

## APPENDIX F:

### Idaho Class I Area Monitoring Data Summary Tables and Charts

Includes the following subsections:

Subsection	IMPROVE Monitor	Class I Area(s) Represented
F.1	CRMO1	Craters of the Moon NM
F.2	HECA1	Hells Canyon WA (Monitor located in OR)
F.3	SAWT1	Sawtooth WA
F.4	SULA1	Anaconda-Pintlar WA and Selway-Bitterroot WA (Monitor located in MT)
F.5	YELL2	Yellowstone NP, Grand Teton NP, Red Rock Lakes WA, and Teton WA (Monitor located in WY)

## F.1. CRATERS OF THE MOON NM (CRMO1)

The following tables and figures are presented in this section for the Craters of the Moon NM represented by the CRMO1 IMPROVE Monitor:

- **Table F.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 F.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 F.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 F.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 F.1-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure F.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 F.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 F.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 F.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 F.1-1**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**Annual Averages, 5-Year Period Averages and Trends**

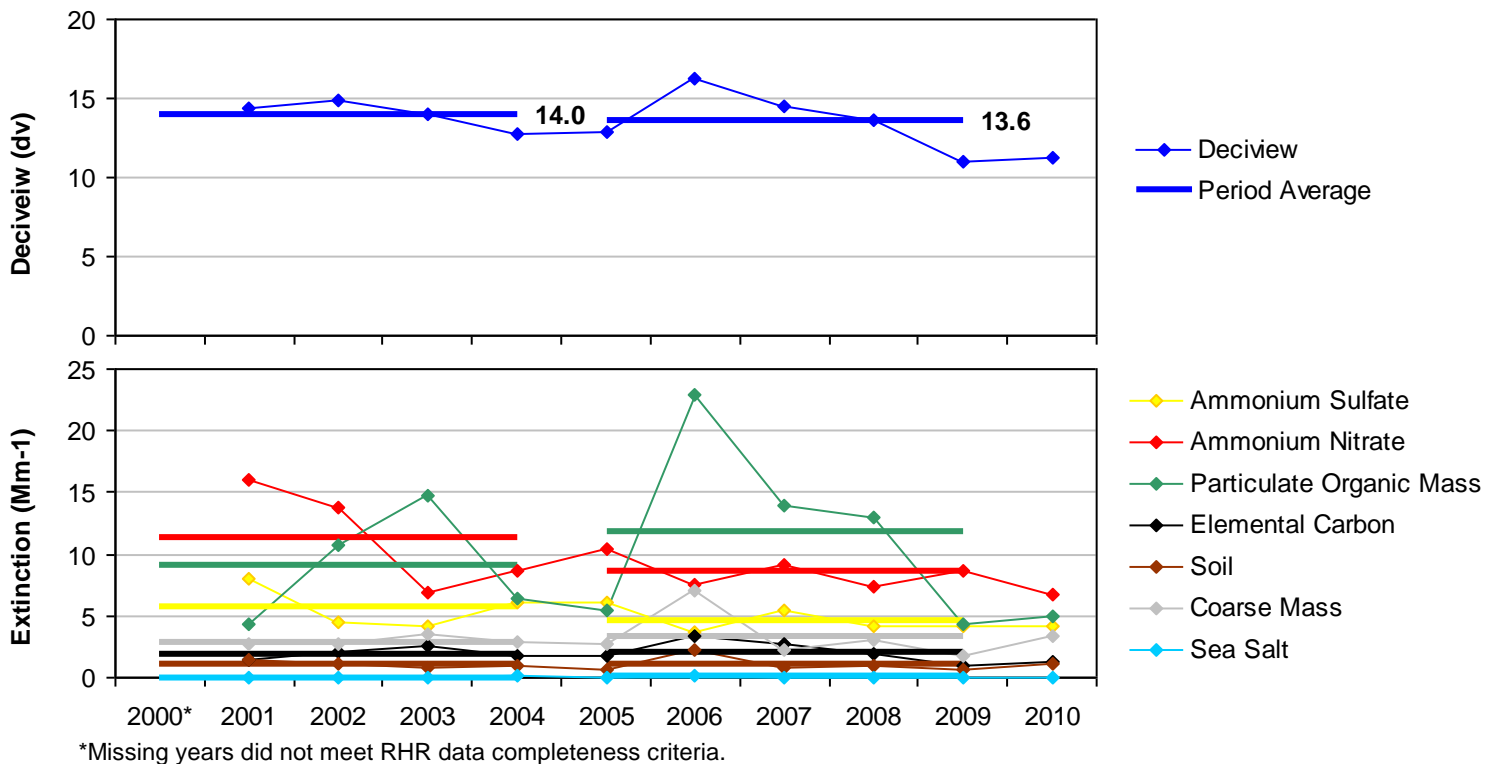
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	4.8	4.9	3.3	4.3	3.9	3.6	3.5	3.2	3.0	2.7	-0.2	0.0	4.3	3.4	-0.9	-21%
Worst 20% Days	---	14.3	14.9	14.0	12.8	12.8	16.2	14.5	13.6	11.0	11.3	-0.3	0.2	14.0	13.6	-0.4	-3%
All Days	---	8.6	9.3	8.1	8.2	8.1	9.3	8.2	7.9	6.9	6.8	-0.2	0.1	8.6	8.1	-0.5	-6%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	16.2	16.3	13.9	15.4	14.8	14.3	14.3	13.8	13.5	13.2	-0.3	0.0	15.5	14.1	-1.4	-9%
Worst 20% Days	---	43.8	44.8	42.8	36.8	37.1	57.0	44.5	40.3	30.5	31.6	-1.0	0.2	42.0	41.9	-0.1	0%
All Days	---	25.4	27.1	24.7	23.9	23.7	29.2	25.0	23.8	20.7	20.7	-0.5	0.1	25.3	24.5	-0.8	-3%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	1.9	1.8	1.0	1.4	2.0	1.6	1.4	1.3	1.3	1.2	-0.1	0.1	1.5	1.5	0.0	0%
Worst 20% Days	---	8.0	4.5	4.2	6.1	6.1	3.6	5.5	4.2	4.1	4.2	-0.2	0.0	5.7	4.7	-1.0	-18%
All Days	---	3.9	3.2	2.6	3.6	3.8	3.4	3.2	3.2	2.9	2.7	-0.1	0.1	3.3	3.3	0.0	0%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	1.2	1.3	0.9	1.5	0.9	0.8	0.8	1.1	0.6	0.6	-0.1	0.0	1.2	0.8	-0.4	-33%
Worst 20% Days	---	16.0	13.8	6.9	8.6	10.3	7.6	9.2	7.3	8.6	6.7	-0.7	0.1	11.3	8.6	-2.7	-24%
All Days	---	5.0	5.0	2.8	3.5	3.5	3.7	3.4	3.1	2.9	2.4	-0.2	0.0	4.1	3.3	-0.8	-20%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	1.5	1.4	0.9	1.4	0.9	0.7	0.8	0.7	0.7	0.6	-0.1	0.0	1.3	0.8	-0.5	-39%
Worst 20% Days	---	4.3	10.7	14.8	6.5	5.4	22.9	13.9	13.0	4.3	4.9	0.1	0.5	9.1	11.9	2.8	31%
All Days	---	3.1	5.0	5.6	3.6	3.2	6.8	4.8	4.4	2.6	2.4	-0.1	0.4	4.3	4.3	0.0	0%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	0.5	0.4	0.2	0.4	0.3	0.4	0.3	0.2	0.2	0.2	0.0	0.0	0.4	0.3	-0.1	-25%
Worst 20% Days	---	1.4	2.1	2.5	1.7	1.8	3.3	2.7	1.9	1.0	1.3	0.0	0.5	1.9	2.1	0.2	11%
All Days	---	1.0	1.1	1.2	1.0	1.0	1.3	1.1	0.8	0.6	0.7	0.0	0.3	1.0	1.0	0.0	0%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.0	0.2	0.2	0.2	0.0	0%
Worst 20% Days	---	1.4	1.1	0.9	0.9	0.6	2.2	0.8	0.9	0.7	1.1	0.0	0.1	1.0	1.1	0.1	10%
All Days	---	0.7	0.7	0.5	0.5	0.4	1.0	0.6	0.6	0.5	0.6	0.0	0.3	0.6	0.6	0.0	0%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	0.9	1.1	0.7	0.5	0.5	0.5	0.6	0.4	0.5	0.4	0.0	0.0	0.8	0.5	-0.3	-38%
Worst 20% Days	---	2.8	2.7	3.5	2.9	2.8	7.1	2.3	3.0	1.8	3.3	-0.1	0.4	2.9	3.4	0.5	17%
All Days	---	1.8	2.1	2.1	1.6	1.8	2.9	1.8	1.7	1.3	1.9	-0.1	0.1	1.9	1.9	0.0	0%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	0.0	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0%
Worst 20% Days	---	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0%
All Days	---	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.5	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).

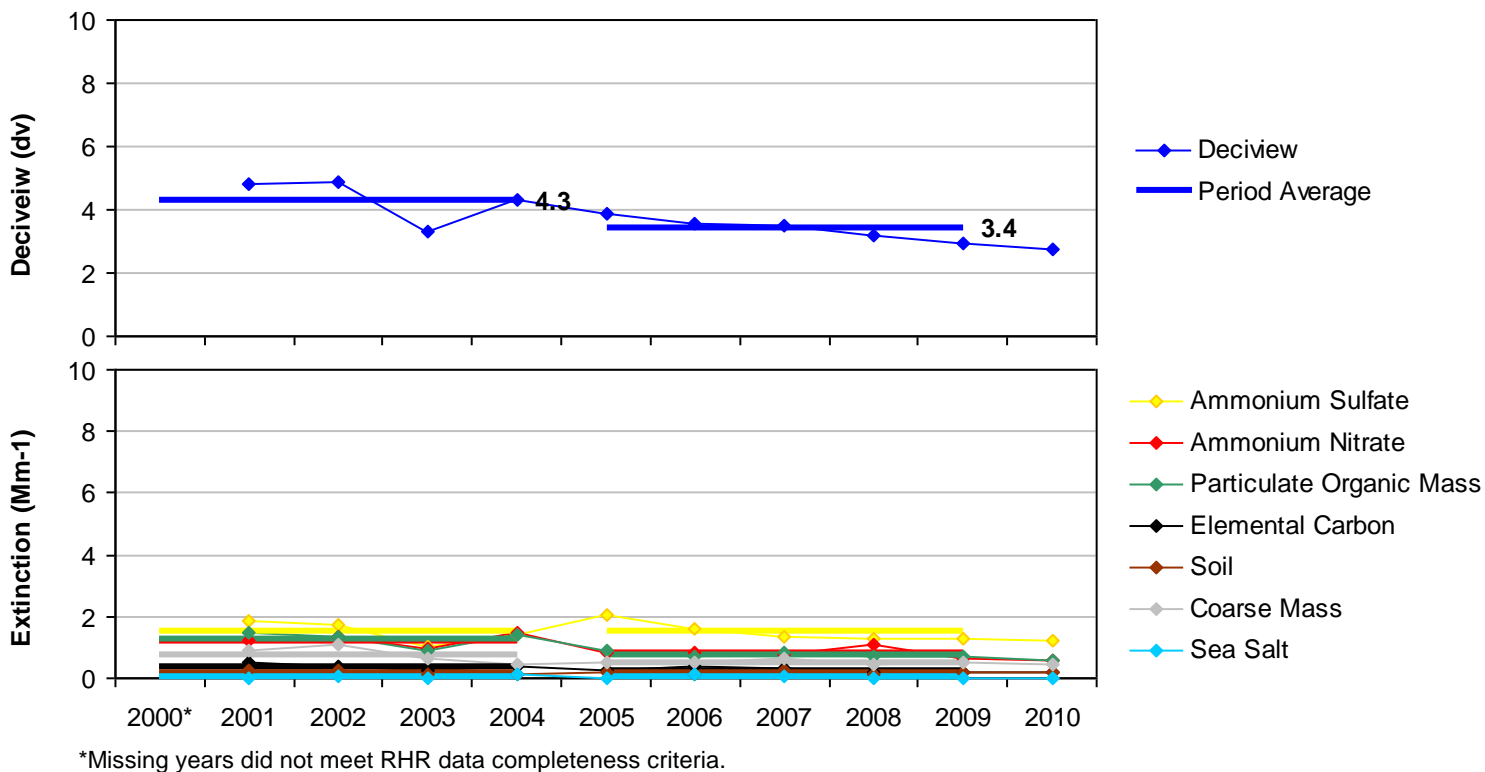
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

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

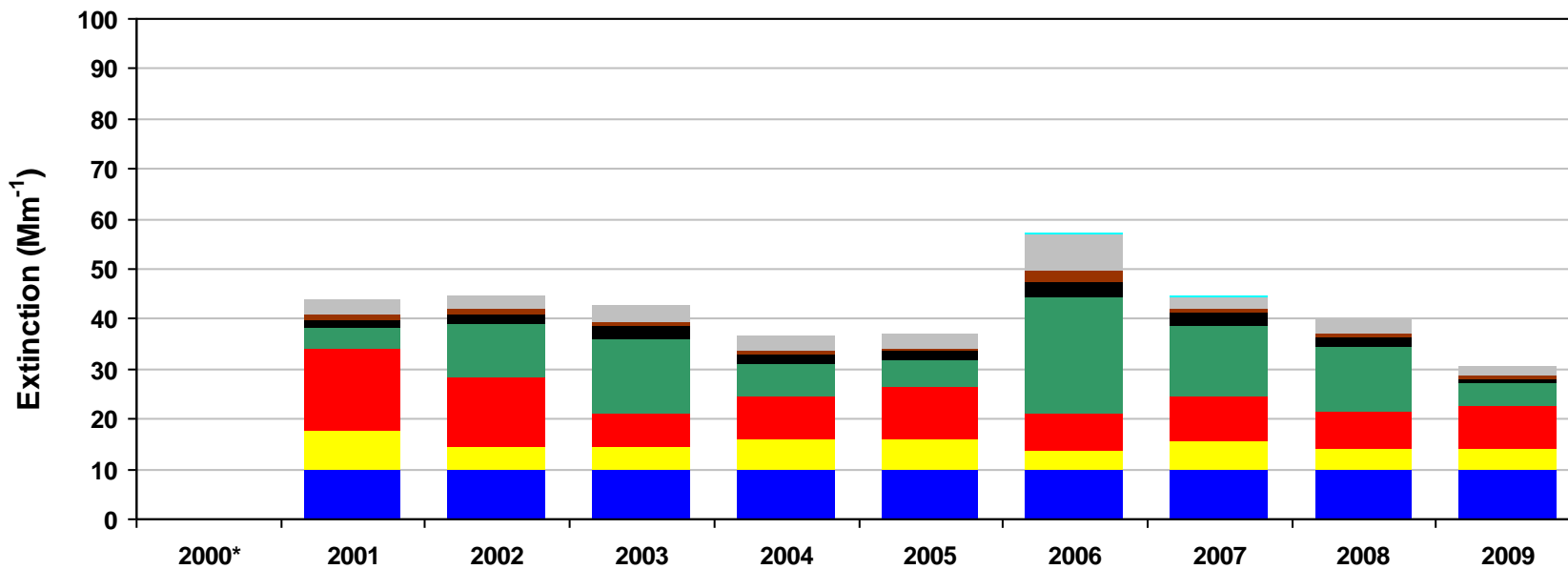
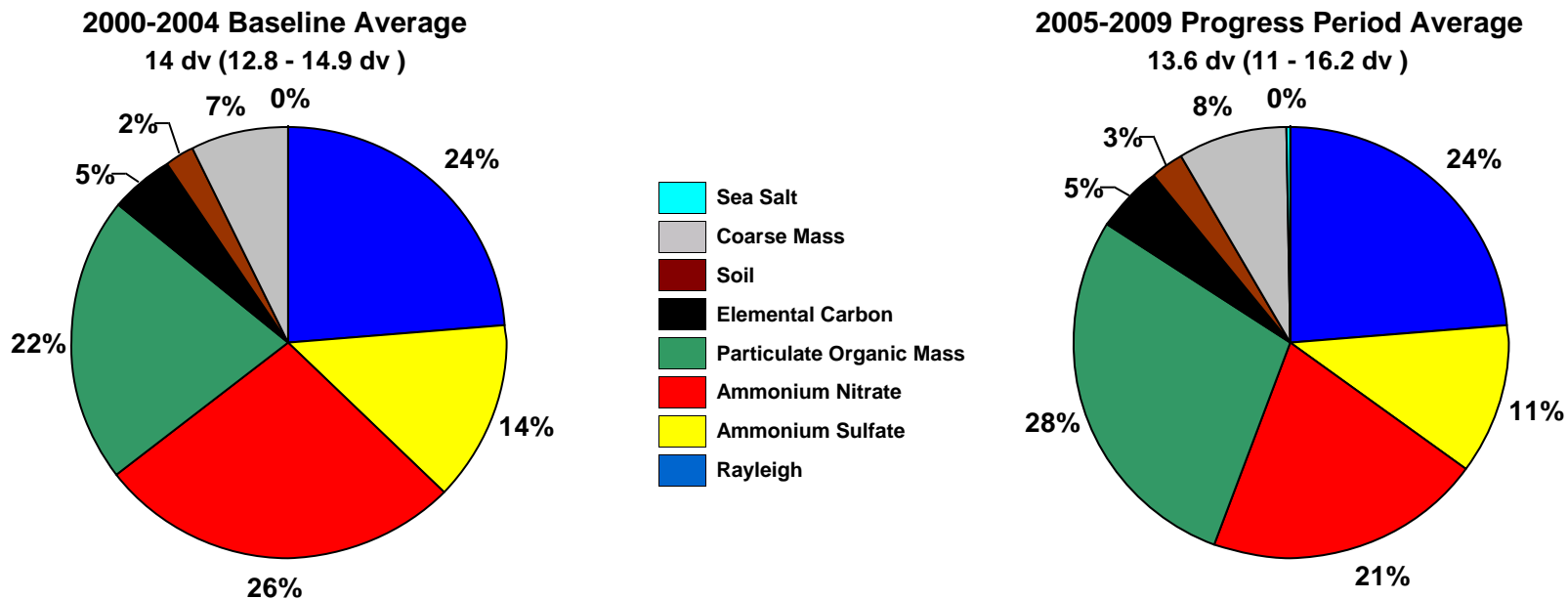
**Figure F.1-1**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**



**Figure F.1-2**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**



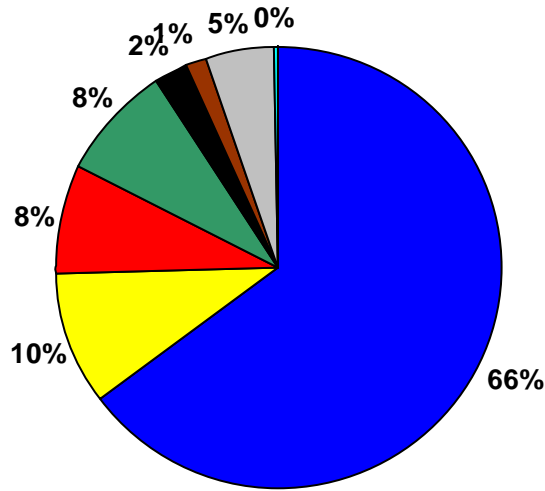
**Figure F.1-3**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**20% Most Impaired Visibility Days**



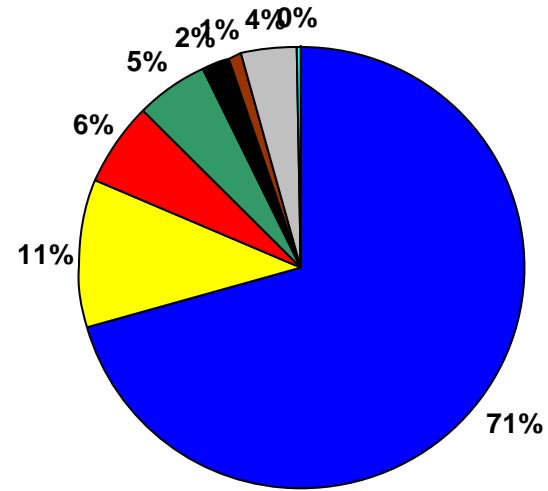
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure F.1-4**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**20% Least Impaired Visibility Days**

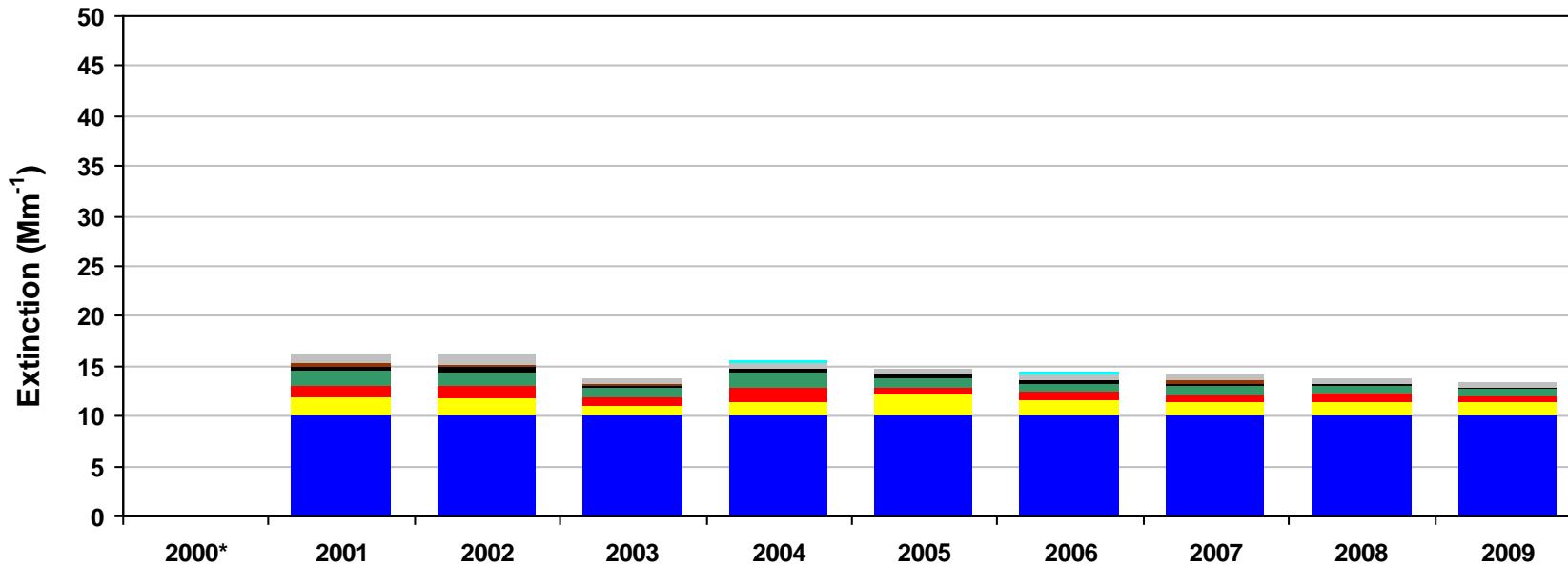
**2000-2004 Baseline Average**  
 4.3 dv (3.3 - 4.9 dv)



**2005-2009 Progress Period Average**  
 3.4 dv (3 - 3.9 dv)

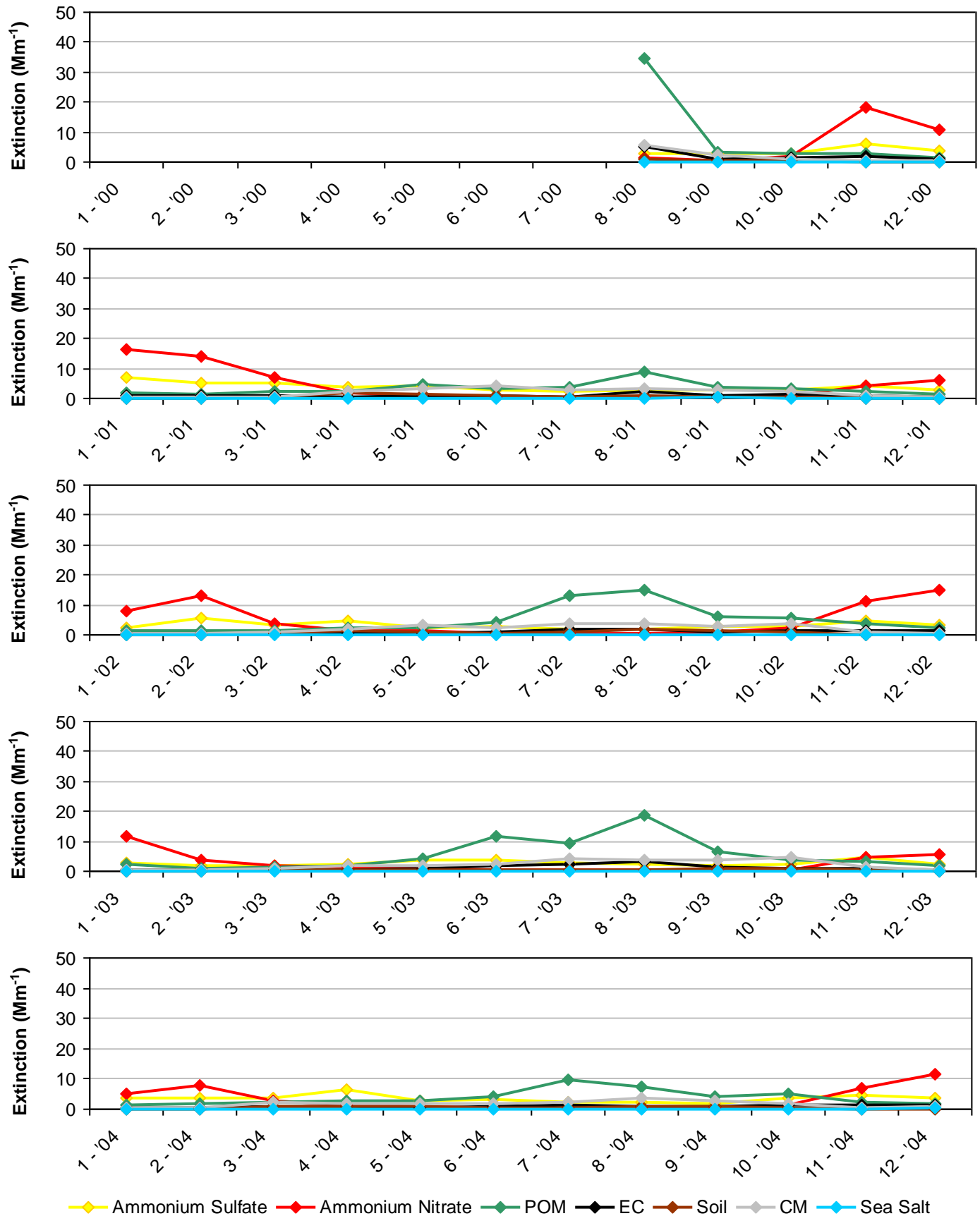


- Sea Salt
- Coarse Mass
- Soil
- Elemental Carbon
- Particulate Organic Mass
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh



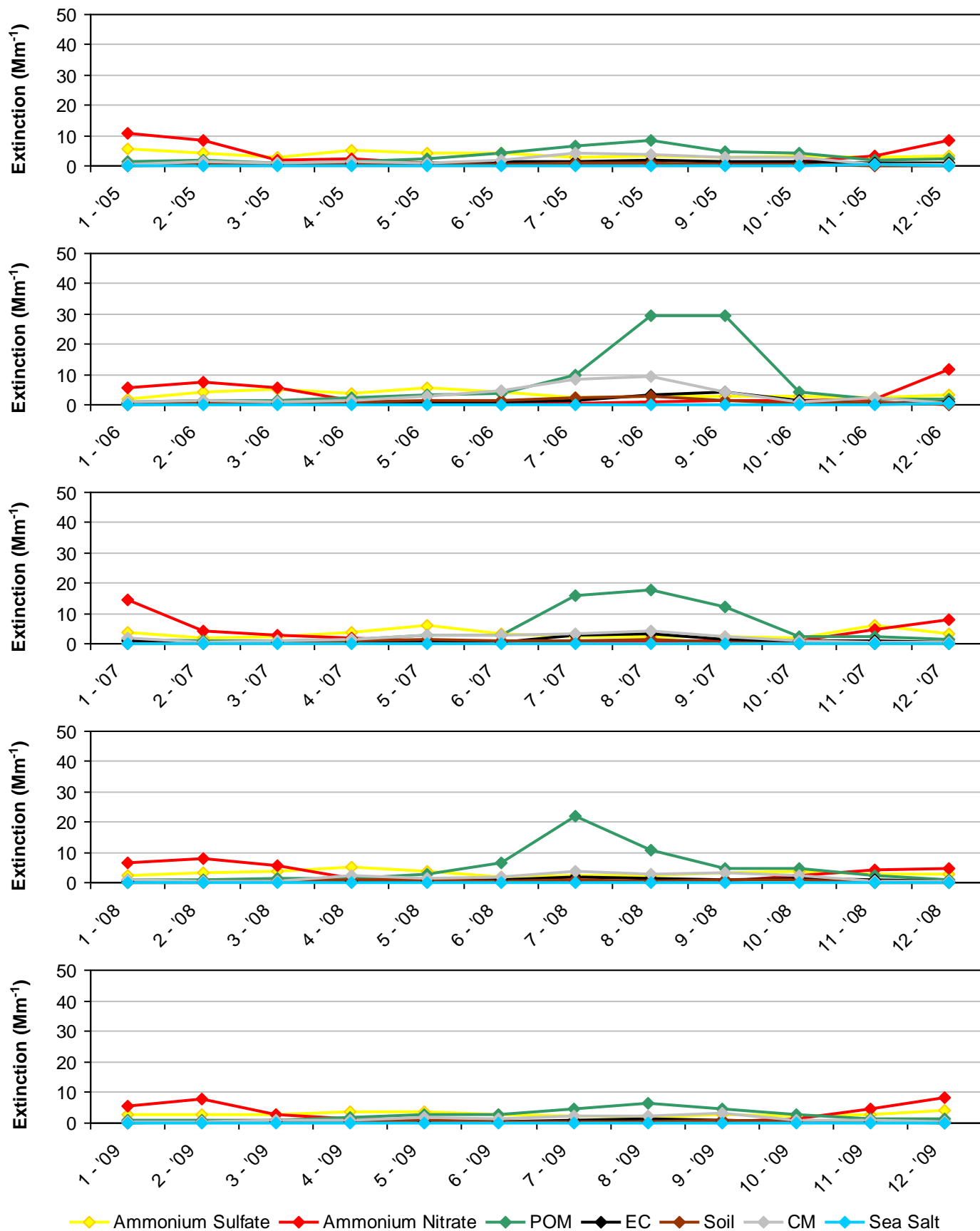
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure F.1-5**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



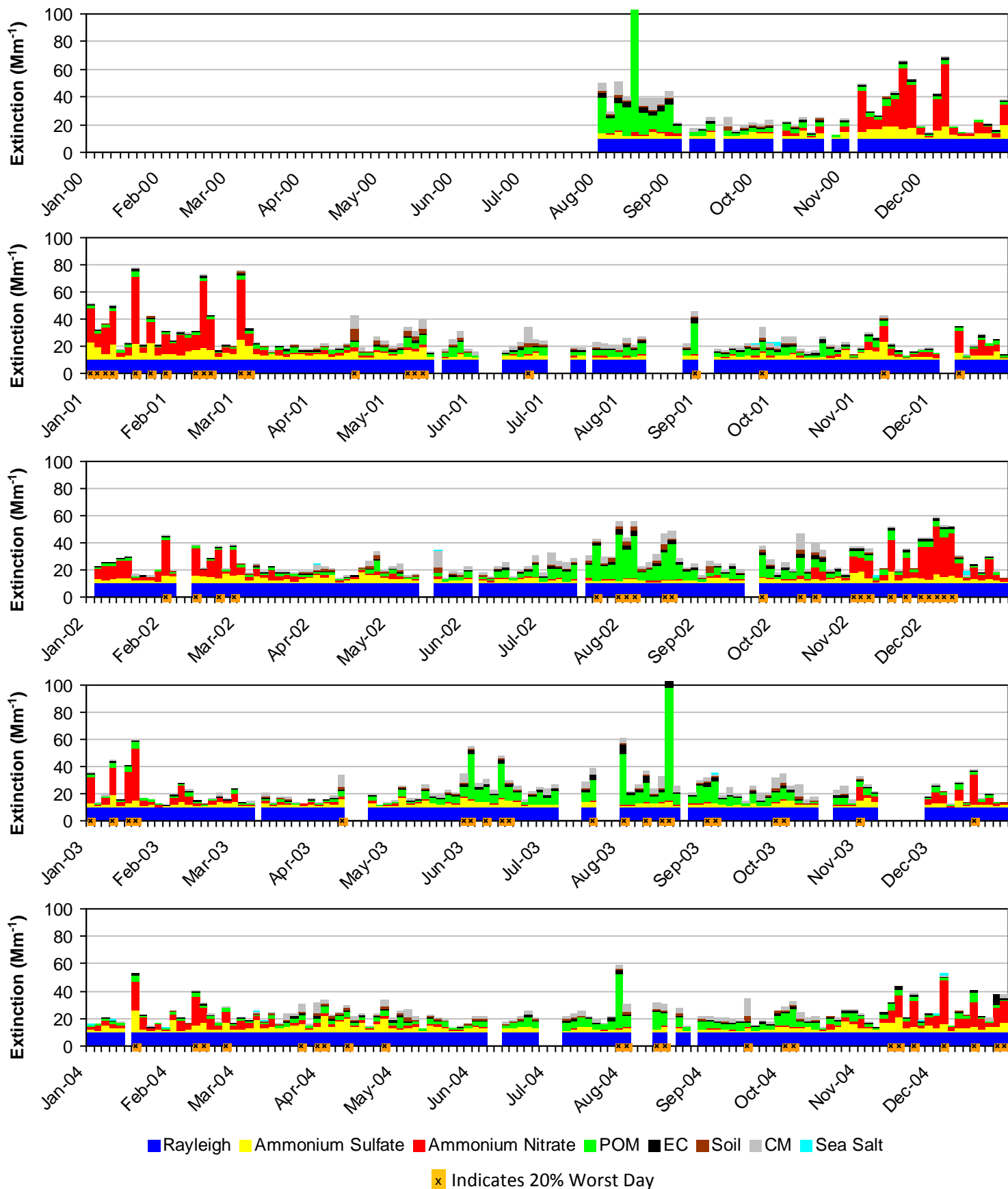
\*Note that monthly averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure F.1-6**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



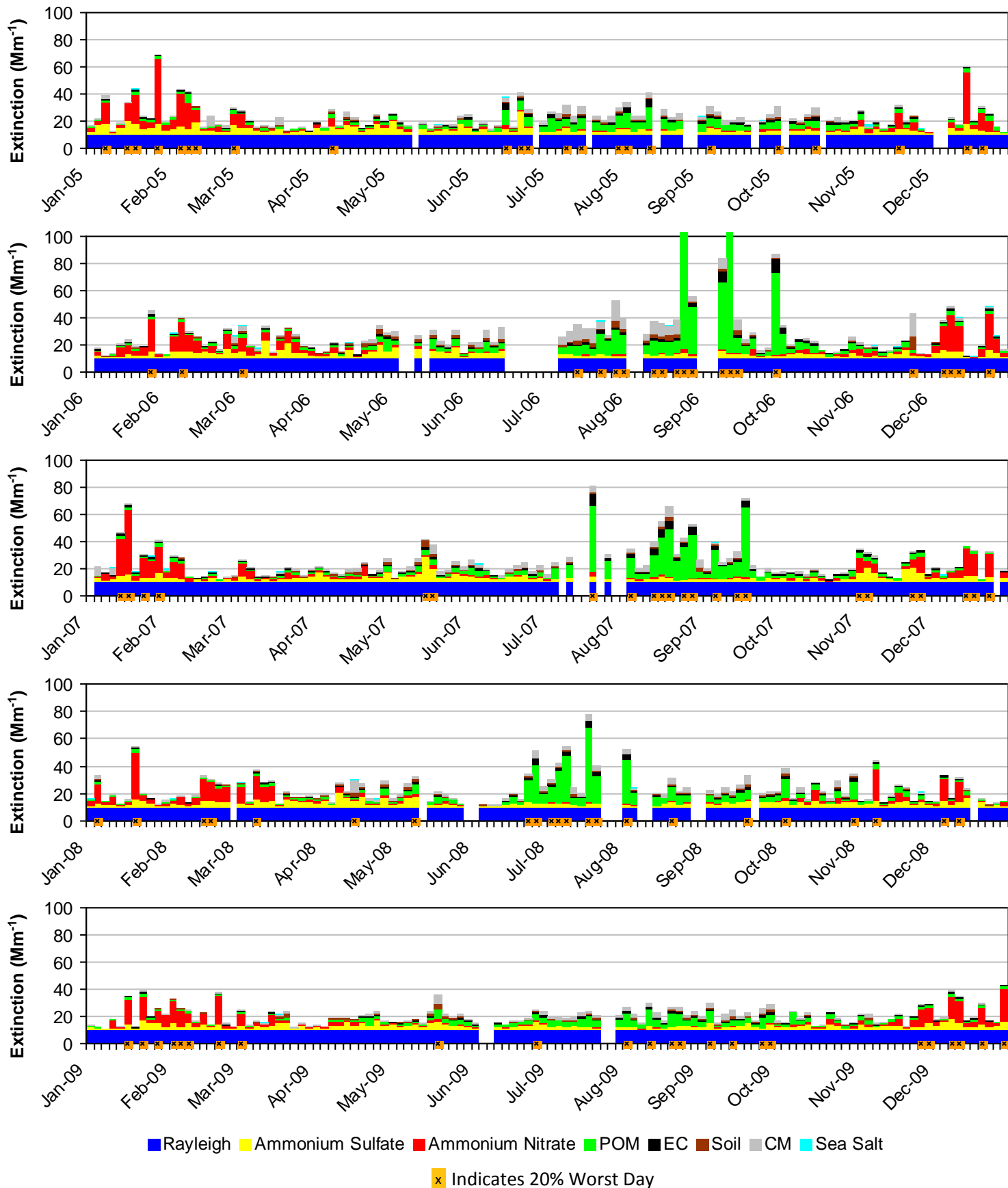


**Figure F.1-7**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



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

**Figure F.1-8**  
**Craters of the Moon NM, ID (CRMO1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



## F.2. HELLS CANYON WA (HECA1)

The following tables and figures are presented in this section for the Hells Canyon WA represented by the HECA1 IMPROVE Monitor:

- **Table F.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 F.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 F.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 F.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 F.2-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure F.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 F.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 F.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 F.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 F.2-1**  
**Hells Canyon WA, OR (HECA1 Site)**  
**Annual Averages, 5-Year Period Averages and Trends**

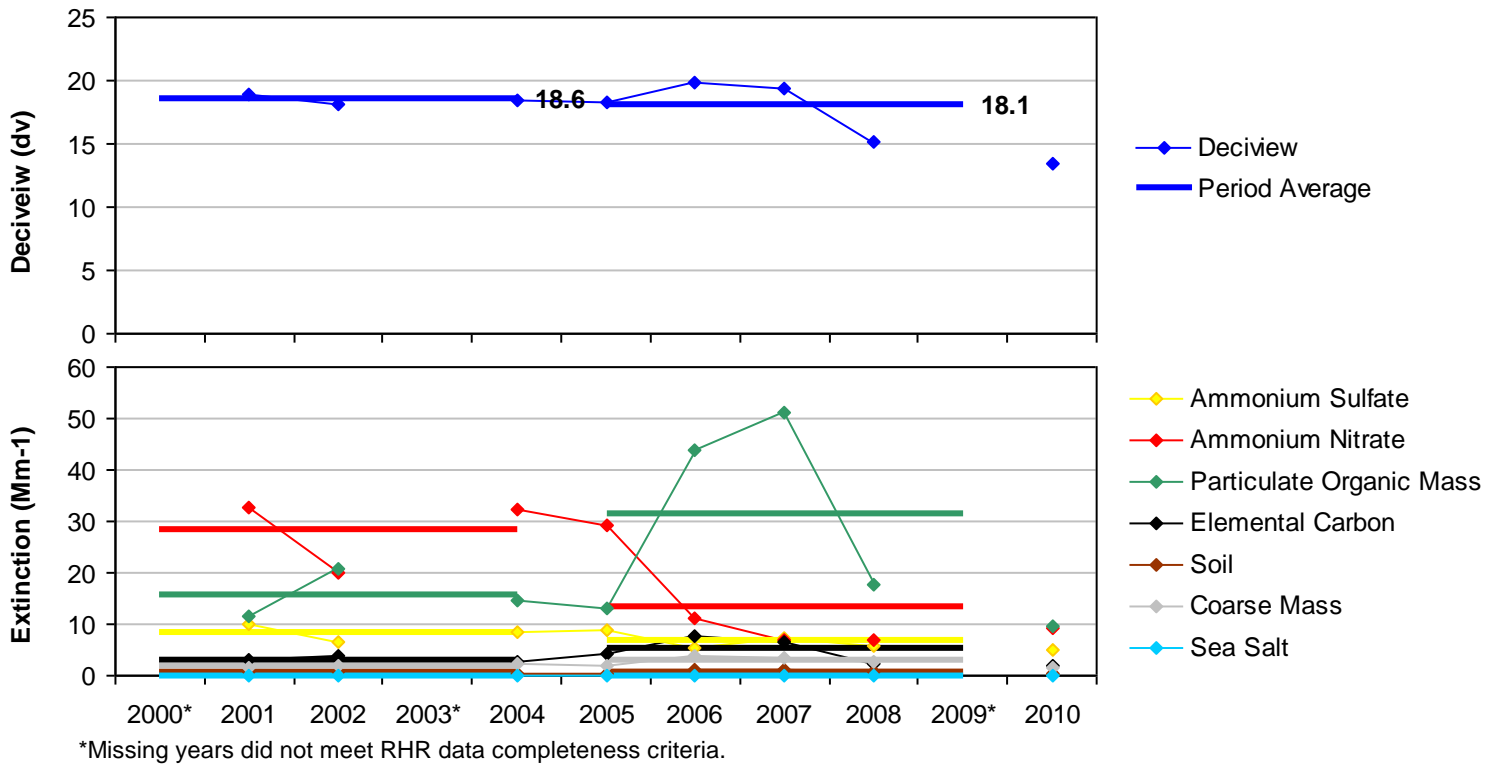
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P -B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	5.5	5.8	---	5.2	4.7	4.7	5.2	4.6	---	4.0	-0.1	0.1	5.5	4.8	-0.7	-13%
Worst 20% Days	---	19.0	18.2	---	18.5	18.3	19.8	19.4	15.1	---	13.5	-0.1	0.5	18.6	18.1	-0.5	-3%
All Days	---	10.9	11.0	---	10.7	10.0	10.8	10.8	9.4	---	8.5	-0.1	0.1	10.9	10.3	-0.6	-6%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	17.4	18.0	---	16.9	16.1	16.1	17.0	15.9	---	15.0	-0.2	0.0	17.4	16.3	-1.1	-6%
Worst 20% Days	---	70.2	64.8	---	72.5	68.7	84.1	87.5	47.2	---	39.1	1.3	0.4	69.1	71.9	2.8	4%
All Days	---	34.3	33.9	---	34.6	32.0	36.7	37.4	27.7	---	24.8	0.1	0.5	34.2	33.4	-0.8	-2%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	2.2	1.9	---	1.7	2.0	1.7	2.2	1.8	---	1.3	0.0	0.4	1.9	1.9	0.0	0%
Worst 20% Days	---	9.9	6.6	---	8.6	8.8	5.4	7.3	5.7	---	5.2	-0.4	0.1	8.4	6.8	-1.6	-19%
All Days	---	4.9	3.8	---	4.5	4.5	3.8	4.4	3.9	---	3.5	-0.1	0.3	4.4	4.2	-0.2	-5%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	1.0	0.8	---	0.5	0.5	0.7	0.6	0.7	---	0.3	0.0	0.2	0.8	0.6	-0.2	-25%
Worst 20% Days	---	32.9	20.0	---	32.5	29.1	11.2	6.8	6.9	---	9.3	-3.7	0.0	28.5	13.5	-15.0	-53%
All Days	---	8.3	5.7	---	8.2	6.7	3.5	3.0	2.7	---	2.8	-0.8	0.0	7.4	4.0	-3.4	-46%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	1.6	2.3	---	2.1	1.4	1.5	1.7	1.4	---	1.1	-0.1	0.1	2.0	1.5	-0.5	-25%
Worst 20% Days	---	11.4	20.7	---	14.7	13.1	43.9	51.0	17.8	---	9.7	1.6	0.1	15.6	31.4	15.8	>100%
All Days	---	6.0	8.9	---	7.1	5.8	13.0	14.1	6.7	---	4.5	0.4	0.3	7.4	9.9	2.5	34%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	0.6	0.7	---	0.5	0.5	0.4	0.5	0.3	---	0.3	0.0	0.1	0.6	0.4	-0.2	-33%
Worst 20% Days	---	2.9	3.7	---	2.5	4.3	7.6	6.6	2.5	---	1.9	0.3	0.4	3.1	5.3	2.2	71%
All Days	---	1.5	1.8	---	1.4	1.9	2.5	2.3	1.2	---	1.0	0.1	0.4	1.6	2.0	0.4	25%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	0.2	0.3	---	0.2	0.1	0.2	0.2	0.2	---	0.2	0.0	0.1	0.3	0.2	-0.1	-33%
Worst 20% Days	---	0.7	0.7	---	0.6	0.4	1.1	1.2	0.7	---	0.5	0.1	0.3	0.7	0.8	0.1	14%
All Days	---	0.7	0.7	---	0.5	0.4	0.7	0.5	0.5	---	0.4	0.0	0.4	0.6	0.5	-0.1	-17%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	0.7	0.9	---	0.8	0.5	0.4	0.6	0.5	---	0.7	-0.1	0.1	0.8	0.5	-0.3	-38%
Worst 20% Days	---	1.4	2.0	---	2.5	1.8	3.8	3.6	2.6	---	1.5	0.3	0.1	1.9	2.9	1.0	53%
All Days	---	1.8	2.0	---	1.8	1.6	2.0	1.9	1.7	---	1.6	0.0	0.3	1.9	1.8	-0.1	-5%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	0.1	0.0	---	0.1	0.1	0.2	0.1	0.1	---	0.0	0.0	0.3	0.1	0.1	0.0	0%
Worst 20% Days	---	0.0	0.0	---	0.1	0.2	0.2	0.1	0.0	---	0.0	0.0	0.2	0.0	0.1	0.1	0%
All Days	---	0.0	0.1	---	0.1	0.1	0.1	0.1	0.1	---	0.0	0.0	0.5	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).

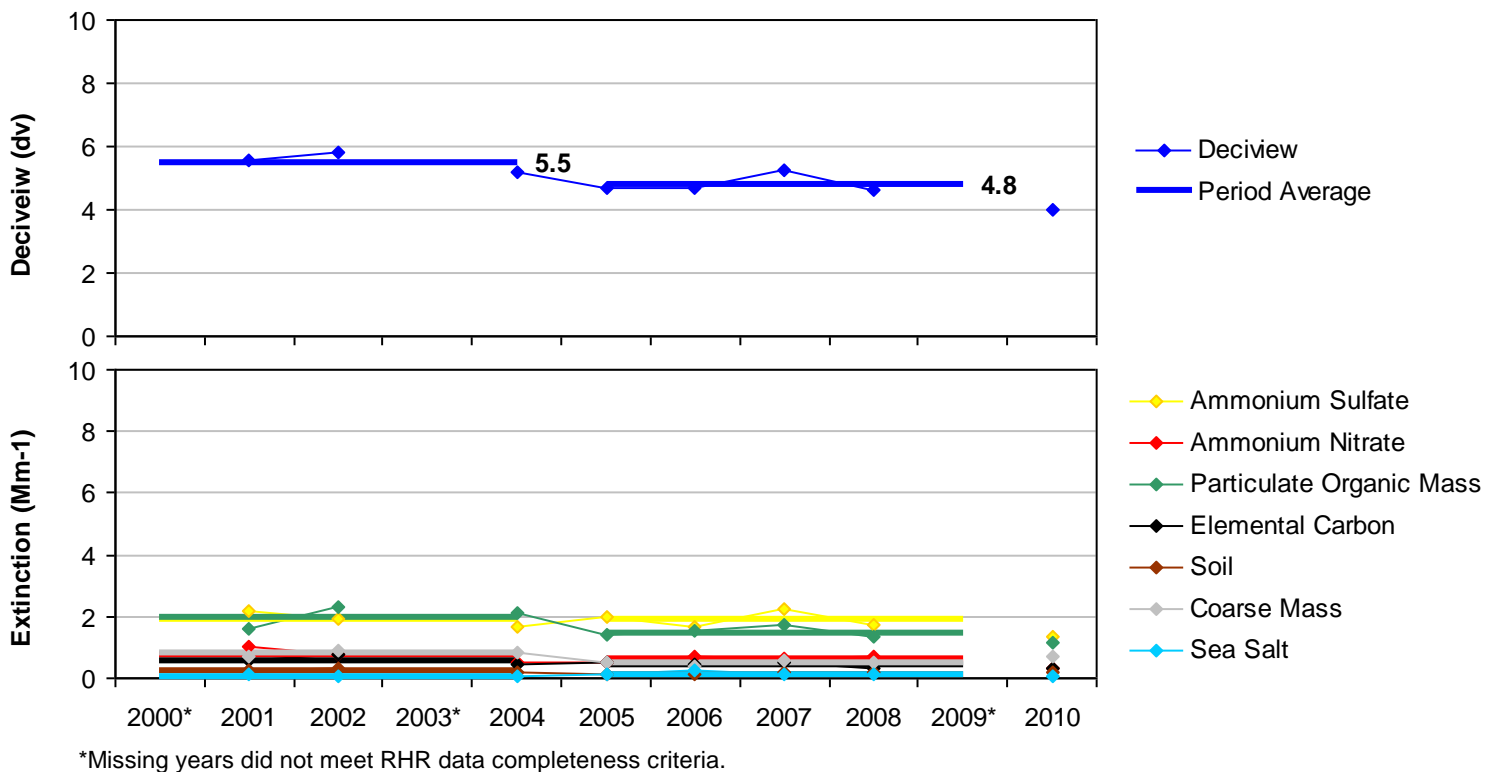
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

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

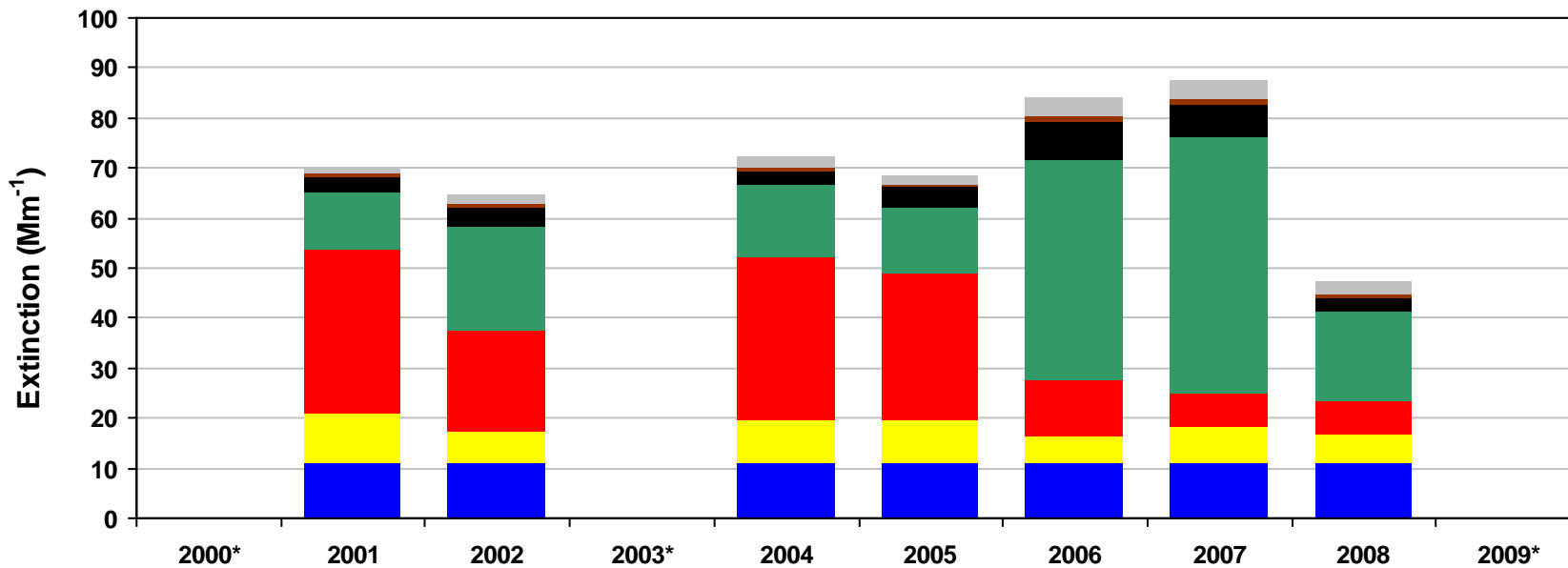
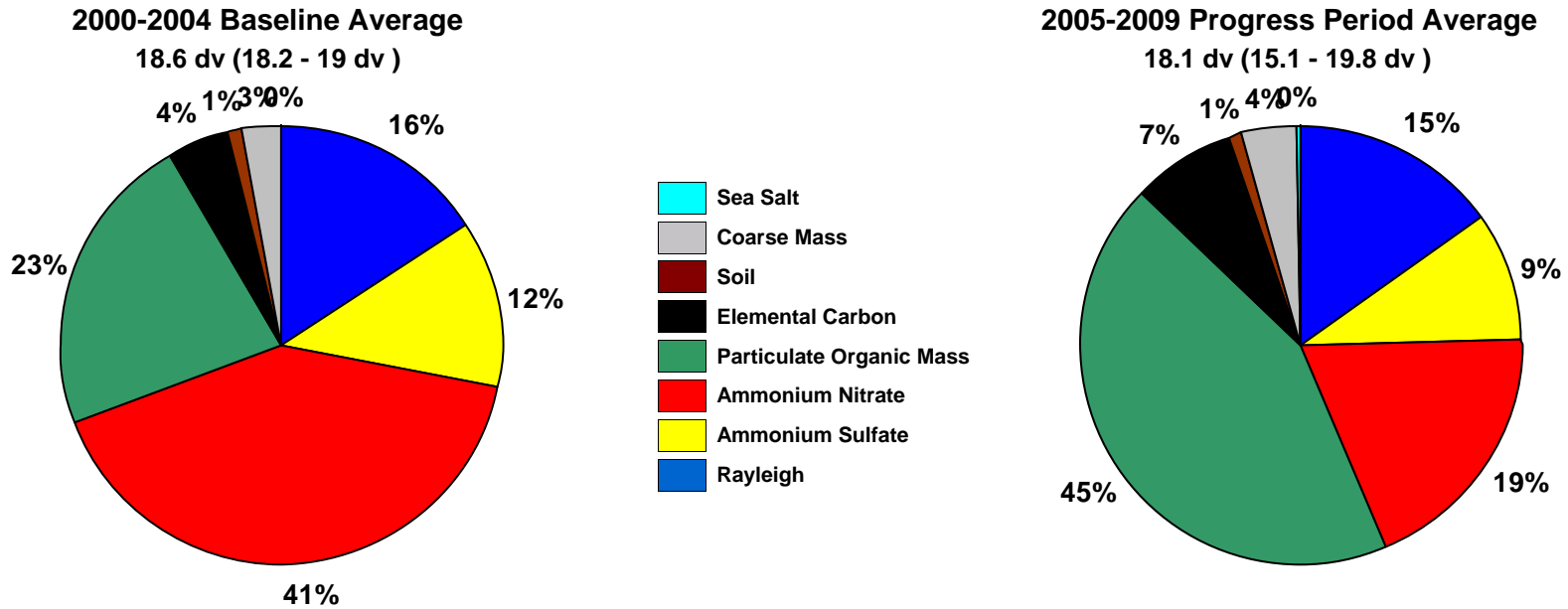
**Figure F.2-1**  
**Hells Canyon WA, OR (HECA1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**



**Figure F.2-2**  
**Hells Canyon WA, OR (HECA1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**



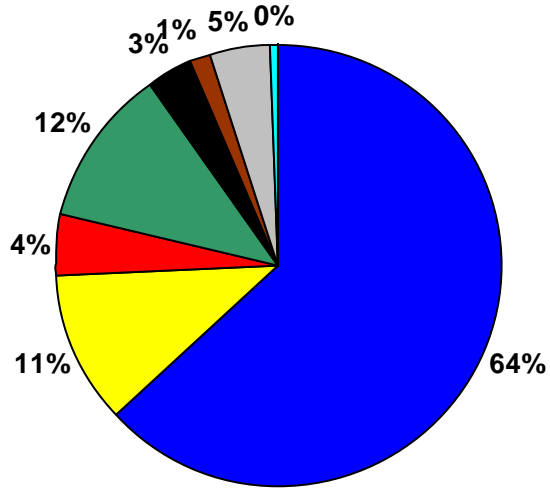
**Figure F.2-3**  
**Hells Canyon WA, OR (HECA1 Site)**  
**20% Most Impaired Visibility Days**



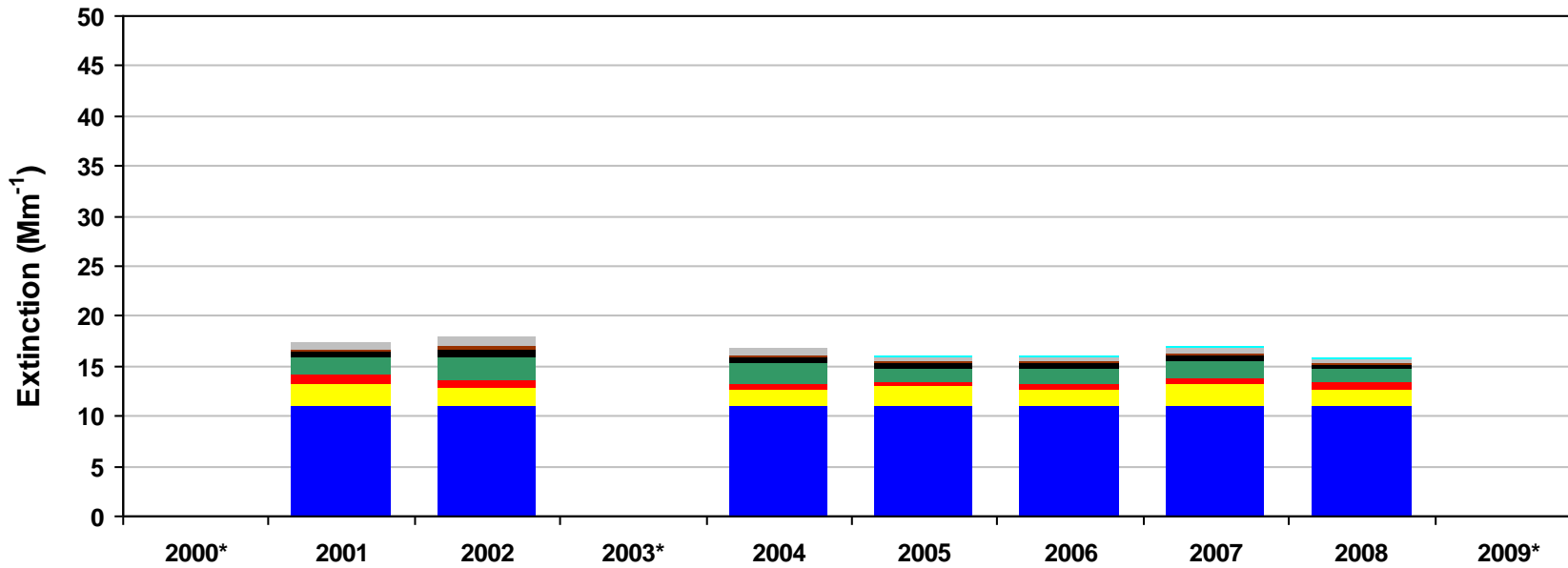
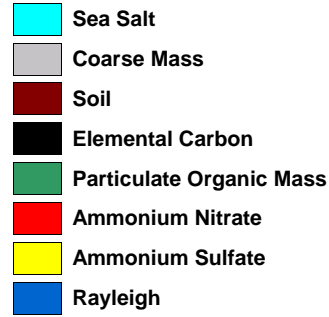
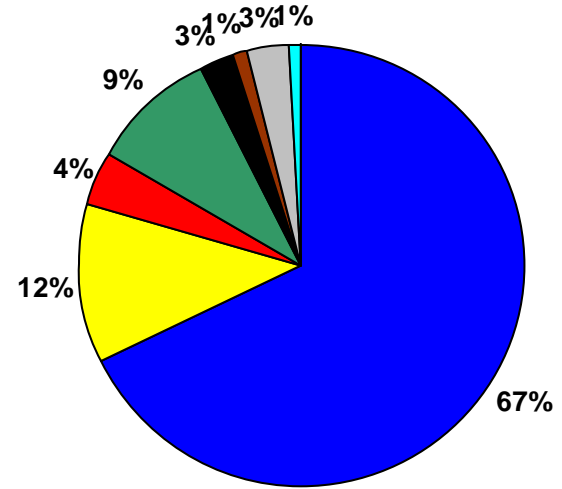
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure F.2-4**  
**Hells Canyon WA, OR (HECA1 Site)**  
**20% Least Impaired Visibility Days**

**2000-2004 Baseline Average**  
 5.5 dv (5.2 - 5.8 dv)

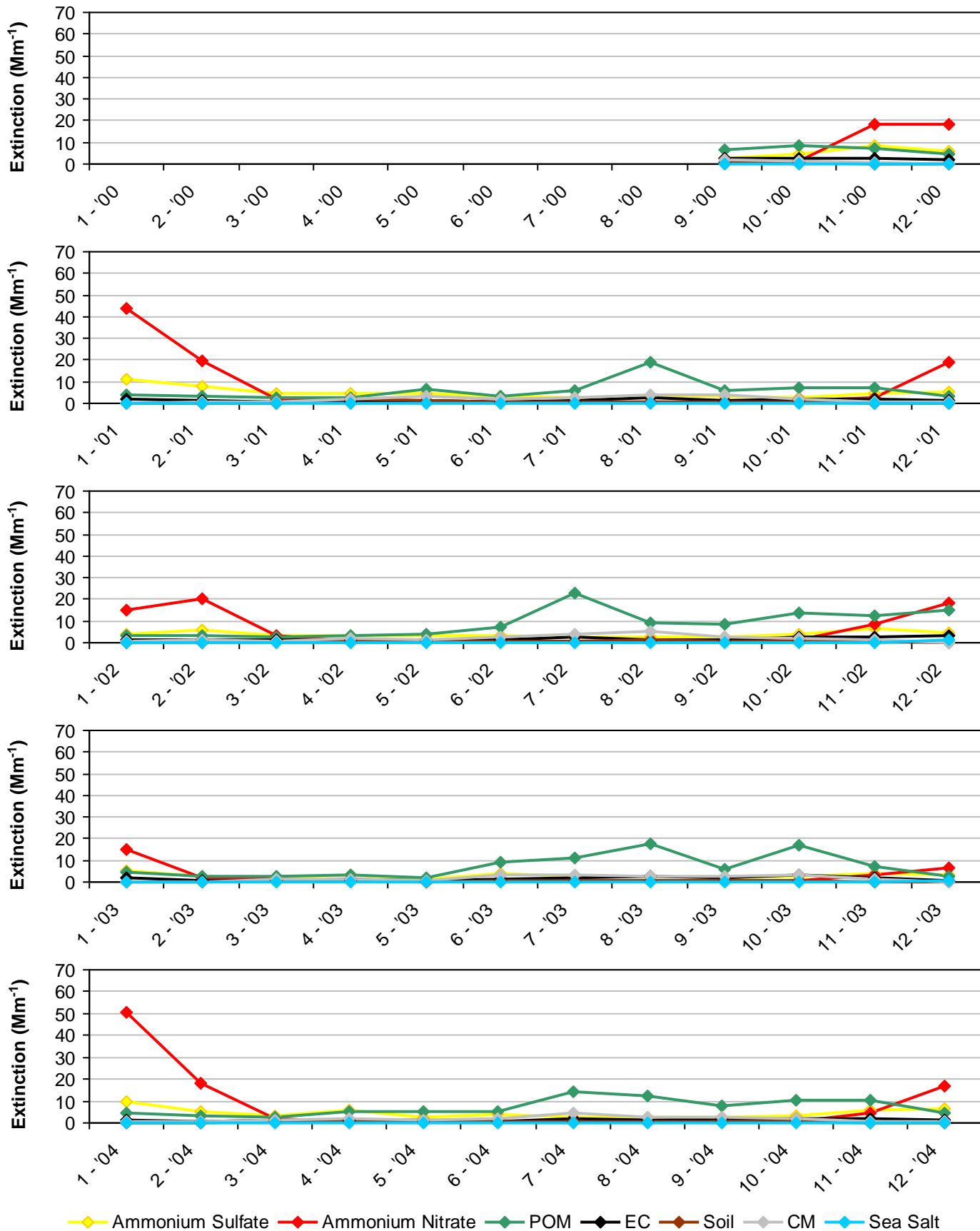


**2005-2009 Progress Period Average**  
 4.8 dv (4.6 - 5.2 dv)



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

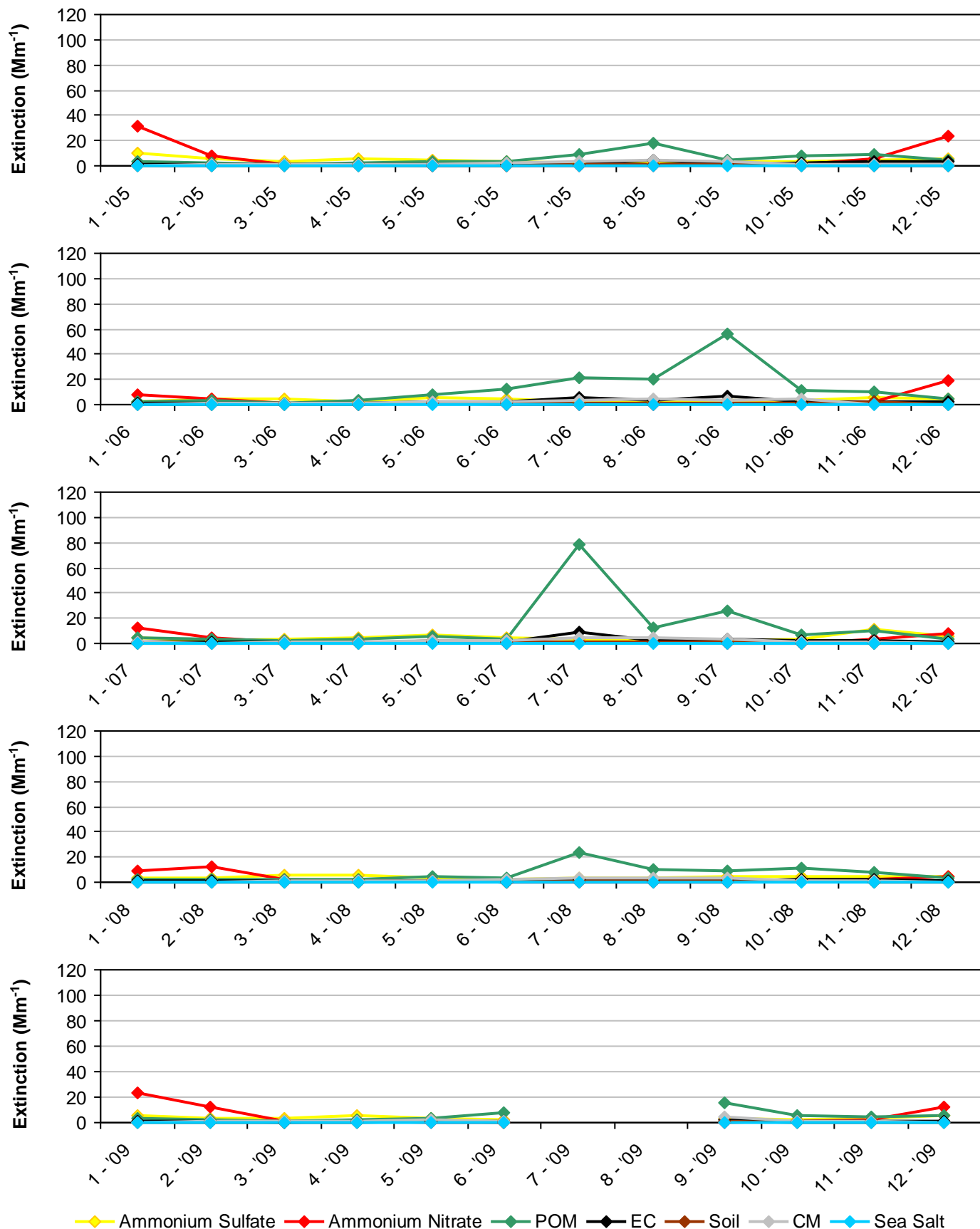
**Figure F.2-5**  
**Hells Canyon WA, OR (HECA1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



\*Note that monthly averages for the years 2000 and 2003 are shown here, but these years did not meet RHR data completeness criteria.

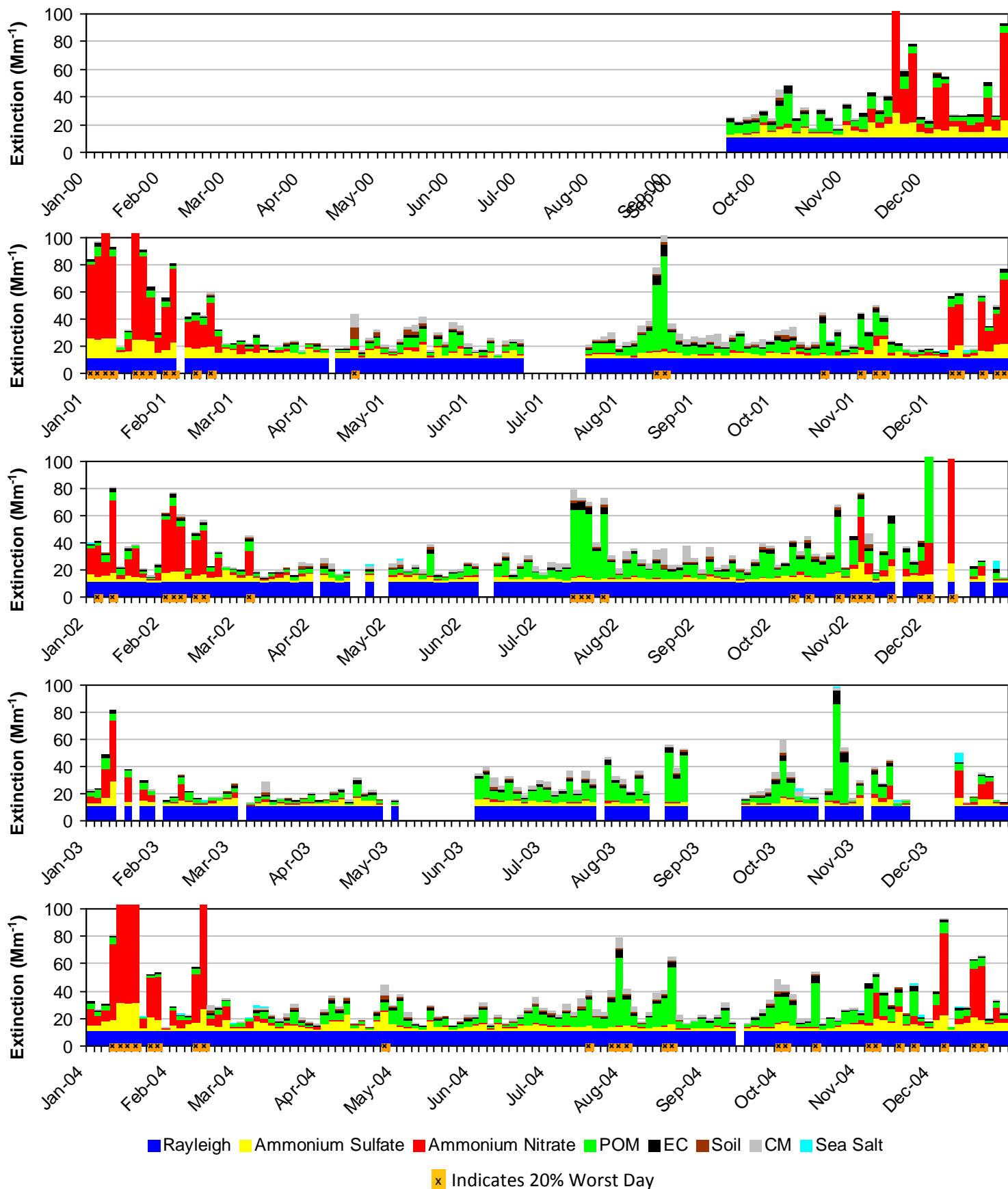


**Figure F.2-6**  
**Hells Canyon WA, OR (HECA1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



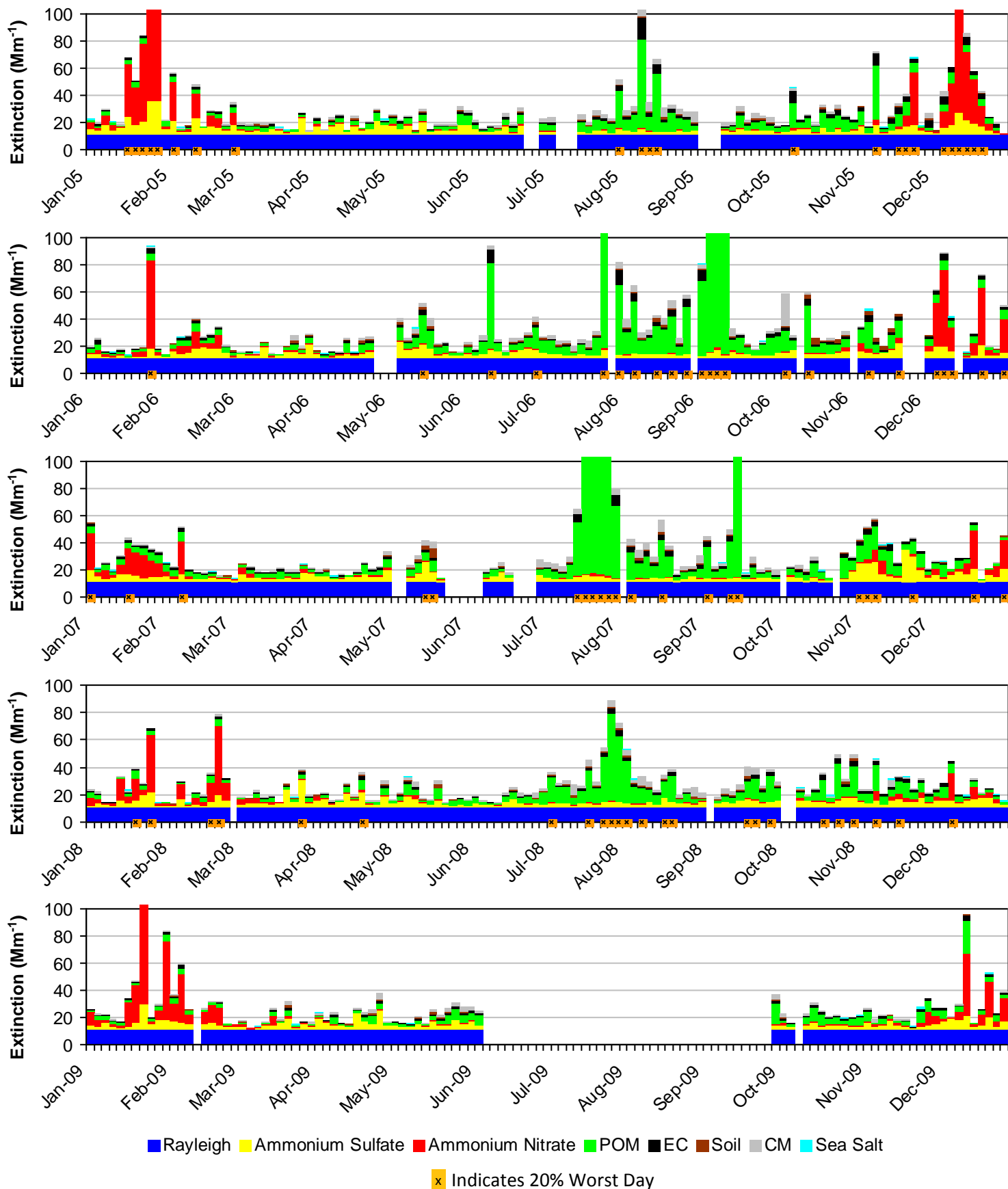
\*Note that monthly averages for the year 2009 are shown here, but this year did not meet RHR data completeness criteria.

**Figure F.2-7**  
**Hells Canyon WA, OR (HECA1 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the years 2000 and 2003 are shown here, but these years did not meet RHR data completeness criteria.

**Figure F.2-8**  
**Hells Canyon WA, OR (HECA1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the year 2009 are shown here, but this year did not meet RHR data completeness criteria.

### F.3. SAWTOOTH WA (SAWT1)

The following tables and figures are presented in this section for the Sawtooth WA represented by the SAWT1 IMPROVE Monitor:

- **Table F.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 F.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 F.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 F.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 F.3-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure F.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 F.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 F.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 F.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 F.3-1  
Sawtooth WA, ID (SAWT1 Site)  
Annual Averages, 5-Year Period Averages and Trends**

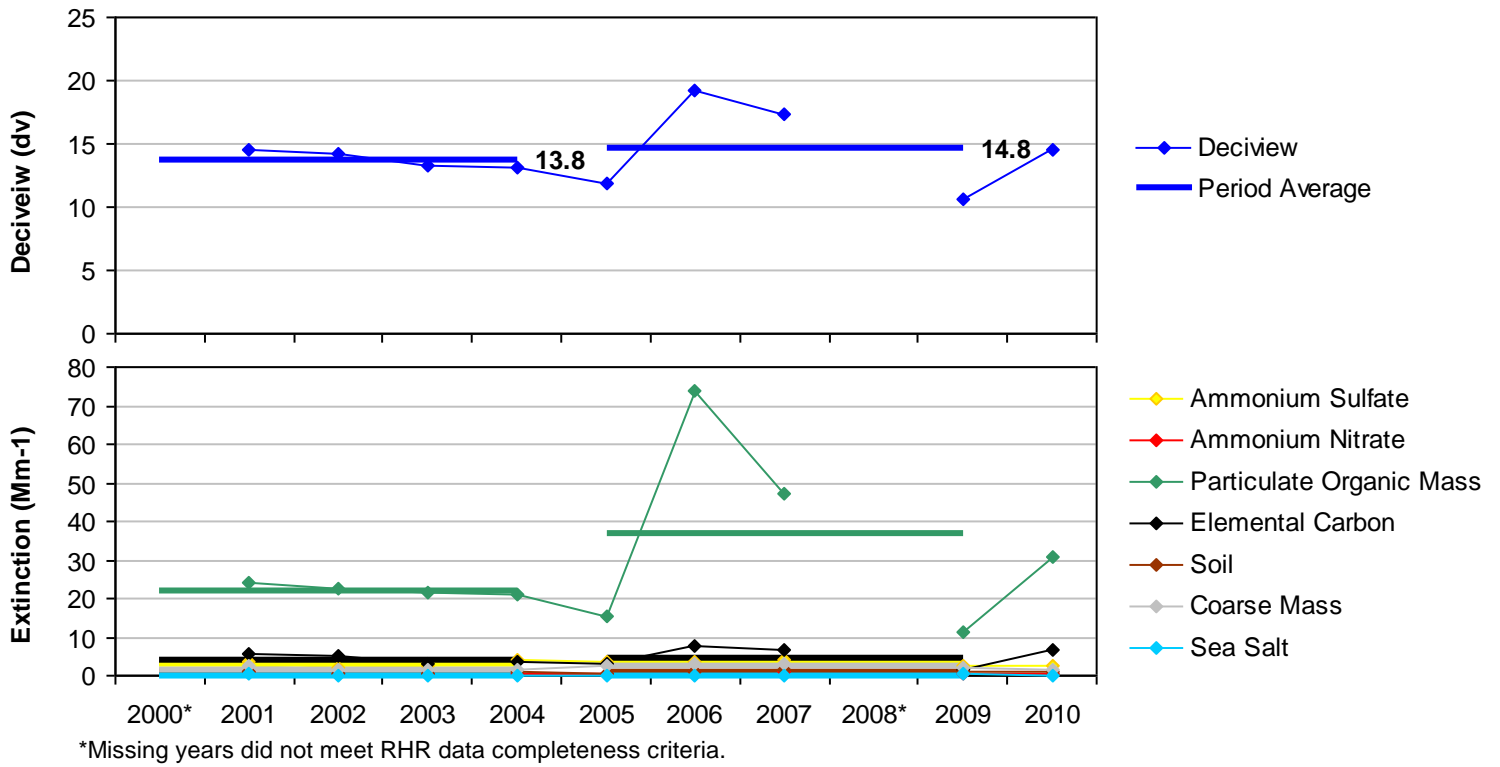
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P -B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	4.9	3.8	3.2	4.1	3.5	4.0	3.8	---	3.8	4.0	-0.1	0.4	4.0	3.8	-0.2	-5%
Worst 20% Days	---	14.5	14.2	13.3	13.1	11.9	19.2	17.4	---	10.6	14.5	-0.4	0.2	13.8	14.8	1.0	7%
All Days	---	8.7	8.1	7.5	7.8	7.4	9.6	8.4	---	6.7	7.9	-0.2	0.2	8.0	8.0	0.0	0%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	16.3	14.6	13.8	15.1	14.3	15.0	14.7	---	14.6	14.9	-0.1	0.4	15.0	14.7	-0.3	-2%
Worst 20% Days	---	47.5	42.5	39.8	41.3	36.0	100.6	72.9	---	29.3	52.8	-1.8	0.3	42.8	59.7	16.9	40%
All Days	---	26.3	24.4	23.0	23.9	22.4	37.2	29.8	---	20.1	25.6	-0.5	0.3	24.4	27.4	3.0	12%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	1.7	1.1	0.8	1.1	1.2	1.4	1.3	---	1.2	1.0	0.0	0.3	1.2	1.3	0.1	8%
Worst 20% Days	---	3.5	2.1	2.6	4.0	3.8	3.8	4.1	---	2.5	2.7	0.1	0.3	3.1	3.5	0.4	13%
All Days	---	2.8	2.1	1.9	2.6	2.6	3.1	2.7	---	2.2	2.1	0.0	0.4	2.3	2.6	0.3	13%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	0.4	0.3	0.2	0.3	0.2	0.3	0.2	---	0.2	0.2	0.0	0.0	0.3	0.2	-0.1	-33%
Worst 20% Days	---	0.8	0.6	0.5	0.6	0.6	1.0	0.9	---	0.4	0.6	0.0	0.5	0.6	0.7	0.1	17%
All Days	---	0.5	0.5	0.4	0.4	0.4	0.6	0.5	---	0.3	0.4	0.0	0.2	0.5	0.5	0.0	0%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	2.8	2.1	1.9	2.6	1.9	2.1	2.3	---	2.2	2.8	0.0	0.4	2.4	2.1	-0.3	-13%
Worst 20% Days	---	23.9	22.5	21.6	20.9	15.3	73.8	47.0	---	11.3	30.7	-1.0	0.2	22.2	36.9	14.7	66%
All Days	---	8.9	8.3	8.2	8.0	6.4	18.8	12.8	---	5.2	9.9	-0.3	0.2	8.3	10.8	2.5	30%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	0.9	0.6	0.5	0.6	0.5	0.7	0.5	---	0.4	0.5	0.0	0.1	0.6	0.5	-0.1	-17%
Worst 20% Days	---	5.6	4.9	2.8	3.4	3.2	7.9	6.6	---	1.7	6.6	-0.3	0.4	4.2	4.9	0.7	17%
All Days	---	2.2	2.0	1.5	1.6	1.7	2.8	2.1	---	1.0	2.0	-0.1	0.4	1.8	1.9	0.1	6%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	0.1	0.2	0.1	0.2	0.1	0.1	0.1	---	0.2	0.1	0.0	0.4	0.1	0.1	0.0	0%
Worst 20% Days	---	1.1	0.8	0.5	0.8	0.7	1.1	1.4	---	0.8	0.9	0.0	0.2	0.8	1.0	0.2	25%
All Days	---	0.5	0.5	0.3	0.4	0.3	0.6	0.6	---	0.4	0.4	0.0	0.5	0.4	0.5	0.1	25%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	0.3	0.3	0.3	0.3	0.3	0.4	0.2	---	0.3	0.3	0.0	0.6	0.3	0.3	0.0	0%
Worst 20% Days	---	2.3	1.6	1.6	1.5	2.4	2.9	2.8	---	2.0	1.3	0.1	0.2	1.7	2.5	0.8	47%
All Days	---	1.3	1.0	0.8	0.9	1.0	1.2	1.1	---	0.8	0.8	0.0	0.4	1.0	1.0	0.0	0%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	0.0	0.0	0.0	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	---	0.3	0.0	0.2	0.0	0.0	0.0	0.0	---	0.6	0.0	0.0	0.3	0.1	0.2	0.1	100%
All Days	---	0.1	0.0	0.0	0.0	0.0	0.1	0.0	---	0.1	0.0	0.0	0.4	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).

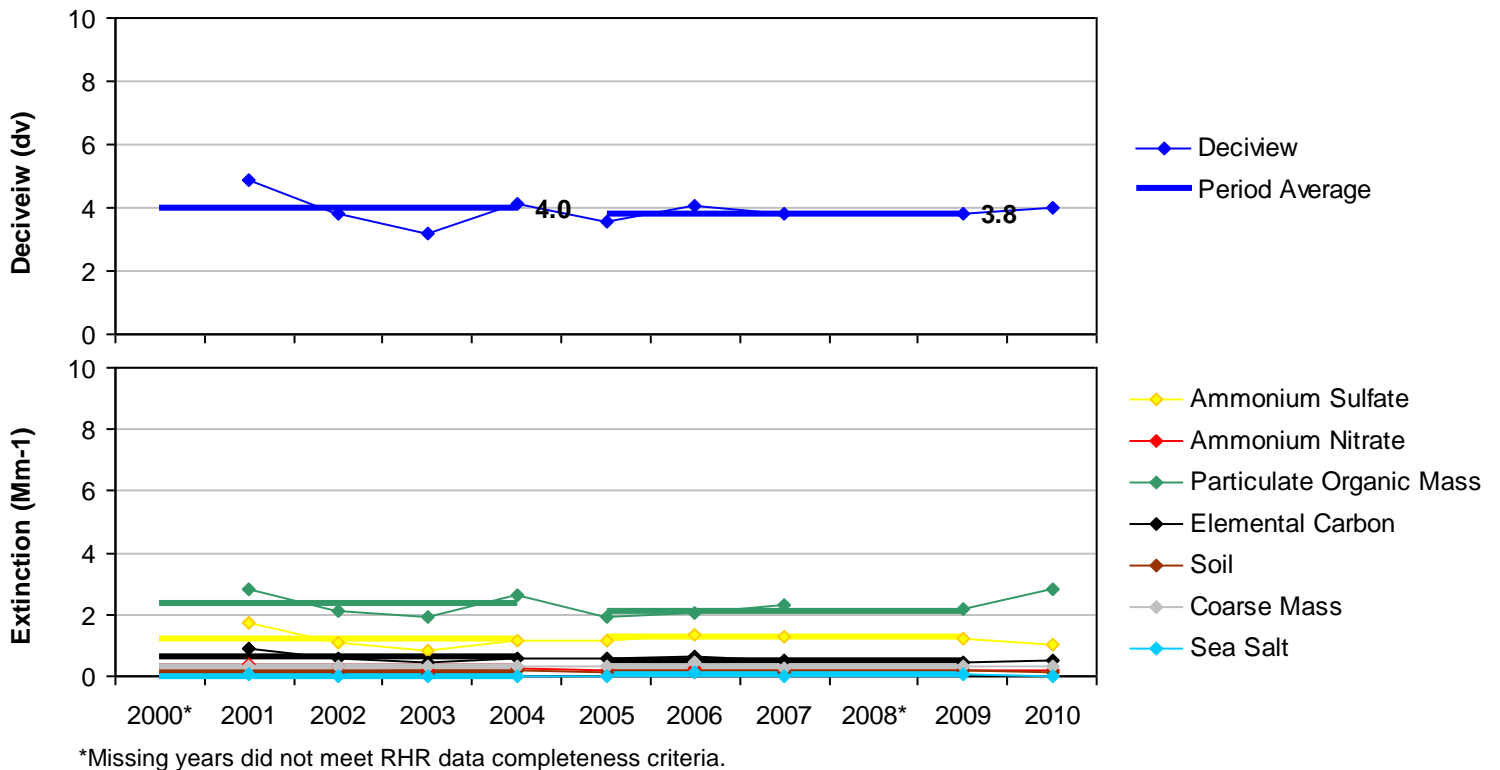
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

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

**Figure F.3-1**  
**Sawtooth WA, ID (SAWT1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

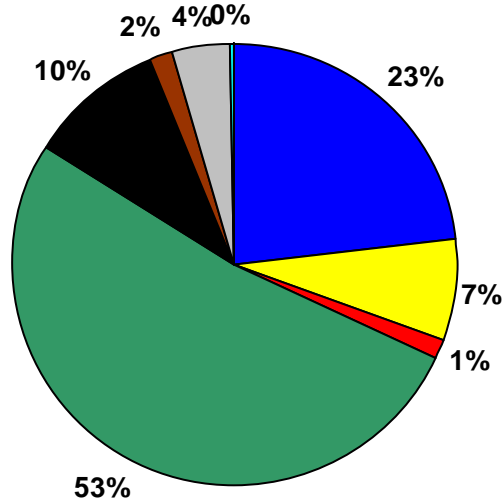


**Figure F.3-2**  
**Sawtooth WA, ID (SAWT1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

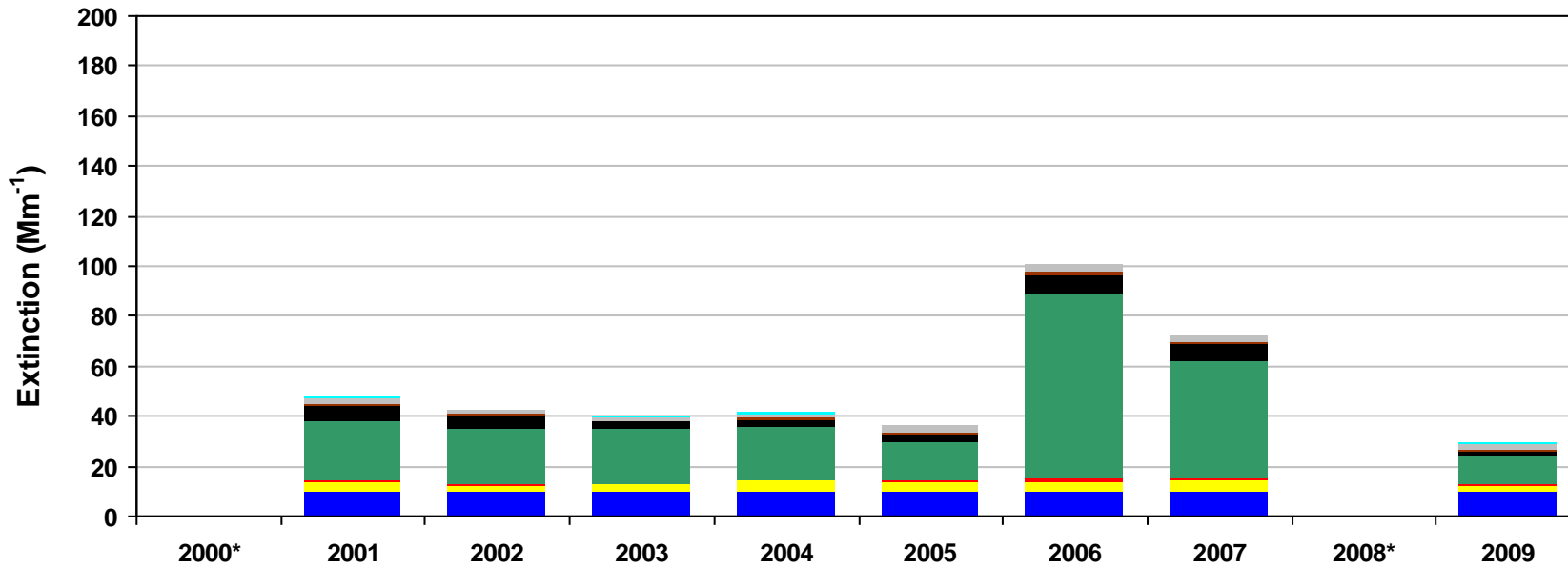
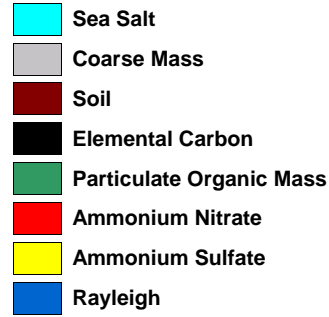
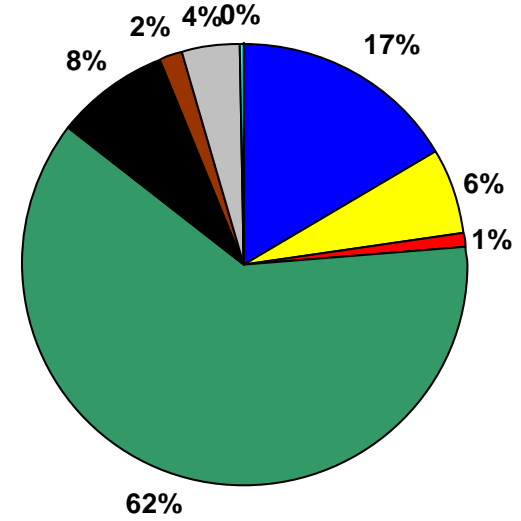


**Figure F.3-3**  
**Sawtooth WA, ID (SAWT1 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 13.8 dv (13.1 - 14.5 dv )



**2005-2009 Progress Period Average**  
 14.8 dv (10.6 - 19.2 dv )

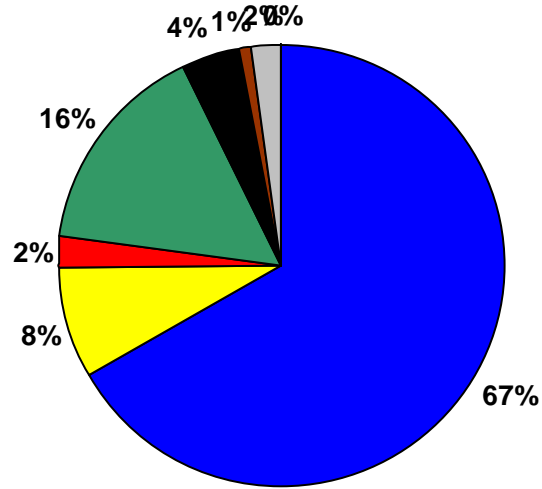


\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure F.3-4**  
**Sawtooth WA, ID (SAWT1 Site)**  
**20% Least Impaired Visibility Days**

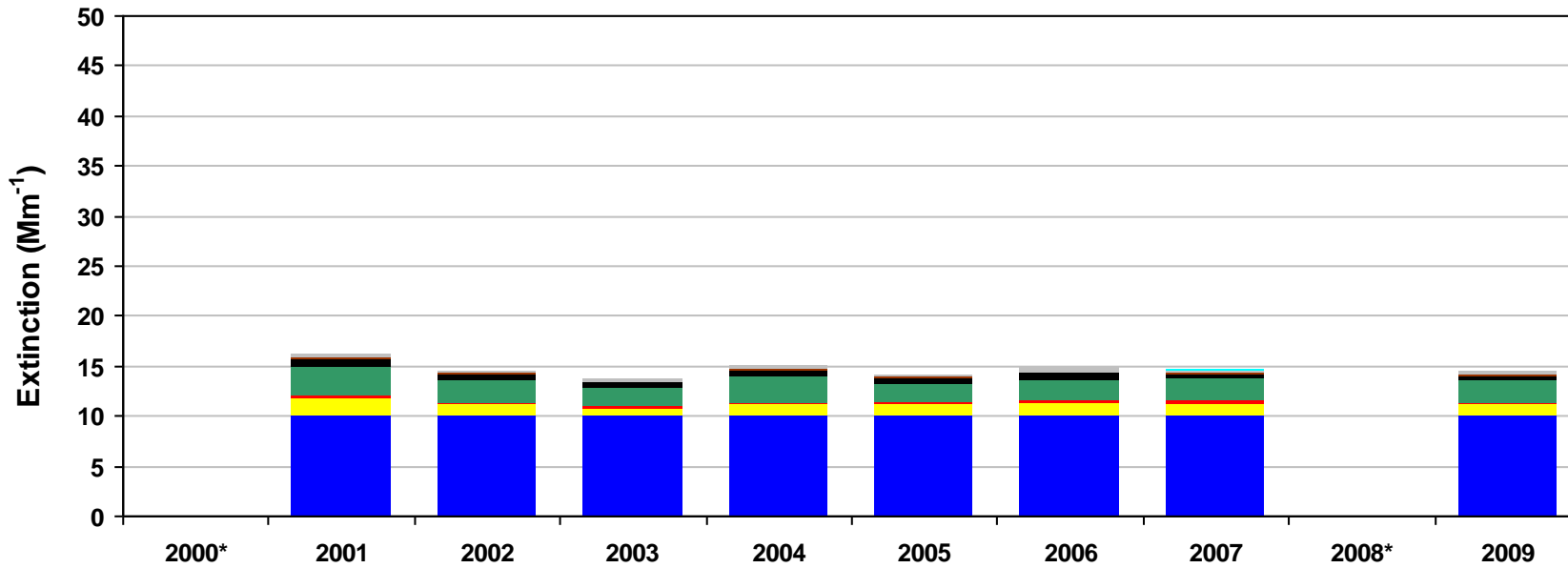
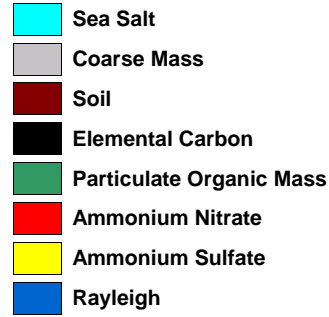
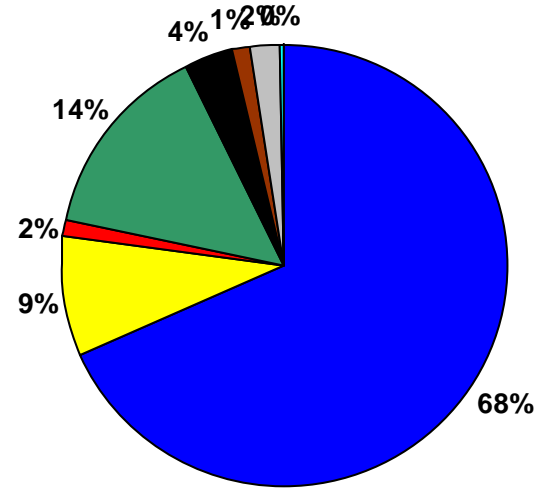
**2000-2004 Baseline Average**

4 dv (3.2 - 4.9 dv )



**2005-2009 Progress Period Average**

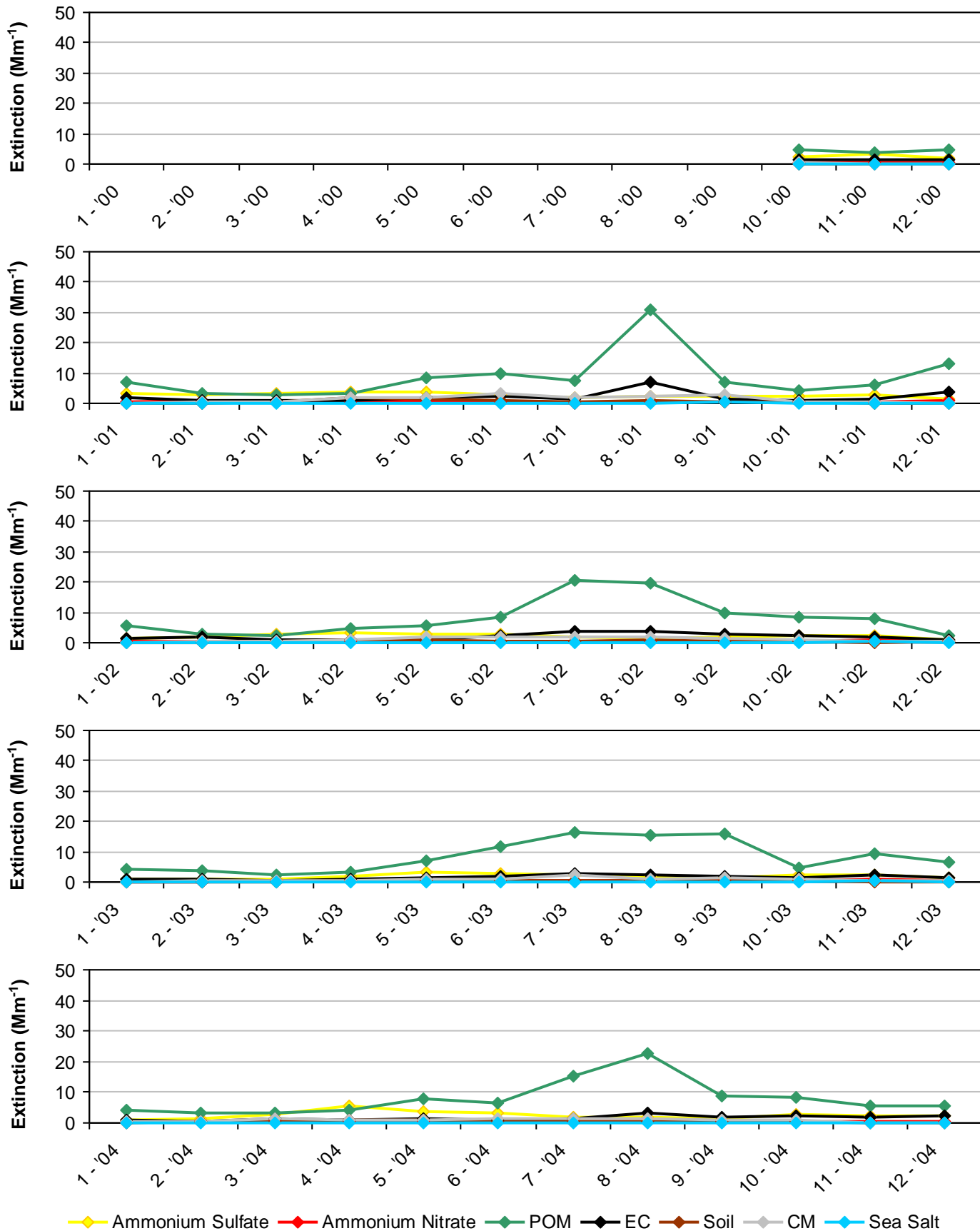
3.8 dv (3.5 - 4 dv )



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

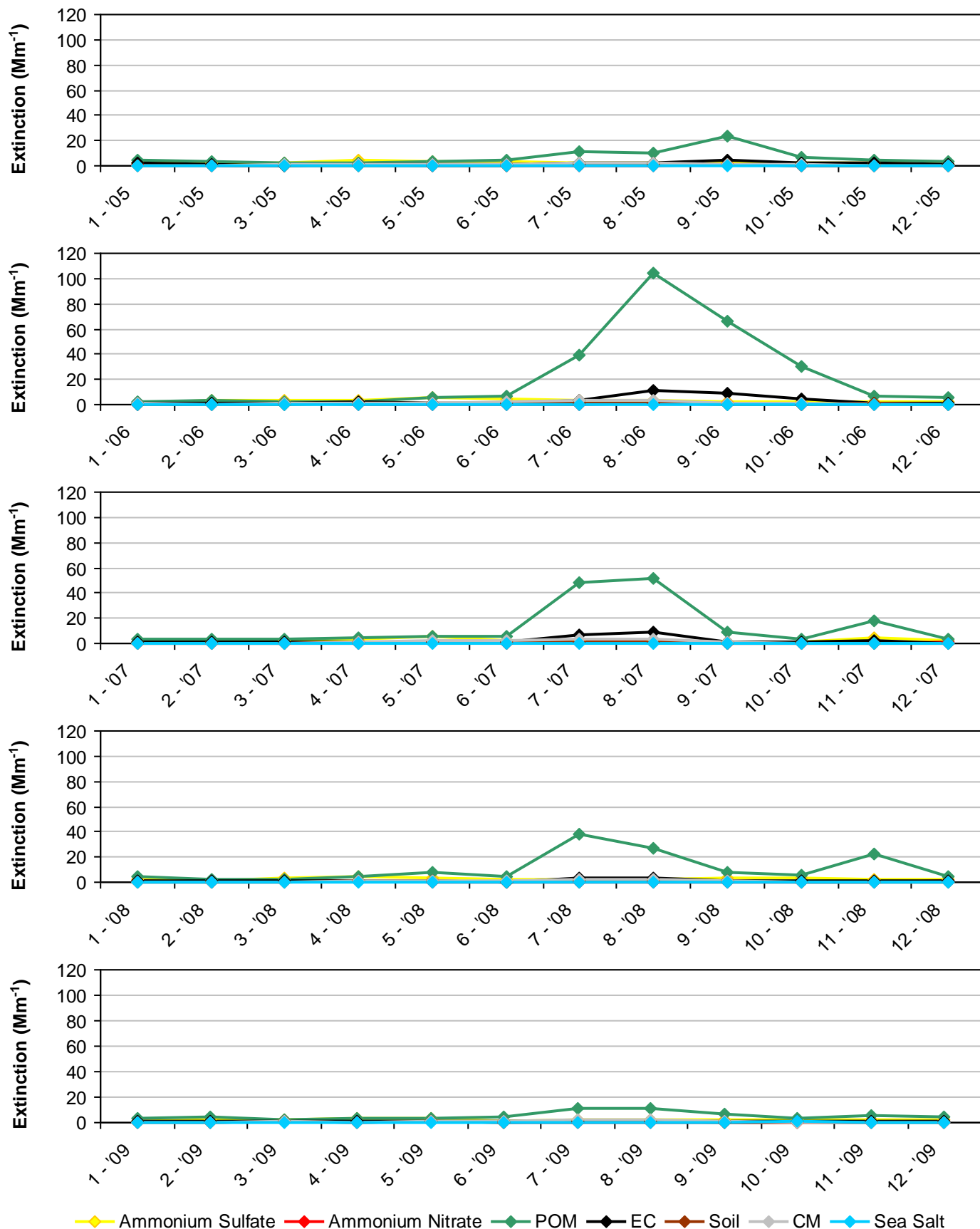


**Figure F.3-5**  
**Sawtooth WA, ID (SAWT1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



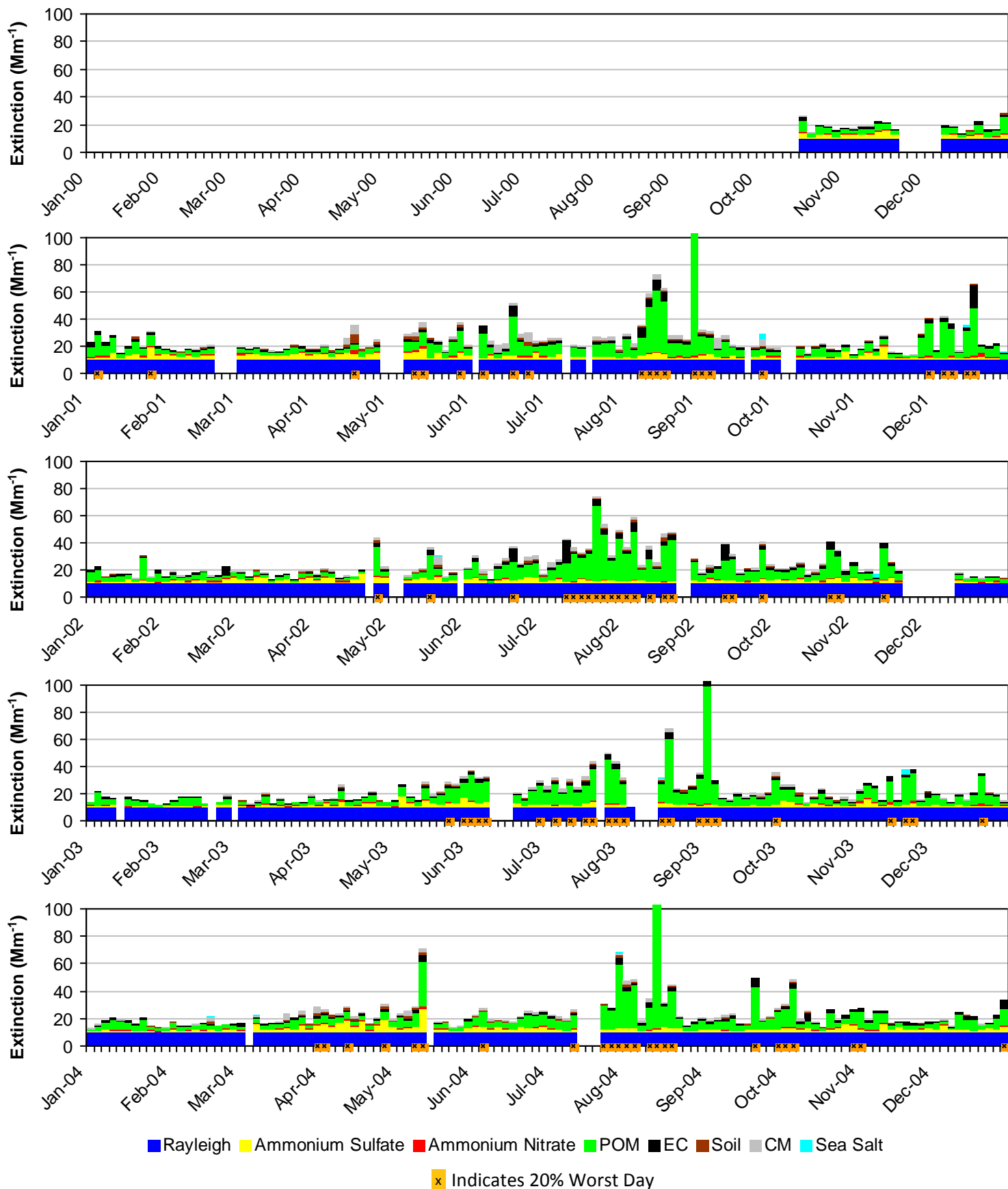
\*Note that monthly averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure F.3-6**  
**Sawtooth WA, ID (SAWT1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



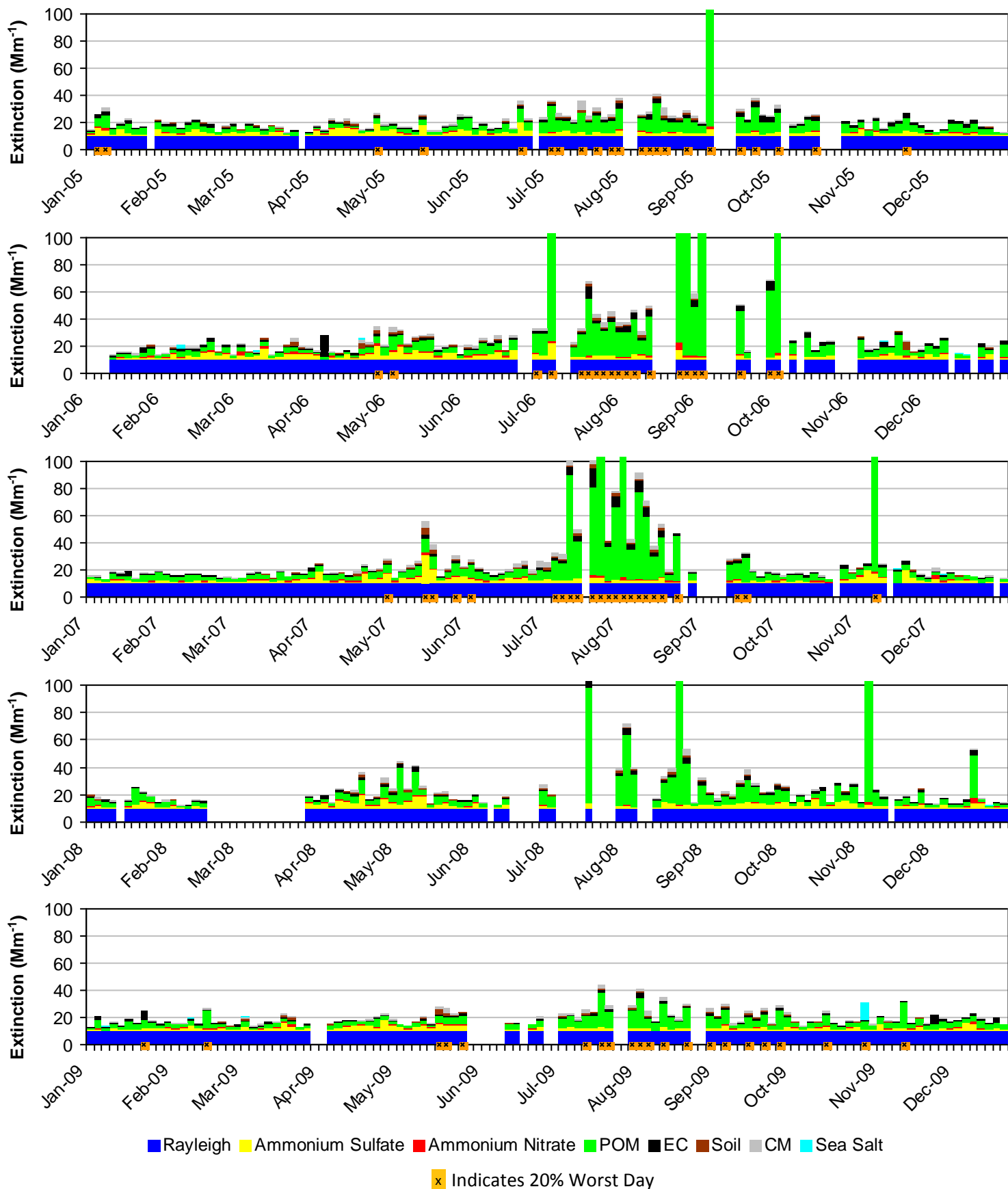
\*Note that monthly averages for the year 2008 are shown here, but this year did not meet RHR data completeness criteria.

**Figure F.3-7**  
**Sawtooth WA, ID (SAWT1 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 F.3-8**  
**Sawtooth WA, ID (SAWT1 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.

#### **F.4. ANACONDA-PINTLAR WA AND SELWAY-BITTERROOT WA (SULA1)**

The following tables and figures are presented in this section for the Anaconda-Pintlar WA and Selway-Bitterroot WA represented by the SULA1 IMPROVE Monitor:

- **Table F.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 F.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 F.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 F.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 F.4-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure F.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 F.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 F.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 F.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 F.4-1**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**Annual Averages, 5-Year Period Averages and Trends**

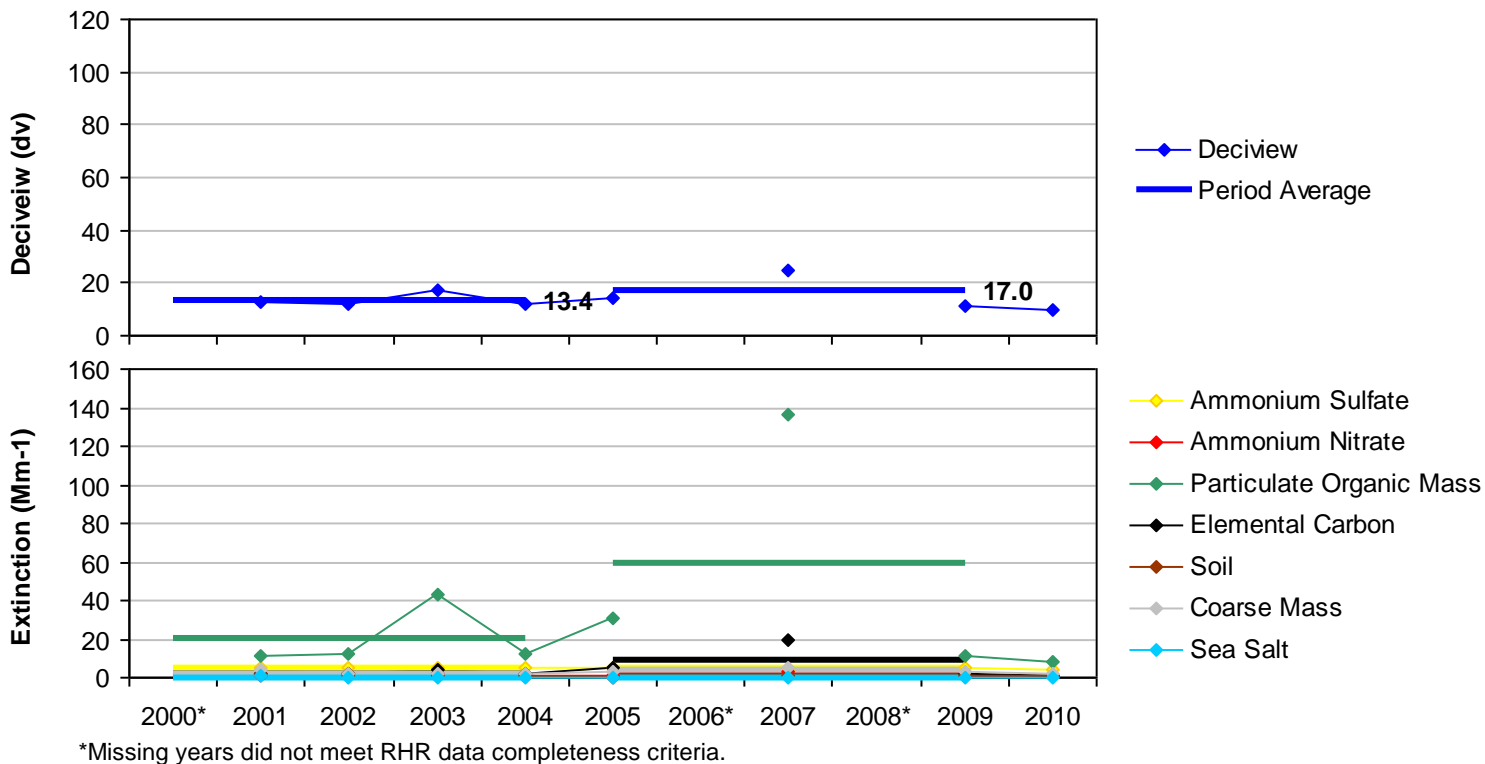
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P-B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	---	3.1	2.7	1.8	2.7	2.5	---	2.5	---	2.3	1.7	-0.1	0.1	2.6	2.5	-0.1	-4%
Worst 20% Days	---	12.6	12.1	16.9	12.0	14.6	---	24.9	---	11.6	9.6	-0.1	0.5	13.4	17.0	3.6	27%
All Days	---	7.5	7.2	7.5	6.8	7.0	---	9.6	---	6.2	5.3	-0.1	0.3	7.2	7.6	0.4	6%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	---	13.6	13.2	12.0	13.2	12.9	---	12.9	---	12.6	11.9	-0.1	0.1	13.0	12.8	-0.2	-2%
Worst 20% Days	---	35.7	34.2	66.3	33.8	55.4	---	178.9	---	32.6	27.4	-0.2	0.5	42.5	88.9	46.4	>100%
All Days	---	22.5	21.8	27.1	21.0	24.9	---	51.3	---	19.9	18.0	-0.2	0.5	23.1	32.0	8.9	39%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	---	1.3	1.1	0.7	1.2	1.4	---	1.3	---	1.2	0.9	0.0	0.5	1.1	1.3	0.2	18%
Worst 20% Days	---	4.8	4.6	4.8	5.1	5.2	---	3.8	---	5.1	4.3	0.0	0.3	4.8	4.7	-0.1	-2%
All Days	---	3.4	3.1	2.7	3.2	3.2	---	3.0	---	3.0	2.7	0.0	0.3	3.1	3.1	0.0	0%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	---	0.4	0.4	0.2	0.4	0.3	---	0.3	---	0.2	0.1	0.0	0.1	0.3	0.3	0.0	0%
Worst 20% Days	---	1.3	1.6	1.6	1.4	1.4	---	2.7	---	1.0	0.8	0.0	0.4	1.5	1.7	0.2	13%
All Days	---	1.1	1.1	0.8	0.9	0.8	---	1.1	---	0.6	0.6	0.0	0.2	1.0	0.9	-0.1	-10%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	1.0	1.0	0.8	1.0	0.6	---	0.7	---	0.6	0.5	-0.1	0.0	0.9	0.6	-0.3	-33%
Worst 20% Days	---	11.5	12.6	43.3	12.7	30.6	---	136.5	---	11.3	7.8	1.1	0.3	20.0	59.5	39.5	>100%
All Days	---	4.7	5.0	11.1	4.7	7.9	---	30.1	---	3.9	2.8	0.3	0.5	6.4	14.0	7.6	>100%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	---	0.3	0.3	0.2	0.3	0.2	---	0.2	---	0.1	0.1	0.0	0.1	0.3	0.2	-0.1	-33%
Worst 20% Days	---	2.0	2.1	4.3	1.7	4.9	---	19.8	---	1.7	1.3	0.3	0.4	2.5	8.8	6.3	>100%
All Days	---	1.0	1.1	1.4	0.9	1.5	---	4.6	---	0.7	0.6	0.1	0.4	1.1	2.3	1.2	>100%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	---	0.2	0.1	0.0	0.1	0.1	---	0.1	---	0.1	0.1	0.0	0.5	0.1	0.1	0.0	0%
Worst 20% Days	---	1.6	0.9	0.6	0.7	0.5	---	0.7	---	0.6	1.0	0.0	0.1	0.9	0.6	-0.3	-33%
All Days	---	0.6	0.5	0.3	0.3	0.3	---	0.3	---	0.3	0.4	0.0	0.2	0.4	0.3	-0.1	-25%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	---	0.3	0.2	0.1	0.2	0.3	---	0.4	---	0.4	0.2	0.0	0.1	0.2	0.3	0.1	50%
Worst 20% Days	---	3.7	2.4	1.7	2.1	2.8	---	5.2	---	2.8	2.2	0.1	0.3	2.5	3.6	1.1	44%
All Days	---	1.4	1.1	0.8	1.0	1.2	---	2.0	---	1.2	0.9	0.0	0.3	1.1	1.4	0.3	27%
<b>Sea Salt Extinction (Mm-1)</b>																	
Best 20% Days	---	0.1	0.0	0.0	0.0	0.0	---	0.1	---	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0%
Worst 20% Days	---	1.0	0.0	0.0	0.0	0.0	---	0.1	---	0.0	0.0	0.0	0.3	0.3	0.0	-0.3	-100%
All Days	---	0.2	0.0	0.0	0.0	0.0	---	0.1	---	0.0	0.0	0.0	0.5	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).

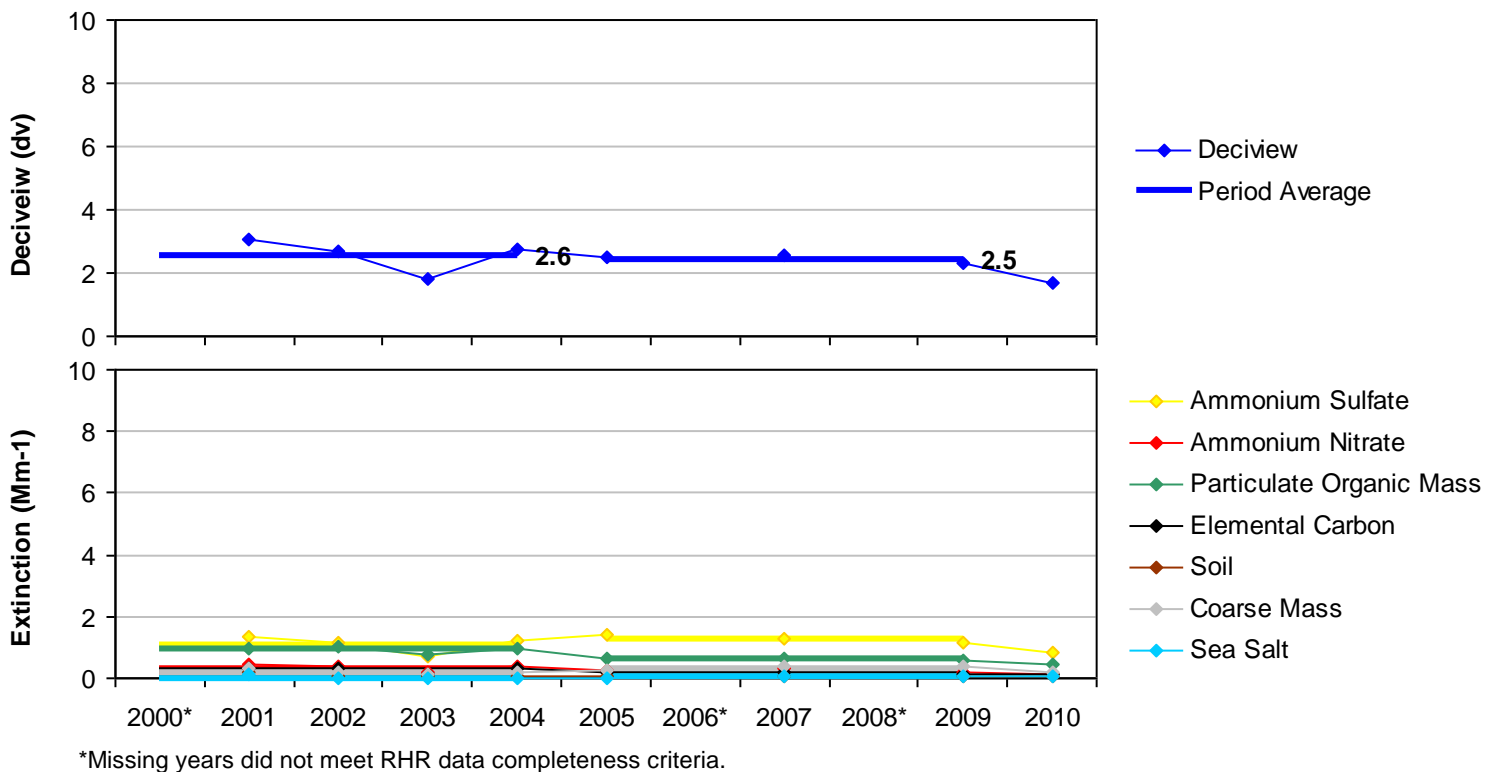
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

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

**Figure F.4-1**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Most Impaired Visibility Days**

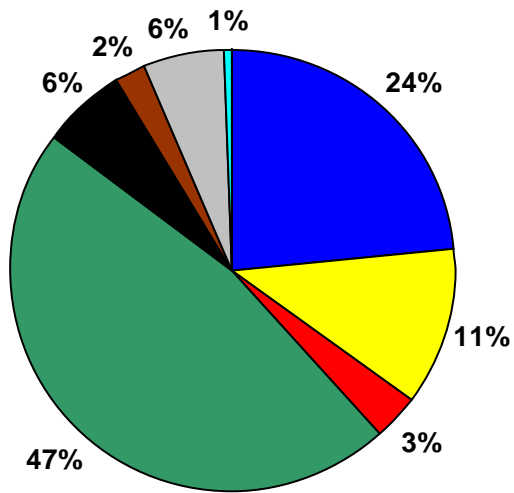


**Figure G.6-2**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**Annual and 5-Year Period Averages**  
**20% Least Impaired Visibility Days**

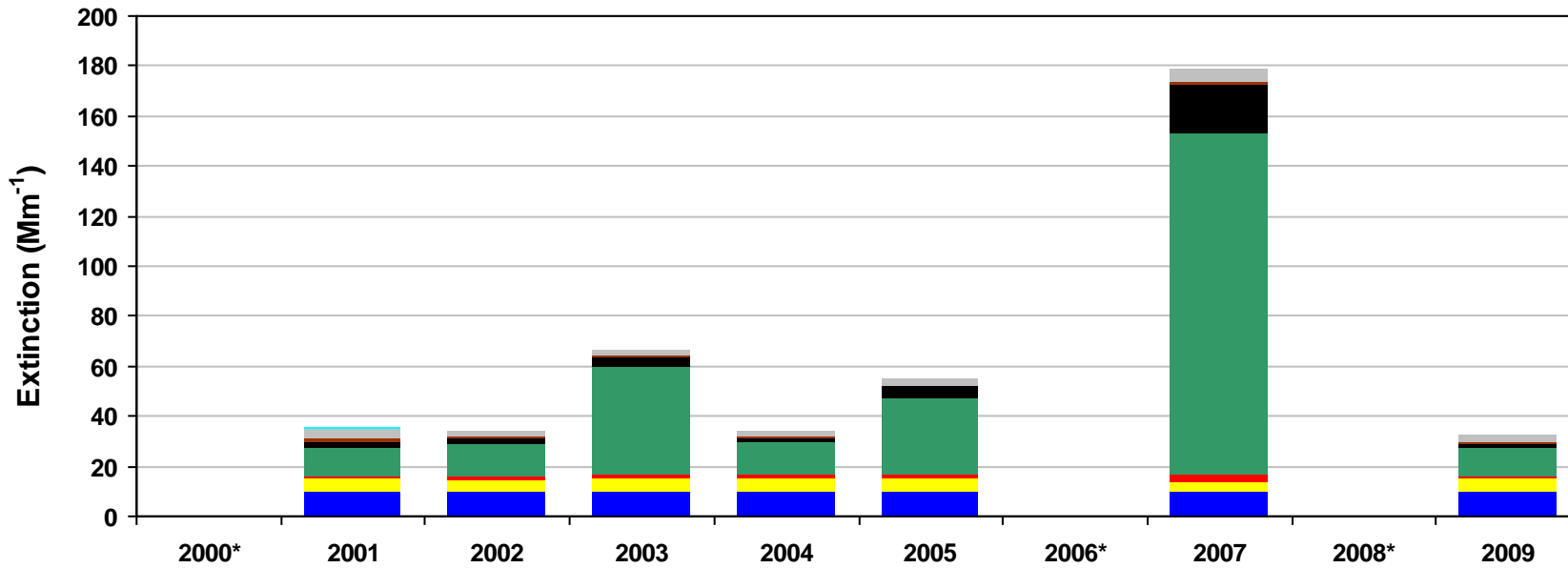
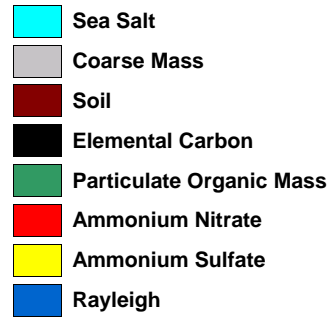
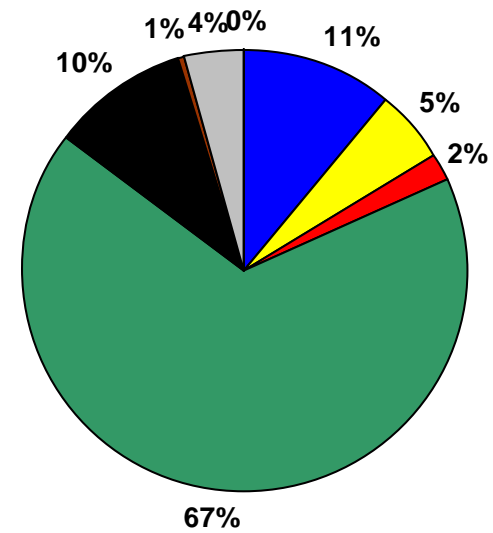


**Figure F.4-3**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 13.4 dv (12 - 16.9 dv )



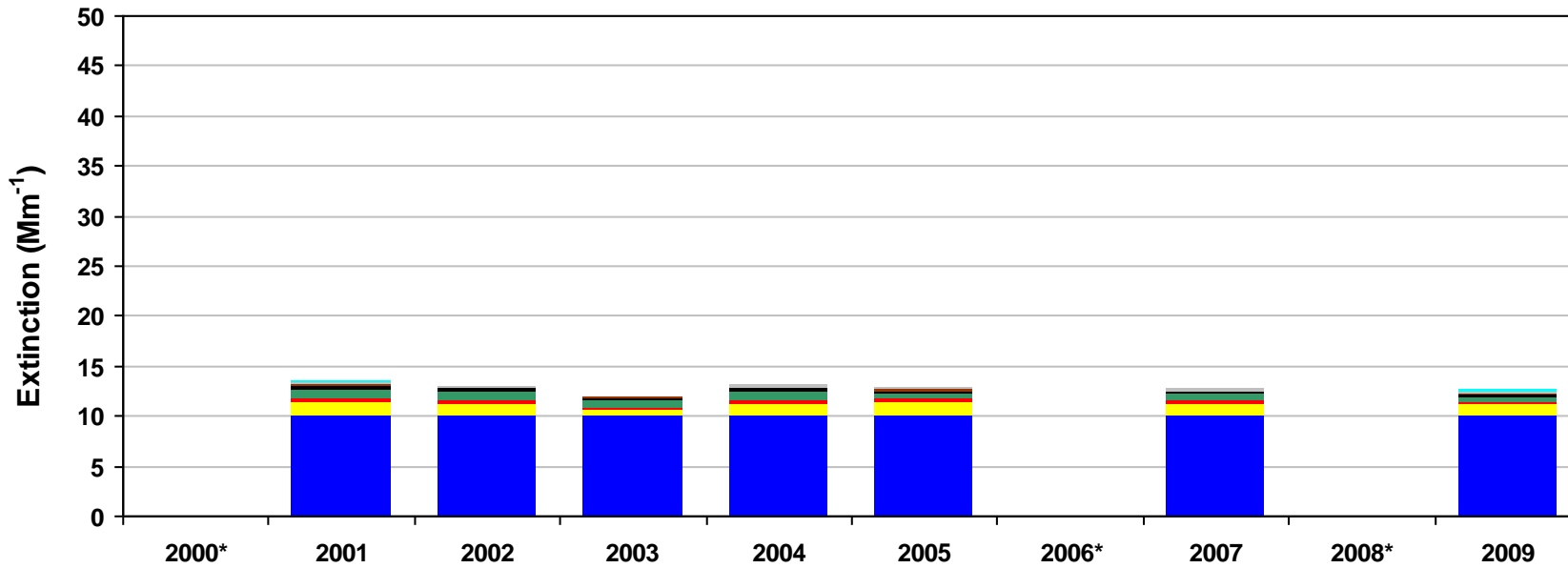
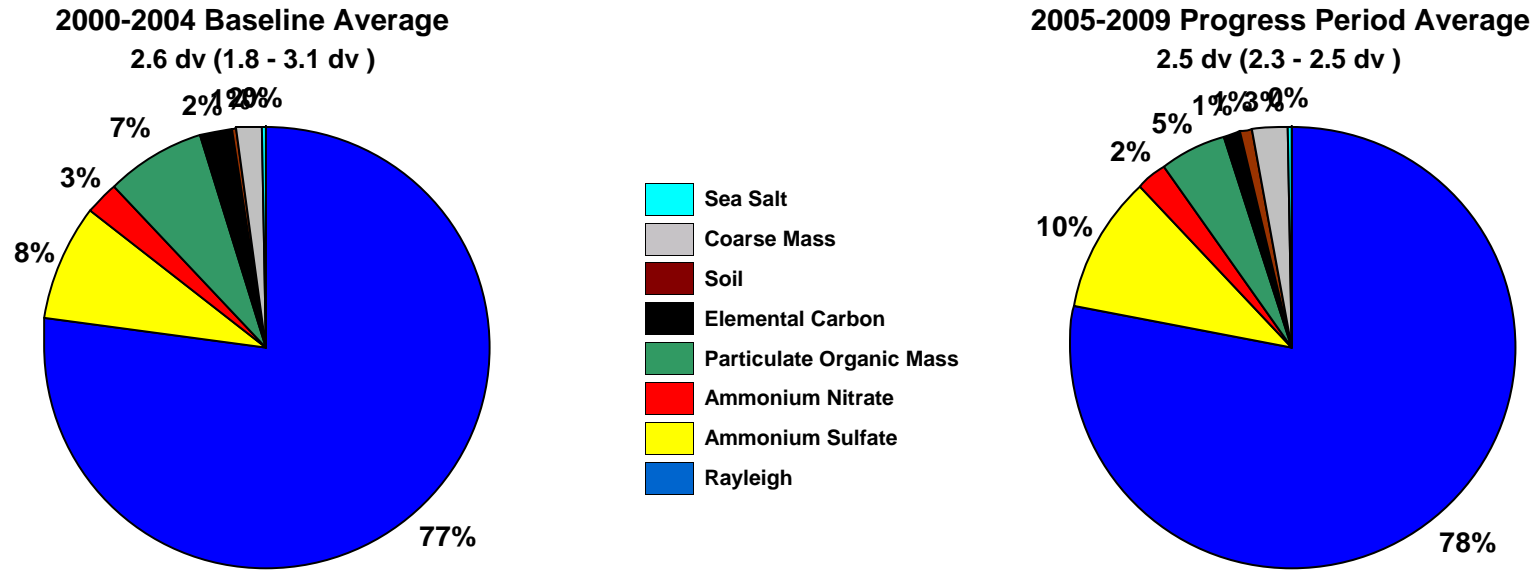
**2005-2009 Progress Period Average**  
 17 dv (11.6 - 24.9 dv )



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

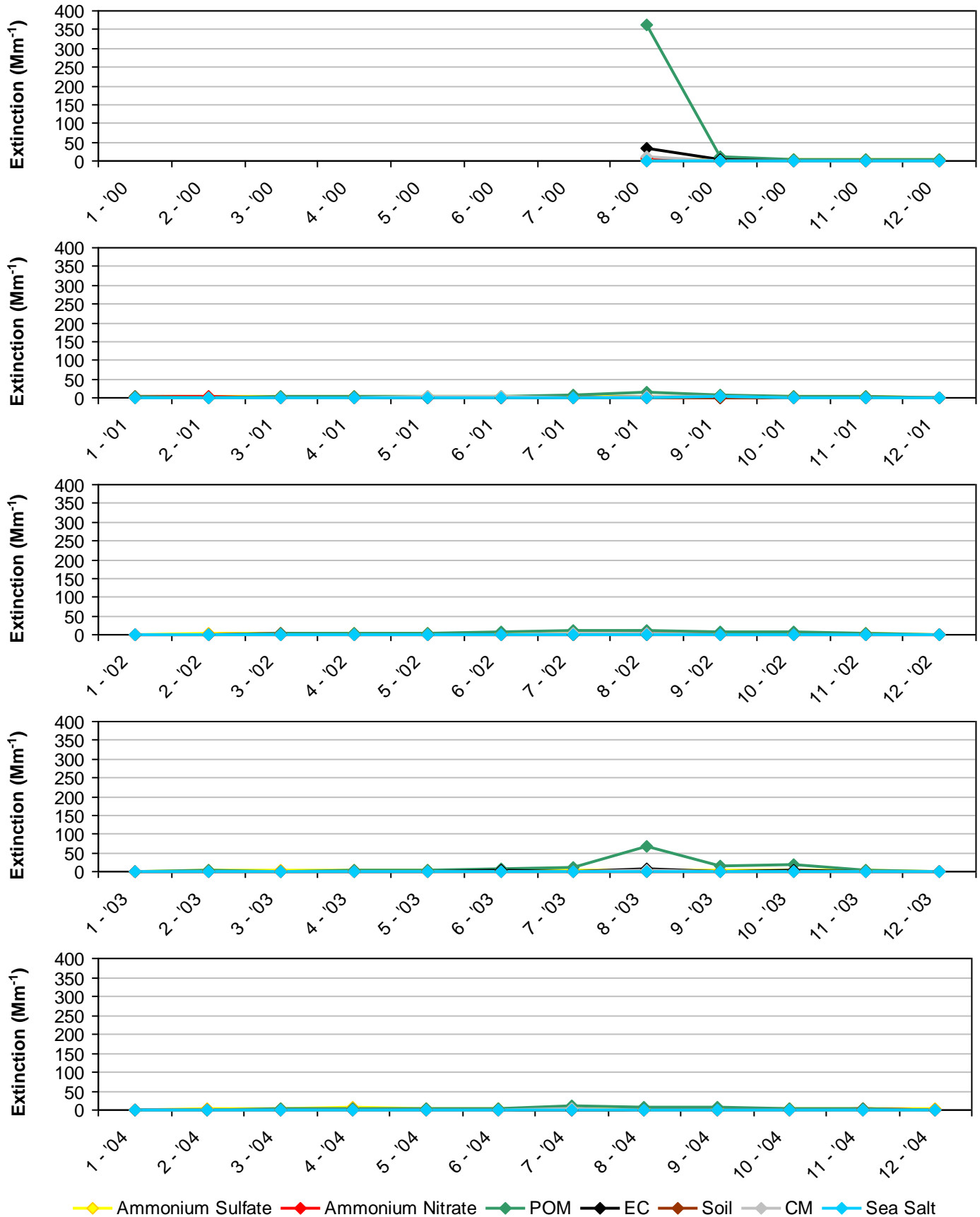


**Figure F.4-4**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**20% Least Impaired Visibility Days**



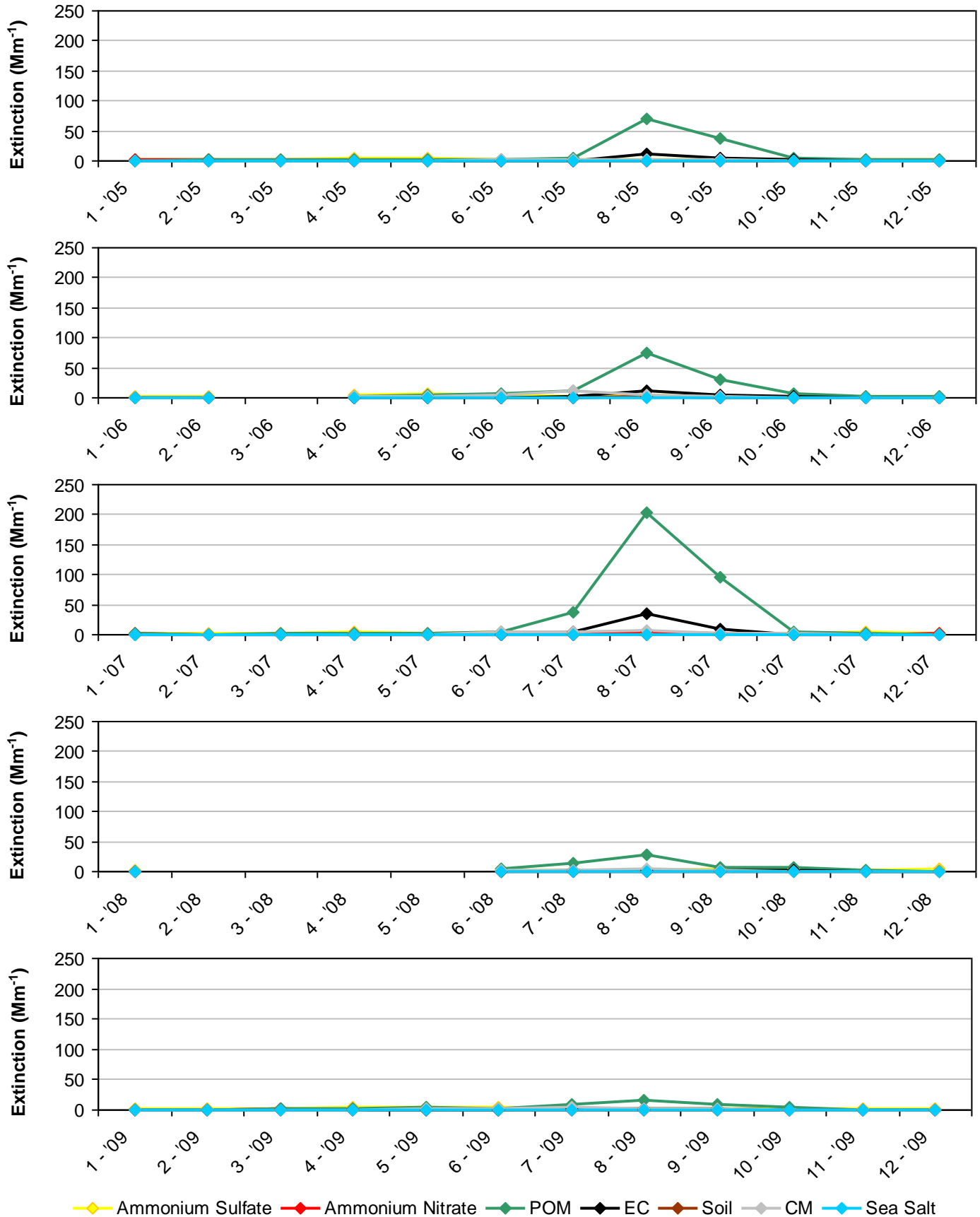
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure F.4-5**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



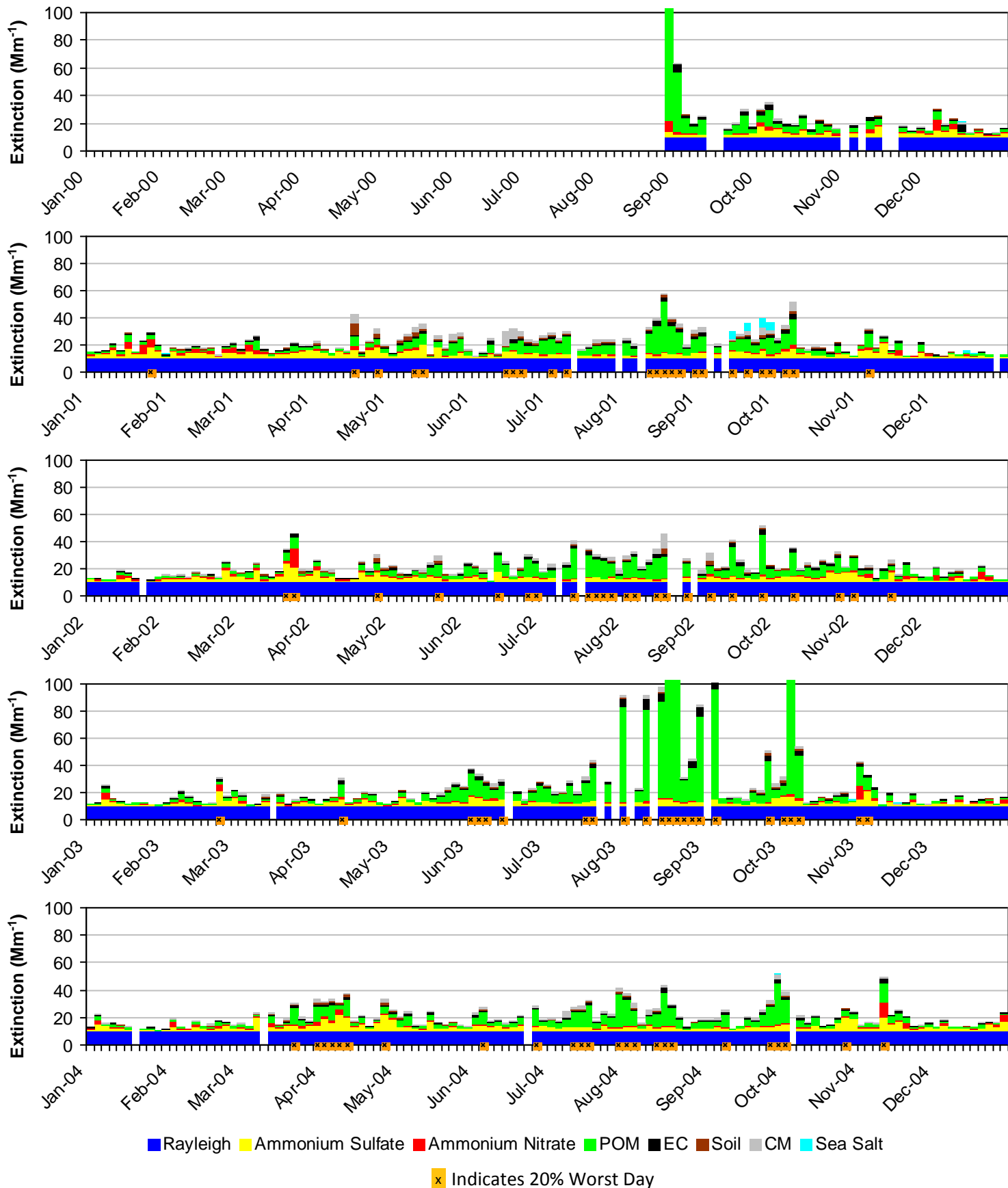
\*Note that monthly averages for the year 2000 are shown here, but this year did not meet RHR data completeness criteria.

**Figure F.4-6**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



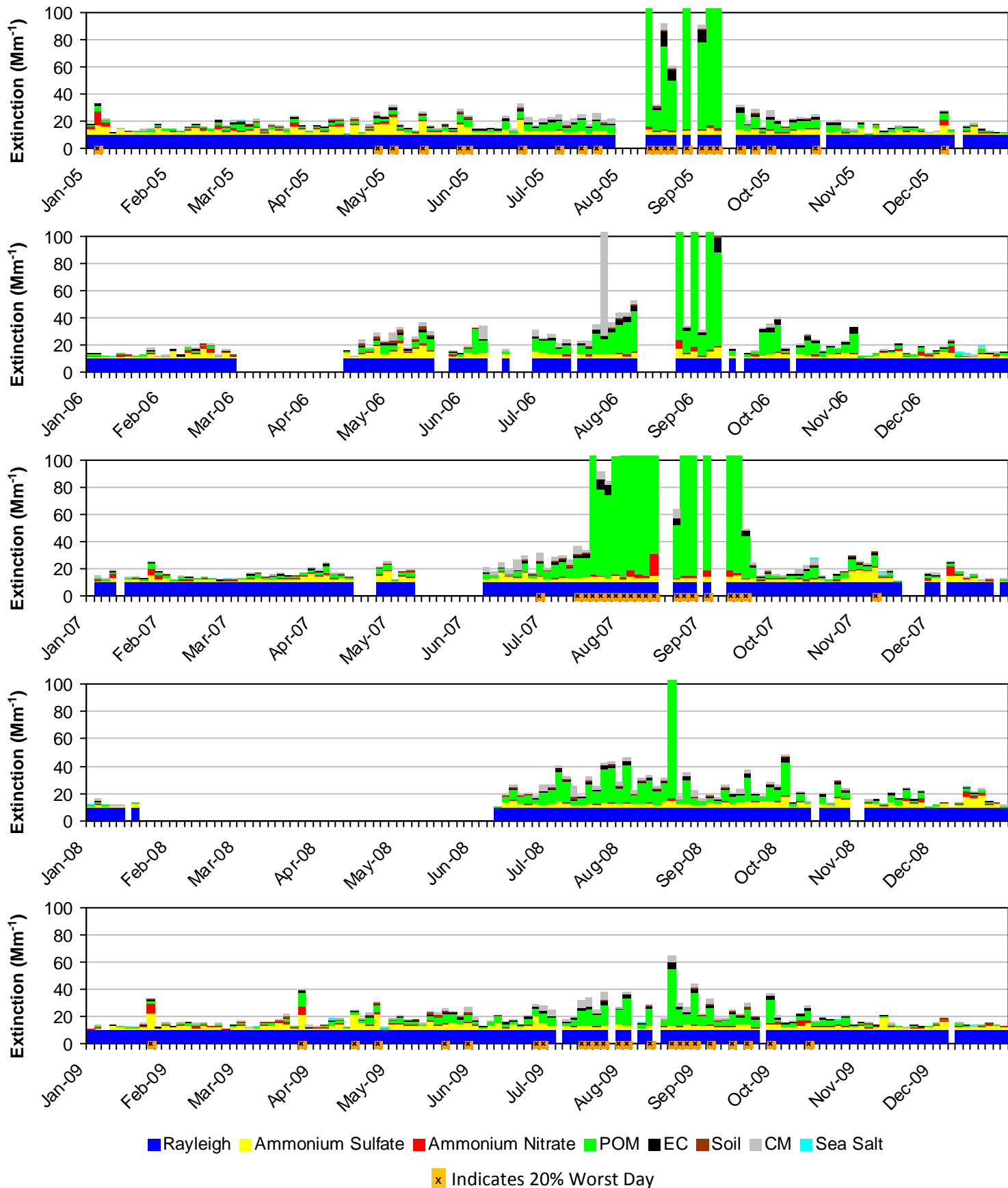
\*Note that monthly averages for the years 2006 and 2008 are shown here, but these years did not meet RHR data completeness criteria.

**Figure F.4-7**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 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 F.4-8**  
**Anaconda-Pintlar WA and Selway-Bitterroot WA, MT (SULA1 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**



\*Note that daily averages for the years 2006 and 2008 are shown here, but these years did not meet RHR data completeness criteria.

## **F.5. YELLOWSTONE NP, GRAND TETON NP, RED ROCK LAKES WA, AND TETON WA (YELL2)**

The following tables and figures are presented in this section for the Yellowstone NP, Grand Teton NP, Red Rock Lakes WA, and Teton WA represented by the YELL2 IMPROVE Monitor:

- **Table F.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 F.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 F.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 F.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 F.5-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure F.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 F.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 F.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 F.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 F.5-1  
Yellowstone NP, WY (YELL2 Site)  
Annual Averages, Period Averages and Trends**

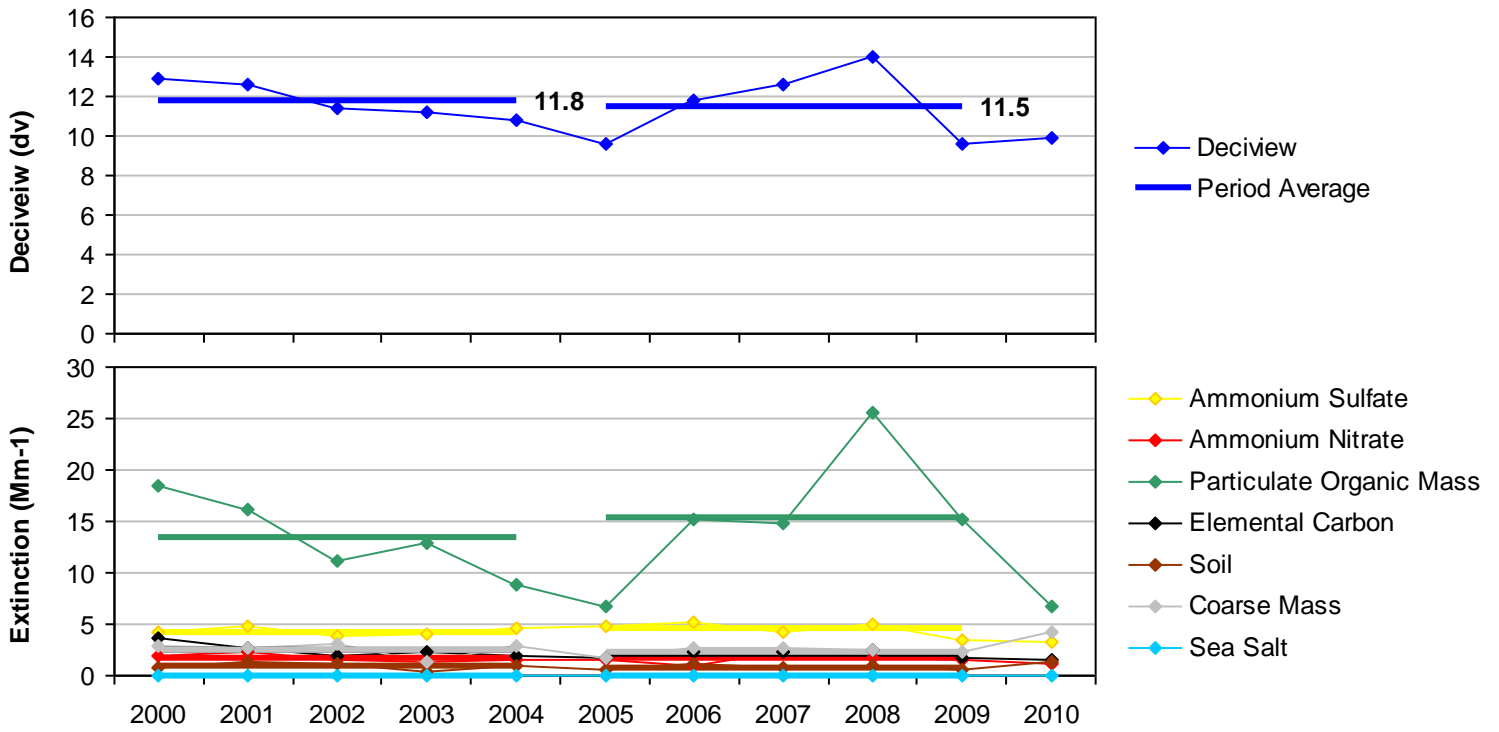
Group	Baseline Period					Progress Period					2010	2000-2009 Trend Statistics*		Period Averages**			
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009		Slope (change/yr.)	p-value	Baseline (B)	Progress (P)	Difference (P - B)	Percent Change
<b>Deciview (dv)</b>																	
Best 20% Days	2.8	3.0	2.6	1.9	2.6	2.1	2.3	2.2	1.8	1.9	0.9	-0.1	0.0	2.6	2.0	-0.6	-23%
Worst 20% Days	12.9	12.6	11.4	11.2	10.8	9.6	11.8	12.6	14.0	9.6	9.9	-0.2	0.2	11.8	11.5	-0.3	-3%
All Days	7.1	7.1	6.8	6.1	6.5	5.8	6.6	6.8	6.7	5.4	4.8	-0.1	0.1	6.7	6.3	-0.4	-6%
<b>Total Extinction (Mm-1)</b>																	
Best 20% Days	13.3	13.6	13.0	12.2	13.0	12.3	12.6	12.5	12.0	12.2	10.9	-0.1	0.0	13.0	12.3	-0.7	-5%
Worst 20% Days	40.9	38.9	31.8	31.4	29.8	26.3	36.2	36.3	47.6	34.1	27.4	-0.5	0.4	34.5	36.1	1.6	5%
All Days	22.5	22.2	20.7	19.7	20.0	18.5	21.3	21.4	23.1	19.4	17.1	-0.2	0.3	21.0	20.7	-0.3	-1%
<b>Ammonium Sulfate Extinction (Mm-1)</b>																	
Best 20% Days	1.7	1.9	1.3	1.1	1.3	1.5	1.6	1.2	1.1	1.4	1.0	0.0	0.2	1.5	1.4	-0.1	-7%
Worst 20% Days	4.2	4.7	3.8	4.1	4.6	4.8	5.1	4.3	5.0	3.5	3.4	0.1	0.3	4.3	4.6	0.3	7%
All Days	3.1	3.6	3.0	2.5	3.1	3.3	3.5	3.1	3.1	2.7	2.4	0.0	0.5	3.1	3.2	0.1	3%
<b>Ammonium Nitrate Extinction (Mm-1)</b>																	
Best 20% Days	0.9	0.8	0.8	0.5	0.6	0.3	0.4	0.7	0.6	0.6	0.2	0.0	0.1	0.7	0.5	-0.2	-29%
Worst 20% Days	2.0	2.4	1.6	1.4	1.5	1.6	0.9	2.4	1.7	1.6	1.2	0.0	0.3	1.8	1.6	-0.2	-11%
All Days	1.5	1.5	1.6	1.2	1.3	1.1	1.1	1.7	1.3	1.1	0.8	0.0	0.2	1.4	1.2	-0.2	-14%
<b>Particulate Organic Mass Extinction (Mm-1)</b>																	
Best 20% Days	1.1	1.2	1.1	0.9	1.3	1.1	0.8	1.0	0.8	0.5	0.3	-0.1	0.0	1.1	0.8	-0.3	-27%
Worst 20% Days	18.4	16.1	11.2	12.8	8.9	6.7	15.1	14.7	25.6	15.2	6.8	0.0	0.5	13.5	15.5	2.0	15%
All Days	6.0	5.3	4.4	4.7	4.0	3.1	5.1	4.8	7.2	4.4	2.4	-0.1	0.3	4.9	4.9	0.0	0%
<b>Elemental Carbon Extinction (Mm-1)</b>																	
Best 20% Days	0.2	0.4	0.3	0.2	0.5	0.3	0.4	0.3	0.1	0.2	0.1	0.0	0.2	0.3	0.3	0.0	0%
Worst 20% Days	3.7	2.6	1.9	2.3	1.9	1.8	2.3	2.4	2.6	1.7	1.6	0.0	0.2	2.5	2.2	-0.3	-12%
All Days	1.3	1.1	1.0	1.0	1.0	0.9	1.1	1.0	0.9	0.7	0.6	0.0	0.0	1.1	0.9	-0.2	-18%
<b>Soil Extinction (Mm-1)</b>																	
Best 20% Days	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0%
Worst 20% Days	0.8	1.4	1.2	0.4	0.9	0.6	1.1	0.8	1.0	0.6	1.3	0.0	0.3	1.0	0.8	-0.2	-20%
All Days	0.4	0.6	0.5	0.3	0.4	0.3	0.4	0.5	0.4	0.3	0.5	0.0	0.4	0.4	0.4	0.0	0%
<b>Coarse Mass Extinction (Mm-1)</b>																	
Best 20% Days	0.3	0.2	0.3	0.2	0.3	0.1	0.2	0.2	0.3	0.3	0.1	0.0	0.5	0.2	0.2	0.0	0%
Worst 20% Days	2.8	2.7	3.1	1.3	2.9	1.8	2.6	2.6	2.6	2.3	4.2	0.0	0.1	2.6	2.4	-0.2	-8%
All Days	1.2	1.2	1.3	0.9	1.1	0.8	1.1	1.4	1.0	1.2	1.4	0.0	0.3	1.1	1.1	0.0	0%
<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	0.0	0.2	0.0	0.0	0.0	0%
Worst 20% Days	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0%
All Days	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	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).

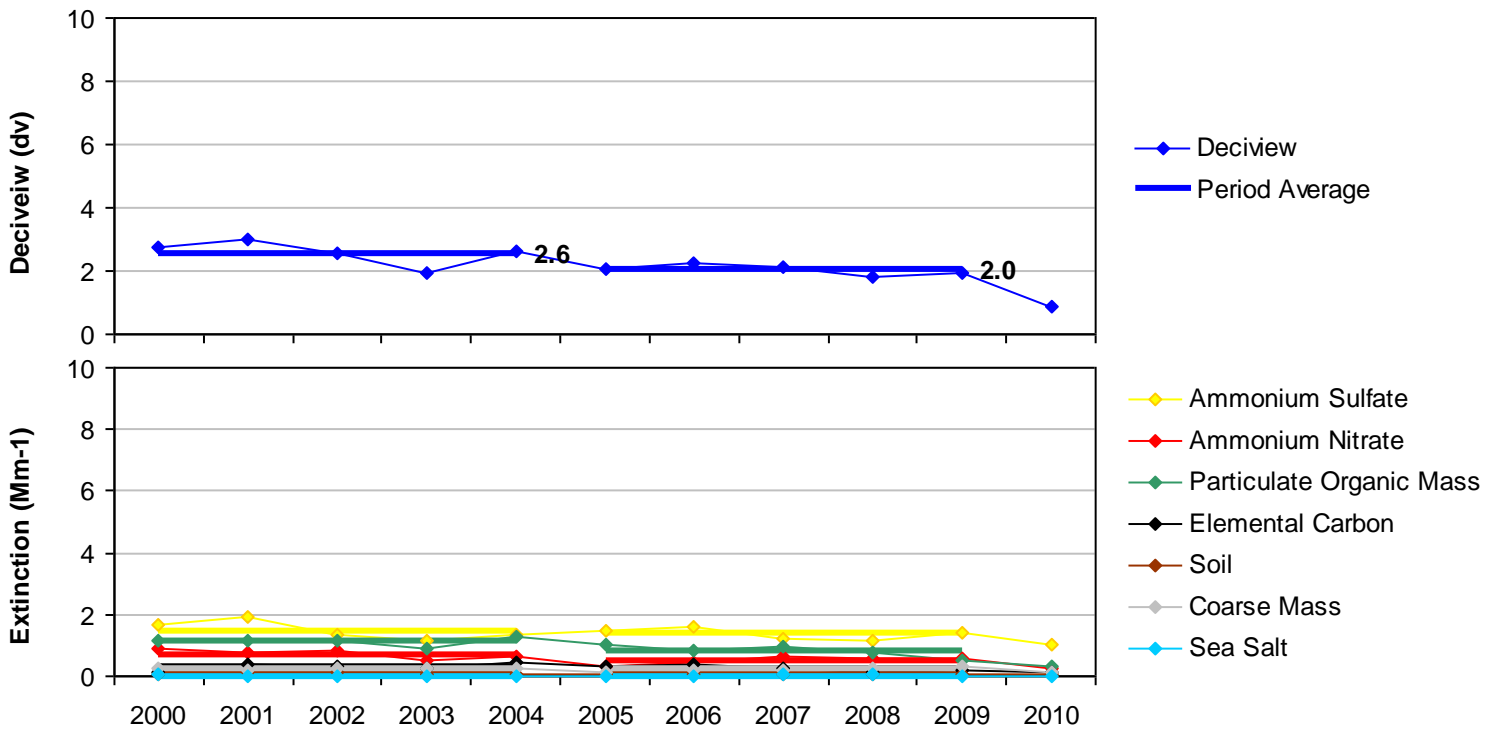
\*\*Values highlighted in blue indicate a decrease in the 5-year average, values highlighted in red indicate an increase.

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

**Figure F.5-1**  
**Yellowstone NP, WY (YELL2 Site)**  
**Annual and Period Averages**  
**20% Most Impaired Visibility Days**



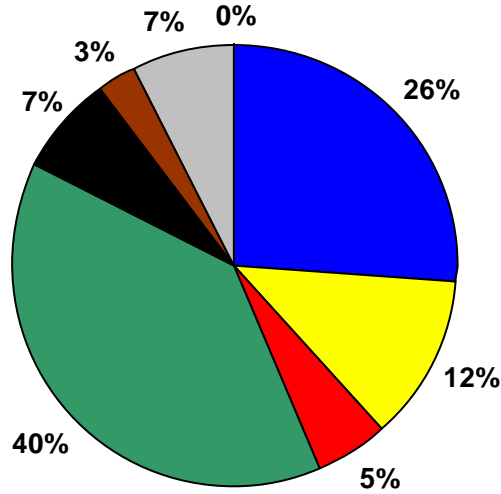
**Figure F.5-2**  
**Yellowstone NP, WY (YELL2 Site)**  
**Annual and Period Averages**  
**20% Least Impaired Visibility Days**



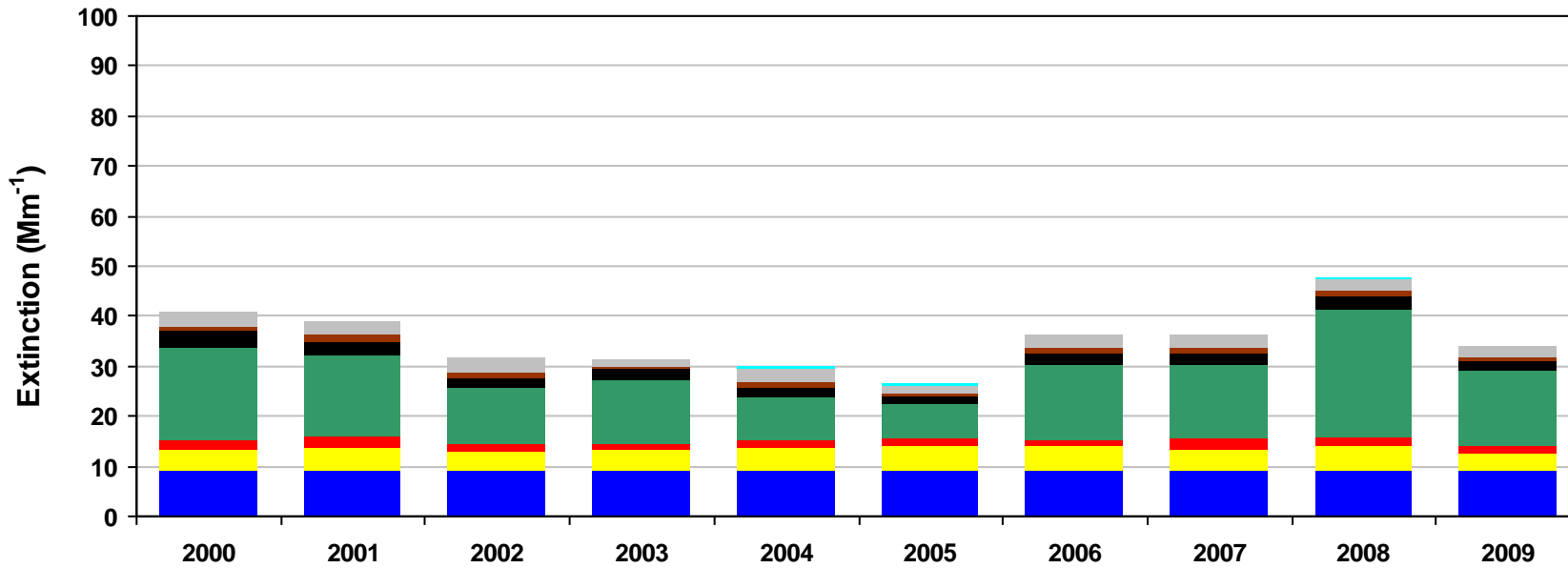
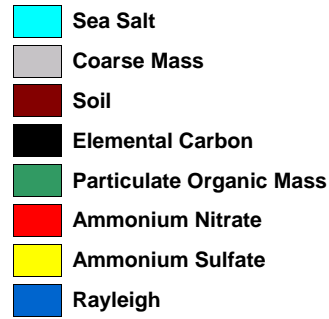
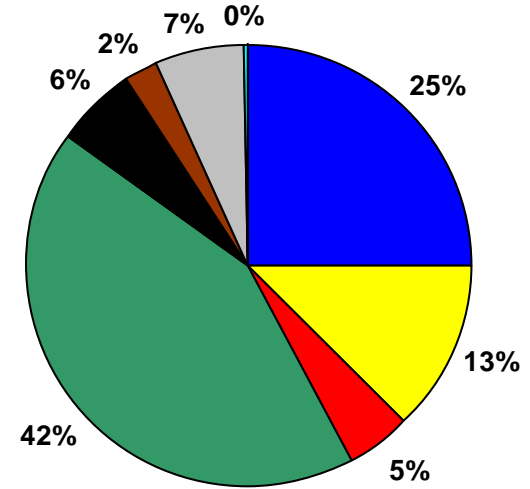


**Figure F.5-3**  
**Yellowstone NP, WY (YELL2 Site)**  
**20% Most Impaired Visibility Days**

**2000-2004 Baseline Average**  
 11.8 dv (10.8 - 12.9 dv)

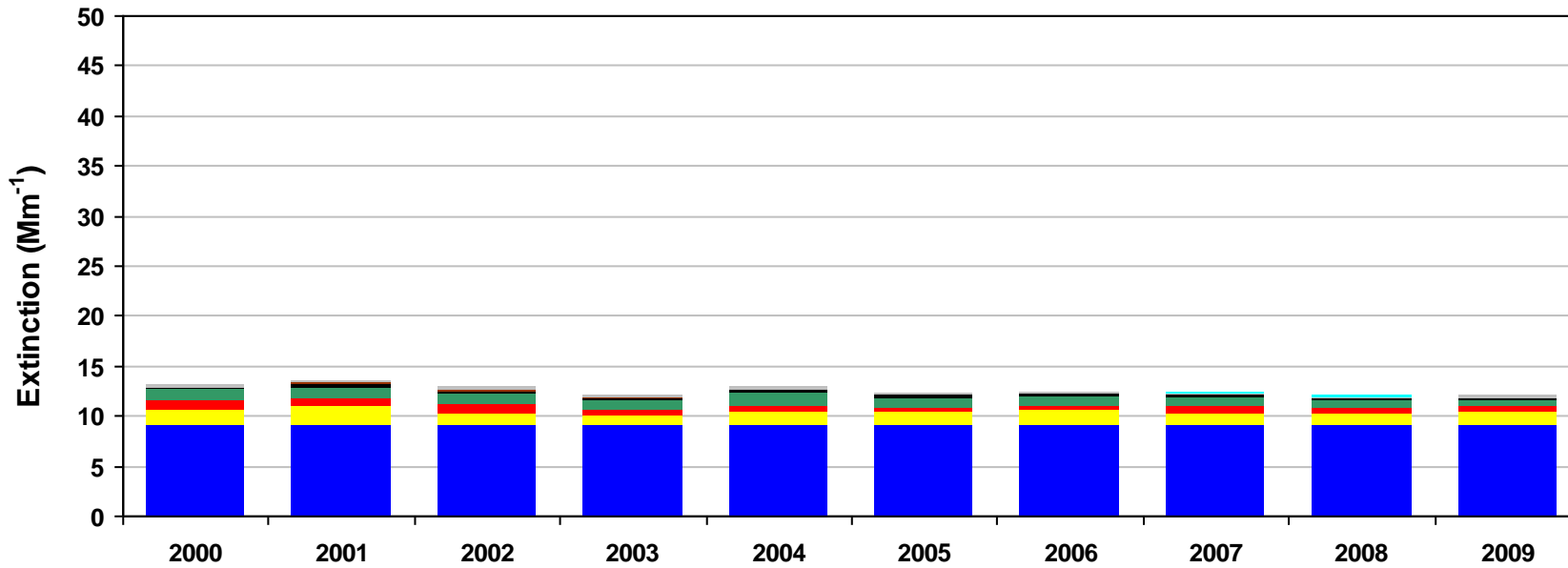
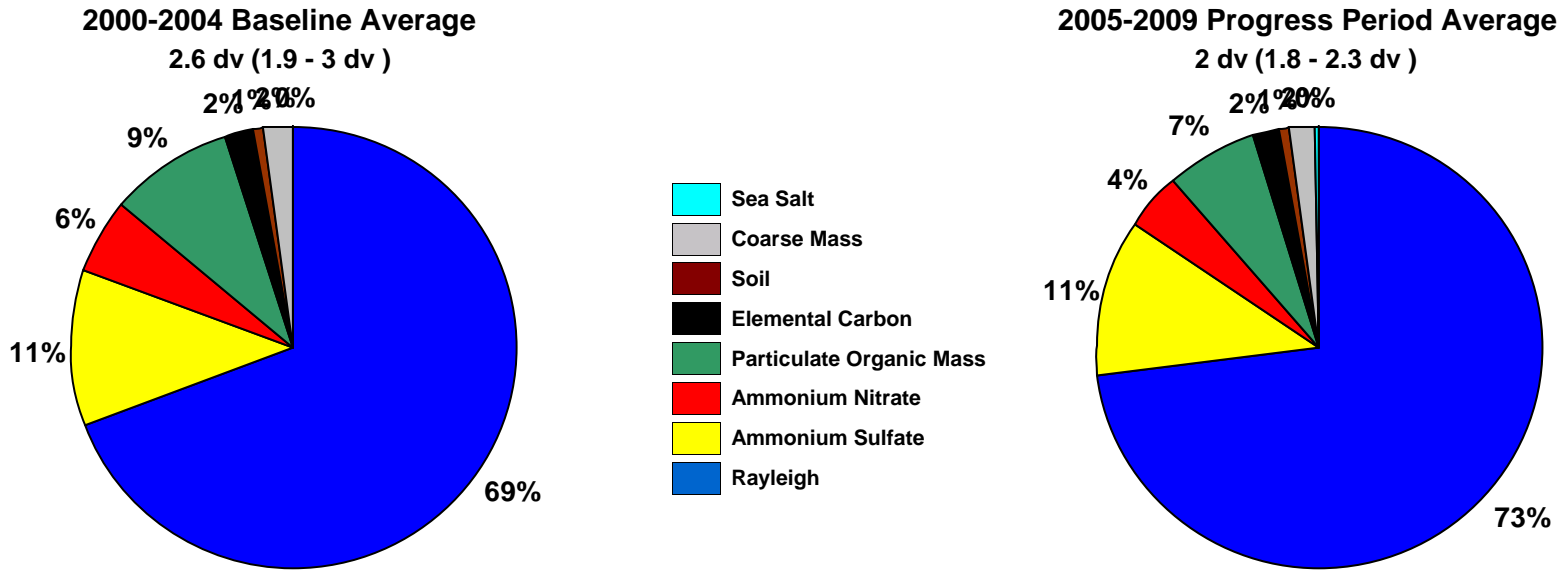


**2005-2009 Progress Period Average**  
 11.5 dv (9.6 - 14 dv)



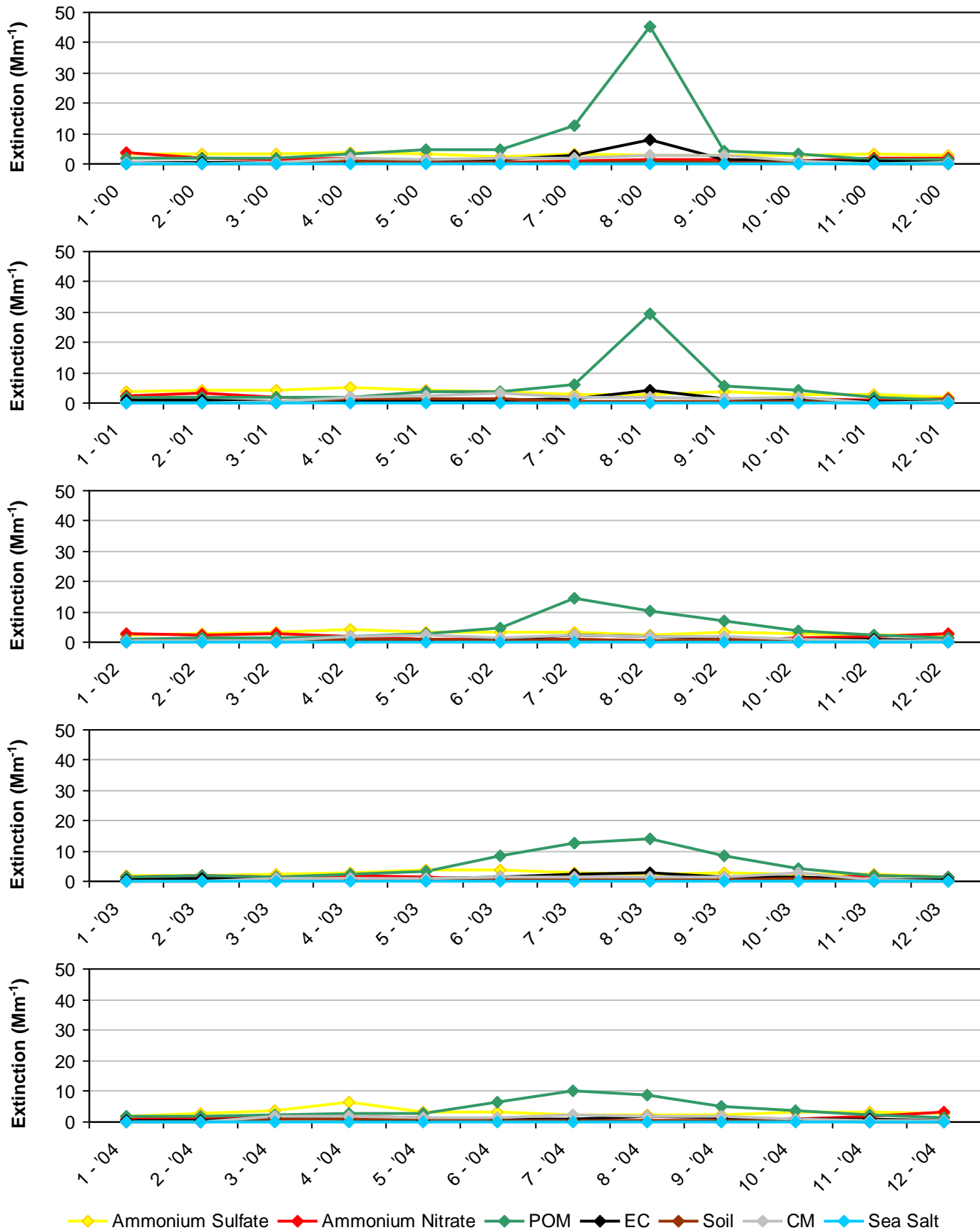
\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

**Figure F.5-4**  
**Yellowstone NP, WY (YELL2 Site)**  
**20% Least Impaired Visibility Days**

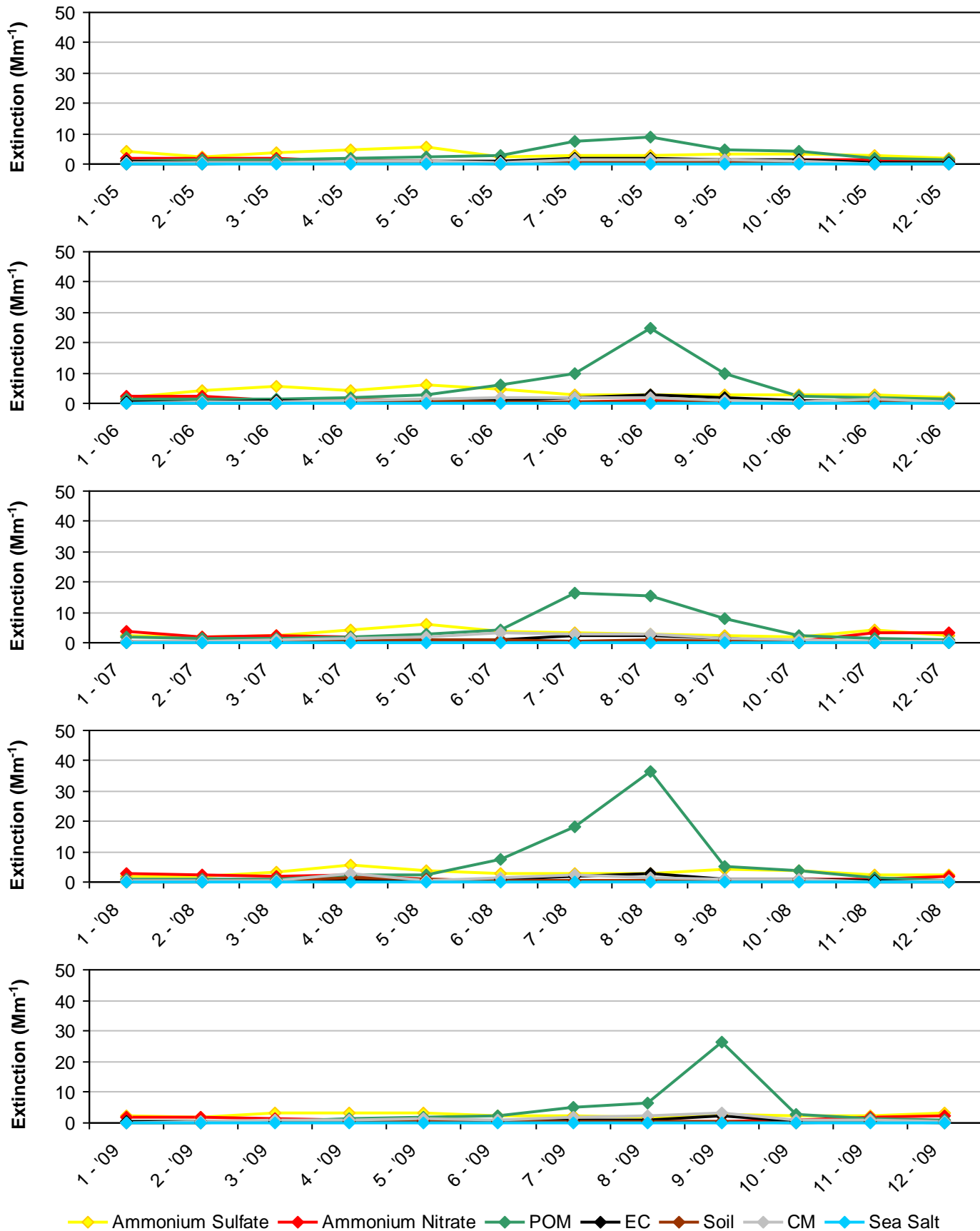


\*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

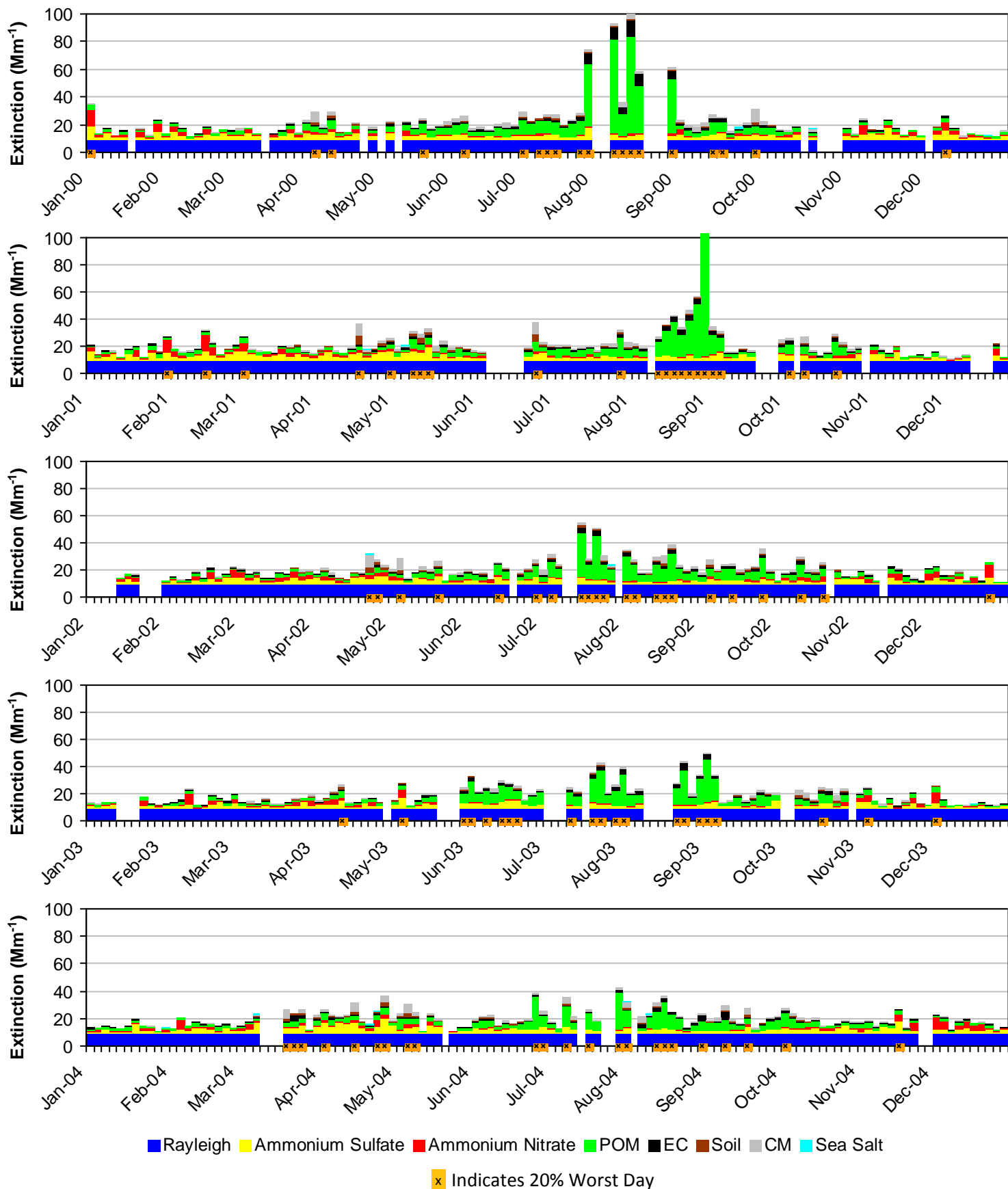
**Figure F.5-5**  
**Yellowstone NP, WY (YELL2 Site)**  
**2000-2004 Monthly Average Aerosol Extinction, All Monitored Days**



**Figure F.5-6**  
**Yellowstone NP, WY (YELL2 Site)**  
**2005-2009 Monthly Average Aerosol Extinction, All Monitored Days**



**Figure F.5-7**  
**Yellowstone NP, WY (YELL2 Site)**  
**2000-2004 Progress Period Extinction, All Sampled Days**



**Figure F.5-8**  
**Yellowstone NP, WY (YELL2 Site)**  
**2005-2009 Progress Period Extinction, All Sampled Days**

