VISIBILITY IN SCENIC AREAS

TRENDS IN VISIBILITY

EPA and the National Park Service monitor visibility trends in 155 of the 156 national parks and wilderness areas, where clear views are an important value for visitors (i.e., Class I areas). States are required to adopt progress goals every ten years for improving visibility, or visual range, from baseline conditions (represented by the five-year average conditions between 2000 and 2004). The ultimate goal is to achieve natural background conditions, or conditions which existed before manmade pollution, by 2064. The Regional Haze Rule, published in 1999, requires states to identify the most effective means of preserving conditions in Class I areas when visibility is at its best—based on the 20 percent best or cleanest visibility days monitored—and to gradually improve visibility when it is most impaired—based on the 20 percent worst visibility days monitored.

Long-term trends indicate that visibility is improving. Figure 32 shows this progress. A number of Class I areas show improving visibility or decreasing haze (indicated by the downward pointing arrows) for the worst visibility days: Mt. Rainier National Park, WA; Great Gulf Wilderness, NH; Snoqualmie Pass, WA; Olympia, WA; Columbia Gorge, WA; Starkey, OR; Presque Isle, ME; and Bridgton, ME. Only Hawaii Volcanoes National Park shows increasing haze. Most locations also show improving visibility (decreasing haze) for the best visibility days. Considerable

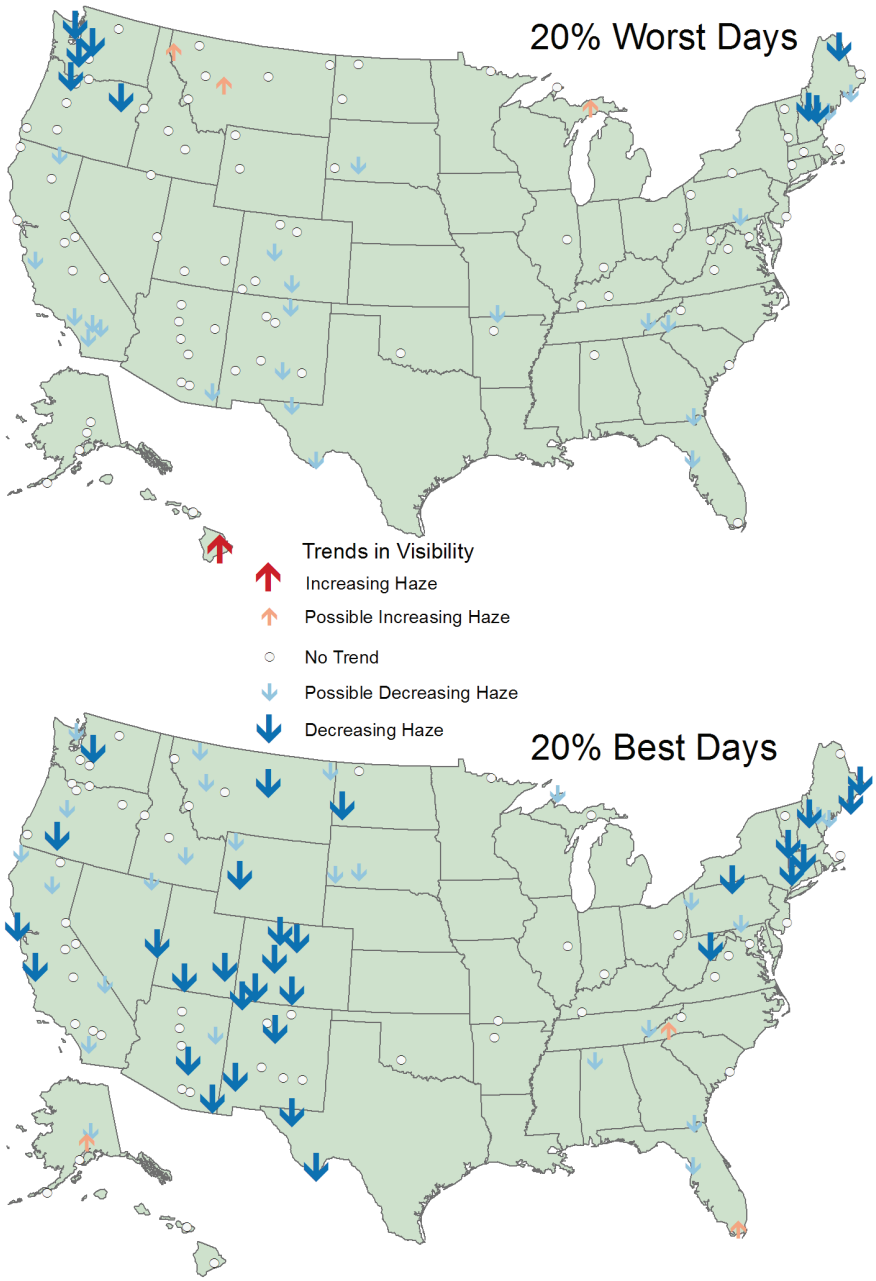

Figure 32. Trends in visibility on the 20 percent worst and best visibility days, 1998-2007. (Source: National Park Service/Air Resources Division, http://www.nature.nps.gov/air/)

Note: Visibility trends using a haze index for the annual average for the 20 percent best and worst visibility days are based on aerosol measurements collected at Interagency Monitoring of Protected Visual Environments (IMPROVE) monitoring sites. The haze index is measured in deciviews (dv), a visibility metric based on the light extinction coefficient that expresses incremental changes in perceived visibility. Sites having at least six years of complete data were used to compute the change in dv per year over the trend period and its statistical significance.

additional progress is needed to achieve natural visibility. Implementation of the Regional Haze Rule and other planned regulatory programs will reduce emissions of visibility impairing pollutants and ensure that the improvement in visibility continues.

States determine whether they are meeting their visibility goals by comparing visibility conditions from one five-year average to another (e.g., 2000-2004 to 2013-2017). The glide path to natural visibility conditions in 2064 for the Shenandoah National Park is shown in Figure 33 and demonstrates the minimum rate of progress or improvement in visibility that should occur over time to meet the goal of natural conditions. In 2007, states were required to submit plans demonstrating how they would achieve natural visibility conditions by 2064. EPA requires monitoring to verify that progress is being made to improve visibility in the Class I areas.

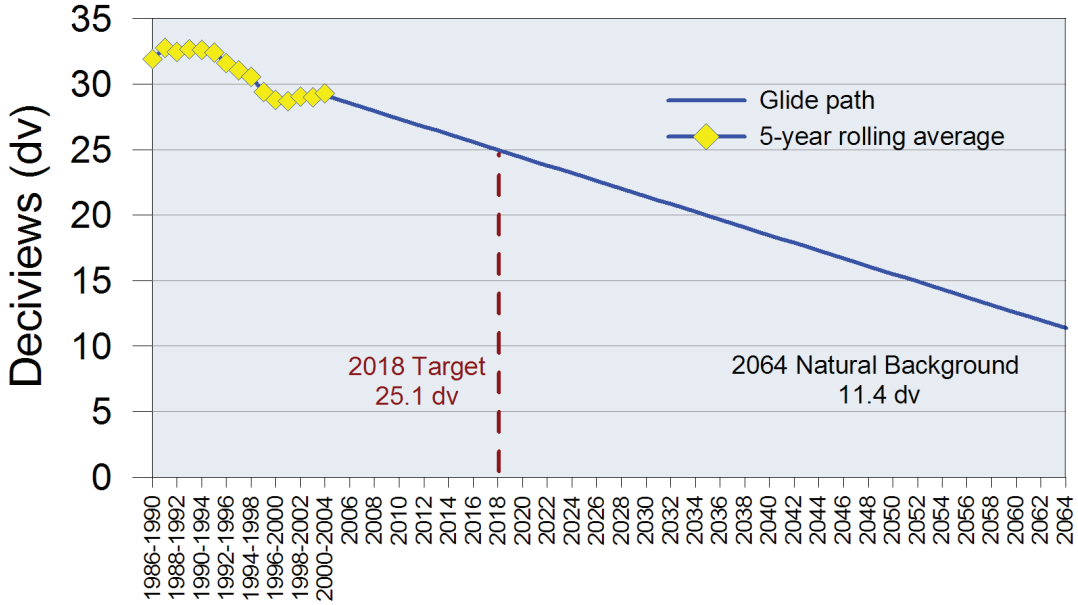

Figure 33. Glide path to natural conditions in 2064 for Shenandoah (deciviews) compared to 2000-2004 baseline conditions. (Source: Visibility Improvement State and Tribal Association of the Southeast—VISTAS)

Notes: A change of one deciview (dv) is a change in visibility that is discernable. The figure shows a five-year rolling average for the 20 percent worst visibility days.