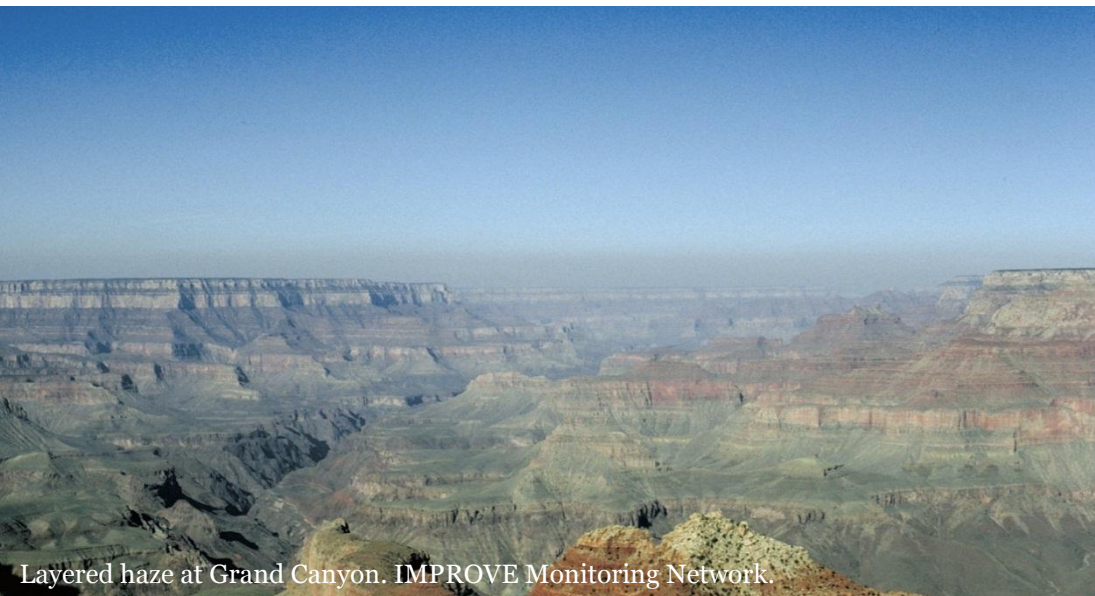
Controllable Sources of Haze at Grand Canyon

The primary human-made causes of haze are sulfates and nitrates, formed in the atmosphere from emissions of sulfur dioxide (SO₂) and nitrogen oxides (NO_x). Pollutants impacting the park originate from many places, with the highest state contributions from Arizona and California.

Sulfates are primarily released from large industrial sources. Nitrates are predominately from mobile sources like cars and trucks, with contributions from stationary sources like coal-fired power plants. Road dust and fugitive dust from industrial sources also contribute to visibility impairment.

Getting to Clear Skies?

Grand Canyon's visibility has improved slightly in the last decade. While all improvements are important to acknowledge, at the current rate, visibility at the Grand Canyon will not be restored to natural conditions in this century. ²



4.4 million

Visitors per year³

\$430 million

Visitor Spending, 2010⁴

6,800

Jobs Supported, 2010⁴

1919

First afforded federal protection in 1893, Grand Canyon was officially established as a National Park in 1919.

12

Miles from Grand Canyon to the coal-fired Navajo Generating Station

What is the Status of the Haze Cleanup Plan for Grand Canyon?

The Arizona haze cleanup plan was split into three parts. Part 1 is finalized and requires pollution controls that will reduce roughly 80% of NO_x pollution at the Apache, Cholla, and Coronado coal plants. Part 2 has also been finalized, and found that Arizona's plan was inadequate for a number of other haze-causing sources. Part 3 will address those sources. It must be proposed by December 2013 and finalized by May 2014.

Sources: 1. Visibility and haze source information derived from Arizona's January 2011 and other regional haze submissions to EPA (see <http://www.azdeq.gov/environ/air/haze/>), along with EPA's proposed and final actions on Arizona's plan (77 Fed. Reg. 42833, 77 Fed. Reg. 72511, 77 Fed. Reg. 75714, 78 Fed. Reg. 46141). 2. IMPROVE Monitoring Network. 3. NPS. 4. Headwaters Economics.