

Chapter 6: Monitoring Strategy

The Regional Haze SIP is to be accompanied by a strategy for monitoring regional haze visibility impairment. Specifically, the regional haze rule states at 40 CFR 51.308(d)(4):

“(4) *Monitoring strategy and other implementation plan requirements.* The State must submit with the implementation plan a monitoring strategy for measuring, characterizing, and reporting of regional haze visibility impairment that is representative of all mandatory Class I Federal areas within the State. This monitoring strategy must be coordinated with the monitoring strategy required in §51.305 for reasonably attributable visibility impairment. Compliance with this requirement may be met through participation in the IMPROVE* network. The implementation plan must also provide for the following:

(i) The establishment of any additional monitoring sites or equipment needed to assess whether reasonable progress goals to address regional haze for all mandatory Class I Federal areas within the State are being achieved.

(ii)-(vi)[Other implementation plan requirements that pertain to reporting and use of monitoring data and an emission inventory.]”

Such monitoring is intended to provide the data needed to satisfy four objectives:

1. Track the expected visibility improvements resulting from emissions reductions identified in this SIP;
2. Better understand the atmospheric processes of importance of haze;
3. Identify chemical species in the ambient particulate matter and relate them to emissions from sources; and
4. Evaluate regional air quality models for haze and construct relative response factors for using those models.

Louisiana intends to satisfy the monitoring requirements of Section 51.308(d)(4) through its participation in the IMPROVE monitoring network. This network is maintained through a cooperative measurement effort governed by a steering committee composed of representatives from Federal and regional-state organizations: the Breton WA monitor is owned and operated by the US Wildlife and Fisheries. Should the new monitor at Lake Catherine become inoperable or is shut down, Louisiana, in consultation with the USEPA and the U.S. Fish and Wildlife Service, will develop an alternative approach for meeting its visibility monitoring obligation, which may include seeking contingency funding for alternative monitoring and the reporting of that data.

6.1 The IMPROVE Monitoring System

The primary monitoring network for regional haze, both nationwide and in Louisiana is the **I**nteragency **M**onitoring of **P**rotected **V**isual **E**nvironments (IMPROVE) network. Given that IMPROVE monitoring data from 2000-2004 serve as the baseline for the regional haze program, the future regional haze monitoring strategy must necessarily be based on, or directly comparable to, IMPROVE. The IMPROVE measurements provide the only long-term record available for tracking visibility improvement or degradation and therefore Louisiana intends to rely on the IMPROVE network for complying with the regional haze monitoring requirements in the Regional Haze Rule.

“[T]he [old] IMPROVE site at Breton was destroyed during Hurricane Katrina. Both the sampler and its stand were demolished by the storm. The site was in the Mississippi Delta downstream from New Orleans, just a few miles before the river empties into the Gulf of Mexico. Due to the severe damage throughout the Gulf Coast region, the Breton site is out of service indefinitely. It is hoped that the site can be reestablished sometime in early 2006, perhaps at a different location in southern Louisiana.” (*The IMPROVE Newsletter*, Volume 14, NO. 3, 3rd Quarter 2005.)

Many sites were investigated to replace the old destroyed monitor; finding a stable structure with electricity since the onslaught of Hurricane Katrina was one of the biggest obstacles. Further, the committee for reestablishing the monitor wanted to make certain that the monitor was able to acquire data that would give an even representation of the areas that affect the class 1 area. The monitor was ultimately relocated to a site near Lake Catherine, St. Bernard Parish, Louisiana. It is believed that this new site will generate the necessary information to continue the long term strategy goals to enhance visibility at Breton. See Figures 6.2 and 6.3 at the end of this chapter.

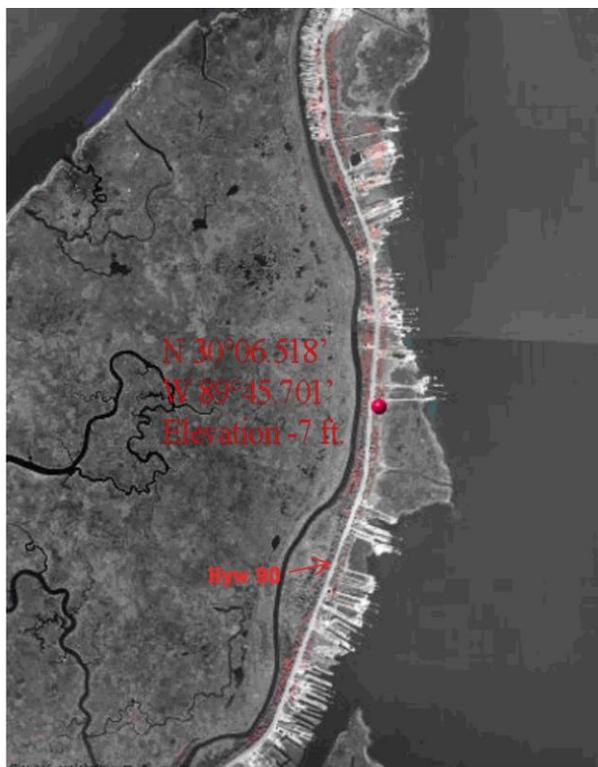
In addition to the IMPROVE monitoring system, Louisiana operates a fairly comprehensive PM_{2.5} network of the filter based Federal reference method monitors as well as a continuous PM_{2.5} monitoring system located in major metropolitan areas. These monitors allow for continuous 24-hour data that is updated hourly on the national Air NOW website and LDEQ’s website. A map of the various locations around the State is included in Figure 6.1. These PM_{2.5} measurements help LDEQ to characterize air pollution levels in areas across the state and therefore aid in the analysis of visibility improvement in and near the Class I area.

toward visibility improvement. In particular, Louisiana’s regional haze strategy relies on emission reductions that will result from newly established national rules such as CAIR and Tier 2 Gasoline Standard. These programs will occur on different time scales and will most likely not be spatially uniform. Monitoring at every Class I area is important to document the different air quality responses to the emissions reductions.

Data produced by the IMPROVE monitoring network will be used nearly continuously for preparing the 5-year progress reports and the 10-year SIP revisions, each of which relies on analysis of the preceding five years of data. Consequently, the monitoring data from the IMPROVE site needs to be readily accessible and to be kept up to date.



**Figure 6.2 Site of IMPROVE monitor
Lake Catherine, Louisiana**



**Figure 6.3 Map with elevation at
New location for monitor**