

## Appendix C

### New Mexico Class I Area Monitoring Data Summary Tables and Charts

Includes the following subsections:

<b>Subsection</b>	<b>IMPROVE Monitor</b>	<b>Class I Area(s) Represented</b>
I.1	BAND1	Bandelier NM
I.2	BOAP1	Bosque del Apache WA
I.3	GICL1	Gila WA
I.4	GUMO1	Guadalupe Mountains NP and Carlsbad Caverns NP
I.5	SACR1	Salt Creek WA
I.6	SAPE1	San Pedro Parks WA
I.7	WHIT1	White Mountain WA
I.8	WHPE1	Wheeler Peak WA and Pecos WA

## I.1. BANDELIER NM (BAND1)

The following tables and figures are presented in this section for the Bandelier NM represented by the BAND1 IMPROVE Monitor:

- **Table I.1-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.1-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.1-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.1-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.1-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.1-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.1-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.1-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.1-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.

**Table I.1-1  
Bandelier NM, NM (BAND1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

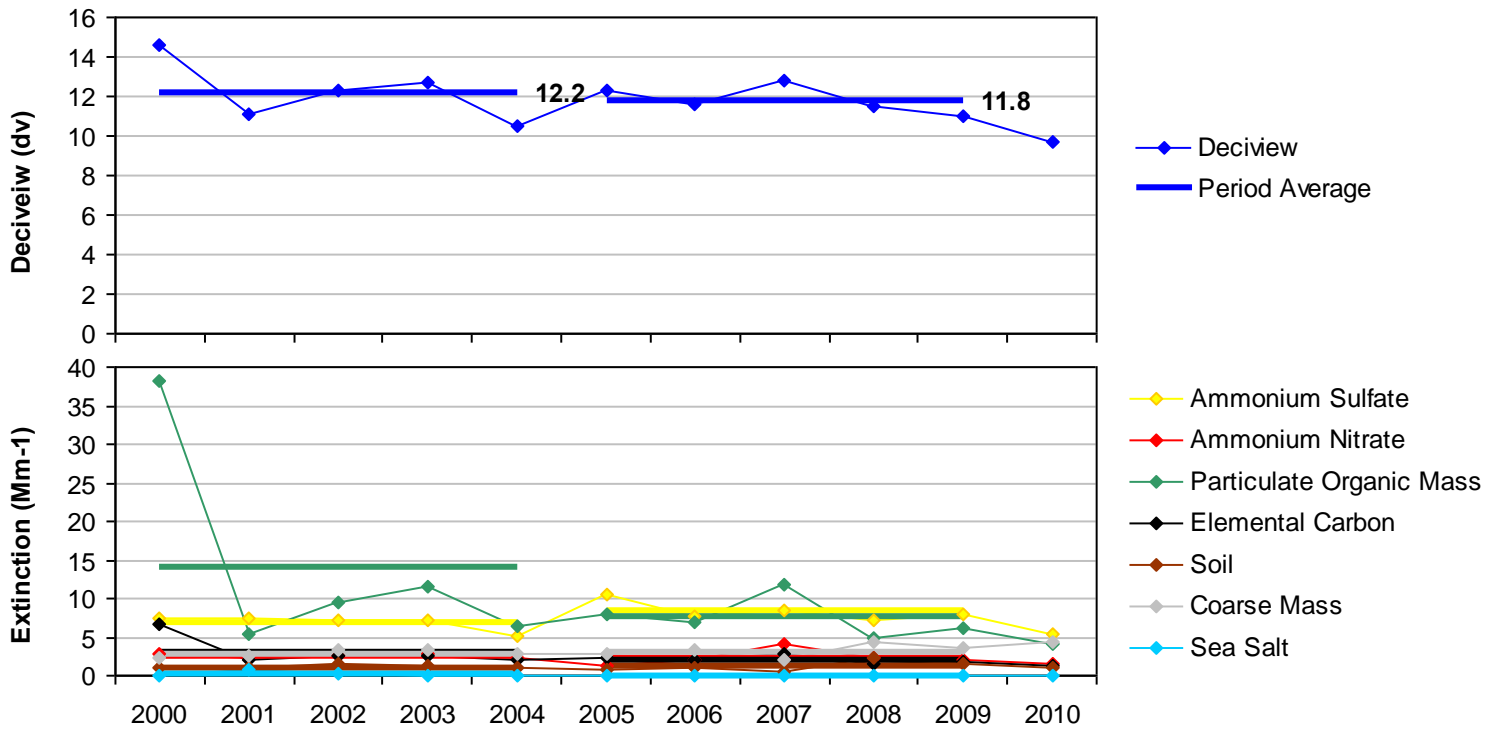
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	4.9	4.9	5.0	4.9	4.9	4.1	4.6	4.5	3.9	3.6	3.4	-0.1	0.0	5.0	4.2	-0.8	-16%
Worst 20% Days	14.6	11.1	12.3	12.7	10.5	12.3	11.6	12.8	11.5	11.0	9.7	-0.2	0.2	12.2	11.8	-0.4	-3%
All Days	9.1	7.9	8.4	8.4	7.8	8.0	7.8	8.2	7.6	7.1	6.5	-0.1	0.0	8.3	7.7	-0.6	-7%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	16.4	16.4	16.6	16.4	16.5	15.1	15.9	15.8	14.8	14.4	14.1	-0.2	0.0	16.5	15.2	-1.3	-8%
Worst 20% Days	67.6	30.5	35.8	37.7	28.7	34.8	32.2	38.7	31.8	32.1	26.8	-0.6	0.2	40.1	33.9	-6.2	-16%
All Days	31.4	22.5	24.2	24.4	22.2	23.2	22.5	24.2	22.1	21.5	19.6	-0.4	0.0	25.0	22.7	-2.3	-9%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	2.4	2.9	2.5	2.0	2.4	2.0	2.5	2.4	1.7	1.9	1.8	-0.1	0.0	2.4	2.1	-0.3	-13%
Worst 20% Days	7.6	7.5	7.1	7.1	5.2	10.6	7.7	8.4	7.3	7.9	5.3	0.0	0.3	6.9	8.4	1.5	22%
All Days	5.0	4.9	4.6	4.4	4.0	5.3	4.5	4.9	4.4	4.2	3.5	-0.1	0.1	4.6	4.7	0.1	2%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	0.8	0.6	0.8	0.8	0.7	0.6	0.5	0.6	0.7	0.4	0.5	0.0	0.0	0.7	0.6	-0.1	-14%
Worst 20% Days	2.8	2.2	2.6	2.8	2.2	1.4	2.1	4.1	2.3	2.0	1.6	0.0	0.2	2.5	2.4	-0.1	-4%
All Days	1.6	1.4	1.6	1.4	1.4	1.0	1.1	1.6	1.2	1.1	0.9	0.0	0.1	1.4	1.2	-0.2	-14%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	2.0	1.7	2.1	2.4	2.4	1.6	1.7	2.0	1.9	1.5	1.2	0.0	0.2	2.1	1.8	-0.3	-14%
Worst 20% Days	38.1	5.4	9.5	11.6	6.5	8.0	6.9	11.8	5.0	6.3	4.1	-0.5	0.2	14.2	7.6	-6.6	-47%
All Days	11.1	3.3	4.6	5.5	4.2	4.2	3.6	5.0	3.4	3.4	2.8	-0.2	0.1	5.7	3.9	-1.8	-32%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	0.9	0.8	0.9	1.0	0.9	0.9	1.0	0.8	0.7	0.6	0.5	0.0	0.2	0.9	0.8	-0.1	-11%
Worst 20% Days	6.8	2.0	2.5	2.5	1.9	2.2	2.1	2.8	1.5	1.9	1.2	-0.1	0.1	3.1	2.1	-1.0	-32%
All Days	2.6	1.3	1.6	1.5	1.4	1.6	1.4	1.5	1.1	1.2	0.9	-0.1	0.1	1.7	1.3	-0.4	-24%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	0.3	0.4	0.4	0.2	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.0	0.1	0.3	0.2	-0.1	-33%
Worst 20% Days	0.9	1.1	1.4	1.2	1.0	0.7	1.0	0.5	2.3	1.5	1.1	0.0	0.4	1.1	1.2	0.1	9%
All Days	0.5	0.7	0.8	0.7	0.6	0.4	0.7	0.5	0.9	0.8	0.6	0.0	0.2	0.6	0.7	0.1	17%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	1.0	1.0	1.0	1.0	0.7	0.9	1.0	0.8	0.6	0.7	0.8	0.0	0.0	0.9	0.8	-0.1	-11%
Worst 20% Days	2.4	2.6	3.5	3.4	2.8	2.7	3.4	1.9	4.4	3.5	4.3	0.1	0.2	2.9	3.2	0.3	10%
All Days	1.6	1.9	1.9	2.0	1.6	1.6	2.1	1.6	2.0	1.9	1.9	0.0	0.2	1.8	1.8	0.0	0%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0%
Worst 20% Days	0.1	0.7	0.3	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.2	0.1	-0.1	-50%
All Days	0.0	0.2	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	-0.1	-100%

\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

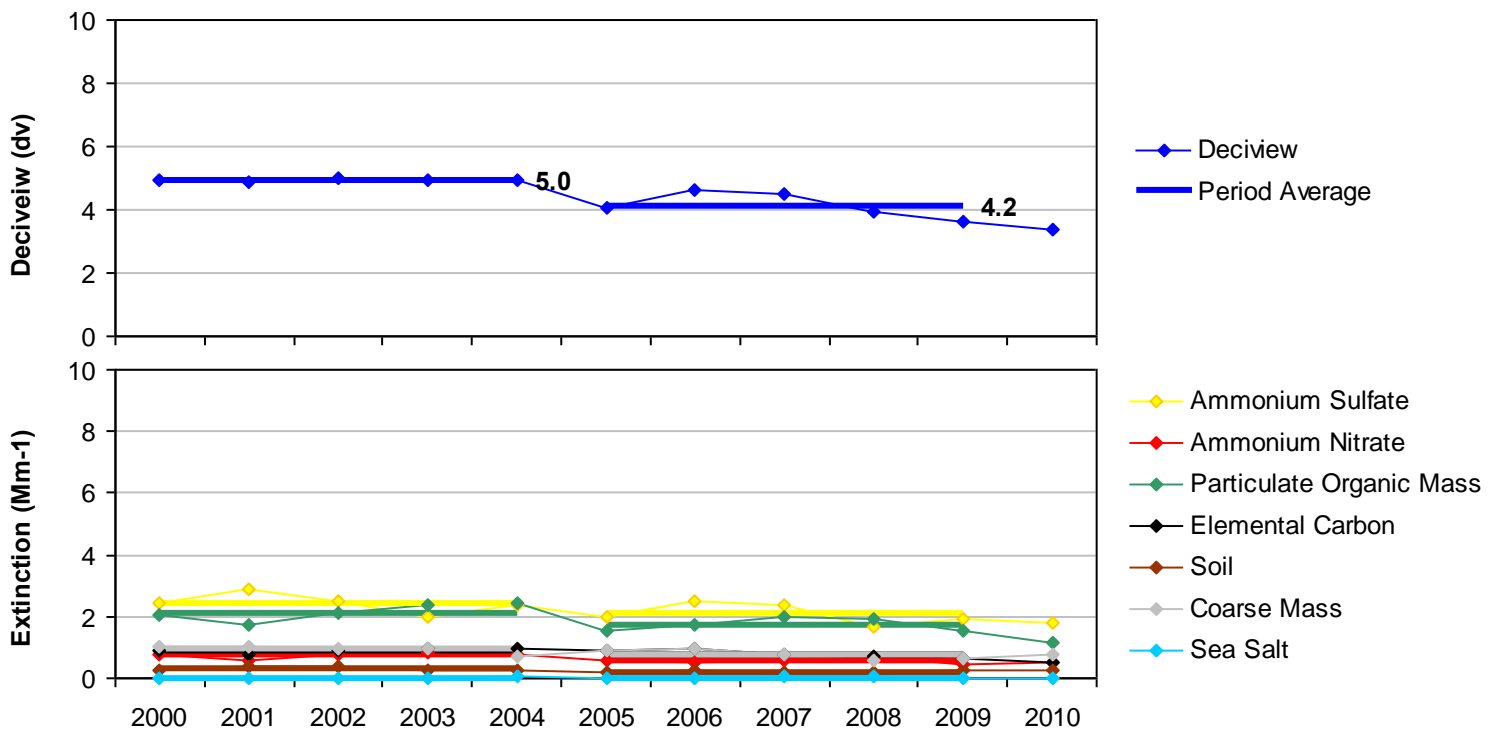
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

---" Indicates a missing year that did not meet RHR data completeness criteria.

**Figure I.1-1**  
**Bandelier NM, NM (BAND1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

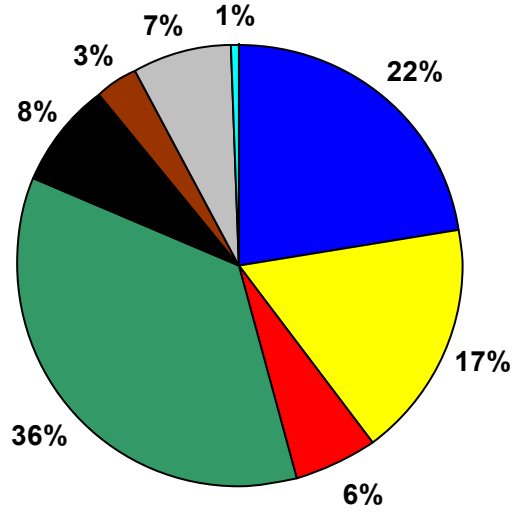


**Figure I.1-2**  
**Bandelier NM, NM (BAND1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

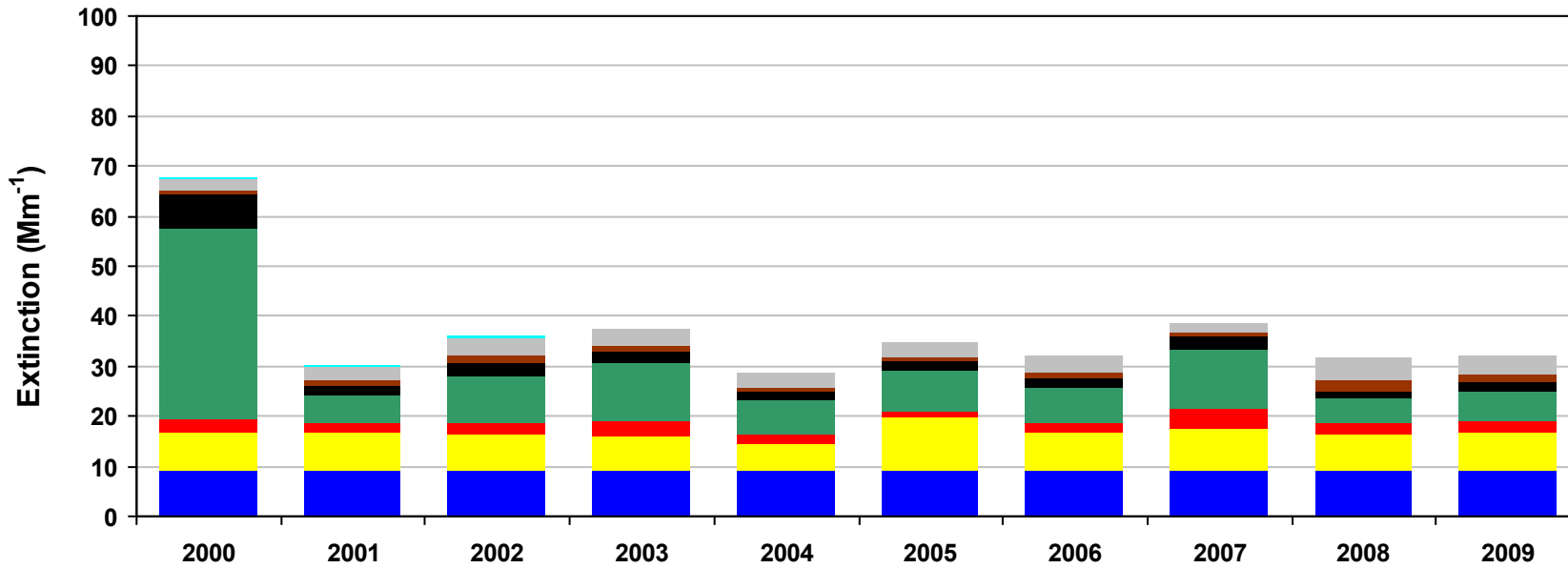
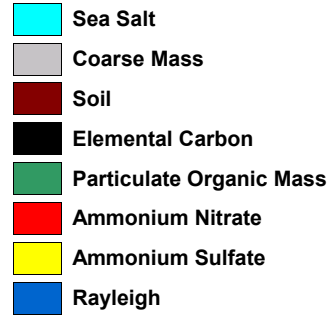
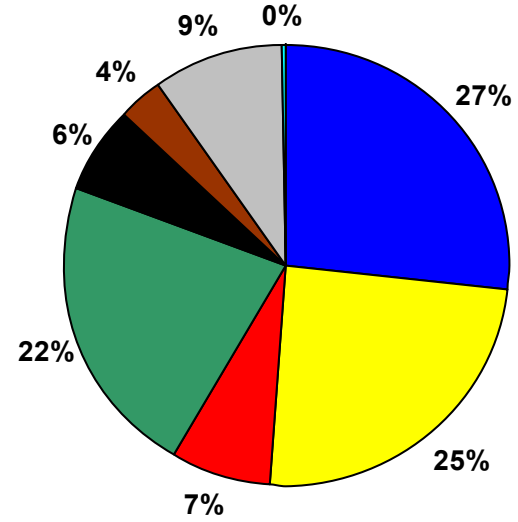


**Figure I.1-3**  
**Bandelier NM, NM (BAND1 Site)**  
**20% Most Impaired Visibility Days**

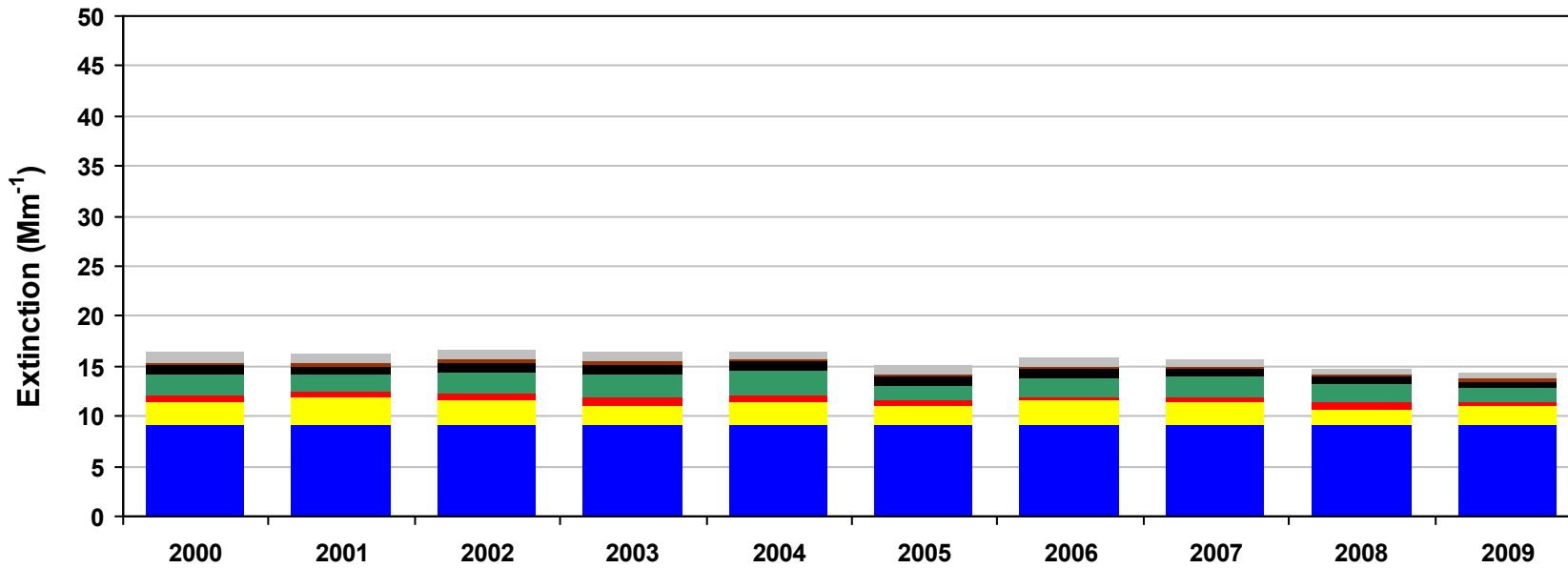
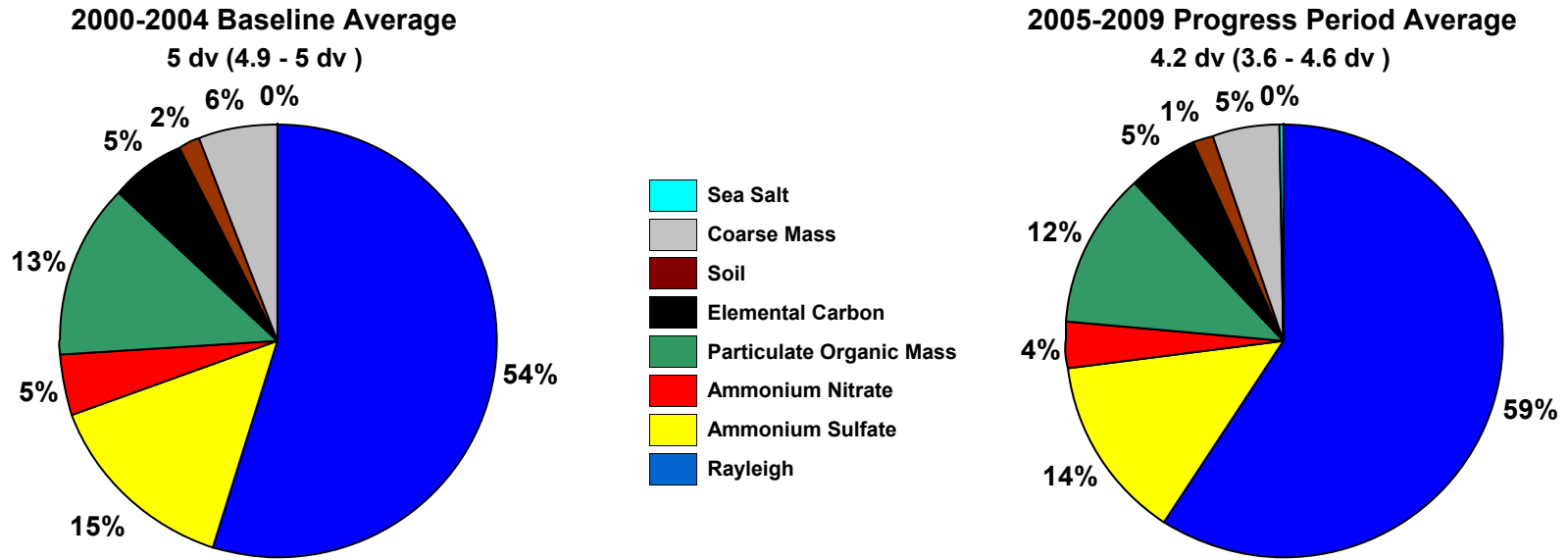
**2000-2004 Baseline Average**  
 12.2 dv (10.5 - 14.6 dv )



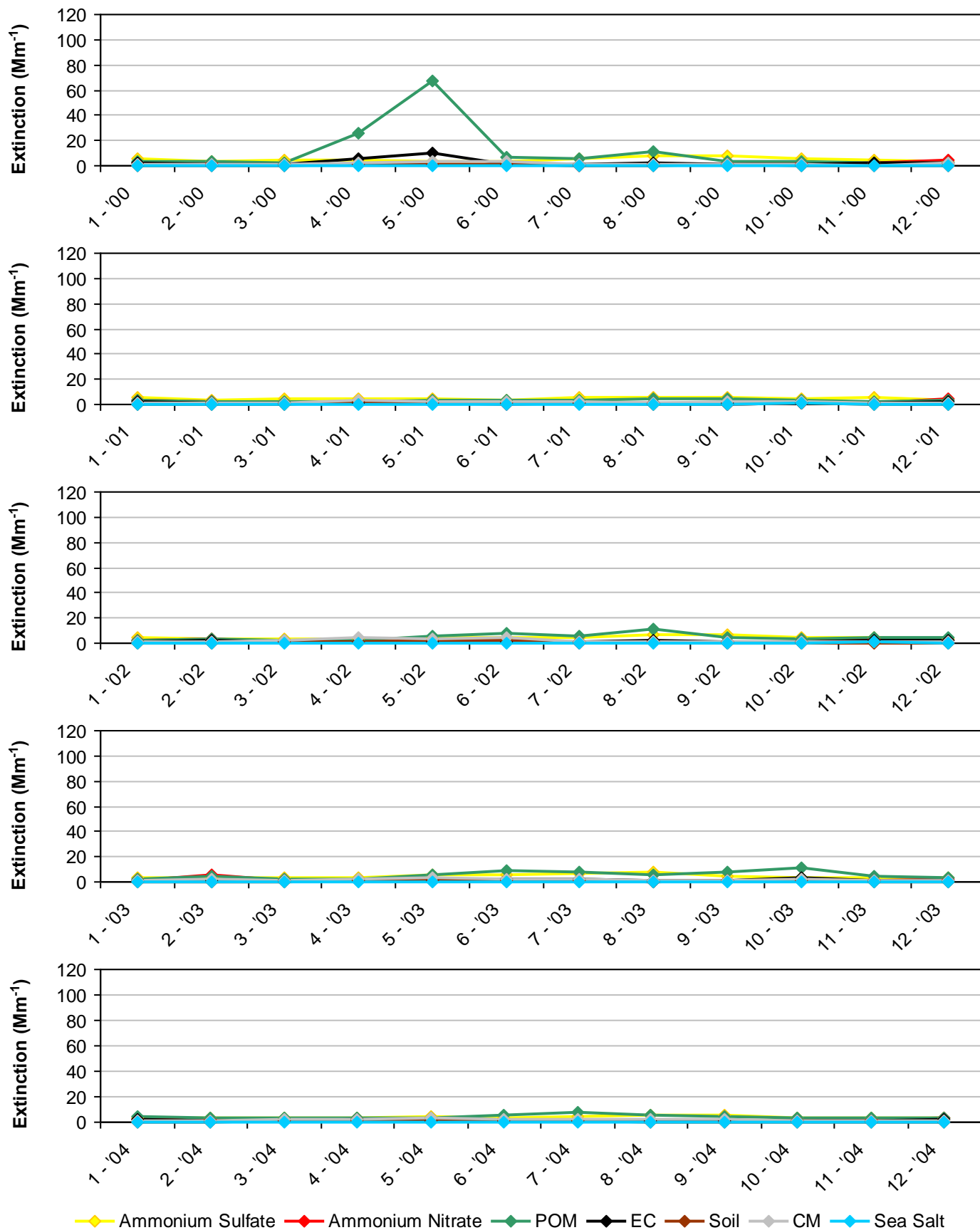
**2005-2009 Progress Period Average**  
 11.8 dv (11 - 12.8 dv )



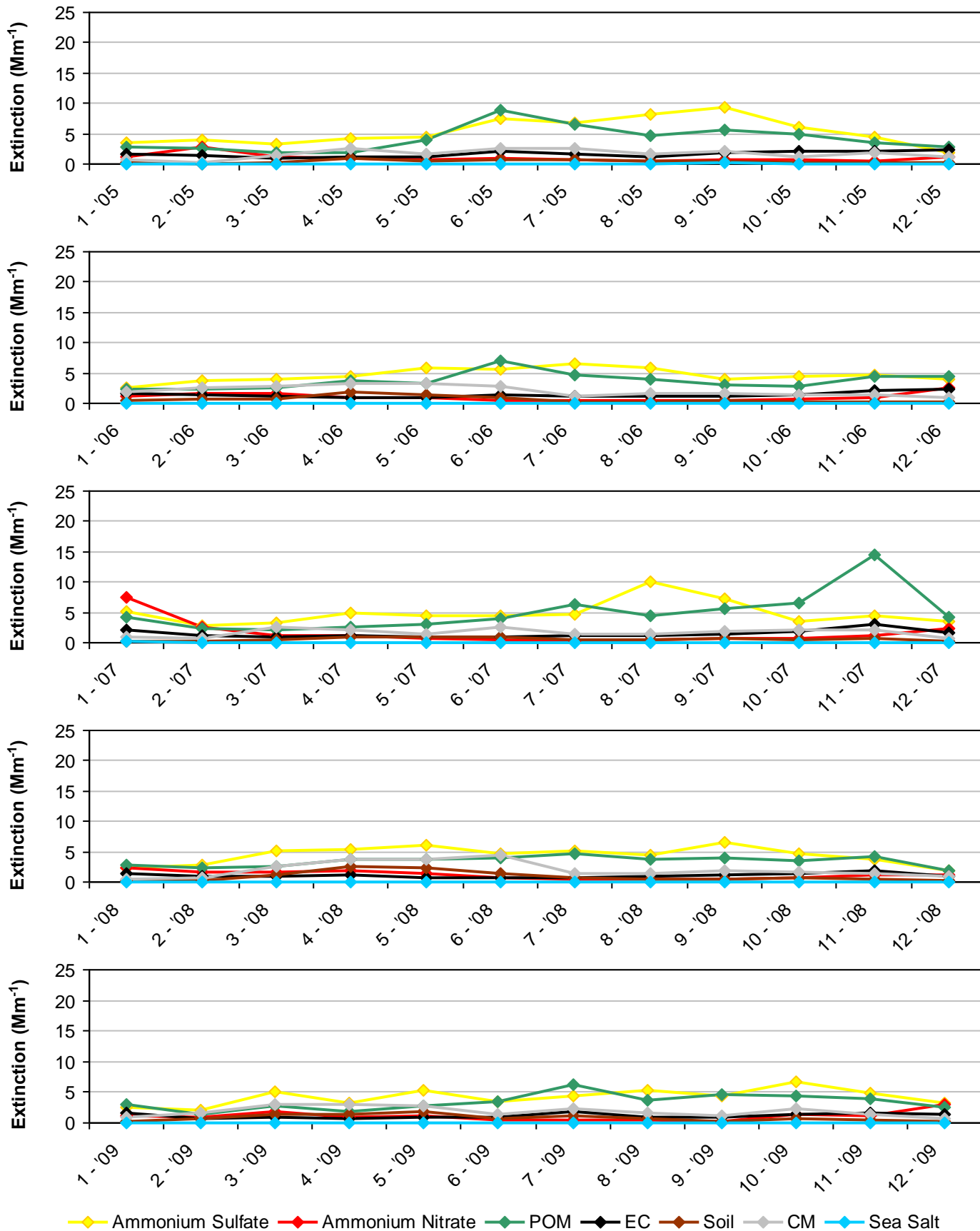
**Figure I.1-4**  
**Bandelier NM, NM (BAND1 Site)**  
**20% Least Impaired Visibility Days**



**Figure I.1-5**  
**Bandelier NM, NM (BAND1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**

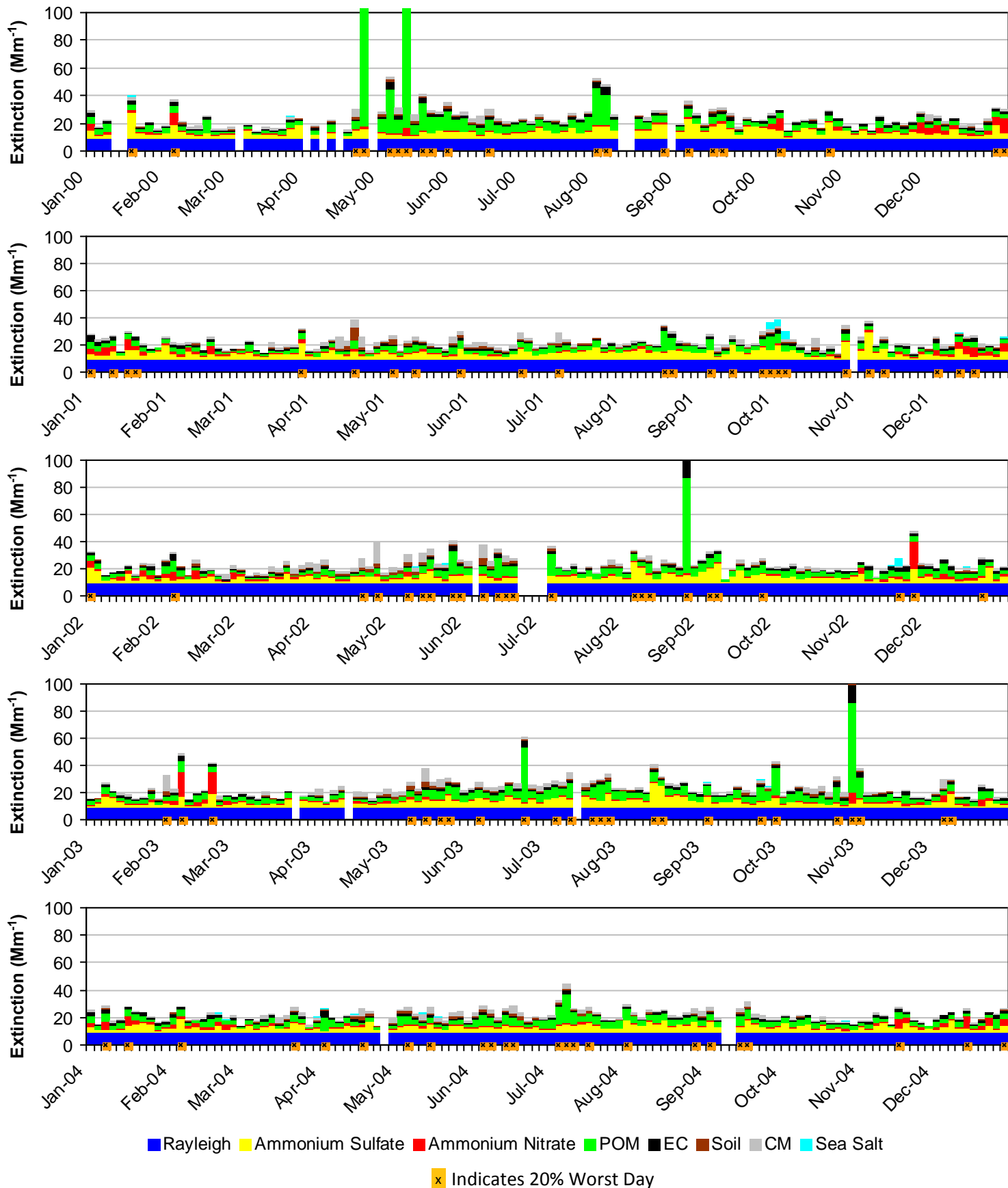


**Figure I.1-6**  
**Bandelier NM, NM (BAND1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**

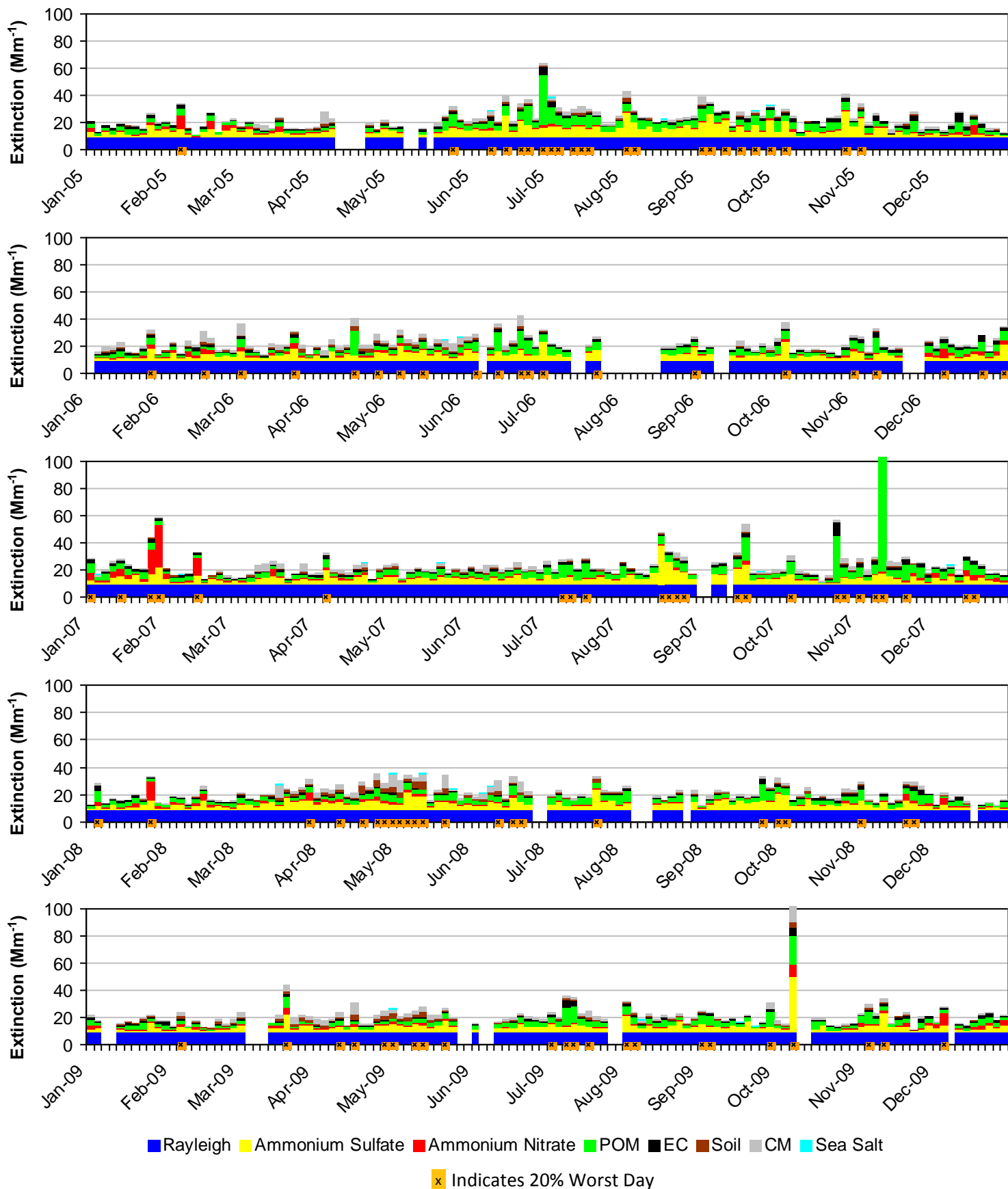




**Figure I.1-7**  
**Bandelier NM, NM (BAND1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



**Figure I.1-8**  
**Bandelier NM, NM (BAND1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



## I.2. BOSQUE DEL APACHE WA (BOAP1)

The following tables and figures are presented in this section for the Bosque del Apache WA represented by the BOAP1 IMPROVE Monitor:

- **Table I.2-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.2-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.2-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.2-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.2-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.2-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.2-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.2-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.2-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.

**Table I.2-1  
Bosque del Apache WA, NM (BOAP1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

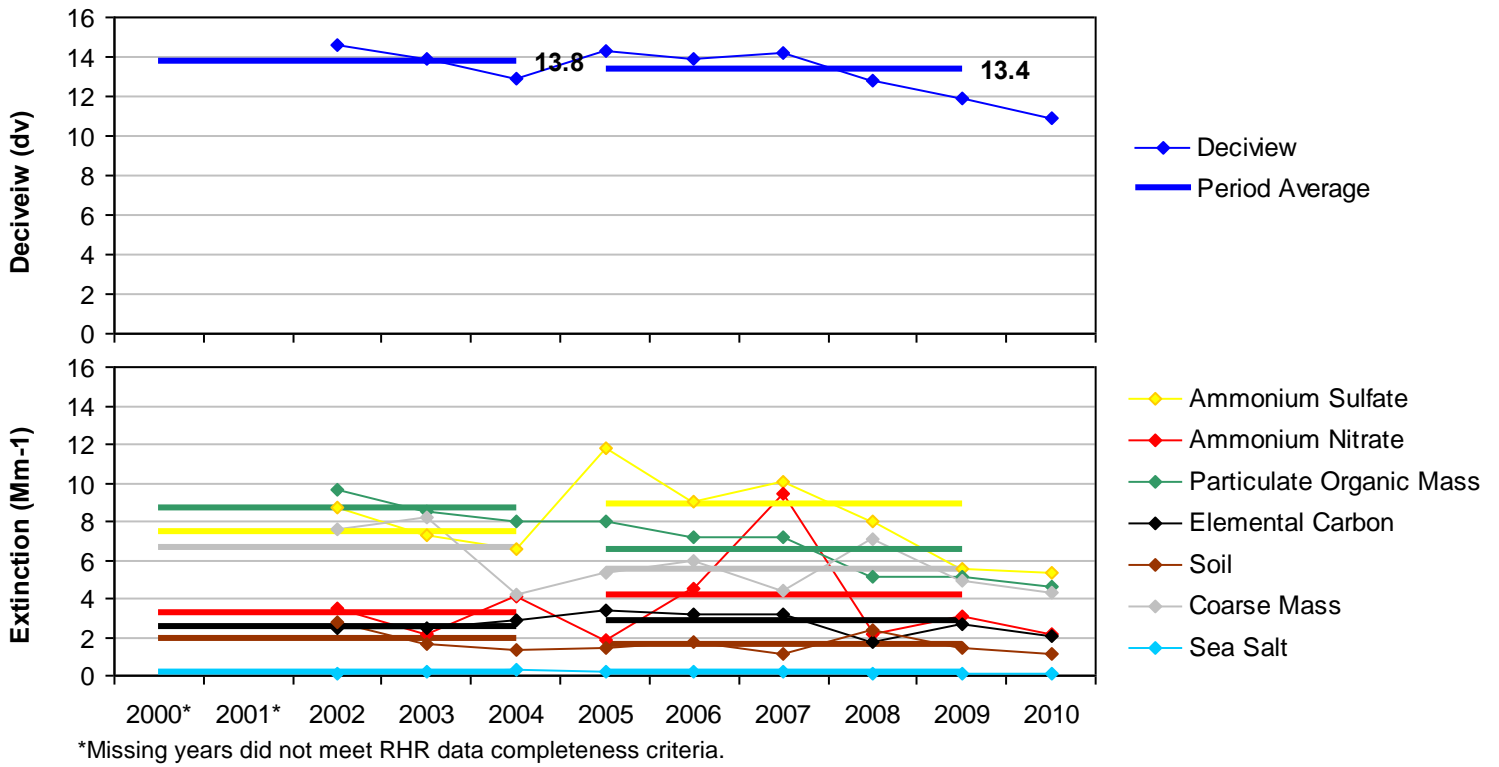
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	---	6.5	6.8	5.5	5.9	6.3	5.9	5.2	5.5	4.6	-0.2	0.1	6.3	5.8	-0.5	-8%
Worst 20% Days	---	---	14.6	13.9	12.9	14.3	13.9	14.2	12.8	11.9	10.9	-0.3	0.0	13.8	13.4	-0.4	-3%
All Days	---	---	10.1	10.4	8.9	9.6	9.6	9.4	8.9	8.6	7.9	-0.2	0.0	9.8	9.2	-0.6	-6%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	---	19.3	19.8	17.5	18.1	18.8	18.1	16.9	17.5	15.9	-0.3	0.1	18.9	17.9	-1.0	-5%
Worst 20% Days	---	---	44.7	40.5	37.5	42.1	41.8	45.7	36.5	32.9	29.7	-0.9	0.1	40.9	39.8	-1.1	-3%
All Days	---	---	28.7	29.3	25.4	27.4	27.4	27.5	25.4	24.3	22.5	-0.6	0.1	27.8	26.4	-1.4	-5%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	---	2.8	2.9	2.6	2.8	2.9	2.9	2.2	2.4	2.1	-0.1	0.1	2.8	2.6	-0.2	-7%
Worst 20% Days	---	---	8.7	7.3	6.6	11.8	9.1	10.1	8.0	5.5	5.3	-0.2	0.4	7.5	8.9	1.4	19%
All Days	---	---	5.2	5.1	4.4	6.4	5.4	5.5	4.9	4.2	3.9	-0.1	0.3	4.9	5.3	0.4	8%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.8	0.9	0.8	0.6	0.6	0.7	0.6	0.6	0.5	0.0	0.1	0.8	0.6	-0.2	-25%
Worst 20% Days	---	---	3.4	2.1	4.1	1.9	4.5	9.4	2.1	3.1	2.2	0.1	0.5	3.2	4.2	1.0	31%
All Days	---	---	1.6	1.4	1.7	1.1	1.6	2.6	1.2	1.3	1.0	0.0	0.4	1.6	1.6	0.0	0%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	---	2.3	2.4	1.8	1.7	1.8	1.9	1.7	1.7	1.1	-0.1	0.1	2.1	1.8	-0.3	-14%
Worst 20% Days	---	---	9.6	8.5	8.0	8.0	7.2	7.2	5.2	5.2	4.6	-0.6	0.0	8.7	6.5	-2.2	-25%
All Days	---	---	4.7	5.1	4.2	4.1	3.8	3.9	3.5	3.2	2.8	-0.2	0.0	4.7	3.7	-1.0	-21%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	---	1.2	1.2	0.9	1.0	1.1	0.9	0.8	0.9	0.5	-0.1	0.0	1.1	0.9	-0.2	-18%
Worst 20% Days	---	---	2.5	2.5	2.9	3.4	3.2	3.2	1.8	2.6	2.0	0.0	0.5	2.6	2.8	0.2	8%
All Days	---	---	1.7	1.8	1.6	2.0	1.9	1.7	1.3	1.4	1.2	-0.1	0.1	1.7	1.7	0.0	0%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.4	0.4	0.3	0.3	0.5	0.3	0.3	0.4	0.4	0.0	0.6	0.3	0.4	0.1	33%
Worst 20% Days	---	---	2.8	1.7	1.4	1.5	1.7	1.1	2.3	1.4	1.1	-0.1	0.3	1.9	1.6	-0.3	-16%
All Days	---	---	1.3	1.0	0.8	0.8	1.0	0.8	1.2	1.0	0.8	0.0	0.5	1.0	0.9	-0.1	-10%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	---	1.9	1.9	0.9	1.6	1.8	1.2	1.1	1.5	1.3	-0.1	0.1	1.6	1.4	-0.2	-13%
Worst 20% Days	---	---	7.6	8.3	4.2	5.3	5.9	4.4	7.0	4.9	4.4	-0.3	0.3	6.7	5.5	-1.2	-18%
All Days	---	---	4.1	4.8	2.6	2.8	3.5	2.8	3.3	3.1	2.7	-0.1	0.3	3.8	3.1	-0.7	-18%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.4	0.1	0.1	0.0	0%
Worst 20% Days	---	---	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.1	0.1	0.0	0.5	0.2	0.2	0.0	0%
All Days	---	---	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.6	0.1	0.2	0.1	100%

\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

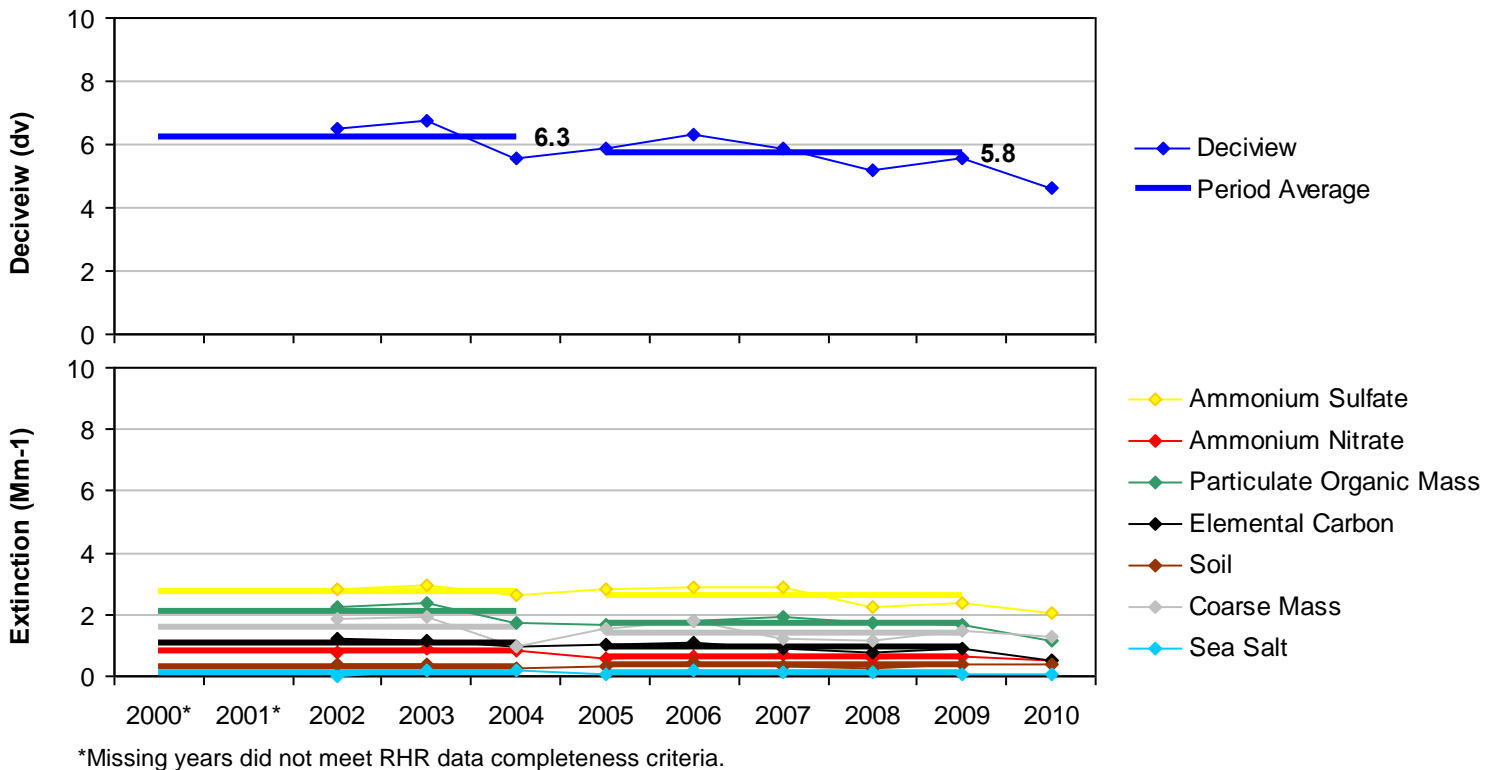
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

---" Indicates a missing year that did not meet RHR data completeness criteria.

**Figure I.2-1**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

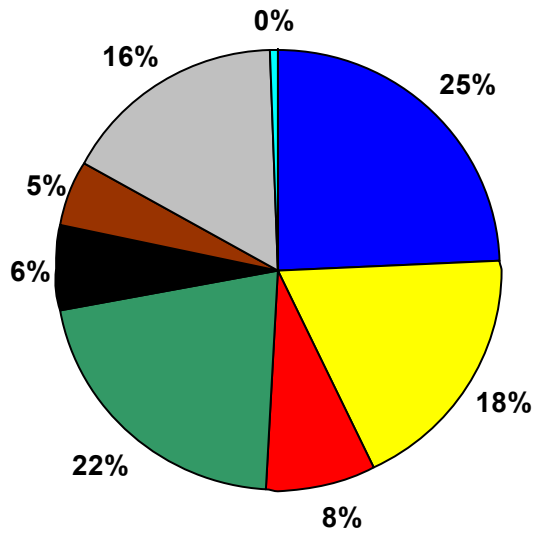


**Figure I.2-2**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

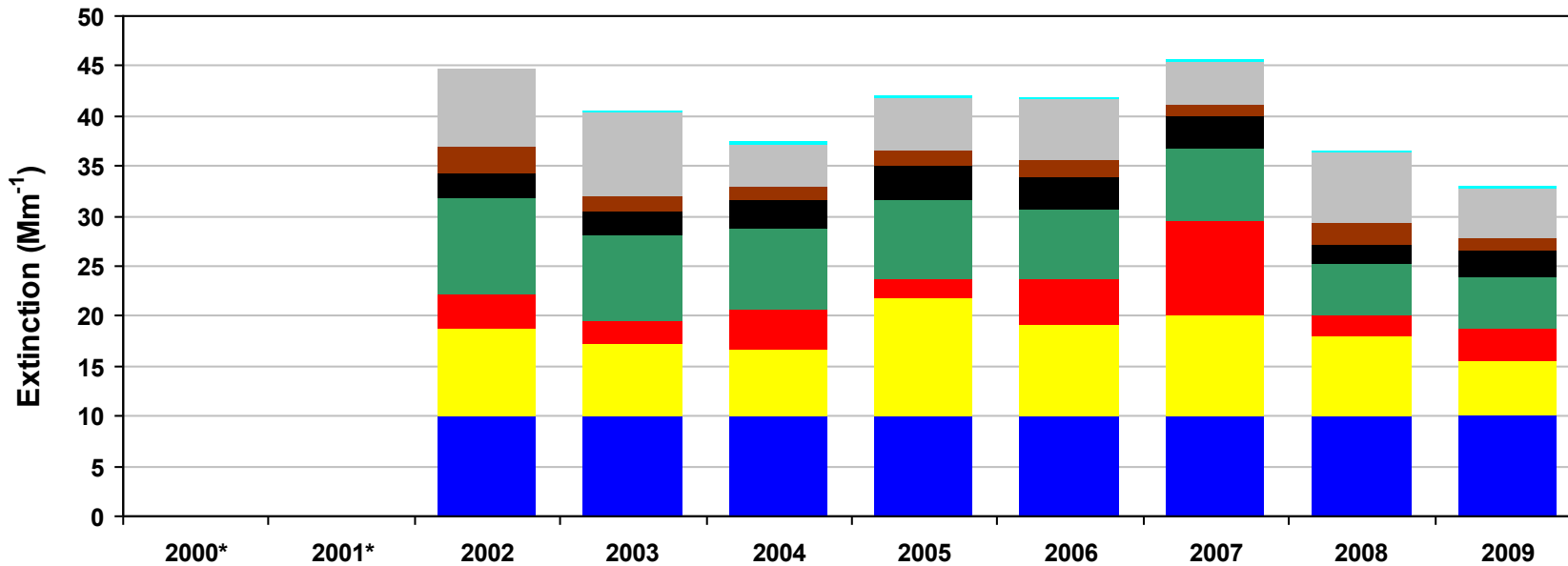
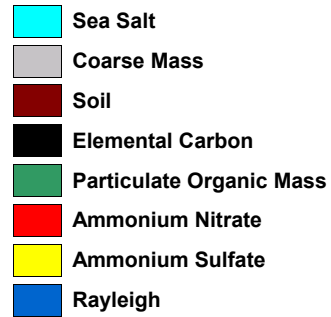
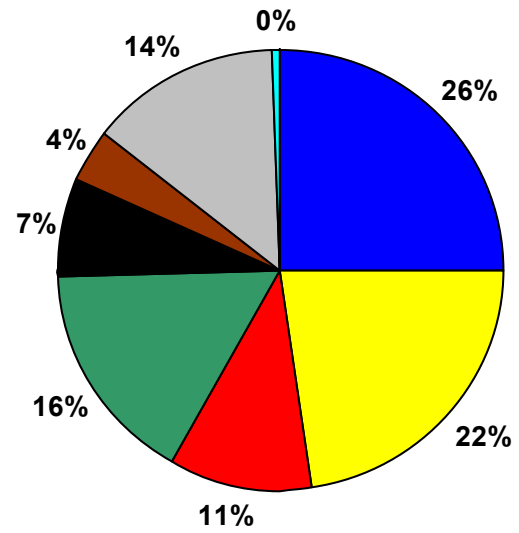


**Figure I.2-3**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 13.8 dv (12.9 - 14.6 dv )

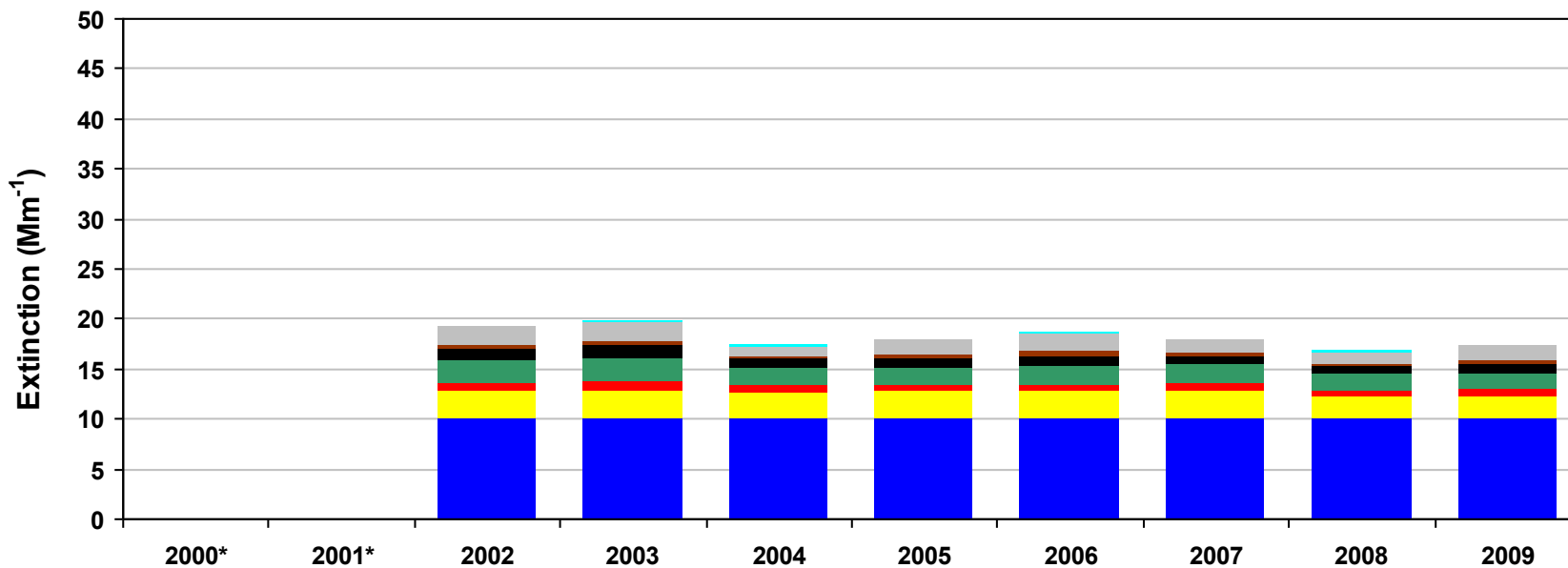
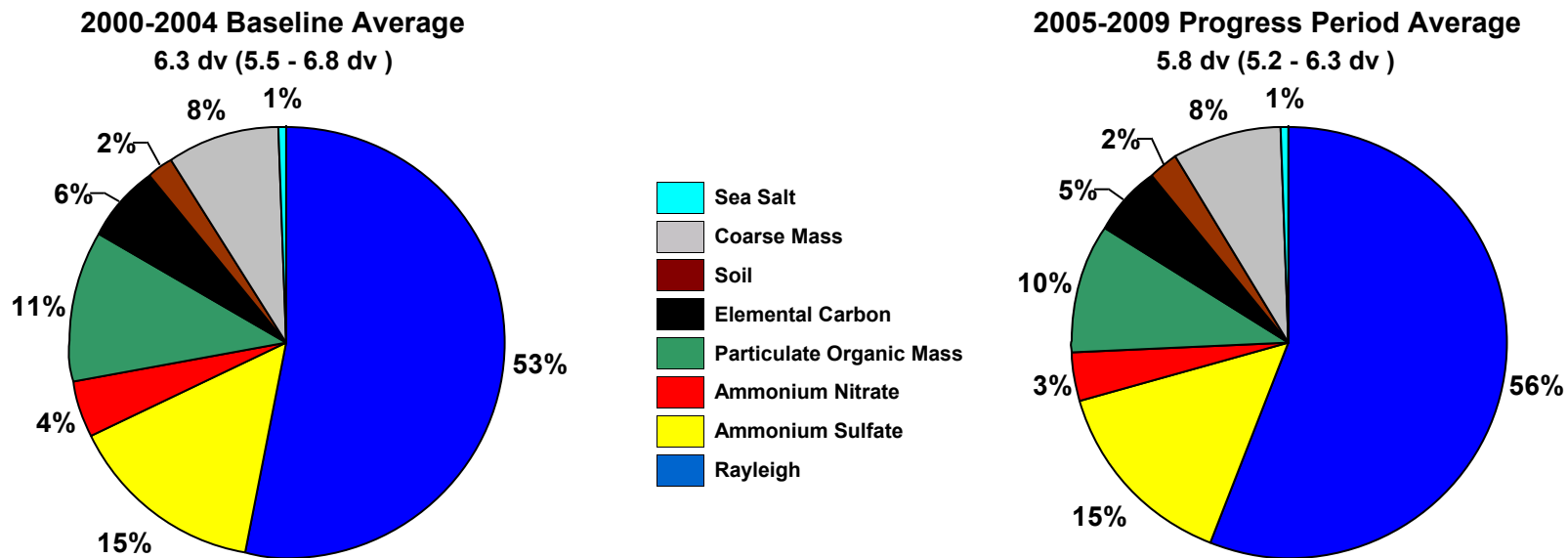


**2005-2009 Progress Period Average**  
 13.4 dv (11.9 - 14.3 dv )



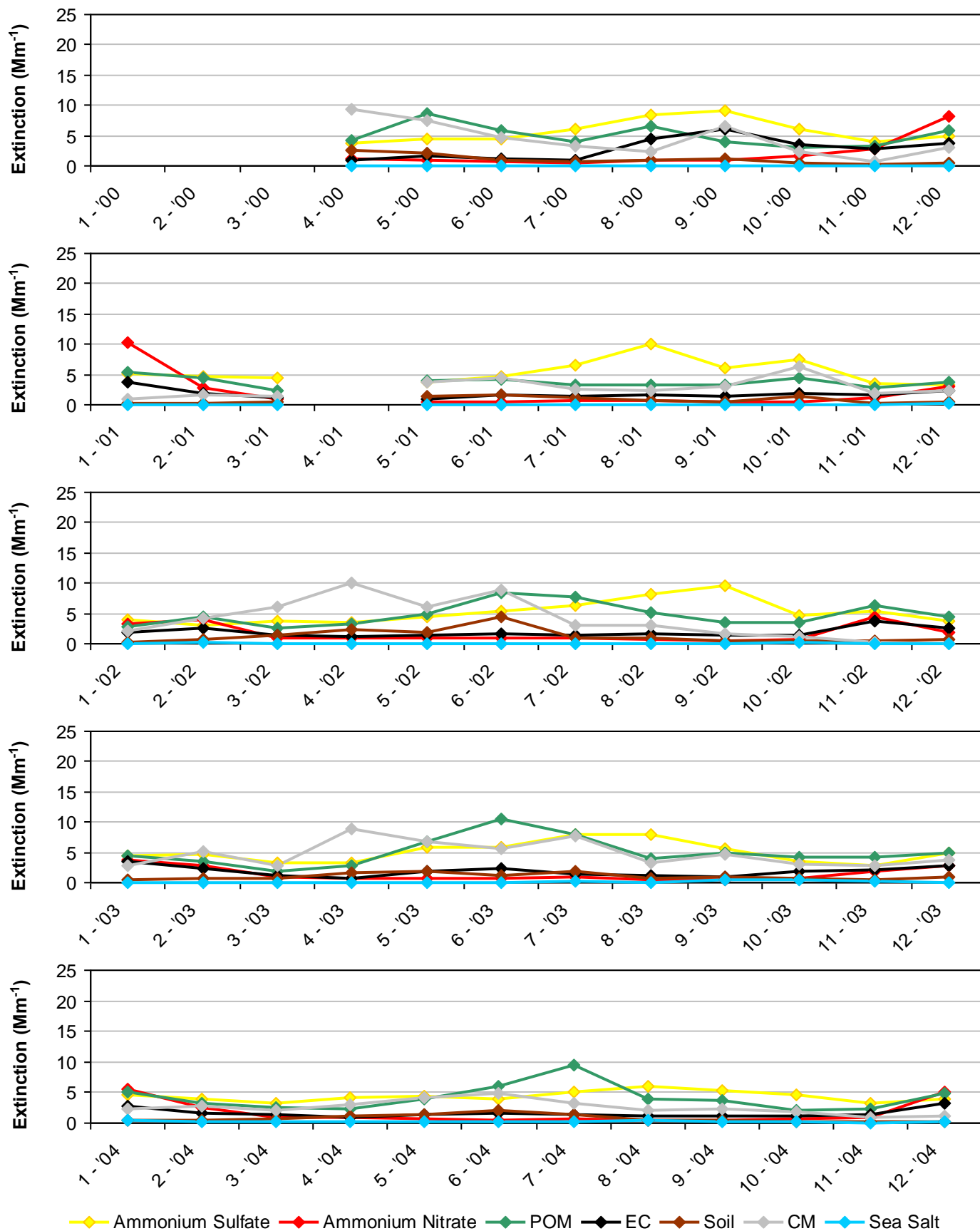
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.2-4**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**20% Least Impaired Visibility Days**



\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

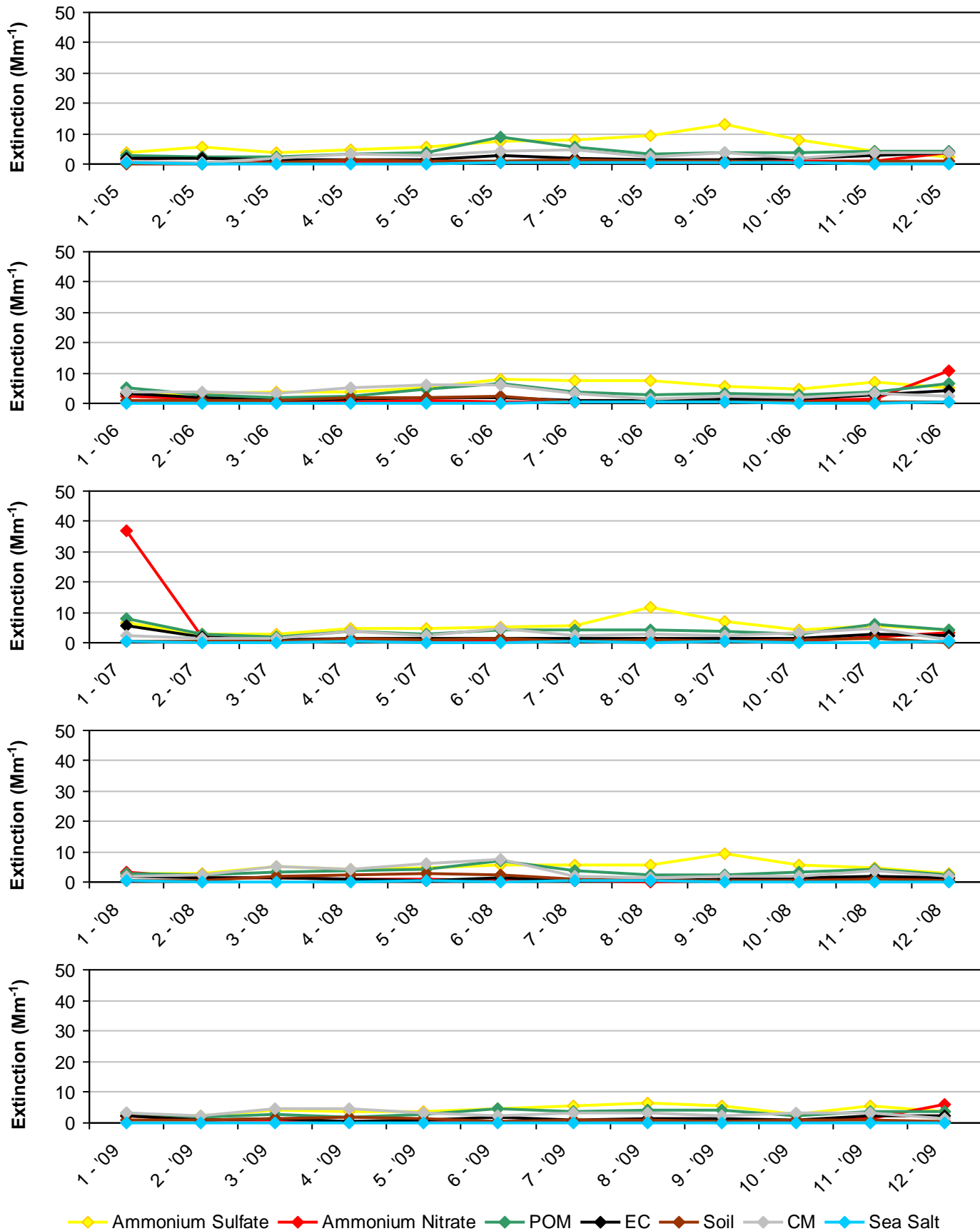
**Figure I.2-5**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



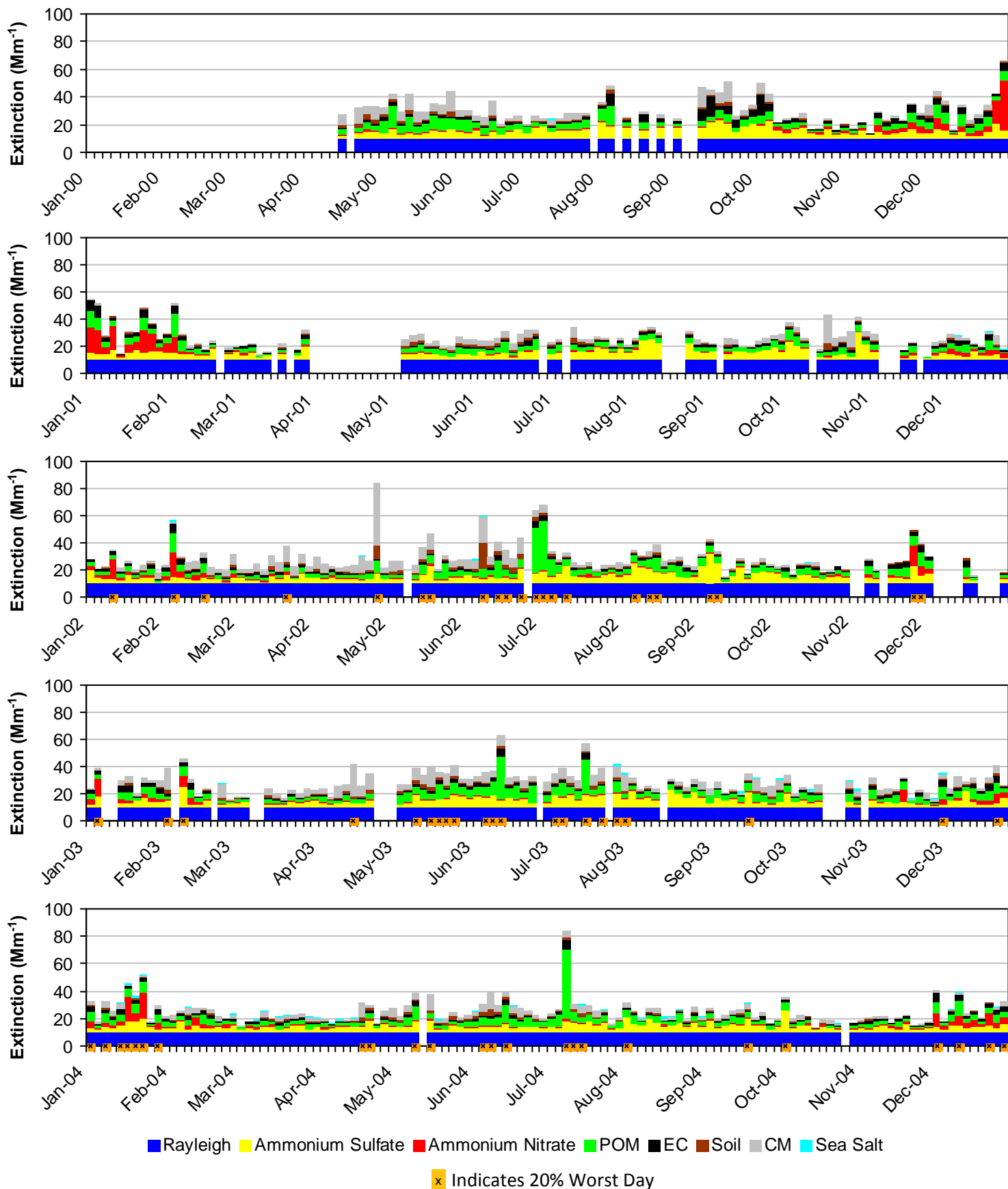
\*Note that monthly averages for the years 2000 and 2001 are shown here, but these years did not meet RHR data completeness criteria.



**Figure I.2-6**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**

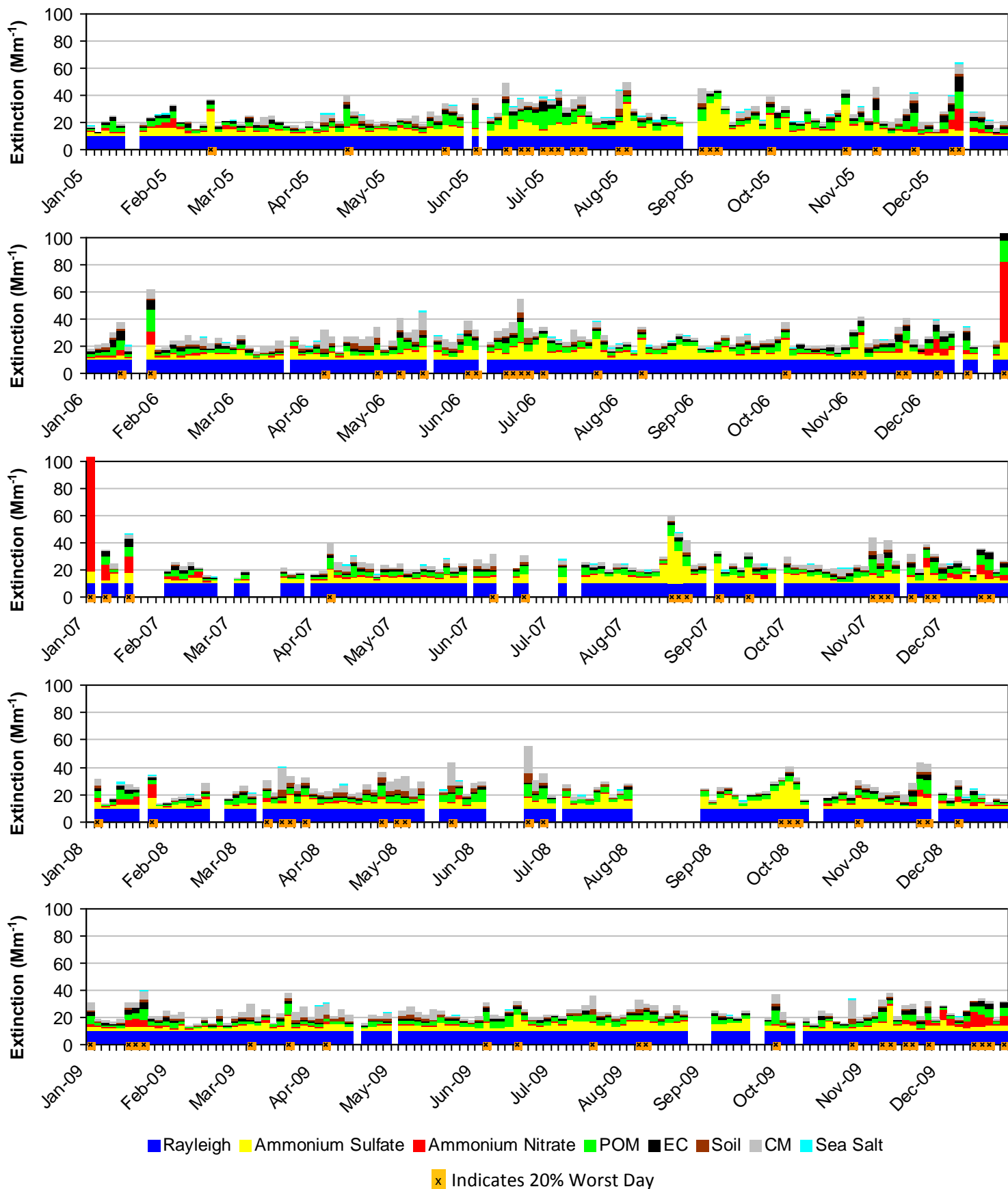


**Figure I.2-7**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the years 2000 and 2001 are shown here, but these years did not meet RHR data completeness criteria.

**Figure I.2-8**  
**Bosque del Apache WA, NM (BOAP1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



### I.3. GILA WA (GICL1)

The following tables and figures are presented in this section for the Gila WA represented by the GICL1 IMPROVE Monitor:

- **Table I.3-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.3-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.3-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.3-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.3-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.3-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.3-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.3-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.3-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.

**Table I.3-1  
Gila WA, NM (GICL1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

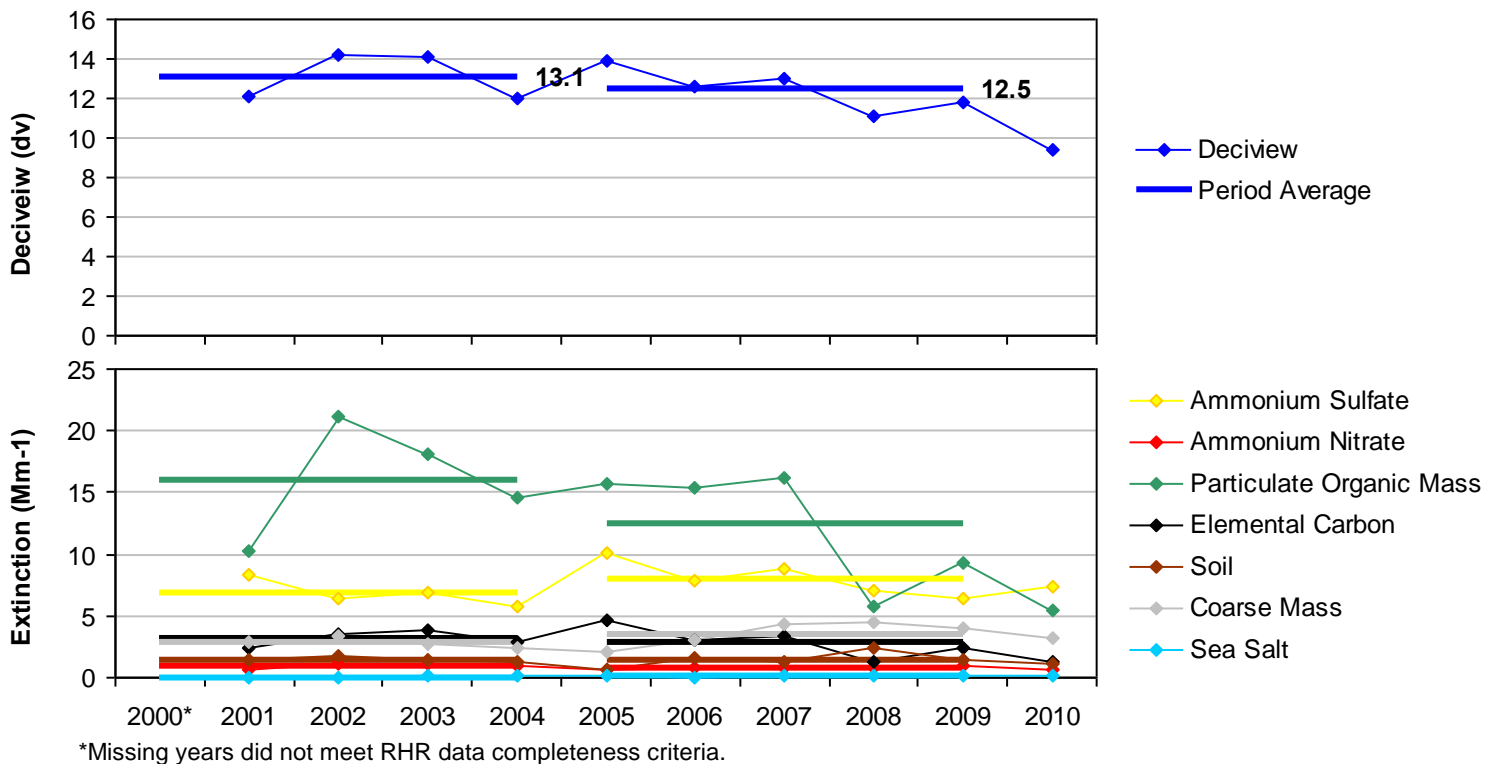
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P - B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	3.7	3.4	2.9	3.3	3.1	3.3	2.7	1.9	2.7	2.3	-0.1	0.0	3.3	2.7	-0.6	-18%
Worst 20% Days	---	12.1	14.2	14.1	12.0	13.9	12.6	13.0	11.1	11.8	9.4	-0.2	0.1	13.1	12.5	-0.6	-5%
All Days	---	7.6	7.9	7.5	7.1	7.5	7.2	7.2	6.3	6.7	5.6	-0.1	0.0	7.5	7.0	-0.5	-7%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	14.5	14.1	13.4	14.0	13.6	13.9	13.2	12.1	13.1	12.7	-0.2	0.0	14.0	13.2	-0.8	-6%
Worst 20% Days	---	34.8	46.2	43.4	36.8	42.7	40.7	44.0	30.7	33.6	28.2	-0.8	0.2	40.3	38.3	-2.0	-5%
All Days	---	22.6	24.7	23.6	22.0	23.2	22.8	23.4	19.8	20.8	18.6	-0.3	0.1	23.2	22.0	-1.2	-5%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	2.3	1.8	1.4	1.9	2.0	1.9	1.6	1.3	1.8	1.6	-0.1	0.1	1.9	1.7	-0.2	-11%
Worst 20% Days	---	8.3	6.4	6.9	5.8	10.1	7.9	8.8	7.0	6.4	7.3	0.0	0.5	6.9	8.0	1.1	16%
All Days	---	4.8	4.3	4.0	3.9	5.2	4.3	4.5	4.0	3.9	3.8	-0.1	0.2	4.2	4.4	0.2	5%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	0.4	0.3	0.2	0.4	0.3	0.3	0.2	0.2	0.2	0.3	0.0	0.0	0.3	0.2	-0.1	-33%
Worst 20% Days	---	0.6	1.0	1.1	0.9	0.6	0.7	0.9	0.8	0.9	0.7	0.0	0.5	0.9	0.8	-0.1	-11%
All Days	---	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.4	0.0	0.1	0.6	0.5	-0.1	-17%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	1.4	1.6	1.6	1.5	1.2	1.2	1.2	0.8	0.9	0.7	-0.1	0.0	1.5	1.1	-0.4	-27%
Worst 20% Days	---	10.2	21.2	18.0	14.5	15.7	15.4	16.2	5.7	9.3	5.5	-1.0	0.1	16.0	12.5	-3.5	-22%
All Days	---	4.7	6.6	6.2	5.2	5.1	5.1	5.5	2.8	3.6	2.5	-0.3	0.1	5.7	4.4	-1.3	-23%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	0.6	0.8	0.6	0.6	0.5	0.6	0.4	0.3	0.4	0.3	0.0	0.0	0.6	0.4	-0.2	-33%
Worst 20% Days	---	2.3	3.5	3.9	2.9	4.6	3.0	3.3	1.2	2.4	1.3	-0.1	0.3	3.2	2.9	-0.3	-9%
All Days	---	1.3	1.5	1.5	1.3	1.7	1.3	1.3	0.7	1.0	0.7	-0.1	0.1	1.4	1.2	-0.2	-14%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	0.2	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.0	0.3	0.2	0.2	0.0	0%
Worst 20% Days	---	1.4	1.7	1.5	1.2	0.6	1.6	1.4	2.4	1.4	1.1	0.0	0.5	1.5	1.5	0.0	0%
All Days	---	0.8	0.9	0.7	0.6	0.5	0.8	0.7	0.9	0.9	0.6	0.0	0.4	0.8	0.7	-0.1	-13%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	0.6	0.4	0.4	0.3	0.4	0.7	0.5	0.4	0.6	0.6	0.0	0.3	0.4	0.5	0.1	25%
Worst 20% Days	---	2.9	3.4	2.8	2.3	2.0	3.1	4.4	4.5	4.0	3.2	0.2	0.1	2.8	3.6	0.8	29%
All Days	---	1.5	1.7	1.6	1.3	1.3	1.7	1.8	1.8	1.8	1.5	0.0	0.1	1.5	1.7	0.2	13%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0%
Worst 20% Days	---	0.0	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.0	0%
All Days	---	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0%

\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

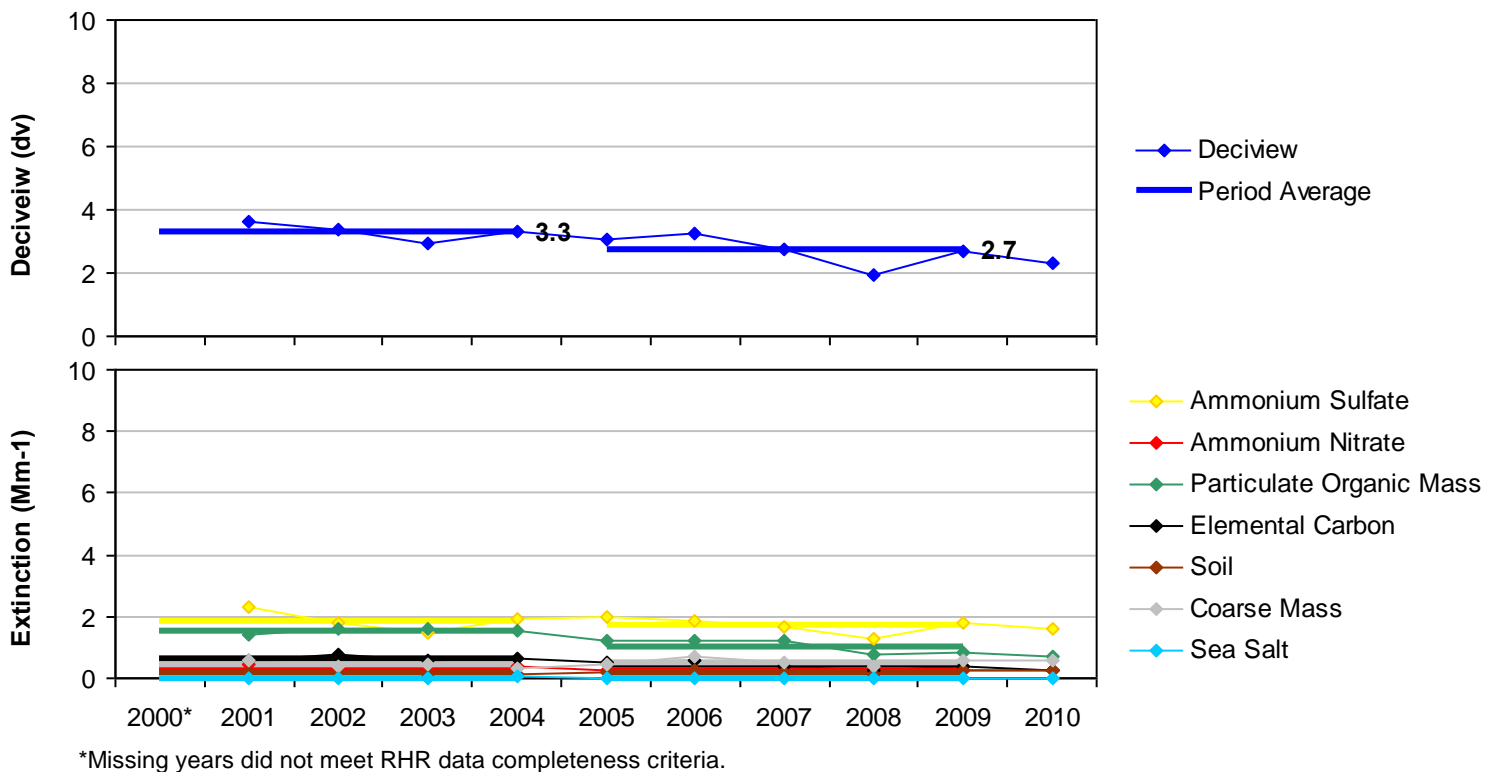
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

---" Indicates a missing year that did not meet RHR data completeness criteria.

**Figure I.3-1**  
**Gila WA, NM (GICL1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

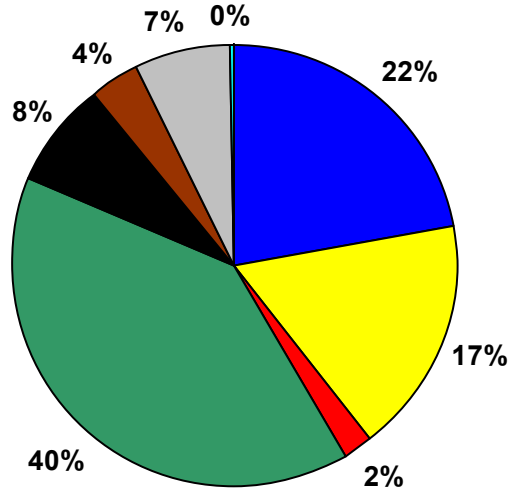


**Figure I.3-2**  
**Gila WA, NM (GICL1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

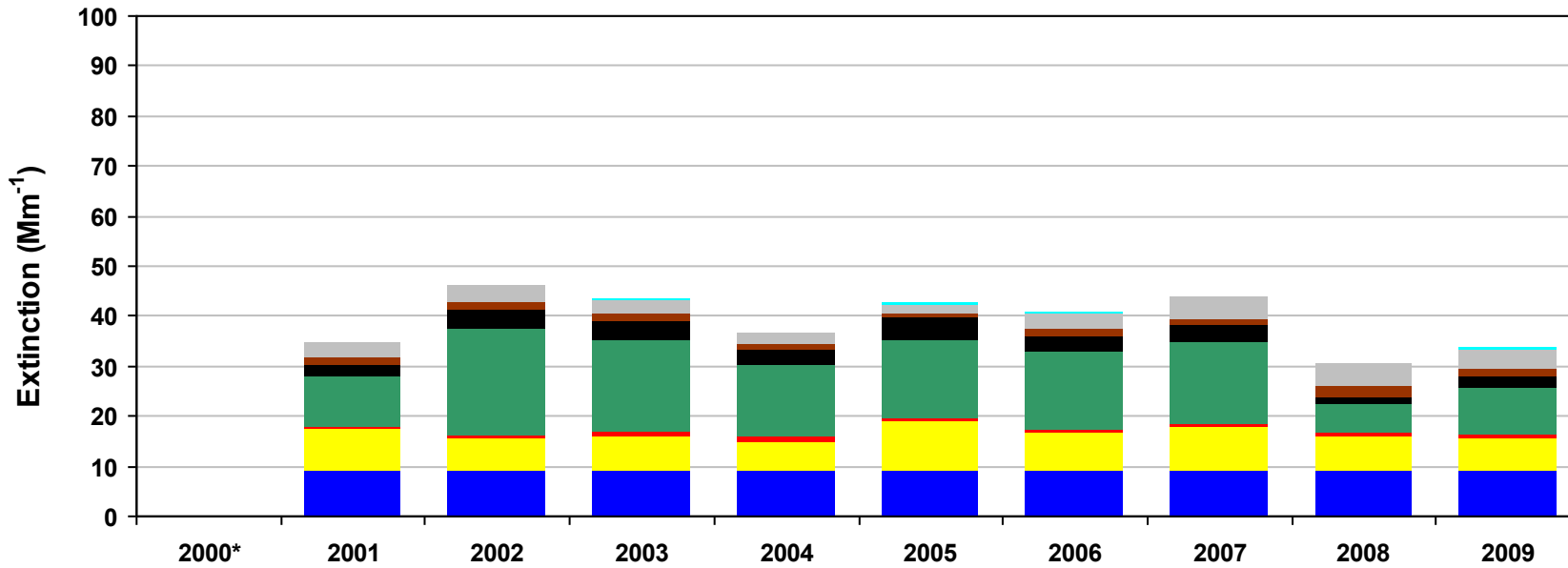
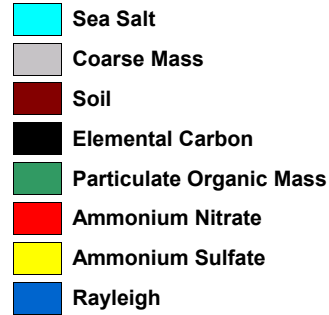
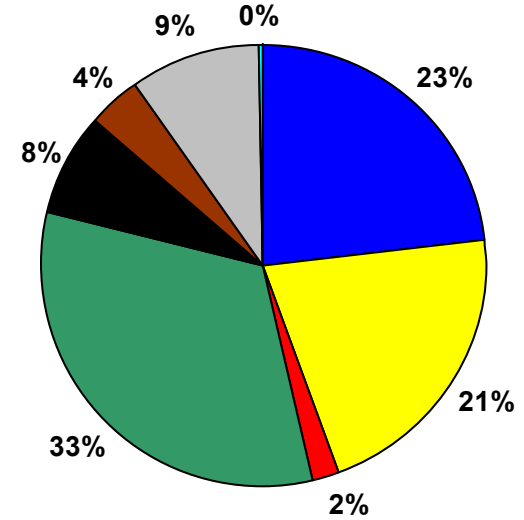


**Figure I.3-3**  
**Gila WA, NM (GICL1 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 13.1 dv (12 - 14.2 dv )

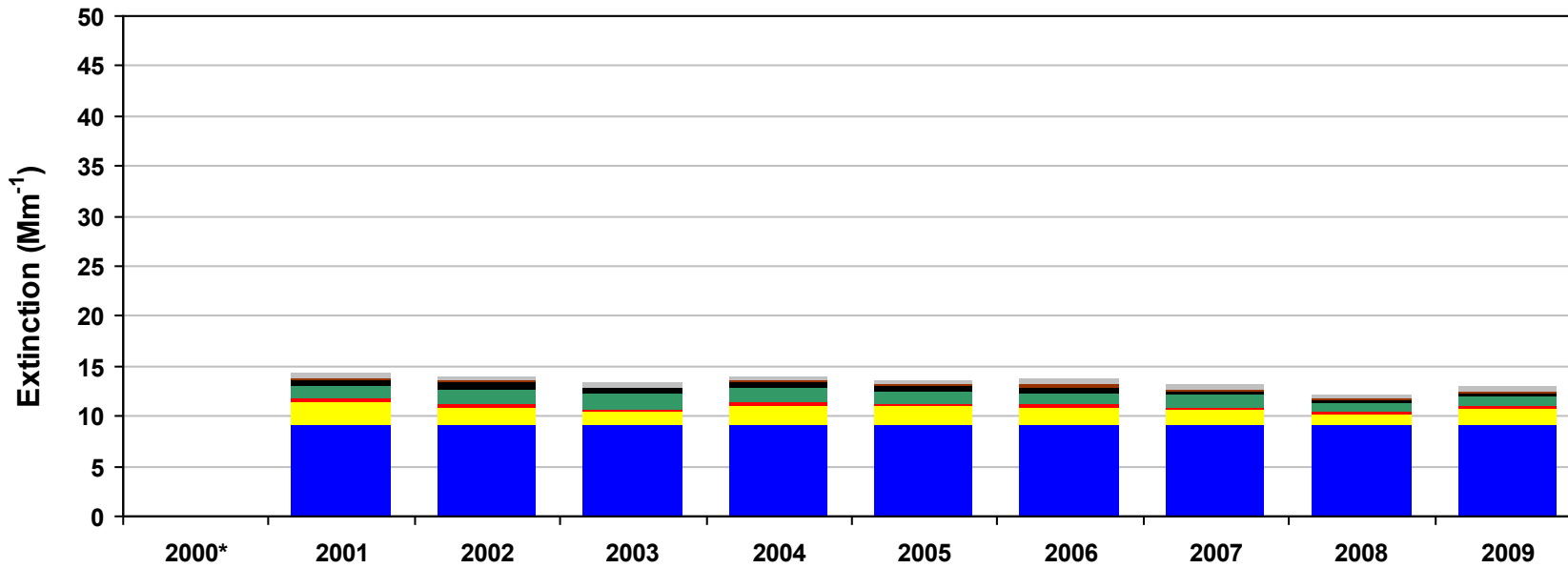
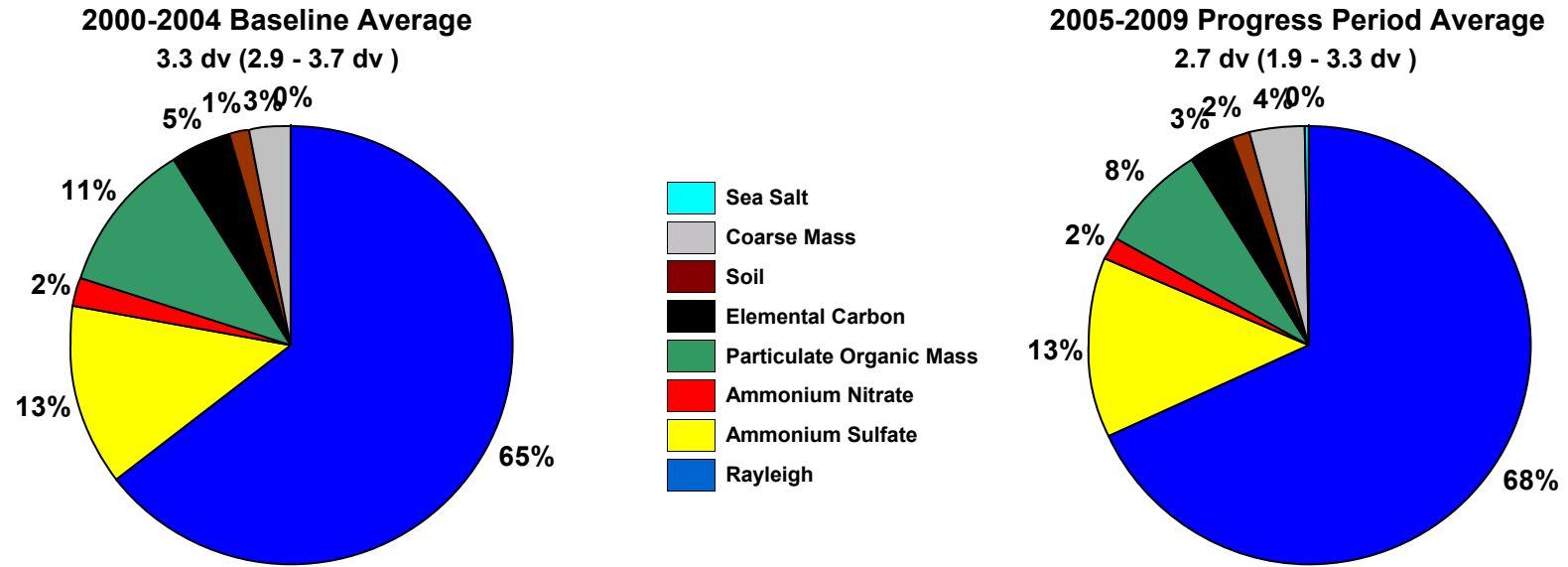


**2005-2009 Progress Period Average**  
 12.5 dv (11.1 - 13.9 dv )



\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

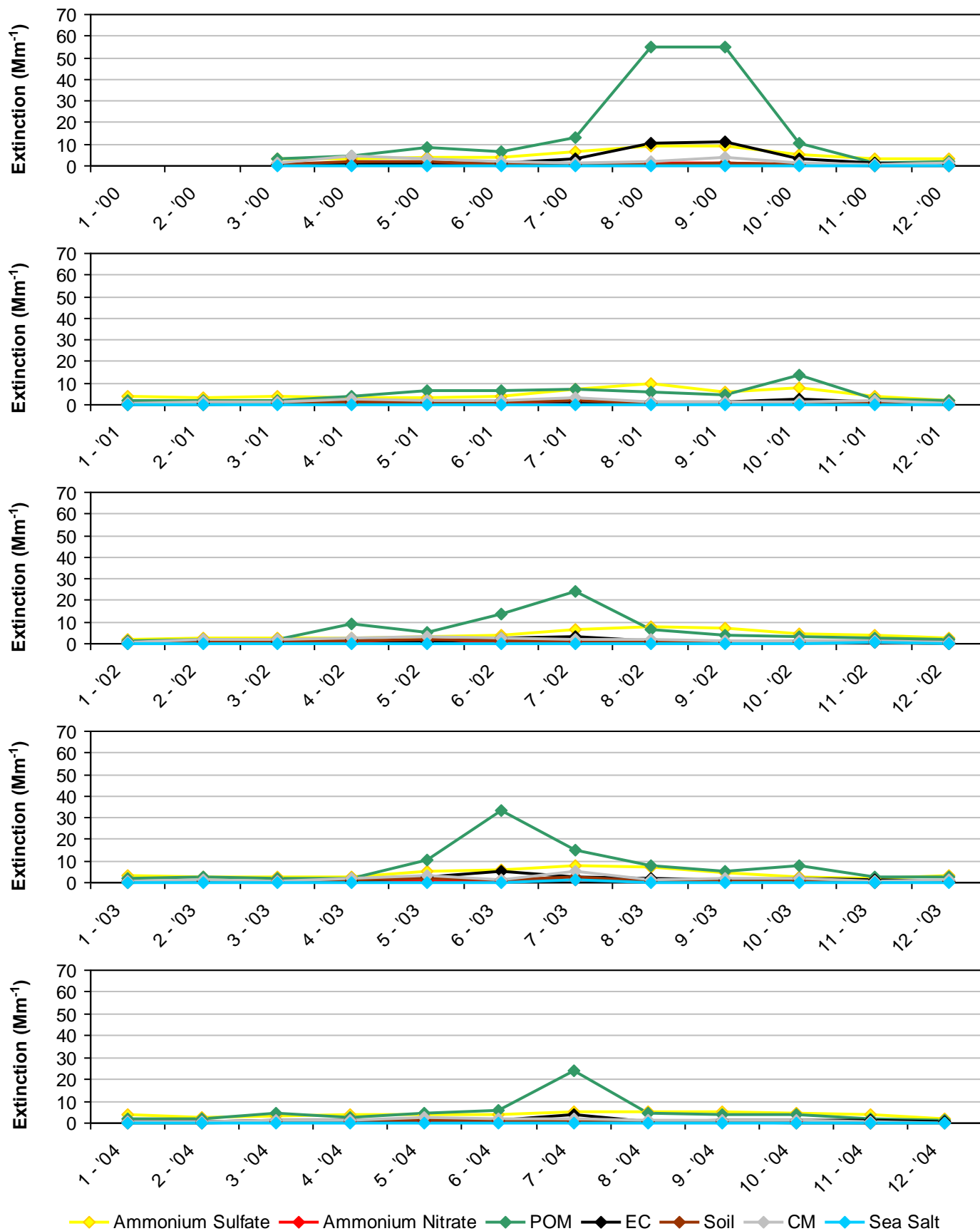
**Figure I.3-4**  
**Gila WA, NM (GICL1 Site)**  
**20% Least Impaired Visibility Days**



\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

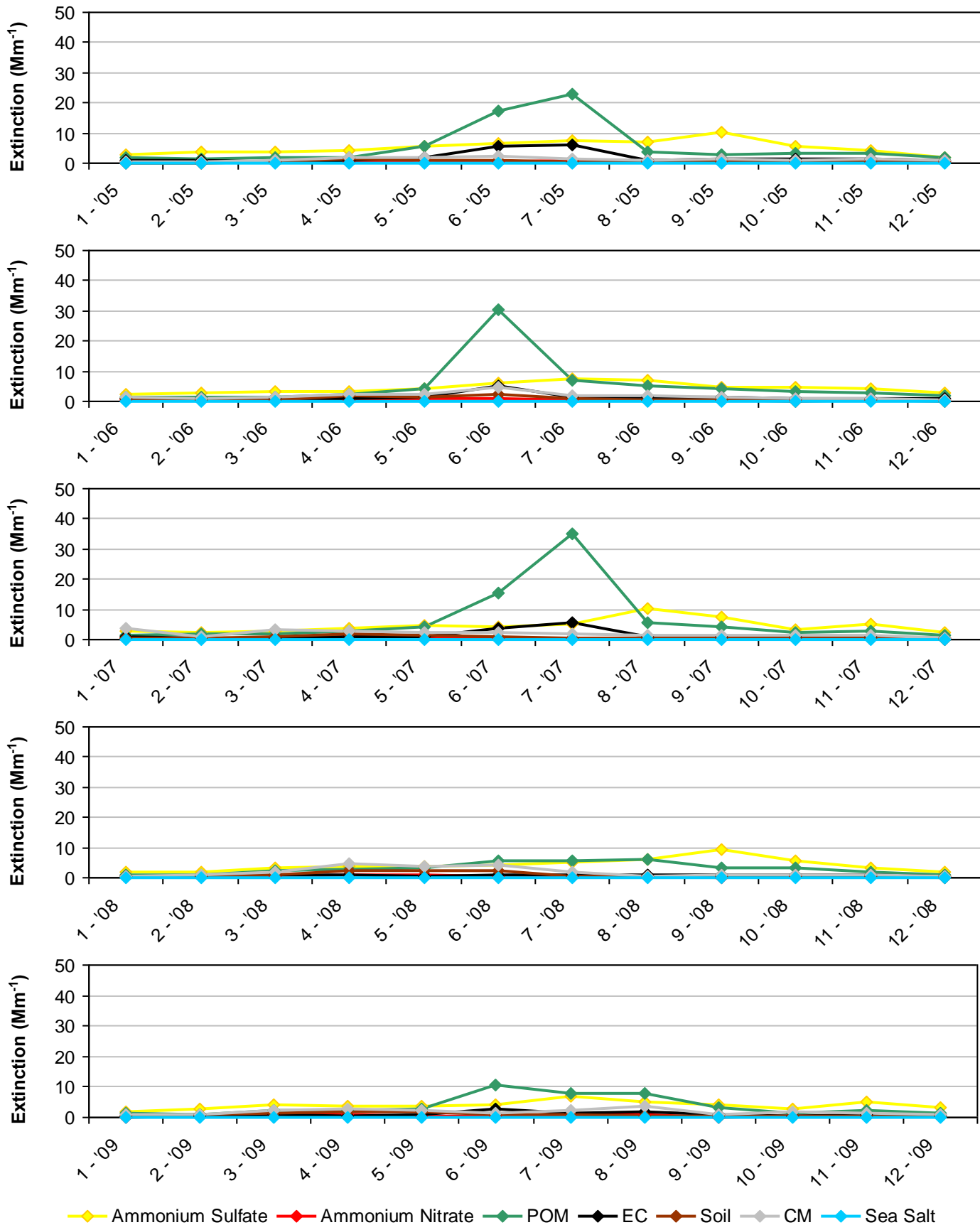


**Figure I.3-5**  
**Gila WA, NM (GICL1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**

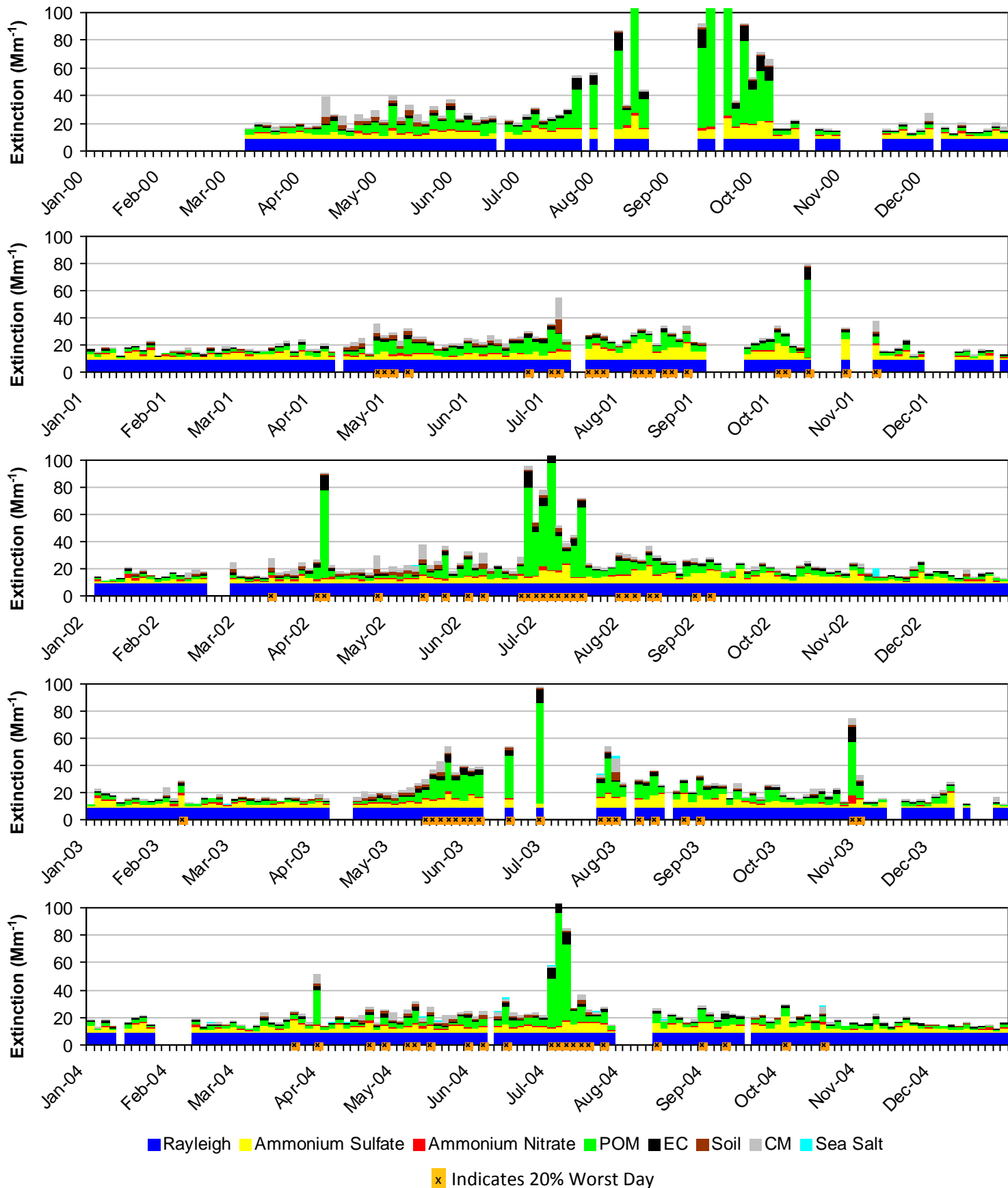


\*Note that monthly averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure I.3-6**  
**Gila WA, NM (GICL1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**

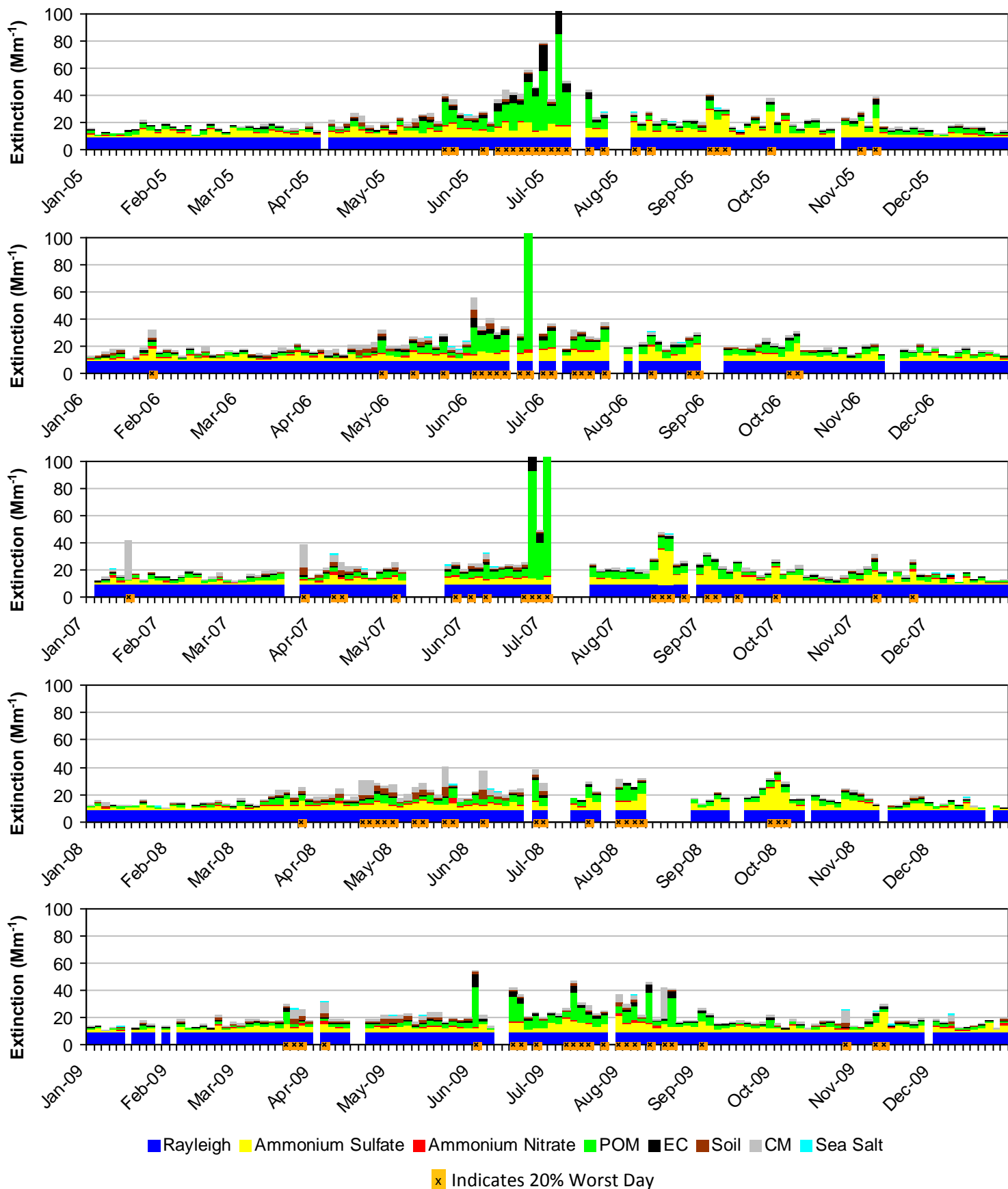


**Figure I.3-7**  
**Gila WA, NM (GICL1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure I.3-8**  
**Gila WA, NM (GICL1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



#### **I.4. GUADALUPE MOUNTAINS NP AND CARLSBAD CAVERNS NP (GUMO1)**

The following tables and figures are presented in this section for Guadalupe Mountains NP and Carlsbad Caverns NP represented by the GUMO1 IMPROVE Monitor:

- **Table I.4-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.4-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.4-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.4-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.4-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.4-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.4-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.4-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.4-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.

**Table I.4-1  
Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

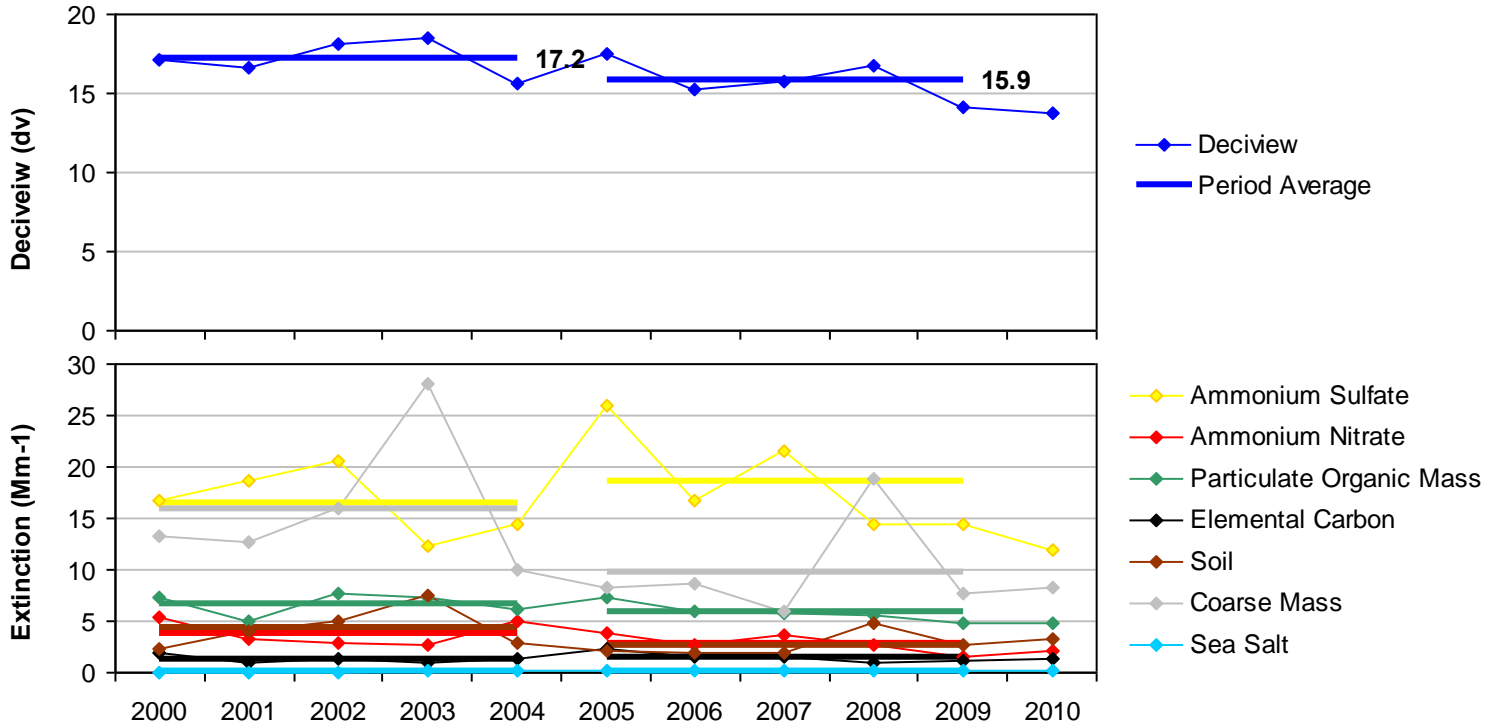
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	6.3	6.3	6.4	5.9	4.8	6.1	5.9	5.3	5.4	4.6	3.9	-0.2	0.0	5.9	5.4	-0.5	-9%
Worst 20% Days	17.1	16.6	18.1	18.5	15.6	17.5	15.3	15.7	16.8	14.1	13.7	-0.3	0.1	17.2	15.9	-1.3	-8%
All Days	11.6	11.4	12.2	11.7	9.9	11.2	10.5	10.2	10.5	9.3	8.5	-0.2	0.0	11.4	10.3	-1.1	-10%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	18.8	19.1	19.5	18.3	16.4	18.6	18.1	17.1	17.3	16.0	14.9	-0.3	0.0	18.4	17.4	-1.0	-5%
Worst 20% Days	56.1	53.6	62.5	68.2	49.0	59.0	46.5	49.6	56.5	41.4	40.7	-1.5	0.1	57.9	50.6	-7.3	-13%
All Days	34.5	33.6	37.1	36.3	29.2	33.5	30.3	29.8	31.4	26.9	24.9	-0.8	0.0	34.1	30.4	-3.7	-11%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	3.9	3.9	3.6	2.9	2.9	3.7	3.3	3.0	3.1	2.6	2.4	-0.1	0.0	3.4	3.1	-0.3	-9%
Worst 20% Days	16.6	18.6	20.5	12.4	14.4	26.0	16.6	21.5	14.5	14.4	11.9	-0.1	0.4	16.5	18.6	2.1	13%
All Days	9.6	10.0	9.7	7.8	7.5	11.2	9.2	9.6	7.9	7.3	5.9	-0.2	0.1	8.9	9.0	0.1	1%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	0.9	1.3	1.5	1.1	1.0	1.0	0.7	1.1	0.8	0.9	0.5	0.0	0.1	1.1	0.9	-0.2	-18%
Worst 20% Days	5.4	3.2	2.8	2.6	5.1	3.8	2.7	3.7	2.6	1.5	2.1	-0.2	0.0	3.8	2.9	-0.9	-24%
All Days	2.7	2.2	2.4	1.6	2.3	1.9	1.6	1.8	1.6	1.2	1.2	-0.1	0.0	2.2	1.6	-0.6	-27%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	1.9	1.6	1.9	1.5	1.1	1.8	1.9	1.5	1.5	1.0	0.9	-0.1	0.1	1.6	1.5	-0.1	-6%
Worst 20% Days	7.4	5.0	7.8	7.4	6.2	7.4	5.9	5.8	5.6	4.9	4.8	-0.2	0.0	6.7	5.9	-0.8	-12%
All Days	4.2	3.2	4.1	3.9	3.3	4.0	3.6	3.4	3.3	2.8	2.5	-0.1	0.0	3.8	3.4	-0.4	-11%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	0.9	0.7	0.7	0.6	0.6	0.9	0.9	0.7	0.6	0.4	0.4	0.0	0.0	0.7	0.7	0.0	0%
Worst 20% Days	2.0	1.0	1.3	1.0	1.3	2.2	1.6	1.5	1.0	1.2	1.3	0.0	0.5	1.3	1.5	0.2	15%
All Days	1.4	0.9	1.0	1.0	1.1	1.4	1.2	1.1	0.8	0.9	0.8	0.0	0.3	1.1	1.1	0.0	0%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.4	0.5	0.6	0.7	0.0	0.5	0.4	0.5	0.1	25%
Worst 20% Days	2.4	4.1	5.1	7.5	2.9	2.1	2.0	2.0	4.8	2.7	3.3	-0.1	0.2	4.4	2.7	-1.7	-39%
All Days	1.4	2.0	2.2	2.3	1.2	1.1	1.1	1.1	1.9	1.5	1.5	-0.1	0.2	1.9	1.3	-0.6	-32%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	1.6	2.0	2.3	2.7	1.5	1.9	2.0	1.4	1.9	1.5	1.1	0.0	0.1	2.0	1.7	-0.3	-15%
Worst 20% Days	13.2	12.7	16.0	28.1	10.1	8.3	8.6	6.0	18.8	7.7	8.3	-0.8	0.1	16.0	9.9	-6.1	-38%
All Days	6.1	6.1	8.7	10.6	4.6	4.7	4.6	3.8	6.8	4.2	4.0	-0.3	0.1	7.2	4.8	-2.4	-33%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.1	0.0	-0.1	-100%
Worst 20% Days	0.1	0.0	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0%
All Days	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.0	0%

\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

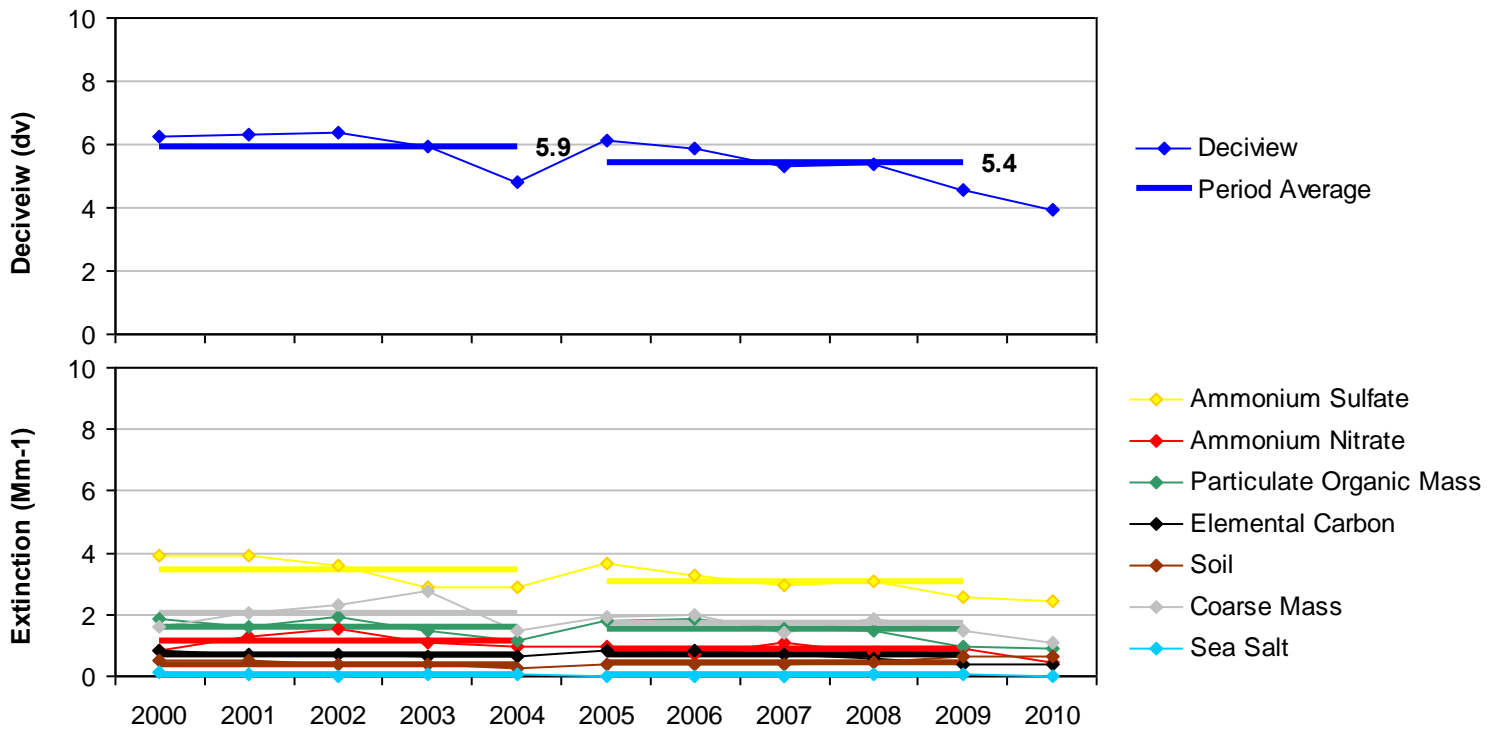
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

---" Indicates a missing year that did not meet RHR data completeness criteria.

**Figure I.4-1**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

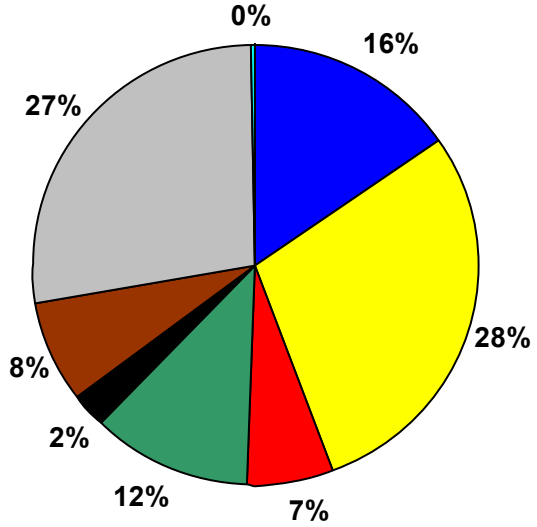


**Figure I.4-2**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

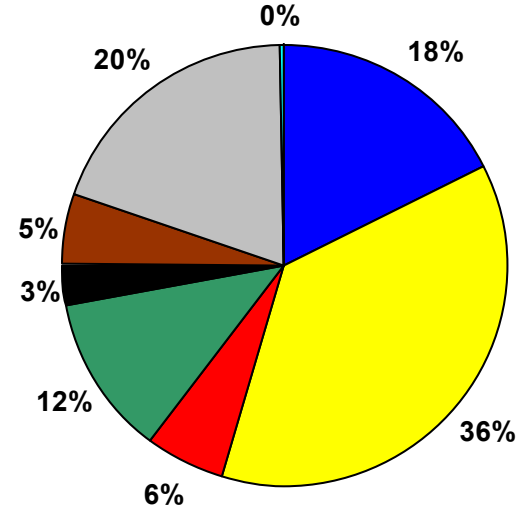


**Figure I.4-3**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**20% Most Impaired Visibility Days**

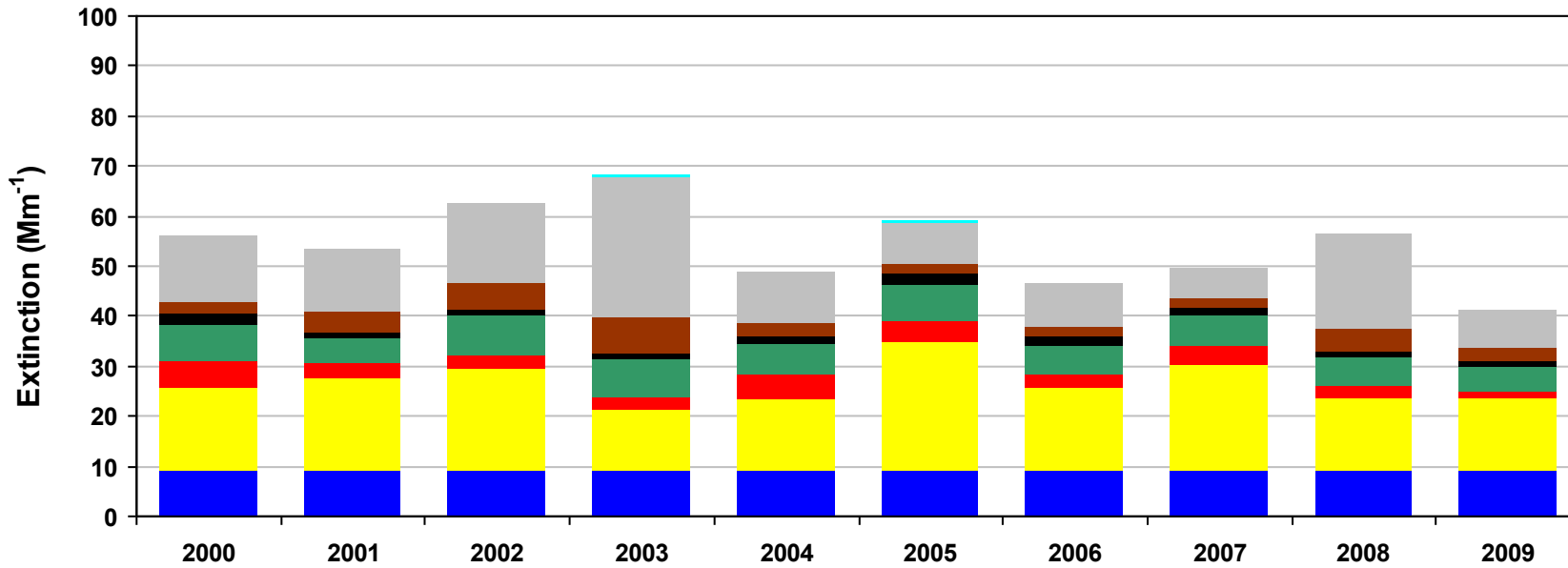
**2000-2004 Baseline Average**  
 17.2 dv (15.6 - 18.5 dv )



**2005-2009 Progress Period Average**  
 15.9 dv (14.1 - 17.5 dv )

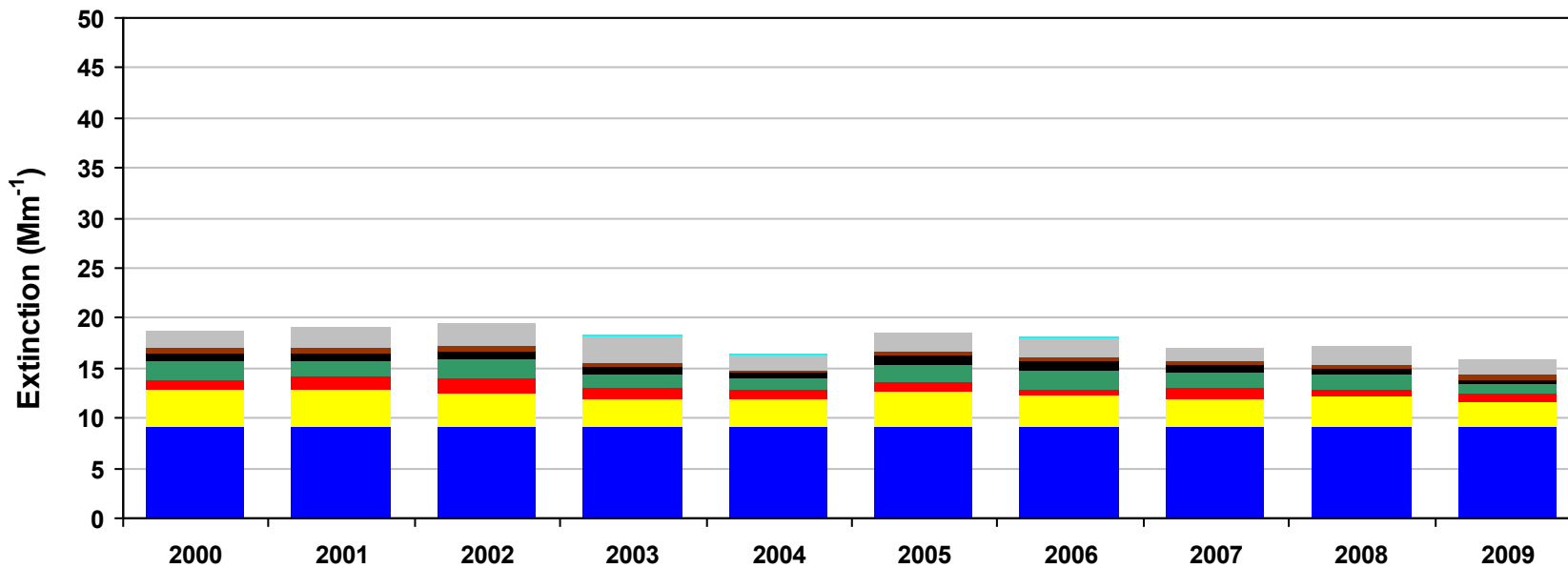
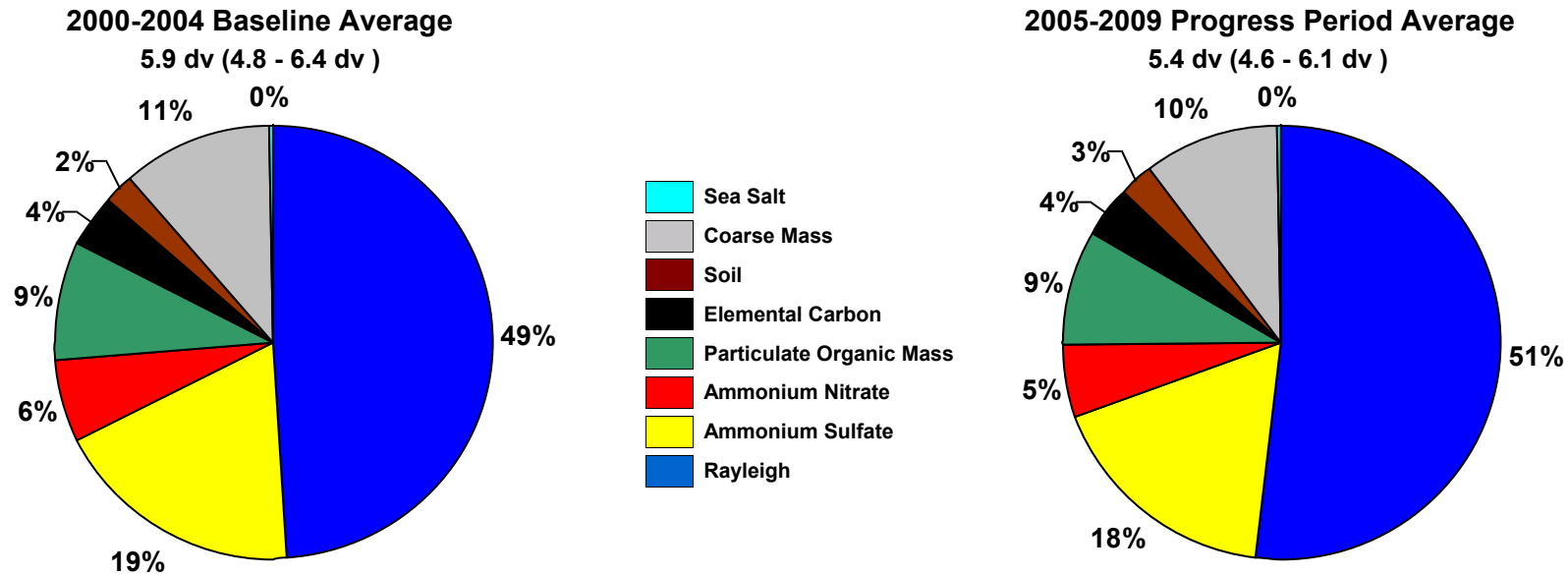


- Sea Salt
- Coarse Mass
- Soil
- Elemental Carbon
- Particulate Organic Mass
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh

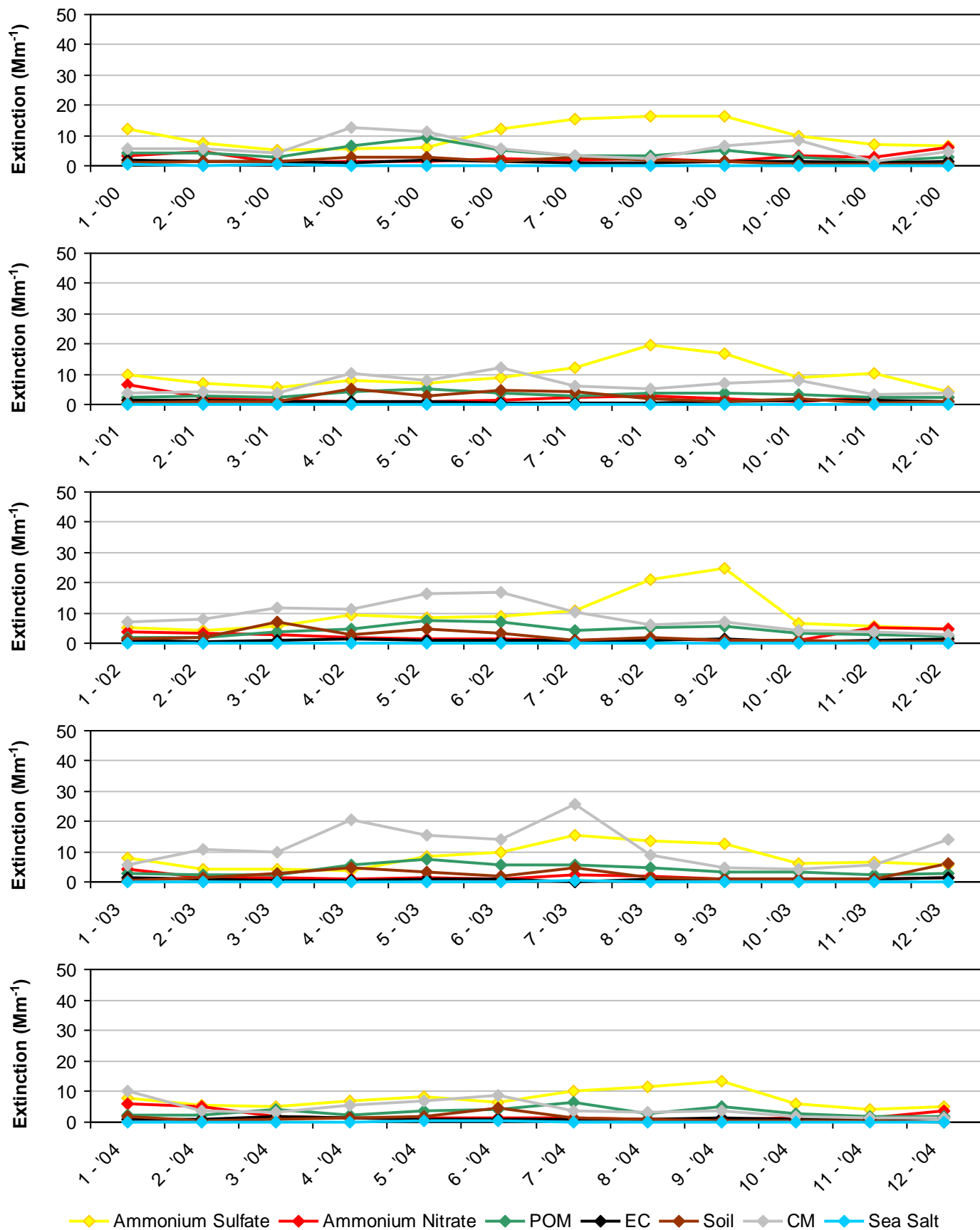




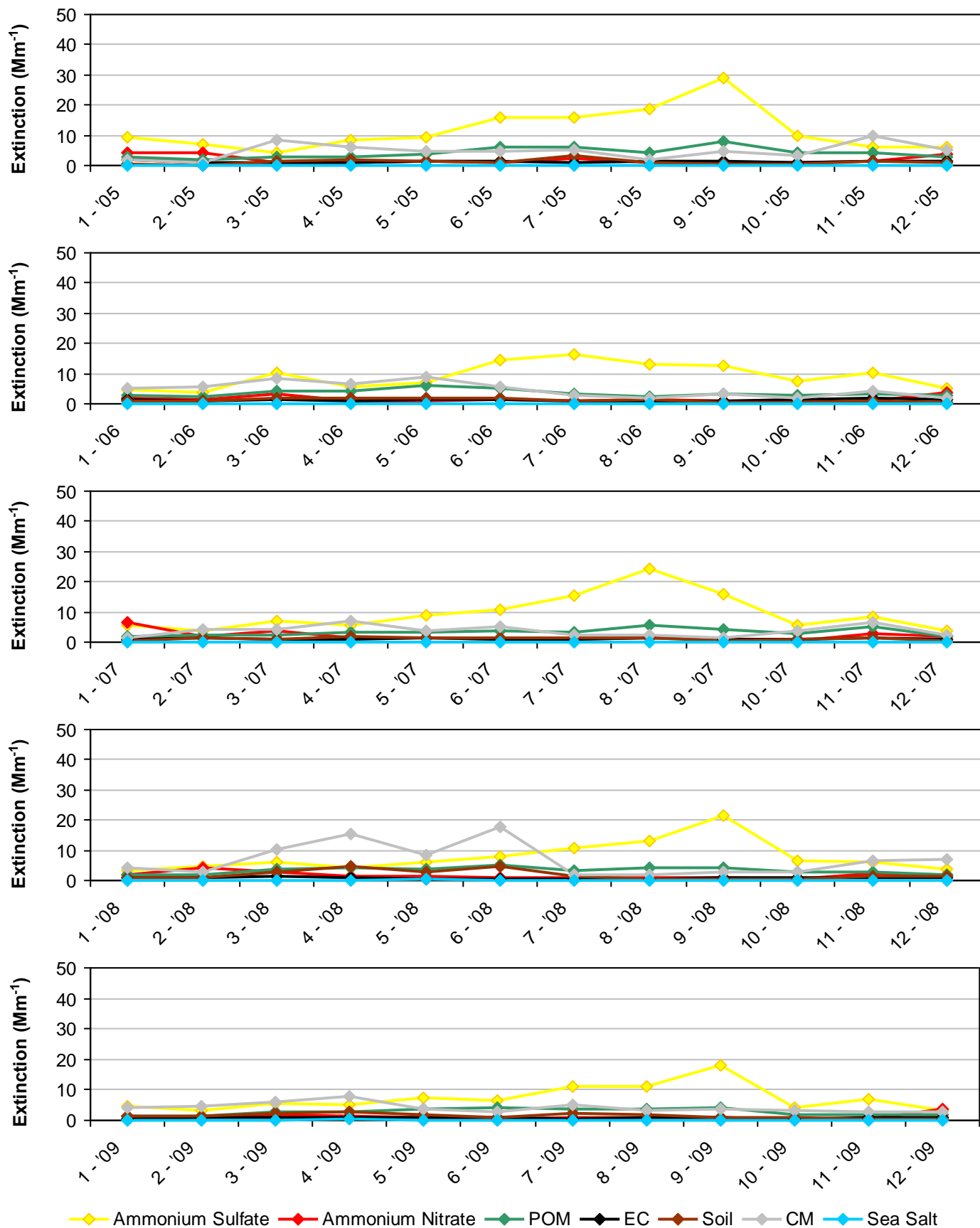
**Figure I.4-4**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**20% Least Impaired Visibility Days**



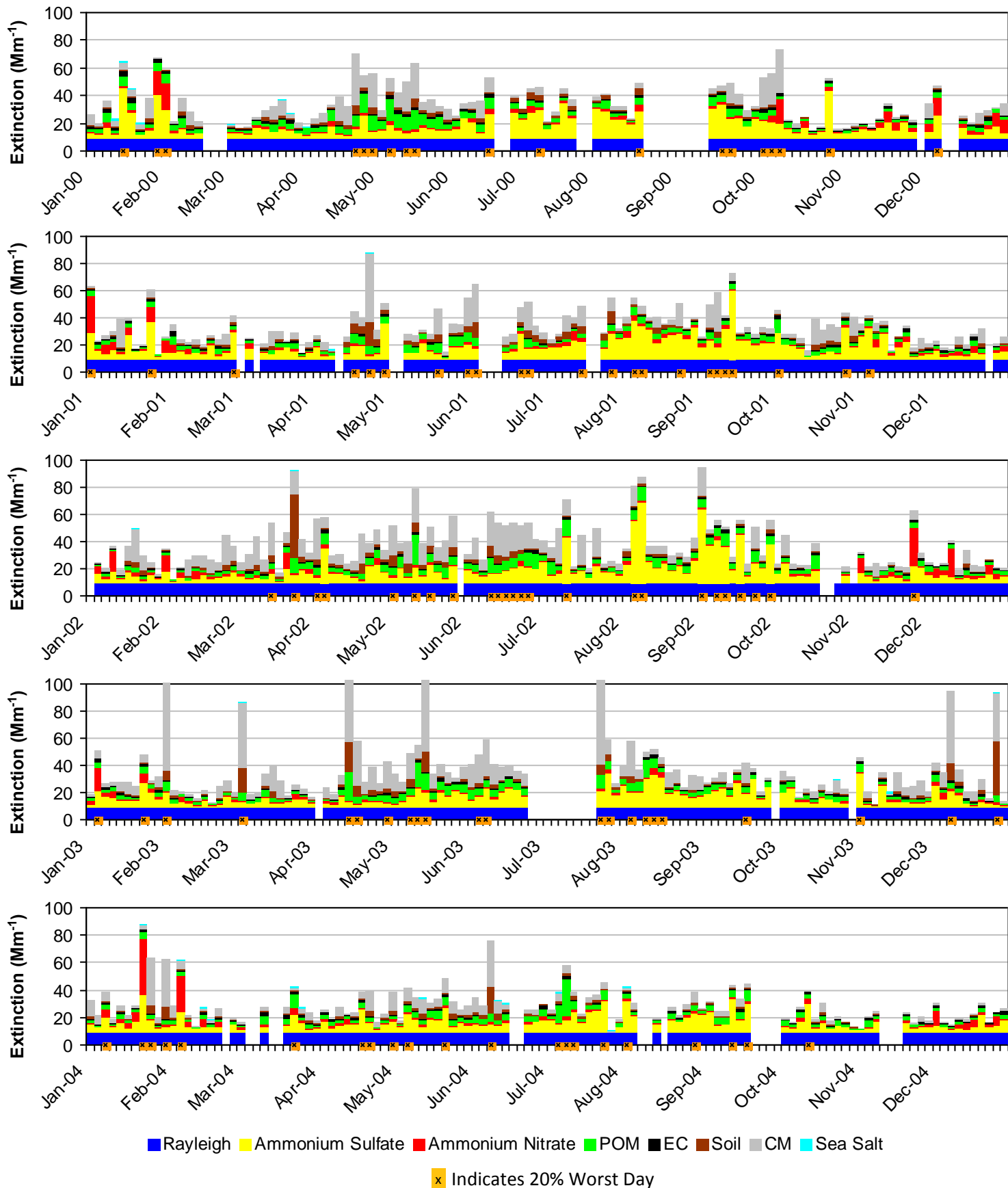
**Figure I.4-5**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



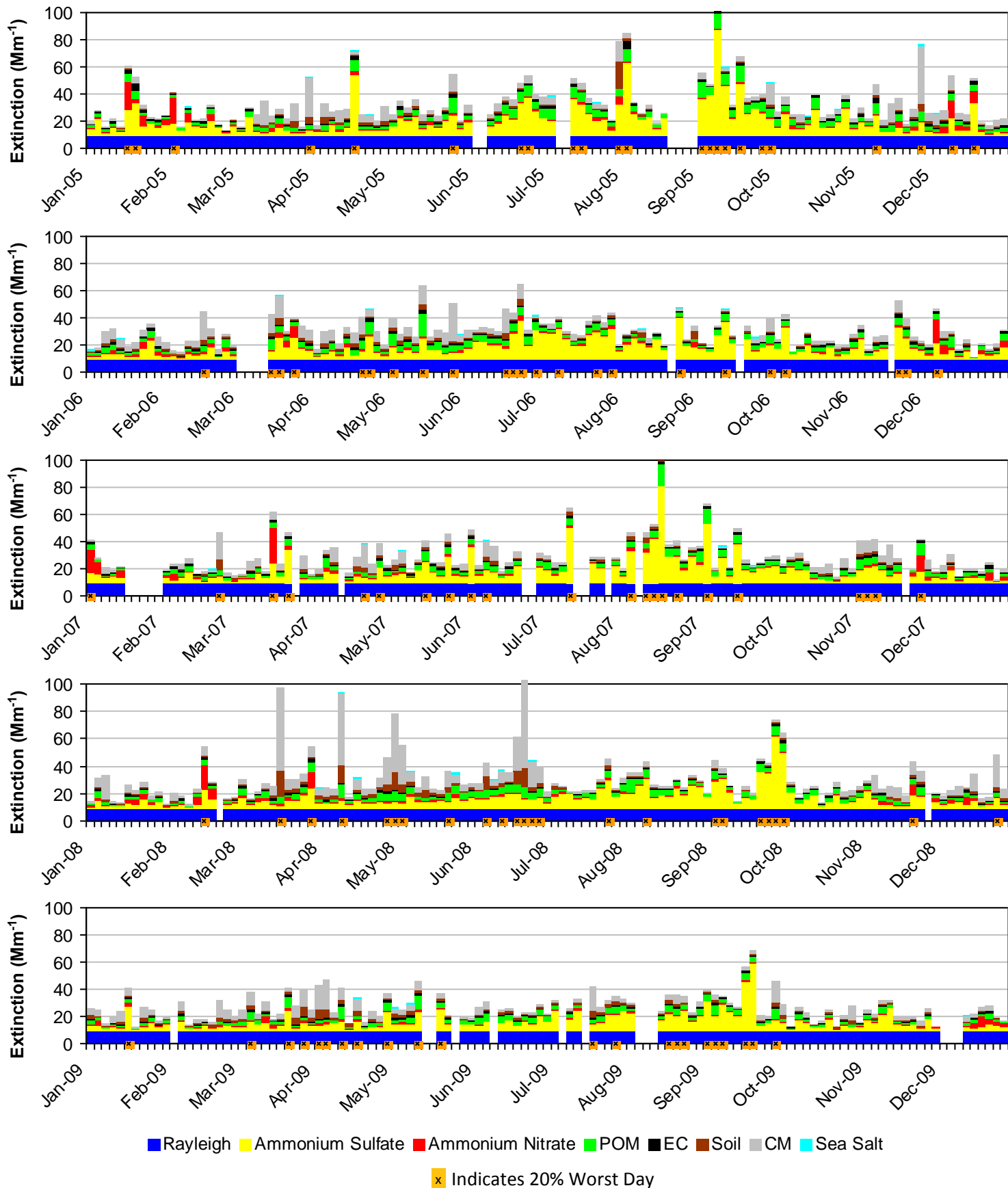
**Figure I.4-6**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



**Figure I.4-7**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



**Figure I.4-8**  
**Guadalupe Mountains NP and Carlsbad Caverns NP, TX (GUMO1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



## I.5. SALT CREEK WA (SACR1)

The following tables and figures are presented in this section for the Salt Creek WA represented by the SACR1 IMPROVE Monitor:

- **Table I.5-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.5-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.5-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.5-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.5-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.5-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.5-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.5-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.5-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.

**Table I.5-1**  
**Salt Creek WA, NM (SACR1 Site)**  
**Annual Averages, 5-Year Period Averages and Trends**

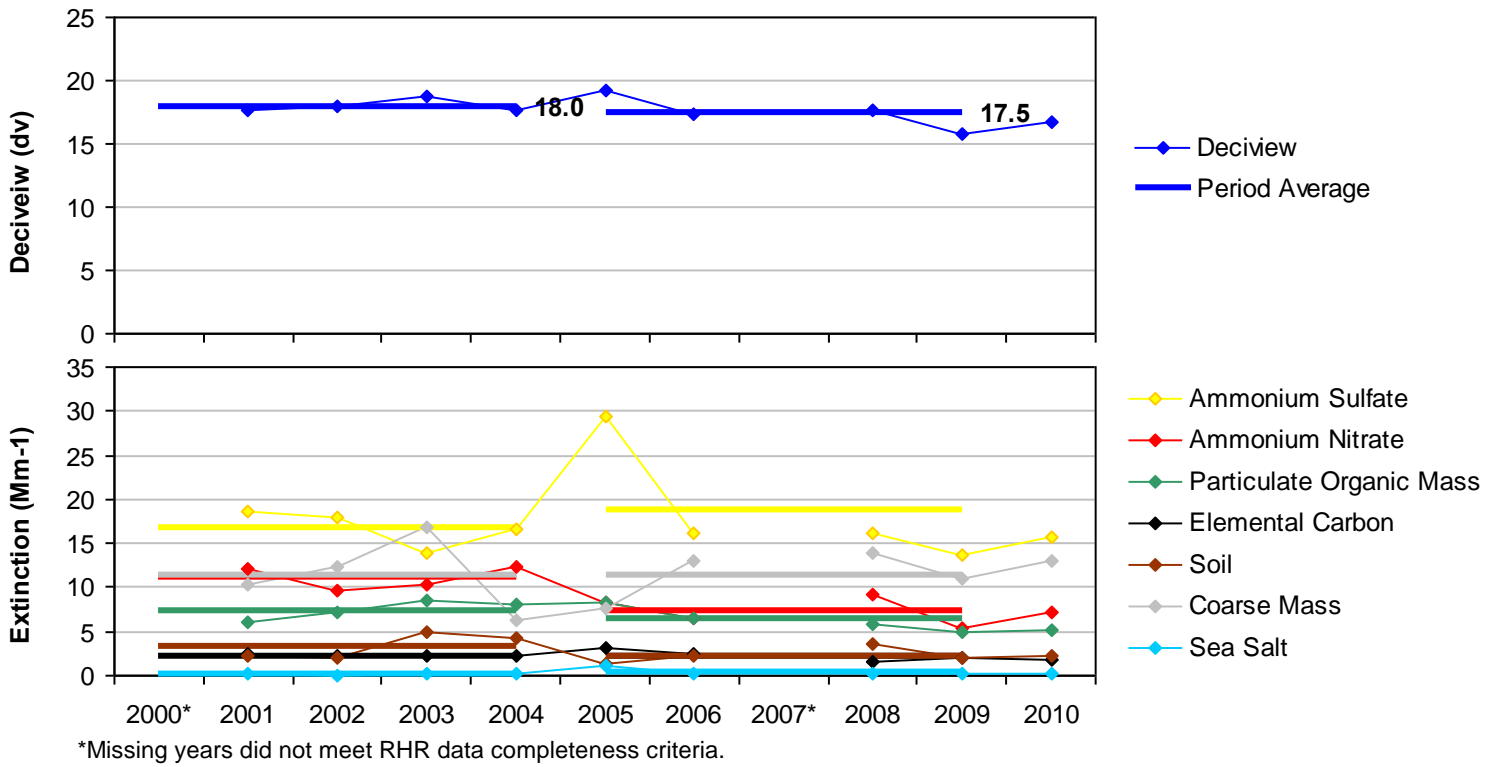
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	7.9	7.9	8.5	7.1	7.9	8.0	---	6.8	6.4	6.0	-0.2	0.1	7.8	7.3	-0.5	-6%
Worst 20% Days	---	17.6	18.0	18.8	17.7	19.2	17.3	---	17.6	15.7	16.8	-0.1	0.2	18.0	17.5	-0.5	-3%
All Days	---	12.4	12.8	13.5	12.4	13.1	12.5	---	12.1	11.3	11.2	-0.2	0.1	12.8	12.3	-0.5	-4%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	22.3	22.3	23.5	20.5	22.1	22.5	---	19.9	19.2	18.5	-0.4	0.1	22.1	20.9	-1.2	-5%
Worst 20% Days	---	62.2	61.4	67.0	60.2	69.4	57.2	---	60.5	49.5	55.5	-1.0	0.1	62.7	59.1	-3.6	-6%
All Days	---	37.4	38.4	41.2	37.0	40.5	36.9	---	36.5	32.7	33.2	-0.4	0.0	38.5	36.6	-1.9	-5%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	3.5	3.3	3.7	3.3	4.2	3.6	---	3.2	2.6	2.9	-0.1	0.1	3.4	3.4	0.0	0%
Worst 20% Days	---	18.7	17.9	13.9	16.5	29.3	16.2	---	16.1	13.7	15.7	-0.5	0.1	16.7	18.9	2.2	13%
All Days	---	9.2	9.1	9.7	9.3	13.1	9.0	---	8.6	7.9	7.8	-0.2	0.1	9.3	9.7	0.4	4%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	2.6	2.0	1.8	1.8	2.2	1.3	---	1.0	0.7	0.9	-0.2	0.0	2.0	1.3	-0.7	-35%
Worst 20% Days	---	12.2	9.5	10.4	12.4	8.4	6.4	---	9.3	5.4	7.3	-0.8	0.0	11.1	7.4	-3.7	-33%
All Days	---	5.1	5.4	4.4	4.8	4.1	3.3	---	3.7	2.5	3.2	-0.3	0.0	4.9	3.4	-1.5	-31%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	2.3	2.2	2.1	2.4	2.2	2.3	---	1.7	1.8	1.6	-0.1	0.1	2.3	2.0	-0.3	-13%
Worst 20% Days	---	6.1	7.3	8.5	8.1	8.4	6.5	---	5.8	5.0	5.2	-0.3	0.1	7.5	6.4	-1.1	-15%
All Days	---	4.0	4.5	4.6	4.8	4.9	4.2	---	3.8	3.5	3.5	-0.1	0.3	4.5	4.1	-0.4	-9%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	1.2	1.1	1.1	1.0	1.1	1.2	---	0.7	0.7	0.5	0.0	0.1	1.1	0.9	-0.2	-18%
Worst 20% Days	---	2.5	2.2	2.3	2.3	3.3	2.4	---	1.6	2.1	1.8	0.0	0.2	2.3	2.3	0.0	0%
All Days	---	1.6	1.6	1.6	1.6	2.0	1.7	---	1.2	1.3	1.2	0.0	0.2	1.6	1.6	0.0	0%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	0.4	0.5	1.4	0.5	0.4	0.6	---	0.5	0.5	0.6	0.0	0.6	0.7	0.5	-0.2	-29%
Worst 20% Days	---	2.1	2.1	4.9	4.2	1.4	2.3	---	3.6	2.0	2.3	0.0	0.4	3.3	2.3	-1.0	-30%
All Days	---	1.3	1.2	3.0	2.4	0.9	1.2	---	1.7	1.2	1.3	0.0	0.4	2.0	1.2	-0.8	-40%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	2.4	3.1	3.4	1.3	2.0	3.5	---	2.7	2.7	1.9	0.0	0.4	2.5	2.7	0.2	8%
Worst 20% Days	---	10.3	12.4	16.8	6.4	7.5	13.1	---	13.8	11.0	13.1	0.2	0.4	11.5	11.4	-0.1	-1%
All Days	---	6.0	6.6	7.8	3.9	5.0	7.3	---	7.2	6.2	6.1	0.1	0.5	6.1	6.4	0.3	5%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	0.0	0.1	0.1	0.1	0.1	0.1	---	0.0	0.0	0.1	0.0	0.6	0.1	0.1	0.0	0%
Worst 20% Days	---	0.2	0.1	0.1	0.3	1.0	0.3	---	0.3	0.3	0.1	0.0	0.1	0.2	0.5	0.3	>100%
All Days	---	0.1	0.1	0.1	0.2	0.4	0.2	---	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.1	100%

\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

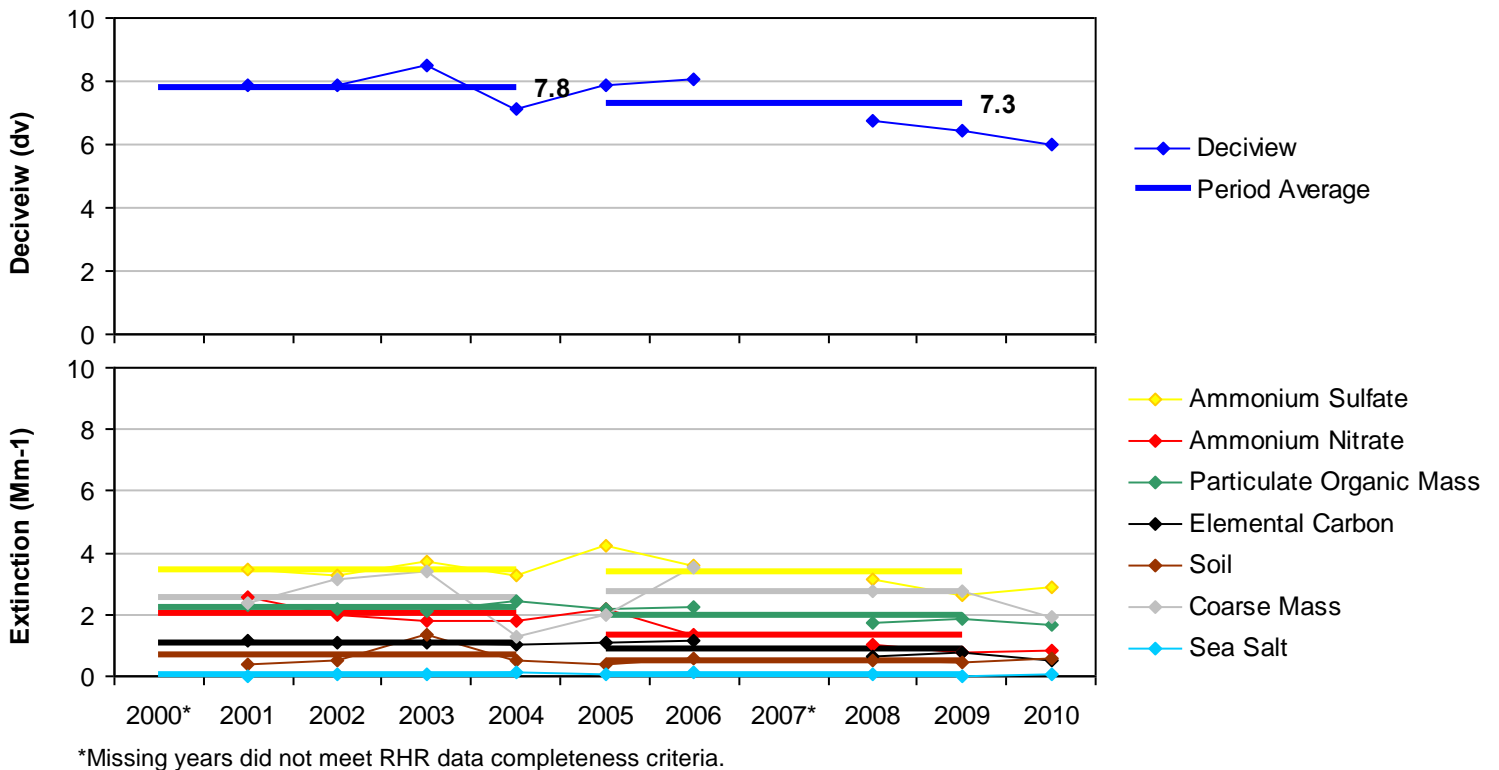
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

---" Indicates a missing year that did not meet RHR data completeness criteria.

**Figure I.5-1**  
**Salt Creek WA, NM (SACR1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**



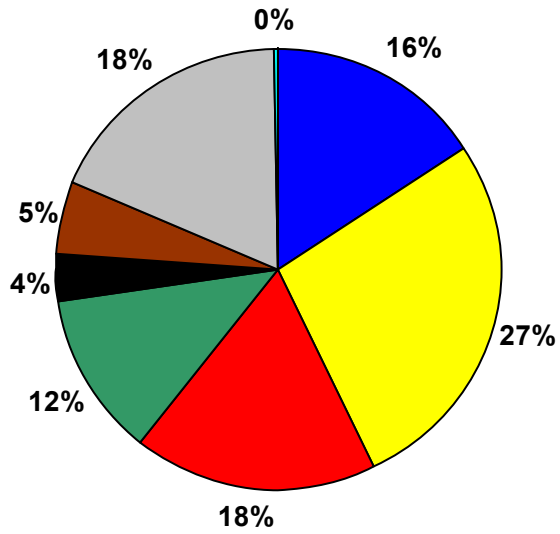
**Figure I.5-2**  
**Salt Creek WA, NM (SACR1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**



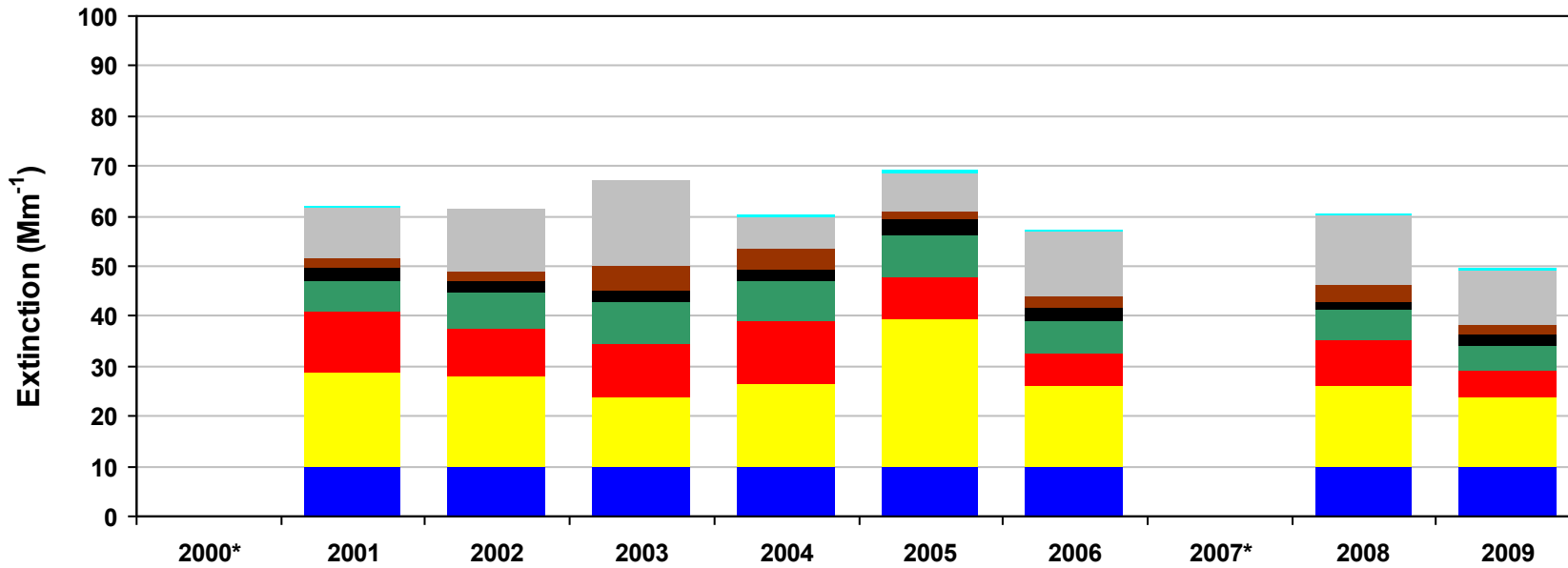
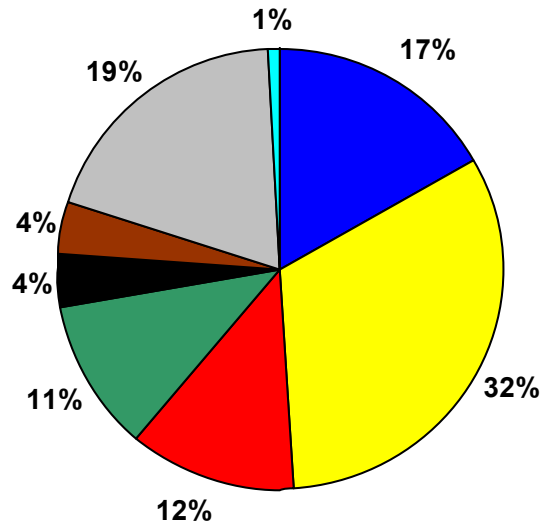


**Figure I.5-3**  
**Salt Creek WA, NM (SACR1 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 18 dv (17.6 - 18.8 dv )

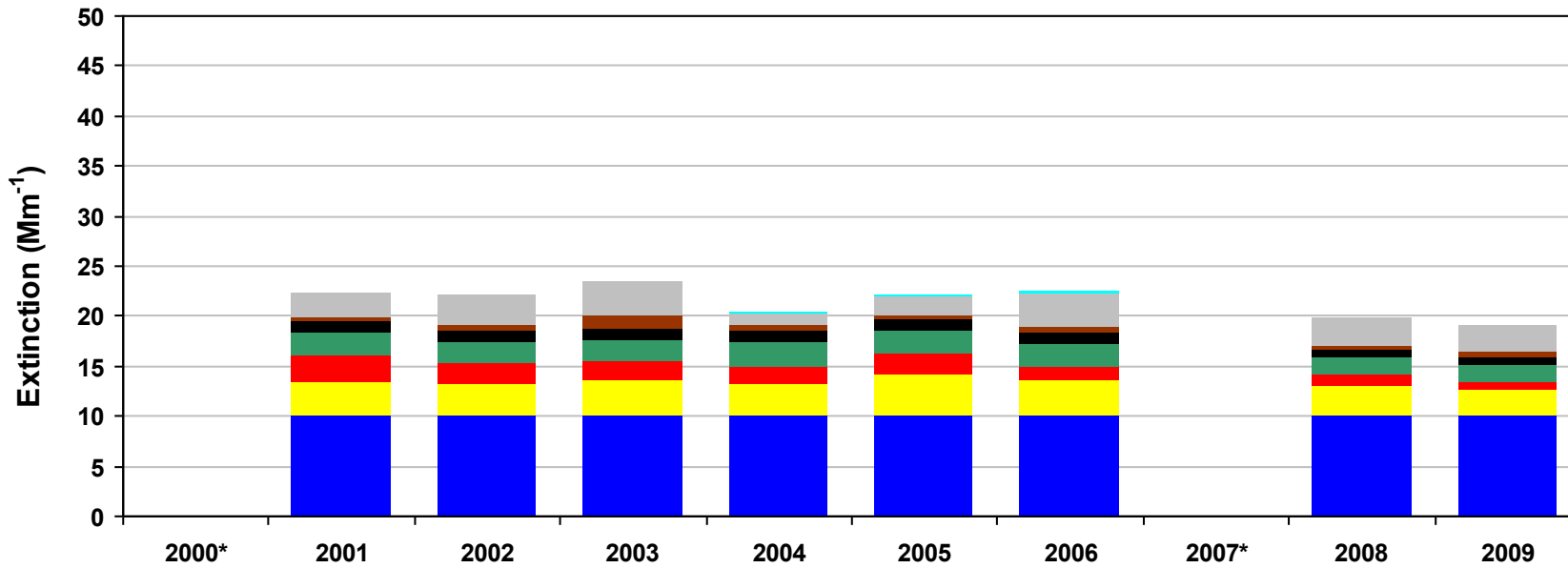
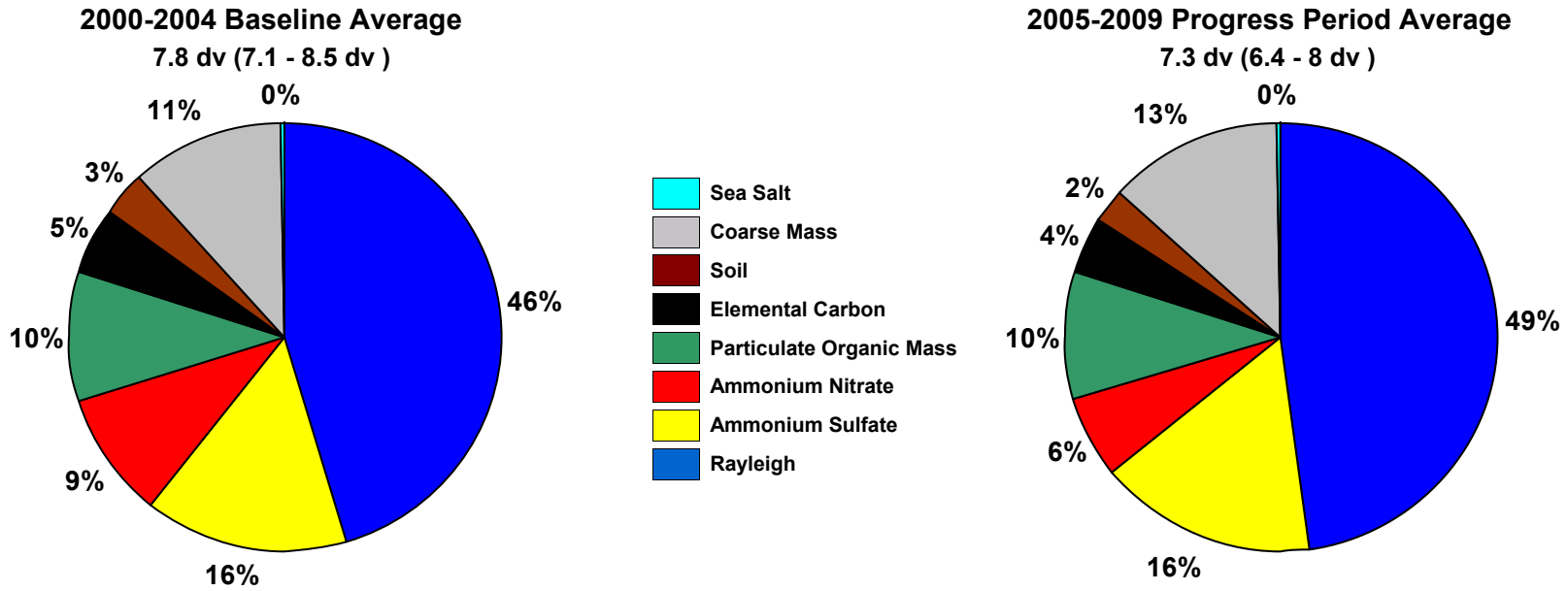


**2005-2009 Progress Period Average**  
 17.5 dv (15.7 - 19.2 dv )



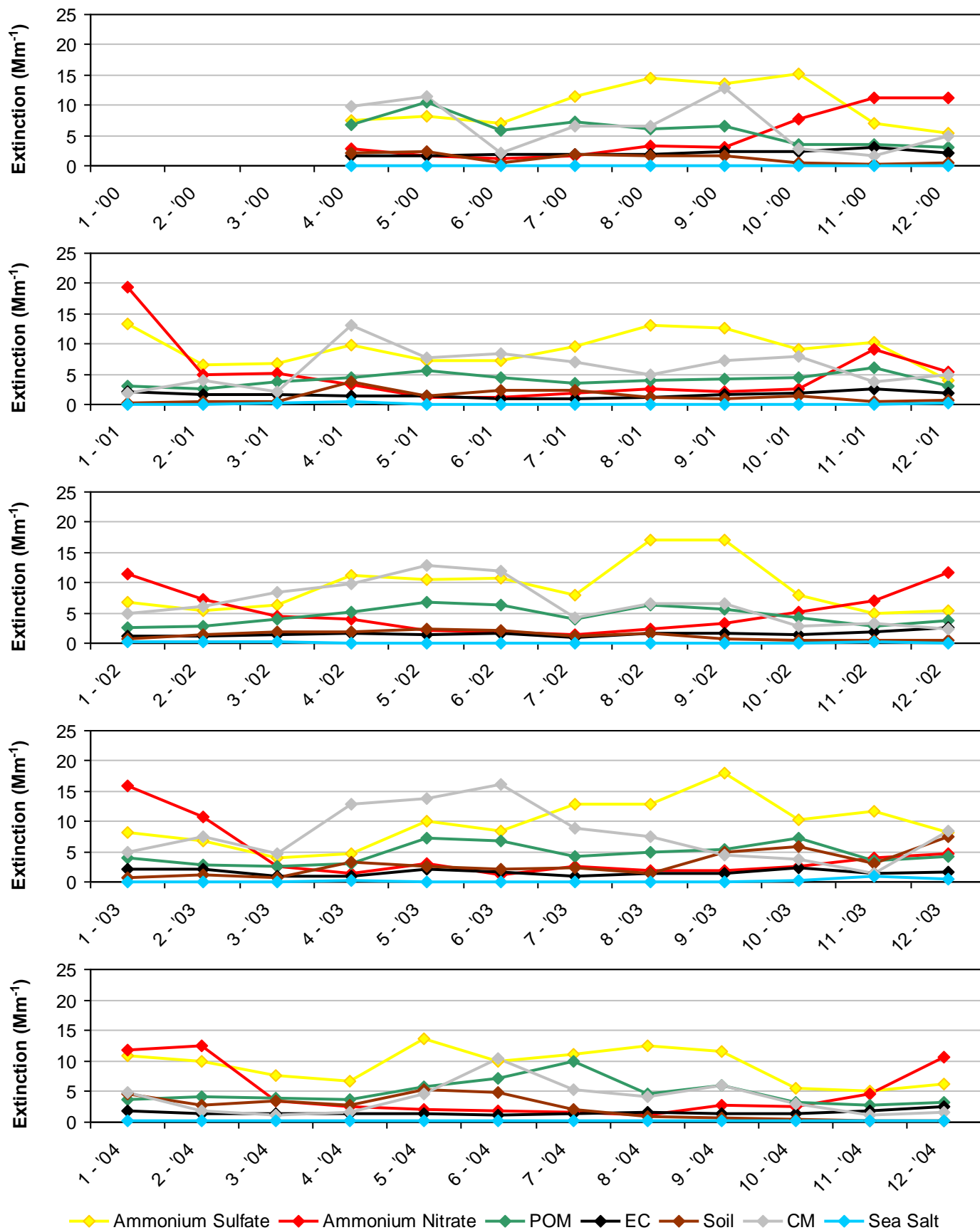
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.5-4**  
**Salt Creek WA, NM (SACR1 Site)**  
**20% Least Impaired Visibility Days**



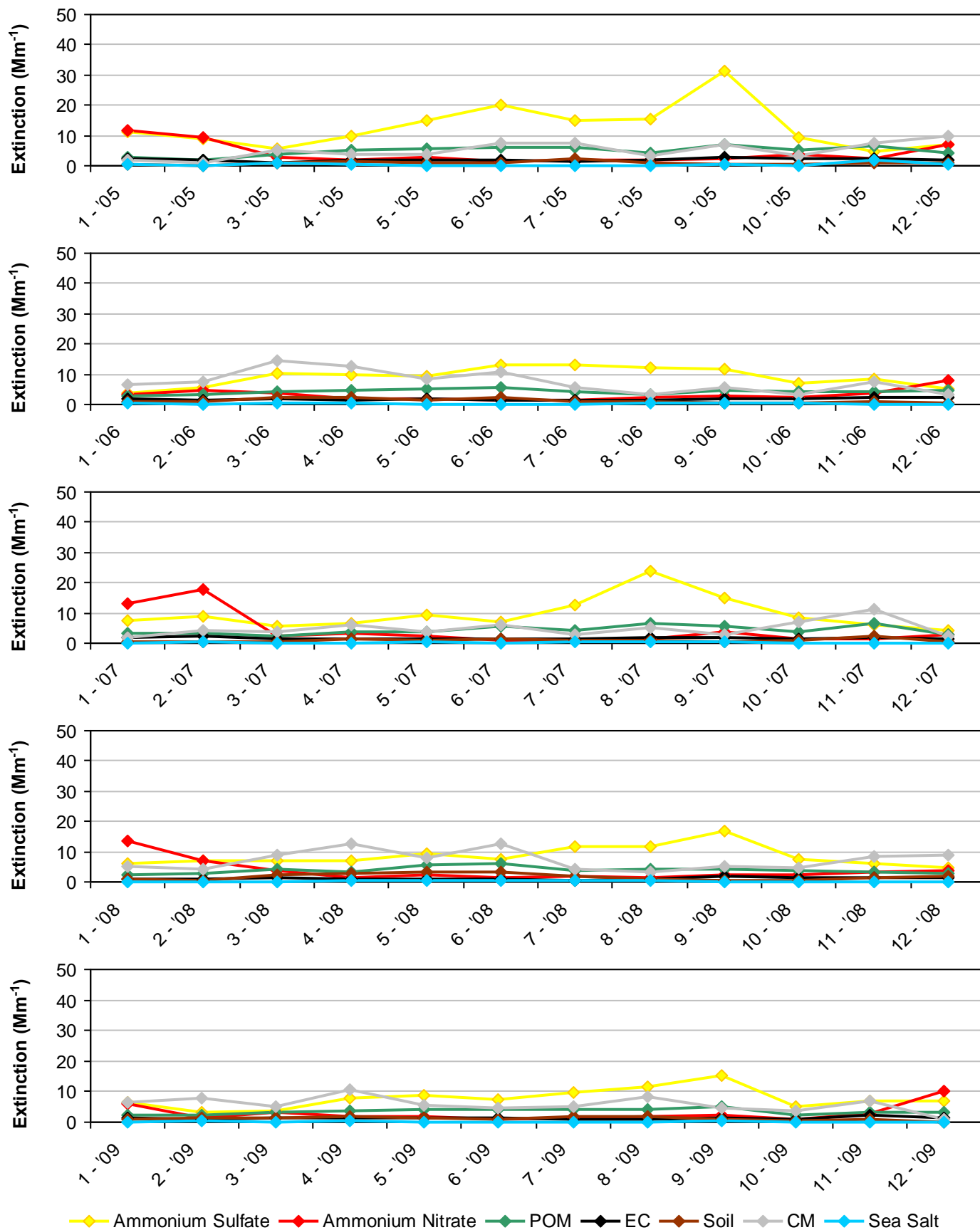
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.5-5**  
**Salt Creek WA, NM (SACR1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



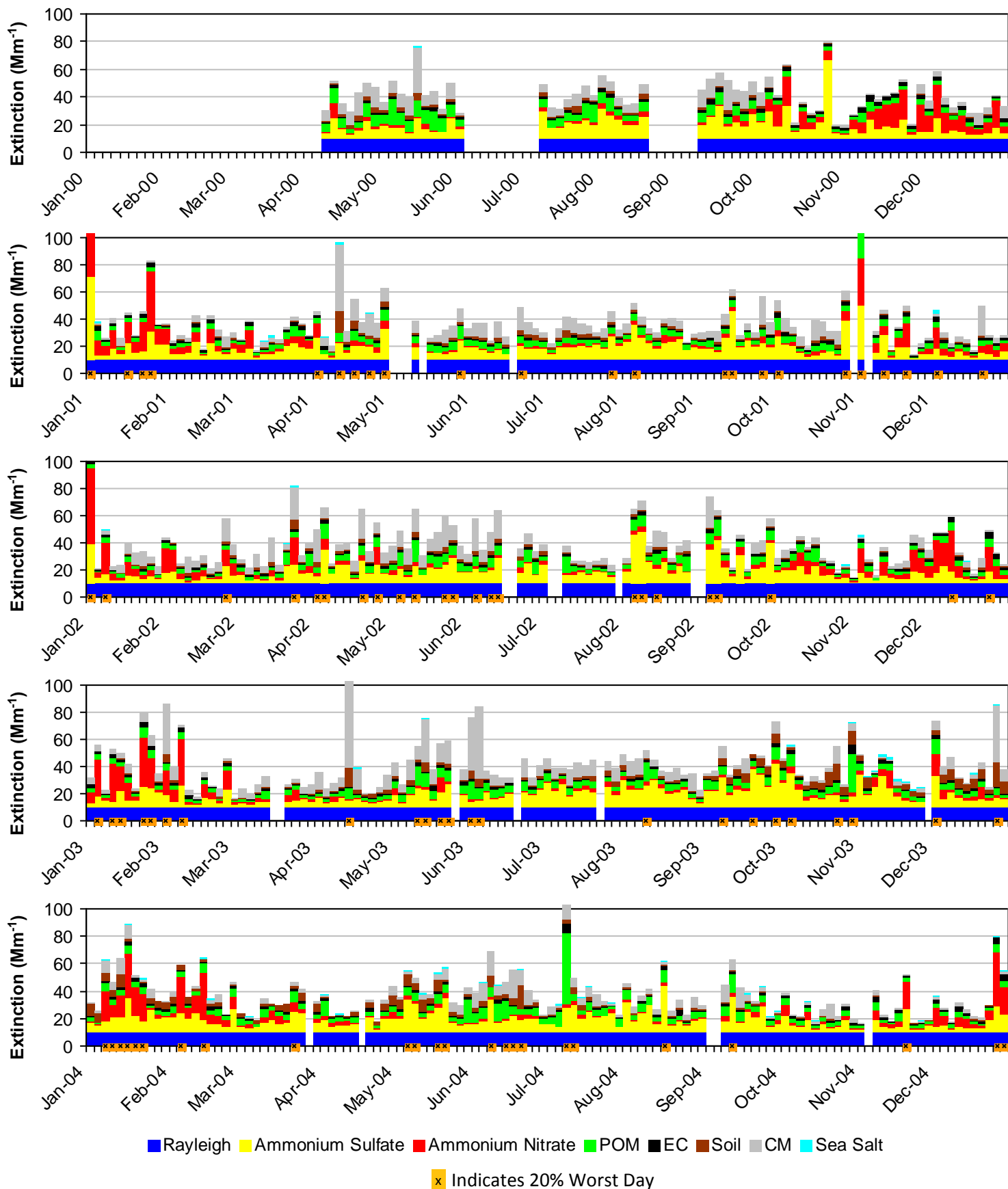
\*Note that monthly averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure I.5-6**  
**Salt Creek WA, NM (SACR1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



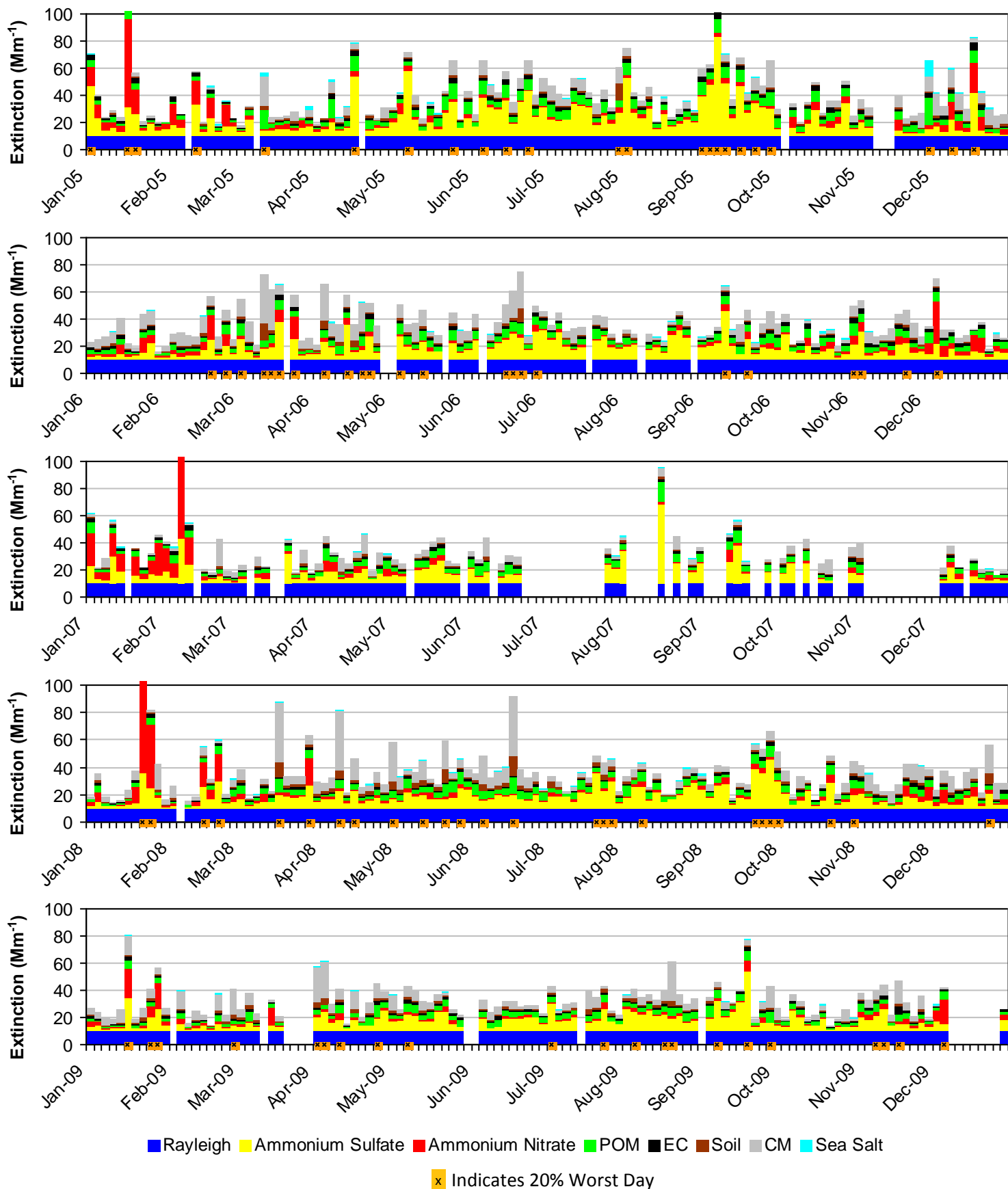
\*Note that monthly averages for the year 2007 are shown here, but this year did not meet RHR data completeness criteria.

**Figure I.5-7**  
**Salt Creek WA, NM (SACR1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure I.5-8**  
**Salt Creek WA, NM (SACR1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the year 2007 are shown here, but this year did not meet RHR data completeness criteria.

## I.6. SAN PEDRO PARKS WA (SAPE1)

The following tables and figures are presented in this section for the San Pedro Parks WA represented by the SAPE1 IMPROVE Monitor:

- **Table I.6-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.6-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.6-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.6-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.6-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.6-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.6-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.6-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.6-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.

**Table I.6-1  
San Pedro Parks WA, NM (SAPE1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	1.9	1.1	1.4	1.5	0.9	1.4	1.0	0.8	1.1	0.8	-0.1	0.1	1.5	1.0	-0.5	-33%
Worst 20% Days	---	9.3	10.6	11.6	9.3	10.8	9.7	10.7	10.0	8.2	8.5	-0.1	0.3	10.2	9.9	-0.3	-3%
All Days	---	5.7	5.8	6.2	5.5	5.7	5.4	5.6	5.6	4.7	4.8	-0.1	0.0	5.8	5.4	-0.4	-7%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	12.1	11.2	11.6	11.6	11.0	11.6	11.1	10.8	11.2	10.8	-0.1	0.1	11.6	11.1	-0.5	-4%
Worst 20% Days	---	25.6	29.9	34.6	25.6	30.2	27.6	30.3	27.4	22.9	23.7	-0.4	0.4	28.9	27.7	-1.2	-4%
All Days	---	18.3	19.0	20.3	17.9	18.9	18.0	18.8	18.4	16.5	16.9	-0.1	0.1	18.9	18.1	-0.8	-4%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	1.9	1.4	1.4	1.6	1.3	1.9	1.4	1.2	1.5	1.3	0.0	0.2	1.6	1.5	-0.1	-6%
Worst 20% Days	---	6.5	6.0	5.3	5.3	9.1	6.3	7.4	6.3	4.7	4.3	0.0	0.4	5.8	6.8	1.0	17%
All Days	---	4.1	3.7	3.5	3.6	4.7	3.7	3.9	3.8	3.1	3.1	0.0	0.4	3.7	3.9	0.2	5%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	0.5	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4	0.4	0.0	0.0	0.4	0.4	0.0	0%
Worst 20% Days	---	1.5	1.8	1.6	1.3	1.3	1.3	1.0	1.3	1.0	1.0	-0.1	0.0	1.6	1.2	-0.4	-25%
All Days	---	1.0	1.1	0.9	1.0	0.8	0.8	0.9	0.9	0.8	0.8	0.0	0.0	1.0	0.8	-0.2	-20%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	0.9	0.6	0.7	0.7	0.5	0.6	0.6	0.6	0.6	0.5	0.0	0.1	0.7	0.6	-0.1	-14%
Worst 20% Days	---	4.8	7.8	11.3	6.8	6.3	7.2	8.6	5.0	4.4	3.7	-0.5	0.2	7.7	6.3	-1.4	-18%
All Days	---	2.6	3.2	4.1	2.9	2.8	2.8	3.3	2.6	2.1	2.1	-0.1	0.1	3.2	2.7	-0.5	-16%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	0.4	0.3	0.4	0.5	0.2	0.3	0.2	0.2	0.3	0.2	0.0	0.1	0.4	0.2	-0.2	-50%
Worst 20% Days	---	1.1	1.6	2.6	1.1	2.2	1.6	1.7	1.2	1.1	1.0	0.0	0.3	1.6	1.6	0.0	0%
All Days	---	0.8	0.9	1.1	0.7	0.9	0.9	0.8	0.6	0.6	0.6	0.0	0.1	0.9	0.8	-0.1	-11%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.0	0.3	0.2	0.1	-0.1	-50%
Worst 20% Days	---	1.6	1.7	1.5	1.0	1.1	0.9	1.0	2.3	1.3	1.8	-0.1	0.2	1.5	1.3	-0.2	-13%
All Days	---	0.7	0.8	0.8	0.6	0.5	0.6	0.6	0.9	0.7	0.8	0.0	0.5	0.7	0.7	0.0	0%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	0.3	0.3	0.4	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.0	0.5	0.3	0.3	0.0	0%
Worst 20% Days	---	2.0	2.6	4.2	2.1	2.1	2.3	2.5	3.2	2.3	3.8	0.1	0.2	2.7	2.5	-0.2	-7%
All Days	---	1.0	1.3	1.8	1.1	1.1	1.2	1.3	1.6	1.3	1.5	0.0	0.1	1.3	1.3	0.0	0%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0%
Worst 20% Days	---	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.5	0.1	0.1	0.0	0%
All Days	---	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0%

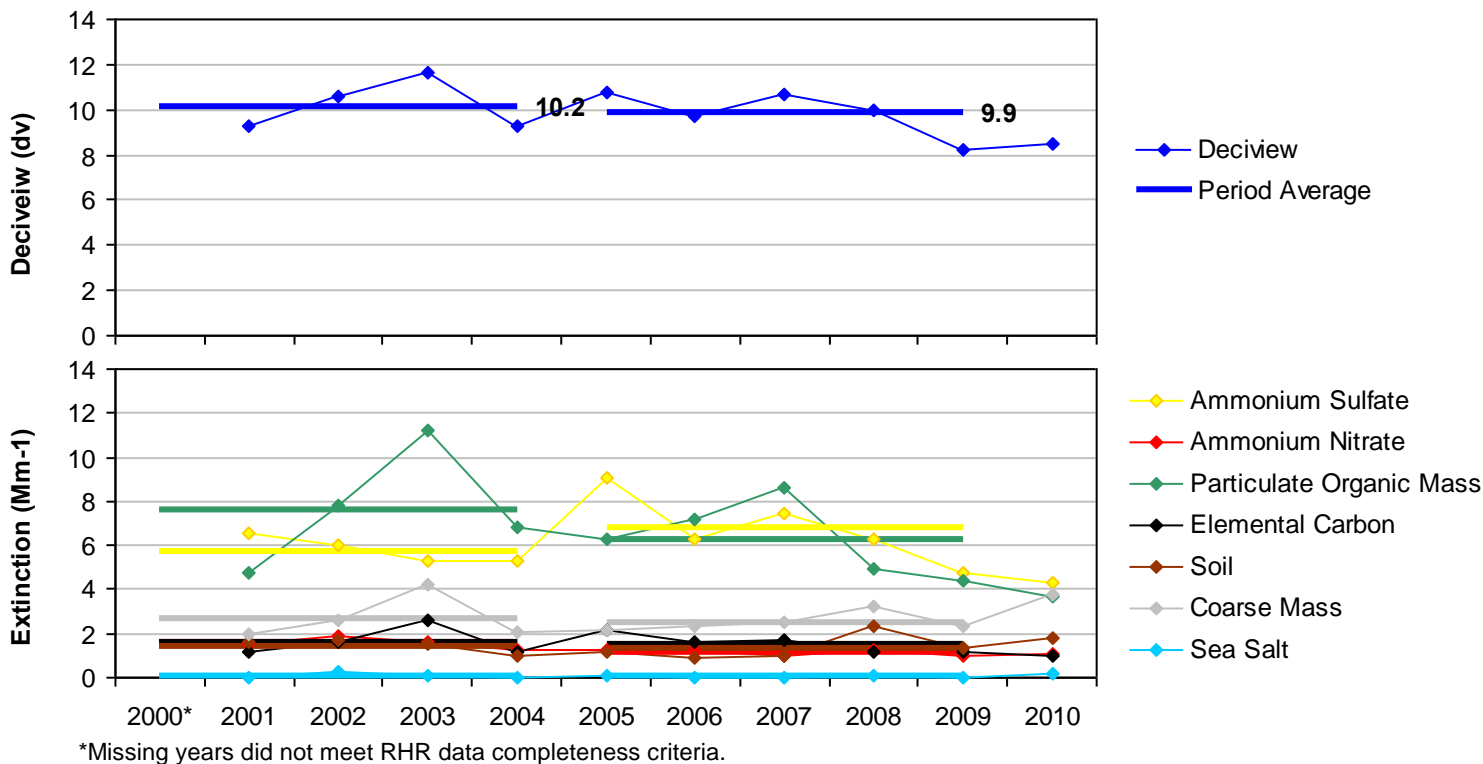
\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

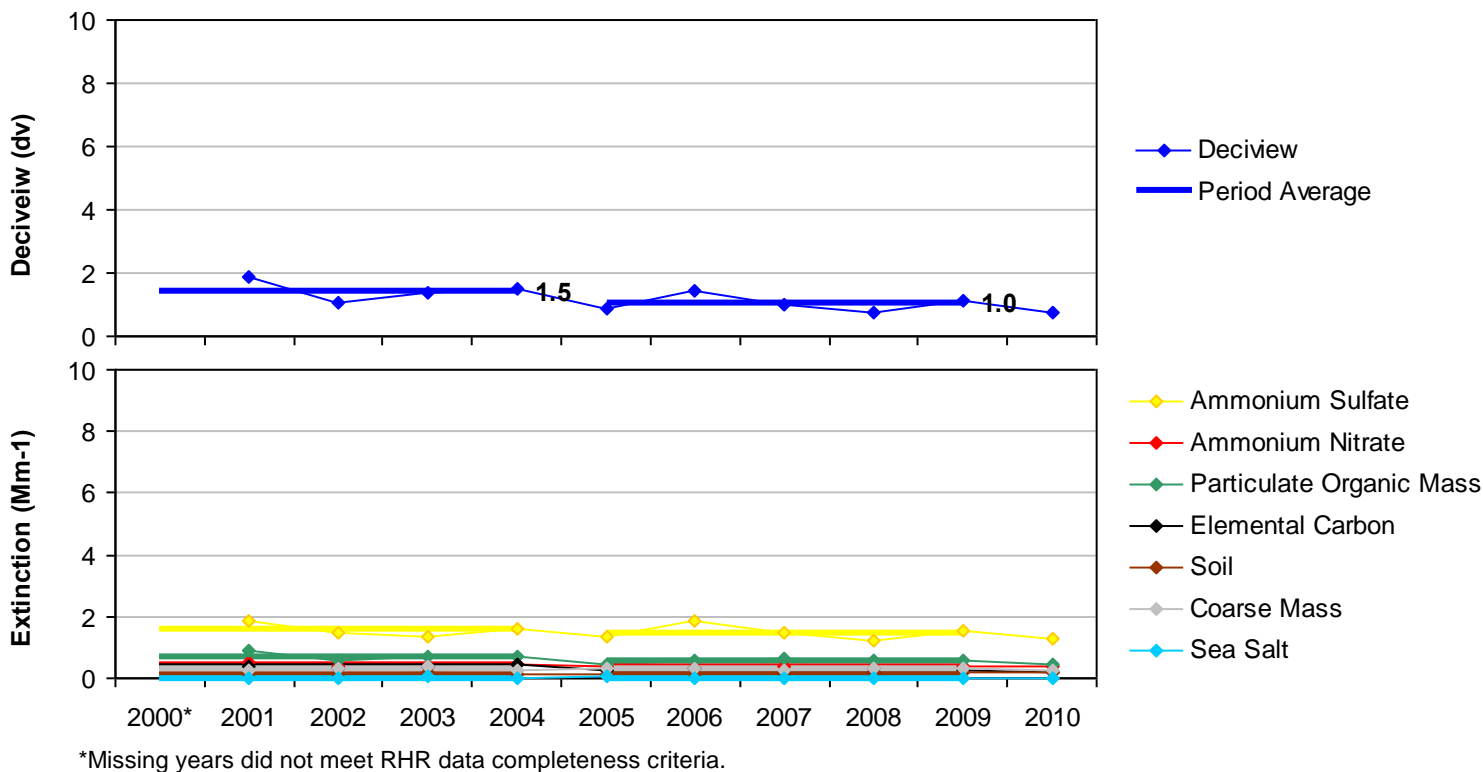
---" Indicates a missing year that did not meet RHR data completeness criteria.



**Figure I.6-1**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

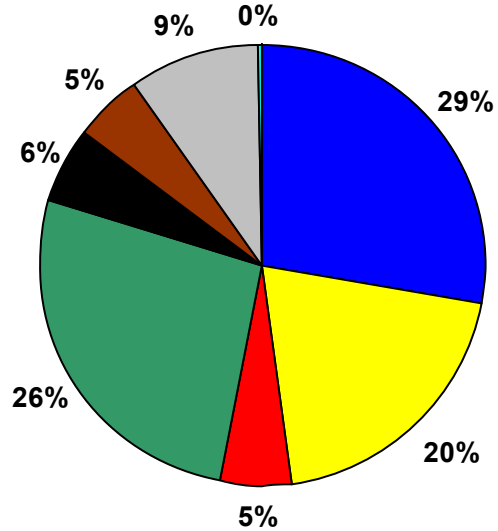


**Figure I.6-2**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

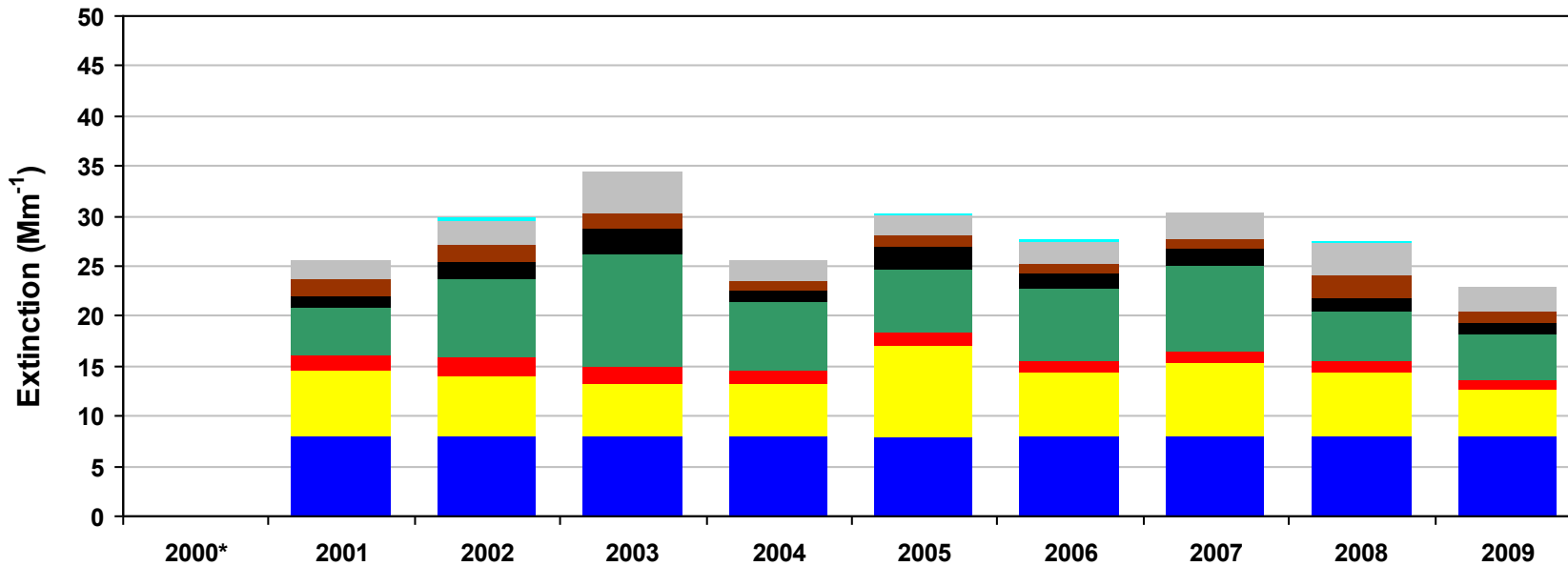
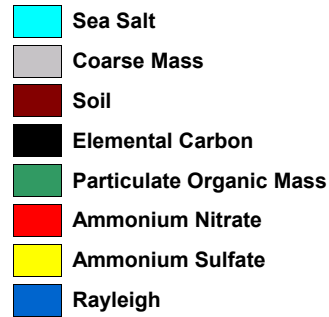
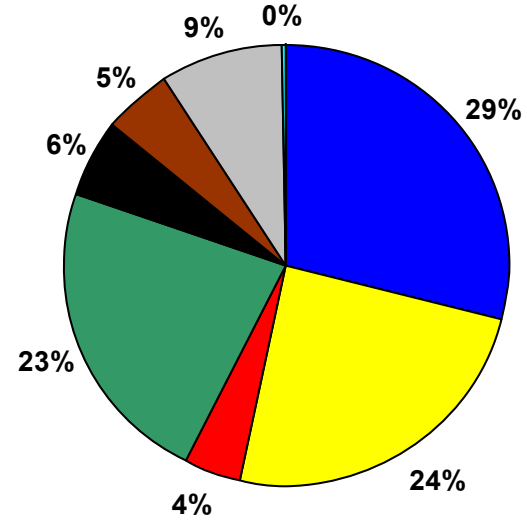


**Figure I.6-3**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 10.2 dv (9.3 - 11.6 dv)

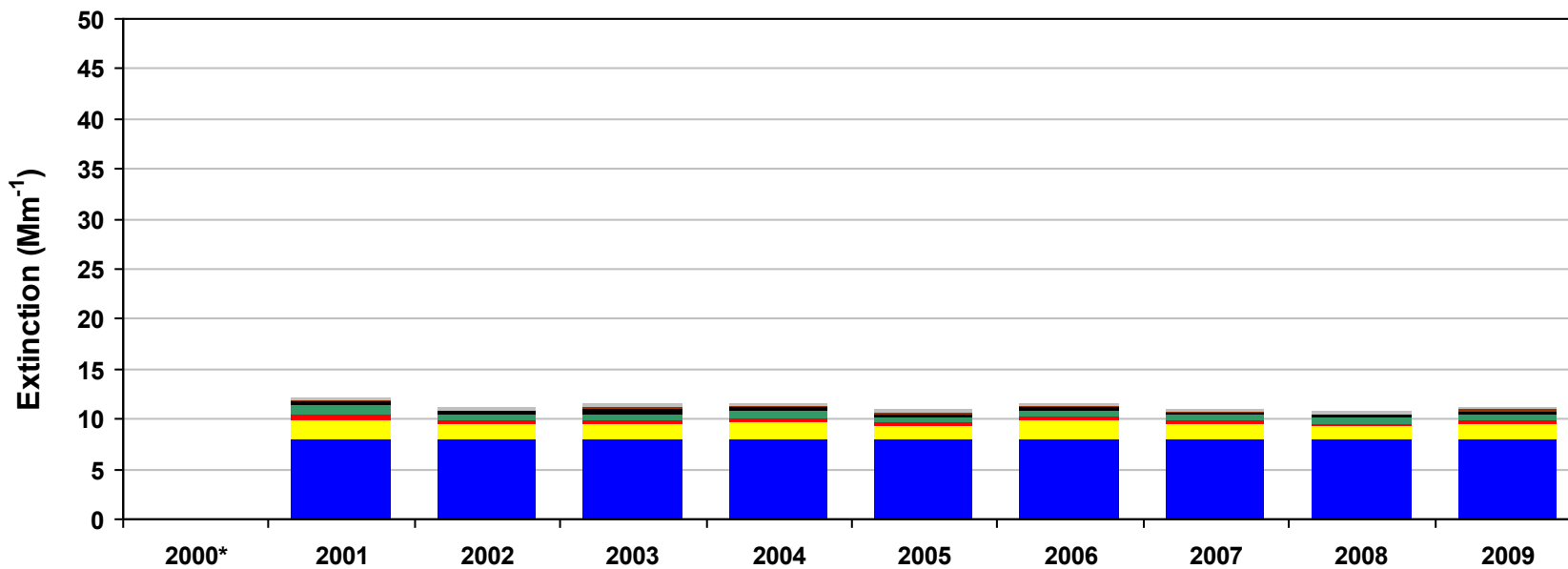
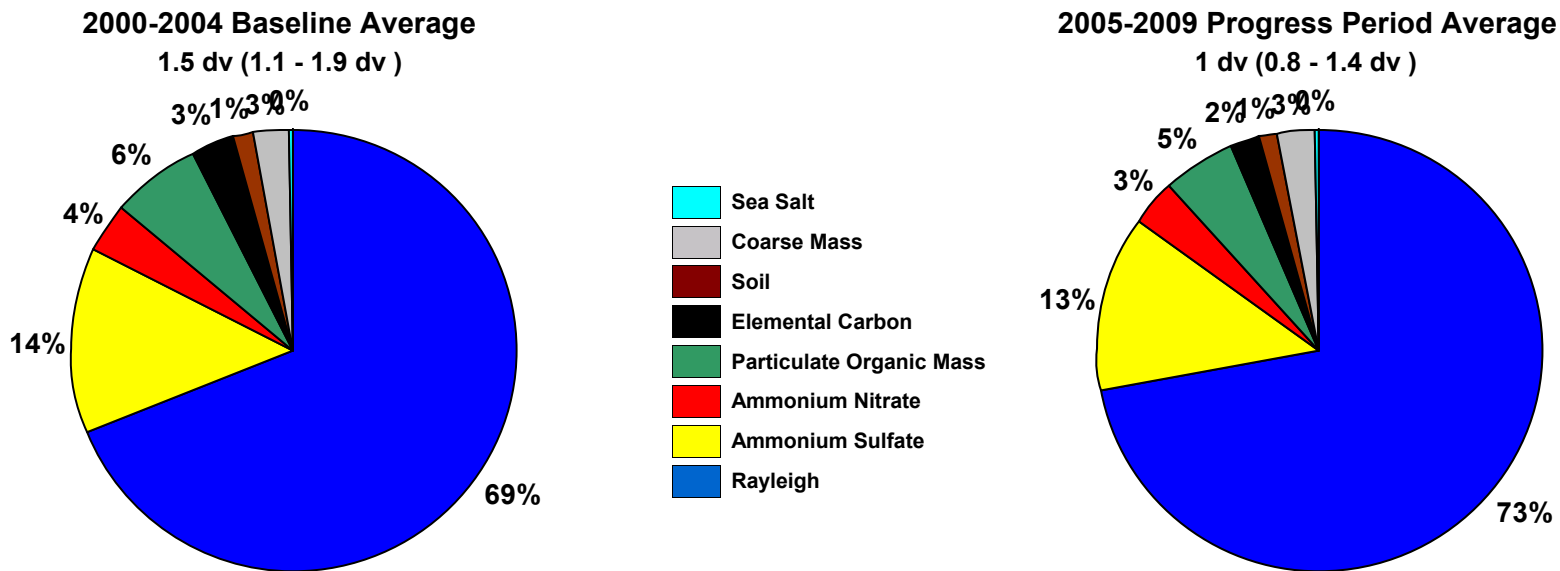


**2005-2009 Progress Period Average**  
 9.9 dv (8.2 - 10.8 dv)



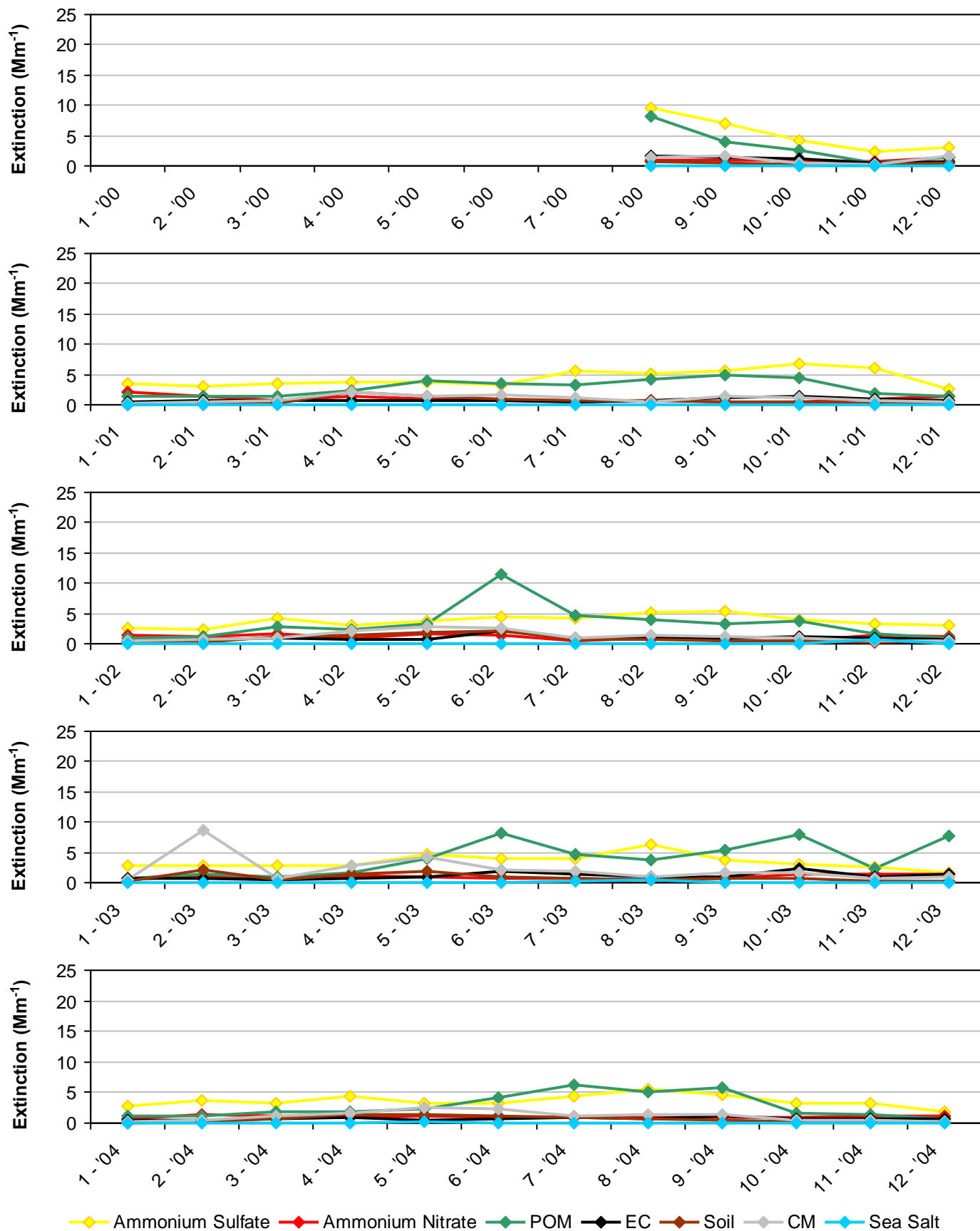
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.6-4**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**20% Least Impaired Visibility Days**



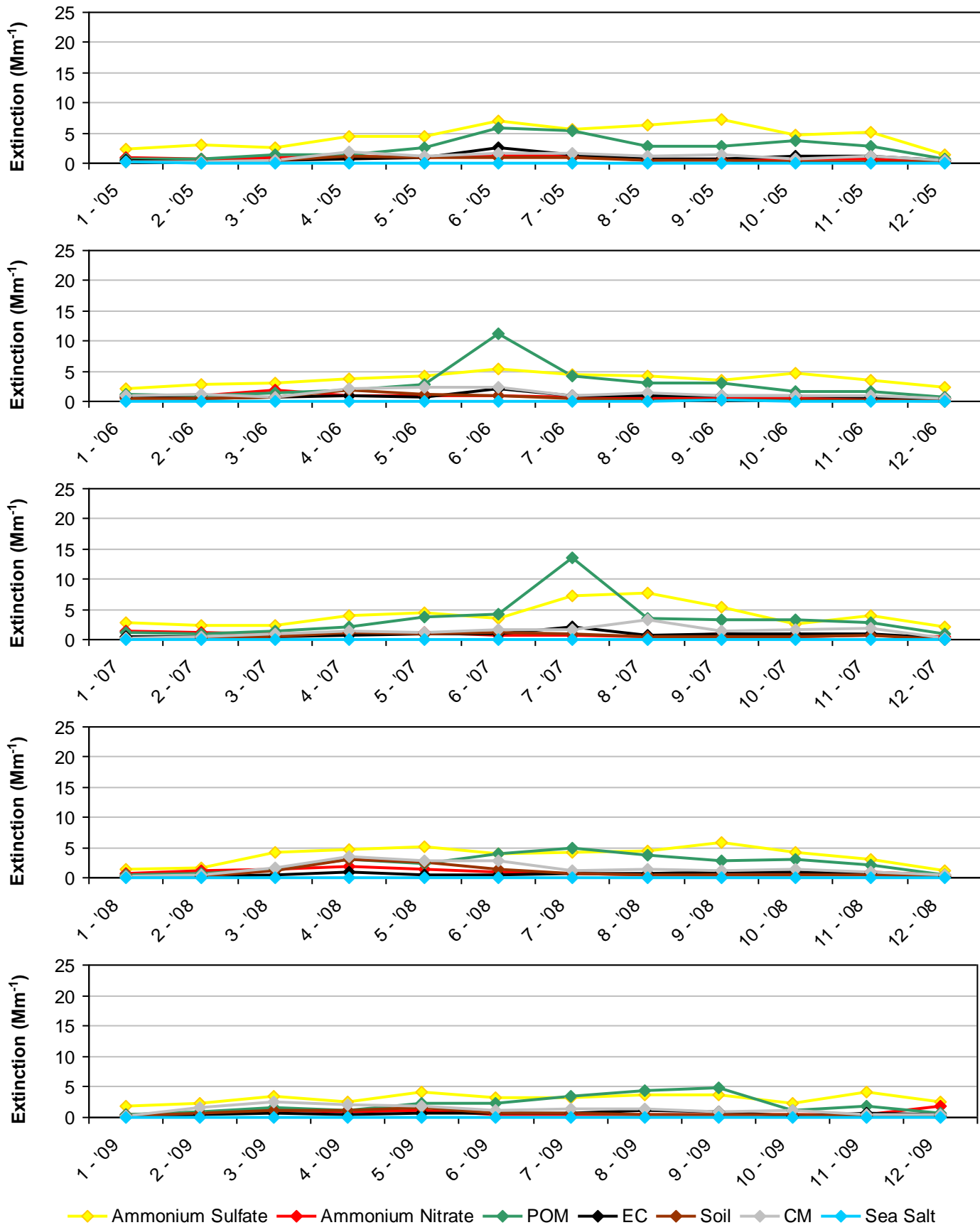
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.6-5**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**

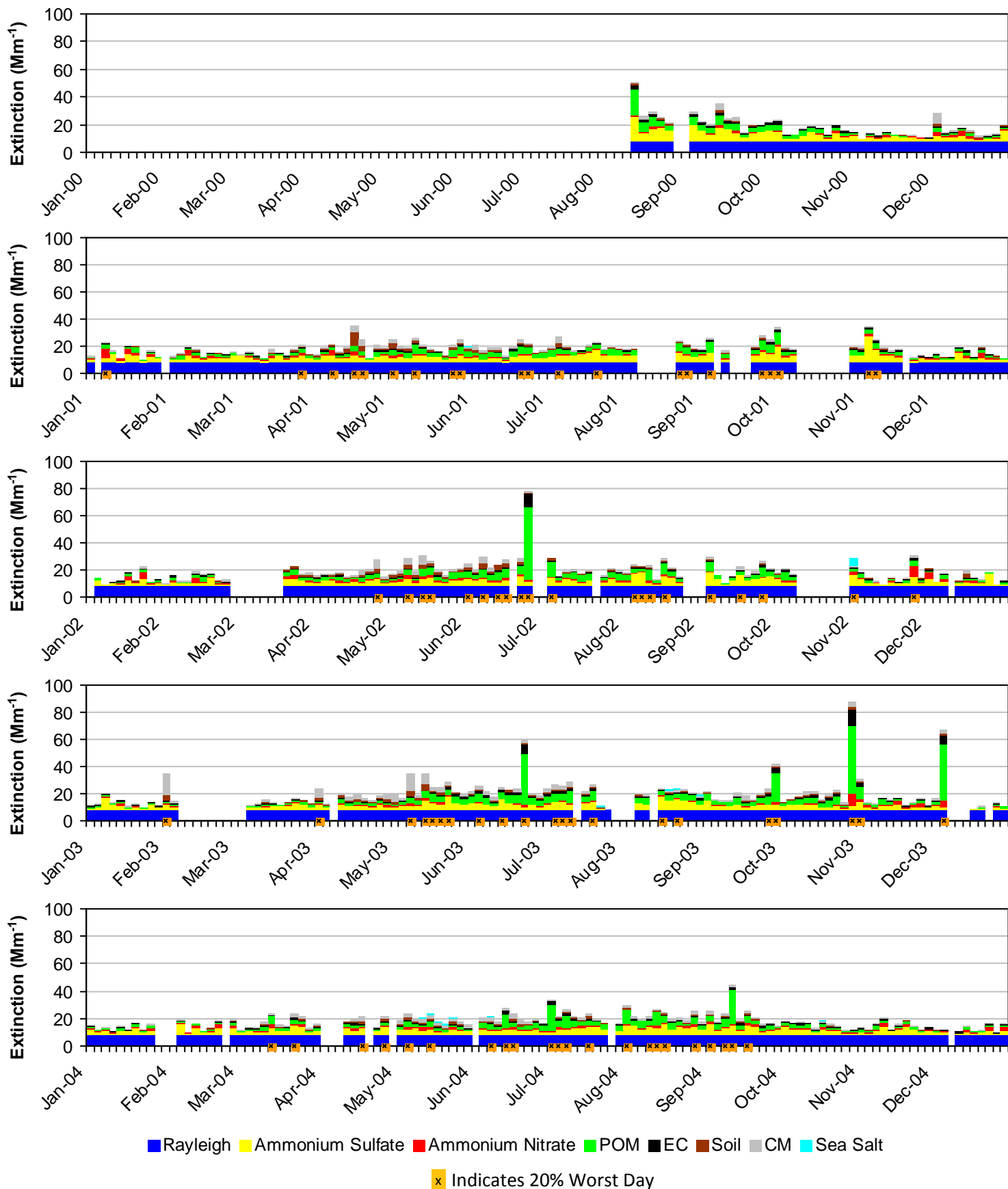


\*Note that monthly averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure I.6-6**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**

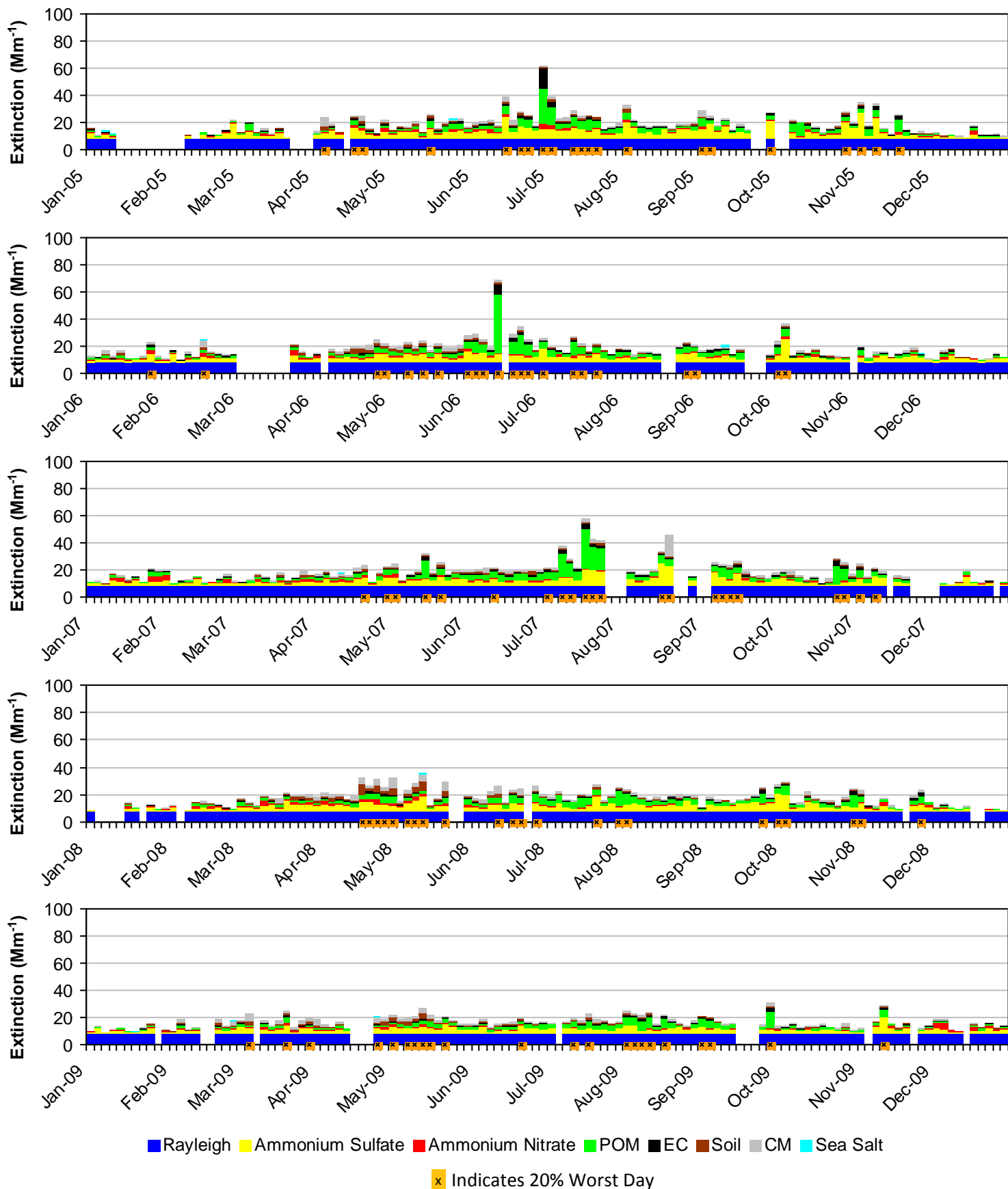


**Figure I.6-7**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure I.6-8**  
**San Pedro Parks WA, NM (SAPE1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



## I.7. WHITE MOUNTAIN WA (WHIT1)

The following tables and figures are presented in this section for the White Mountain WA represented by the WHIT1 IMPROVE Monitor:

- **Table I.7-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.7-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.7-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.7-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.7-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.7-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.7-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.7-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.7-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.



**Table I.7-1  
White Mountain WA, NM (WHIT1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

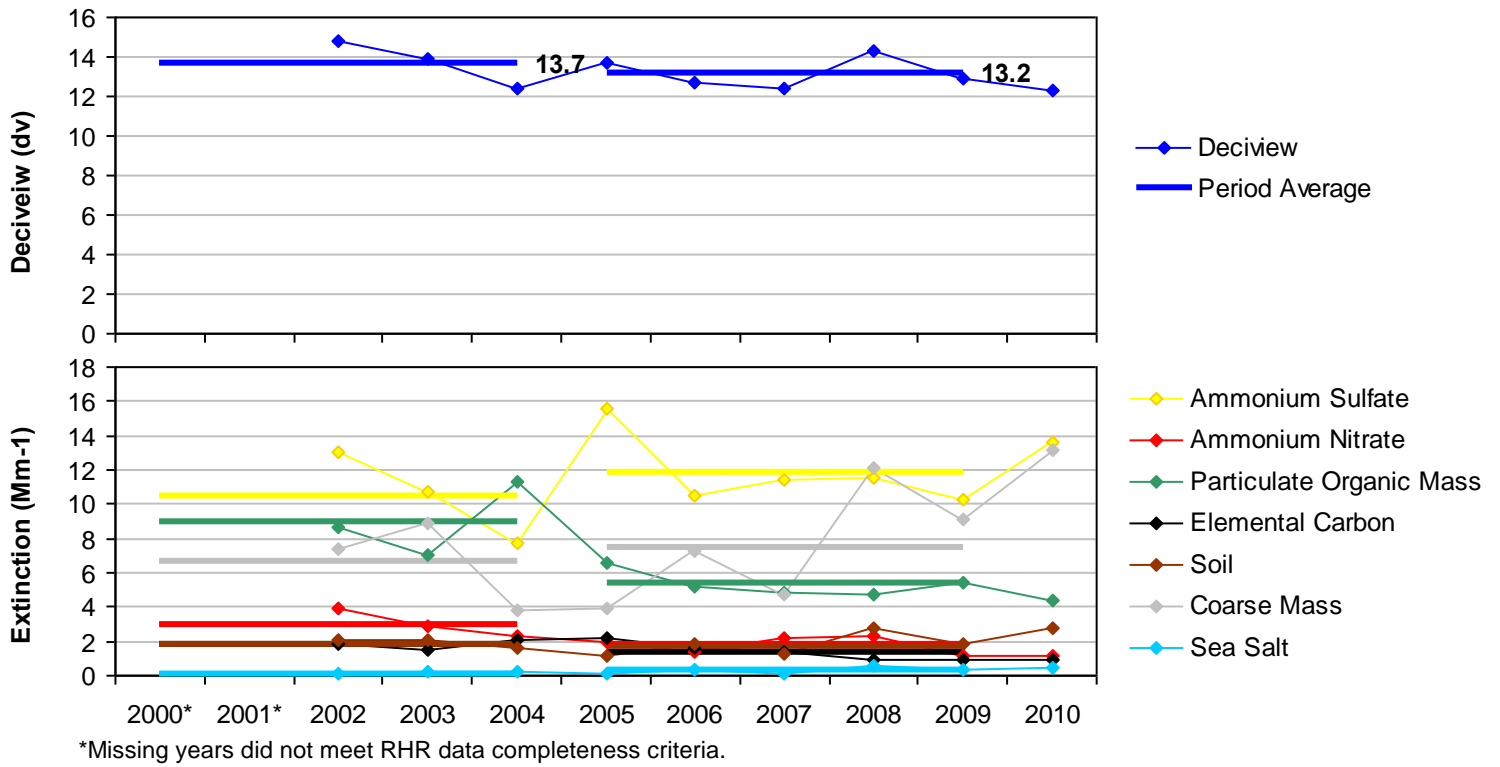
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	---	4.1	3.5	3.0	3.0	3.4	3.9	3.0	3.2	3.1	-0.1	0.4	3.6	3.3	-0.3	-8%
Worst 20% Days	---	---	14.8	13.9	12.4	13.7	12.7	12.4	14.3	12.9	12.3	-0.2	0.3	13.7	13.2	-0.5	-4%
All Days	---	---	8.9	8.7	7.4	7.8	7.8	8.1	8.2	7.7	7.3	-0.1	0.2	8.3	7.9	-0.4	-5%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	---	15.2	14.3	13.5	13.5	14.1	14.8	13.6	13.9	13.7	-0.1	0.4	14.3	14.0	-0.3	-2%
Worst 20% Days	---	---	46.0	42.2	38.1	40.4	37.3	35.0	44.0	38.3	45.4	-1.0	0.1	42.1	39.0	-3.1	-7%
All Days	---	---	26.5	25.8	22.9	23.7	23.4	23.5	25.0	23.4	24.0	-0.2	0.1	25.1	23.8	-1.3	-5%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	---	2.2	1.9	1.6	1.6	1.8	2.0	1.7	1.8	1.8	0.0	0.4	1.9	1.8	-0.1	-5%
Worst 20% Days	---	---	13.1	10.7	7.8	15.5	10.5	11.4	11.6	10.2	13.6	-0.1	0.4	10.5	11.9	1.4	13%
All Days	---	---	6.1	5.7	4.4	6.4	5.4	5.9	5.9	5.2	5.8	-0.1	0.4	5.4	5.8	0.4	7%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.5	0.4	0.4	0.3	0.3	0.5	0.3	0.4	0.3	0.0	0.3	0.5	0.4	-0.1	-20%
Worst 20% Days	---	---	3.9	2.9	2.3	1.9	1.4	2.2	2.3	1.2	1.2	-0.3	0.0	3.0	1.8	-1.2	-40%
All Days	---	---	1.5	1.3	1.3	1.1	0.9	1.1	1.1	0.8	0.7	-0.1	0.0	1.3	1.0	-0.3	-23%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	---	1.6	1.2	1.2	0.9	1.1	1.5	1.0	1.1	1.3	0.0	0.1	1.3	1.1	-0.2	-15%
Worst 20% Days	---	---	8.6	7.0	11.3	6.6	5.2	4.8	4.7	5.5	4.4	-0.6	0.0	9.0	5.4	-3.6	-40%
All Days	---	---	4.0	3.6	4.3	3.1	2.9	3.2	2.8	3.3	2.8	-0.1	0.1	4.0	3.1	-0.9	-23%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.7	0.6	0.5	0.6	0.5	0.5	0.4	0.3	0.2	0.0	0.0	0.6	0.4	-0.2	-33%
Worst 20% Days	---	---	1.9	1.5	2.1	2.2	1.7	1.3	1.0	1.0	0.9	-0.2	0.1	1.8	1.4	-0.4	-22%
All Days	---	---	1.1	1.0	1.1	1.2	1.0	1.0	0.7	0.7	0.6	-0.1	0.0	1.1	0.9	-0.2	-18%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.2	0.2	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.0	0.2	0.2	0.2	0.0	0%
Worst 20% Days	---	---	2.0	2.1	1.6	1.1	1.8	1.3	2.7	1.9	2.8	0.0	0.6	1.9	1.8	-0.1	-5%
All Days	---	---	1.0	1.0	0.7	0.6	0.9	0.7	1.2	0.9	1.0	0.0	0.5	0.9	0.9	0.0	0%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	---	1.0	1.1	0.5	0.9	1.0	1.0	0.9	1.0	0.9	0.0	0.5	0.9	1.0	0.1	11%
Worst 20% Days	---	---	7.4	8.9	3.8	3.9	7.3	4.7	12.1	9.2	13.1	0.4	0.2	6.7	7.4	0.7	10%
All Days	---	---	3.6	4.1	2.0	2.3	3.2	2.6	4.1	3.4	4.0	0.1	0.4	3.2	3.1	-0.1	-3%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Worst 20% Days	---	---	0.1	0.2	0.2	0.1	0.3	0.1	0.6	0.4	0.5	0.0	0.1	0.2	0.3	0.1	50%
All Days	---	---	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.4	0.1	0.1	0.0	0%

\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

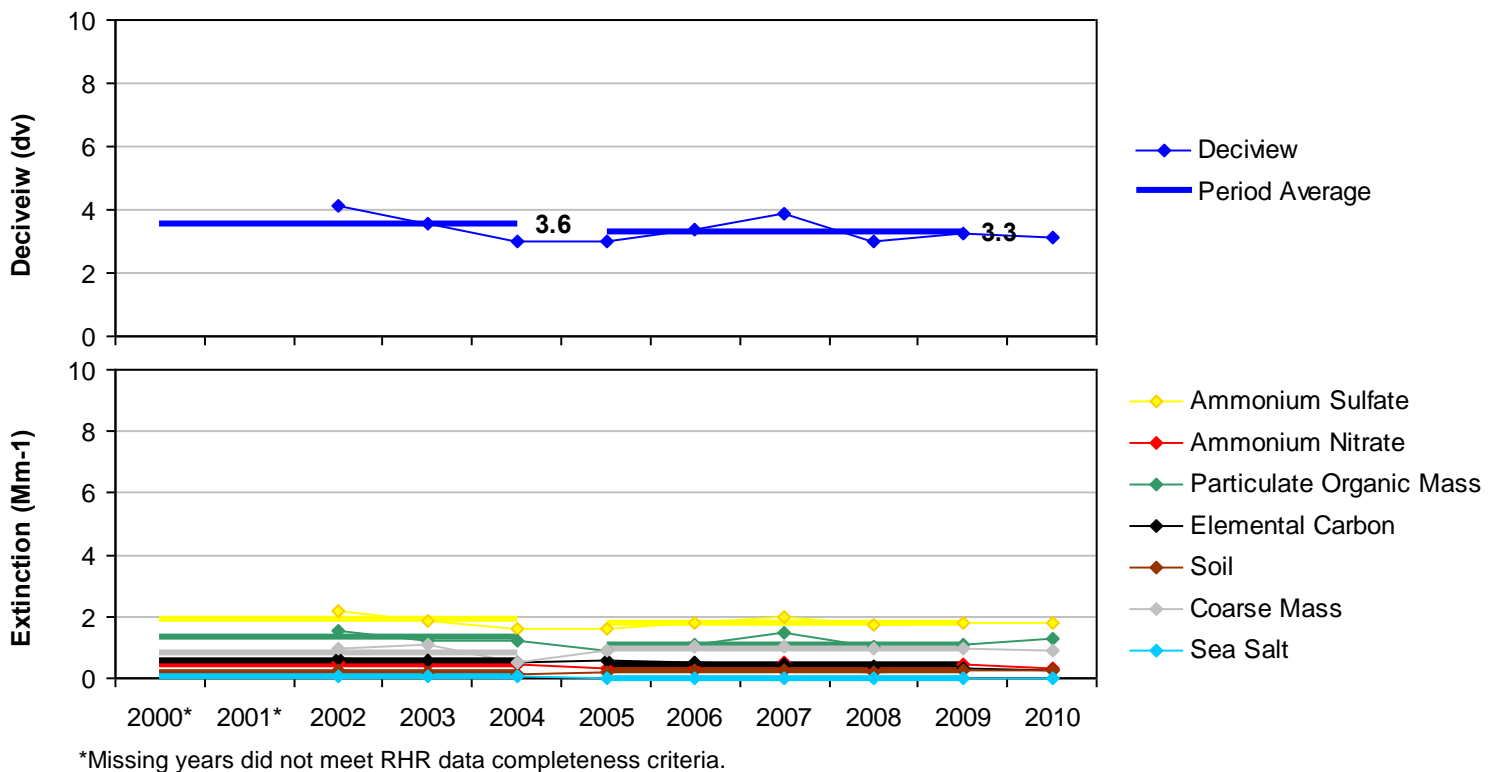
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

---" Indicates a missing year that did not meet RHR data completeness criteria.

**Figure I.7-1**  
**White Mountain WA, NM (WHIT1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

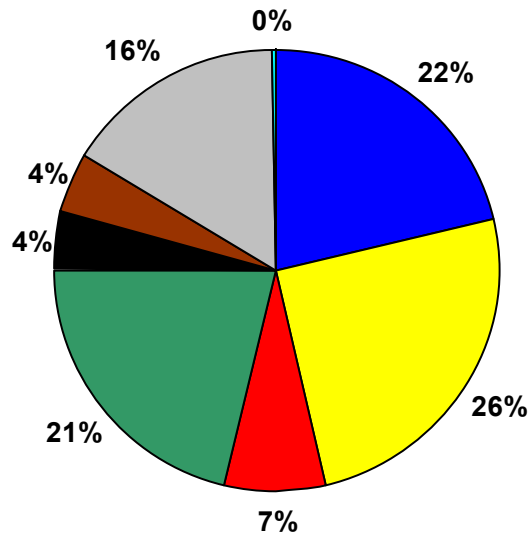


**Figure I.7-2**  
**White Mountain WA, NM (WHIT1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

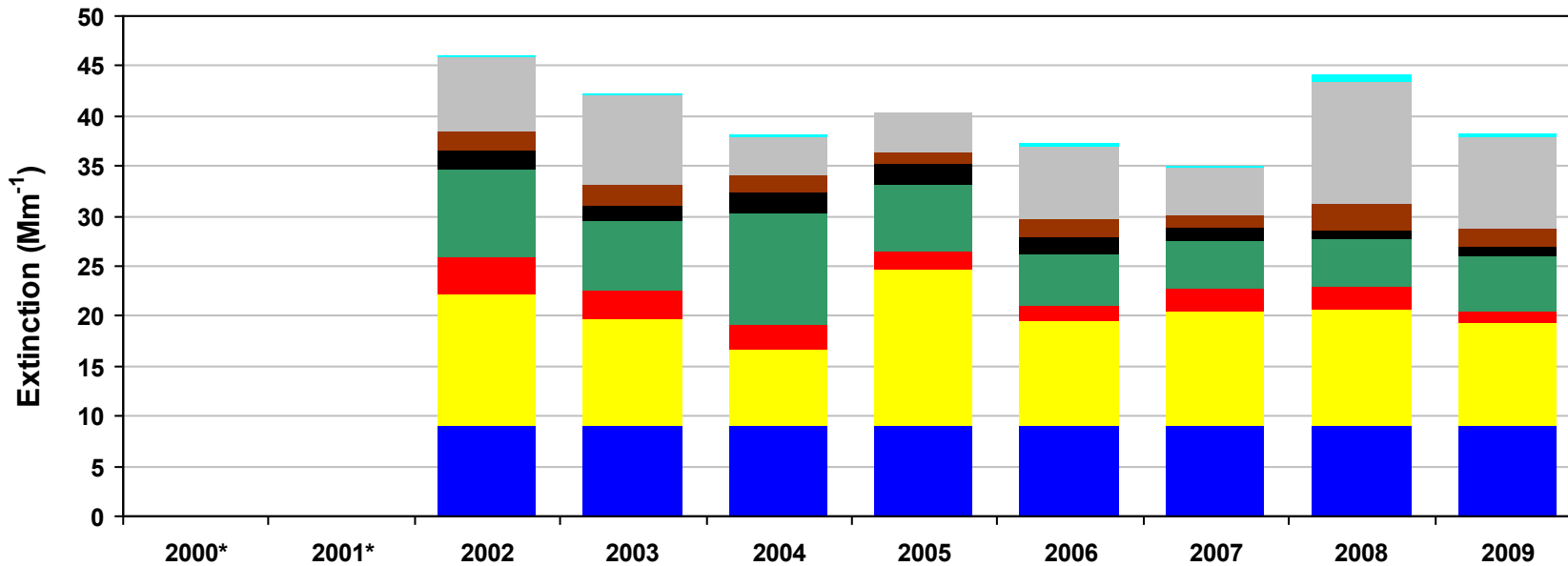
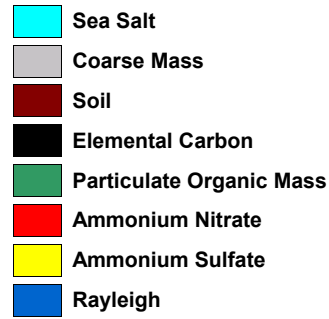
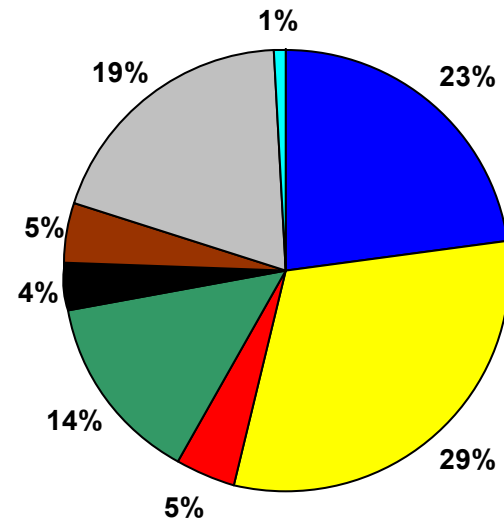


**Figure I.7-3**  
**White Mountain WA, NM (WHIT1 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 13.7 dv (12.4 - 14.8 dv )

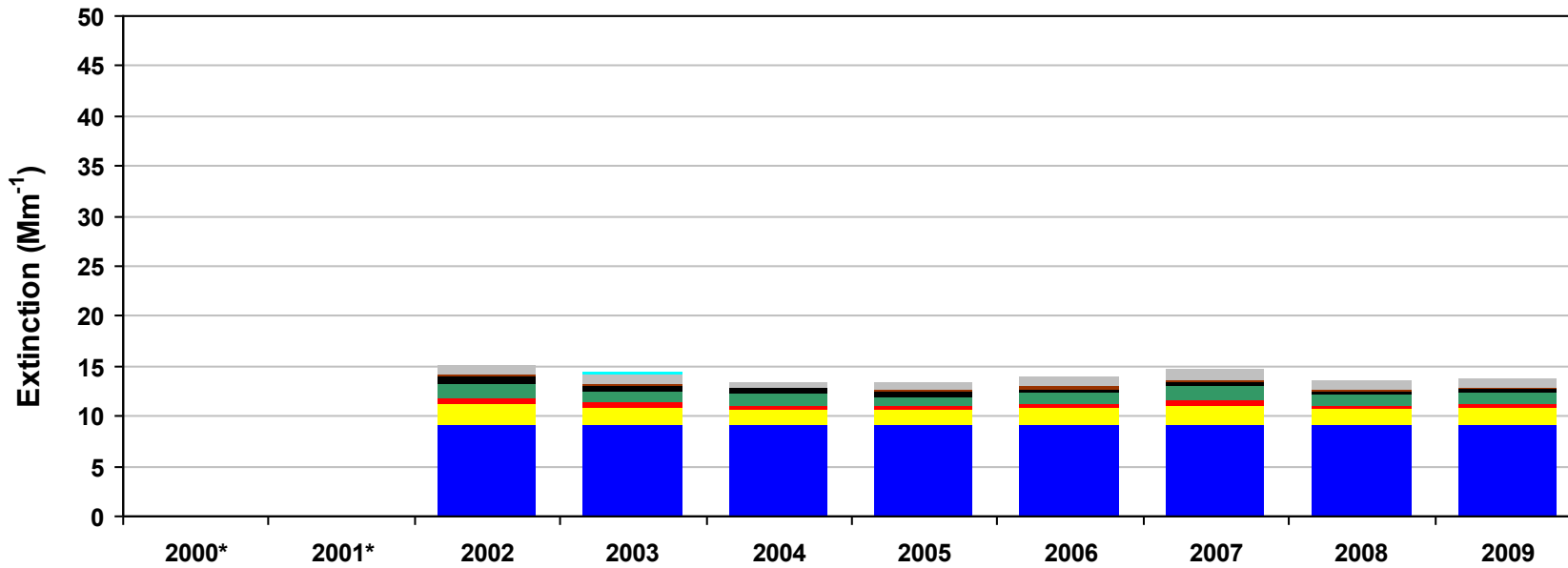
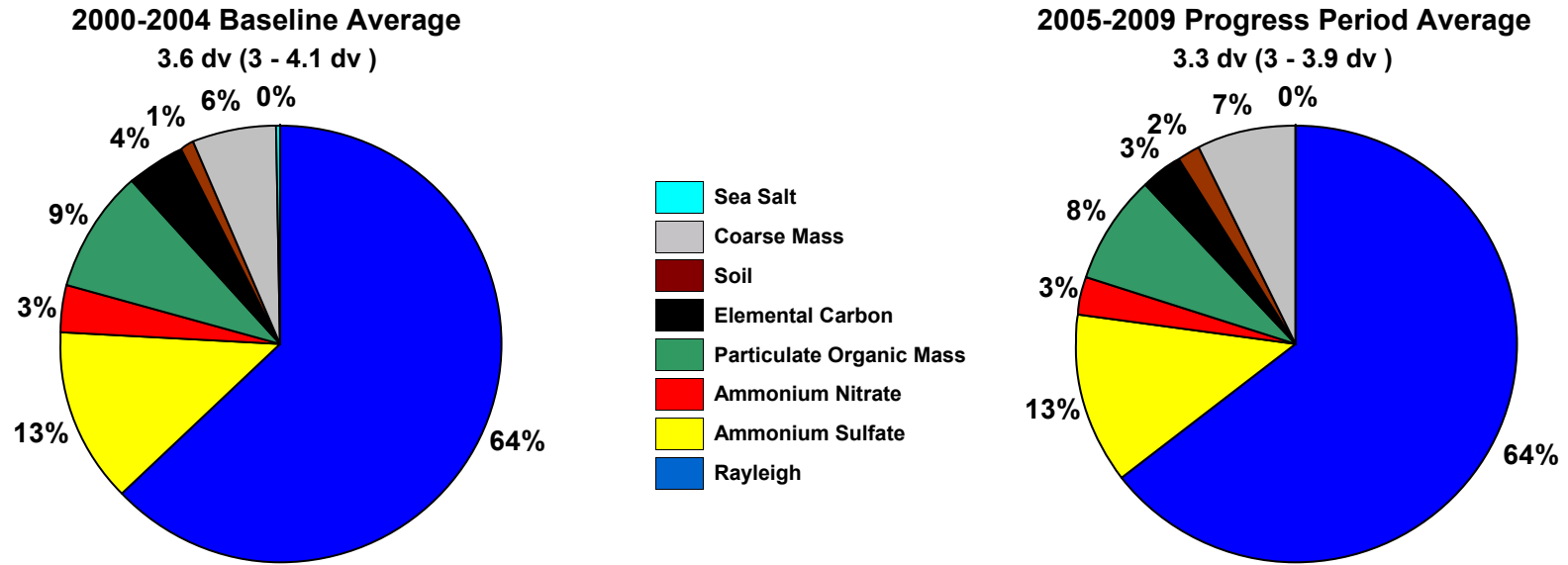


**2005-2009 Progress Period Average**  
 13.2 dv (12.4 - 14.3 dv )



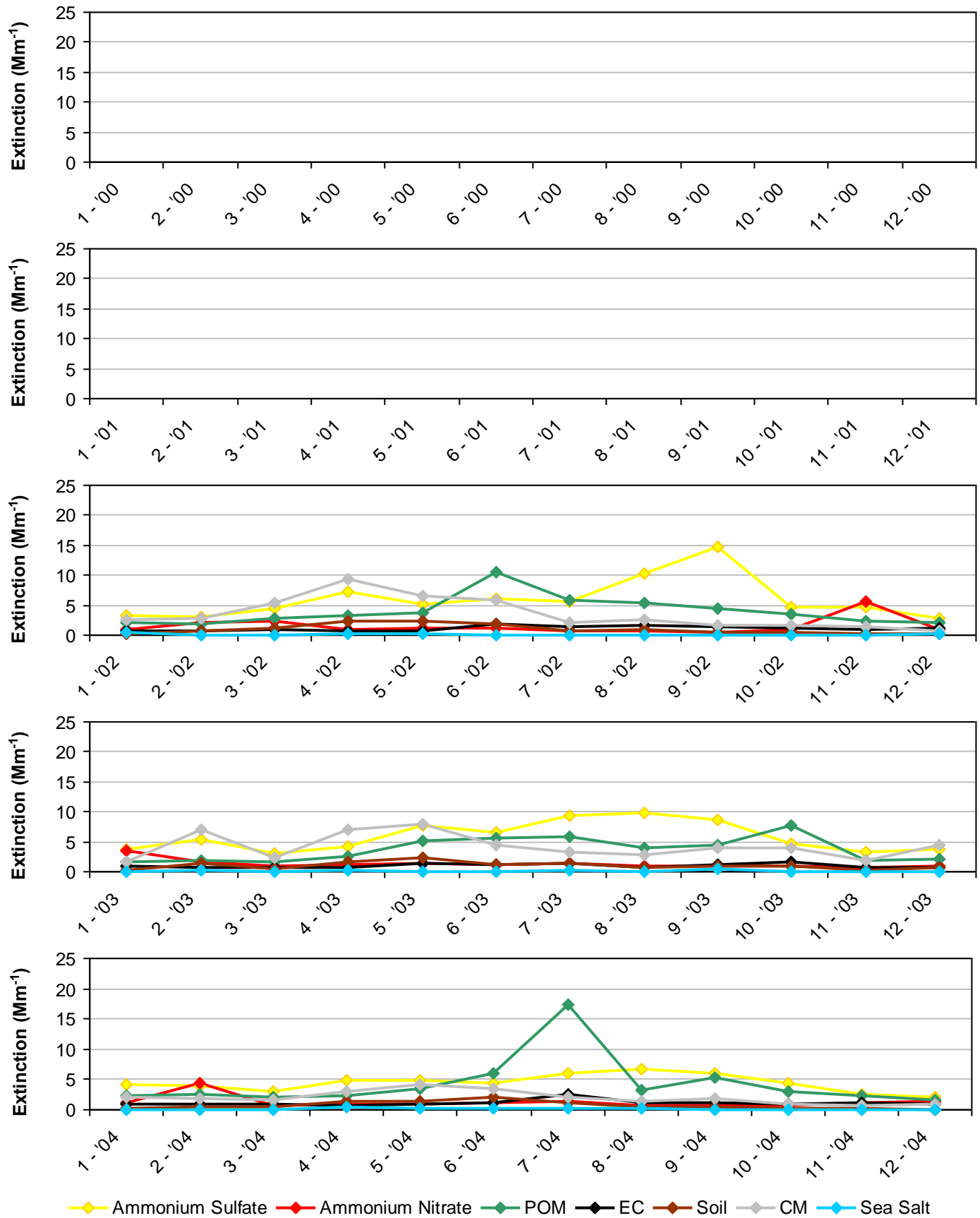
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.7-4**  
**White Mountain WA, NM (WHIT1 Site)**  
**20% Least Impaired Visibility Days**



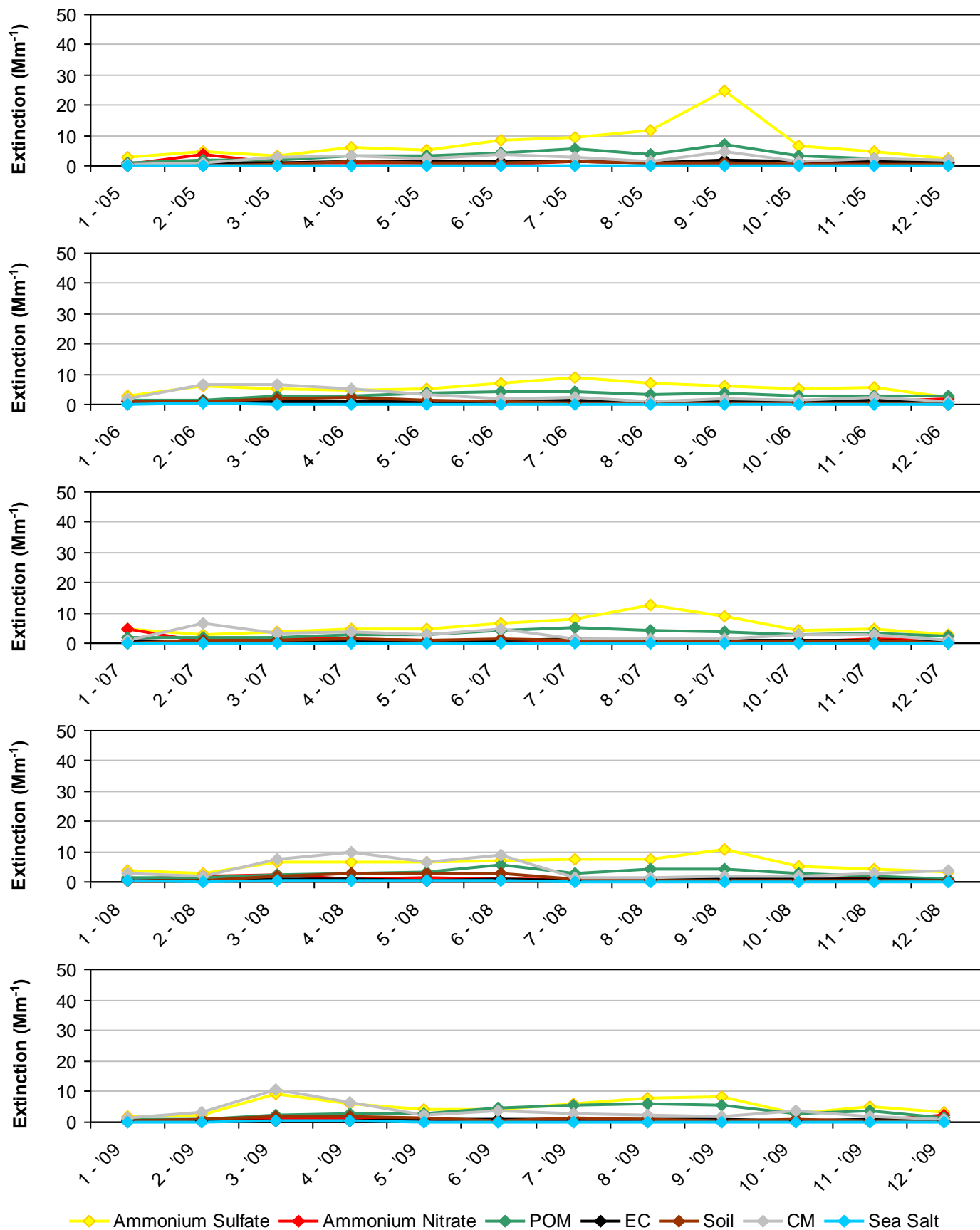
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.7-5**  
**White Mountain WA, NM (WHIT1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**

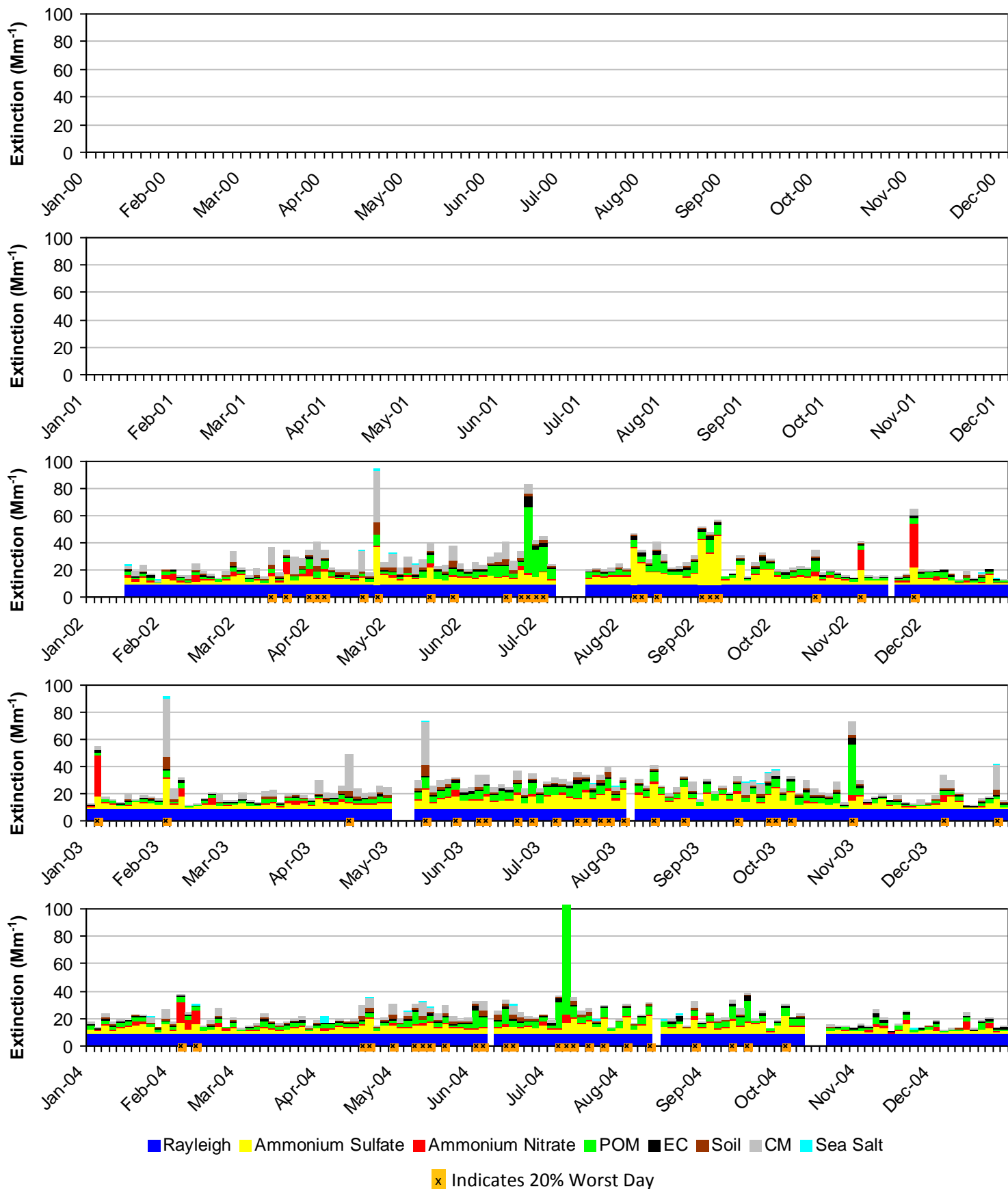


\*Note that monthly averages for the years 2000 and 2001 are shown here, but these years did not meet RHR data completeness criteria.

**Figure I.7-6**  
**White Mountain WA, NM (WHIT1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**

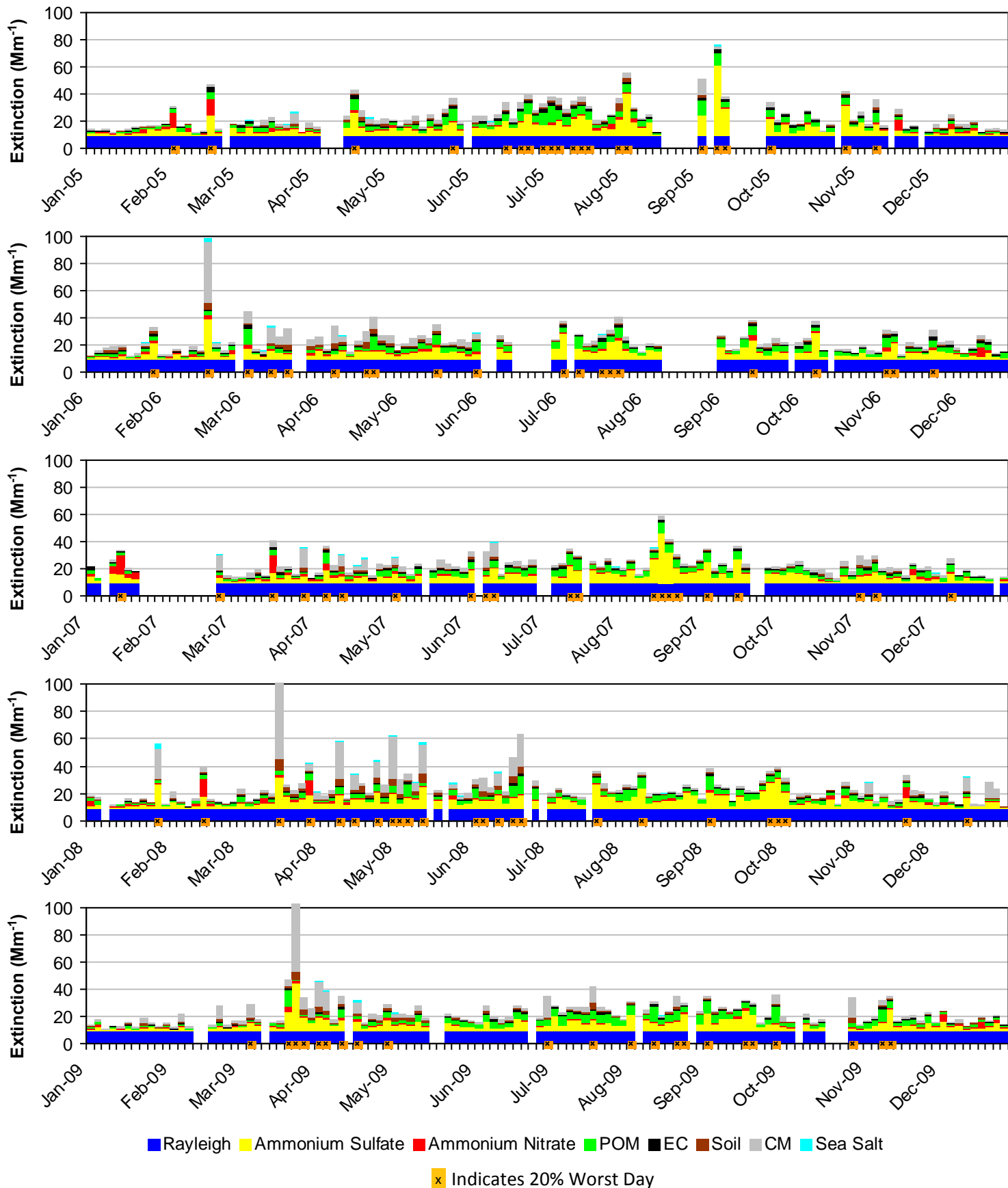


**Figure I.7-7**  
**White Mountain WA, NM (WHIT1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the years 2000 and 2001 are shown here, but these years did not meet RHR data completeness criteria.

**Figure I.7-8**  
**White Mountain WA, NM (WHIT1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**





## I.8. WHEELER PEAK WA AND PECOS WA (WHPE1)

The following tables and figures are presented in this section for the Bandelier NM represented by the WHPE1 IMPROVE Monitor:

- **Table I.8-1: Annual Averages, 5-Year Period Averages, and Trends:** Table of averages and other metrics for the 20% least impaired days, the 20% most impaired days, and all sampled days is presented.
- **Figure I.8-1: Annual and 5-Year Period Averages for the 20% Most Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.8-2: Annual and 5-Year Period Averages for the 20% Least Impaired Visibility Days:** Line graphs depicting annual and period averages by component are presented.
- **Figure I.8-3: 20% Most Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component for the 20% most impaired days are presented.
- **Figure I.8-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure I.8-5: 2000-2004 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the baseline period are presented.
- **Figure I.8-6: 2005-2009 Monthly Average Aerosol Extinction, All Monitored Days:** Line graphs depicting monthly averages by year and component for the progress period are presented.
- **Figure I.8-7: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the baseline period are presented.
- **Figure I.8-8: 2000-2004 Progress Period Extinction, All Sampled Days:** Stacked bar charts depicting daily averages by year and component for the progress period are presented.

**Table I.8-1  
Wheeler Peak and Pecos Was, NM (WHPE1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

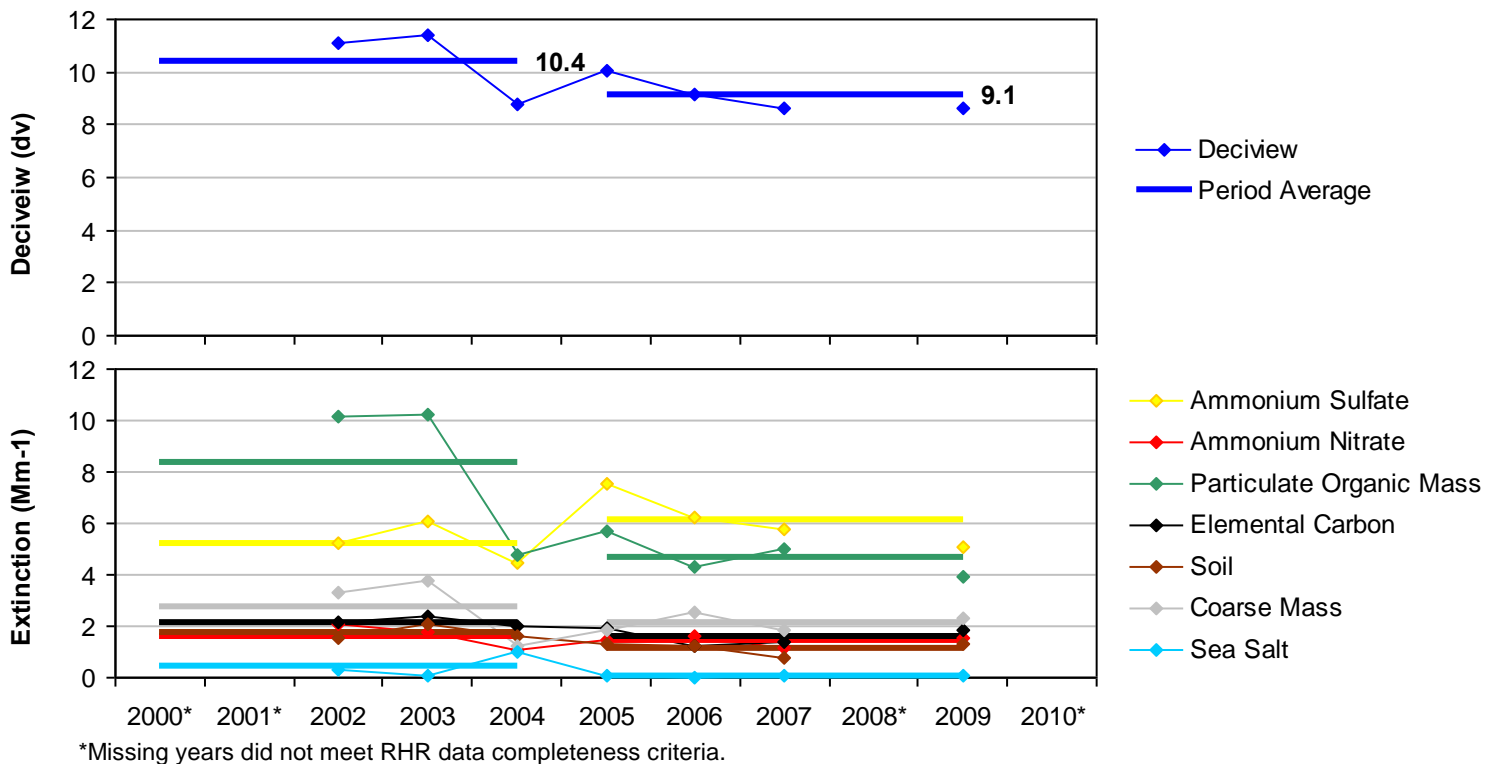
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	---	1.1	1.5	1.0	0.6	1.3	1.2	---	0.4	---	-0.1	0.2	1.2	0.9	-0.3	-25%
Worst 20% Days	---	---	11.1	11.4	8.7	10.1	9.2	8.6	---	8.6	---	-0.5	0.0	10.4	9.1	-1.3	-13%
All Days	---	---	6.0	6.0	5.0	5.3	5.3	5.0	---	4.5	---	-0.2	0.0	5.7	5.0	-0.7	-12%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	---	11.2	11.7	11.1	10.7	11.4	11.4	---	10.4	---	-0.1	0.2	11.3	11.0	-0.3	-3%
Worst 20% Days	---	---	32.7	34.4	24.2	27.9	25.1	23.9	---	24.0	---	-1.6	0.0	30.4	25.2	-5.2	-17%
All Days	---	---	19.8	19.9	17.2	18.0	17.7	17.1	---	16.4	---	-0.5	0.0	19.0	17.3	-1.7	-9%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	---	1.2	1.1	1.2	1.1	1.5	1.3	---	1.3	---	0.0	0.2	1.2	1.3	0.1	8%
Worst 20% Days	---	---	5.3	6.1	4.5	7.6	6.3	5.7	---	5.1	---	0.0	0.5	5.3	6.2	0.9	17%
All Days	---	---	3.4	3.4	3.1	4.0	3.6	3.4	---	3.2	---	0.0	0.4	3.3	3.6	0.3	9%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.4	0.3	0.4	0.2	0.2	0.3	---	0.2	---	0.0	0.1	0.3	0.3	0.0	0%
Worst 20% Days	---	---	2.1	1.8	1.1	1.4	1.6	1.2	---	1.5	---	-0.1	0.2	1.6	1.4	-0.2	-13%
All Days	---	---	1.1	1.0	0.9	0.8	0.9	0.9	---	0.8	---	0.0	0.0	1.0	0.8	-0.2	-20%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.6	1.0	0.8	0.6	0.9	0.8	---	0.4	---	0.0	0.3	0.8	0.7	-0.1	-13%
Worst 20% Days	---	---	10.1	10.2	4.7	5.7	4.3	5.0	---	3.9	---	-0.9	0.0	8.4	4.7	-3.7	-44%
All Days	---	---	3.7	3.9	2.5	2.5	2.5	2.5	---	1.9	---	-0.3	0.0	3.4	2.3	-1.1	-32%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.4	0.4	0.3	0.2	0.4	0.3	---	0.2	---	0.0	0.1	0.4	0.3	-0.1	-25%
Worst 20% Days	---	---	2.2	2.4	2.0	2.0	1.2	1.4	---	1.8	---	-0.1	0.0	2.2	1.6	-0.6	-27%
All Days	---	---	1.1	1.1	1.0	1.0	0.9	0.7	---	0.7	---	-0.1	0.0	1.0	0.8	-0.2	-20%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.1	0.1	0.1	0.1	0.1	0.1	---	0.1	---	0.0	0.2	0.1	0.1	0.0	0%
Worst 20% Days	---	---	1.6	2.1	1.6	1.3	1.2	0.7	---	1.3	---	-0.1	0.1	1.7	1.1	-0.6	-35%
All Days	---	---	0.8	0.8	0.8	0.5	0.6	0.5	---	0.6	---	0.0	0.1	0.8	0.5	-0.3	-38%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.5	0.6	0.4	0.4	0.3	0.5	---	0.2	---	0.0	0.1	0.5	0.3	-0.2	-40%
Worst 20% Days	---	---	3.3	3.8	1.2	1.9	2.5	1.9	---	2.3	---	-0.1	0.3	2.8	2.1	-0.7	-25%
All Days	---	---	1.7	1.7	0.8	1.1	1.2	1.2	---	1.1	---	-0.1	0.1	1.4	1.1	-0.3	-21%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	---	0.1	0.0	0.0	0.0	0.0	0.0	---	0.0	---	0.0	0.0	0.1	0.0	-0.1	-100%
Worst 20% Days	---	---	0.3	0.1	1.0	0.1	0.0	0.1	---	0.1	---	0.0	0.3	0.5	0.1	-0.4	-80%
All Days	---	---	0.1	0.0	0.2	0.0	0.0	0.0	---	0.0	---	0.0	0.1	0.1	0.0	-0.1	-100%

\*Values highlighted in blue (red) indicate statistically significant decreasing (increasing) annual trend. Significance is measured at the 85% confidence level (p-value ≤0.15).

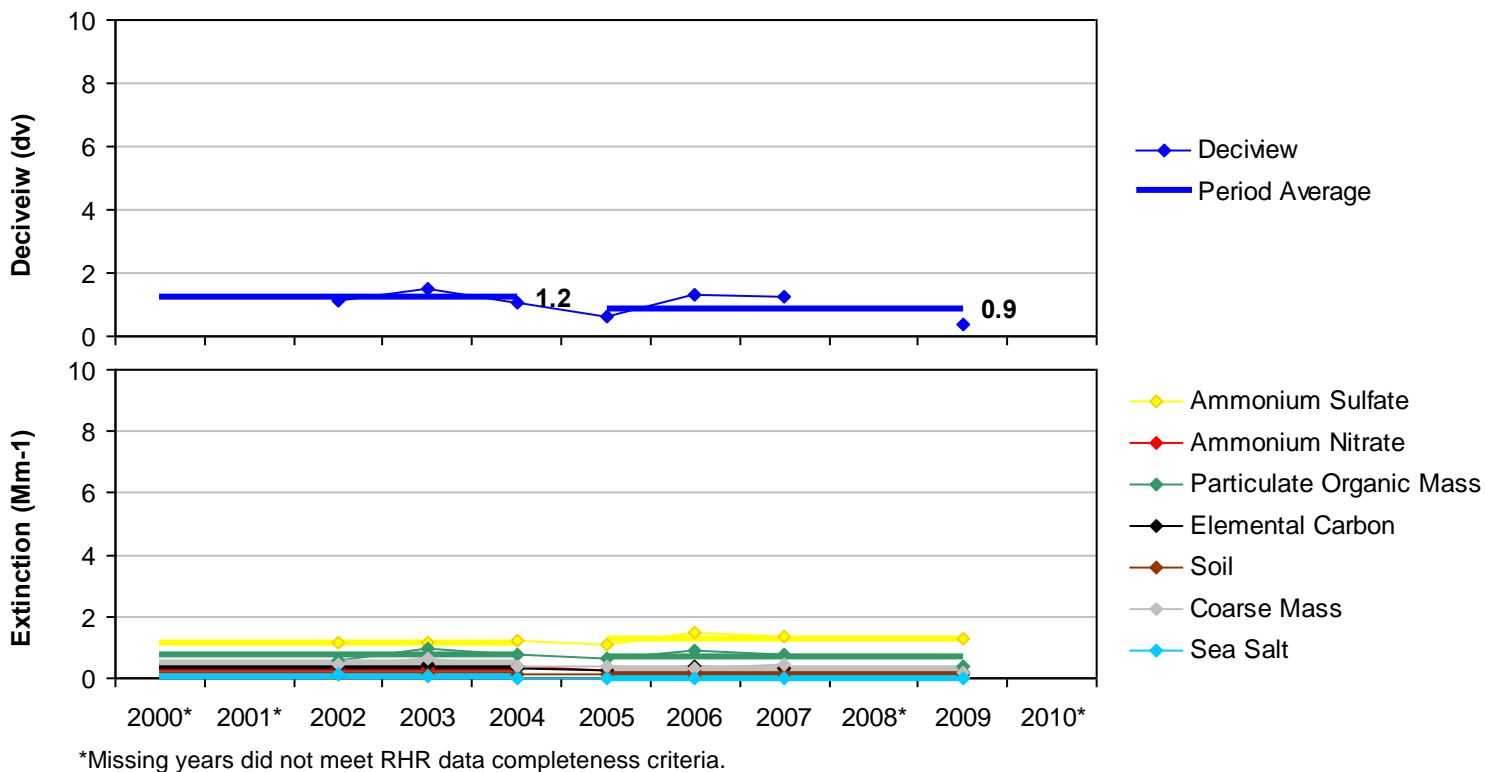
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

---" Indicates a missing year that did not meet RHR data completeness criteria.

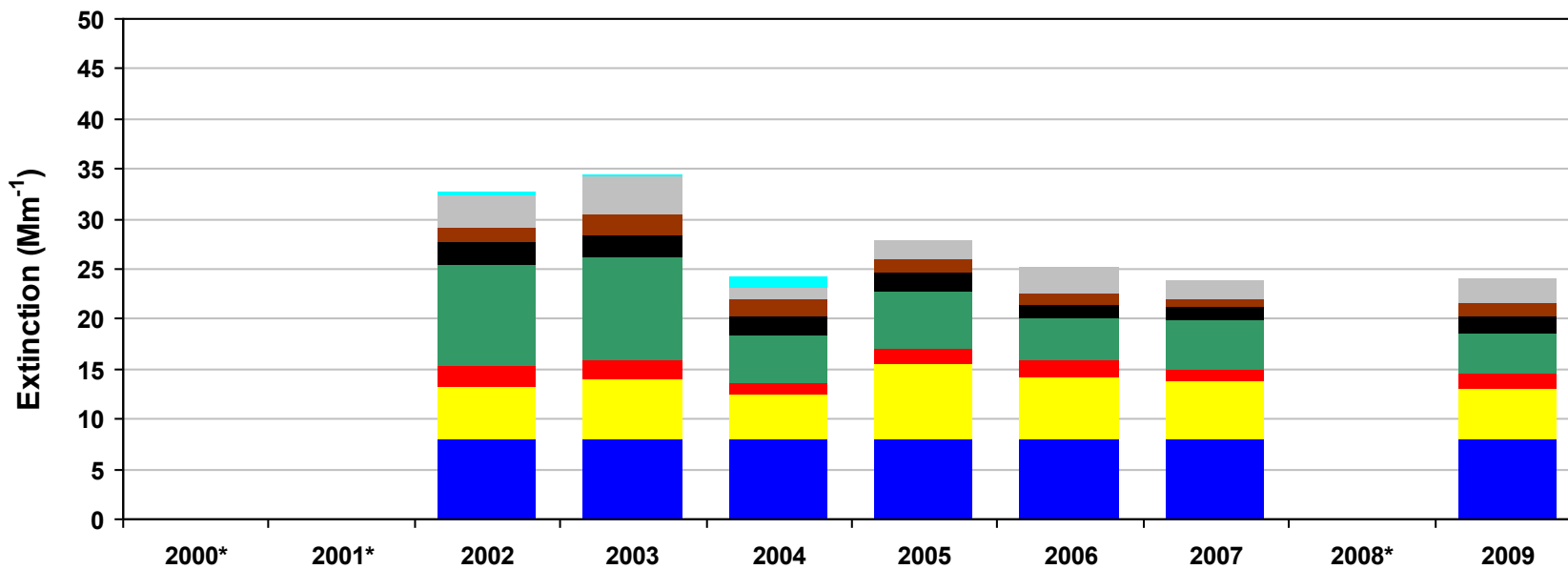
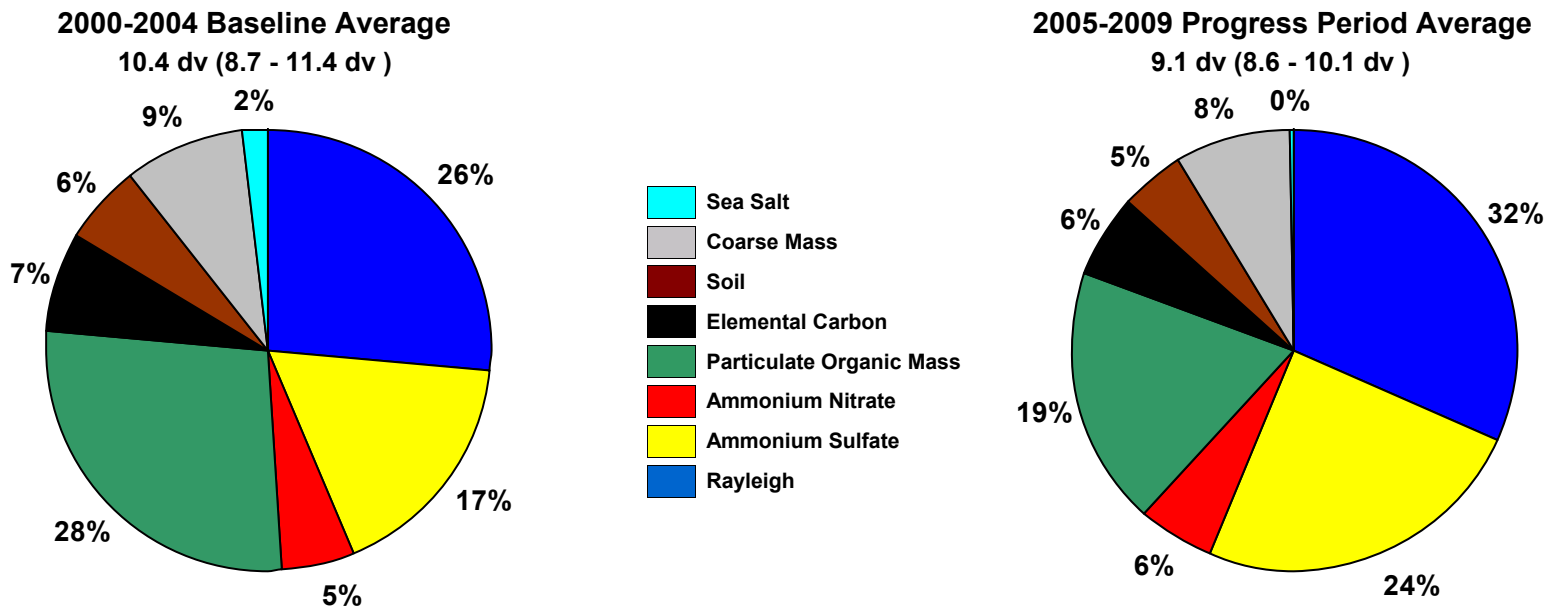
**Figure I.8-1**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**



**Figure I.8-2**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

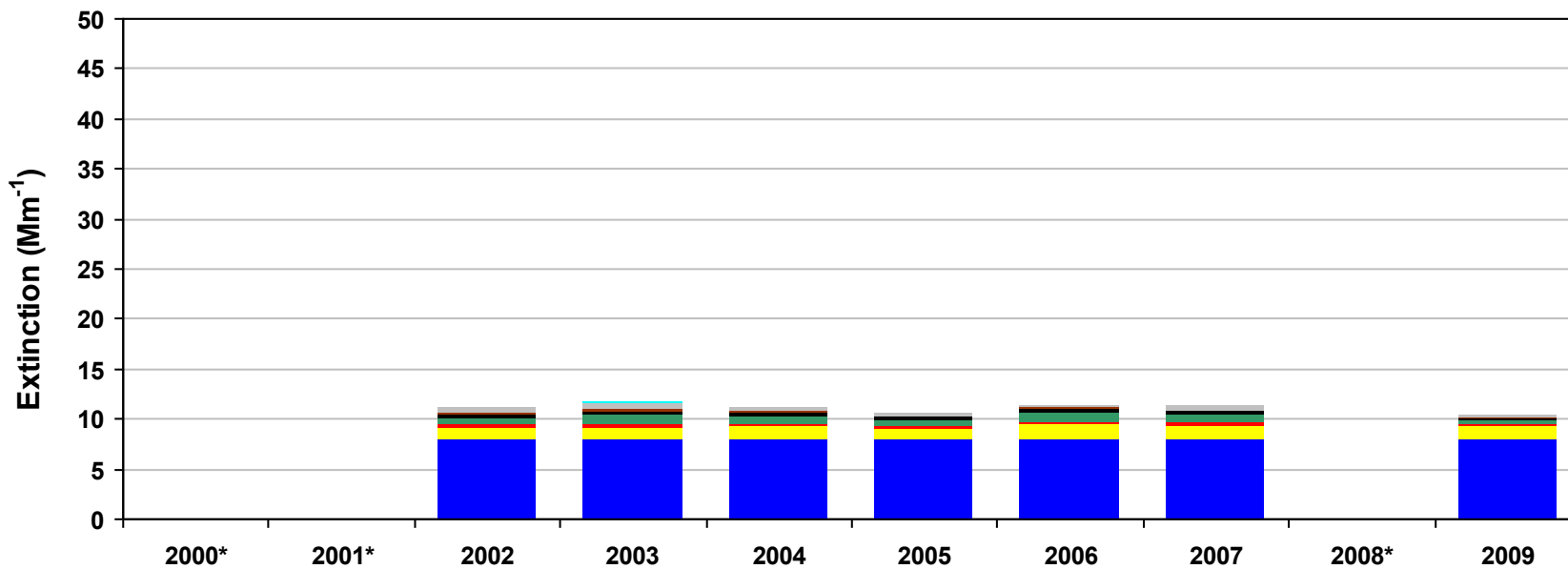
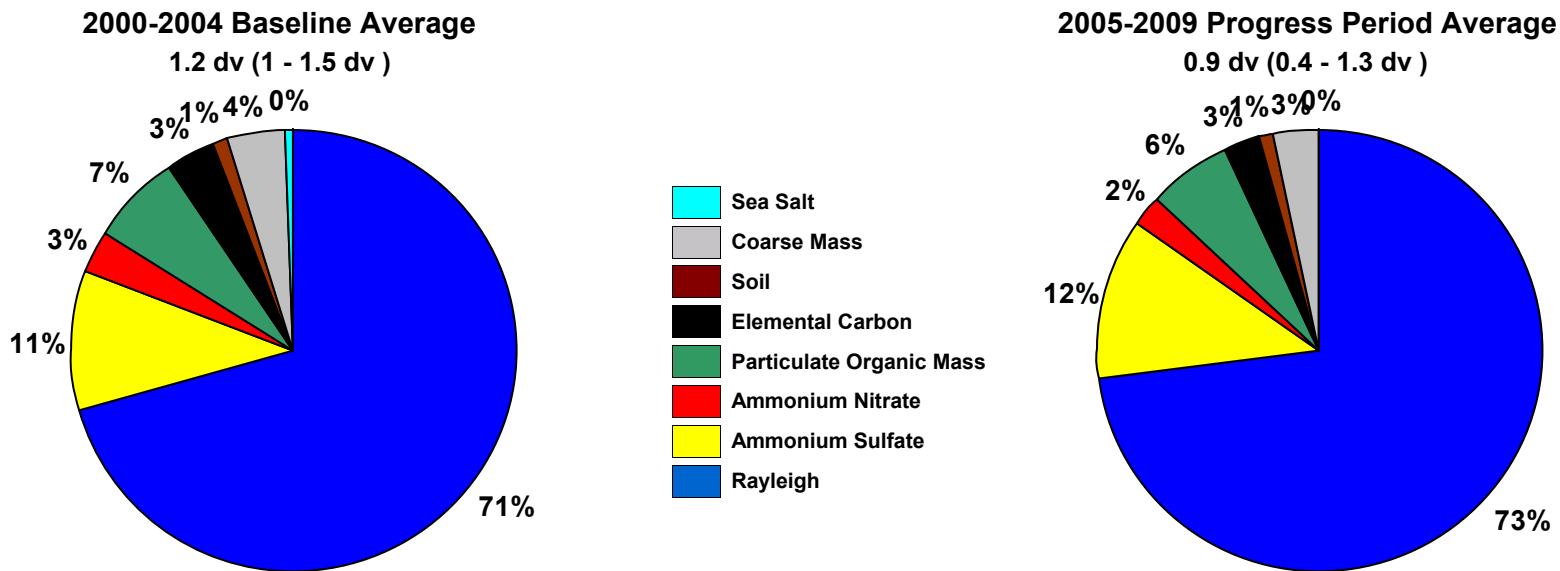


**Figure I.8-3**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**20% Most Impaired Visibility Days**



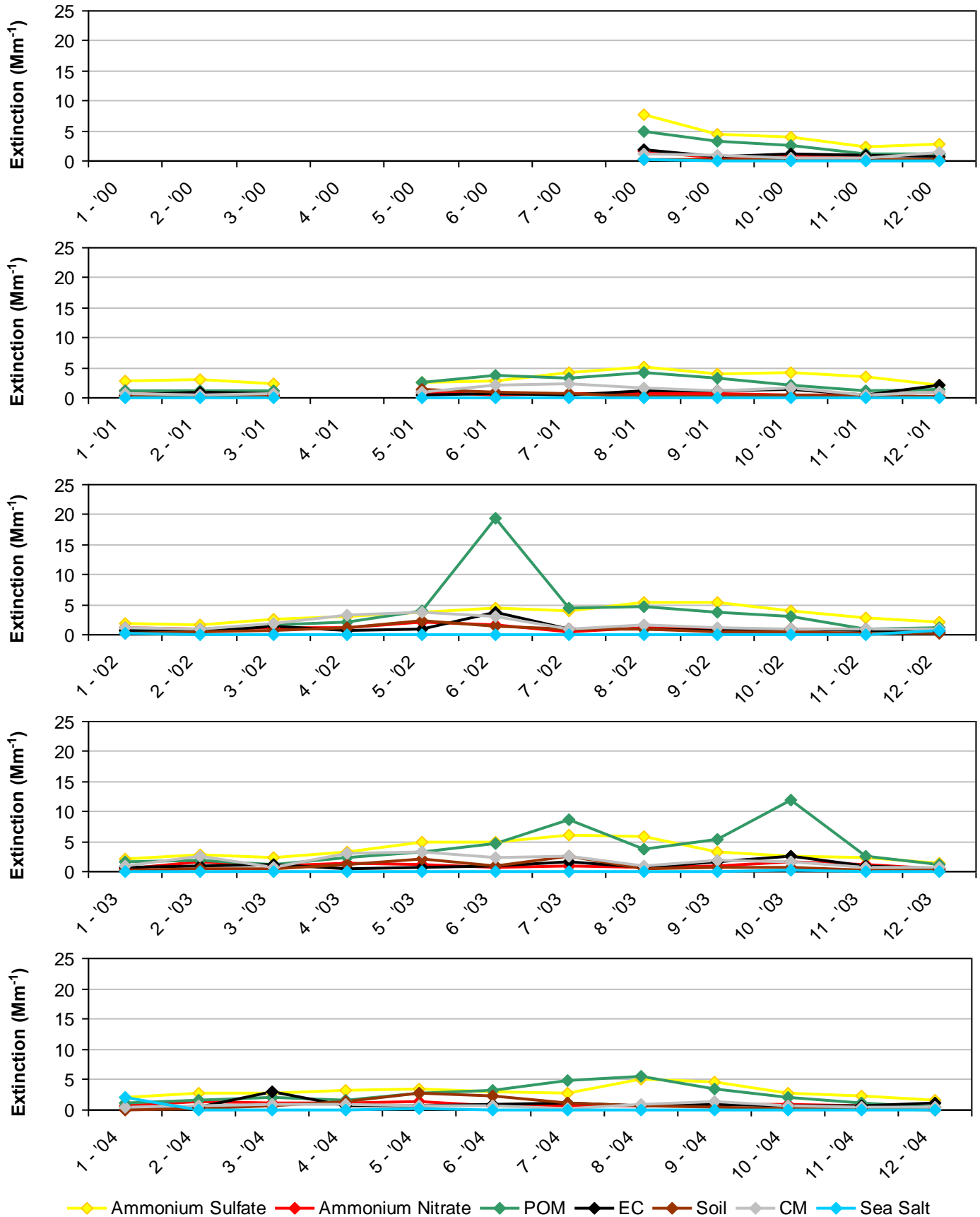
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.8-4**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**20% Least Impaired Visibility Days**



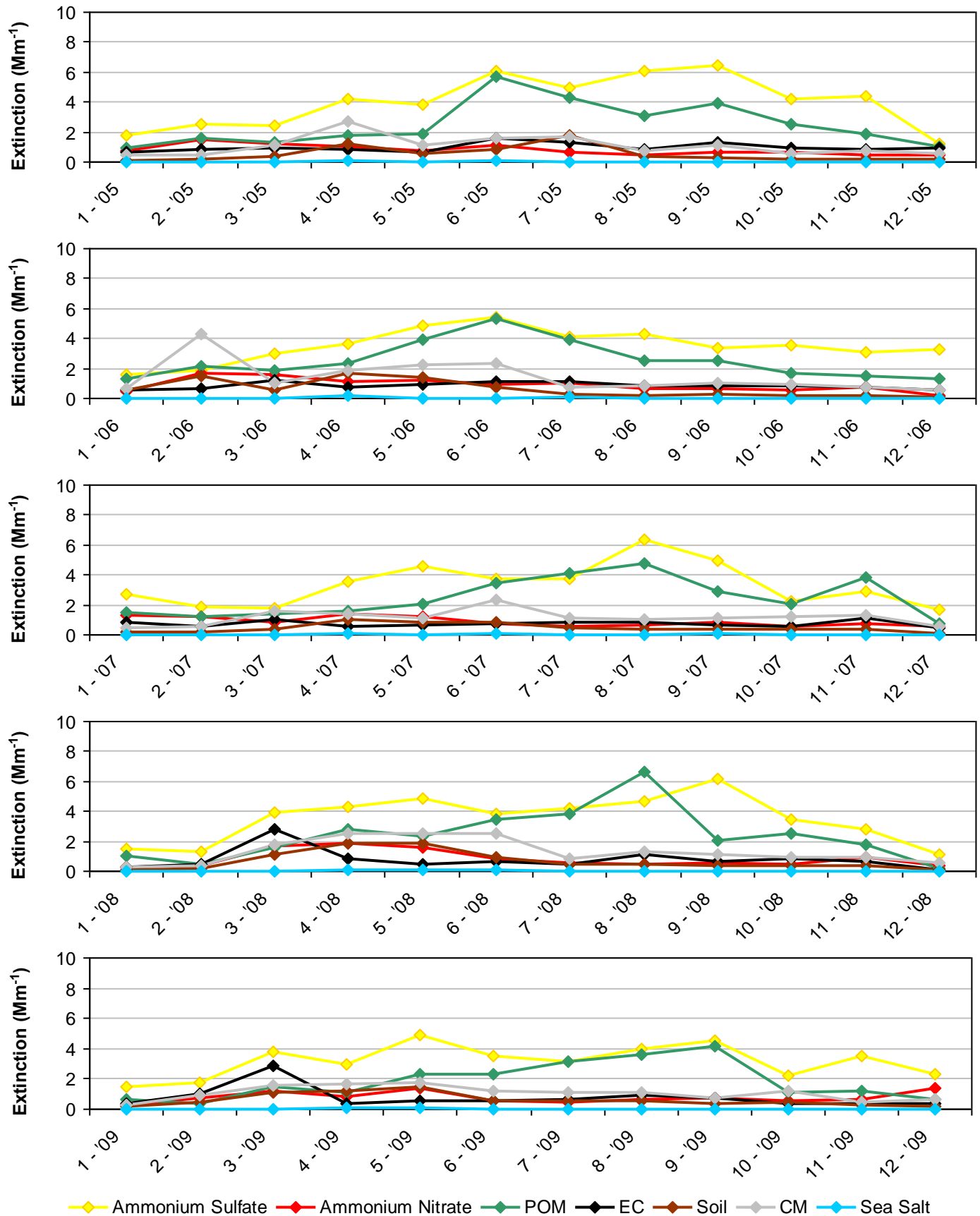
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure I.8-5**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



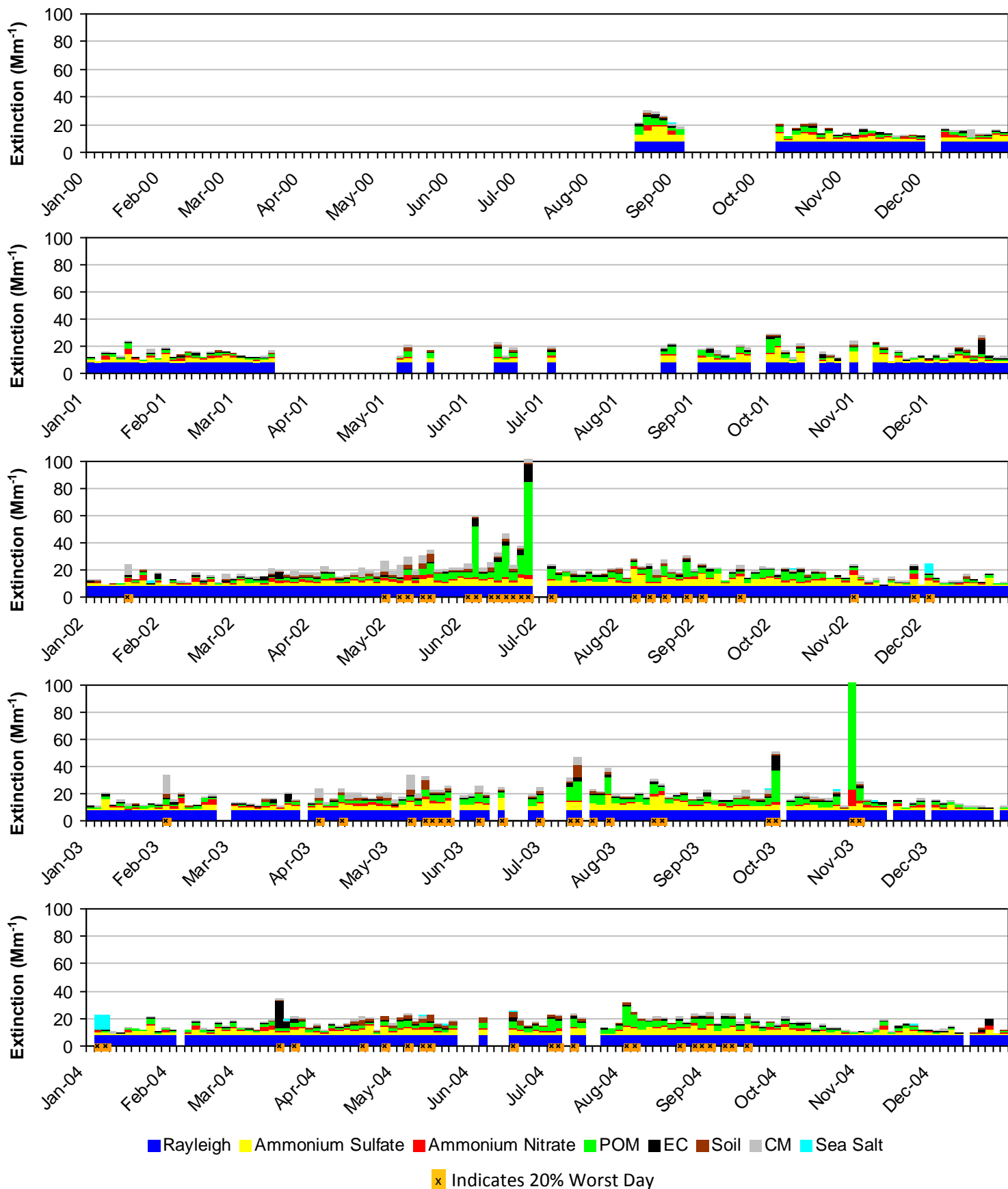
\*Note that monthly averages for the years 2000 and 2001 are shown here, but these years did not meet RHR data completeness criteria.

**Figure I.8-6**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



\*Note that monthly averages for the year 2008 are shown here, but this year did not meet RHR data completeness criteria.

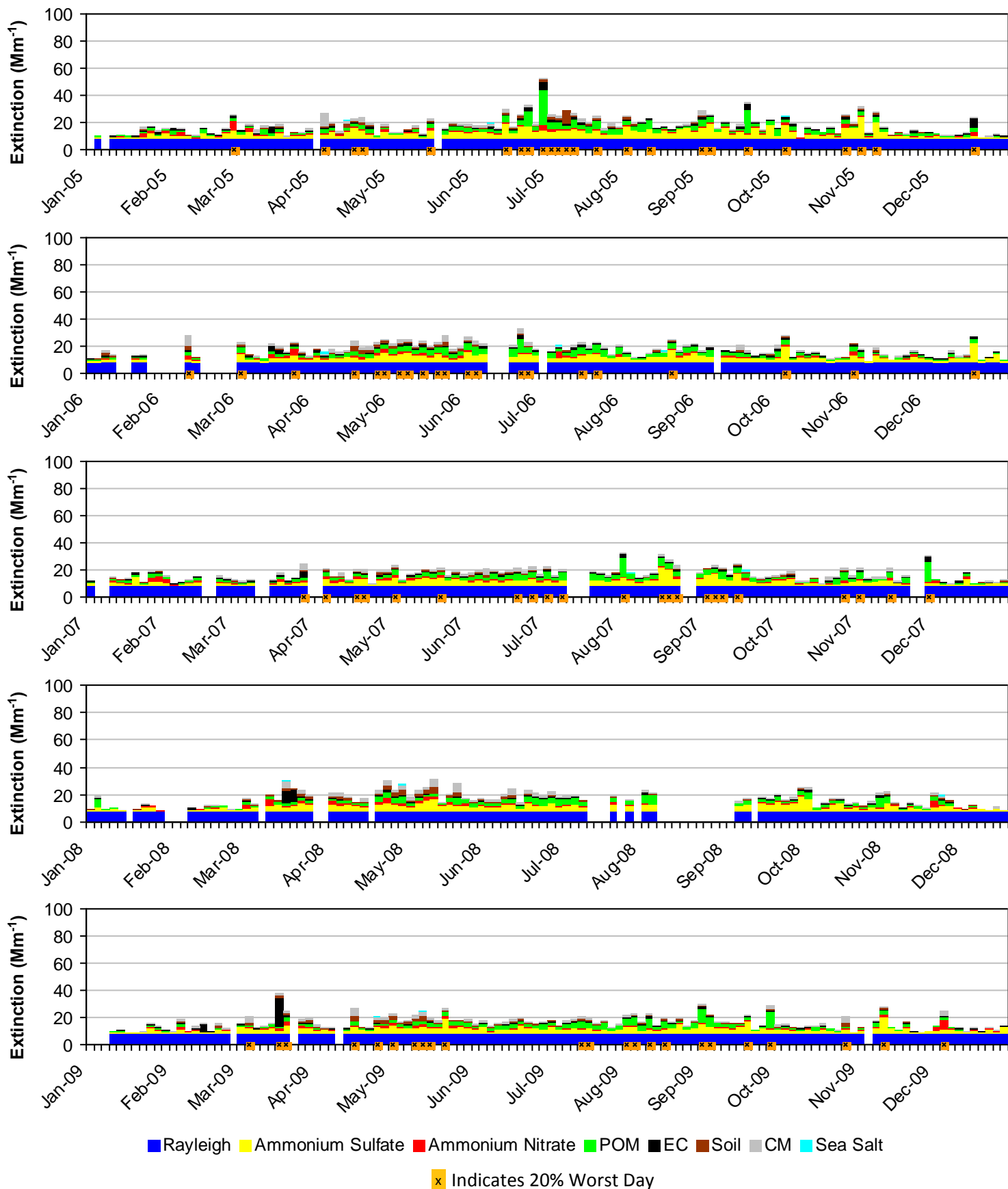
**Figure I.8-7**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the years 2000 and 2001 are shown here, but these years did not meet RHR data completeness criteria.



**Figure I.8-8**  
**Wheeler Peak and Pecos Was, NM (WHPE1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the year 2008 are shown here, but this year did not meet RHR data completeness criteria.