

**Appendix 10-3: Uniform Rate of Progress Curves Using Default  
Natural Condition Estimates**

Chapter 10 presents the uniform rate of progress (URP) for the best 20 percent and the worst 20 percent days for the two Class I areas in Texas using the best site-specific natural conditions estimates available to the TCEQ. Appendix 10-3 shows the two different URPs for Big Bend National Park and the two for Guadalupe Mountains National Park based on the site-specific estimates and on the default natural conditions estimates the EPA recommends. These are the Natural Conditions II (NCII) estimates.

**Table 1: Uniform Rate of Progress for Class I Areas in Texas (Worst 20 Percent Days)**

Class I Area	Using Texas Site-specific Natural Condition Estimates			Using EPA-recommended NCII Default Natural Condition Estimates		
	Improvement Needed by 2018 assuming URP (dv)	Progress Annually to 2018 assuming URP (dv)	Improvement Needed by 2064 (dv)	Improvement Needed by 2018 assuming URP (dv)	Progress Annually to 2018 assuming URP (dv)	Improvement Needed by 2064 (dv)
Big Bend	1.7	0.12	7.2	2.3	0.17	10.1
Guadalupe Mountains	1.2	0.08	4.9	2.4	0.17	10.4

**Table 2: Reasonable Progress Goals for Class I Areas (Worst 20 Percent Days)**

Class I Area	Improvement Projected by 2018 using RPG (dv)	Using Texas Site-specific Natural Condition Estimates			Using EPA-recommended NCII Default Natural Condition Estimates		
		Improvement by 2018 at URP (dv)	Projected Improvement by 2064 at RPG Rate (dv)	Date Natural Visibility Attained at RPG Rate	Improvement by 2018 at URP (dv)	Projected Improvement by 2064 at RPG Rate (dv)	Date Natural Visibility Attained at RPG Rate
Big Bend	0.7	1.7	2.9	2155	2.3	2.9	2215
Guadalupe Mountains	0.9	1.2	3.8	2081	2.4	3.8	2167

These projections of the year in which visibility would improve to natural conditions for the worst 20 percent of days are a requirement of the Regional Haze Rule. The large contribution that international pollution transport makes to Big Bend and to Guadalupe Mountains means that U.S. emission reductions alone could never bring these two Class I areas to natural visibility conditions.

For the best 20 percent of days the requirement is to project the haze index in deciviews for the end of the planning period, which is 2018 for this first Regional Haze SIP submission, and to show that the projection does not show any degradation from the base period average haziness for the best 20 percent days. Table 10-3 in the body of Chapter 10 does show that the modeling

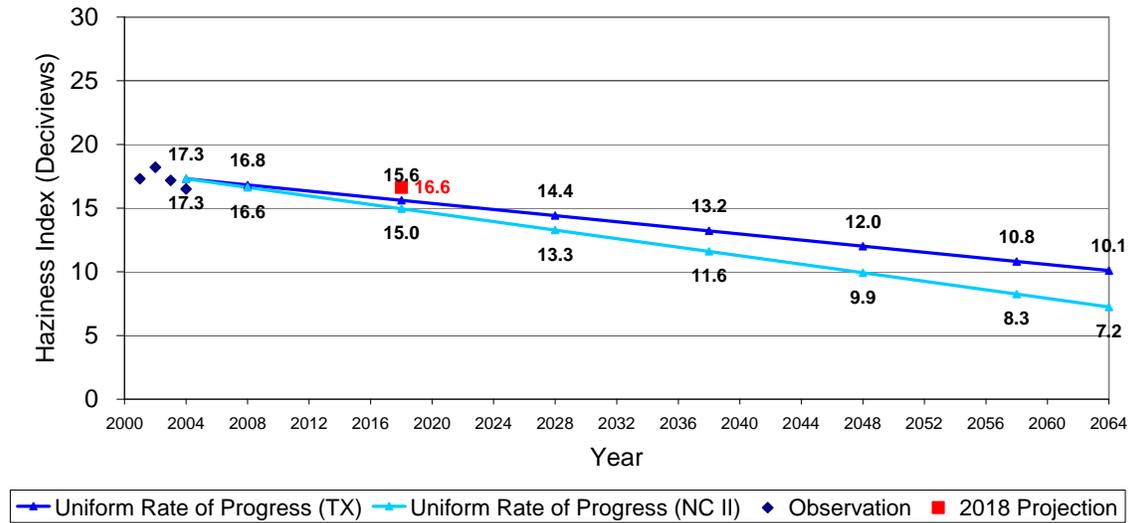
using Texas' long-term strategy does provide for 0.2 deciview improvement in haze for the best 20 percent of days at both Big Bend and Guadalupe Mountains. For quick reference a copy of Table 10-3 from the SIP text appears here:

**Table 3: Reasonable Progress Goals for Class I Areas (Best 20 Percent Days)**

Class I Area	Baseline Visibility (dv)	Projected 2018 Visibility (RPG) (dv)	Improvement by 2018 at RPG (dv)
Big Bend	5.8	5.6	0.2
Guadalupe Mountains	5.9	5.7	0.2

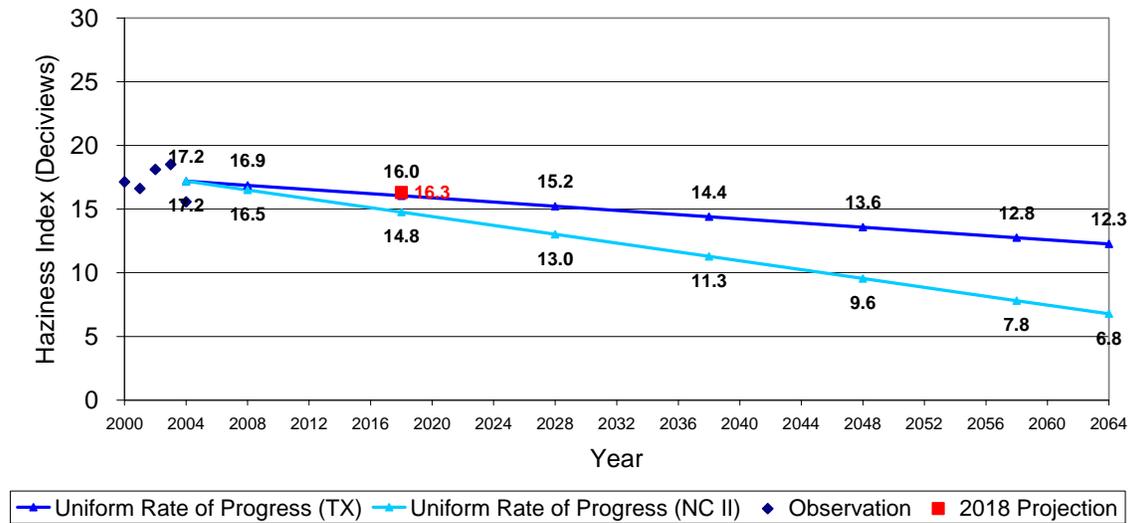
The following two figures show both the site-specific and the EPA default uniform rate of progress lines along with the 2018 projected RPG points for Big Bend and Guadalupe Mountains.

**Uniform Rate of Progress and 2018 Projected Progress  
Big Bend NP - W20% Data Days**



**Figure 1: Glide Paths for Big Bend National Park Calculated Using Site-Specific 2064 Natural Conditions Estimates and Natural Conditions II Committee Estimates**

## Uniform Rate of Progress and 2018 Projected Progress Guadalupe Mountains NP - W20% Data Days



**Figure 2: Glide Paths for Guadalupe Mountains National Park Calculated Using Site-Specific 2064 Natural Conditions Estimates and Natural Conditions II Committee Estimates**