

Alaska Regional Haze Fact Sheet

What is regional haze?

Regional haze refers to haze that impairs visibility in all directions over a large area. The distance that we can see is limited because of tiny particles in the air absorbing and scattering sunlight, which degrades color, contrast, and clarity of the view.

Where do the “tiny particles” or haze-forming pollution come from?

Many sources produce the particulate matter that causes haze. Particulate matter is both manmade and naturally occurring. Some natural sources of particulate matter include windblown dust, wildfires, “bioorganic” emissions from trees, and coastal emissions from the ocean. Manmade sources include gas and diesel engines, electric utility and industrial fuel burning, manufacturing operations, prescribed burns, and dust from unpaved roads, construction, and agriculture. Additionally, particulate matter is formed when gaseous pollutants undergo chemical reactions with sunlight in the atmosphere. Factors such as weather and humidity further impact the formation of haze. Particulate matter tends to remain suspended in the air for a long period of time and can travel to areas hundreds or even thousands of miles away from the pollution sources.

How does regional haze affect Alaska?

In 1999 EPA announced the final version of the Regional Haze Rule. The rule requires all States to develop long-term plans to reduce pollutant emissions contributing to haze. Goals to improve visibility in Class I areas and restore them to natural conditions must be established within the plans. Class I areas are a certain type of national and international park and wilderness area. Alaska has four Class I areas. These Class I areas are Denali National Park, Tuxedni Wilderness Area, Simeonof Wilderness Area, and Bering Sea Wilderness Area.

Why is regional haze important? How does it affect environmental quality?

The long-term goal of the Regional Haze Rule is to improve visibility and air quality in Class I national parks and wilderness areas and to prevent degradation of air quality. The purpose of the Regional Haze rule is to return Class I areas to “natural conditions” from current conditions. Natural conditions can be defined as air quality conditions without any human-caused pollution impairing visibility.

The particles in the air not only impair visibility but they can also impact the health of humans, wildlife, lakes, and rivers. Therefore, control strategies used to improve visibility and reduce pollutant levels at Class I areas will also benefit public health and the environment.

Regional Haze in Alaska

The farthest distance one can see a landscape or feature measures visibility. Currently, haze reduces visibility in the western United States from 140 miles to between 33 and 90 miles. Alaska's visibility is far better than the lower 48 states. On a hazy day in Denali, the average visibility is 130 miles and on a mid-range to clear day visibility can range from 205-255 miles.

If visibility is so good in Alaska, why is regional haze even a concern?

The goal of the regional haze rule is to reduce and eventually prevent manmade visibility impacts to national parks and wilderness areas by reducing emissions that contribute to haze. The rule is also designed to prevent future impairment and preserve natural and historic areas for both present and future generations. Denali has almost 400,000 tourists visiting the park a year. Good visibility and air quality is valuable to both Alaskans and the tourists visiting Alaska. Keeping Alaska clean and pristine will not only be better for Alaskans health and quality of life for current and future generations, but for tourism which is an important part of Alaska's economy.

What are the major requirements of the rule?

The rule requires Class I areas to be at "natural conditions" in 60 years. The planning process is currently underway. A Long Term Strategy Plan is due no later than 2008 and must be updated and revised every ten years. The Strategy Plan will demonstrate how the State will reach natural conditions by 2064 and show progress in emissions reductions.

The rule also requires emissions limits be determined for certain older, large stationary sources, i.e. power plants, and refineries. Sources found contributing to Regional Haze will be required to install Best Available Retrofit Technology (BART) within 5 years after a state plan has been improved. The control technology placed on these sources will significantly reduce pollutant emissions and air pollution.

A five-year progress report must also be submitted to EPA documenting actual changes in visibility and emission reductions. The report will compare existing conditions to conditions at the start of the rule.

Besides large stationary sources, what other types of sources have been identified as sources that may potentially be controlled or monitored for pollutant emissions?

All types of manmade emissions that contribute to regional haze may be identified in the Strategy Plan. Manmade emission sources include mobile sources, "area" sources such as residential wood combustion and gas stations, burning related to forestry and agriculture activities, and dust from roadways and construction activities.