

Chapter 11: Long-Term Strategy

11.1 Long-term Strategy Requirements

40 CFR section 51.308(d)(3) requires Louisiana to submit a long-term strategy that addresses regional haze visibility impairment for each mandatory Class I Federal area within and outside the state which may be affected by emissions from within the state. The long-term strategy must include enforceable emissions limitations, compliance schedules, permit applications and other measures necessary to achieve the reasonable progress goals established by states where the Class I areas are located. This chapter describes how Louisiana meets the long-term strategy requirements.

11.2 Consultation

40 CFR section 51.308(d)(3)(i) requires Louisiana to consult with other states to develop coordinated emission strategies. This requirement applies both where emissions from the state are reasonably anticipated to contribute to visibility impairment in Class I areas outside the state and when emissions from other states are reasonably anticipated to contribute to visibility impairment in Class I areas within the state.

Louisiana consulted with other states/Tribes in the CENRAP and VISTAS RPOs on processes that developed technical information necessary for development of coordinated strategies for the Breton Class I area. In addition Louisiana participated in discussions focused on Class I areas in Oklahoma including the Wichita Mountains Wilderness Area. Louisiana also coordinated with CENRAP and other RPOs to develop a weight of evidence analysis that was used to develop the state's long-term strategy (Appendix H). Strategy development considered the impacts of the state's emissions on Class I areas within and outside the state. In addition, Louisiana is required to consult with the FLM on any applications for any proposed new source or major modifications that may have an adverse impact on visibility in any Class I area (LAC 33:III.509.E.1)

Louisiana may be reasonably anticipated to contribute to the following Class I areas:

1. Breton National Wilderness Area, Louisiana;
2. Caney Creek Wilderness Area, Arkansas.

11.3 Weight of Evidence

11.3.1 Basis for emission reduction obligations

40 CFR section 51.308(d)(3)(iii) requires Louisiana to document the technical basis for the state's apportionment of emission reductions necessary to meet reasonable progress goals in each Class I area affected by Louisiana's emissions.

Louisiana relied on technical analyses developed by CENRAP and VISTAS to demonstrate that the state's emission reductions, when coordinated with those of other states are sufficient to achieve RPGs in Class I areas affected by the states.

The demonstration of attainment of RPGs relies on the analysis of monitored and modeled data in a weight of evidence analysis to determine whether visibility is improved on days when it is usually poor and does not deteriorate on days when it is usually good. Current visibility is estimated from monitored components of PM_{2.5} and coarse mass. Models are used in a relative sense to estimate how current concentrations respond to emission reduction measures. Data analysis is used to identify source categories and regions. Current concentrations of particulate matter components are adjusted by the relative modeled response to estimate concentrations at the end of the first implementation period 2018. Future visibility is estimated from estimated component concentrations of PM_{2.5} and coarse particulate matter at the end of the first implementation period. The difference between present visibility and future estimated visibility is compared with the RPG to determine if the goal is met.

11.3.2 Baseline Inventory

Louisiana 40 CFR section 51.308(d)(3)(iii) requires Louisiana to identify the baseline inventory on which the long-term strategy is based. Louisiana used the 2002 Base G CENRAP inventory as its baseline inventory (Appendix B).

11.4 Factors for State Consideration

40 CFR section 51.308(d)(3)(v) requires Louisiana to consider several factors in developing its long-term strategy. These factors include emission reductions from ongoing pollution control programs (40 CFR section 51.308(d)(3)(v)(A)). Louisiana considered the following ongoing programs in developing its long-term strategy:

- National VOC Emission Standards for Automobile Refinish Coatings (63 FR 48806)
- National VOC Emission Standards for Consumer Products (63 FR 48819)
- National VOC Emission Standards for Architectural Coatings (63 FR 48848)

- Tier 2 Motor Vehicle Emission Standards and Gasoline Sulfur Control Requirements (65 FR 6697)
- Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements (66 FR 5002)
- Control of Emissions from Nonroad Diesel Engines and Fuels (69 FR 38958)
- Clean Air Interstate Rule (70 FR 25162)

Louisiana requires that any new major stationary source and/or major modification permit application impacting any Class I area will be consistent with making progress toward the national visibility goal of preventing any further impairment of visibility in any Class I area (LAC 33:II.504.E.5)

Louisiana is also required to consider measures to mitigate the impacts of construction activities. (40 CFR section 51.308(d)(3)(v)(B)). Louisiana may require visibility monitoring in any Class I area where preconstruction and post-construction of any new source or major modification may have an adverse impact on visibility in any Class I area (LAC 33:III.504.E.3.b). There has been a great deal of construction activities in southern Louisiana due to Hurricanes Katrina and Rita; however, there have been no measurable impacts on visibility from construction activities.

40 CFR section 51.308(d)(3)(v)(C) requires Louisiana to identify additional measures to meet RPGs when ongoing programs alone are not sufficient to meet the goals. Louisiana found that ongoing air pollution control programs were sufficient to meet RPGs through 2018.

According to 40 CFR section 51.308(d)(3)(v)(D) Louisiana is required to consider source retirement and replacement schedules in developing RPGs. Retirement and replacement will be managed in conformance with existing SIP requirements pertaining to PSD and New Source Review.

Louisiana is required to consider smoke management techniques for the purposes of agricultural and forestry management in developing RPG (40 CFR section 51.308(d)(3)(v)(E)). According to the Louisiana Environmental Quality Act (La. R.S. 30:2054(B)(2)), the Louisiana Department of Environmental Quality does not have the jurisdiction or authority to make any rule, regulation, recommendations, or determination with respect to the following:

- Burning of agricultural by-products in the field in connection with the planting, harvesting, or processing of agricultural products.
- Controlled burning of cotton gin agricultural wastes in connection with cotton gin operations.
- Controlled burning in connection with timber stand management.

- Controlled burning of pastureland or marshland in connection with trapping or livestock production.
- Both the Louisiana Department of Agriculture and Forestry and the Louisiana State University Ag Center have Smoke Management Guidelines.

In addition, Louisiana is required to ensure that emission limitations and control measures used to meet RPGs are enforceable (40 CFR section 51.308(d)(3)(v)(F) as well as the anticipated net effect on visibility due to projected changes in point, area, and mobile source emission over the period addressed by the long-term strategy according to 40 CFR section 51.308(d)(3)(v)(G).

11.5 Summary of Visibility Projections

A comparison of the RPO visibility projections was discussed in Chapter 5 of the Technical Support Document (Appendix B). In the case of Breton, the 2018 visibility projections of CENRAP and VISTAS were compared. CENRAP approximates a 94% achievement of the URP point, while VISTAS is less optimistic, predicting only 84% achievement. It is believed the potential contributor to this difference is that emissions from off-shore marine vessel emission in the oil and gas production areas of the Gulf of Mexico are double counted in the VISTAS Base G modeling. As these emissions were assumed to remain unchanged between 2002 and 2018, the double counting of their emissions will result in stiffer RRFs than there should be and consequently less visibility benefits in 2018.

This double counting also occurred in the CENRAP Base F modeling but was corrected in Base G. The double counting occurred because off-shore marine vessels were present in both the MMS off-shore oil/gas development inventory for the Gulf of Mexico and the VISTAS off-shore marine vessel inventory for the Pacific and Atlantic Oceans and the Gulf of Mexico.