

Interagency Monitoring of Protected Visual Environments

Our national Parks and Wilderness Areas possess many stunning vistas and scenery. Unfortunately, these scenes are diminished by uniform [haze](#) causing discoloration and loss of texture and visual range. [Layered hazes](#) and [plume blight](#) also detract from the scene. Recognizing the importance of visual air quality, congress included [legislation in the 1977 Clean Air Act](#) to prevent future and remedy existing visibility impairment in [Class I areas](#). To aid the implementation of this legislation, the [IMPROVE program](#) was initiated in 1985. This program implemented an extensive long term monitoring program to establish the current visibility conditions, track changes in visibility and determine causal mechanism for the visibility impairment in the National Parks and Wilderness Areas.



The [purpose](#) of this website is to provide access to the IMPROVE monitoring data resources and educational material on the science of visibility and regulations. First time visitors should visit the [Overview](#) section which summarizes the IMPROVE network and visibility science and regulations.

Website Categories



IMPROVE Resources



Bulletins

- ◆ [2012 IMPROVE Steering Committee Meeting Summary](#)
- ◆ [Interactive Program on Monitoring the Changing Air Quality in the Edwin B. Forsythe National Wildlife Refuge](#)
- ◆ [Update to TOR/TOT Carbon Analysis SOP](#)
- ◆ Fall quarter 2012 nephelometer data are now available in [ASCII format](#)
- ◆ [The fourth quarter 2012 IMPROVE newsletter](#)



- ◆ [The 2013 IMPROVE Calendar](#)
- ◆ The online data access tools has been switched from [VIEWS](#) to [FED](#)
- ◆ [IMPROVE RHR summary data from 1988 - 2010 are now available](#)
- ◆ [2011 IMPROVE Report: Spatial and Seasonal Patterns and Temporal Variability of Haze and its Constituents in the United States](#)
- ◆ [EPRI Reports from the Sulfate Regional Experiment \(SURE\) and other studies are now available.](#)
- ◆ [Presentations from the IMPROVE Carbonaceous Aerosol Workshop, Stevenson, WA, October 20, 2010](#)
- ◆ [Presentations from the IMPROVE steering committee meeting, at Stevenson, WA, October 21-22, 2010](#)
- ◆ [QA/QC report on the XRF and PESA data from UC Davis for the 1st - 3rd quarter, 2009 data.](#)
- ◆ [Four new data advisories have been added](#)
- ◆ [New gray literature article - Evaluate the Sensitivity of Deciview Calculations to Missing Data Values and Relative Humidity Factors](#)
- ◆ [A CARB report on Visibility Reduction as Related to Aerosol Constituents by Appel et al., 1983](#)
- ◆ [The under-correction of chloride concentrations for filter blank levels has been fixed and the data advisory has been updated.](#)
- ◆ [One new data advisory on under-correction of chloride concentrations for filter blank levels](#)
- ◆ [The 1988-1993 NESCAUM particulate data is now available](#)
- ◆ [The impact of haze section of the "Exploring Visibility Concepts" tutorial has been updated](#)
- ◆ [A new interactive tutorial presents the cycling of reactive nitrogen through our the atmosphere and ecosystem.](#)
- ◆ [New gray literature article - Summary of Urban Visibility Workshop and Presentations](#)
- ◆ The latest IMPROVE data are available from the [Query Wizard](#) in the network: "IMPROVE Aerosol (Preliminary - DRAFT)
- ◆ [Presentations and Summary from the IMPROVE - CSN Carbon PM Monitoring Workshop, UC, Davis, Jan 22- 24, 2008](#)
- ◆ [An interactive tutorial guiding the user through air quality issues impacting Sequoia Kings Canyon National Park.](#)
- ◆ [A presentation comparing data from collocated IMPROVE and STN monitors has been added to the gray literature](#)
- ◆ [Brochure on the Rocky Mountain Atmospheric Nitrogen and Sulfur \(ROMANS\) Study](#)

- ◆ [Final report reviewing the IMPROVE light extinction equation](#) - by J. Hand and W. Malm
- ◆ Final versions of the [Regional Haze Guidance Documents](#)