

Chapter 10: Reasonable Progress Goals

10.1 Reasonable Progress Goal Requirements:

The regional haze rule at 40 CFR section 51.308(d)(1) requires states to establish reasonable progress goals (RPG) for each Class I area within the state (expressed in deciviews) that provide for reasonable progress towards achieving natural visibility. In addition, EPA released guidance on June 7, 2007 to use in setting reasonable progress goals. The goals must provide improvement in visibility for the most impaired days, and ensure no degradation in visibility for the least impaired days over the SIP period. The state must also provide an assessment of the number of years it would take to attain natural visibility conditions if improvement continues at the rate represented by the RPG.

The EPA guidance referenced above describes the RPG development process as follows:

RPGs should be initially developed considering available control measures as evaluated using the statutory factors. Based on emission reductions anticipated from the resulting control strategy for all visibility impairing pollutants, the State should ensure that the RPGs define visibility conditions at, or better than, conditions based on the uniform rate of progress. If a State finds that its initial RPG will not result in visibility improvement equal to or better than the uniform rate of progress, then the State should reconsider available control measures, and additional measures should be evaluated as appropriate. The RPGs should then be revised based upon a more stringent suite of controls.

The “statutory factors” that the state must consider are identified in 40 CFR 51.308(d)(i)(A) as:

- a) The costs of compliance,
- b) The time necessary for compliance,
- c) The energy and non-air quality environmental impacts of compliance, and
- d) The remaining useful life of existing sources that contribute to visibility impairment.

The state must demonstrate how these factors were taken into consideration in selecting the goal for its mandatory Class I areas.

10.2 Louisiana Reasonable Progress Goal

The “Uniform Rate of Progress” (URP) named in the EPA guidance (described as uniform rate of improvement in 40 CFR 51.308(d)(1)(i)(B)) and is essentially a line between

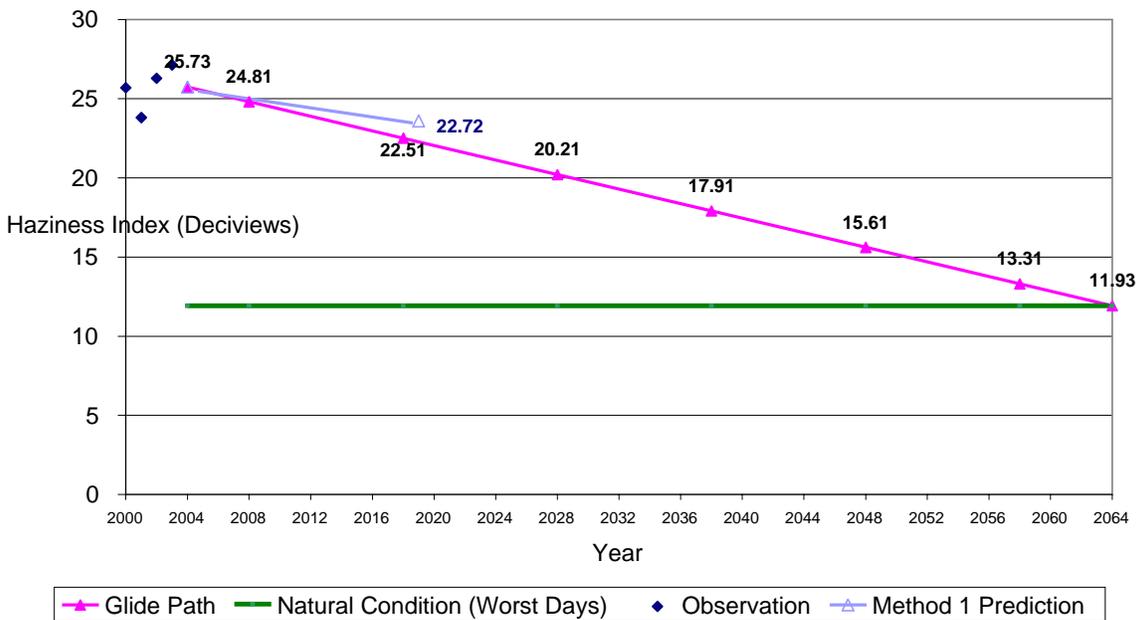
current or baseline conditions on the worst days and natural background in 2064. Table 10.1 provides a Uniform Rate of Progress for the Breton Wilderness Class I area. The deciview (dv) improvements needed by 2018 are calculated by subtracting the 2018 URP point from the 2000/2004 baseline conditions. Similarly, the dv improvements needed by 2064 are calculated by subtracting the natural background conditions in 2064 from the baseline conditions. Figure 10.1 illustrates the URP glidepath for Breton.

Table 10.1: Uniform Rate of Progress for Breton Wilderness Class I Area

Class I Area	2018 URP Point (dv)	2018 Method 1 Prediction (dv)	Deciview Improvement Needed by 2018 assuming URP	Progress Annually to 2018 assuming URP	Deciview Improvement Needed by 2064
Breton	22.51	22.72	0.21	0.021	13.80

(Deciview value to three decimal places)

**Figure 10.1
Uniform Rate of Reasonable Progress Glide Path
Breton - 20% Data Days**



These RPGs are derived from the CENRAP modeling and reflect emissions reduction programs already in place and additional SO₂ reductions from refineries as a result of the EPA refinery consent decrees. The reasonable progress goals were developed after considering the statutory factors: cost and time of compliance, the energy and non-air quality impacts of compliance, and the remaining useful life of existing sources. Appendix H, CENRAP Regional Control Strategy Analysis Plan, provides an analysis showing that these goals are reasonable.

The cost of compliance factor is used to determine whether compliance costs for sources are reasonable compared to the emission reductions and visibility improvement they will achieve. Costs should be determined for one-time capital costs and ongoing annual operations, maintenance and upkeep costs.

The time necessary for compliance factor may be used to adjust the reasonable progress goals to reflect the degree of improvement achievable within the long term strategy period, as opposed to the improvement expected at full implementation of a control measure, if the time needed for full compliance exceeds the length of the long term strategy.

The energy and non-air impacts factor is meant to consider whether the energy requirements (the amount, type and availability of energy) of the control technology result in energy penalties or benefits.

The statutory factor of the remaining useful life of the source is applicable only to those measures which would require retrofitting of control devices at existing sources. The remaining useful life of a source affects the annualized costs of retrofit controls and is included in the methods used for calculating annualized costs in the control cost equations modified from EPA's AirControlNET.

The control strategy analysis points out that point sources, both EGU and non-EGU, of SO₂ and NO_x are the main anthropogenic pollutants that affect visibility at Breton. The next highest source of these two pollutants is area sources. With the implementation of CAIR, SO₂ and NO_x reductions will be expected; also with the implementation of BART through consent decrees at facilities surrounding Breton, further reductions will be seen.

If Louisiana assumed reduction requirements in tons per year (tpy) of sulfate and nitrate, the required emissions reductions would be as follows:

- SO₂ emission reductions (tpy) 226,000
- NO_x emission reductions (tpy) 572,000

Should Louisiana require emission reductions using the assumption that a single chemical species is controlled, the required emission reductions would be as follows:

- SO₂ emission reductions (tpy) 308,000
- NO_x emission reductions (tpy) 6,010,000

Based on the extraordinary reductions that would be required if a single chemical species control strategy for NO_x were implemented, new control strategies will have to be extensively reviewed. However, Louisiana will review the need for further SO₂ emissions reduction control measures after all CAIR and federal rules have come into full force and effect. Based on the analysis by Alpine Geophysics, the total cost using 2005 dollar values for established reduction targets, as well as subregional controls strategy reductions, are estimated to be \$203,443,093 or \$1,696 per ton reduction.¹

10.3 Consultation

In determining a reasonable progress rate for Breton, LDEQ has consulted with the other states that are reasonably anticipated to cause or contribute to visibility impairment. The participating states are Mississippi, Alabama and Florida. The FLMs and EPA participated in these meetings as well. Notes from the meetings are available in Appendix I.

10.4 Reporting

LDEQ will report progress will be reported to the EPA every five years in accordance with 51.308 (g). A complete detail on the five-year reporting and ten-year SIP submittal requirements is included in Chapter 12 of this document.

¹ CENRAP Regional Haze Control Strategy Analysis Plan, Alpine Geophysics, LLC, Prepared by Stella, Wilkinson, and Tesche for CENRAP/CenSARA, May 9, 2006; page 43.