

APPENDIX D:

Colorado Class I Area Monitoring Data Summary Tables and Charts

Includes the following subsections:

| Subsection | IMPROVE Monitor | Class I Area(s) Represented |
|-------------------|------------------------|-------------------------------------------------------------------------|
| D.1 | GRSA1 | Great Sand Dunes NP |
| D.2 | MEVE1 | Mesa Verde NP |
| D.3 | MOZI1 | Mount Zirkel WA and Rawah WA |
| D.4 | ROMO1 | Rocky Mountain NP |
| D.5 | WEMI1 | Weminuche WA, Black Canyon of the Gunnison WA, and La Garita WA |
| D.6 | WHR11 | Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA, and West Elk WA |

D.1. GREAT SAND DUNES NP (GRSA1)

The following tables and figures are presented in this section for the Great Sand Dunes NP represented by the GRSA1 IMPROVE Monitor:

- **Table D.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 D.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 D.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 D.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 D.1-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure D.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 D.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 D.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 D.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 D.1-1
Great Sand Dunes NP, CO (GRSA1 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 |
| Deciview (dv) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 4.4 | 4.5 | 5.0 | 4.5 | 4.1 | 3.3 | 3.9 | 3.6 | 3.4 | 3.6 | 3.3 | -0.1 | 0.0 | 4.5 | 3.6 | -0.9 | -20% |
| Worst 20% Days | 14.1 | 11.4 | 14.3 | 12.9 | 11.2 | 12.5 | 11.6 | 11.0 | 11.4 | 10.8 | 9.8 | -0.3 | 0.0 | 12.8 | 11.4 | -1.4 | -11% |
| All Days | 8.8 | 8.1 | 8.9 | 8.2 | 7.5 | 7.6 | 7.5 | 7.3 | 7.5 | 7.1 | 6.4 | -0.2 | 0.0 | 8.3 | 7.4 | -0.9 | -11% |
| Total Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 15.6 | 15.8 | 16.5 | 15.7 | 15.0 | 13.9 | 14.9 | 14.3 | 14.2 | 14.4 | 14.0 | -0.2 | 0.0 | 15.7 | 14.3 | -1.4 | -9% |
| Worst 20% Days | 42.0 | 32.2 | 44.3 | 36.7 | 31.1 | 35.8 | 32.5 | 30.3 | 32.0 | 29.7 | 27.4 | -1.3 | 0.0 | 37.3 | 32.1 | -5.2 | -14% |
| All Days | 25.7 | 23.2 | 26.2 | 23.8 | 21.8 | 22.7 | 22.2 | 21.5 | 22.1 | 21.0 | 19.7 | -0.5 | 0.0 | 24.1 | 21.9 | -2.2 | -9% |
| Ammonium Sulfate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 2.4 | 2.2 | 2.4 | 1.7 | 1.9 | 1.6 | 2.2 | 1.9 | 1.7 | 2.1 | 1.6 | 0.0 | 0.1 | 2.1 | 1.9 | -0.2 | -10% |
| Worst 20% Days | 6.2 | 7.0 | 5.1 | 6.3 | 5.2 | 8.2 | 7.1 | 6.0 | 6.0 | 5.9 | 4.3 | 0.0 | 0.4 | 6.0 | 6.6 | 0.6 | 10% |
| All Days | 4.5 | 4.7 | 4.0 | 4.0 | 3.9 | 4.8 | 4.4 | 4.1 | 3.9 | 3.6 | 3.1 | -0.1 | 0.1 | 4.2 | 4.2 | 0.0 | 0% |
| Ammonium Nitrate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.6 | 0.5 | 0.9 | 0.6 | 0.7 | 0.4 | 0.4 | 0.6 | 0.6 | 0.5 | 0.3 | 0.0 | 0.2 | 0.7 | 0.5 | -0.2 | -29% |
| Worst 20% Days | 1.7 | 1.8 | 2.5 | 1.1 | 2.7 | 1.2 | 1.0 | 2.6 | 1.6 | 1.4 | 1.6 | 0.0 | 0.4 | 2.0 | 1.5 | -0.5 | -25% |
| All Days | 1.1 | 1.1 | 1.5 | 1.0 | 1.5 | 1.0 | 0.8 | 1.4 | 1.1 | 0.9 | 1.0 | 0.0 | 0.2 | 1.2 | 1.1 | -0.1 | -8% |
| Particulate Organic Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 1.6 | 1.5 | 1.8 | 2.2 | 1.9 | 1.4 | 1.2 | 1.4 | 1.4 | 1.5 | 1.4 | 0.0 | 0.2 | 1.8 | 1.4 | -0.4 | -22% |
| Worst 20% Days | 10.6 | 5.1 | 10.8 | 9.1 | 6.8 | 7.5 | 5.9 | 6.3 | 5.5 | 5.2 | 4.3 | -0.6 | 0.0 | 8.5 | 6.1 | -2.4 | -28% |
| All Days | 4.8 | 3.1 | 4.7 | 4.5 | 3.5 | 3.5 | 3.1 | 3.5 | 3.5 | 3.4 | 2.7 | -0.1 | 0.0 | 4.1 | 3.4 | -0.7 | -17% |
| Elemental Carbon Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.6 | 0.6 | 0.7 | 0.5 | 0.6 | 0.5 | 0.7 | 0.5 | 0.5 | 0.6 | 0.5 | 0.0 | 0.1 | 0.6 | 0.5 | -0.1 | -17% |
| Worst 20% Days | 2.2 | 1.2 | 2.0 | 1.9 | 1.3 | 2.1 | 2.0 | 1.5 | 1.6 | 1.3 | 1.5 | -0.1 | 0.2 | 1.7 | 1.7 | 0.0 | 0% |
| All Days | 1.3 | 0.9 | 1.1 | 1.1 | 0.9 | 1.1 | 1.2 | 1.0 | 1.0 | 1.1 | 0.9 | 0.0 | 0.4 | 1.1 | 1.1 | 0.0 | 0% |
| Soil Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 | 0.2 | 0.4 | 0.3 | 0.2 | 0.3 | 0.4 | 0.0 | 0.0 | 0.4 | 0.3 | -0.1 | -25% |
| Worst 20% Days | 2.8 | 2.3 | 4.1 | 2.8 | 2.1 | 1.9 | 1.8 | 0.9 | 2.5 | 2.5 | 2.5 | -0.1 | 0.1 | 2.8 | 1.9 | -0.9 | -32% |
| All Days | 1.2 | 1.0 | 1.6 | 1.3 | 1.1 | 0.9 | 1.0 | 0.7 | 1.1 | 1.0 | 1.1 | 0.0 | 0.1 | 1.2 | 0.9 | -0.3 | -25% |
| Coarse Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 1.1 | 1.3 | 1.3 | 1.2 | 0.6 | 0.7 | 0.9 | 0.7 | 0.7 | 0.5 | 0.7 | -0.1 | 0.0 | 1.1 | 0.7 | -0.4 | -36% |
| Worst 20% Days | 9.5 | 5.8 | 10.8 | 6.5 | 3.7 | 5.9 | 5.6 | 4.0 | 5.8 | 4.4 | 4.2 | -0.4 | 0.0 | 7.2 | 5.1 | -2.1 | -29% |
| All Days | 4.0 | 3.2 | 4.1 | 3.0 | 1.8 | 2.3 | 2.5 | 1.9 | 2.5 | 1.8 | 1.9 | -0.2 | 0.0 | 3.2 | 2.2 | -1.0 | -31% |
| Sea Salt Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| 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 | 0.4 | 0.0 | 0.0 | 0.0 | 0% |
| Worst 20% Days | 0.0 | 0.0 | 0.0 | 0.1 | 0.2 | 0.0 | 0.2 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0% |
| All Days | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 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 D.1-1
Great Sand Dunes NP, CO (GRSA1 Site)
Annual and 5-Year Period Averages
20% Most Impaired Visibility Days

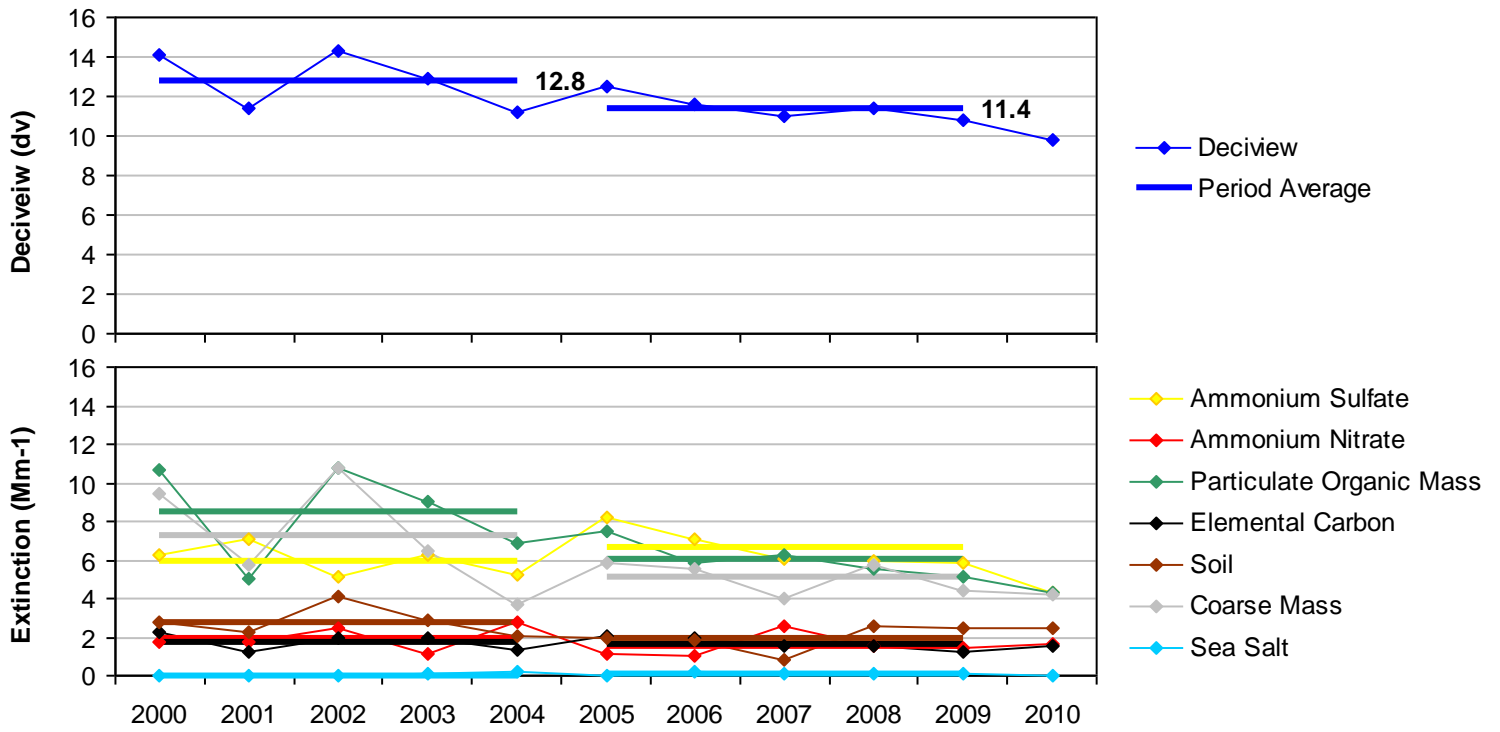


Figure D.1-2
Great Sand Dunes NP, CO (GRSA1 Site)
Annual and 5-Year Period Averages
20% Least Impaired Visibility Days

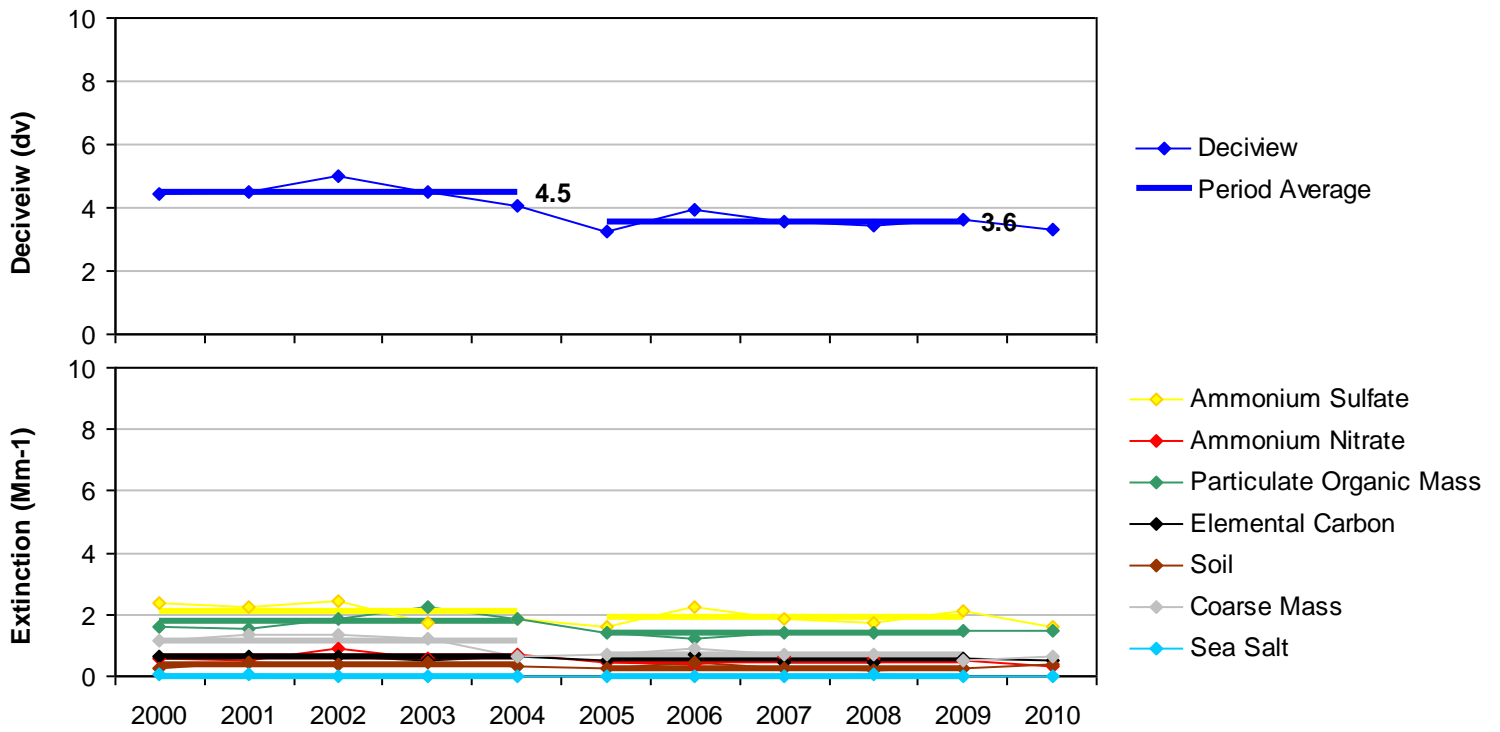
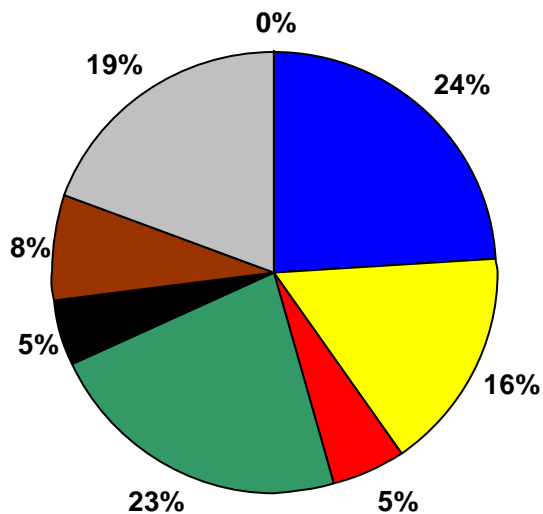


Figure D.1-3
Great Sand Dunes NP, CO (GRSA1 Site)
20% Most Impaired Visibility Days

2000-2004 Baseline Average
 12.8 dv (11.2 - 14.3 dv)



2005-2009 Progress Period Average
 11.4 dv (10.8 - 12.5 dv)

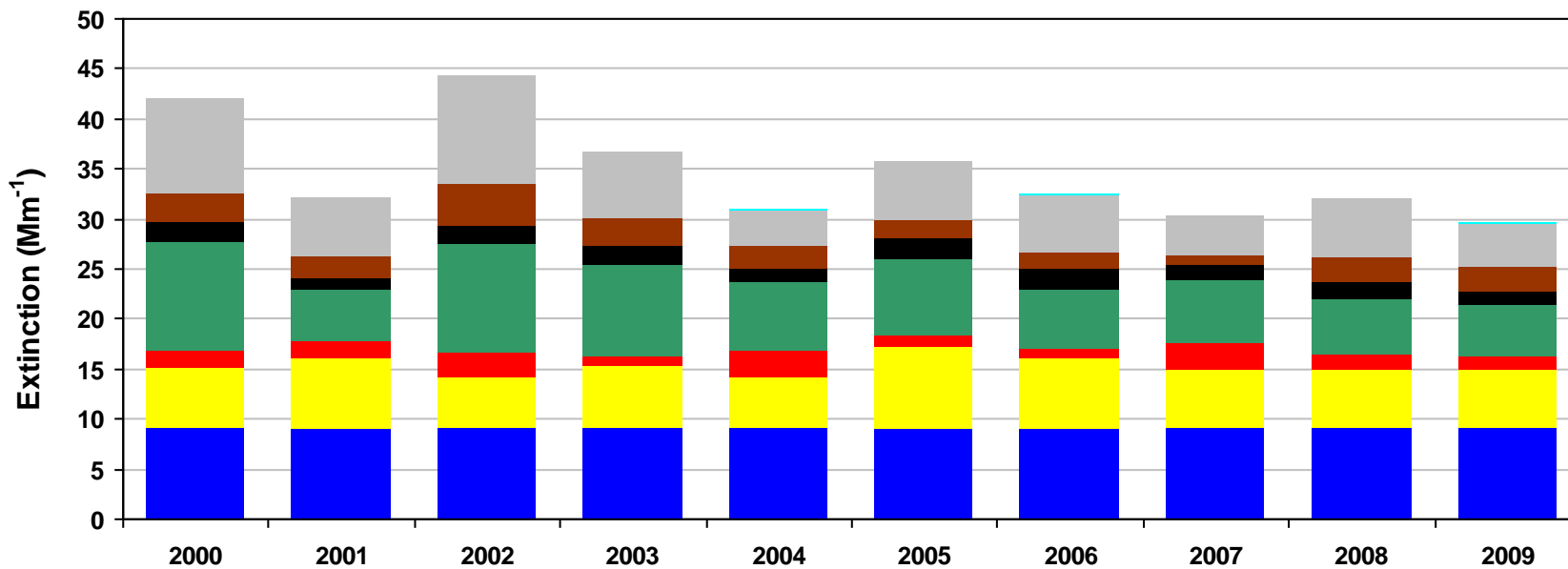
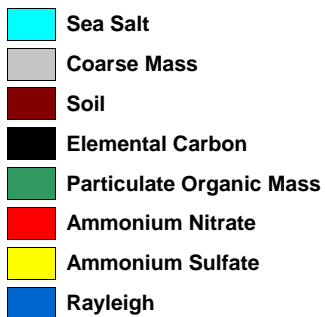
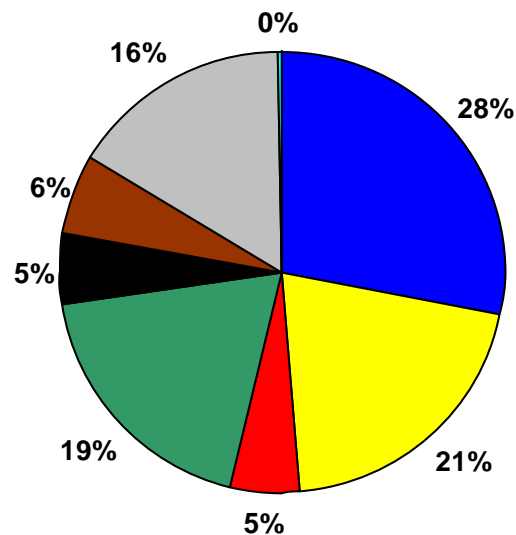
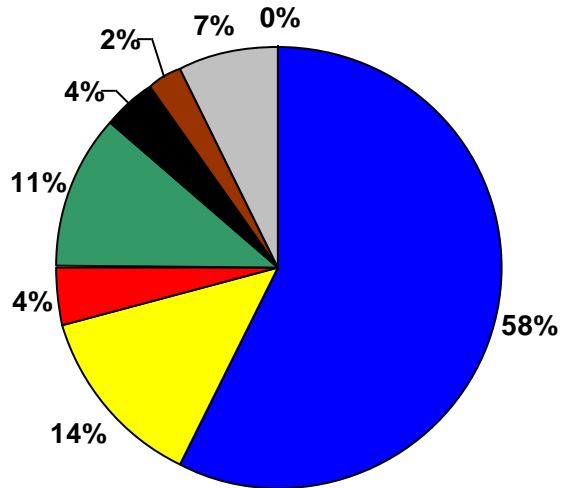


Figure D.1-4
Great Sand Dunes NP, CO (GRSA1 Site)
20% Least Impaired Visibility Days

2000-2004 Baseline Average
 4.5 dv (4.1 - 5 dv)



2005-2009 Progress Period Average
 3.6 dv (3.3 - 3.9 dv)

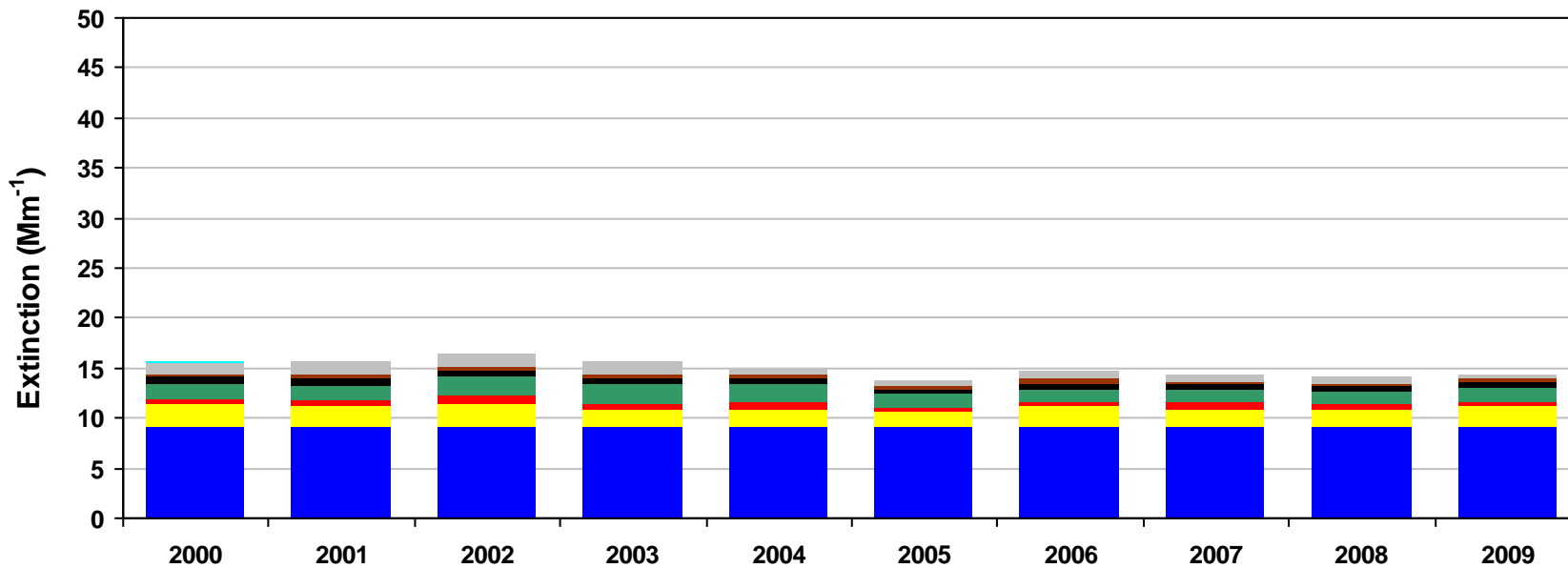
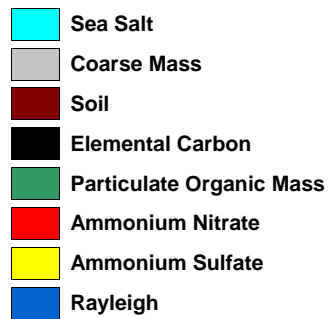
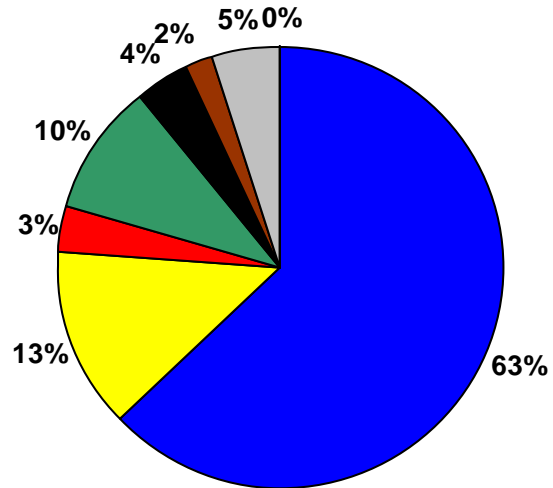


Figure D.1-5
Great Sand Dunes NP, CO (GRSA1 Site)
2000-2004 Monthly Average Aerosol Extinction, All Monitored Days

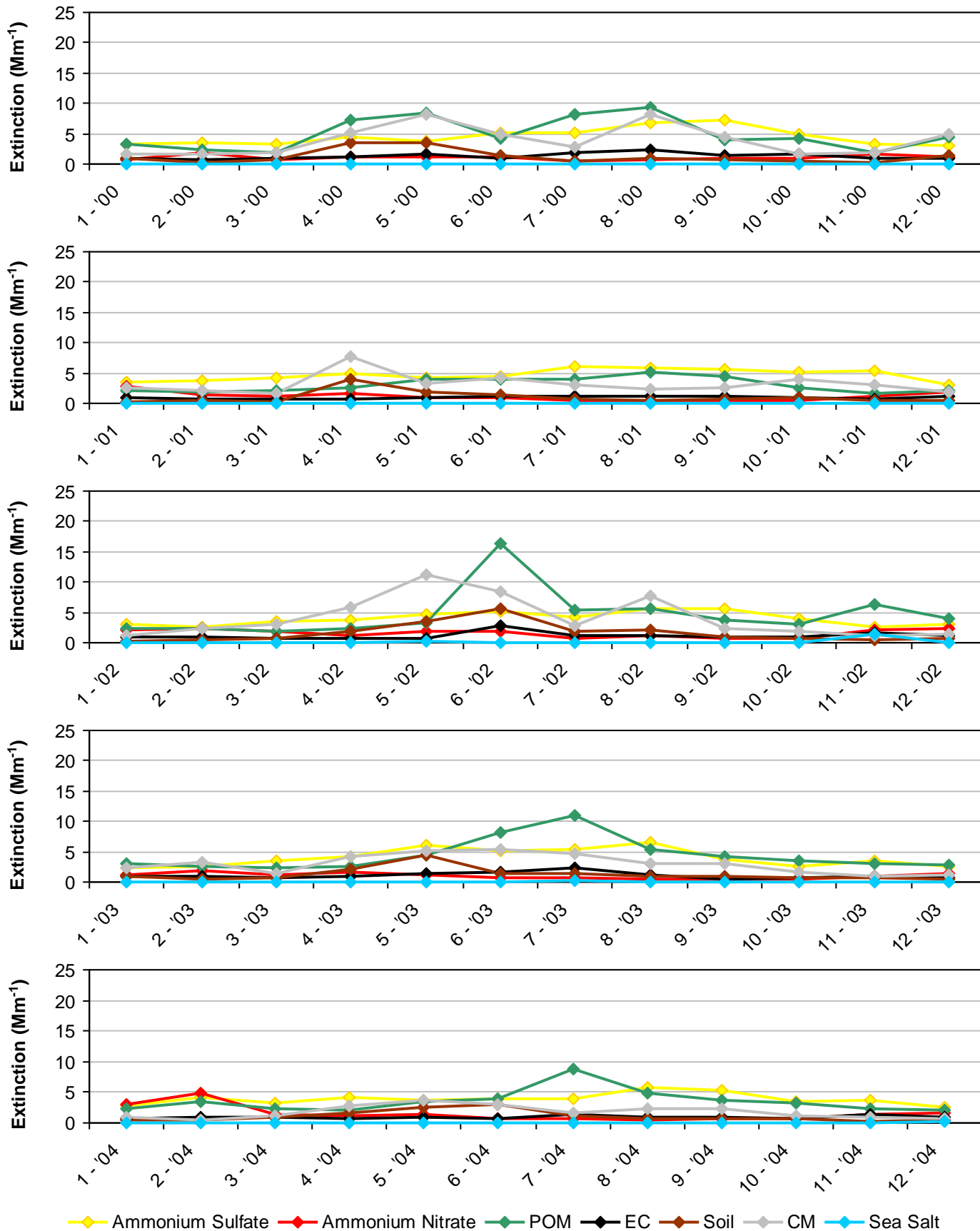


Figure D.1-6
Great Sand Dunes NP, CO (GRSA1 Site)
2005-2009 Monthly Average Aerosol Extinction, All Monitored Days

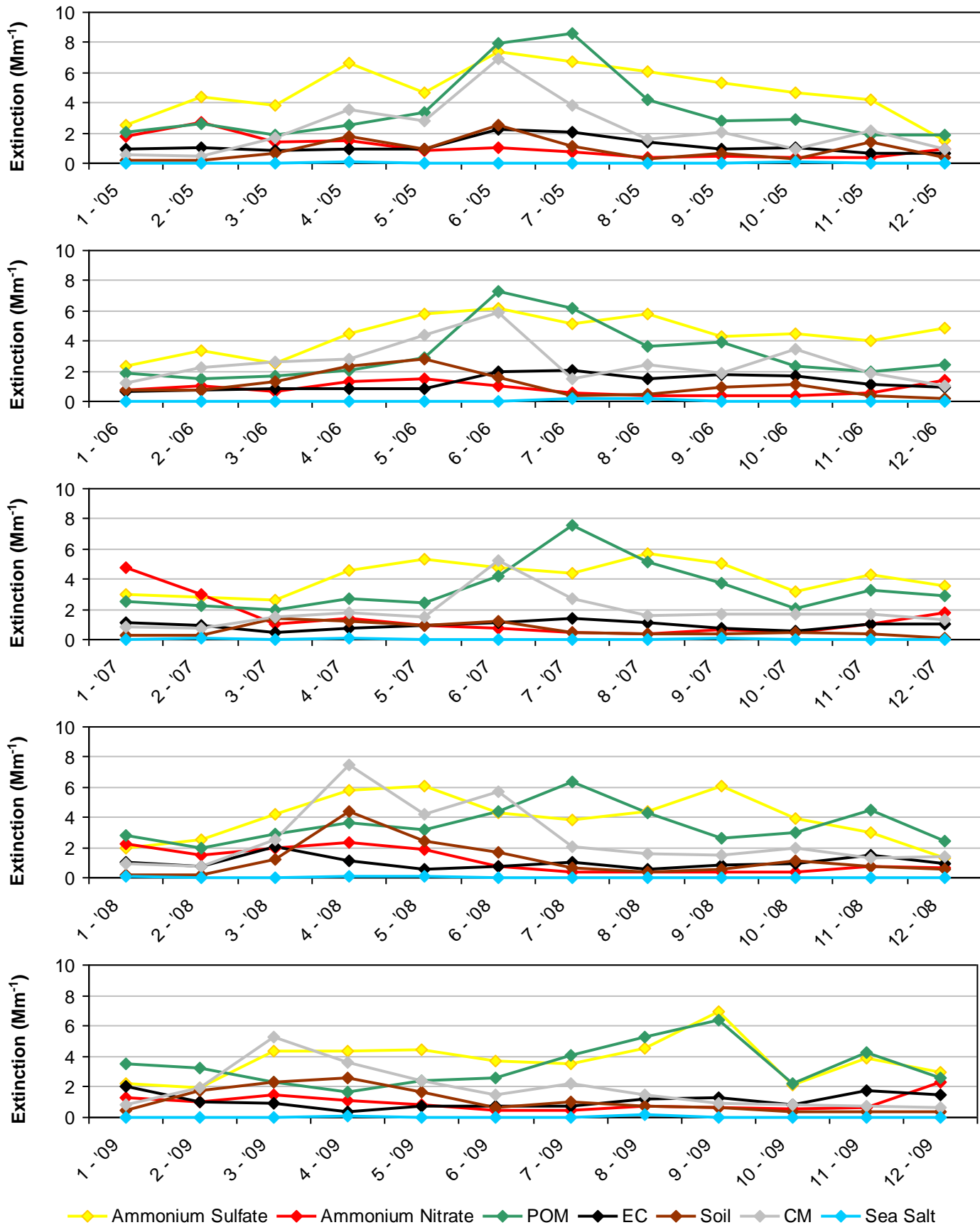


Figure D.1-7
Great Sand Dunes NP, CO (GRSA1 Site)
2000-2004 Progress Period Extinction, All Sampled Days

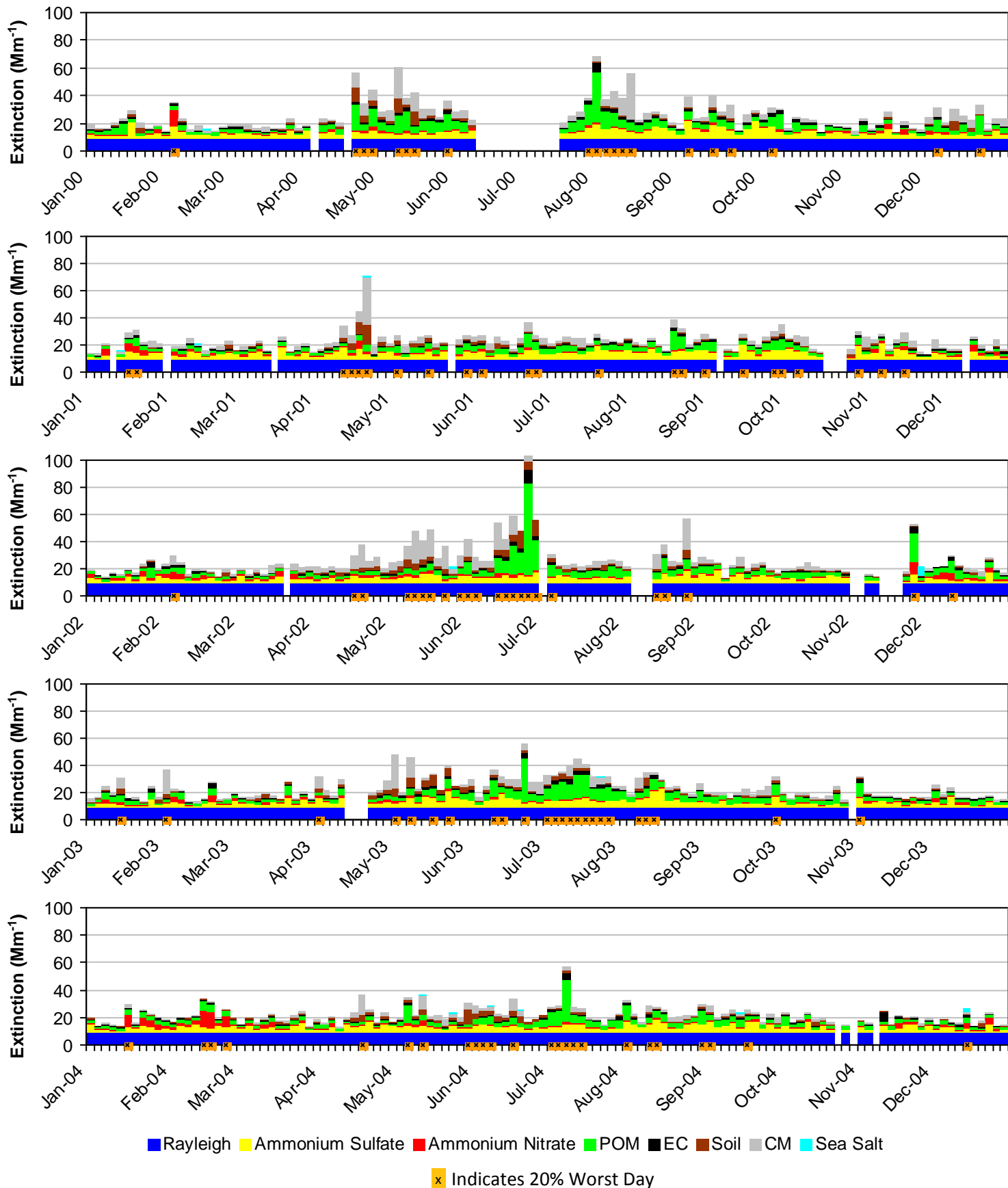
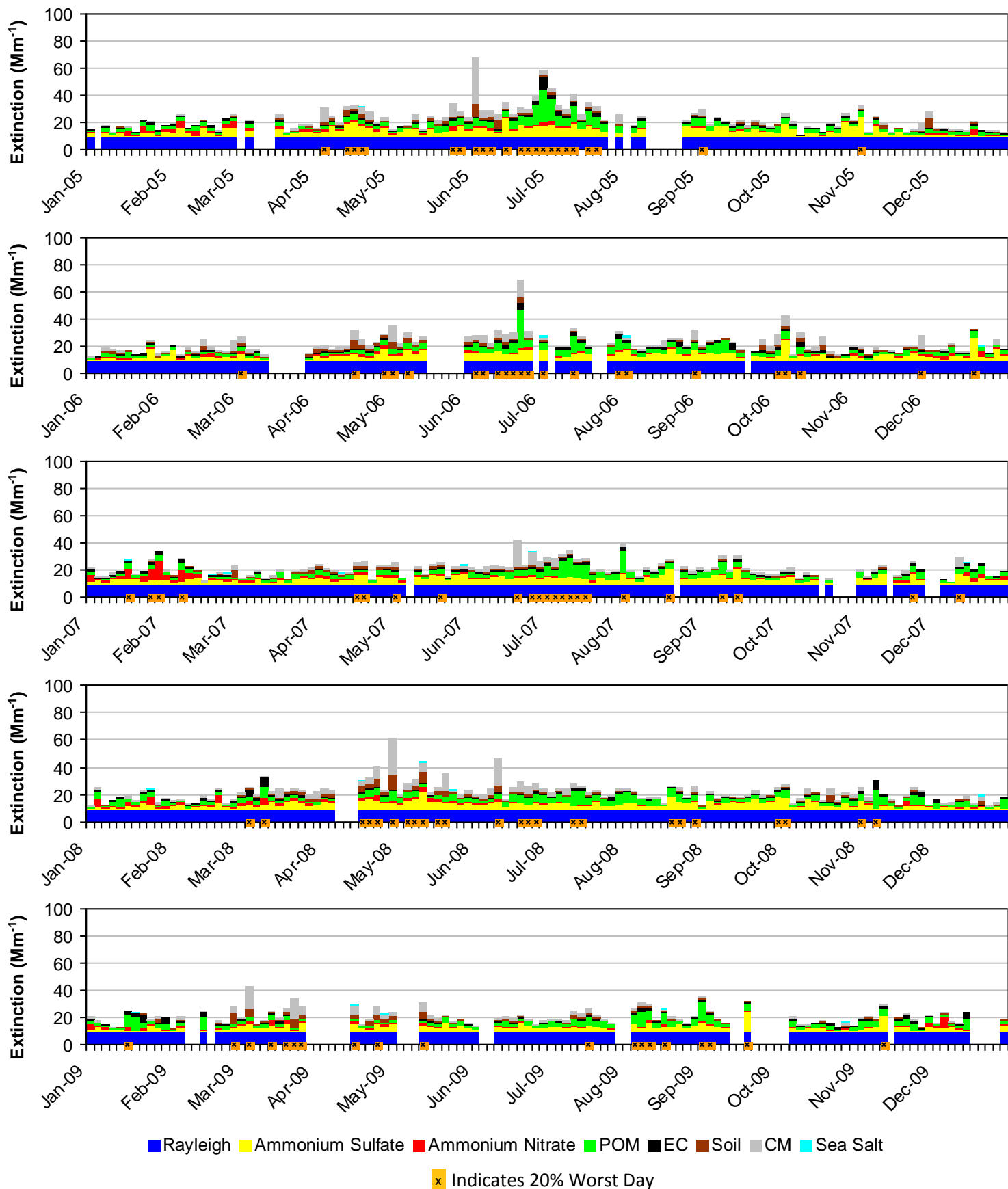


Figure D.1-8
Great Sand Dunes NP, CO (GRSA1 Site)
2005-2009 Progress Period Extinction, All Sampled Days



D.2. MESA VERDE NP (MEVE1)

The following tables and figures are presented in this section for the Mesa Verde NP represented by the MEVE1 IMPROVE Monitor:

- **Table D.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 D.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 D.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 D.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 D.2-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure D.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 D.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 D.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 D.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 D.2-1
Mesa Verde NP, CO (MEVE1 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 |
| Deciview (dv) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 4.3 | 4.0 | 4.7 | 4.7 | 3.9 | 3.0 | 3.6 | 3.3 | 2.8 | 3.0 | 2.9 | -0.2 | 0.0 | 4.3 | 3.1 | -1.2 | -28% |
| Worst 20% Days | 13.0 | 10.5 | 14.7 | 16.8 | 10.3 | 12.0 | 10.7 | 10.9 | 11.0 | 11.7 | 11.6 | -0.1 | 0.4 | 13.0 | 11.3 | -1.7 | -13% |
| All Days | 8.0 | 7.5 | 8.9 | 9.3 | 6.9 | 7.0 | 6.9 | 7.1 | 6.8 | 6.7 | 6.6 | -0.1 | 0.0 | 8.1 | 6.9 | -1.2 | -15% |
| Total Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 15.5 | 14.9 | 16.0 | 16.1 | 14.8 | 13.6 | 14.4 | 14.0 | 13.3 | 13.5 | 13.4 | -0.3 | 0.0 | 15.5 | 13.8 | -1.7 | -11% |
| Worst 20% Days | 44.3 | 28.6 | 45.1 | 61.0 | 28.3 | 35.2 | 29.7 | 30.1 | 30.8 | 34.1 | 36.3 | -0.3 | 0.4 | 41.5 | 32.0 | -9.5 | -23% |
| All Days | 25.0 | 21.7 | 26.3 | 29.5 | 20.5 | 21.5 | 20.7 | 21.1 | 20.6 | 20.9 | 21.2 | -0.3 | 0.1 | 24.6 | 21.0 | -3.6 | -15% |
| Ammonium Sulfate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 2.3 | 2.7 | 2.5 | 2.1 | 2.3 | 2.0 | 2.3 | 2.1 | 1.8 | 2.2 | 1.8 | -0.1 | 0.0 | 2.4 | 2.1 | -0.3 | -13% |
| Worst 20% Days | 6.6 | 7.3 | 5.5 | 5.9 | 7.0 | 7.6 | 6.2 | 6.5 | 6.3 | 4.9 | 4.3 | -0.1 | 0.2 | 6.5 | 6.3 | -0.2 | -3% |
| All Days | 4.5 | 5.2 | 4.1 | 4.1 | 4.3 | 4.7 | 4.3 | 4.2 | 4.1 | 3.6 | 3.5 | -0.1 | 0.0 | 4.4 | 4.2 | -0.2 | -5% |
| Ammonium Nitrate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.8 | 0.7 | 1.0 | 1.0 | 0.8 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.0 | 0.0 | 0.8 | 0.6 | -0.2 | -25% |
| Worst 20% Days | 1.7 | 1.9 | 3.5 | 2.5 | 2.0 | 1.5 | 1.6 | 3.1 | 1.3 | 2.4 | 2.4 | 0.0 | 0.4 | 2.3 | 2.0 | -0.3 | -13% |
| All Days | 1.1 | 1.2 | 1.9 | 1.6 | 1.2 | 1.0 | 0.9 | 1.5 | 1.0 | 1.2 | 1.2 | 0.0 | 0.2 | 1.4 | 1.1 | -0.3 | -21% |
| Particulate Organic Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 1.8 | 1.0 | 1.3 | 1.9 | 1.5 | 1.0 | 1.1 | 1.2 | 1.0 | 0.8 | 0.9 | -0.1 | 0.1 | 1.5 | 1.0 | -0.5 | -33% |
| Worst 20% Days | 17.8 | 4.1 | 11.5 | 23.4 | 4.7 | 8.9 | 6.2 | 6.3 | 5.2 | 5.9 | 3.7 | -0.9 | 0.2 | 12.3 | 6.5 | -5.8 | -47% |
| All Days | 6.3 | 2.7 | 4.6 | 7.3 | 2.8 | 3.4 | 3.1 | 3.2 | 2.9 | 2.7 | 2.2 | -0.3 | 0.1 | 4.8 | 3.0 | -1.8 | -38% |
| Elemental Carbon Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.8 | 0.4 | 0.6 | 0.7 | 0.6 | 0.4 | 0.6 | 0.4 | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 | 0.6 | 0.4 | -0.2 | -33% |
| Worst 20% Days | 3.6 | 1.3 | 2.2 | 3.5 | 1.2 | 2.6 | 1.7 | 1.6 | 1.0 | 1.3 | 1.3 | -0.2 | 0.1 | 2.4 | 1.6 | -0.8 | -33% |
| All Days | 1.6 | 0.9 | 1.2 | 1.5 | 0.8 | 1.2 | 1.0 | 1.0 | 0.7 | 0.7 | 0.7 | -0.1 | 0.0 | 1.2 | 0.9 | -0.3 | -25% |
| Soil Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.2 | 0.4 | 0.6 | 0.5 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.0 | 0.0 | 0.4 | 0.2 | -0.2 | -50% |
| Worst 20% Days | 1.9 | 1.6 | 3.9 | 3.9 | 1.3 | 1.5 | 1.9 | 1.1 | 2.3 | 3.2 | 5.1 | 0.0 | 0.4 | 2.5 | 2.0 | -0.5 | -20% |
| All Days | 0.8 | 0.9 | 1.6 | 1.5 | 0.7 | 0.7 | 0.8 | 0.7 | 0.9 | 1.1 | 1.5 | 0.0 | 0.4 | 1.1 | 0.8 | -0.3 | -27% |
| Coarse Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.6 | 0.9 | 1.1 | 0.9 | 0.4 | 0.3 | 0.4 | 0.5 | 0.5 | 0.5 | 0.4 | 0.0 | 0.2 | 0.7 | 0.4 | -0.3 | -43% |
| Worst 20% Days | 3.8 | 3.5 | 9.5 | 12.8 | 3.0 | 4.0 | 3.2 | 2.4 | 5.6 | 7.5 | 10.4 | -0.1 | 0.5 | 6.5 | 4.6 | -1.9 | -29% |
| All Days | 1.6 | 1.8 | 3.8 | 4.5 | 1.6 | 1.5 | 1.6 | 1.5 | 2.2 | 2.6 | 3.0 | 0.0 | 0.4 | 2.7 | 1.9 | -0.8 | -30% |
| Sea Salt Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| 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 | 0.4 | 0.0 | 0.0 | 0.0 | 0% |
| Worst 20% Days | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.1 | 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 D.2-1
Mesa Verde NP, CO (MEVE1 Site)
Annual and 5-Year Period Averages
20% Most Impaired Visibility Days

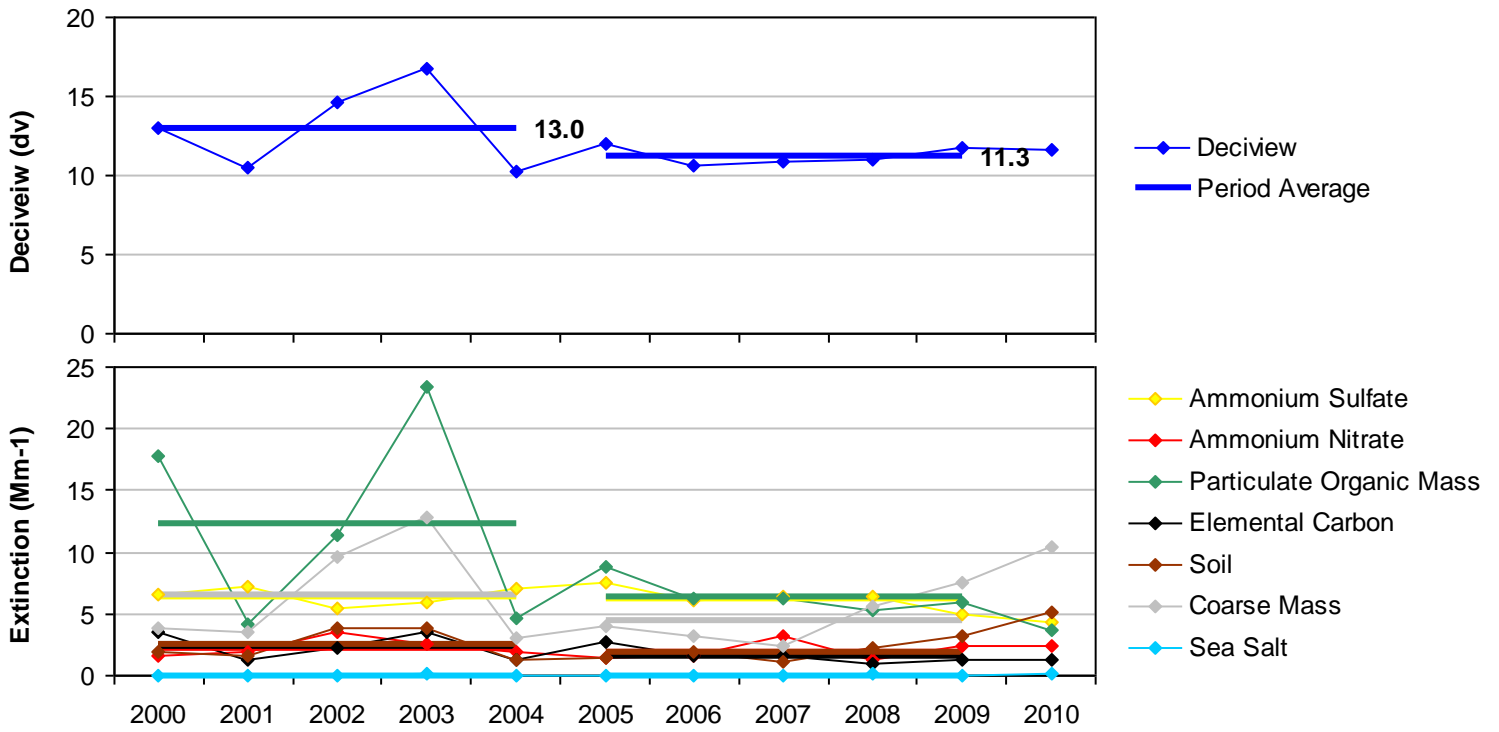


Figure D.2-2
Mesa Verde NP, CO (MEVE1 Site)
Annual and 5-Year Period Averages
20% Least Impaired Visibility Days

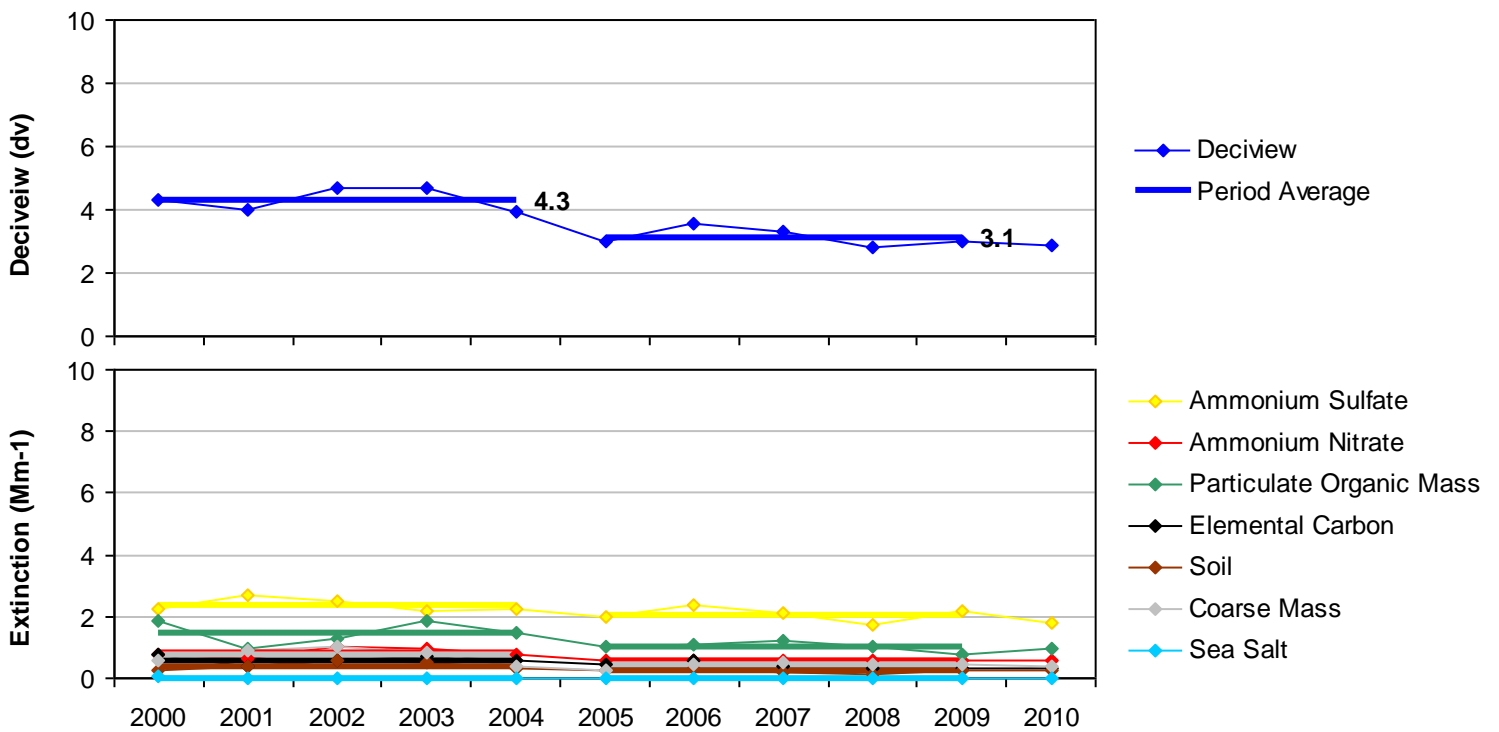
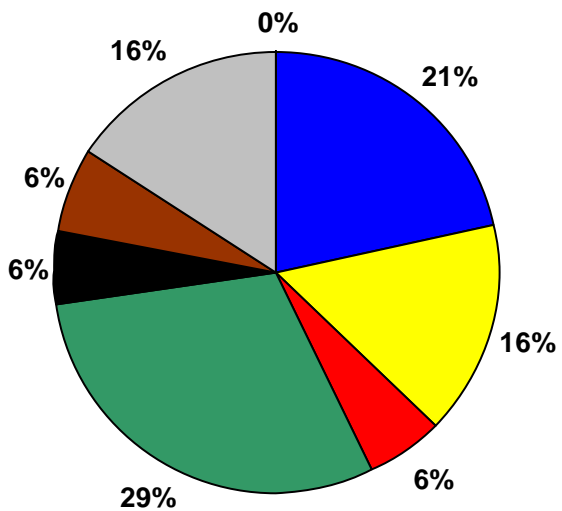


Figure D.2-3
Mesa Verde NP, CO (MEVE1 Site)
20% Most Impaired Visibility Days

2000-2004 Baseline Average
 13 dv (10.3 - 16.8 dv)



2005-2009 Progress Period Average
 11.3 dv (10.7 - 12 dv)

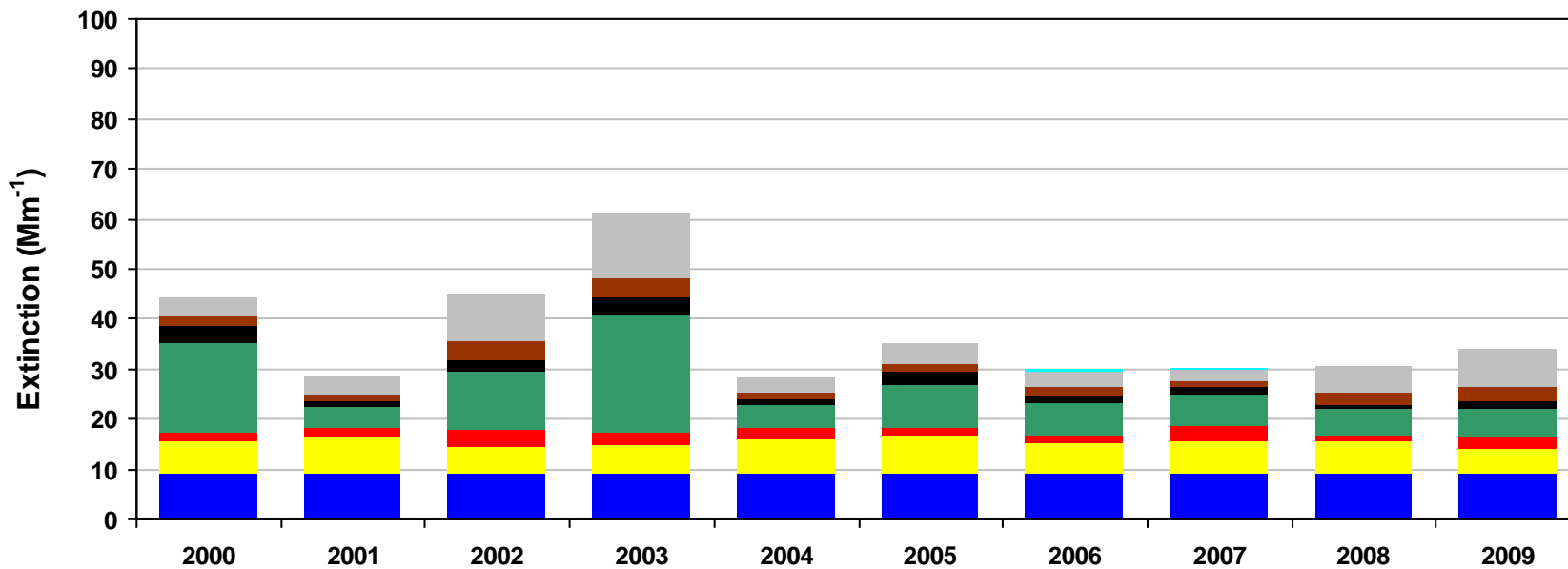
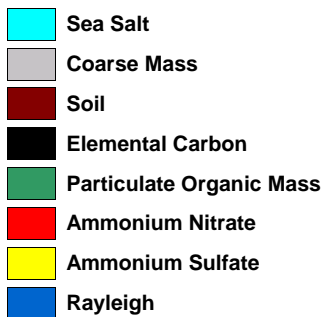
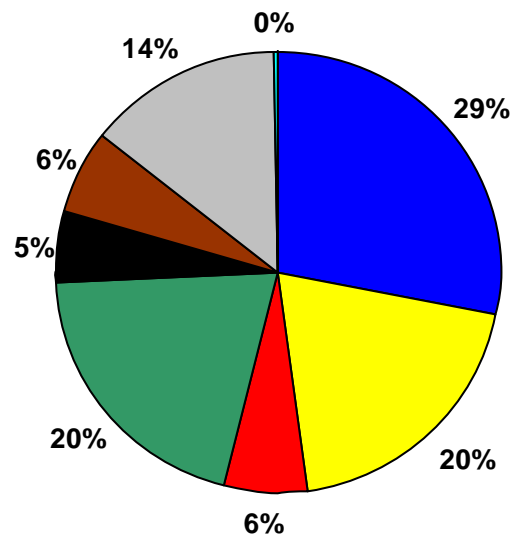
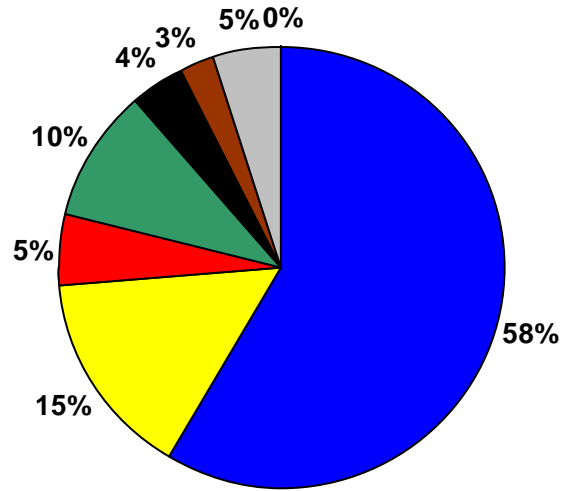


Figure D.2-4
Mesa Verde NP, CO (MEVE1 Site)
20% Least Impaired Visibility Days

2000-2004 Baseline Average

4.3 dv (3.9 - 4.7 dv)



2005-2009 Progress Period Average

3.1 dv (2.8 - 3.6 dv)

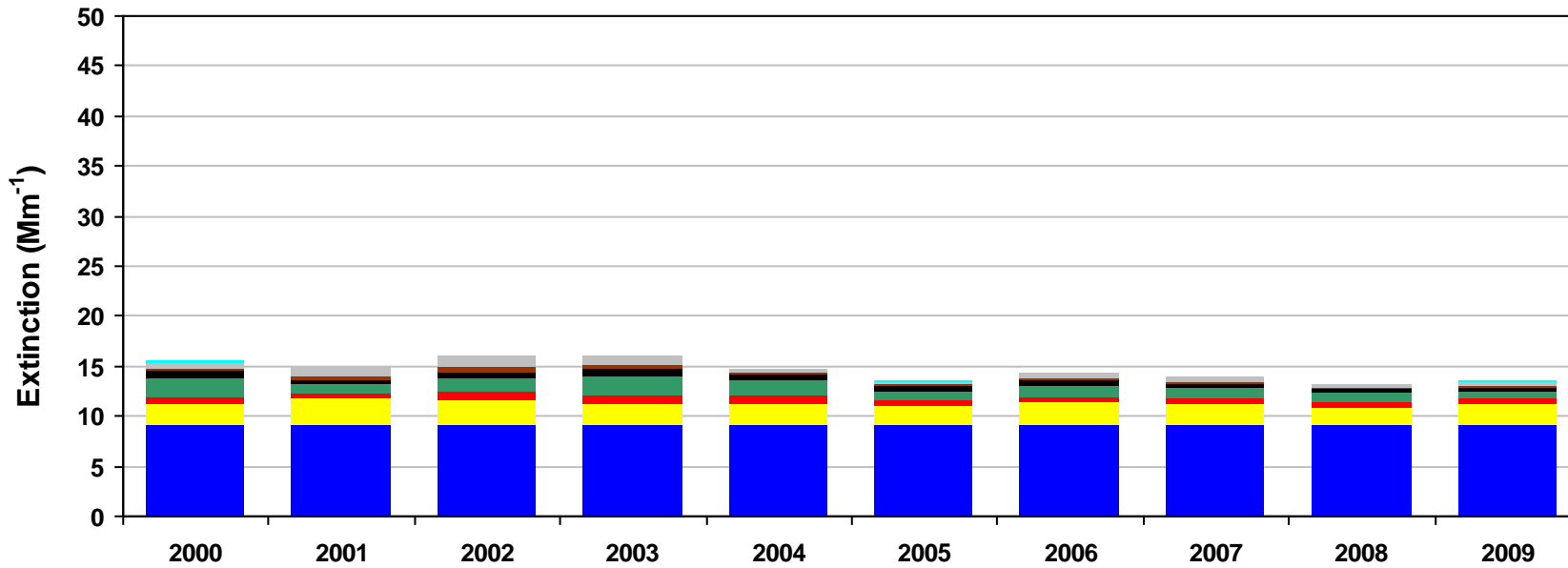
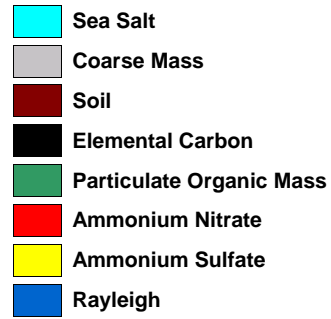
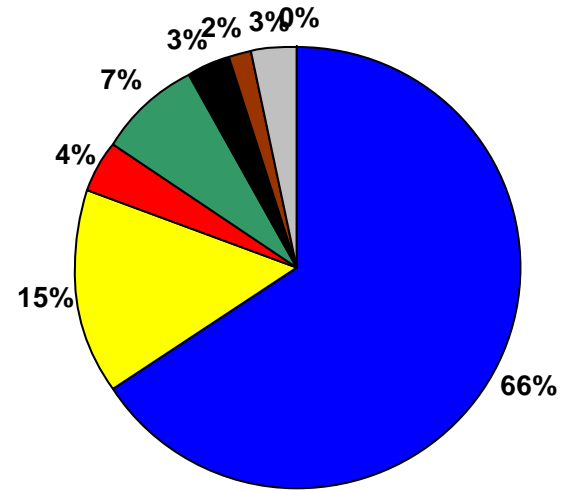


Figure D.2-5
Mesa Verde NP, CO (MEVE1 Site)
2000-2004 Monthly Average Aerosol Extinction, All Monitored Days

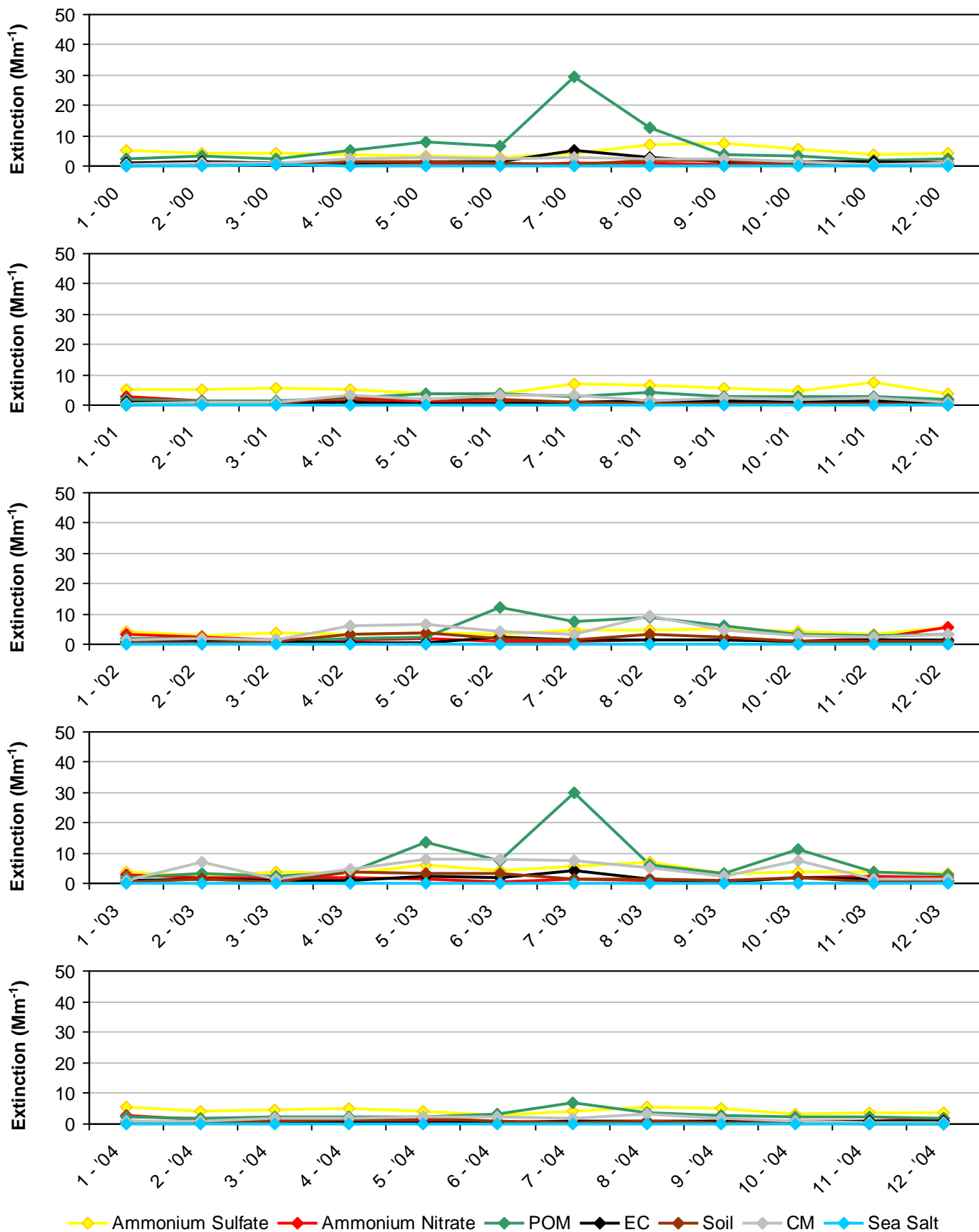


Figure D.2-6
Mesa Verde NP, CO (MEVE1 Site)
2005-2009 Monthly Average Aerosol Extinction, All Monitored Days

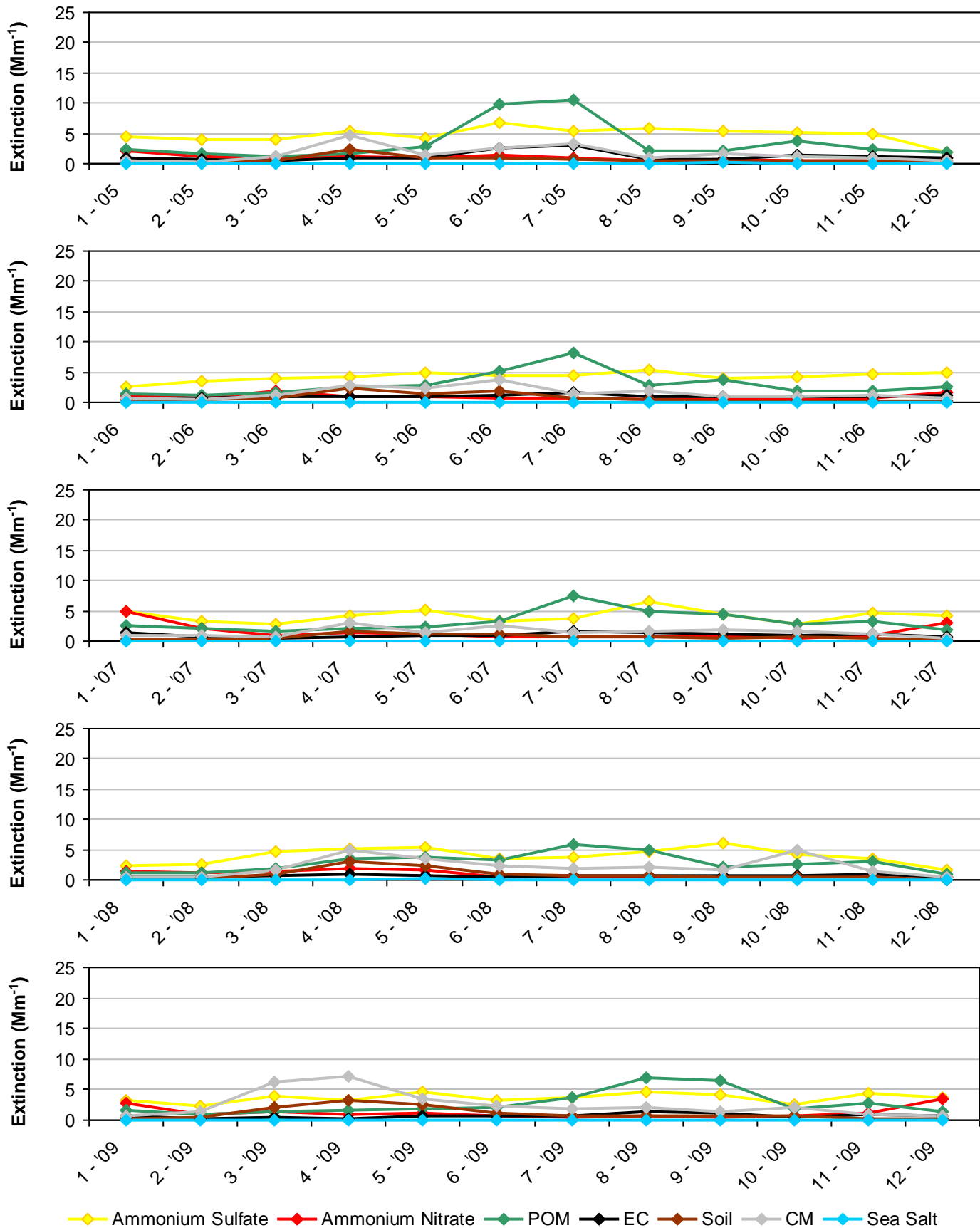


Figure D.2-7
Mesa Verde NP, CO (MEVE1 Site)
2000-2004 Progress Period Extinction, All Sampled Days

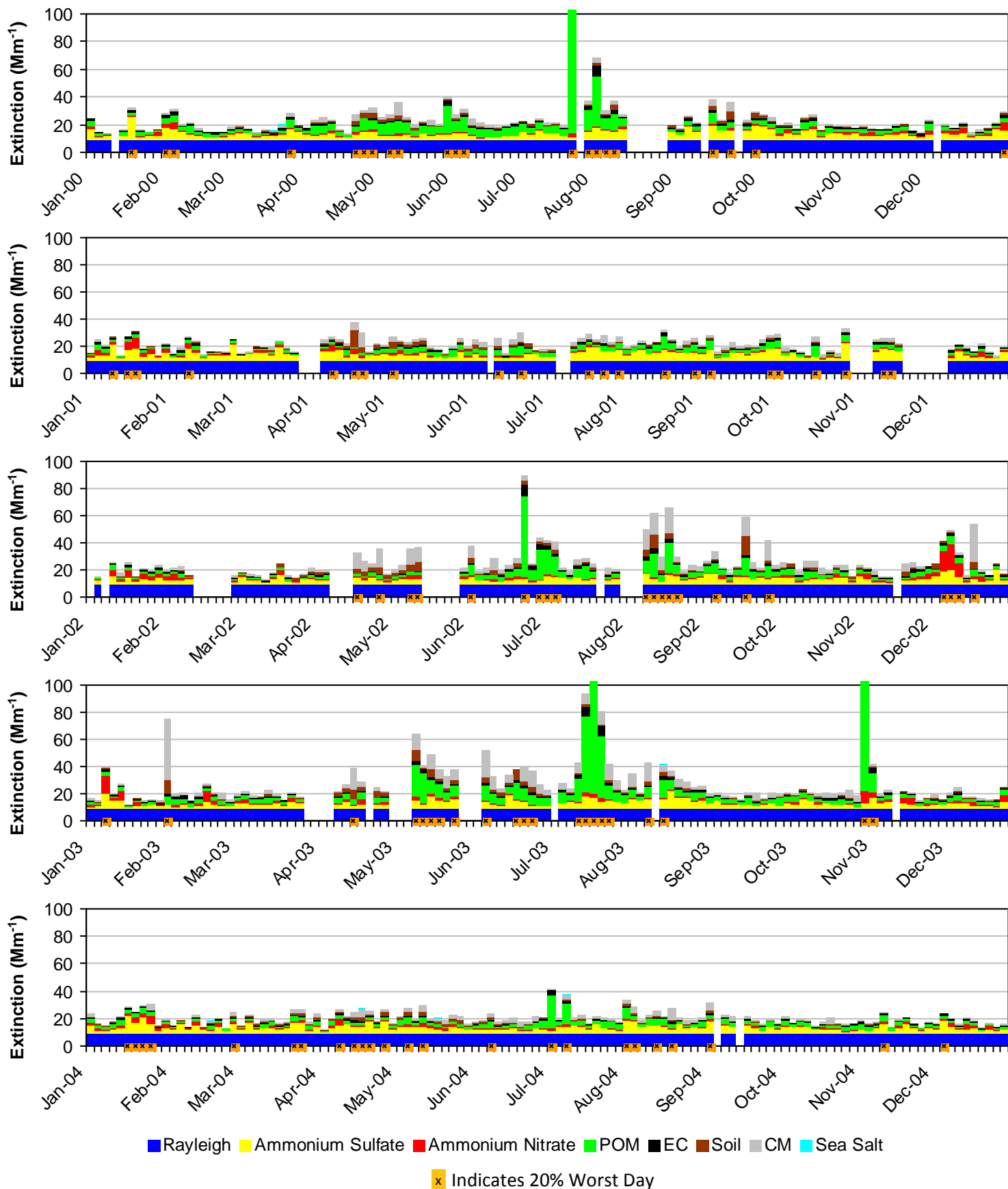
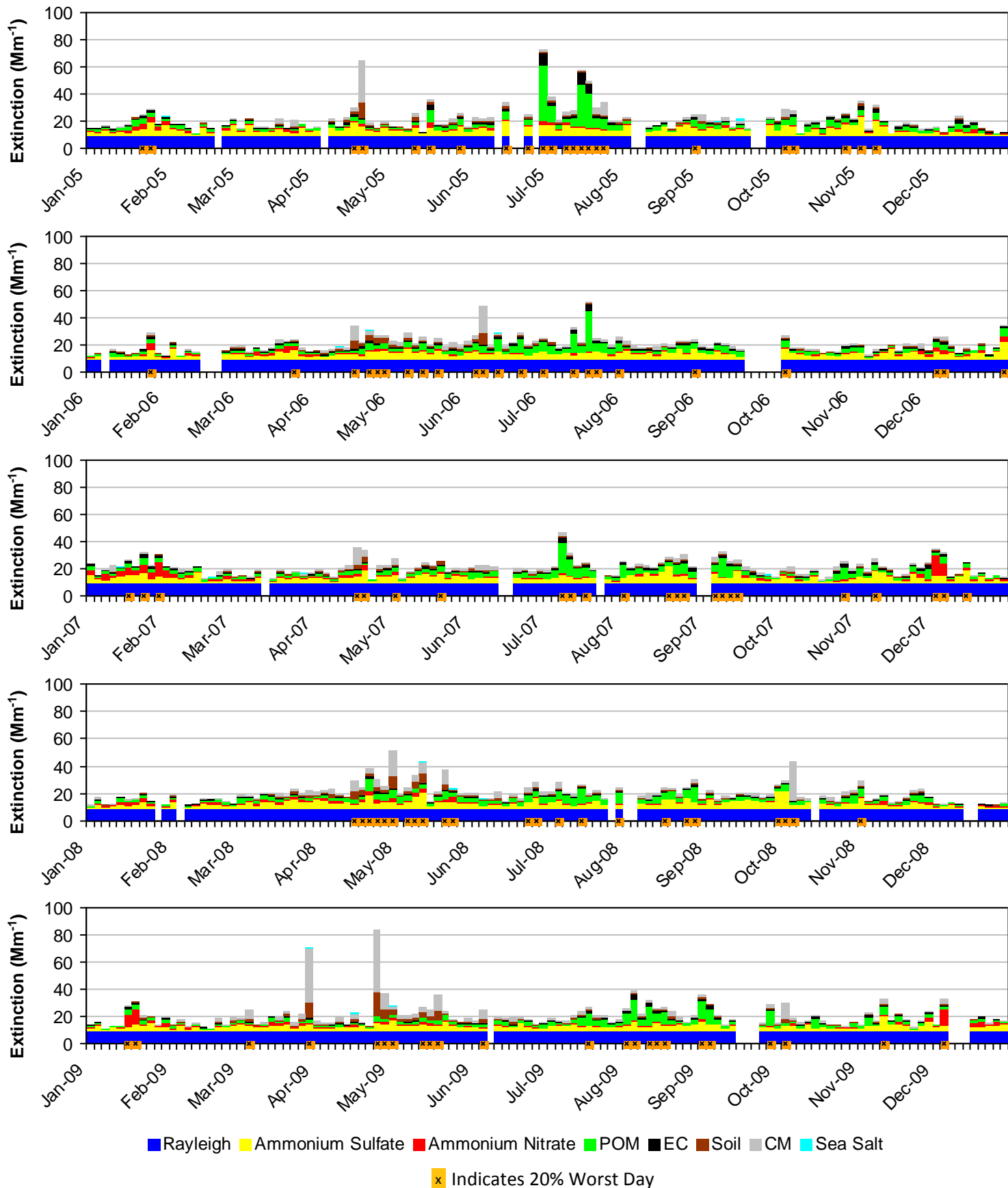


Figure D.2-8
Mesa Verde NP, CO (MEVE1 Site)
2005-2009 Progress Period Extinction, All Sampled Days



D.3. MOUNT ZIRKEL WA AND RAWAH WA (MOZI1)

The following tables and figures are presented in this section for the Mount Zirkel WA and Rawah WA represented by the MOZI1 IMPROVE Monitor:

- **Table D.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 D.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 D.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 D.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 D.3-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure D.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 D.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 D.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 D.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 D.3-1
Mount Zirkel WA and Rawah WA, CO (MOZI1 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 |
| Deciview (dv) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 2.7 | 1.4 | 1.2 | 1.1 | 0.7 | 1.0 | 0.8 | 0.4 | 0.6 | 0.0 | -0.2 | 0.0 | 1.6 | 0.7 | -0.9 | -56% |
| Worst 20% Days | --- | 10.3 | 12.5 | 10.6 | 8.7 | 9.4 | 9.7 | 10.1 | 9.7 | 9.5 | 7.7 | -0.1 | 0.1 | 10.5 | 9.7 | -0.8 | -8% |
| All Days | --- | 6.4 | 6.1 | 5.7 | 5.0 | 5.0 | 5.3 | 5.4 | 5.3 | 4.8 | 4.1 | -0.2 | 0.0 | 5.8 | 5.1 | -0.7 | -12% |
| Total Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 13.2 | 11.6 | 11.3 | 11.2 | 10.8 | 11.1 | 10.8 | 10.5 | 10.6 | 10.0 | -0.2 | 0.0 | 11.8 | 10.7 | -1.1 | -9% |
| Worst 20% Days | --- | 28.6 | 40.1 | 32.3 | 24.0 | 25.9 | 26.8 | 28.3 | 27.3 | 31.0 | 21.8 | -0.1 | 0.5 | 31.3 | 27.8 | -3.5 | -11% |
| All Days | --- | 19.7 | 20.9 | 19.4 | 17.1 | 17.3 | 17.8 | 18.2 | 18.0 | 17.9 | 15.6 | -0.2 | 0.2 | 19.3 | 17.9 | -1.4 | -7% |
| Ammonium Sulfate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 2.3 | 1.3 | 1.2 | 1.3 | 1.2 | 1.4 | 1.2 | 1.1 | 1.2 | 1.1 | 0.0 | 0.0 | 1.5 | 1.2 | -0.3 | -20% |
| Worst 20% Days | --- | 6.8 | 4.9 | 4.7 | 4.6 | 7.0 | 5.6 | 5.2 | 5.5 | 4.7 | 3.9 | -0.1 | 0.3 | 5.2 | 5.6 | 0.4 | 8% |
| All Days | --- | 4.2 | 3.3 | 3.1 | 3.2 | 4.0 | 3.8 | 3.4 | 3.4 | 3.1 | 2.8 | 0.0 | 0.2 | 3.5 | 3.5 | 0.0 | 0% |
| Ammonium Nitrate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.6 | 0.5 | 0.6 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.4 | 0.2 | 0.0 | 0.2 | 0.5 | 0.4 | -0.1 | -20% |
| Worst 20% Days | --- | 2.9 | 2.3 | 1.5 | 1.9 | 1.3 | 1.0 | 1.4 | 1.9 | 1.5 | 1.2 | -0.2 | 0.1 | 2.2 | 1.4 | -0.8 | -36% |
| All Days | --- | 1.3 | 1.4 | 1.0 | 1.1 | 0.9 | 0.8 | 1.1 | 1.1 | 0.8 | 0.7 | 0.0 | 0.1 | 1.2 | 0.9 | -0.3 | -25% |
| Particulate Organic Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 1.1 | 0.8 | 0.7 | 0.7 | 0.6 | 0.6 | 0.6 | 0.4 | 0.5 | 0.3 | 0.0 | 0.0 | 0.8 | 0.5 | -0.3 | -38% |
| Worst 20% Days | --- | 5.1 | 17.3 | 11.6 | 5.8 | 4.8 | 7.2 | 8.9 | 5.9 | 9.4 | 3.9 | 0.1 | 0.5 | 9.9 | 7.2 | -2.7 | -27% |
| All Days | --- | 2.8 | 5.0 | 4.0 | 2.6 | 2.3 | 2.8 | 3.2 | 2.7 | 3.2 | 1.9 | 0.0 | 0.4 | 3.6 | 2.8 | -0.8 | -22% |
| Elemental Carbon Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.4 | 0.4 | 0.3 | 0.3 | 0.2 | 0.3 | 0.3 | 0.1 | 0.2 | 0.1 | 0.0 | 0.0 | 0.3 | 0.2 | -0.1 | -33% |
| Worst 20% Days | --- | 1.4 | 2.6 | 2.0 | 1.0 | 1.5 | 1.7 | 1.7 | 1.0 | 1.7 | 0.8 | 0.0 | 0.4 | 1.8 | 1.5 | -0.3 | -17% |
| All Days | --- | 0.8 | 1.0 | 0.9 | 0.6 | 0.8 | 0.9 | 0.8 | 0.6 | 0.7 | 0.5 | 0.0 | 0.1 | 0.8 | 0.7 | -0.1 | -13% |
| Soil Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.5 | 0.1 | 0.1 | 0.0 | 0% |
| Worst 20% Days | --- | 1.2 | 1.2 | 0.6 | 1.0 | 0.9 | 0.7 | 1.0 | 1.4 | 1.8 | 1.4 | 0.0 | 0.2 | 1.0 | 1.1 | 0.1 | 10% |
| All Days | --- | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.5 | 0.6 | 0.6 | 0.5 | 0.0 | 0.2 | 0.5 | 0.5 | 0.0 | 0% |
| Coarse Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.6 | 0.5 | 0.5 | 0.5 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.5 | 0.2 | -0.3 | -60% |
| Worst 20% Days | --- | 3.2 | 3.8 | 3.8 | 1.8 | 2.4 | 2.6 | 2.1 | 3.5 | 3.9 | 2.7 | 0.0 | 0.5 | 3.1 | 2.9 | -0.2 | -7% |
| All Days | --- | 2.0 | 1.7 | 2.0 | 1.1 | 1.1 | 1.2 | 1.2 | 1.6 | 1.5 | 1.2 | 0.0 | 0.2 | 1.7 | 1.3 | -0.4 | -24% |
| Sea Salt Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.0 | 0.1 | 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 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 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 | 0.1 | 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 D.3-1
Mount Zirkel WA and Rawah WA, CO (MOZI1 Site)
Annual and 5-Year Period Averages
20% Most Impaired Visibility Days

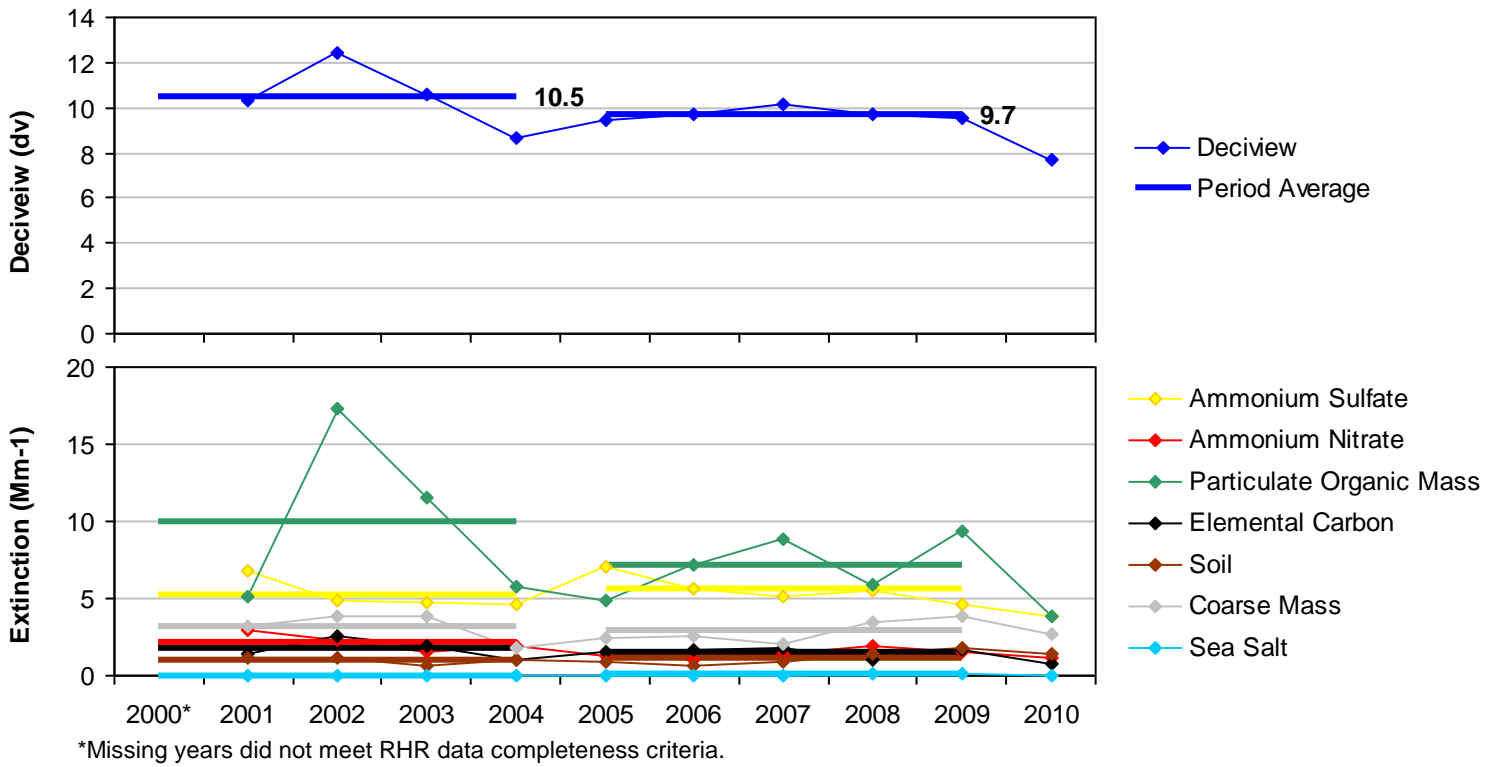


Figure D.3-2
Mount Zirkel WA and Rawah WA, CO (MOZI1 Site)
Annual and 5-Year Period Averages
20% Least Impaired Visibility Days

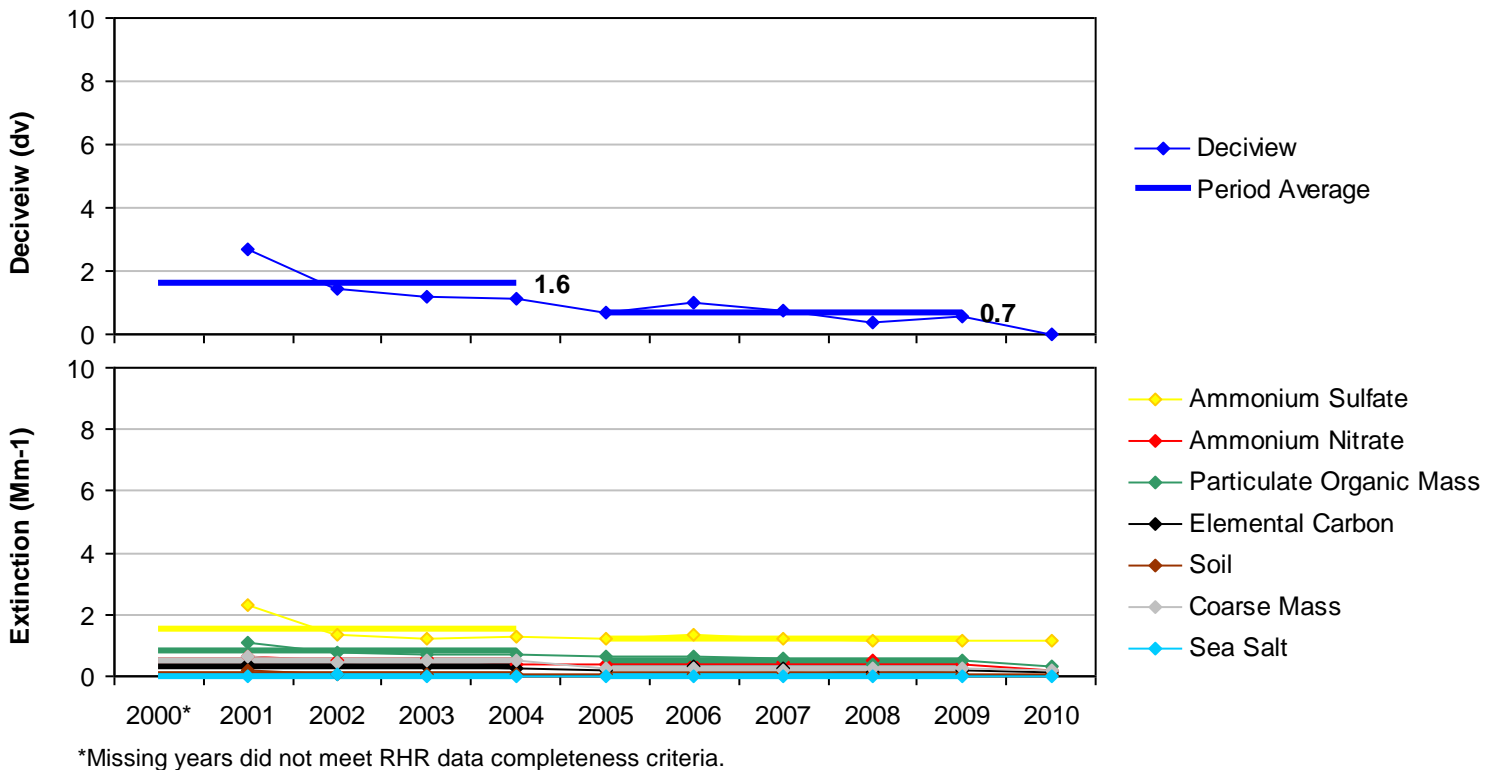
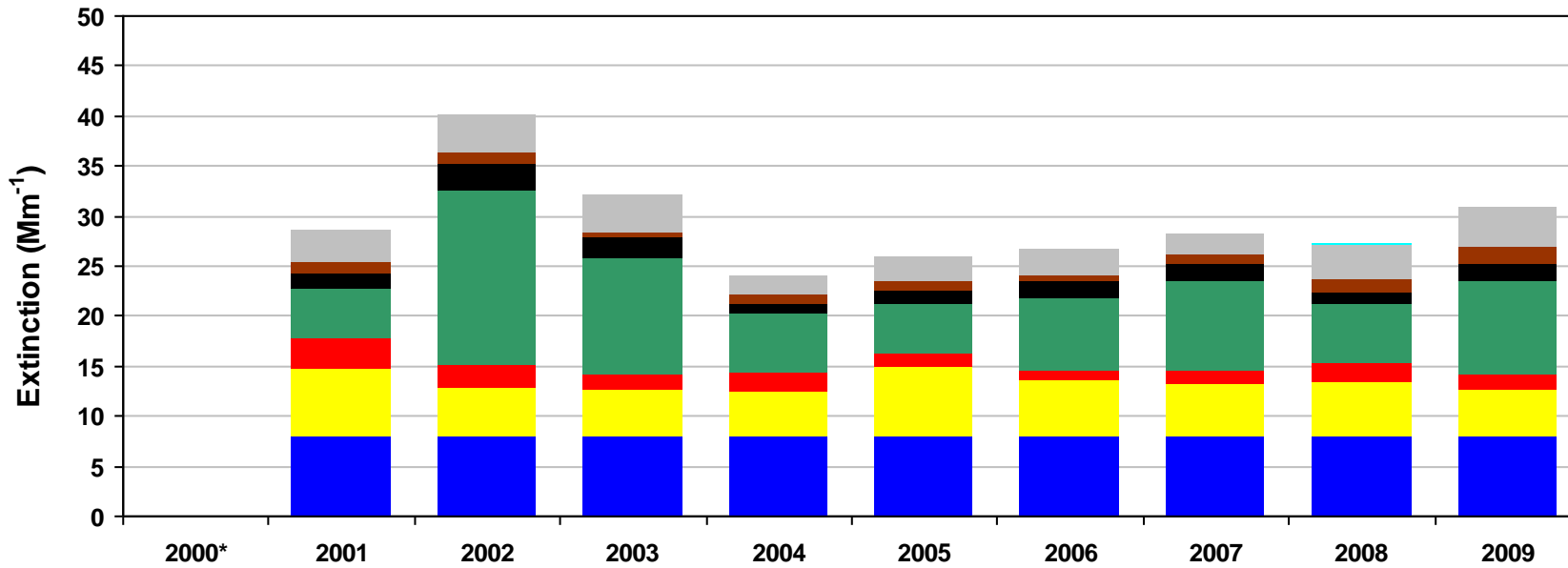
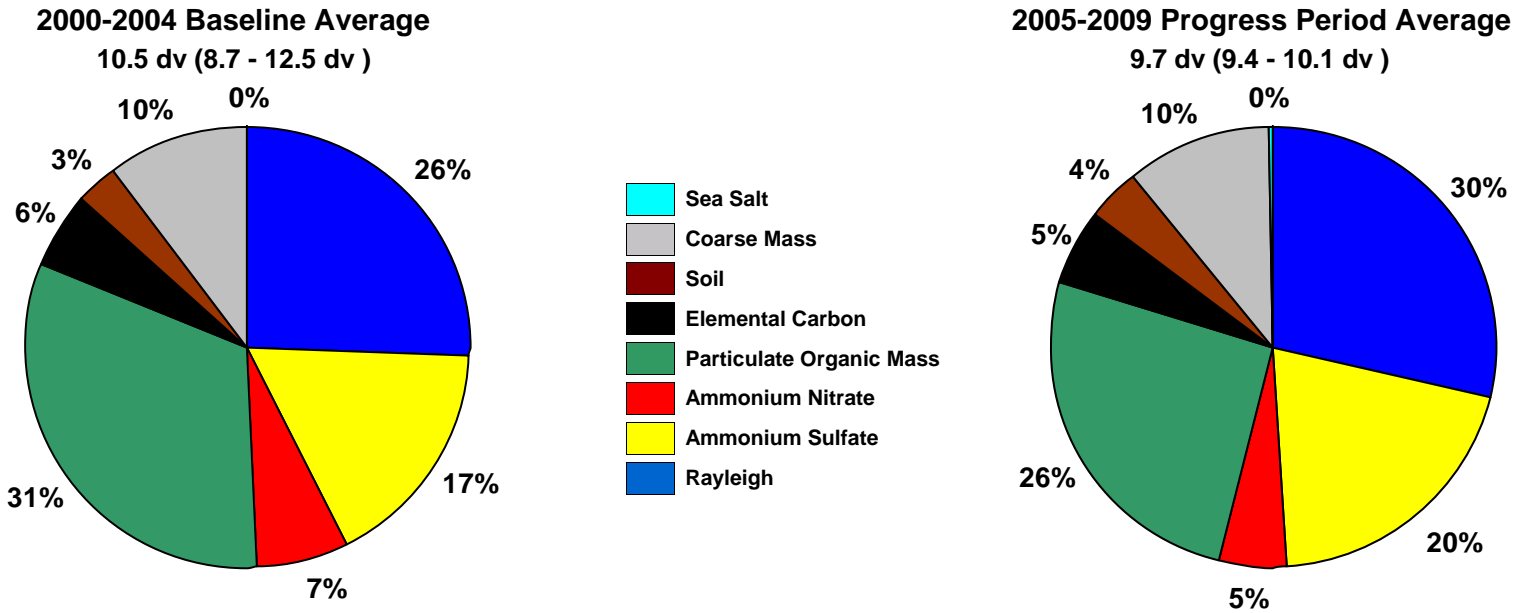
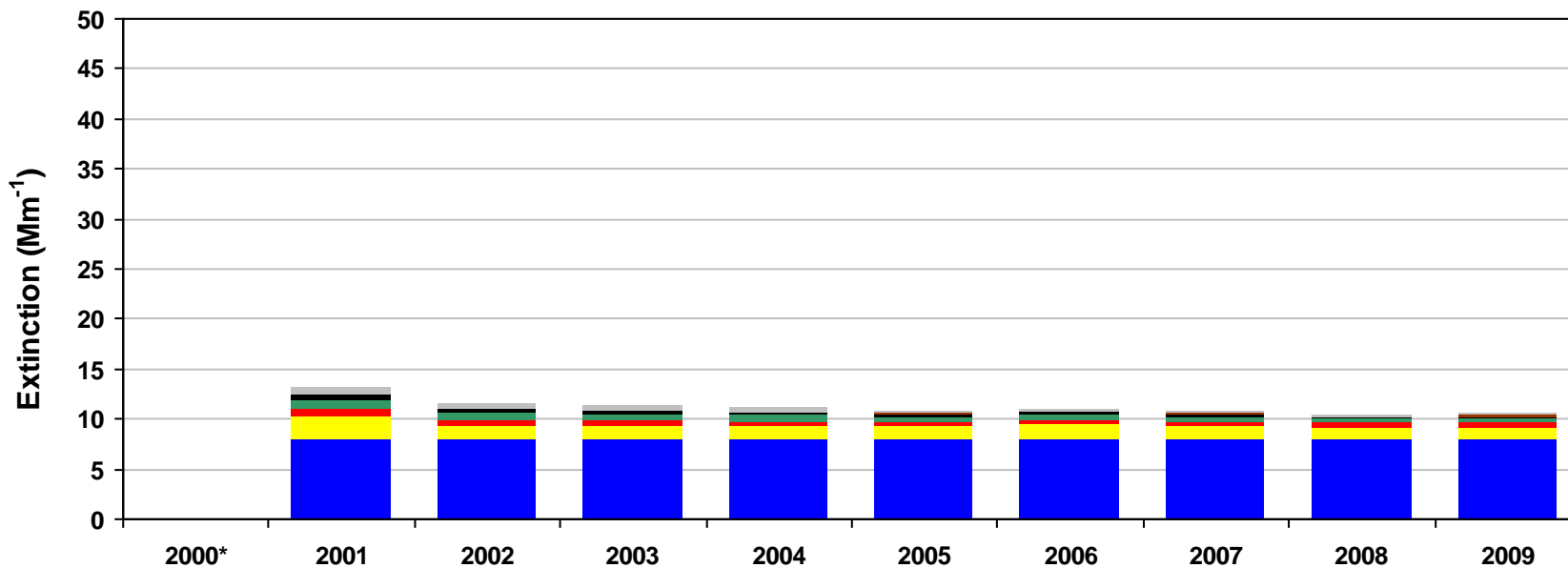
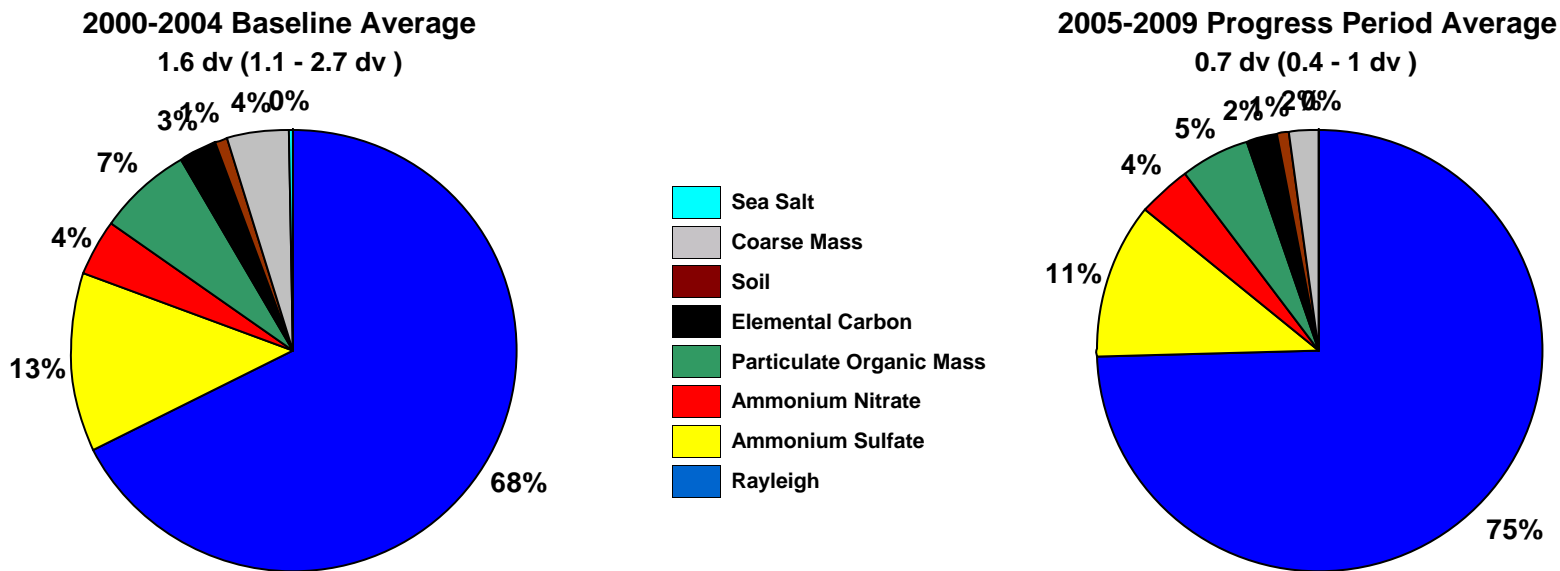


Figure D.3-3
Mount Zirkel WA and Rawah WA, CO (MOZI1 Site)
20% Most Impaired Visibility Days



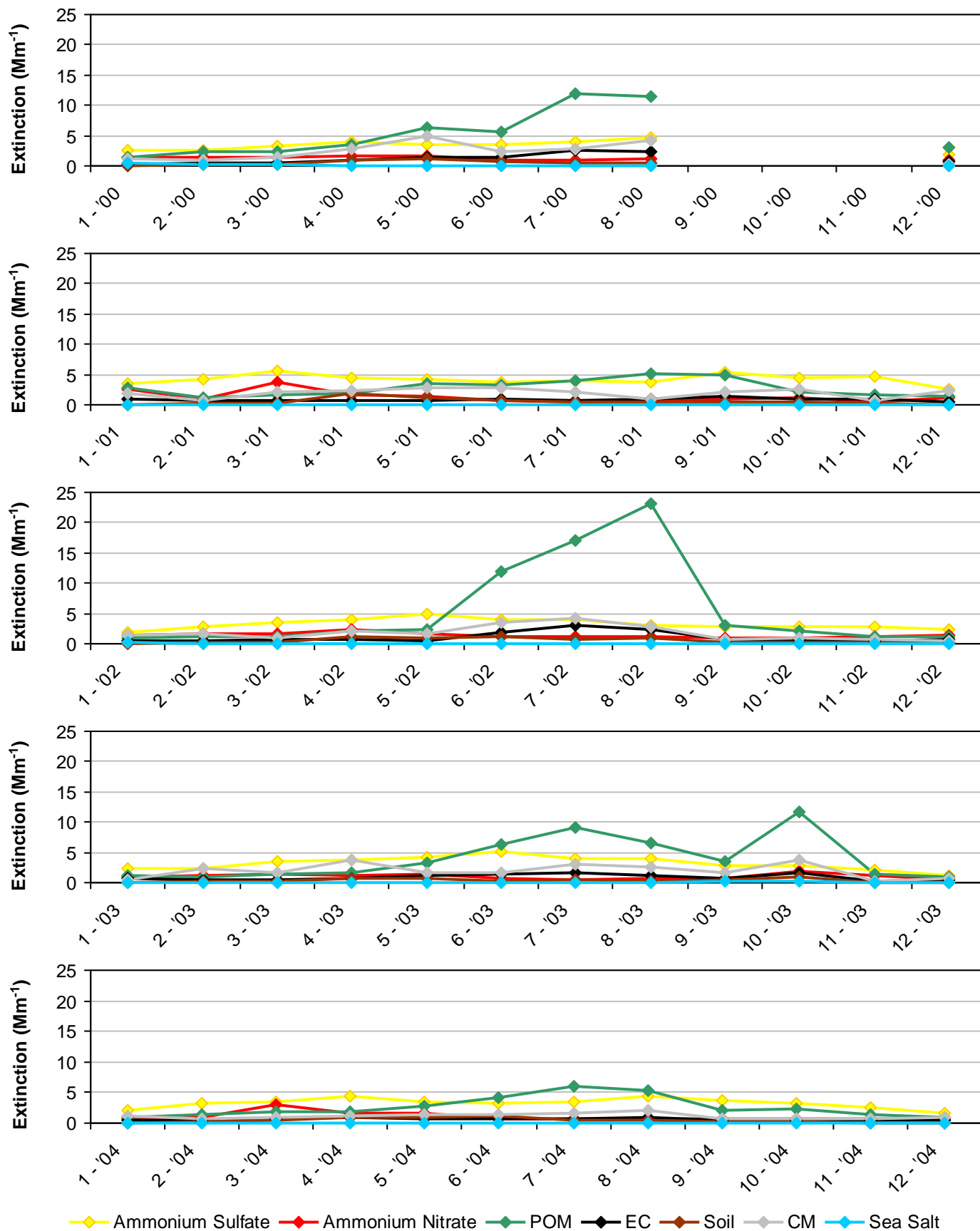
*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

Figure D.3-4
Mount Zirkel WA and Rawah WA, CO (MOZI1 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 D.3-5
Mount Zirkel WA and Rawah WA, CO (MOZI1 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 D.3-6
Mount Zirkel WA and Rawah WA, CO (MOZI1 Site)
2005-2009 Monthly Average Aerosol Extinction, All Monitored Days

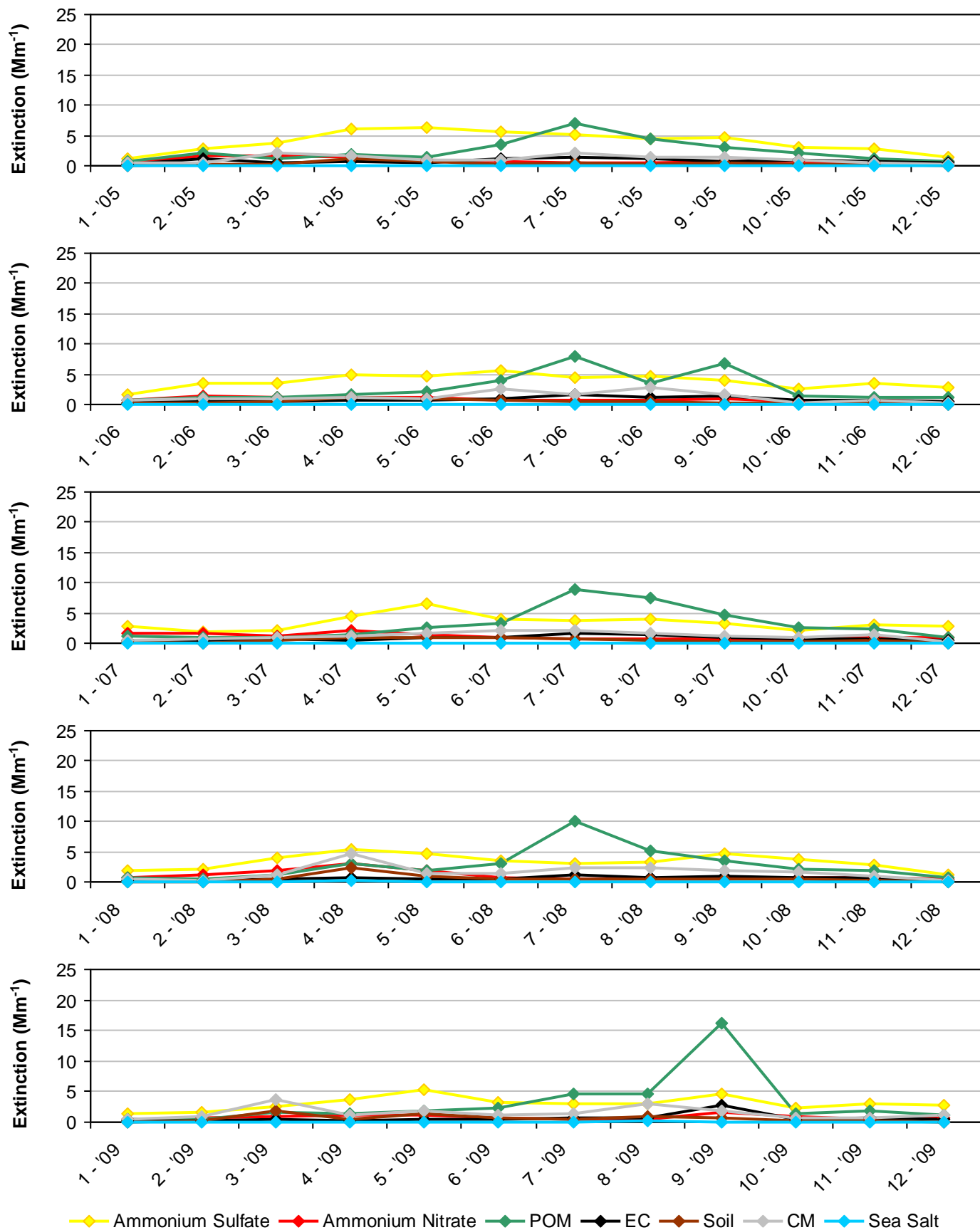
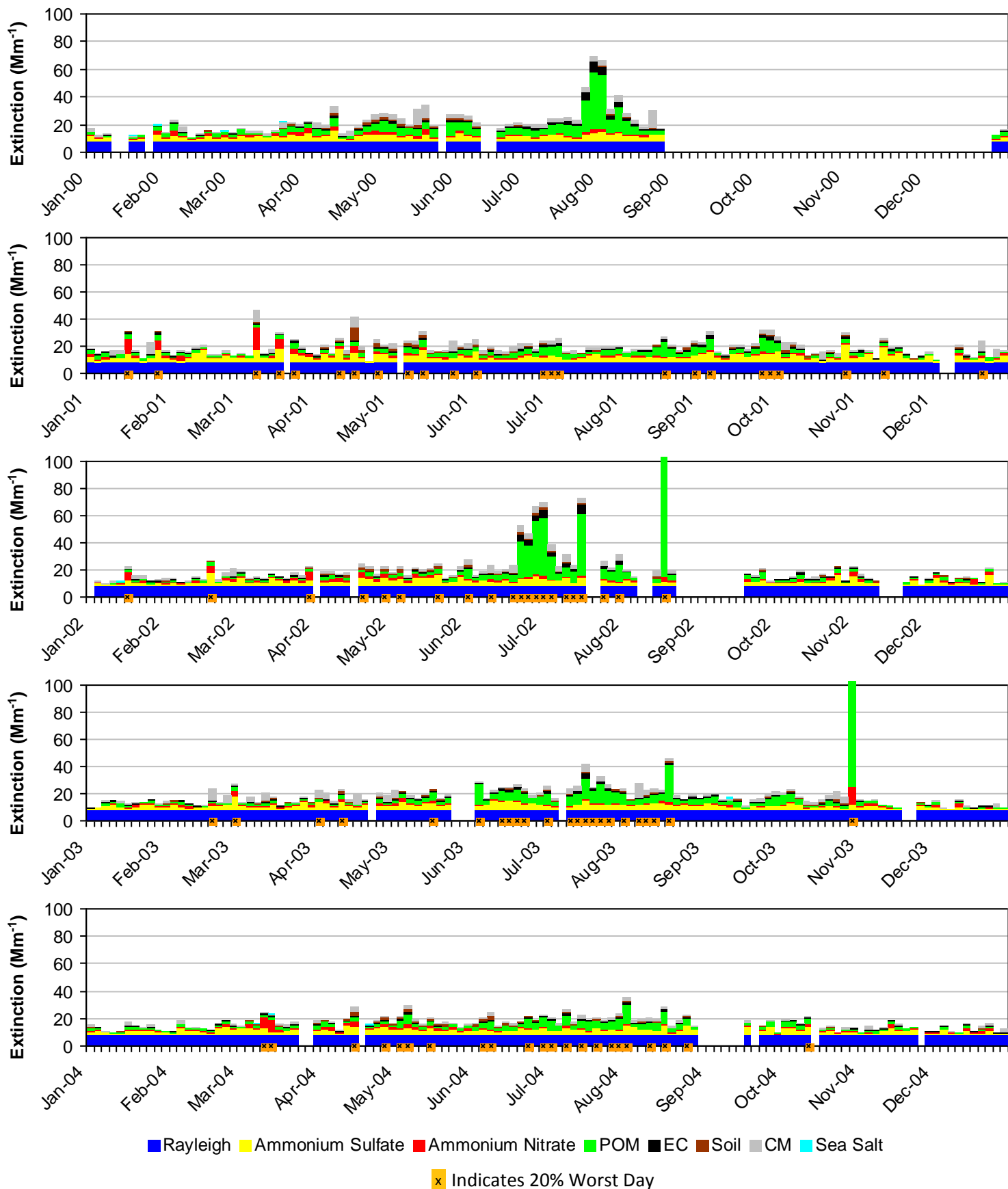
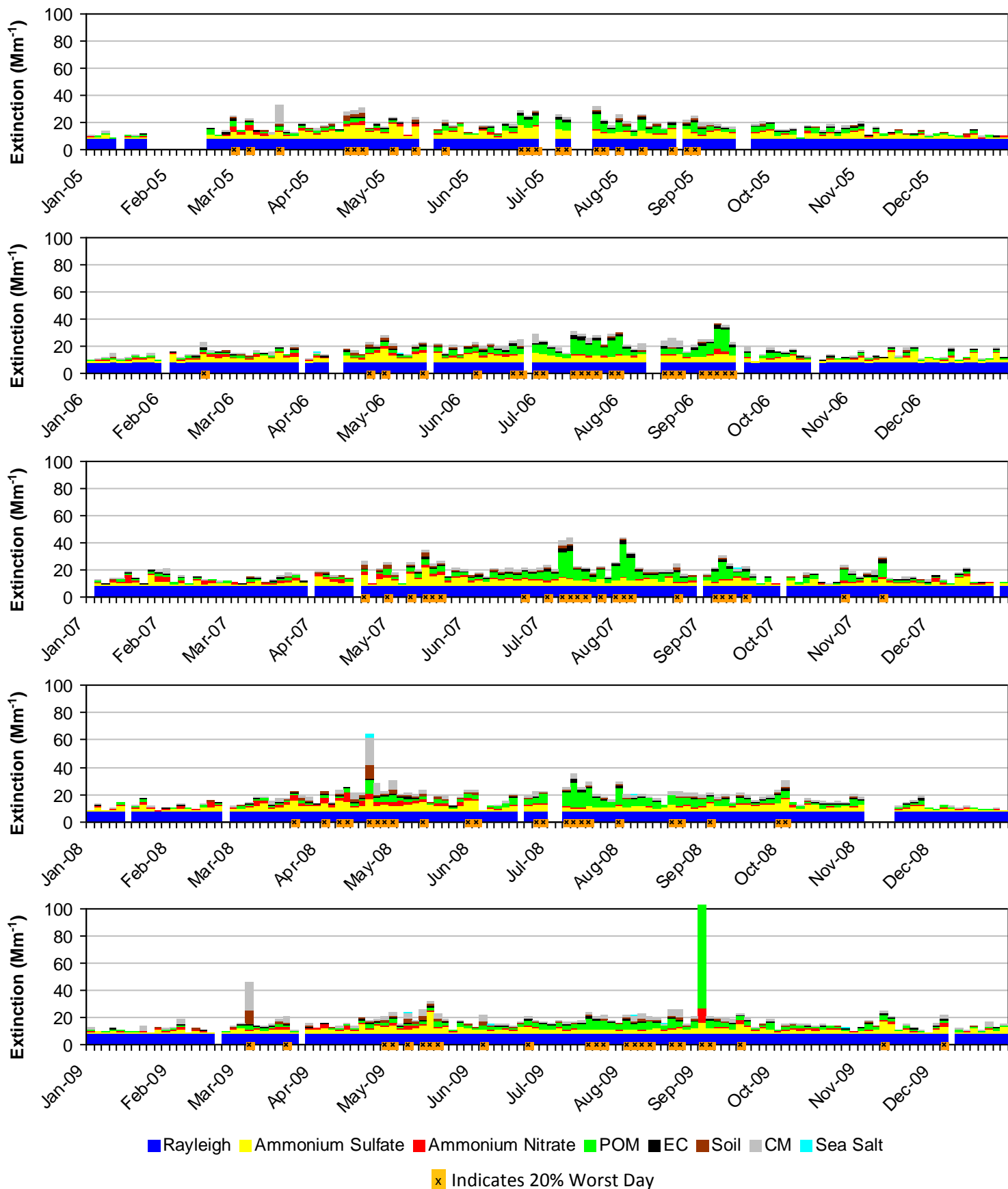


Figure D.3-7
Mount Zirkel WA and Rawah WA, CO (MOZ11 Site)
2000-2004 Progress Period Extinction, All Sampled Days



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

Figure D.3-8
Mount Zirkel WA and Rawah WA, CO (MOZ11 Site)
2005-2009 Progress Period Extinction, All Sampled Days



D.4. ROCKY MOUNTAIN NP (ROMO1)

The following tables and figures are presented in this section for the Rocky Mountain NP represented by the ROMO1 IMPROVE Monitor:

- **Table D.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 D.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 D.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 D.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 D.4-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure D.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 D.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 D.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 D.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 D.4-1
Rocky Mountain NP, CO (ROMO1 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 |
| Deciview (dv) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 2.6 | 2.4 | 1.8 | 2.5 | 2.1 | 2.1 | 2.1 | 2.3 | 1.6 | 2.0 | 1.4 | -0.1 | 0.1 | 2.3 | 2.0 | -0.3 | -13% |
| Worst 20% Days | 14.0 | 13.5 | 16.0 | 13.7 | 11.9 | 13.5 | 12.5 | 12.6 | 12.8 | 11.7 | 10.6 | -0.2 | 0.0 | 13.8 | 12.6 | -1.2 | -9% |
| All Days | 7.9 | 7.7 | 8.4 | 8.0 | 6.9 | 7.7 | 7.2 | 7.7 | 6.8 | 6.5 | 5.9 | -0.2 | 0.0 | 7.8 | 7.2 | -0.6 | -8% |
| Total Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 13.0 | 12.8 | 12.0 | 12.9 | 12.4 | 12.4 | 12.4 | 12.6 | 11.8 | 12.2 | 11.5 | -0.1 | 0.1 | 12.6 | 12.3 | -0.3 | -2% |
| Worst 20% Days | 41.9 | 39.0 | 53.4 | 40.0 | 33.2 | 39.0 | 35.5 | 35.9 | 37.4 | 35.8 | 29.4 | -0.6 | 0.1 | 41.5 | 36.7 | -4.8 | -12% |
| All Days | 24.1 | 23.5 | 26.9 | 24.2 | 21.3 | 23.4 | 22.1 | 23.1 | 21.8 | 21.0 | 19.2 | -0.3 | 0.0 | 24.0 | 22.3 | -1.7 | -7% |
| Ammonium Sulfate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 1.7 | 1.5 | 0.9 | 1.3 | 1.2 | 1.4 | 1.3 | 1.2 | 1.0 | 1.3 | 0.9 | 0.0 | 0.1 | 1.3 | 1.2 | -0.1 | -8% |
| Worst 20% Days | 6.4 | 9.7 | 9.4 | 6.8 | 7.3 | 9.3 | 7.3 | 6.9 | 5.9 | 6.5 | 5.4 | -0.2 | 0.1 | 7.9 | 7.2 | -0.7 | -9% |
| All Days | 3.9 | 4.8 | 4.5 | 3.9 | 3.8 | 5.1 | 4.2 | 4.1 | 3.7 | 3.7 | 3.1 | -0.1 | 0.1 | 4.2 | 4.2 | 0.0 | 0% |
| Ammonium Nitrate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.5 | 0.3 | 0.2 | 0.3 | 0.4 | 0.4 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 | 0% |
| Worst 20% Days | 2.5 | 7.6 | 8.7 | 3.2 | 4.3 | 4.8 | 3.7 | 4.3 | 4.1 | 3.2 | 3.1 | -0.2 | 0.4 | 5.3 | 4.0 | -1.3 | -25% |
| All Days | 1.7 | 2.5 | 3.3 | 1.9 | 1.9 | 2.1 | 1.6 | 2.1 | 1.6 | 1.4 | 1.4 | -0.1 | 0.1 | 2.3 | 1.7 | -0.6 | -26% |
| Particulate Organic Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.8 | 0.7 | 0.8 | 1.1 | 1.0 | 0.7 | 0.8 | 1.0 | 0.7 | 0.7 | 0.6 | 0.0 | 0.4 | 0.9 | 0.8 | -0.1 | -11% |
| Worst 20% Days | 11.1 | 6.2 | 16.5 | 12.1 | 6.7 | 7.8 | 9.0 | 8.5 | 9.1 | 10.1 | 5.2 | 0.2 | 0.4 | 10.5 | 8.9 | -1.6 | -15% |
| All Days | 4.1 | 3.3 | 5.3 | 4.9 | 3.4 | 3.5 | 3.6 | 4.1 | 3.7 | 3.7 | 2.6 | 0.0 | 0.5 | 4.2 | 3.7 | -0.5 | -12% |
| Elemental Carbon Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.0 | 0.0 | 0.3 | 0.3 | 0.0 | 0% |
| Worst 20% Days | 2.9 | 2.0 | 3.4 | 2.5 | 2.0 | 2.5 | 2.4 | 1.9 | 1.7 | 2.3 | 1.5 | -0.1 | 0.0 | 2.6 | 2.2 | -0.4 | -15% |
| All Days | 1.3 | 1.1 | 1.3 | 1.3 | 1.1 | 1.3 | 1.2 | 1.1 | 0.9 | 0.9 | 0.8 | 0.0 | 0.0 | 1.2 | 1.1 | -0.1 | -8% |
| Soil Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.1 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.2 | 0.3 | 0.1 | 0.0 | 0.1 | 0.1 | 0.2 | 0.1 | 100% |
| Worst 20% Days | 1.3 | 1.4 | 1.9 | 1.2 | 1.1 | 1.5 | 0.9 | 1.3 | 2.3 | 1.5 | 1.3 | 0.0 | 0.3 | 1.4 | 1.5 | 0.1 | 7% |
| All Days | 0.6 | 0.8 | 0.9 | 0.6 | 0.6 | 0.6 | 0.7 | 0.7 | 0.9 | 0.7 | 0.6 | 0.0 | 0.1 | 0.7 | 0.7 | 0.0 | 0% |
| Coarse Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.6 | 0.8 | 0.6 | 0.8 | 0.4 | 0.5 | 0.6 | 0.7 | 0.5 | 0.5 | 0.5 | 0.0 | 0.2 | 0.6 | 0.6 | 0.0 | 0% |
| Worst 20% Days | 8.7 | 3.2 | 4.6 | 5.1 | 2.9 | 4.1 | 3.2 | 3.8 | 5.1 | 3.2 | 3.7 | -0.2 | 0.2 | 4.9 | 3.9 | -1.0 | -20% |
| All Days | 3.4 | 1.9 | 2.5 | 2.5 | 1.5 | 1.9 | 1.8 | 2.1 | 2.1 | 1.6 | 1.7 | -0.1 | 0.1 | 2.4 | 1.9 | -0.5 | -21% |
| Sea Salt Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | 0.0 | 0.0 | 0.1 | 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 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.1 | 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 | 0.2 | 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 D.4-1
Rocky Mountain NP, CO (ROMO1 Site)
Annual and 5-Year Period Averages
20% Most Impaired Visibility Days

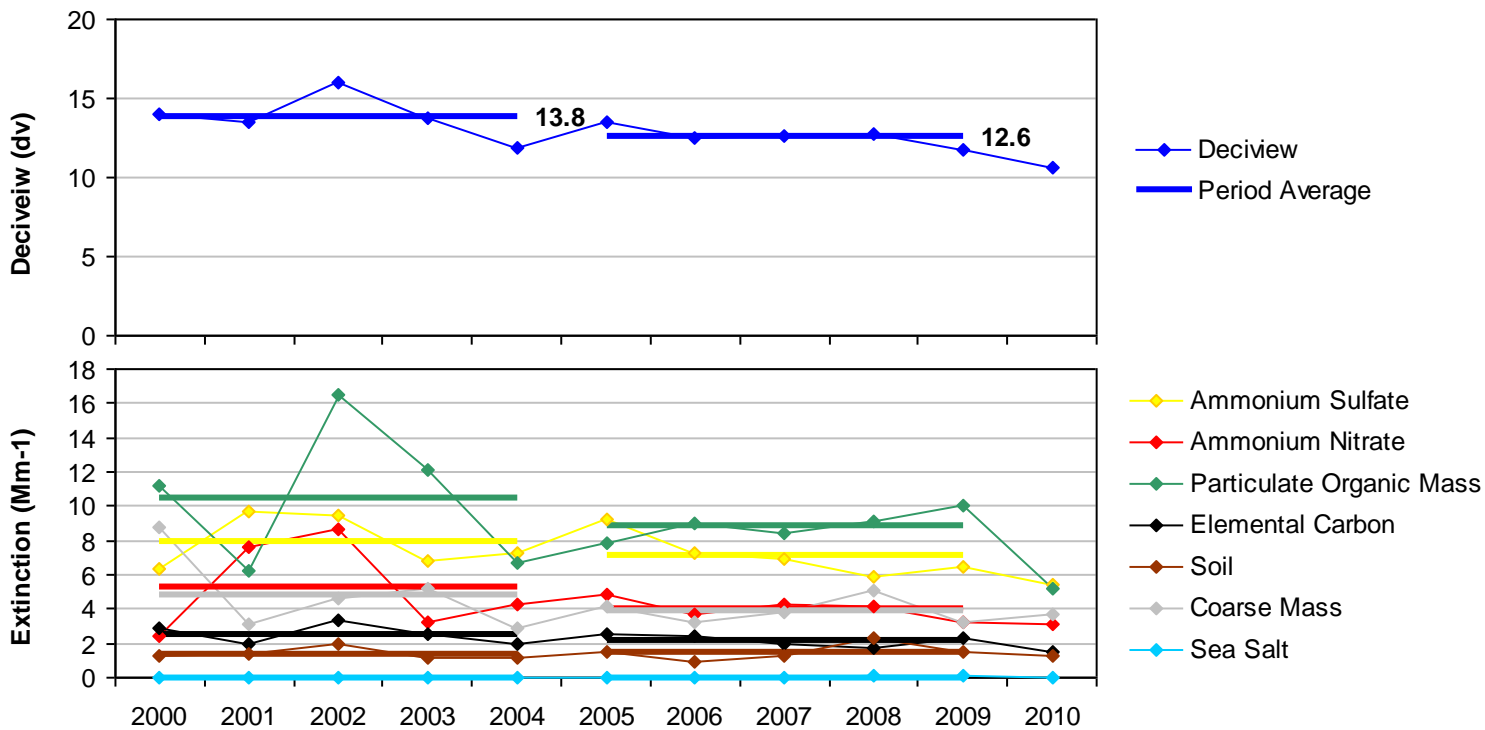


Figure D.4-2
Rocky Mountain NP, CO (ROMO1 Site)
Annual and 5-Year Period Averages
20% Least Impaired Visibility Days

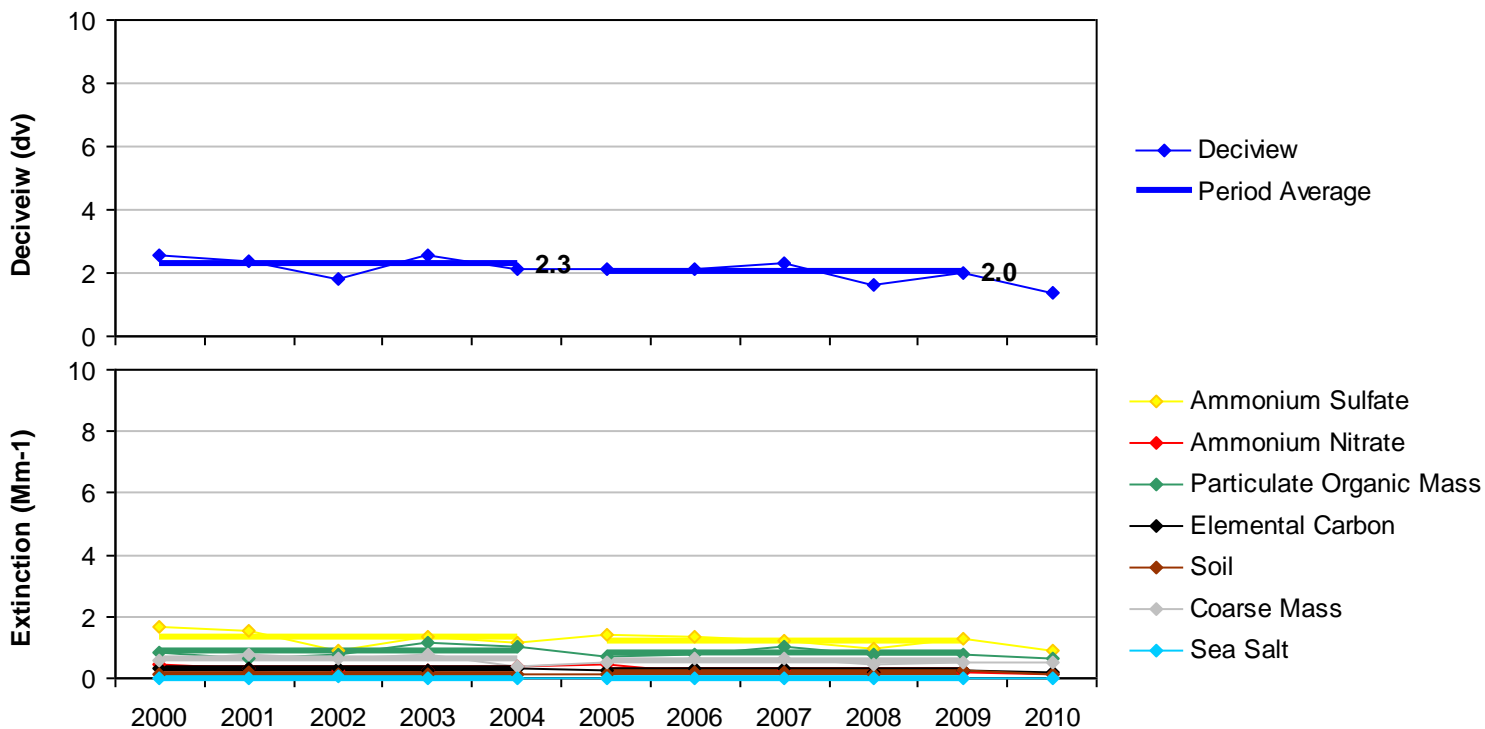
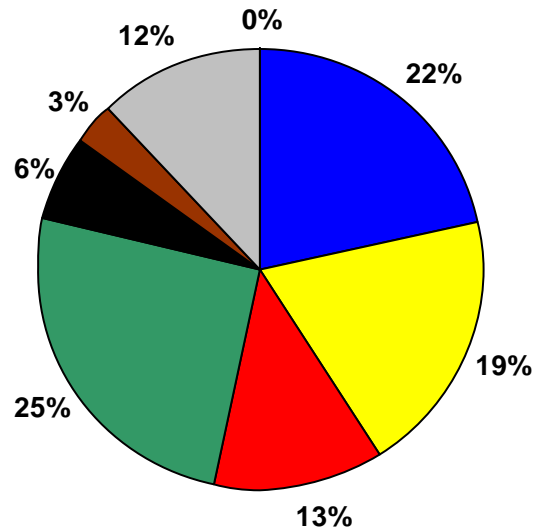


Figure D.4-3
Rocky Mountain NP, CO (ROMO1 Site)
20% Most Impaired Visibility Days

2000-2004 Baseline Average
 13.8 dv (11.9 - 16 dv)



2005-2009 Progress Period Average
 12.6 dv (11.7 - 13.5 dv)

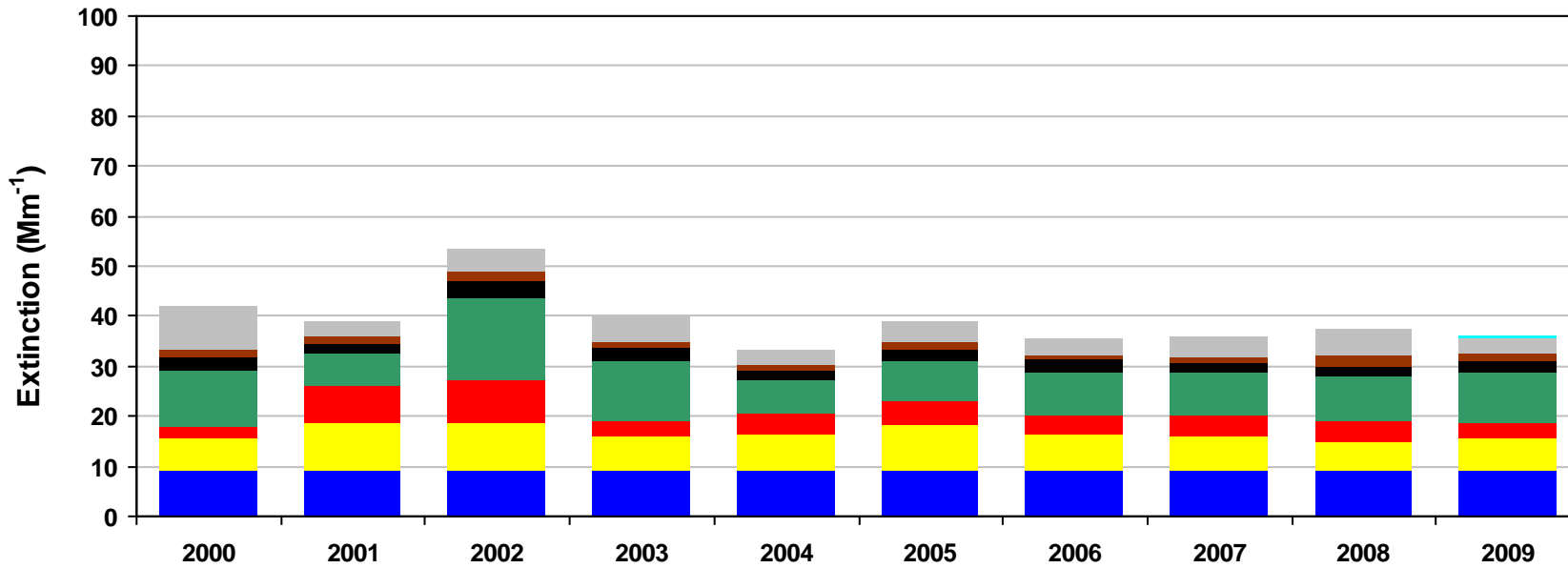
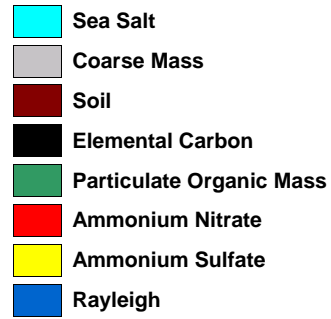
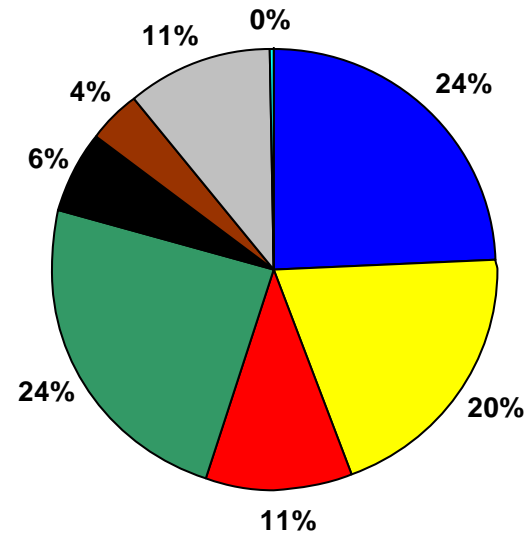


Figure D.4-4
Rocky Mountain NP, CO (ROMO1 Site)
20% Least Impaired Visibility Days

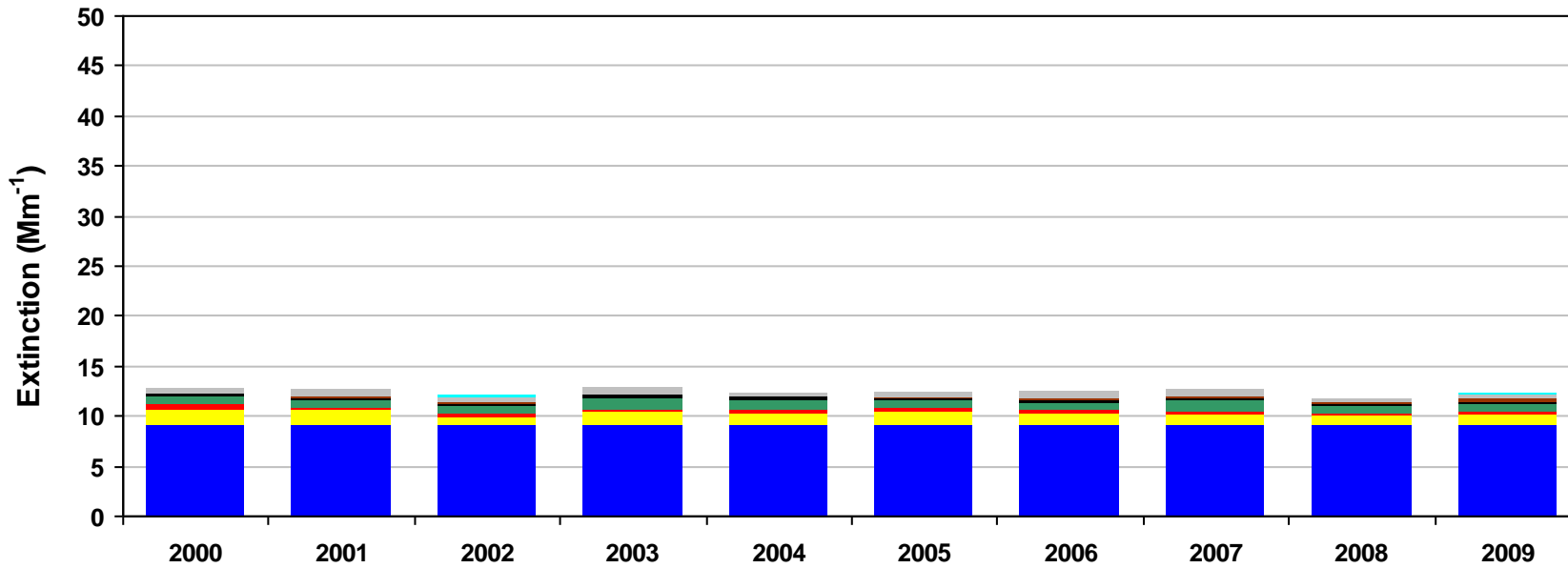
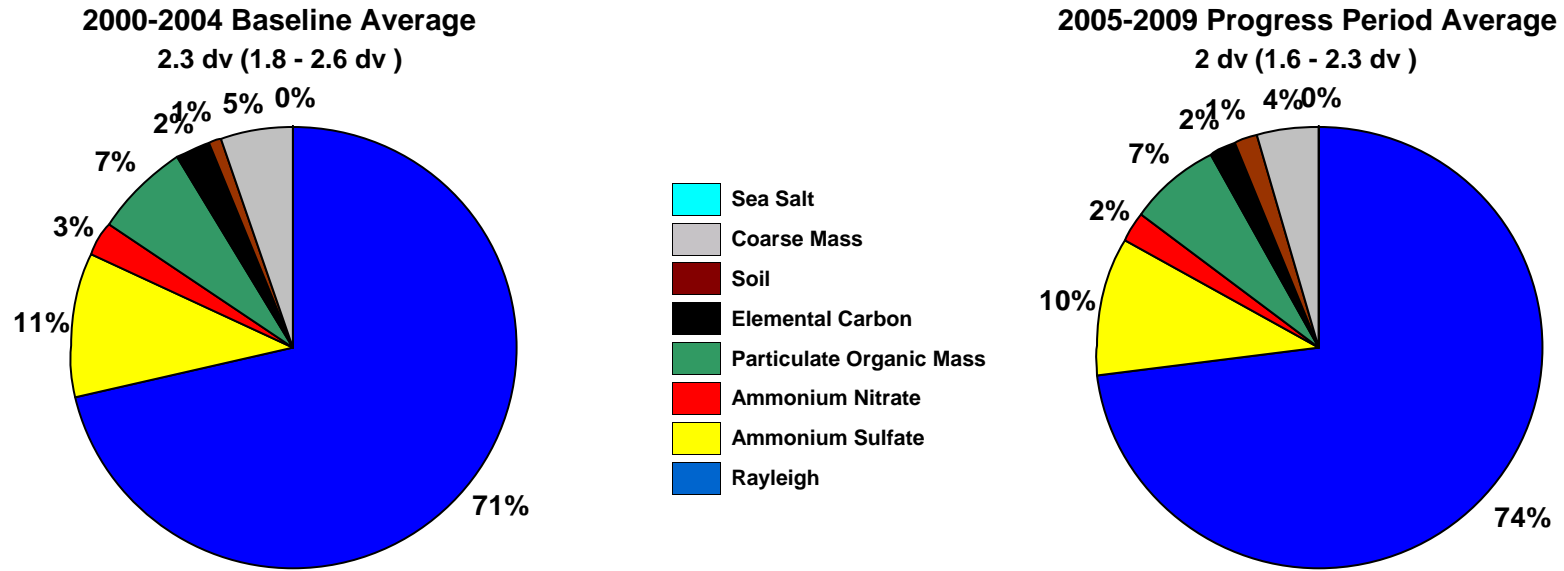


Figure D.4-5
Rocky Mountain NP, CO (ROMO1 Site)
2000-2004 Monthly Average Aerosol Extinction, All Monitored Days

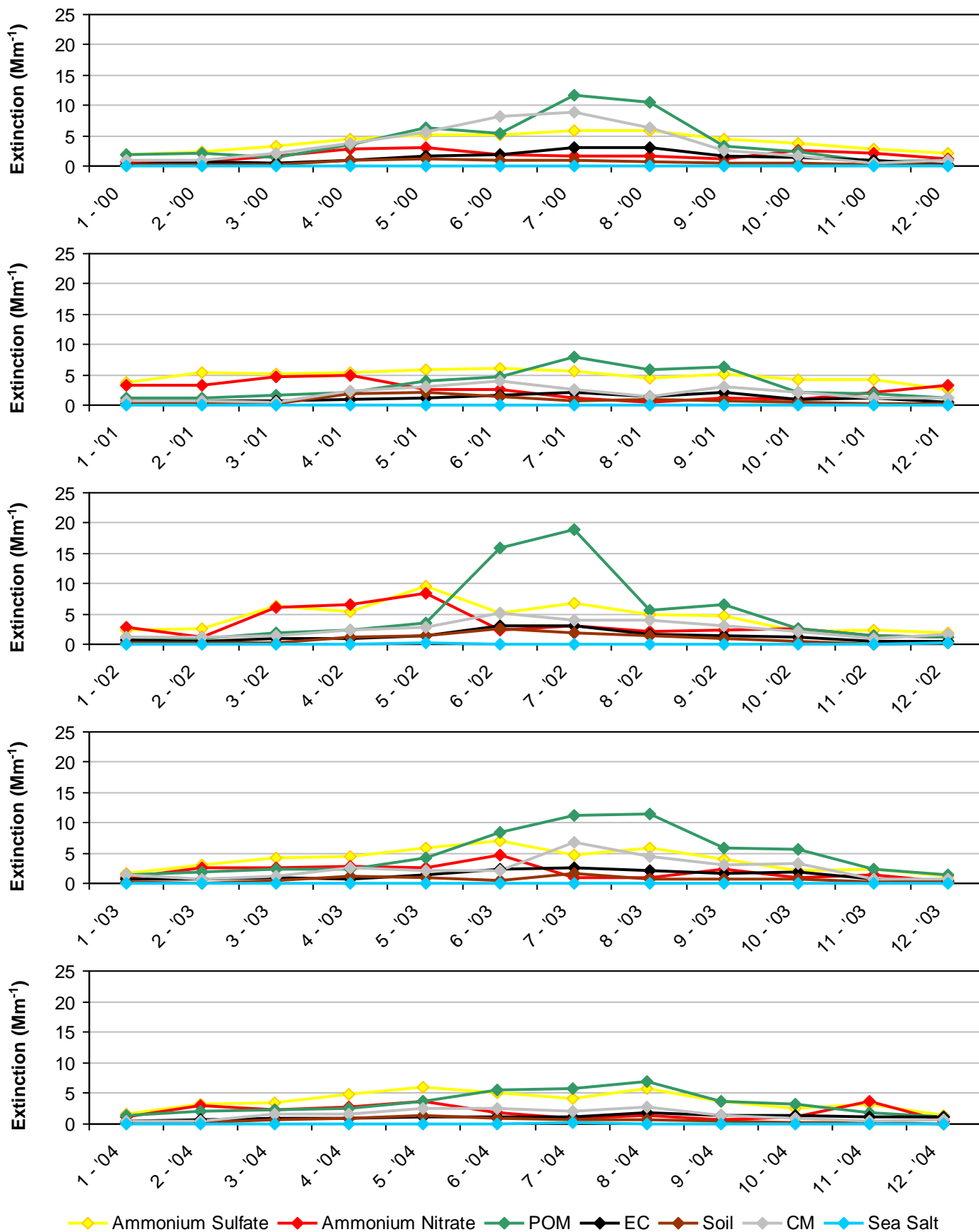


Figure D.4-6
Rocky Mountain NP, CO (ROMO1 Site)
2005-2009 Monthly Average Aerosol Extinction, All Monitored Days

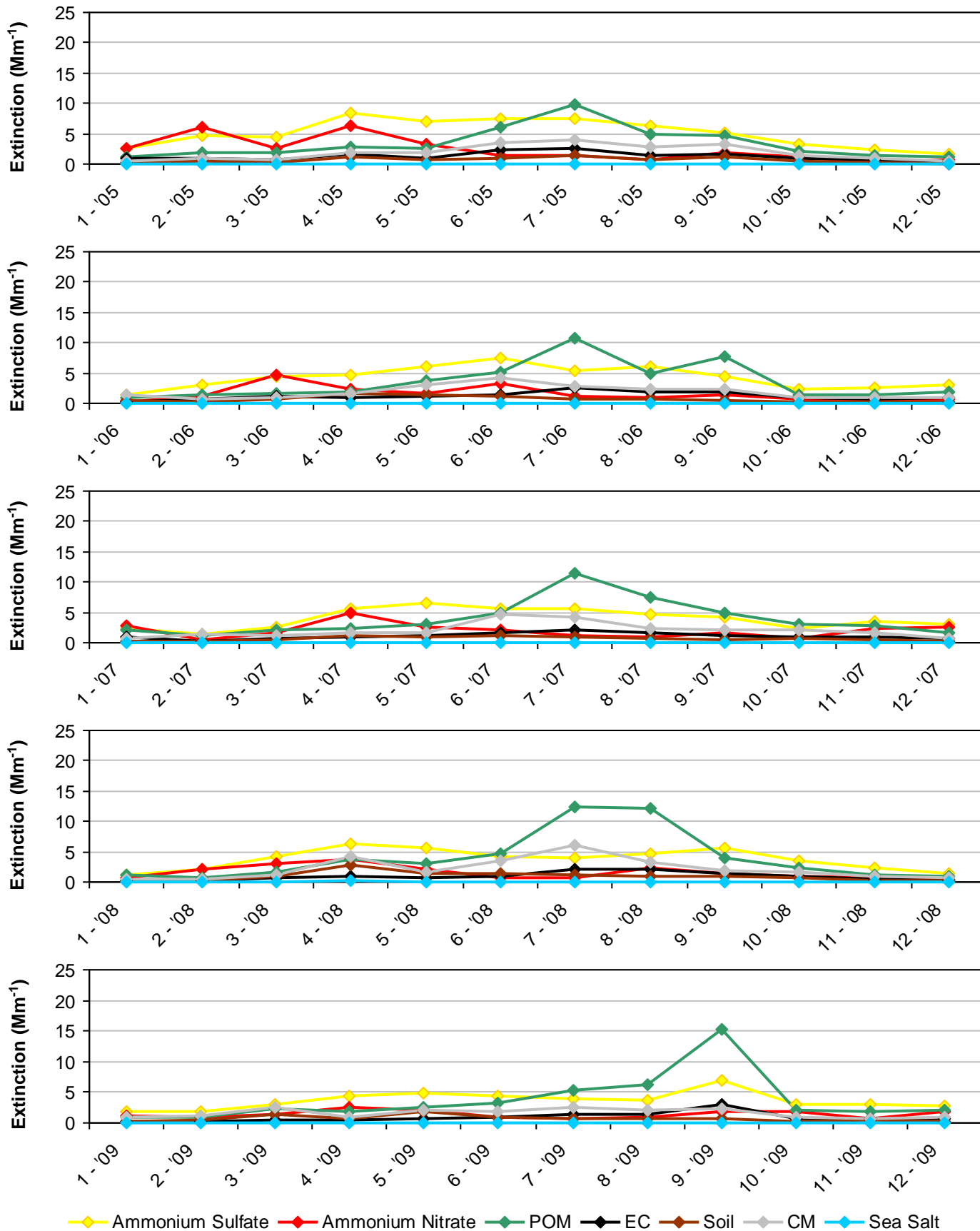


Figure D.4-7
Rocky Mountain NP, CO (ROMO1 Site)
2000-2004 Progress Period Extinction, All Sampled Days

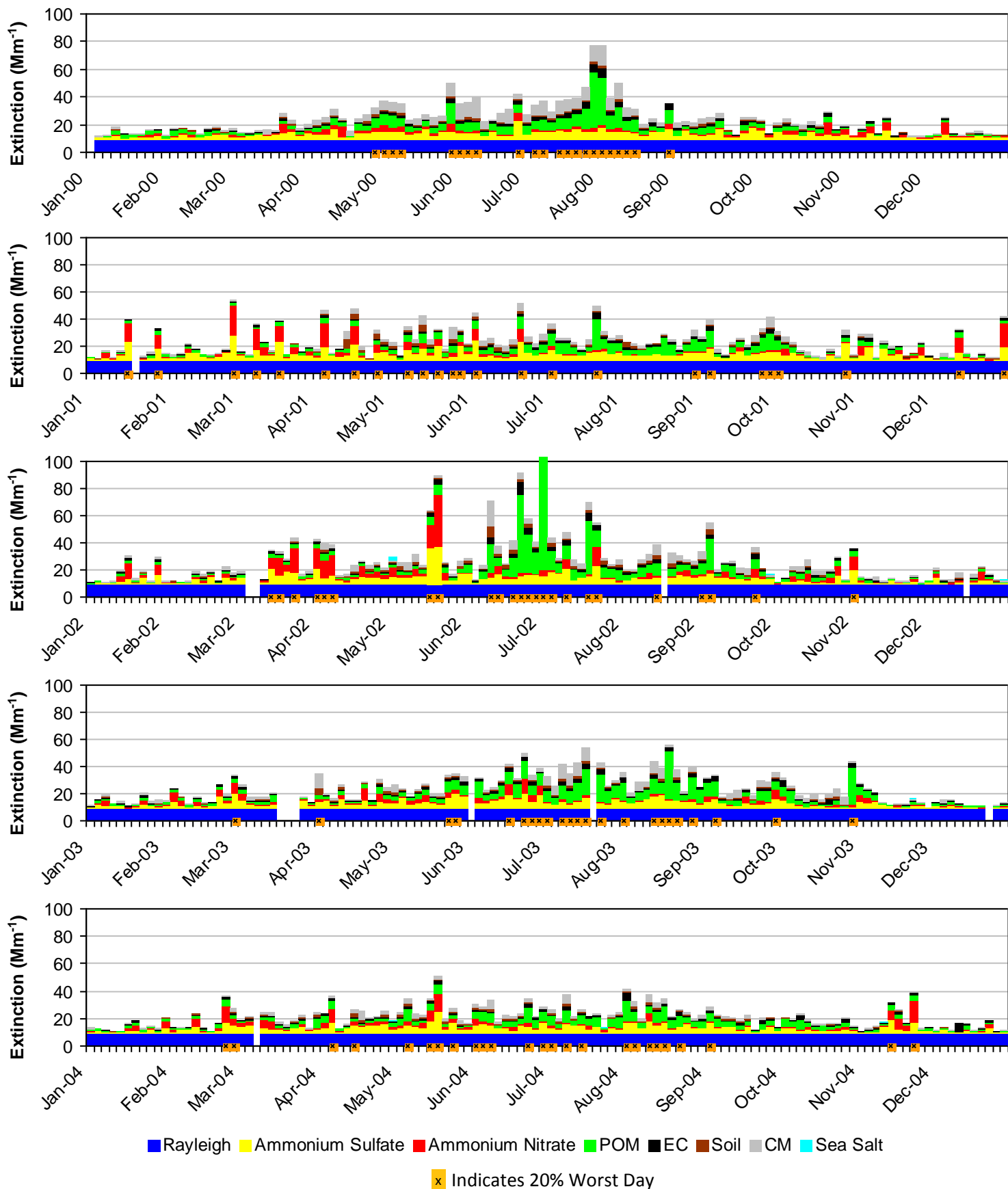
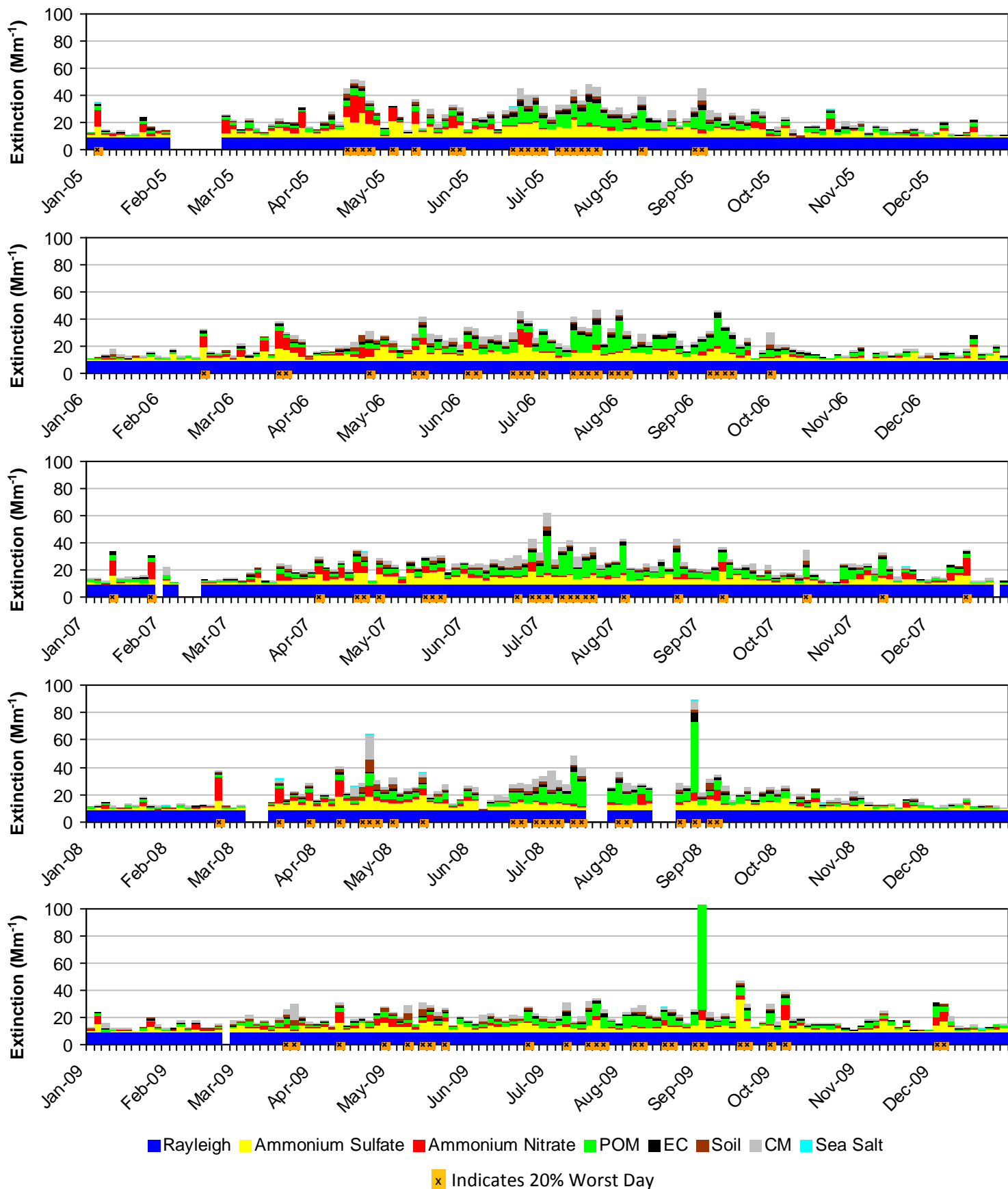


Figure D.4-8
 Rocky Mountain NP, CO (ROMO1 Site)
 2005-2009 Progress Period Extinction, All Sampled Days



D.5. WEMINUCHE WA, BLACK CANYON OF THE GUNNISON WA, AND LA GARITA WA (WEMII1)

The following tables and figures are presented in this section for the Weminuche WA, Black Canyon of the Gunnison WA, and La Garita WA represented by the WEMII1 IMPROVE Monitor:

- **Table D.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 D.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 D.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 D.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 D.5-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure D.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 D.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 D.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 D.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 D.5-1
Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 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 |
| Deciview (dv) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 3.2 | 3.3 | 2.9 | 3.0 | 2.6 | 2.9 | 2.3 | 2.2 | 2.1 | 1.8 | -0.2 | 0.0 | 3.1 | 2.4 | -0.7 | -23% |
| Worst 20% Days | --- | 9.5 | 11.2 | 11.3 | 9.3 | 10.0 | 9.2 | 10.3 | 10.8 | 10.0 | 9.5 | 0.0 | 0.5 | 10.3 | 10.0 | -0.3 | -3% |
| All Days | --- | 6.5 | 6.7 | 6.7 | 6.1 | 6.0 | 6.1 | 6.1 | 6.2 | 5.7 | 5.4 | -0.1 | 0.0 | 6.5 | 6.0 | -0.5 | -8% |
| Total Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 13.9 | 13.9 | 13.5 | 13.6 | 13.0 | 13.4 | 12.6 | 12.4 | 12.4 | 12.0 | -0.2 | 0.0 | 13.7 | 12.8 | -0.9 | -7% |
| Worst 20% Days | --- | 26.2 | 31.7 | 35.6 | 25.9 | 27.2 | 25.1 | 28.9 | 31.5 | 28.3 | 29.2 | 0.1 | 0.5 | 29.9 | 28.2 | -1.7 | -6% |
| All Days | --- | 19.6 | 20.6 | 21.3 | 18.9 | 18.9 | 19.0 | 19.3 | 19.9 | 18.7 | 18.5 | -0.1 | 0.2 | 20.1 | 19.2 | -0.9 | -5% |
| Ammonium Sulfate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 1.7 | 1.6 | 1.2 | 1.4 | 1.4 | 1.7 | 1.2 | 1.1 | 1.4 | 1.2 | -0.1 | 0.1 | 1.5 | 1.3 | -0.2 | -13% |
| Worst 20% Days | --- | 6.2 | 4.5 | 4.9 | 4.4 | 7.0 | 4.4 | 5.1 | 4.9 | 4.2 | 3.6 | 0.0 | 0.2 | 5.0 | 5.1 | 0.1 | 2% |
| All Days | --- | 3.9 | 3.0 | 2.9 | 3.0 | 3.7 | 3.2 | 3.0 | 3.1 | 2.9 | 2.6 | 0.0 | 0.3 | 3.2 | 3.2 | 0.0 | 0% |
| Ammonium Nitrate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.3 | 0.4 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.3 | 0.0 | 0.1 | 0.3 | 0.2 | -0.1 | -33% |
| Worst 20% Days | --- | 1.0 | 1.3 | 1.7 | 0.9 | 0.8 | 0.8 | 1.1 | 1.2 | 1.2 | 0.8 | 0.0 | 0.5 | 1.2 | 1.0 | -0.2 | -17% |
| All Days | --- | 0.7 | 0.9 | 0.8 | 0.6 | 0.6 | 0.6 | 0.7 | 0.6 | 0.6 | 0.5 | 0.0 | 0.1 | 0.8 | 0.6 | -0.2 | -25% |
| Particulate Organic Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.0 | 0.9 | 0.7 | 0.6 | 0.6 | -0.1 | 0.0 | 1.2 | 0.9 | -0.3 | -25% |
| Worst 20% Days | --- | 4.5 | 9.5 | 12.7 | 6.6 | 5.1 | 5.4 | 7.9 | 9.6 | 6.6 | 3.6 | 0.2 | 0.3 | 8.3 | 6.9 | -1.4 | -17% |
| All Days | --- | 2.6 | 3.8 | 4.7 | 3.2 | 2.7 | 2.8 | 3.3 | 3.7 | 2.8 | 2.1 | 0.0 | 0.5 | 3.6 | 3.1 | -0.5 | -14% |
| Elemental Carbon Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.8 | 0.7 | 0.8 | 0.9 | 0.7 | 0.8 | 0.5 | 0.5 | 0.3 | 0.4 | -0.1 | 0.0 | 0.8 | 0.5 | -0.3 | -38% |
| Worst 20% Days | --- | 2.0 | 1.9 | 2.2 | 2.0 | 2.1 | 1.8 | 2.0 | 1.8 | 1.5 | 0.9 | 0.0 | 0.1 | 2.0 | 1.8 | -0.2 | -10% |
| All Days | --- | 1.4 | 1.3 | 1.4 | 1.3 | 1.4 | 1.4 | 1.2 | 1.0 | 0.9 | 0.8 | -0.1 | 0.0 | 1.4 | 1.2 | -0.2 | -14% |
| Soil Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.2 | 0.1 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 | 0.2 | 0.0 | 0% |
| Worst 20% Days | --- | 1.2 | 1.5 | 1.4 | 0.8 | 0.9 | 1.1 | 0.9 | 1.5 | 2.1 | 3.6 | 0.0 | 0.4 | 1.3 | 1.3 | 0.0 | 0% |
| All Days | --- | 0.6 | 0.7 | 0.6 | 0.4 | 0.4 | 0.5 | 0.5 | 0.7 | 0.9 | 1.1 | 0.0 | 0.4 | 0.6 | 0.6 | 0.0 | 0% |
| Coarse Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.6 | 0.7 | 0.7 | 0.5 | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 | 0.4 | 0.0 | 0.4 | 0.7 | 0.6 | -0.1 | -14% |
| Worst 20% Days | --- | 2.1 | 4.1 | 3.6 | 2.2 | 2.2 | 2.7 | 2.8 | 3.6 | 3.6 | 7.7 | 0.1 | 0.2 | 3.0 | 3.0 | 0.0 | 0% |
| All Days | --- | 1.3 | 1.9 | 1.8 | 1.3 | 1.2 | 1.5 | 1.5 | 1.7 | 1.6 | 2.4 | 0.0 | 0.5 | 1.6 | 1.5 | -0.1 | -6% |
| Sea Salt Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | 0% |
| Worst 20% Days | --- | 0.3 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.0 | 0.2 | 0.1 | 0.0 | -0.1 | -100% |
| All Days | --- | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 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 D.5-1
Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 Site)
Annual and 5-Year Period Averages
20% Most Impaired Visibility Days

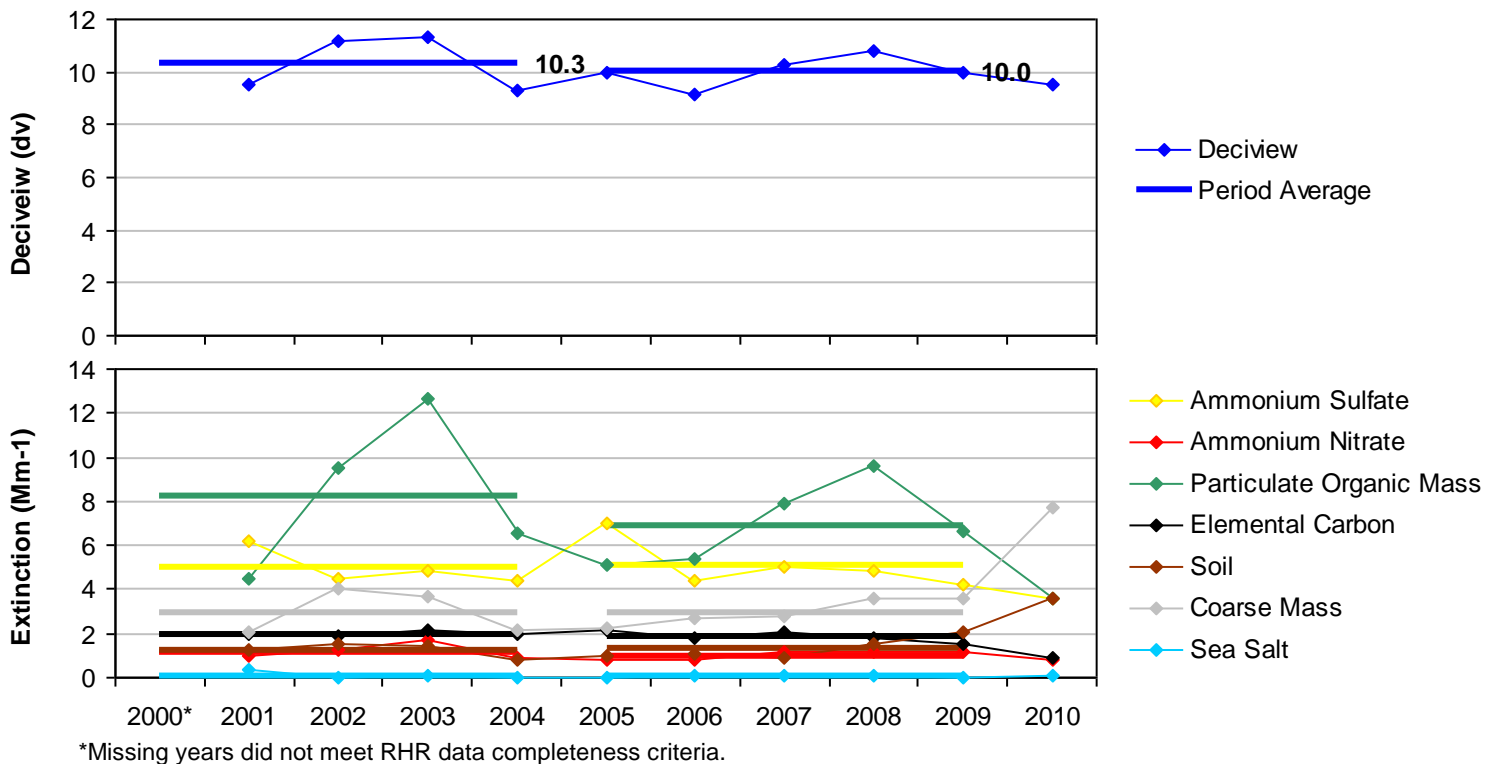


Figure D.5-2
Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 Site)
Annual and 5-Year Period Averages
20% Least Impaired Visibility Days

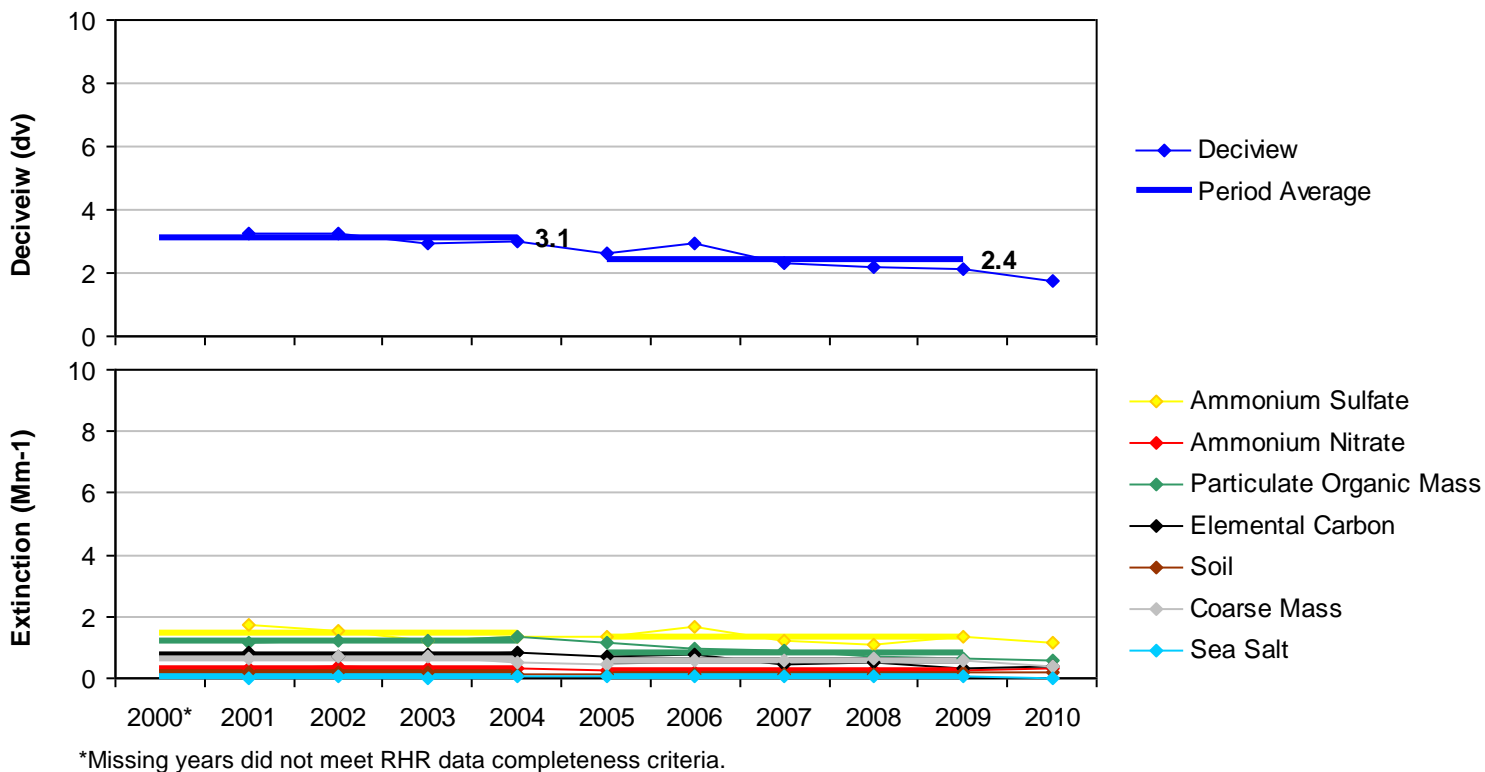


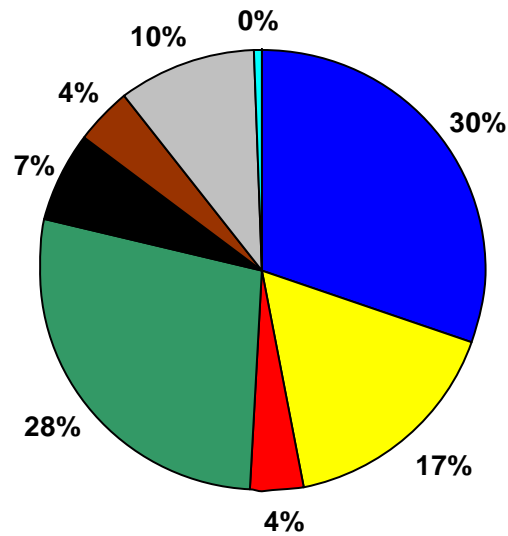
Figure D.5-3

Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 Site)

20% Most Impaired Visibility Days

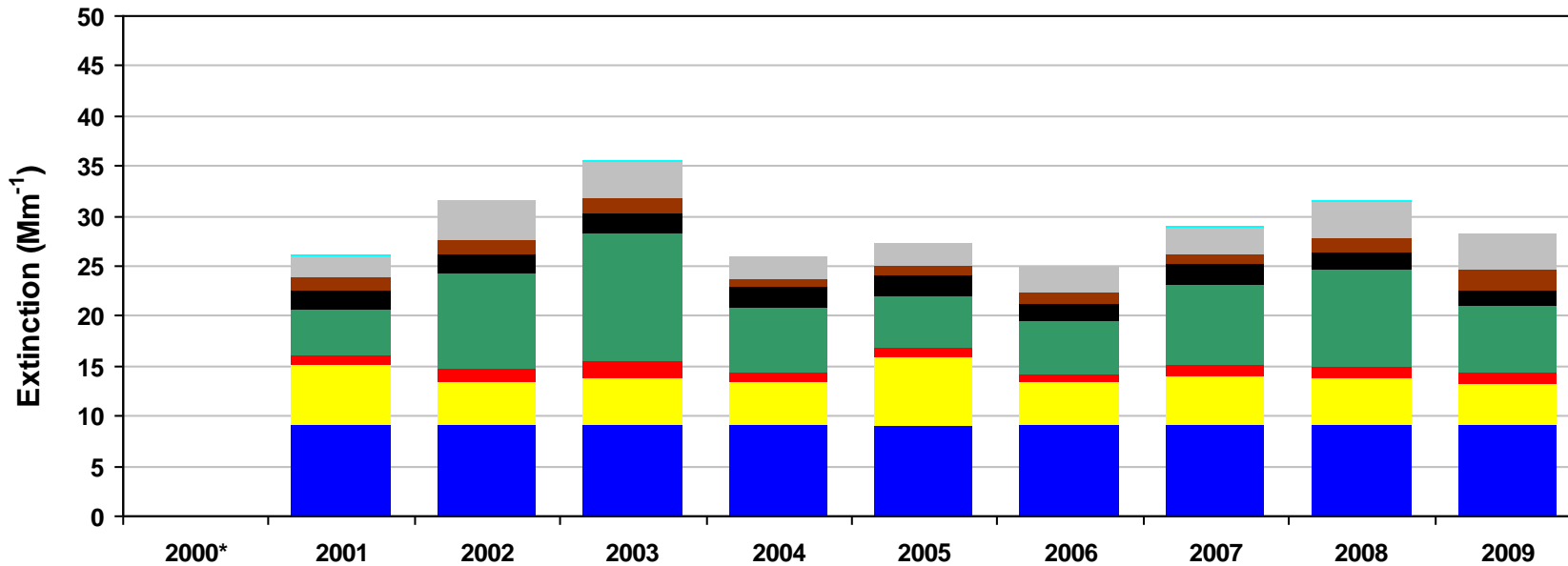
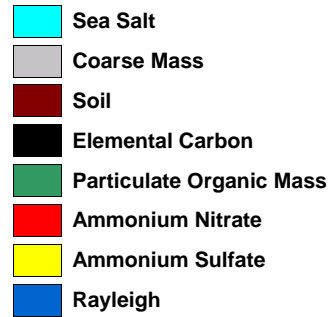
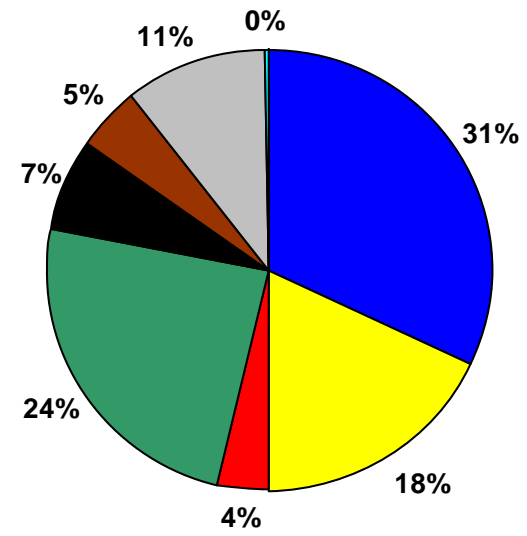
2000-2004 Baseline Average

10.3 dv (9.3 - 11.3 dv)



2005-2009 Progress Period Average

10 dv (9.2 - 10.8 dv)



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

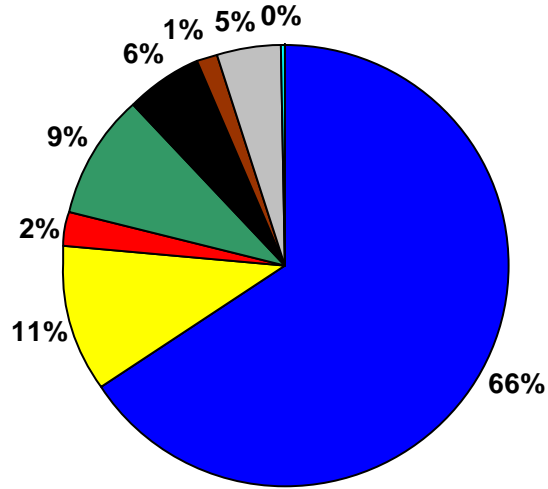
Figure D.5-4

Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 Site)

20% Least Impaired Visibility Days

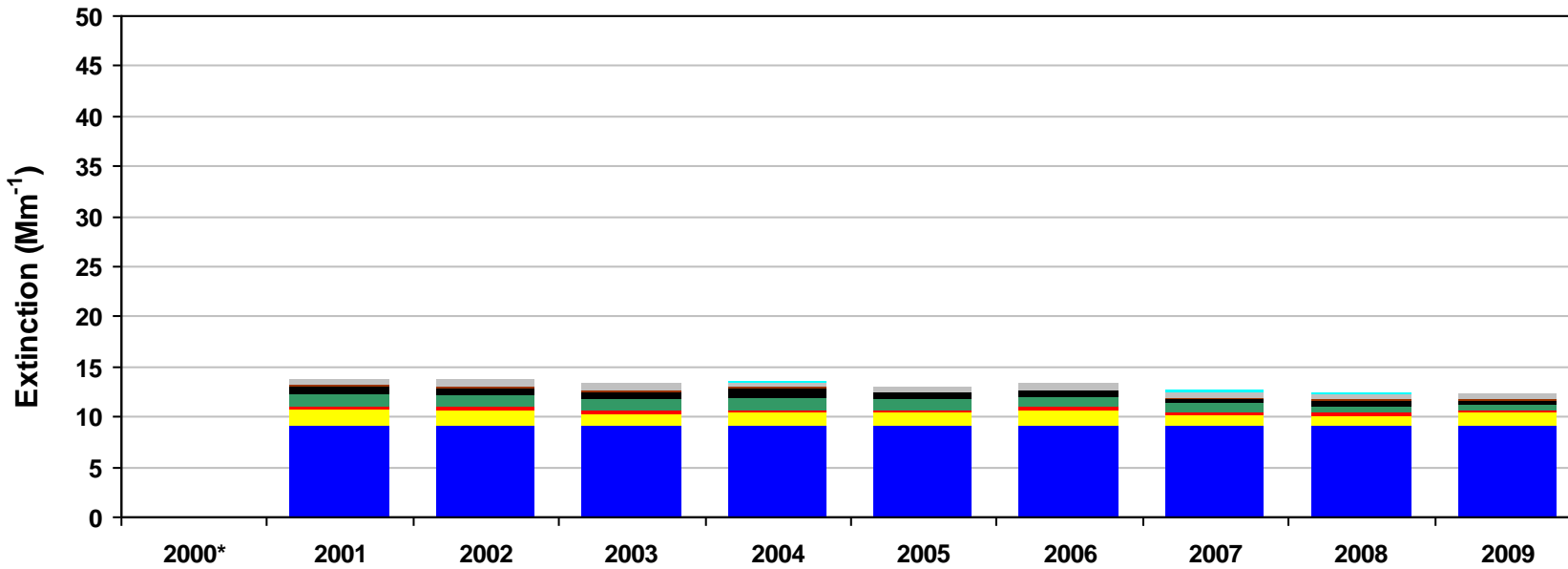
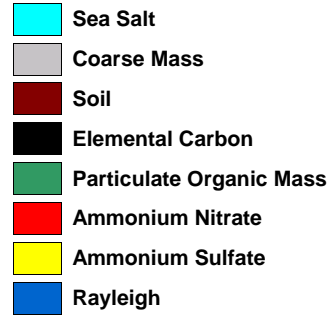
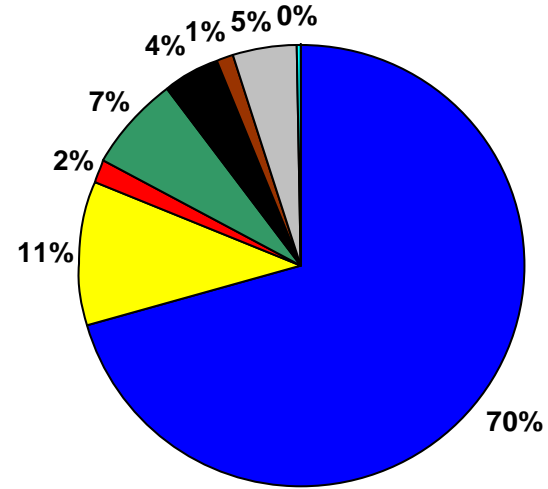
2000-2004 Baseline Average

3.1 dv (2.9 - 3.3 dv)



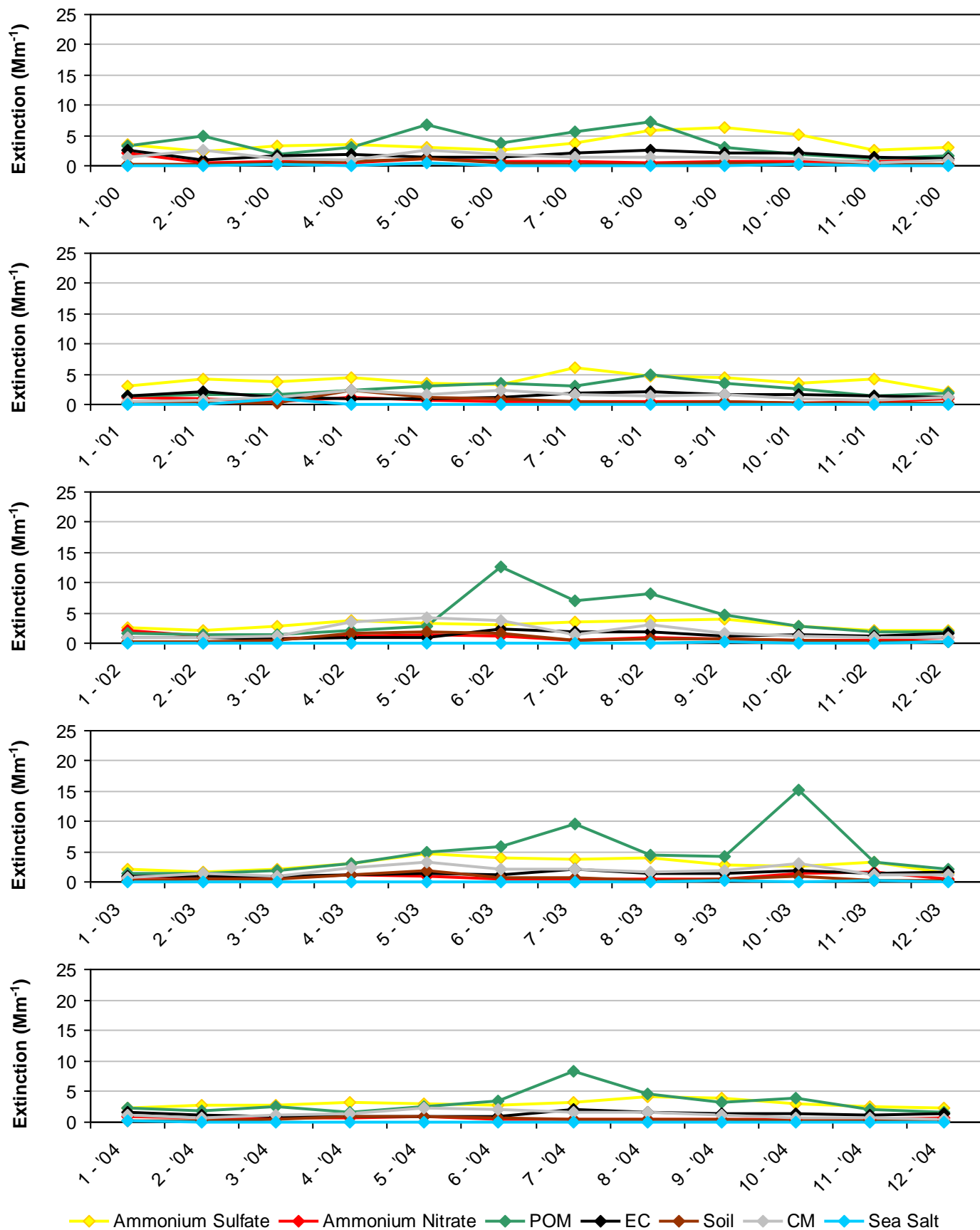
2005-2009 Progress Period Average

2.4 dv (2.1 - 2.9 dv)



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

Figure D.5-5
Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 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 D.5-6
Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 Site)
2005-2009 Monthly Average Aerosol Extinction, All Monitored Days

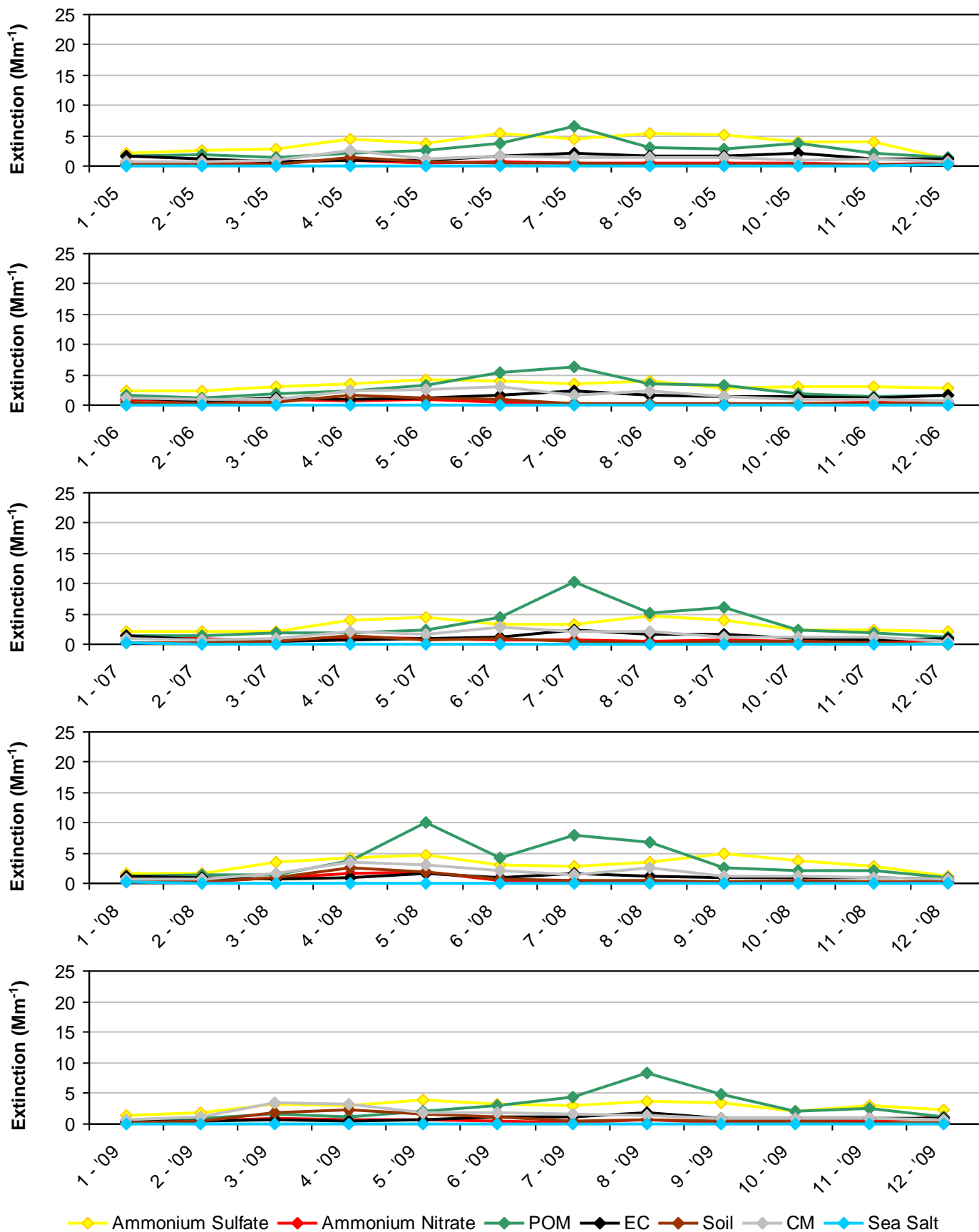
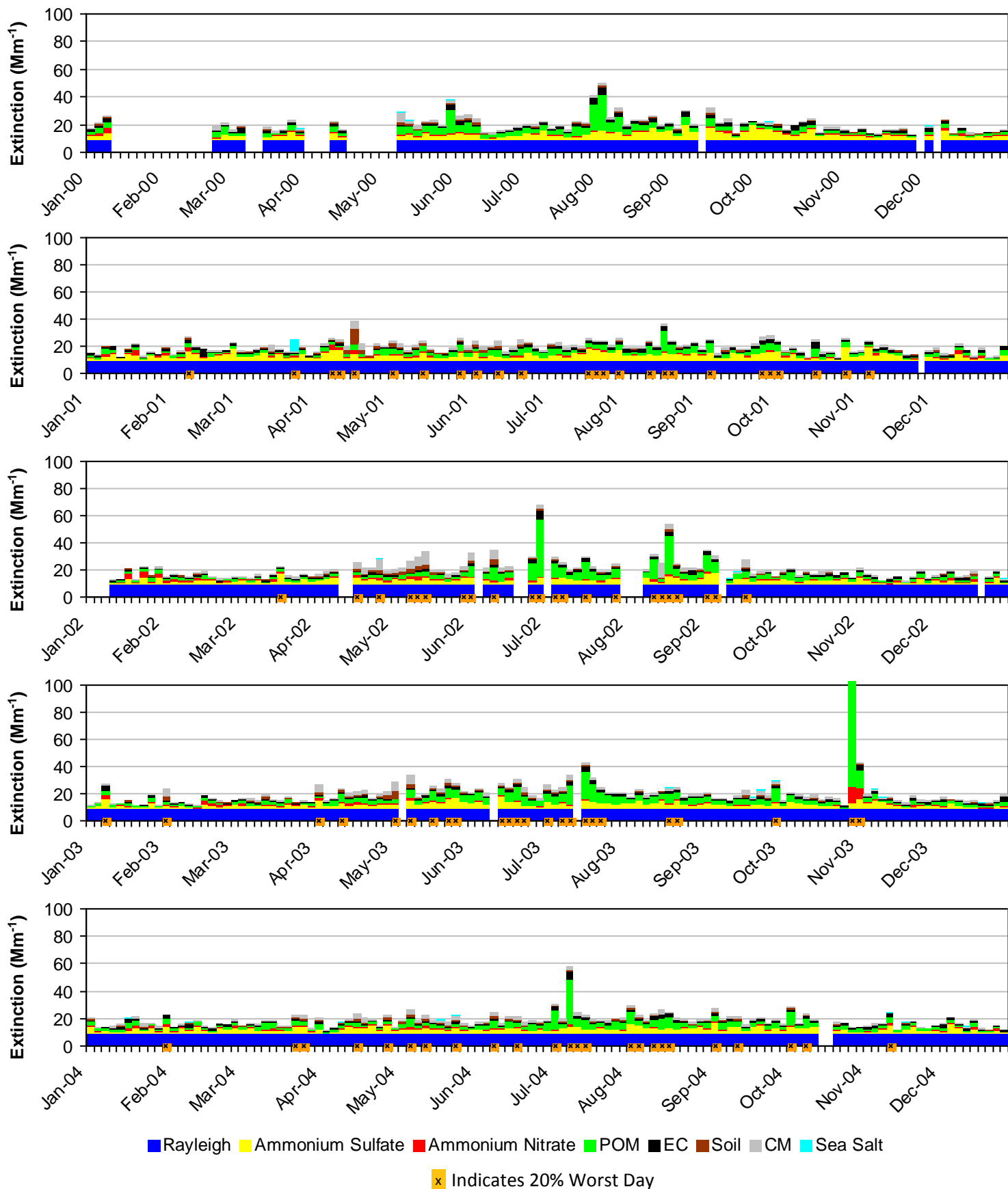
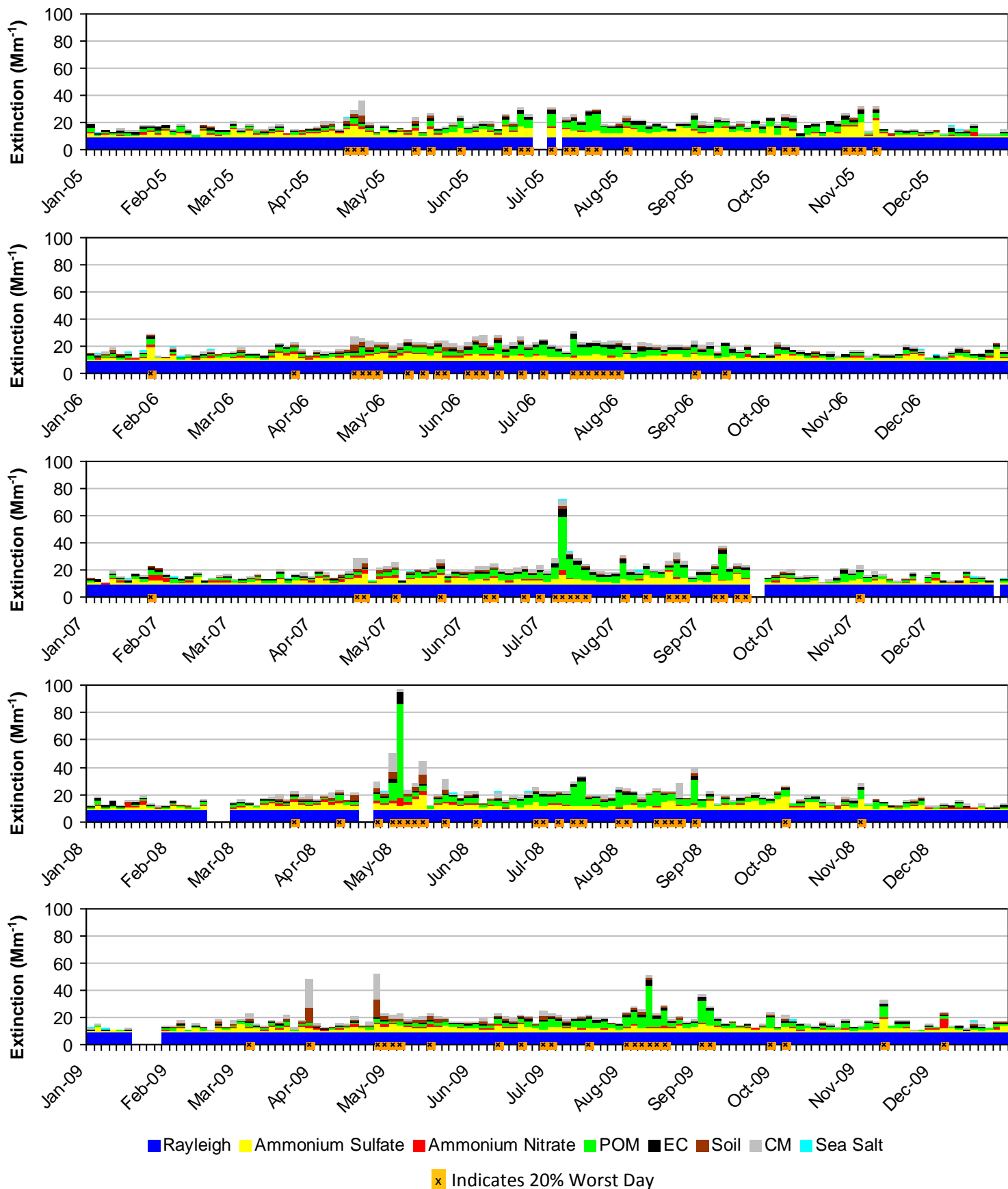


Figure D.5-7
Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 Site)
2000-2004 Progress Period Extinction, All Sampled Days



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

Figure D.5-8
Weminuche WA, Black Canyon of the Gunnison WA and La Garita WA, CO (WEMI1 Site)
2005-2009 Progress Period Extinction, All Sampled Days



D.6. EAGLES NEST WA, FLAT TOPS WA, MAROON BELLS-SNOWMASS WA, AND WEST ELK WA (WHRI1)

The following tables and figures are presented in this section for the Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA, and West Elk WA represented by the WHRI1 IMPROVE Monitor:

- **Table D.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 D.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 D.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 D.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 D.6-4: 20% Least Impaired Visibility Days:** Pie charts depicting period averages and stacked bar charts depicting annual averages by component are presented.
- **Figure D.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 D.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 D.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 D.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 D.6-1
Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHRI1 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 |
| Deciview (dv) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 1.1 | 0.6 | 0.6 | 0.6 | -0.1 | 0.5 | 0.3 | 0.1 | 0.1 | 0.0 | -0.1 | 0.0 | 0.7 | 0.2 | -0.5 | -71% |
| Worst 20% Days | --- | 9.4 | 11.8 | 9.6 | 7.6 | 9.1 | 8.8 | 9.0 | 9.6 | 8.3 | 7.8 | -0.1 | 0.1 | 9.6 | 8.9 | -0.7 | -7% |
| All Days | --- | 5.0 | 5.6 | 4.7 | 4.1 | 4.1 | 4.6 | 4.5 | 4.5 | 4.1 | 3.7 | -0.1 | 0.0 | 4.8 | 4.4 | -0.4 | -8% |
| Total Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 11.2 | 10.7 | 10.6 | 10.6 | 10.0 | 10.6 | 10.4 | 10.1 | 10.2 | 10.0 | -0.1 | 0.0 | 10.8 | 10.2 | -0.6 | -6% |
| Worst 20% Days | --- | 26.1 | 36.4 | 26.6 | 21.7 | 25.1 | 24.3 | 25.2 | 26.9 | 23.7 | 22.2 | -0.3 | 0.2 | 27.7 | 25.0 | -2.7 | -10% |
| All Days | --- | 17.2 | 19.6 | 17.0 | 15.6 | 16.0 | 16.6 | 16.5 | 16.8 | 15.8 | 15.1 | -0.1 | 0.1 | 17.4 | 16.3 | -1.1 | -6% |
| Ammonium Sulfate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 1.3 | 0.9 | 1.0 | 1.1 | 0.9 | 1.3 | 0.9 | 1.0 | 1.0 | 0.9 | 0.0 | 0.5 | 1.1 | 1.0 | -0.1 | -9% |
| Worst 20% Days | --- | 6.1 | 4.3 | 4.6 | 4.0 | 6.0 | 5.1 | 4.9 | 5.1 | 4.4 | 3.4 | 0.0 | 0.4 | 4.8 | 5.1 | 0.3 | 6% |
| All Days | --- | 3.4 | 2.8 | 2.8 | 2.7 | 3.2 | 3.2 | 2.9 | 3.0 | 2.8 | 2.5 | 0.0 | 0.3 | 2.9 | 3.0 | 0.1 | 3% |
| Ammonium Nitrate Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.4 | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.0 | 0.0 | 0.3 | 0.2 | -0.1 | -33% |
| Worst 20% Days | --- | 1.5 | 1.5 | 1.1 | 1.1 | 1.0 | 1.2 | 1.5 | 1.7 | 1.3 | 1.0 | 0.0 | 0.5 | 1.3 | 1.3 | 0.0 | 0% |
| All Days | --- | 0.8 | 1.0 | 0.8 | 0.8 | 0.7 | 0.7 | 0.9 | 0.9 | 0.7 | 0.7 | 0.0 | 0.2 | 0.8 | 0.8 | 0.0 | 0% |
| Particulate Organic Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.7 | 0.7 | 0.5 | 0.5 | 0.3 | 0.4 | 0.4 | 0.3 | 0.1 | 0.2 | -0.1 | 0.0 | 0.6 | 0.3 | -0.3 | -50% |
| Worst 20% Days | --- | 4.4 | 15.2 | 7.2 | 4.5 | 5.2 | 5.1 | 6.4 | 6.2 | 5.0 | 3.3 | 0.0 | 0.5 | 7.8 | 5.6 | -2.2 | -28% |
| All Days | --- | 2.1 | 4.7 | 2.7 | 2.0 | 1.9 | 2.1 | 2.4 | 2.3 | 1.8 | 1.4 | -0.1 | 0.1 | 2.9 | 2.1 | -0.8 | -28% |
| Elemental Carbon Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.4 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.0 | 0.0 | 0.5 | 0.3 | -0.2 | -40% |
| Worst 20% Days | --- | 1.6 | 2.5 | 1.5 | 1.4 | 1.8 | 1.5 | 1.4 | 1.2 | 1.2 | 1.6 | -0.1 | 0.0 | 1.8 | 1.4 | -0.4 | -22% |
| All Days | --- | 0.9 | 1.0 | 0.9 | 0.8 | 0.9 | 0.9 | 0.8 | 0.6 | 0.6 | 0.7 | 0.0 | 0.0 | 0.9 | 0.8 | -0.1 | -11% |
| Soil Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.3 | 0.1 | 0.1 | 0.0 | 0% |
| Worst 20% Days | --- | 1.6 | 1.3 | 0.9 | 0.9 | 1.0 | 1.1 | 1.0 | 1.6 | 1.6 | 2.0 | 0.0 | 0.3 | 1.2 | 1.3 | 0.1 | 8% |
| All Days | --- | 0.6 | 0.6 | 0.5 | 0.4 | 0.4 | 0.6 | 0.5 | 0.7 | 0.7 | 0.8 | 0.0 | 0.3 | 0.5 | 0.6 | 0.1 | 20% |
| Coarse Mass Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| Best 20% Days | --- | 0.3 | 0.2 | 0.3 | 0.2 | 0.2 | 0.2 | 0.3 | 0.2 | 0.4 | 0.2 | 0.0 | 0.5 | 0.2 | 0.3 | 0.1 | 50% |
| Worst 20% Days | --- | 2.8 | 3.5 | 3.1 | 1.8 | 2.1 | 2.3 | 1.9 | 2.9 | 2.2 | 2.8 | -0.1 | 0.2 | 2.8 | 2.3 | -0.5 | -18% |
| All Days | --- | 1.4 | 1.5 | 1.3 | 0.9 | 0.9 | 1.1 | 1.0 | 1.2 | 1.1 | 1.1 | 0.0 | 0.2 | 1.3 | 1.1 | -0.2 | -15% |
| Sea Salt Extinction (Mm-1) | | | | | | | | | | | | | | | | | |
| 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 | 0.2 | 0.0 | 0.0 | 0.0 | 0% |
| Worst 20% Days | --- | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 | 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 | 0.1 | 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 D.6-1

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHR11 Site)

Annual and 5-Year Period Averages

20% Most Impaired Visibility Days

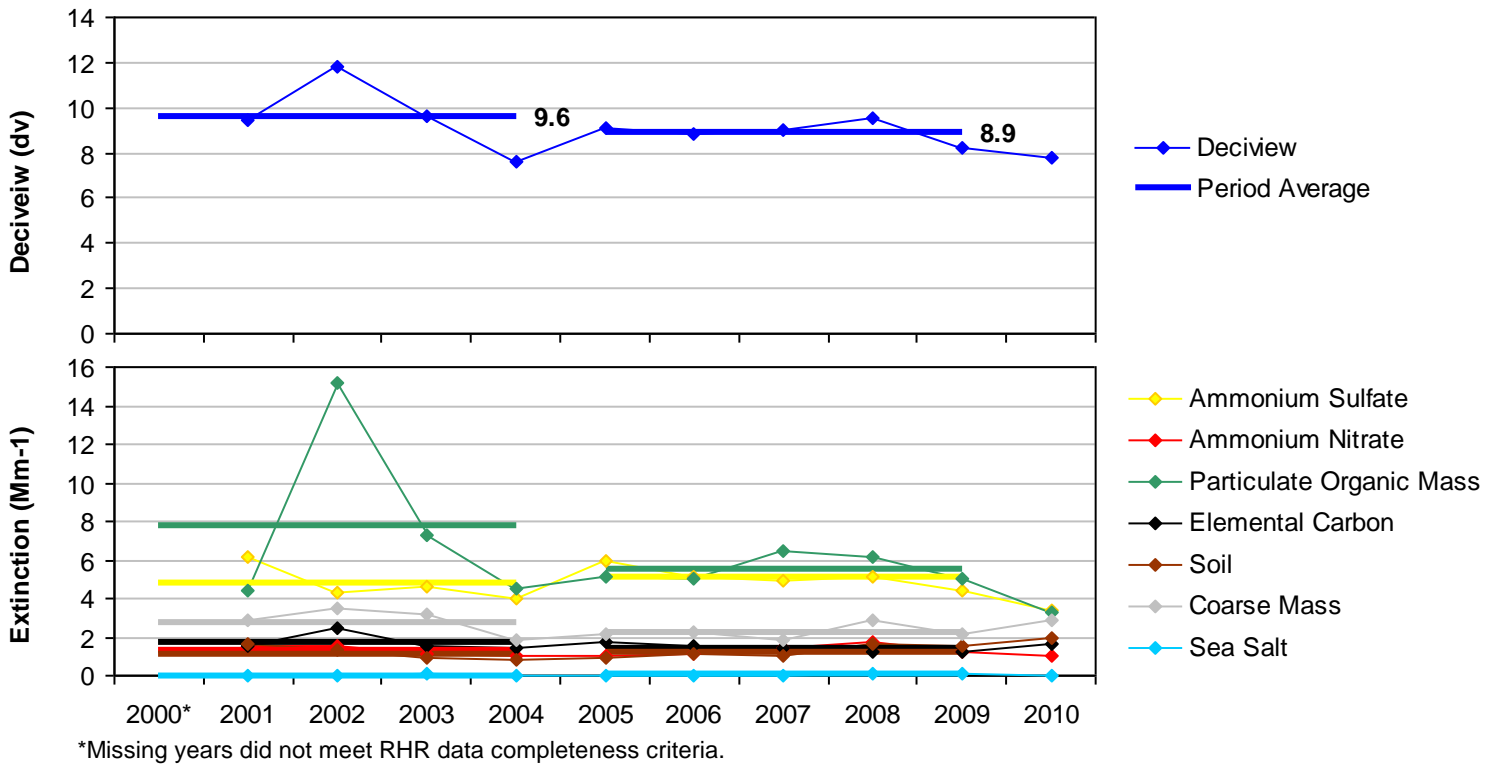


Figure D.6-2

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHR11 Site)

Annual and 5-Year Period Averages

20% Least Impaired Visibility Days

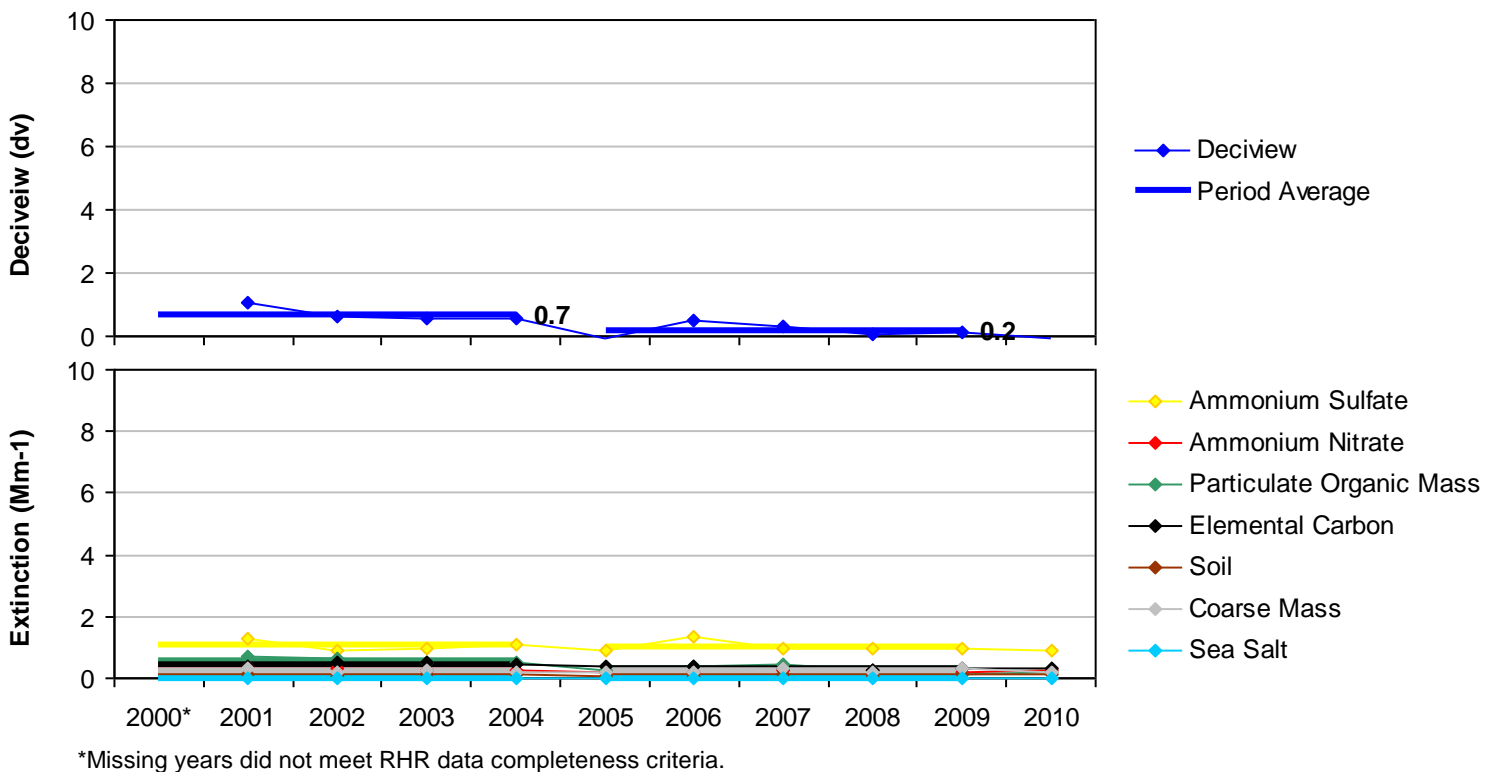
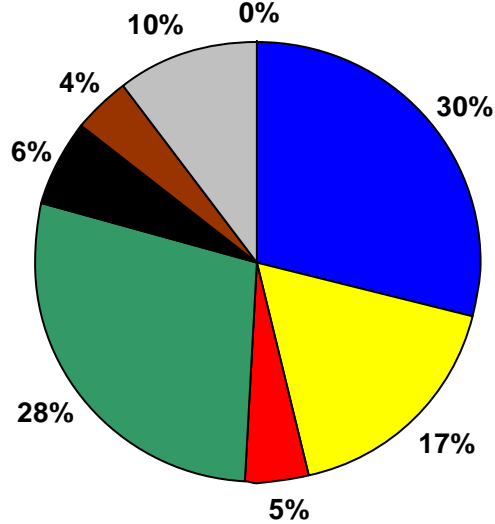


Figure D.6-3

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHRI1 Site)
20% Most Impaired Visibility Days

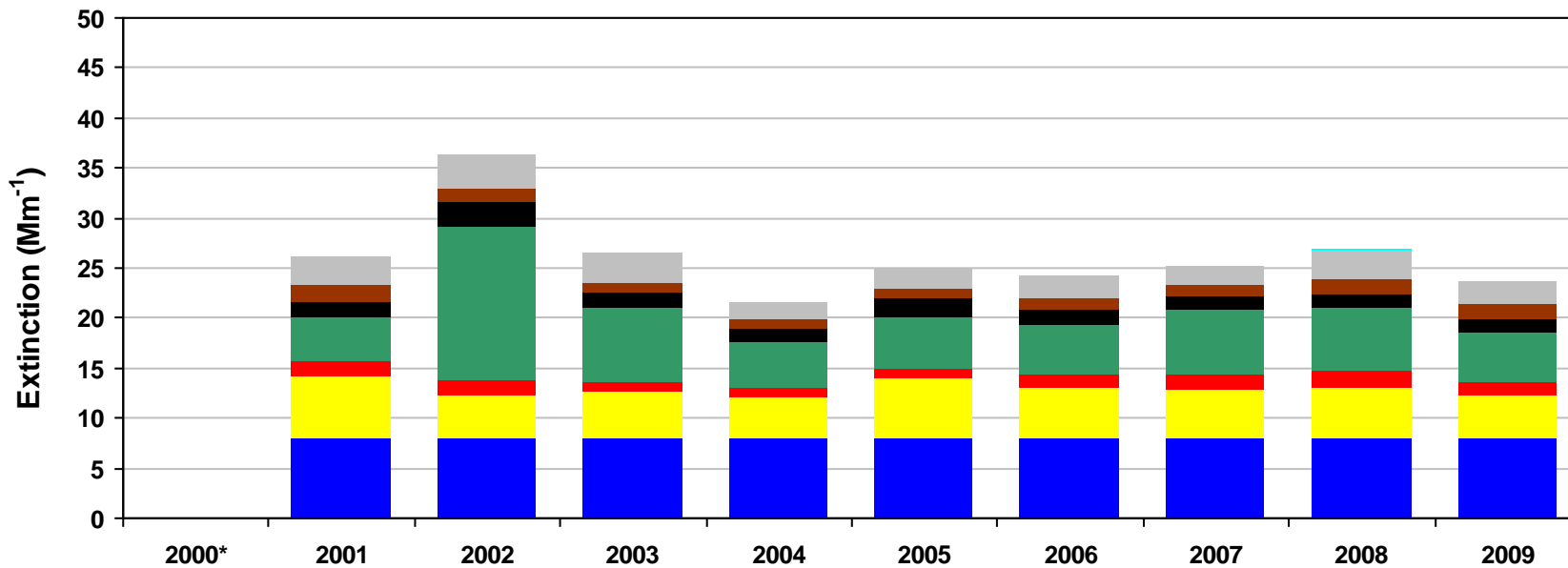
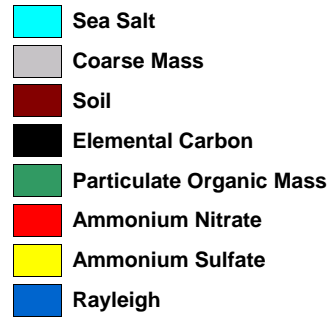
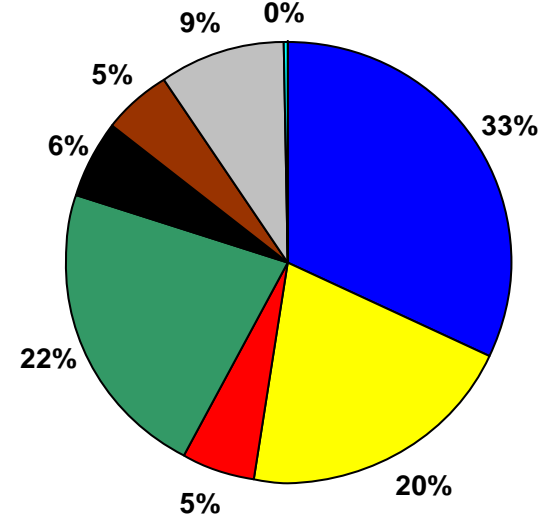
2000-2004 Baseline Average

9.6 dv (7.6 - 11.8 dv)



2005-2009 Progress Period Average

8.9 dv (8.3 - 9.6 dv)

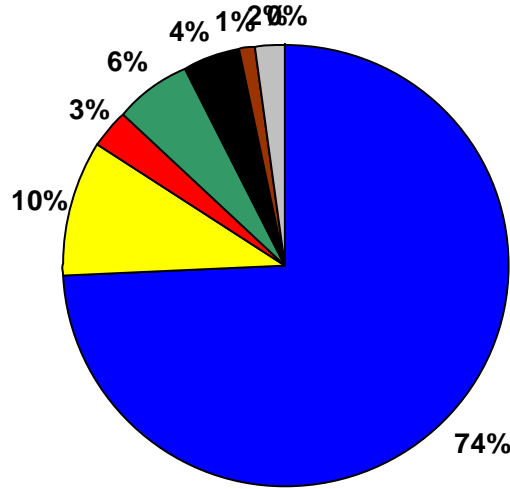


*Missing years did not meet RHR data completeness criteria. Only complete years are included in 5-year average pie charts.

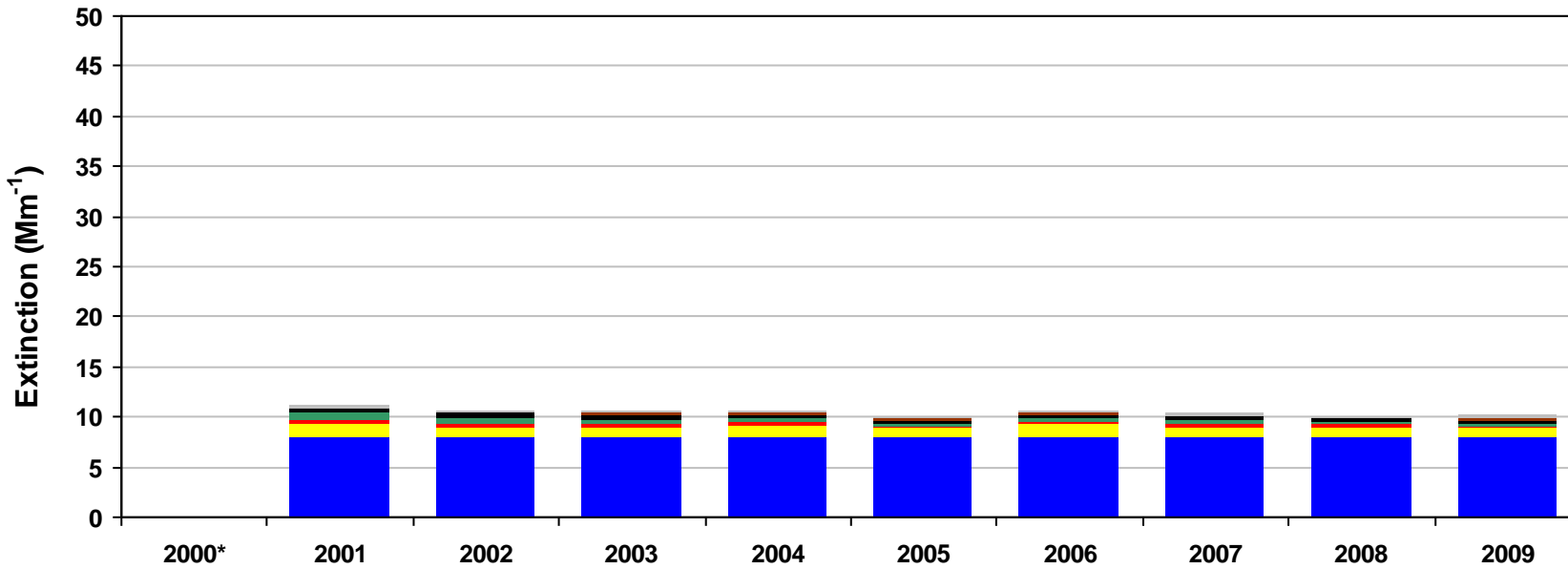
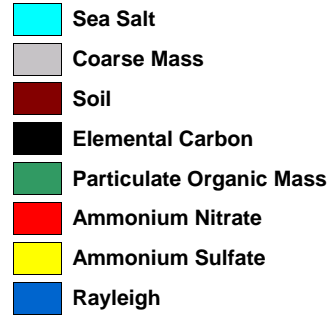
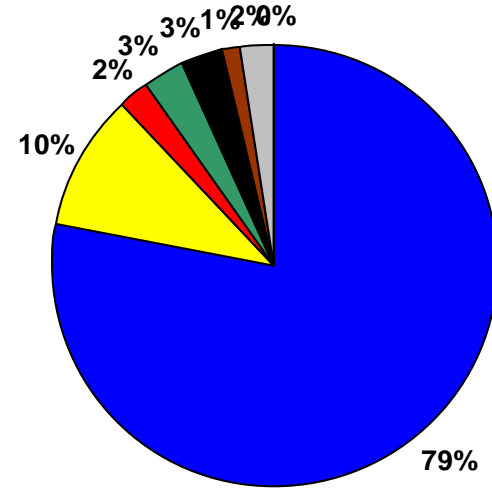
Figure D.6-4

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHRI1 Site)
20% Least Impaired Visibility Days

2000-2004 Baseline Average
0.7 dv (0.6 - 1.1 dv)



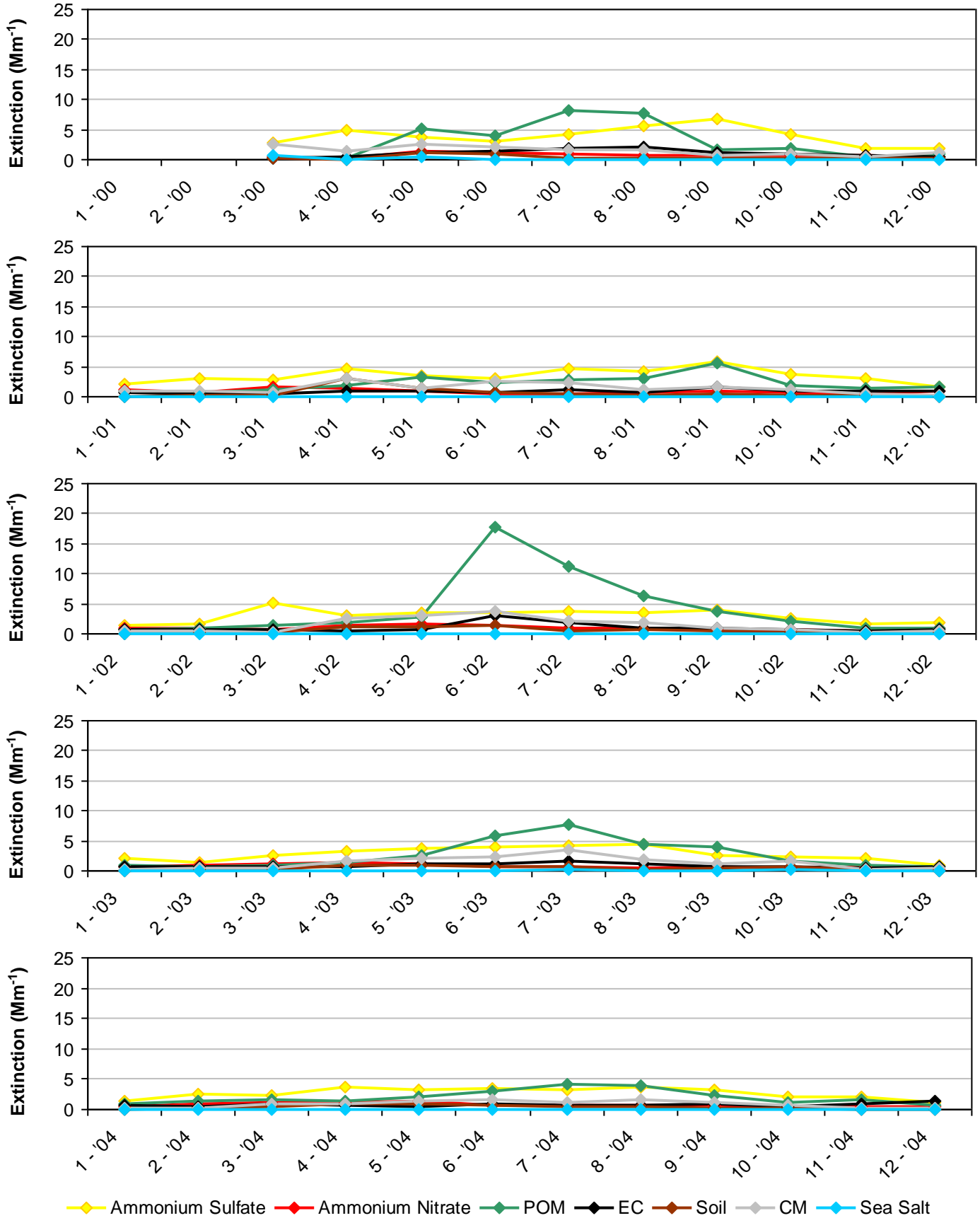
2005-2009 Progress Period Average
0.2 dv (-0.1 - 0.5 dv)



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

Figure D.6-5

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHR11 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 D.6-6

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHR11 Site)
2005-2009 Monthly Average Aerosol Extinction, All Monitored Days

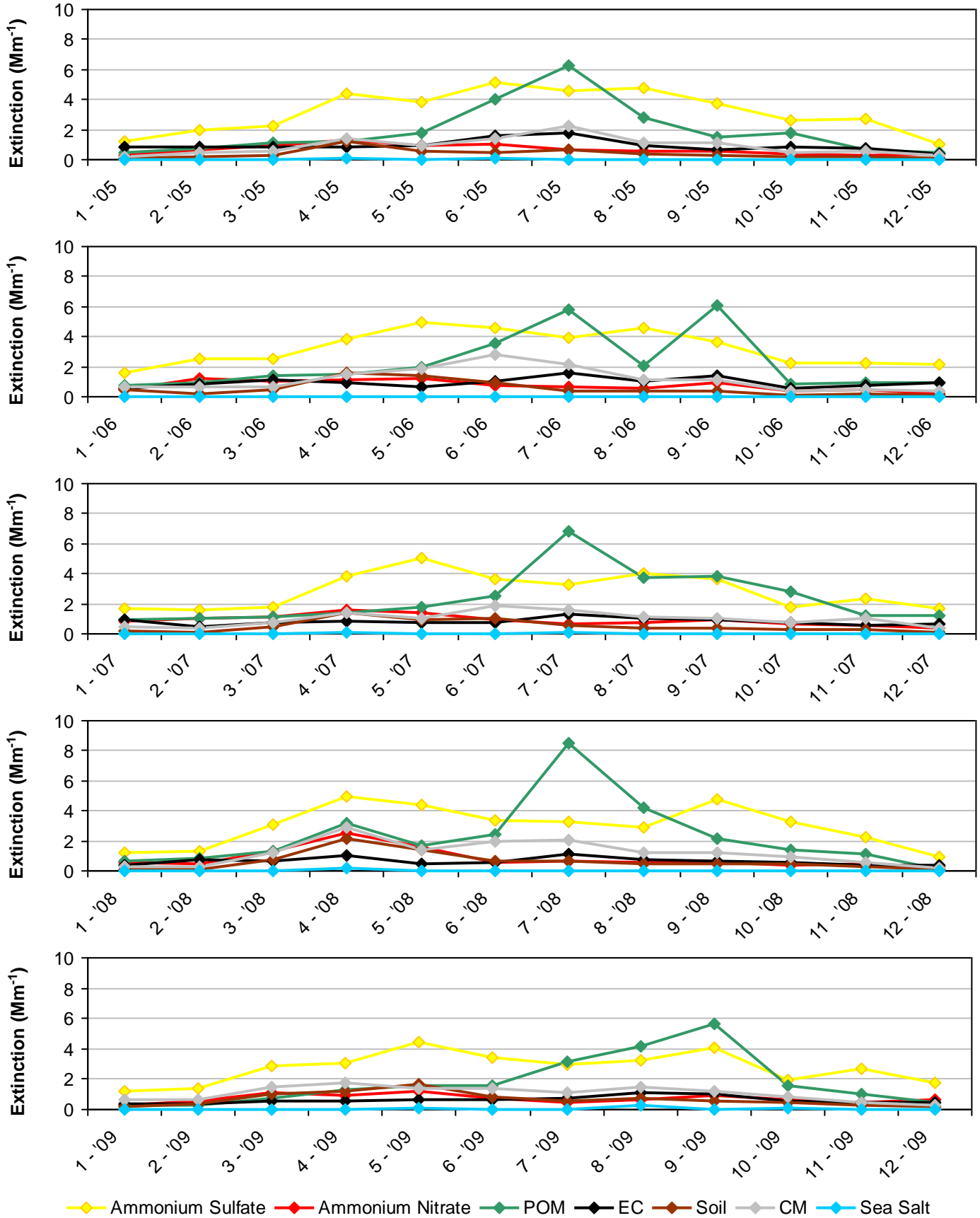
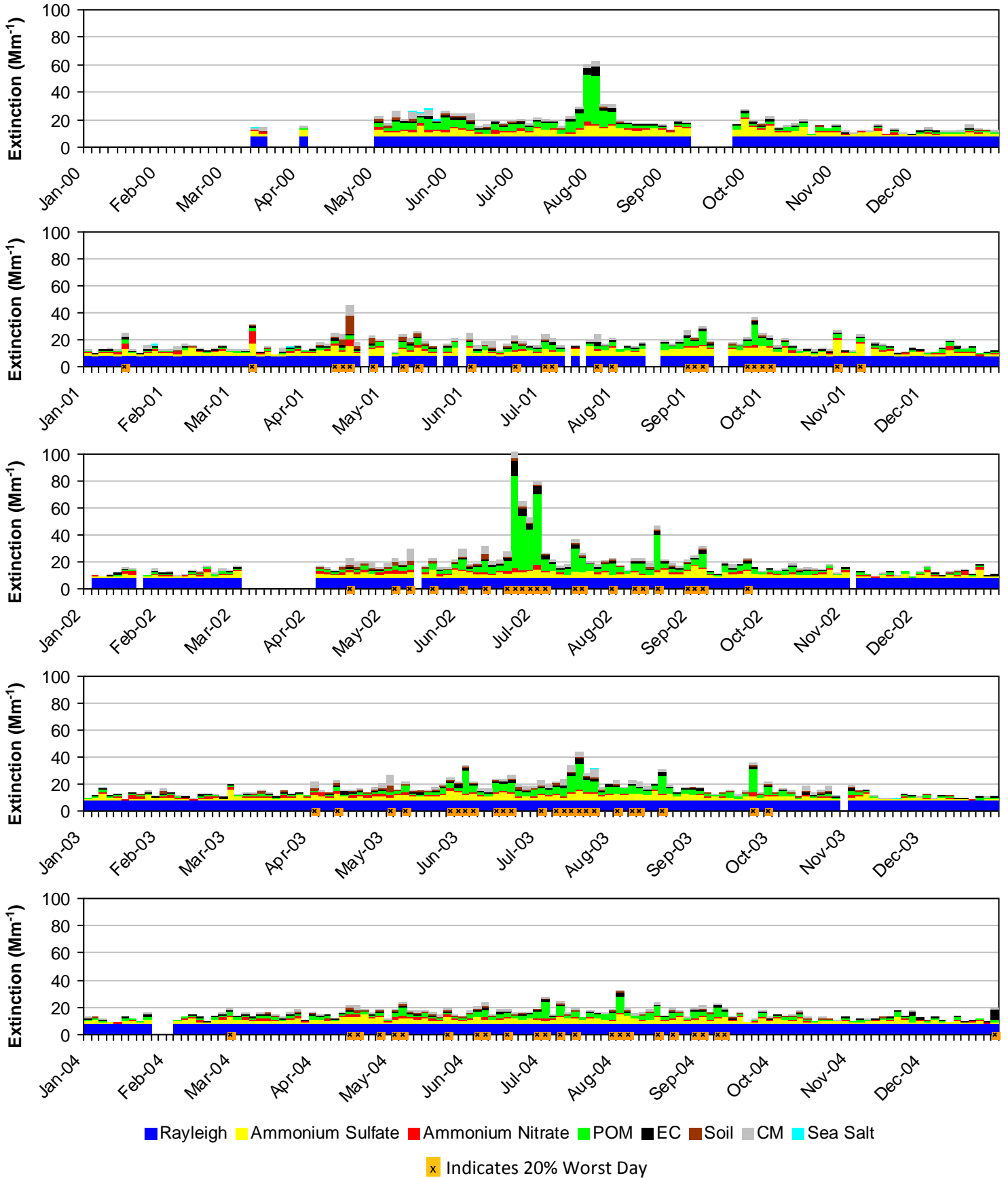


Figure D.6-7

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHR11 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 D.6-8

Eagles Nest WA, Flat Tops WA, Maroon Bells-Snowmass WA and West Elk WA, CO (WHR11 Site)
2005-2009 Progress Period Extinction, All Sampled Days

