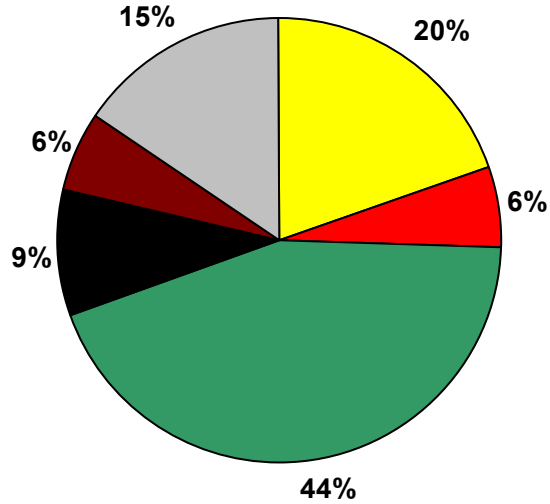


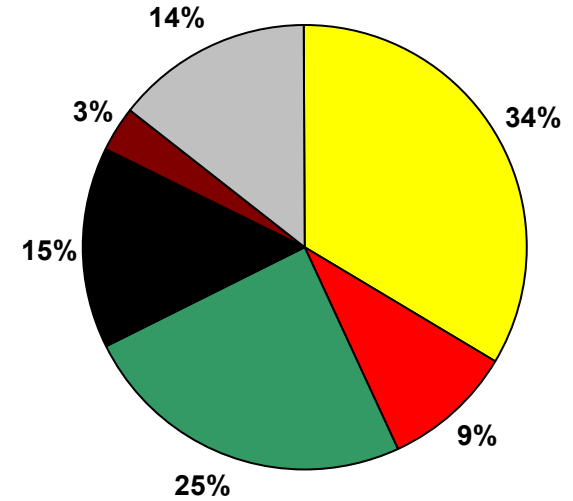
**MONITORING DATA**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
WEMI1 Monitoring Data (every third day)**

**20% Worst Visibility Days**  
Aerosol Extinction\* = 27 Mm-1 (16 to 102 Mm-1)

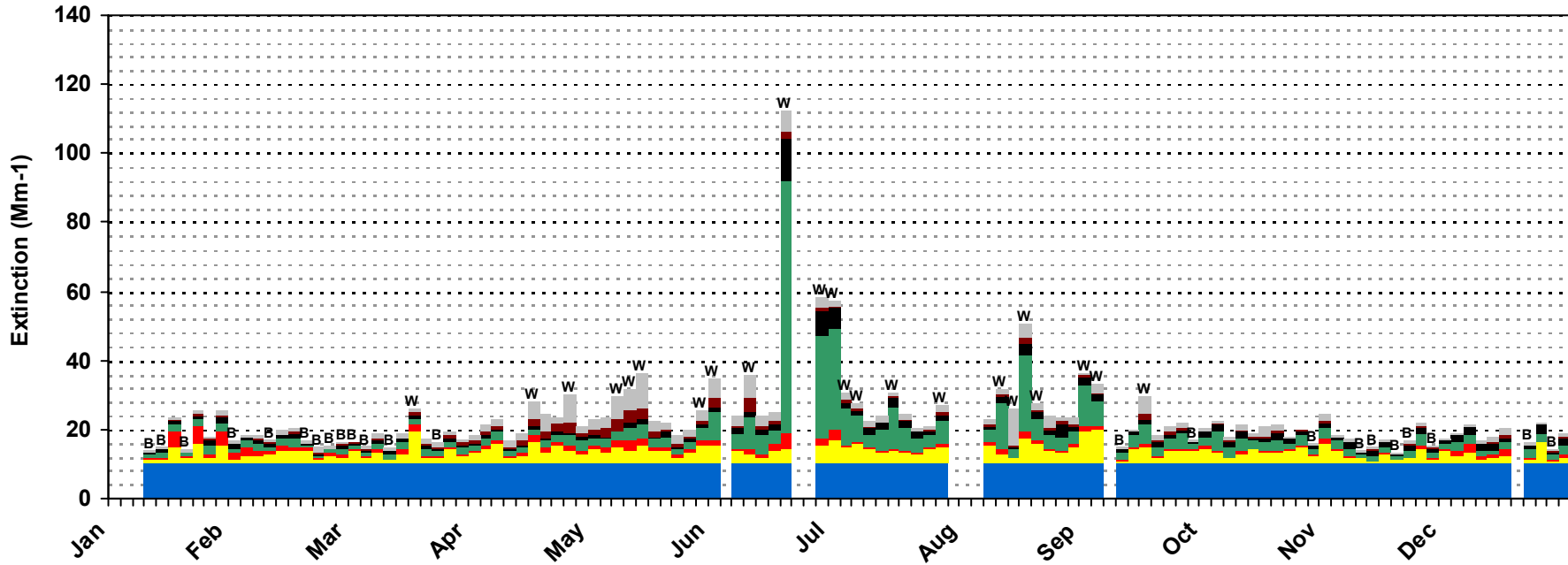


**20% Best Visibility Days**  
Aerosol Extinction\* = 5 Mm-1 (3 to 7 Mm-1)



- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh

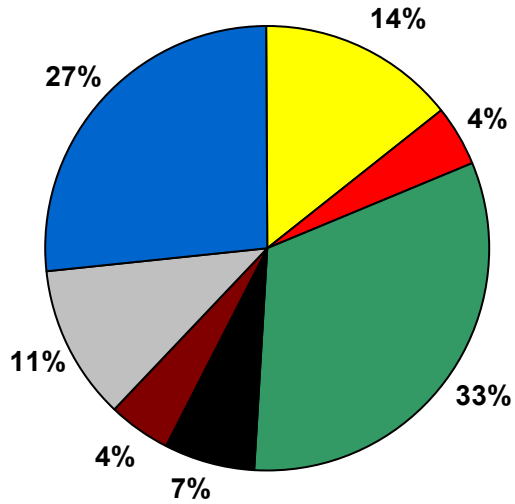
\*Excludes Rayleigh Extinction



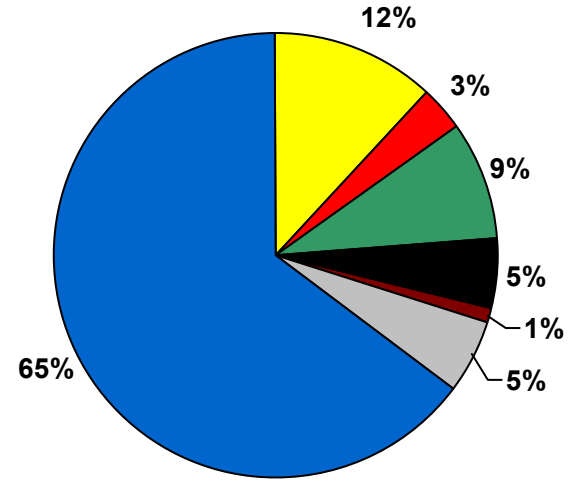
**MONITORING DATA**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
WEMI1 Monitoring Data (every third day)**

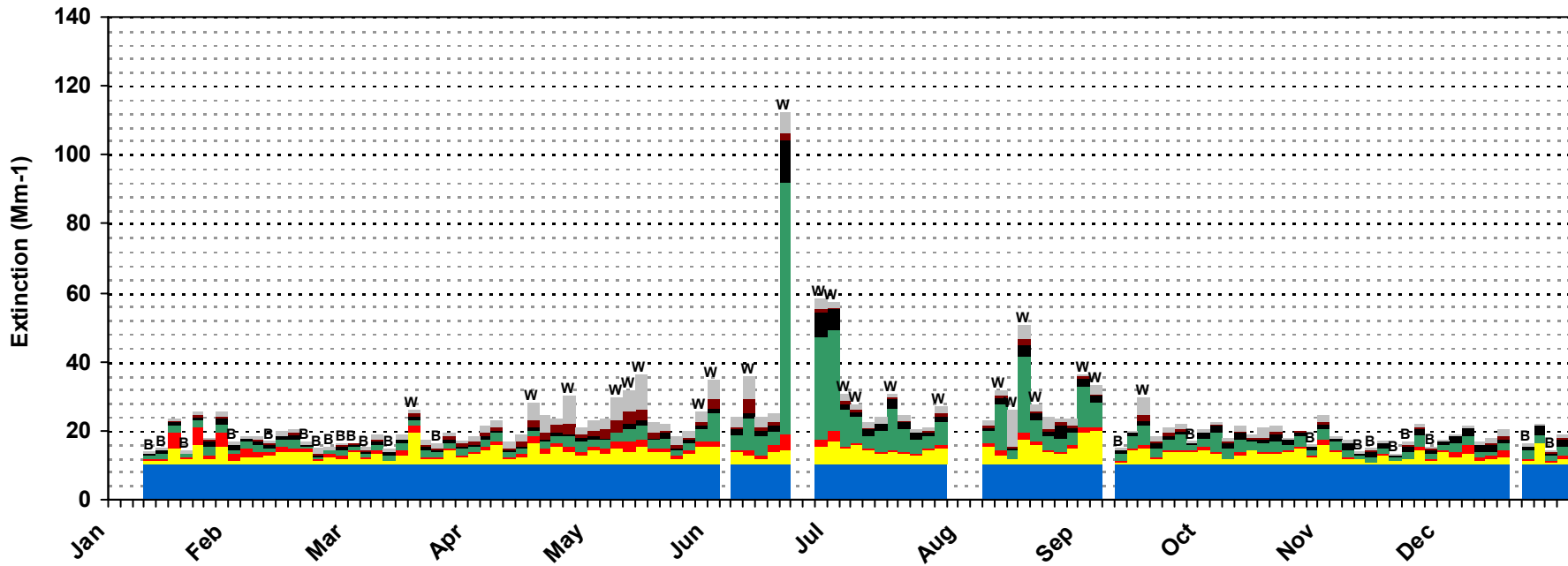
**20% Worst Visibility Days**  
Total Extinction = 37 Mm-1 (26 to 112 Mm-1)



**20% Best Visibility Days**  
Total Extinction = 15 Mm-1 (13 to 17 Mm-1)



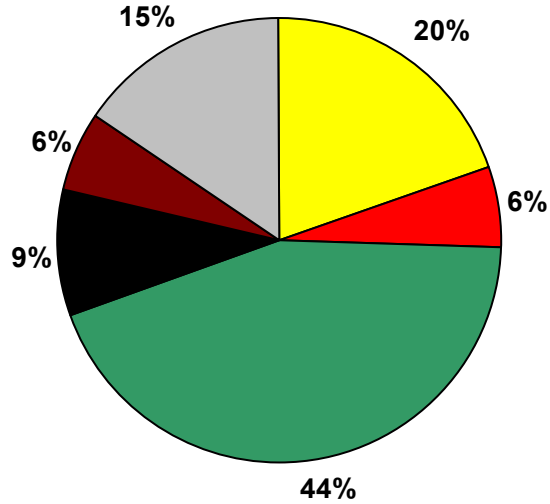
- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh



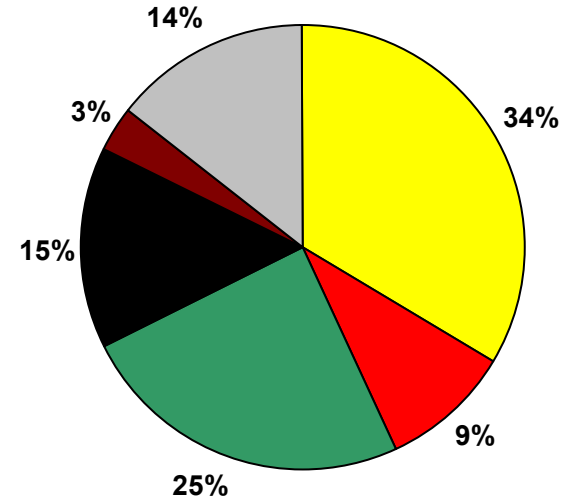
**MONITORING DATA**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
WEMI1 Monitoring Data (every third day)**

**20% Worst Visibility Days**  
Aerosol Extinction\* = 27 Mm-1 (16 to 102 Mm-1)

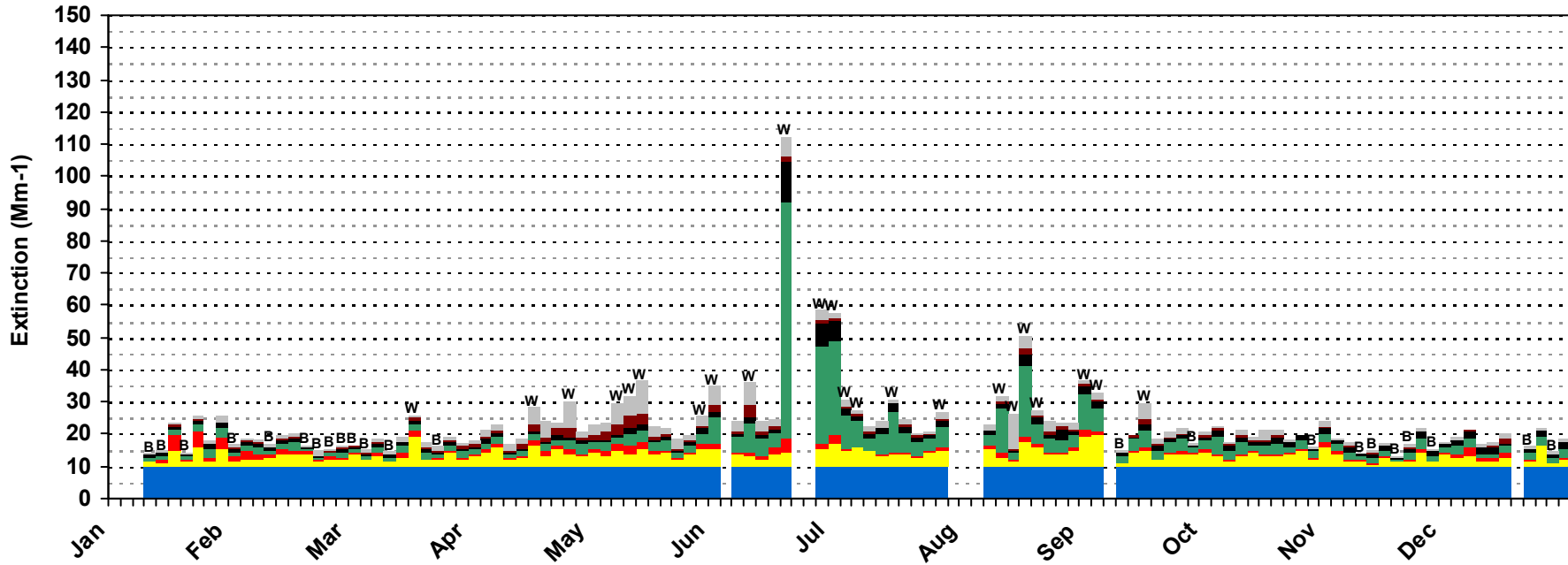


**20% Best Visibility Days**  
Aerosol Extinction\* = 5 Mm-1 (3 to 7 Mm-1)



- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh

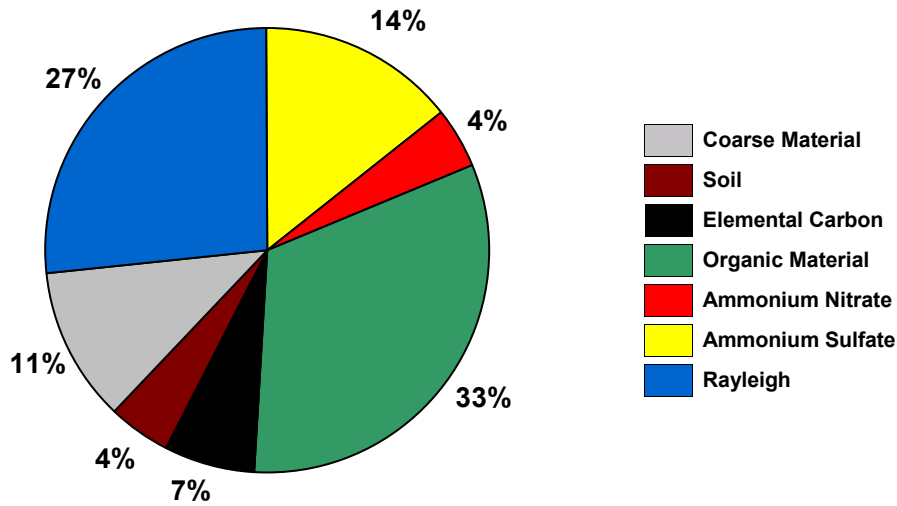
\*Excludes Rayleigh Extinction



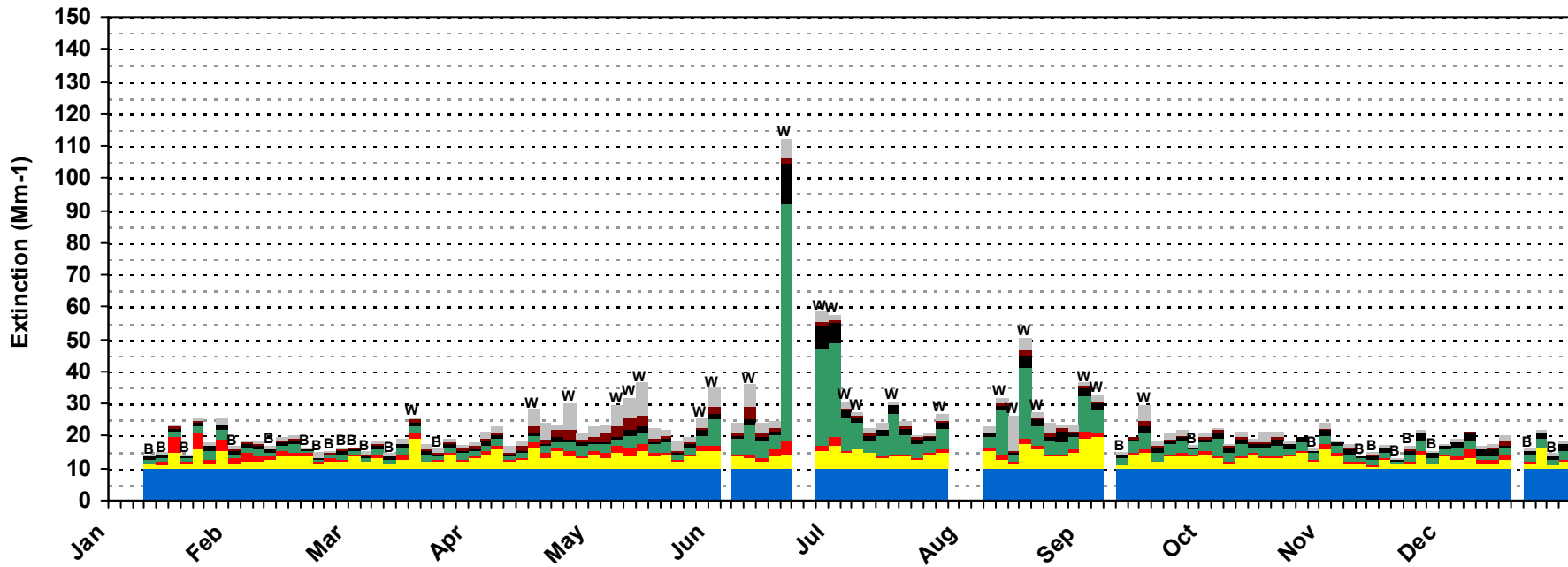
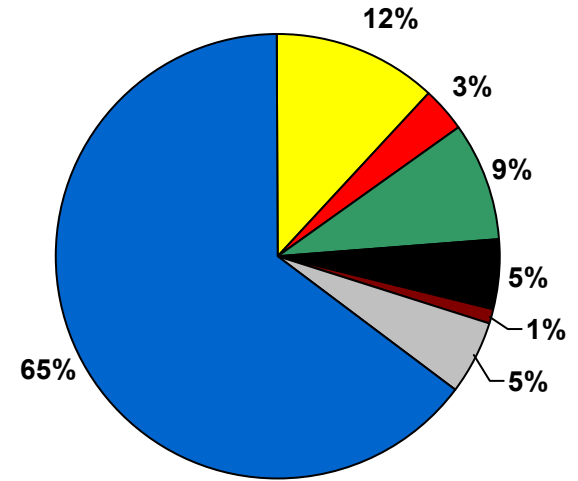
**MONITORING DATA**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
WEMI1 Monitoring Data (every third day)**

**20% Worst Visibility Days**  
Total Extinction = 37 Mm-1 (26 to 112 Mm-1)



**20% Best Visibility Days**  
Total Extinction = 15 Mm-1 (13 to 17 Mm-1)



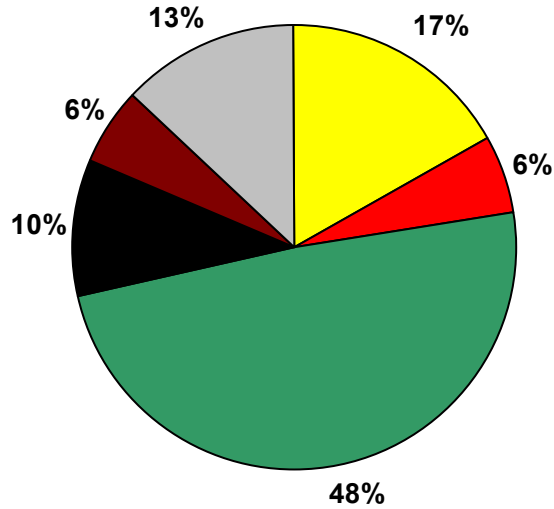
**MONITORING DATA**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
WEMI1 Monitoring Data (every third day)**

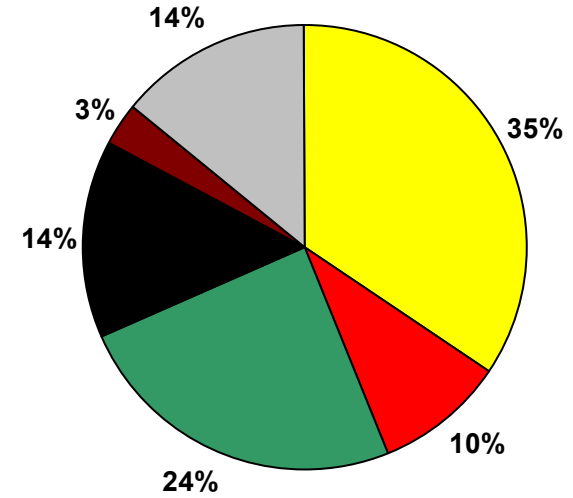
**"RAW" DATA**

- No RHR data substitutions
- Includes available data from days with clogged filters

**20% Worst Visibility Days**  
Aerosol Extinction\* = 30 Mm-1 (17 to 102 Mm-1)

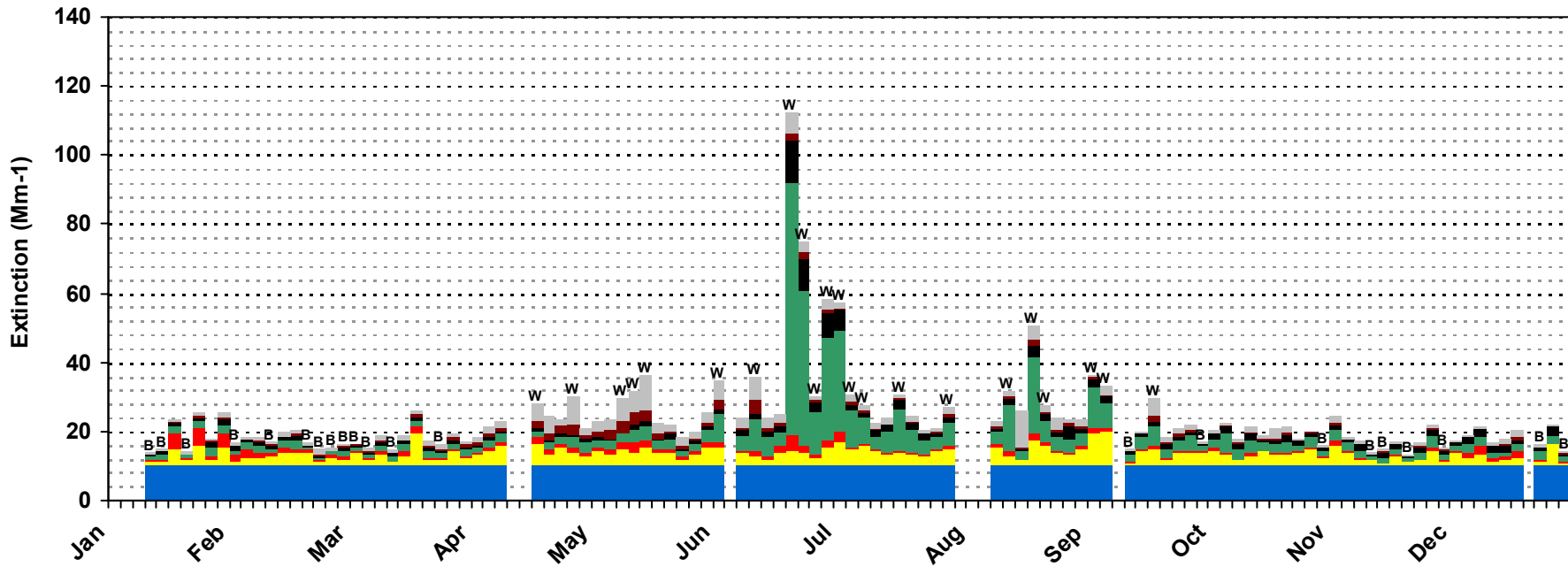


**20% Best Visibility Days**  
Aerosol Extinction\* = 5 Mm-1 (3 to 7 Mm-1)



- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh

\*Excludes Rayleigh Extinction



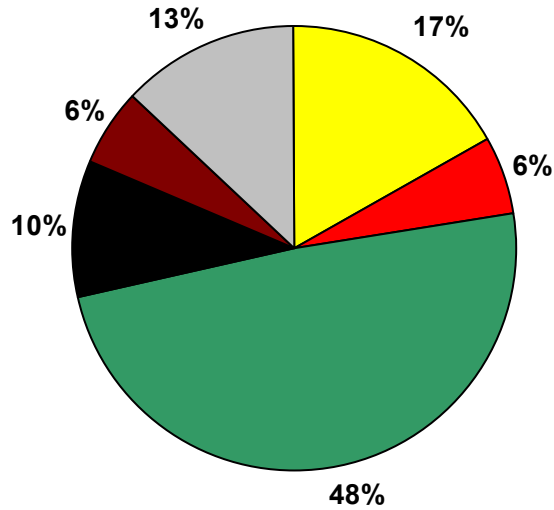
**MONITORING DATA**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
WEMI1 Monitoring Data (every third day)**

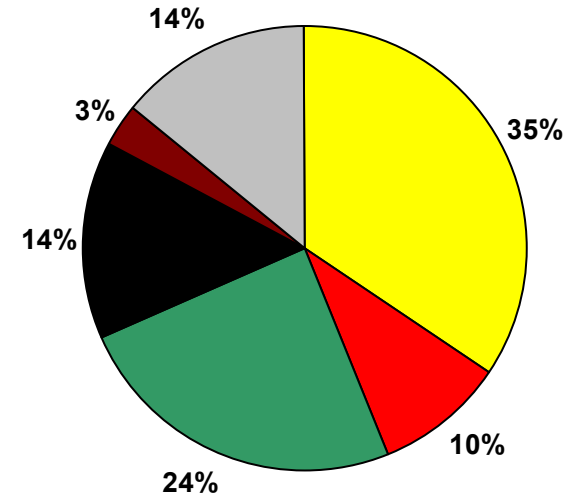
**"RAW" DATA**

- No RHR data substitutions
- Includes available data from days with clogged filters

**20% Worst Visibility Days**  
Aerosol Extinction\* = 30 Mm-1 (17 to 102 Mm-1)

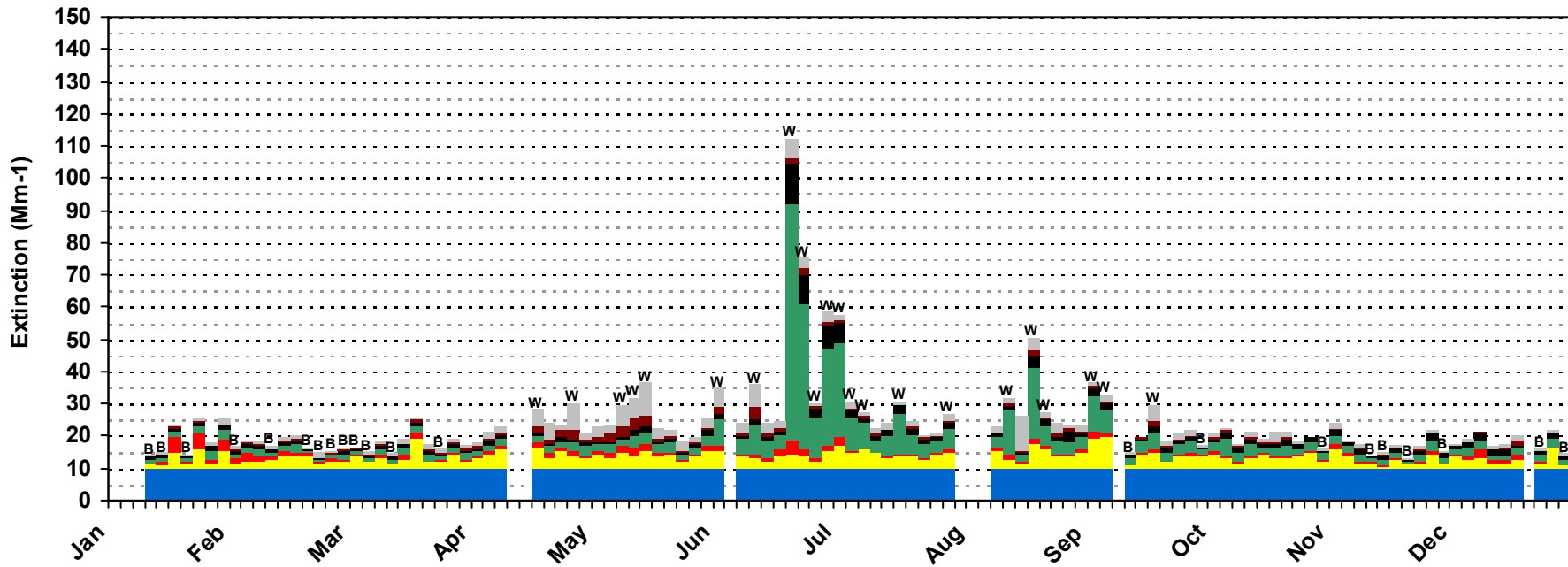


**20% Best Visibility Days**  
Aerosol Extinction\* = 5 Mm-1 (3 to 7 Mm-1)



- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh

\*Excludes Rayleigh Extinction



## MONITORING DATA

### Black Canyon of Gunnison National Park, CO 2002 Reconstructed Extinction Values WEMI1 Monitoring Data (every third day)

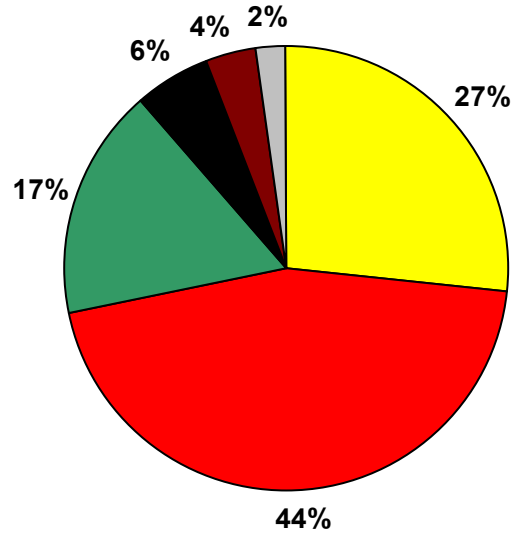
<b>20% Worst Visibility Days</b>			
	<b>Average (Mm-1)</b>	<b>Minimum (Mm-1)</b>	<b>Maximum (Mm-1)</b>
<b>Total Extinction:</b>	37.3 (13.2 dv)	25.5 (9.4 dv)	112.5 (24.2 dv)
<b>Aerosol Extinction*:</b>	27.3	15.5	102.5
	<b>Average (Mm-1)</b>	<b>% of Tot. Extinction</b>	<b>% of Aer. Extinction</b>
<b>Ammonium Sulfate:</b>	5.4	14%	20%
<b>Ammonium Nitrate:</b>	1.6	4%	6%
<b>Organic Material:</b>	12.0	32%	44%
<b>Elemental Carbon:</b>	2.5	7%	9%
<b>Soil:</b>	1.6	4%	6%
<b>Coarse Material:</b>	4.2	11%	15%
<b>Rayleigh:</b>	10.0	27%	N/A
<b>20% Best Visibility Days</b>			
	<b>Average (Mm-1)</b>	<b>Minimum (Mm-1)</b>	<b>Maximum (Mm-1)</b>
<b>Total Extinction:</b>	15.4 (4.3 dv)	13.1 (2.7 dv)	16.9 (5.3 dv)
<b>Aerosol Extinction*:</b>	5.4	3.1	6.9
	<b>Average (Mm-1)</b>	<b>% of Tot. Extinction</b>	<b>% of Aer. Extinction</b>
<b>Ammonium Sulfate:</b>	1.8	12%	34%
<b>Ammonium Nitrate:</b>	0.5	3%	9%
<b>Organic Material:</b>	1.3	9%	25%
<b>Elemental Carbon:</b>	0.8	5%	15%
<b>Soil:</b>	0.2	1%	3%
<b>Coarse Material:</b>	0.7	5%	13%
<b>Rayleigh:</b>	10.0	65%	N/A

\*Excludes Rayleigh Extinction

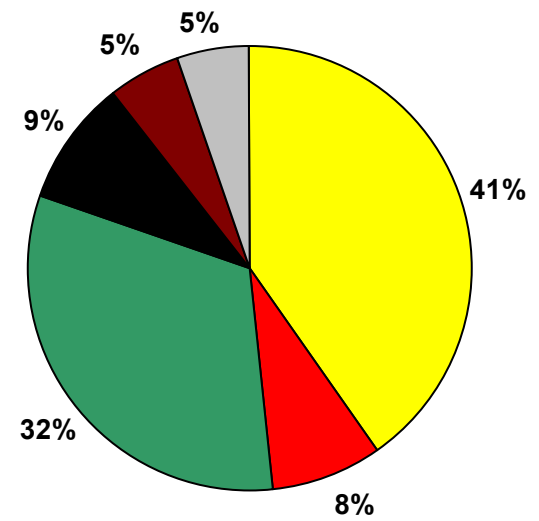
**MODEL RESULTS**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
CMAQ Model Results (every day)**

**20% Worst Visibility Days**  
Aerosol Extinction\* = 30 Mm-1 (23 to 53 Mm-1)

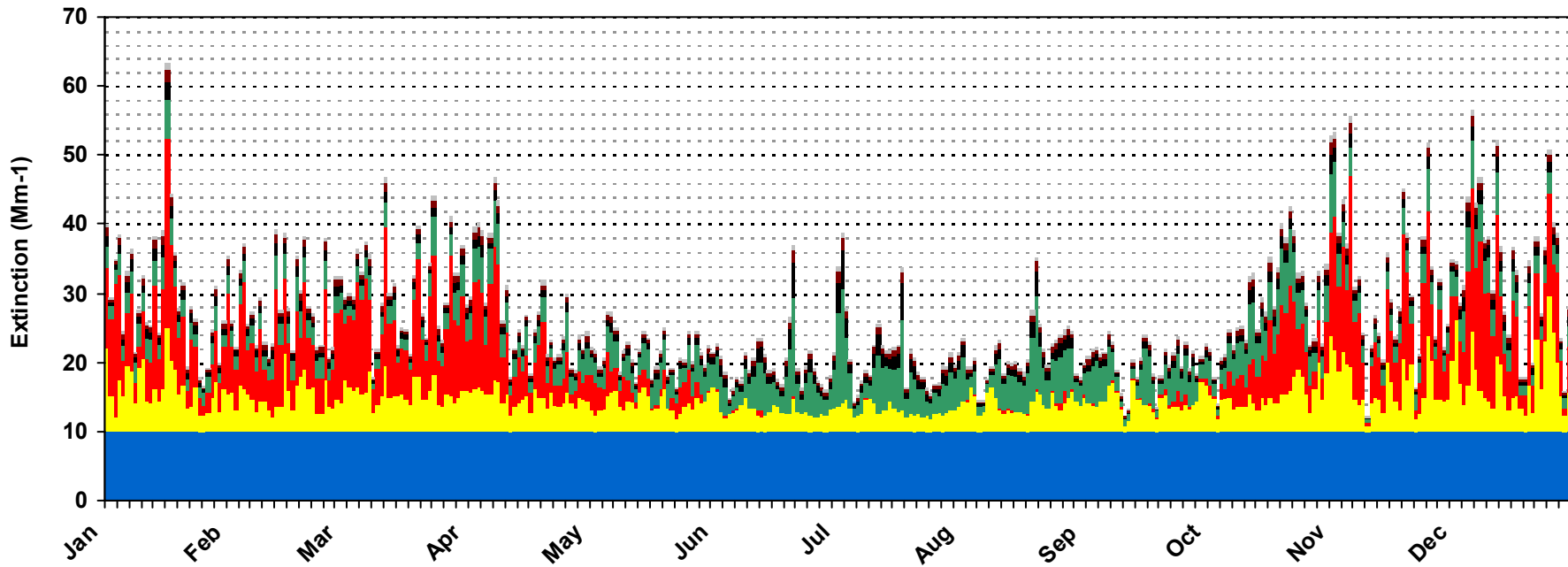


**20% Best Visibility Days**  
Aerosol Extinction\* = 7 Mm-1 (2 to 9 Mm-1)



- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh

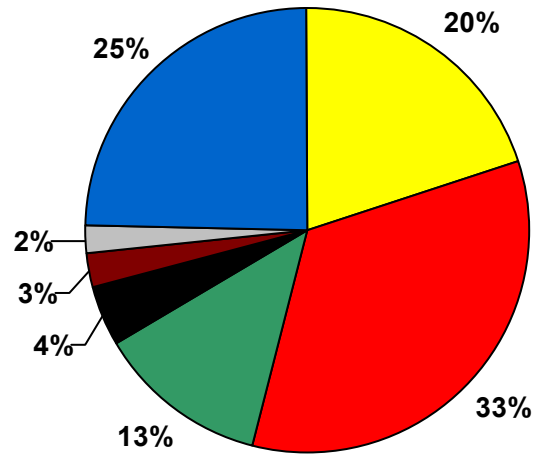
\*Excludes Rayleigh Extinction



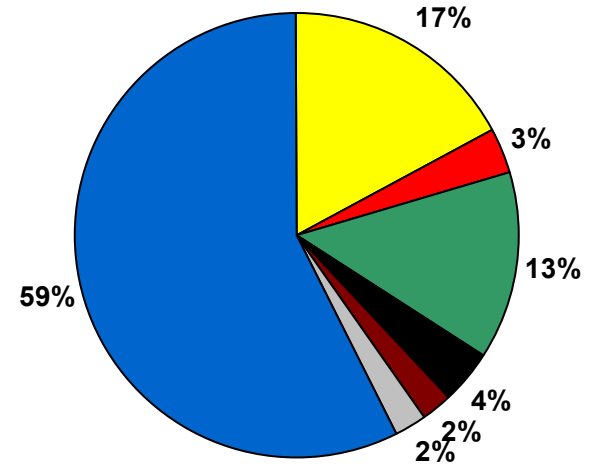
**MODEL RESULTS**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
CMAQ Model Results (every day)**

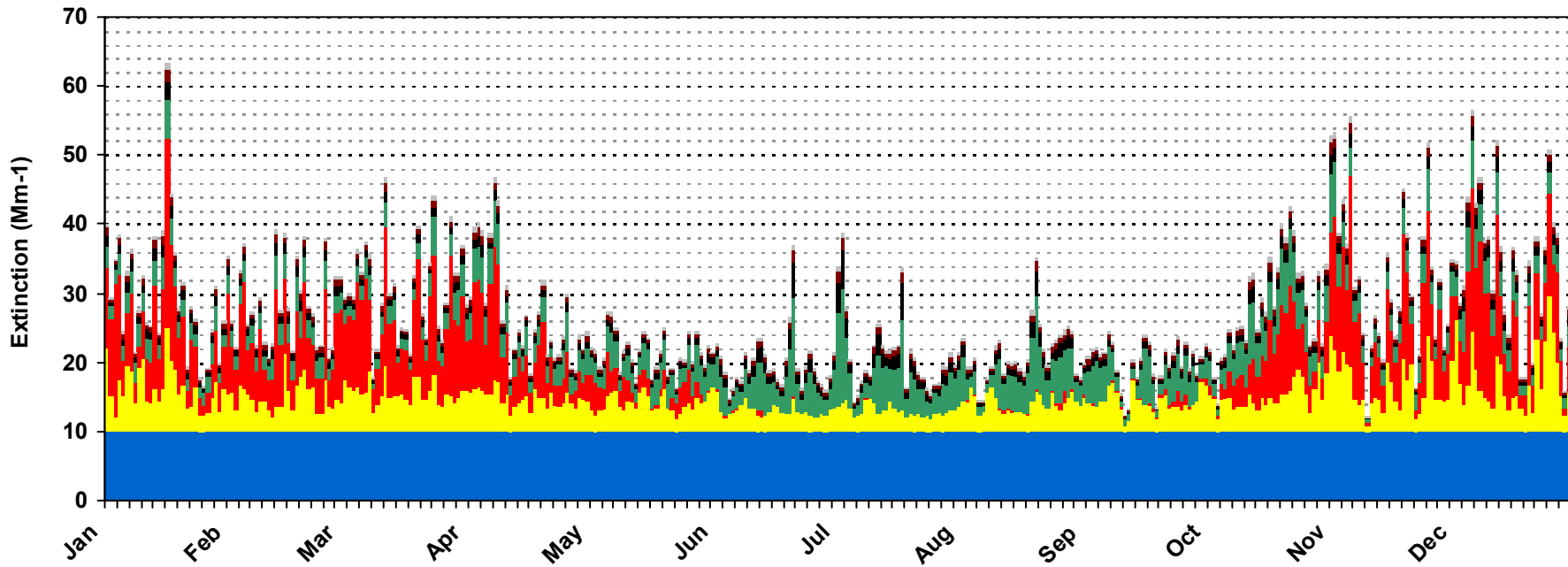
**20% Worst Visibility Days**  
Total Extinction = 40 Mm-1 (33 to 63 Mm-1)



**20% Best Visibility Days**  
Total Extinction = 17 Mm-1 (12 to 19 Mm-1)



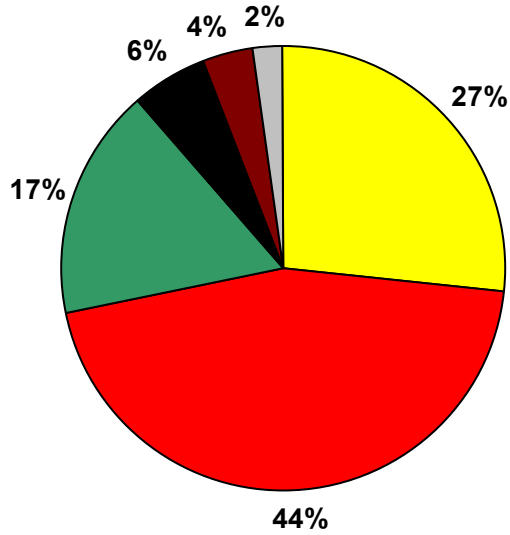
- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh



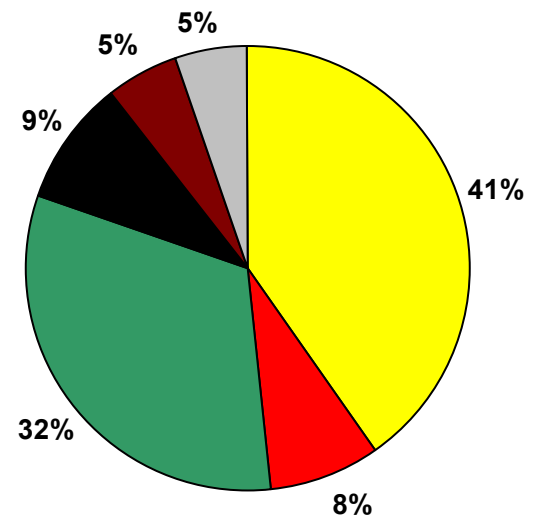
**MODEL RESULTS**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
CMAQ Model Results (every day)**

**20% Worst Visibility Days**  
Aerosol Extinction\* = 30 Mm-1 (23 to 53 Mm-1)

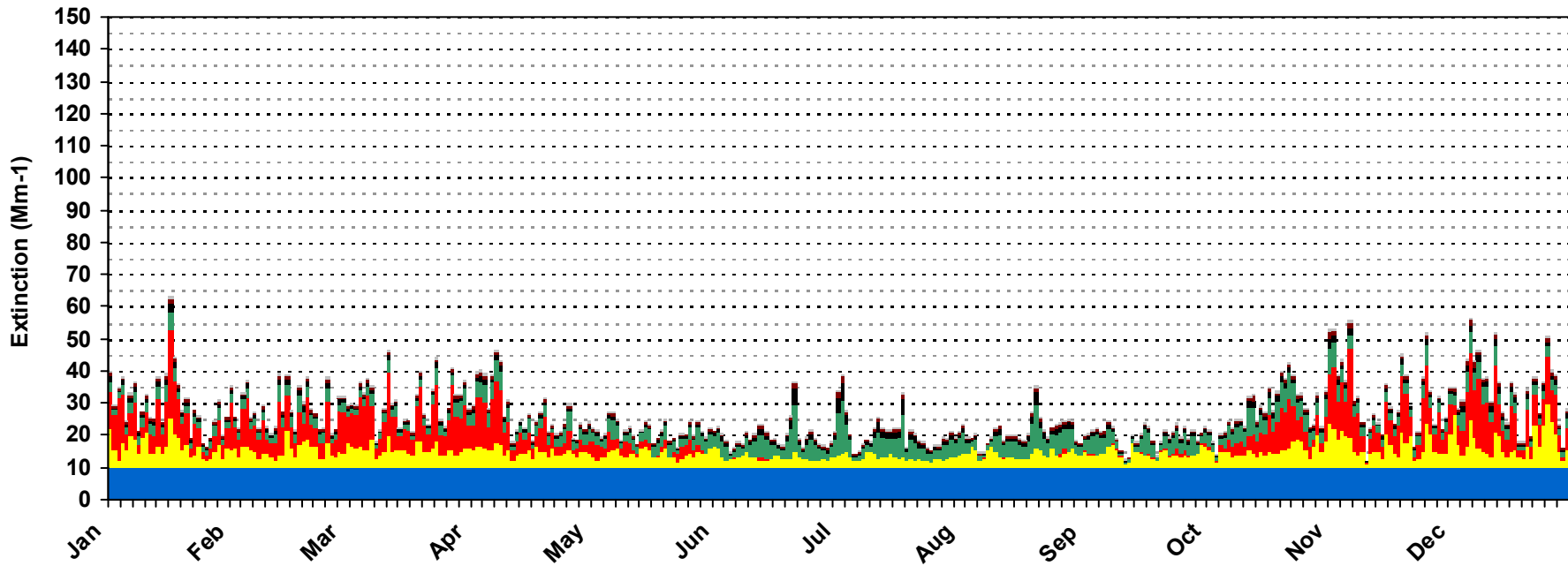


**20% Best Visibility Days**  
Aerosol Extinction\* = 7 Mm-1 (2 to 9 Mm-1)



- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh

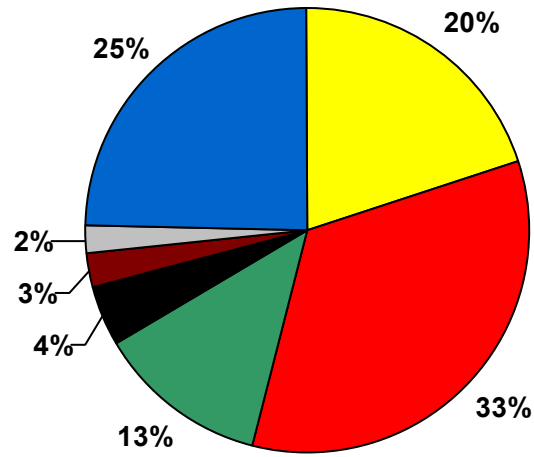
\*Excludes Rayleigh Extinction



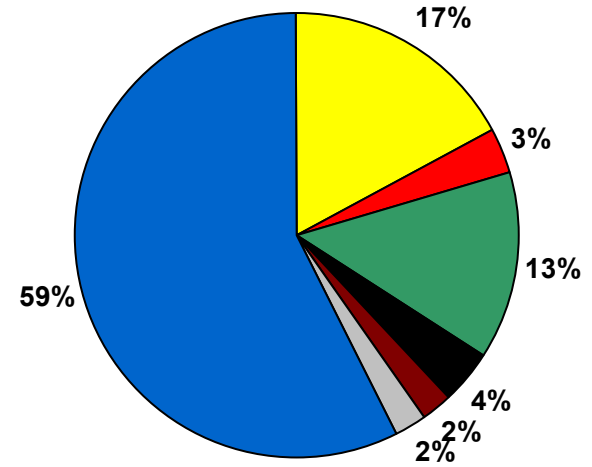
**MODEL RESULTS**

**Black Canyon of Gunnison National Park, CO  
2002 Reconstructed Extinction  
CMAQ Model Results (every day)**

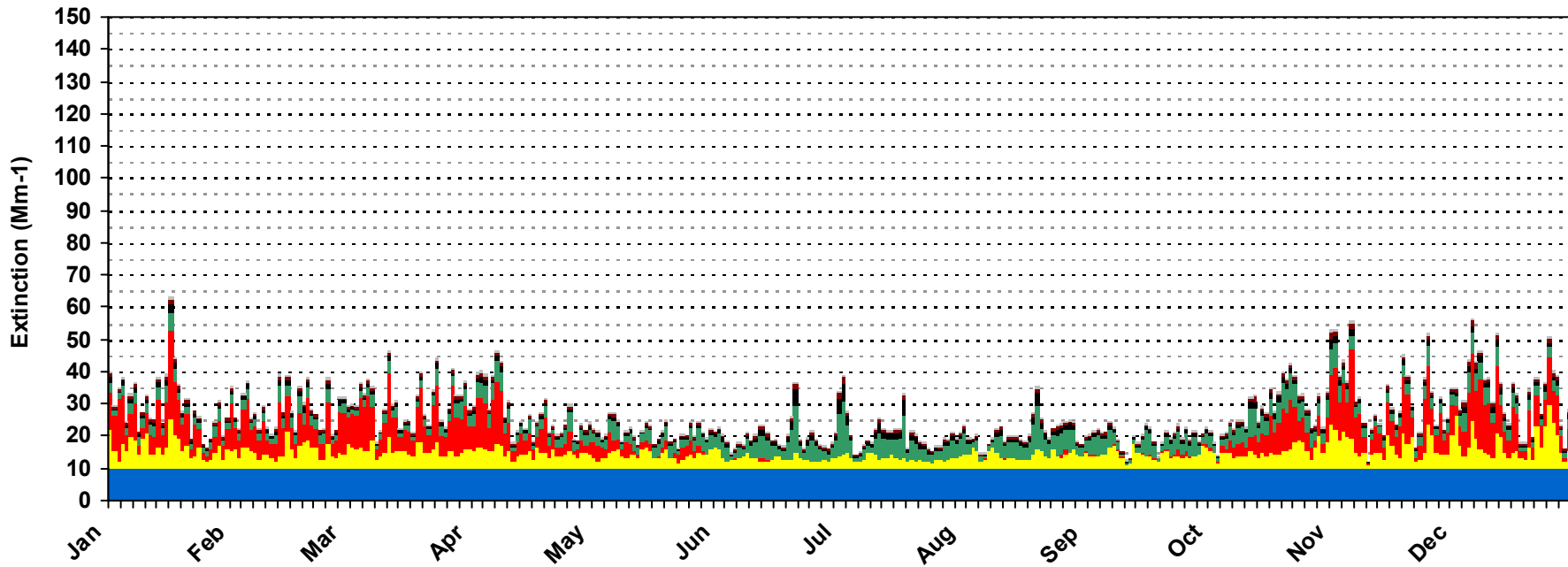
**20% Worst Visibility Days**  
Total Extinction = 40 Mm-1 (33 to 63 Mm-1)



**20% Best Visibility Days**  
Total Extinction = 17 Mm-1 (12 to 19 Mm-1)



- Coarse Material
- Soil
- Elemental Carbon
- Organic Material
- Ammonium Nitrate
- Ammonium Sulfate
- Rayleigh



## MODEL RESULTS

### Black Canyon of Gunnison National Park, CO 2002 Reconstructed Extinction CMAQ Model Results (every day)

<b>20% Worst Visibility Days</b>			
	<b>Average (Mm-1)</b>	<b>Minimum (Mm-1)</b>	<b>Maximum (Mm-1)</b>
<b>Total Extinction:</b>	40.3 (13.9 dv)	33.5 (12.1 dv)	63.3 (18.5 dv)
<b>Aerosol Extinction*:</b>	30.3	23.5	53.3
	<b>Average (Mm-1)</b>	<b>% of Tot. Extinction</b>	<b>% of Aer. Extinction</b>
<b>Ammonium Sulfate:</b>	8.1	20%	27%
<b>Ammonium Nitrate:</b>	13.6	34%	45%
<b>Organic Material:</b>	5.1	13%	17%
<b>Elemental Carbon:</b>	1.7	4%	6%
<b>Soil:</b>	1.1	3%	4%
<b>Coarse Material:</b>	0.7	2%	2%
<b>Rayleigh:</b>	10.0	25%	N/A
<b>20% Best Visibility Days</b>			
	<b>Average (Mm-1)</b>	<b>Minimum (Mm-1)</b>	<b>Maximum (Mm-1)</b>
<b>Total Extinction:</b>	17.4 (5.5 dv)	12.2 (2.0 dv)	19.4 (6.6 dv)
<b>Aerosol Extinction*:</b>	7.4	2.2	9.4
	<b>Average (Mm-1)</b>	<b>% of Tot. Extinction</b>	<b>% of Aer. Extinction</b>
<b>Ammonium Sulfate:</b>	3.0	17%	40%
<b>Ammonium Nitrate:</b>	0.6	3%	8%
<b>Organic Material:</b>	2.3	13%	32%
<b>Elemental Carbon:</b>	0.7	4%	9%
<b>Soil:</b>	0.4	2%	5%
<b>Coarse Material:</b>	0.4	2%	5%
<b>Rayleigh:</b>	10.0	58%	N/A

\*Excludes Rayleigh Extinction