INTERAGENCY MONITORING OF PROTECTED VISUAL ENVIRONMENTS

IMPROVE

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IMPROVE MONITORING UPDATE

Preliminary data collection statistics for the Fall 1997 season (September, October, and November) are:

Data Type	Collection Percentage
Aerosol Data	94%
Optical (transmissometer) Data	98%
Optical (nephelometer) Data	94%
Scene (photographic) Data	82%

Particulate data have been submitted through August 1997 for all measurements except carbon. Seasonal summaries including carbon have been distributed through February 1997.

Nephelometer sites discontinue monitoring

The U.S. Forest Service discontinued nephelometer monitoring at four IMPROVE monitoring sites on October 1, 1997 due to lack of funds. The four sites are: Boundary Waters Canoe Area Wilderness, Minnesota; Dolly Sods Wilderness, West Virginia; Jarbidge Wilderness, Nevada; and Upper Buffalo Wilderness, Arkansas. The four wilderness areas have operated ambient nephelometers since 1993; IMPROVE aerosol samplers continue to operate at each site.

VISIBILITY NEWS....

IMPROVE committee meeting scheduled

The IMPROVE Steering Committee has scheduled a meeting to be held January 26-27, 1998. IMPROVE program representatives will meet in Las Vegas, Nevada, to discuss the network.

Yellowstone National Park to study bison

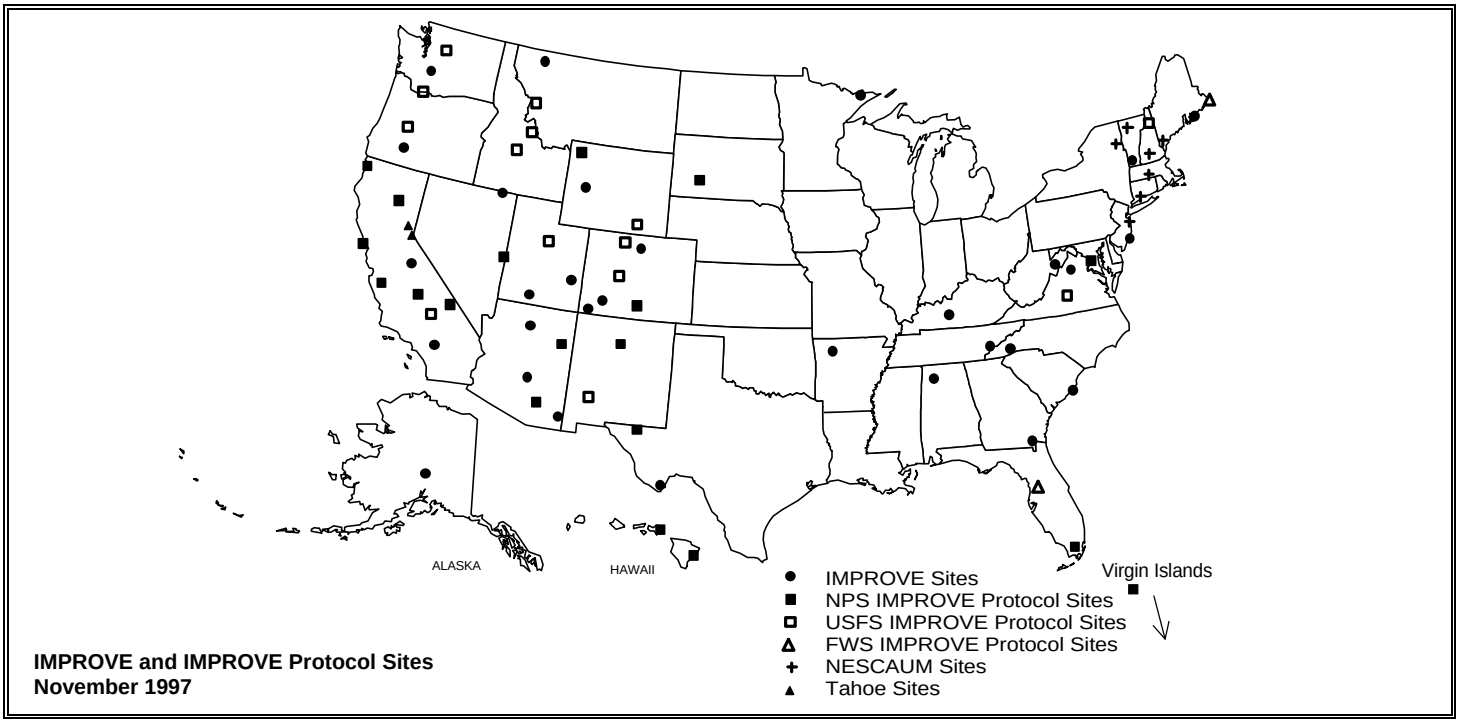
Yellowstone National Park is beginning a short study to determine if snowmobile use is changing bison migration patterns in the park. The park will monitor and document bison migration through the use of five 35mm automatic camera systems, which were loaned to the park by the IMPROVE program.

IMPROVE newsletters available on the Web

In addition to a paper copy of the IMPROVE Newsletter, anyone interested can view or print out an on-line version. All past newsletters are available in Portable Document Format (PDF) on the National Park Service web site. New issues will be posted to the site quarterly. The site's address is:

http://aqd.nps.gov/natnet/ard/impr/index.htm.

VISIBILITY NEWS continued on page 3....



IMPROVE and IMPROVE Protocol Sites
November 1997

Feature Article

Acadia National Park provides year-round activity for monitoring technician Bill Gawley

Acadia National Park, Maine, has the distinction of being the only national park in the northeast United States. It is also the site of numerous air and water quality monitoring programs. Air/Water Technician Bill Gawley has been servicing the instruments involved with the programs since the spring of 1994.

Bill came to Acadia after graduating from the University of Rhode Island with a B.S. degree in zoology. He's especially interested in the effects of natural resources on the animal life, and participates in many of the research activities at the park. "One of our goals here at the park," says Bill, "is to make the park an attractive place for researchers. The National Park Service has performed air quality monitoring at the park since the late 1970s. We've collected a good baseline of data, and we encourage researchers to come and make use of these data."

The IMPROVE program has operated an Optec ambient nephelometer at Acadia since 1993 and an IMPROVE aerosol sampler since 1988. Other instrumentation that various agencies run include ozone, NO_x, and VOC monitors; meteorological sensors, acid rain monitors, and mercury deposition monitors. A UV-B monitor and dry deposition sampler are scheduled to be installed later this winter. Various monitoring programs are conducted simultaneously at the park, often in cooperation with federal, state, and Canadian agencies.

Air/Water Technician Bill Gawley servicing IMPROVE aerosol modules a Acadia National Park, Maine.

Bill's year-round responsibility is to service and maintain all of this monitoring equipment. He's the primary operator for the NPS air quality instrumentation, which are all installed at one location. Recently he's been assisting with relocating the air quality monitoring site. The existing site was not ideally located for some of the measurements, and had a very small shelter. "We obtained a larger shelter and moved the entire operation from its location in a hollow, to across the street where it is more open and affords a better view of the horizon," says Bill. This was necessary for the new UV-B monitor to operate correctly.

Old air quality monitoring shelter, installed in 1993.

In addition to servicing the air quality instruments, Bill also spends time monitoring the water quality of the 24 lakes in the park; 8 to 10 of them are intensely monitored from April through October. "Acadia has an interesting and comprehensive fresh-water monitoring program," says Bill. It also includes sampling of macro- invertebrates (insect larvae) from park streams as indicators of water quality.

New air quality monitoring shelter, installe December 1997.

In addition to researchers, Acadia National Park attracts many visitors. Although summer is Acadia's prime tourist season with nearly 3 million visitors annually, the park stays open year-round for enthusiasts of winter activities such as cross-country skiing and snowmobiling.

When not performing a monitoring task, Bill's favorite pastime is music. He's a singer, songwriter, and guitarplayer. He also likes to spend time with his wife, Cindy, and their three teenagers, boating, fishing, or participating in other outdoor activities. His oldest son has spent a summer working with the Youth Conservation Corps at Acadia, maintaining parts of the trail system that winds through the park.

Bill never has a lack of things to do at Acadia. Park visitors and researchers alike, keep him busy year-round.

VISIBILITY NEWS continued from page 1....

FWS promotes air quality educational poster

Air quality at Brigantine Wilderness, a Fish and Wildlife Service Class I area and IMPROVE monitoring site, is the subject of a new educational poster and website (http://www.aqd.nps.gov/ard/fws/brig/brigaq.htm). The objective of this multi-media project is to educate audiences about the importance of air quality and the effect air pollution has on the environment. It emphasizes the health of natural resources at Brigantine, which is on the New Jersey shore, and provides information on other Class I areas nationwide.

The poster, titled "The Brigantine Air Quality Web," depicts eleven actual web pages. This "web" includes hyperlinked pages about the wilderness area and the vegetation, birds, and wildlife there. Pages on the effects of air pollution and on how citizens can help promote air quality are also included. All web pages contain links to related websites, where more information is accessible. The pages titled "air pollution" and "relevant web sites" are linked to the IMPROVE website (http://www.aqd.nps.gov/ard/impr/index.htm).

The poster is distributed to school groups and other visitors to Edwin B. Forsythe National Wildlife Refuge,

Air quality web poster as seen on the web site, and at the Brigantine Wilderness Area, New Jersey.

the home of Brigantine. The Fish and Wildlife Service's Air Quality Branch and the National Park Service's Air Resources Division, who collaborated on the design of the "Brigantine Web," plan to complete several more posters/websites as part of their environmental education and outreach efforts. They are currently designing posters and associated web pages for their national air quality programs. Subsequently, they will focus on producing posters/websites for select Class I areas.

Digital monitoring camera system available

Digital camera systems that yield high-resolution digital images are now being applied in environmental monitoring applications including visibility monitoring. A high-resolution digital camera system will soon be installed at Great Smoky Mountains National Park, Tennessee, by Air Resource Specialists, Inc.

HRDC-1 high-resolution digital camera system.

The system is a stand-alone, self-contained unit capable of capturing, storing, and transmitting high-resolution digital images from remote locations. It will be installed at the Look Rock observation tower; digital images, along with visibility, ambient air quality, and meteorology data collected at Look Rock, will be transmitted over a telephone line to the Sugarland's Visitors Center, where the near real-time images and data will be available to park visitors in an interpretive display. In addition, the images and data displays will be placed on the Internet and available to anyone with Internet access.

The high-resolution digital camera system consists of a high-resolution digital camera (1280 x 960, 24-bit true color) and supporting computer housed in a weatherproof, heated environmental enclosure. The system can internally store up to 1,400 high-resolution images on its 1.2 gigabyte hard disk. The images can be downloaded by telephone or be directed to a computer. The telephone connection also provides the remote capability of changing the camera zoom, focus, exposure, image resolution, and frequency of image capture. The system can be used for:

- Environmental monitoring.
- Security.
- Construction documentation.
- Event monitoring.
- Advertising/information.

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IMPROVE STEERING COMMITTEE

IMPROVE Steering Committee members represent their respective agencies and meet periodically to establish and evaluate program goals and actions. IMPROVE-related questions within agencies should be directed to the agency's Steering Committee representative. Steering Committee representatives are:

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The next IMPROVE Newsletter will be published in April 1998.

Please Contact Us: If you know someone who would like to receive the newsletter or if you are no longer interested in receiving a copy, please call us at 970/484-7941. Your ideas and comments are always welcome. We continue to look for ways to improve the newsletter and to provide you with interesting and pertinent information.

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