

## **Appendix F**

### **Visibility Pie Charts**

Source category, species and state contributions to each Class I area for the average 20% worst modeled visibility days

New Mexico IMPROVE sites

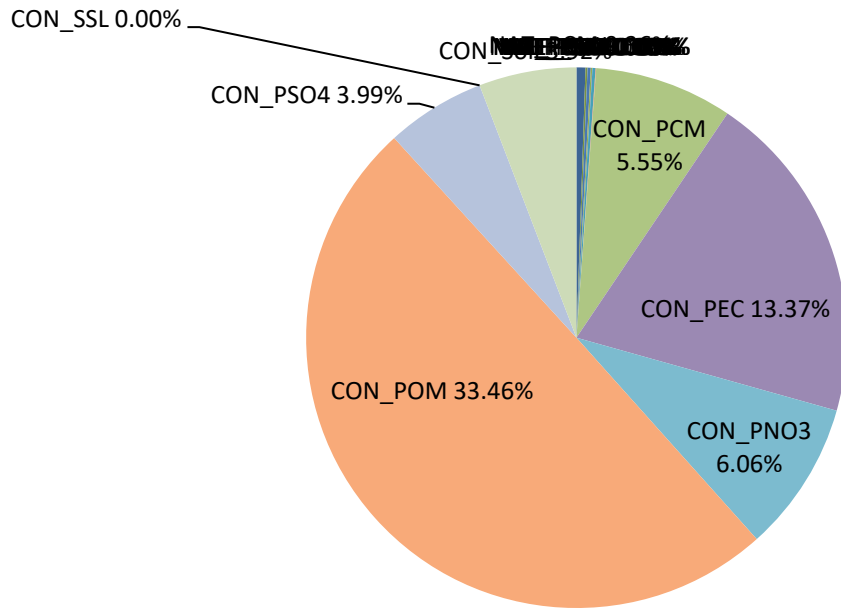
**Bandelier National Monument**

**Contribution to Total Extinction (Mm-1) at Bandelier National Monument, W20 = 10.93**

**DV, avgW20**

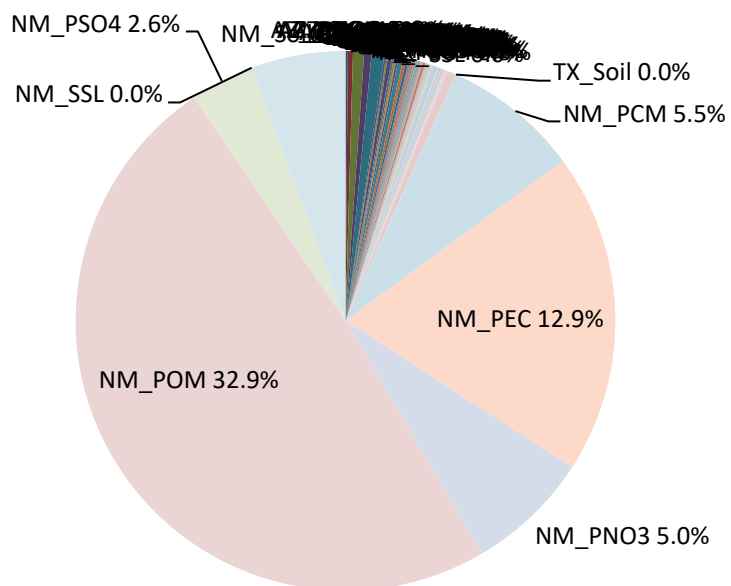
Total Extinction = 61.6 (Mm-1), Haze Index = 14.4 DV

BC = 6.7 Mm-1 (10.9%), 2.3 DV (16.1%)



## DV, avgW20

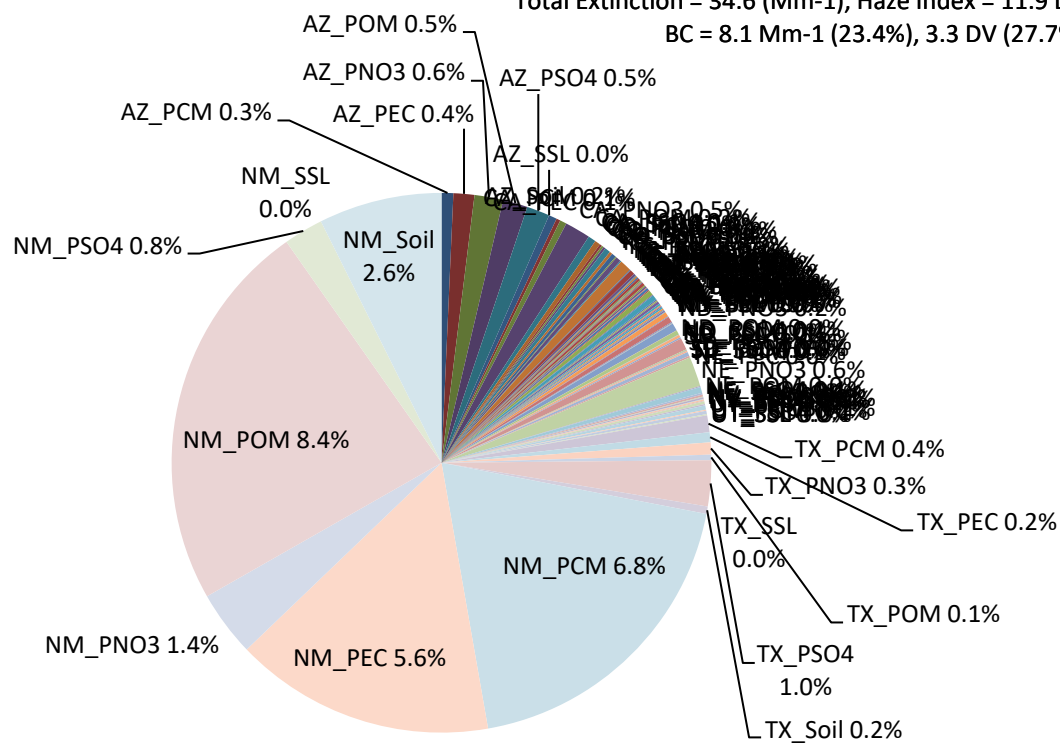
BC = 6.7 Mm-1 (10.9%), 2.3 DV (16.1%)



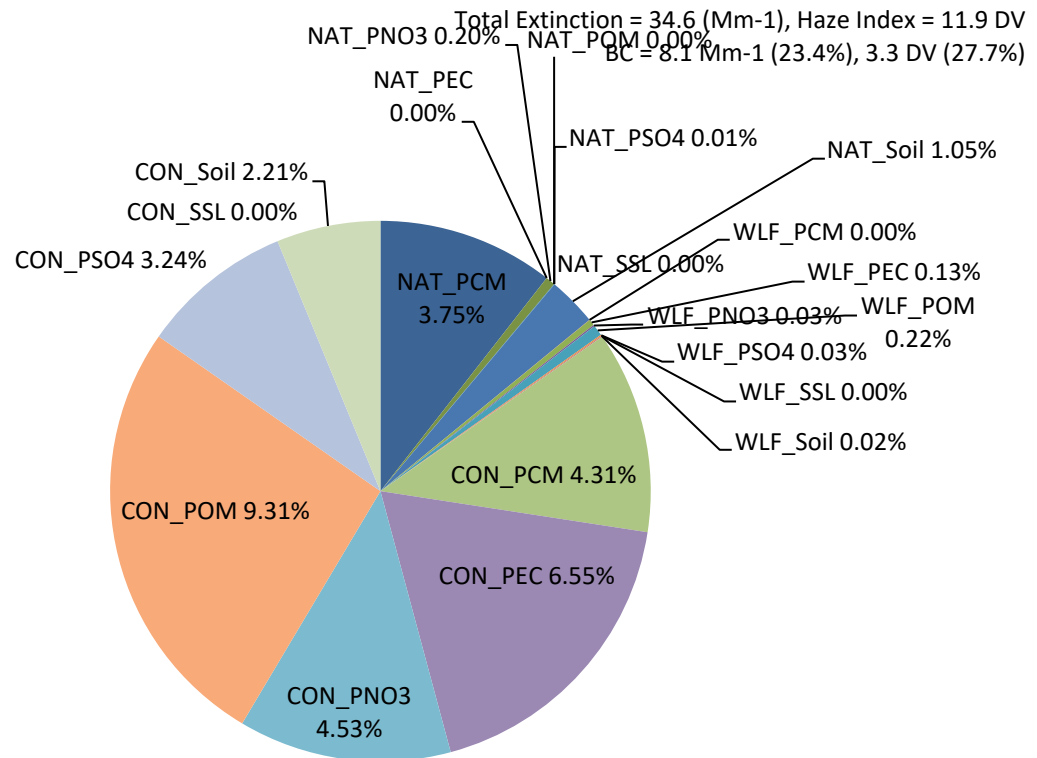
## **Bosque Del Apache National Wildlife Refuge**

[illegible]

**Total Extinction = 34.6 (Mm<sup>-1</sup>), Haze Index = 11.9 DV  
BC = 8.1 Mm<sup>-1</sup> (23.4%), 3.3 DV (27.7%)**



**Contribution to Total Extinction (Mm-1) at Bosque del Apache, W20 = 10.28 DV, avgW20**

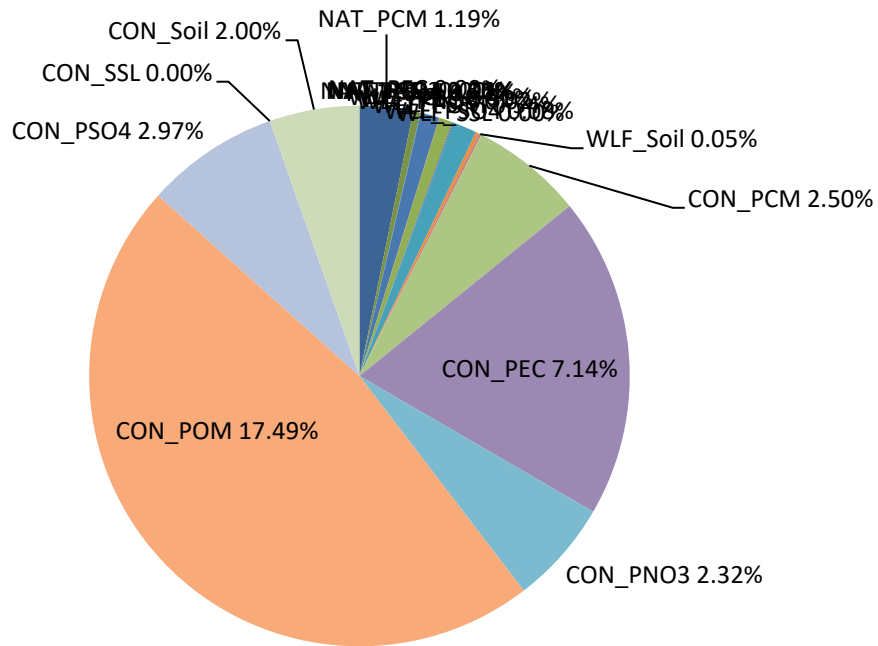


## Gila Wilderness

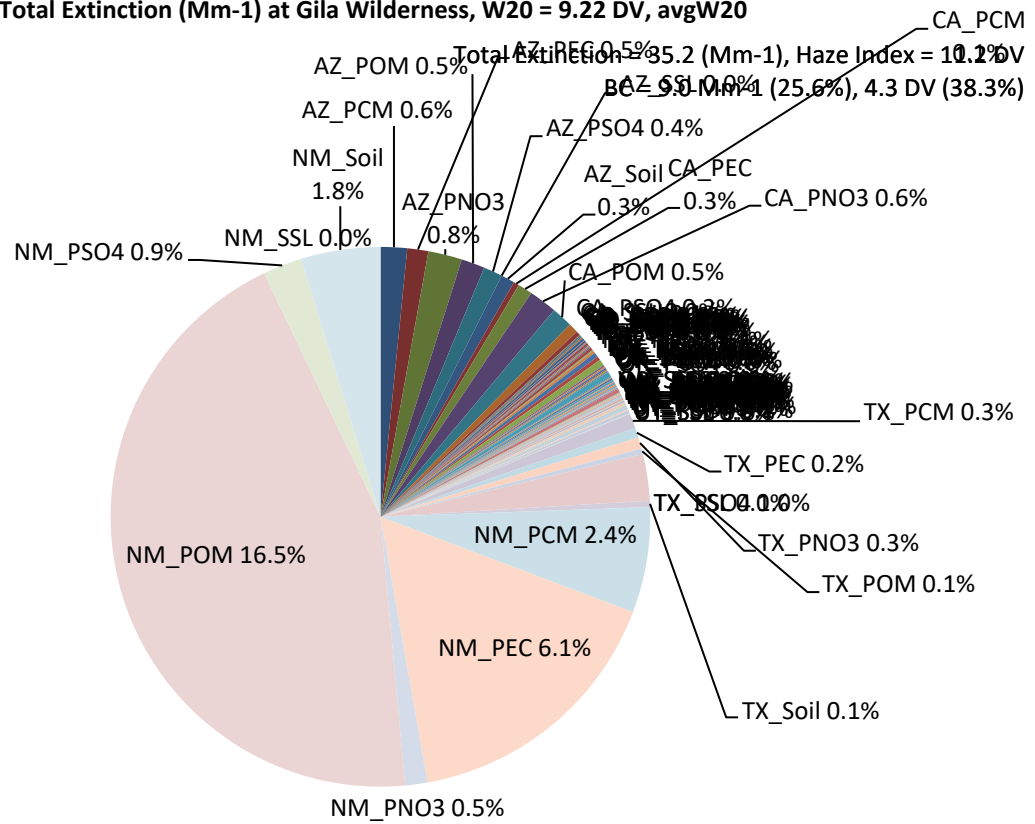
### Contribution to Total Extinction (Mm-1) at Gila Wilderness, W20 = 9.22 DV, avgW20

Total Extinction = 35.2 (Mm-1), Haze Index = 11.2 DV

BC = 9.0 Mm-1 (25.6%), 4.3 DV (38.3%)



**Contribution to Total Extinction (Mm-1) at Gila Wilderness, W20 = 9.22 DV, avgW20**



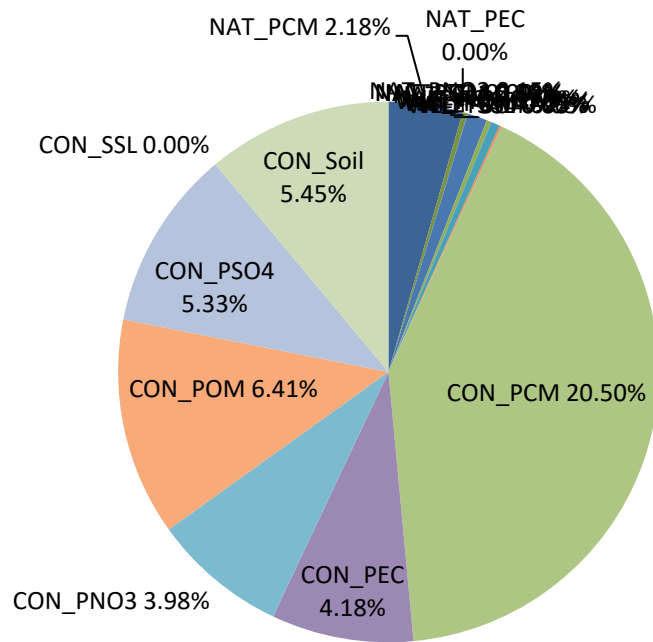


## Salt Creek Wilderness

Contribution to Total Extinction (Mm-1) at Salt Creek, W20 = 13.06 DV, avgW20

Total Extinction = 41.8 (Mm-1), Haze Index = 14.3 DV

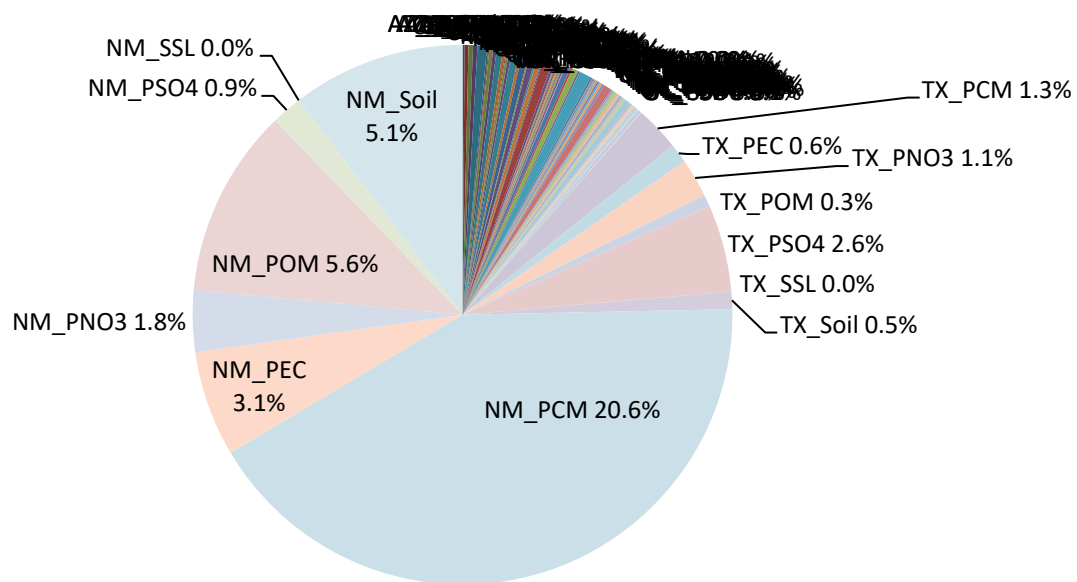
BC = 5.1 Mm-1 (12.3%), 1.4 DV (10.0%)



**Contribution to Total Extinction (Mm-1) at Salt Creek, W20 = 13.06 DV, avgW20**

Total Extinction = 41.8 (Mm-1), Haze Index = 14.3 DV

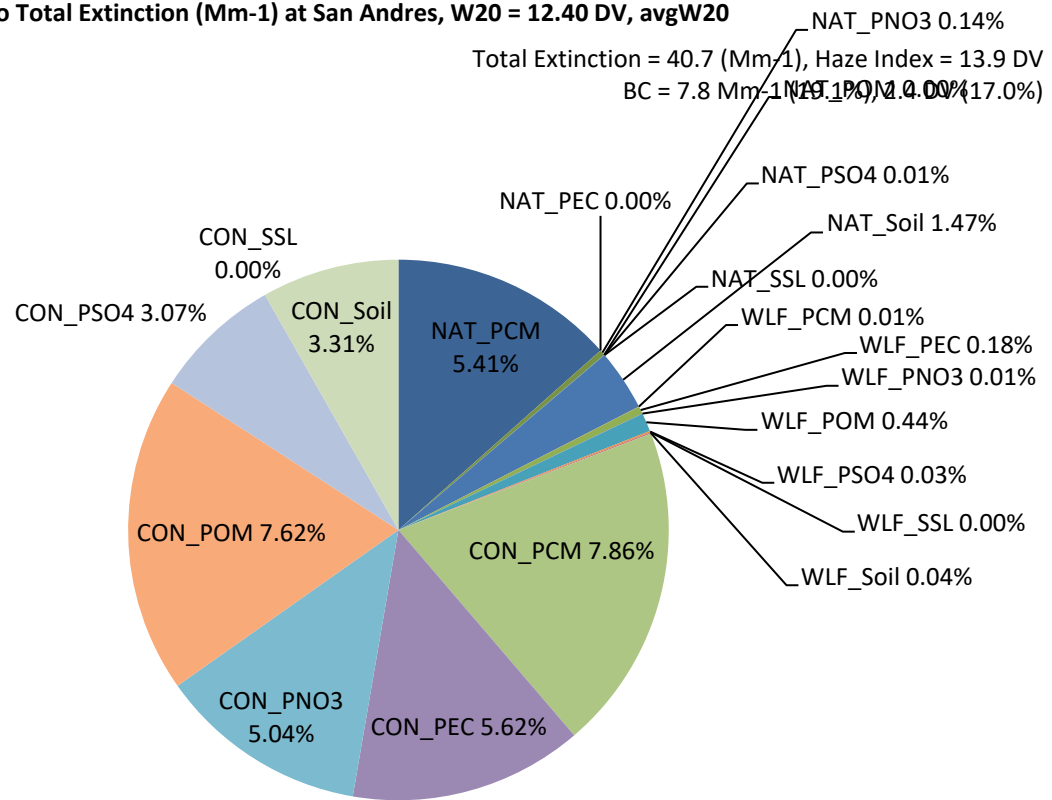
BC = 5.1 Mm-1 (12.3%), 1.4 DV (10.0%)



## San Andres National Wildlife Refuge

### Contribution to Total Extinction (Mm-1) at San Andres, W20 = 12.40 DV, avgW20

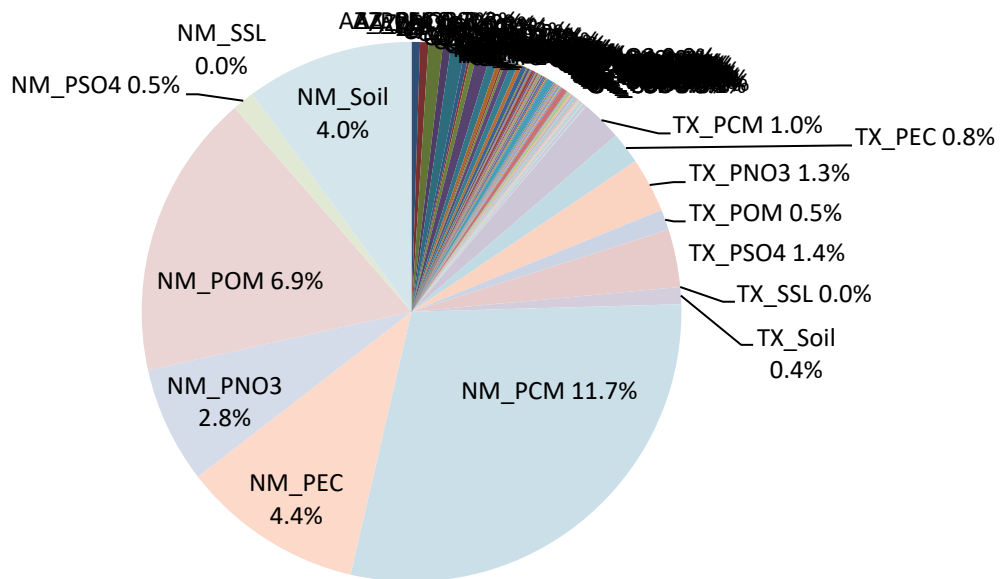
Total Extinction = 40.7 (Mm-1), Haze Index = 13.9 DV  
BC = 7.8 Mm-1 (19.1%)



**Contribution to Total Extinction (Mm-1) at San Andres, W20 = 12.40 DV, avgW20**

Total Extinction = 40.7 (Mm-1), Haze Index = 13.9 DV

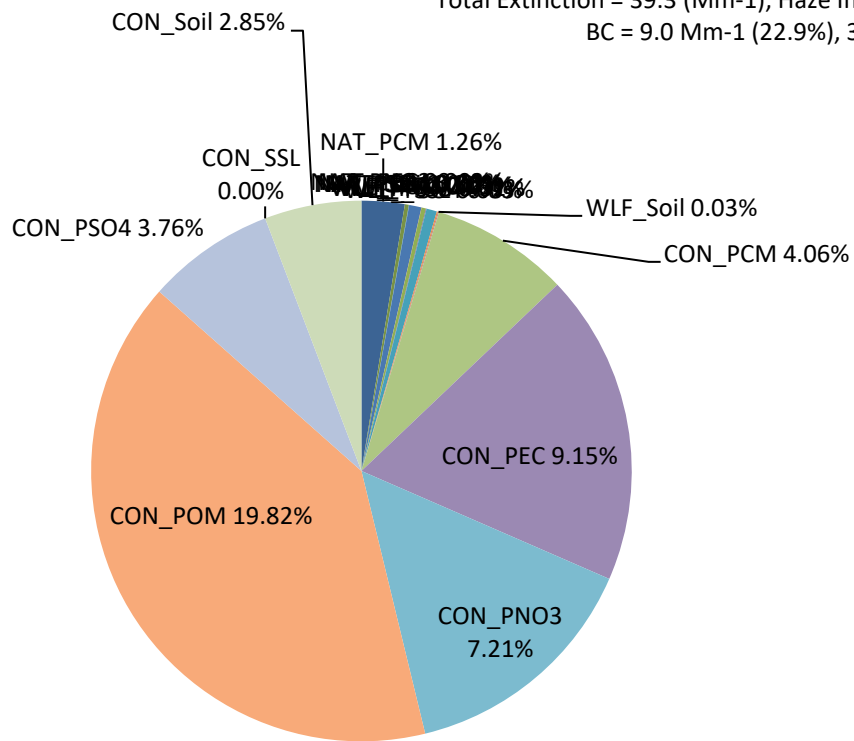
BC = 7.8 Mm-1 (19.1%), 2.4 DV (17.0%)



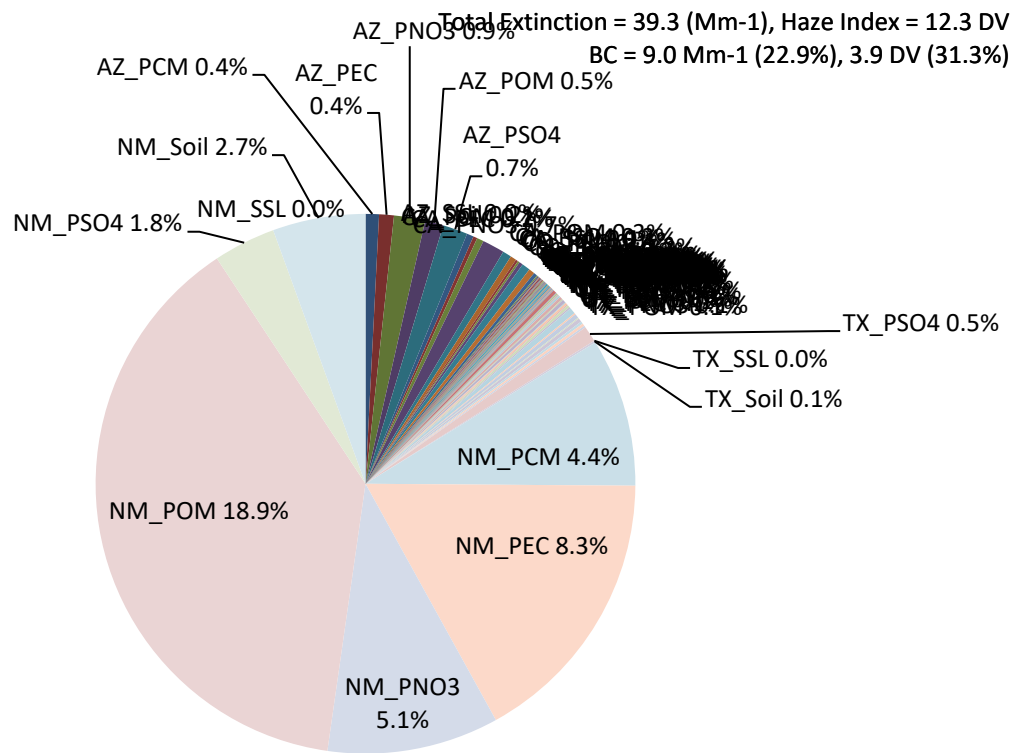
## San Pedro Parks Wilderness

Contribution to Total Extinction (Mm-1) at San Pedro Parks, W20 = 9.46 DV, avgW20

Total Extinction = 39.3 (Mm-1), Haze Index = 12.3 DV  
BC = 9.0 Mm-1 (22.9%), 3.9 DV (31.3%)



**Contribution to Total Extinction (Mm-1) at San Pedro Parks, W20 = 9.46 DV, avgW20**

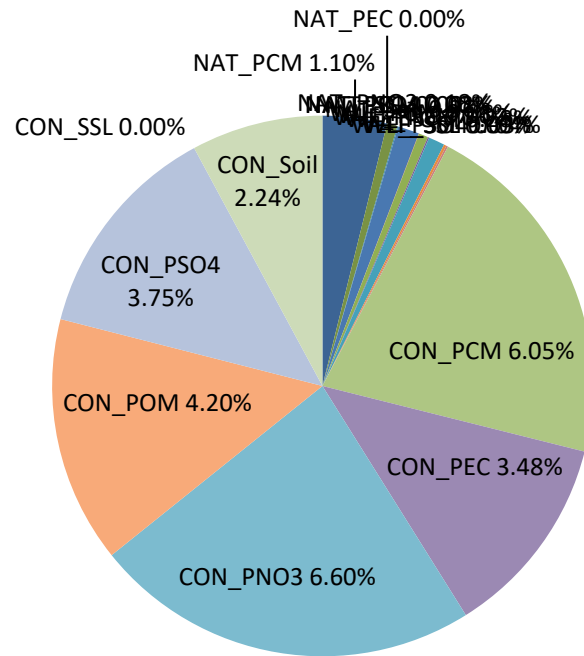


## Wheeler Peak Wilderness

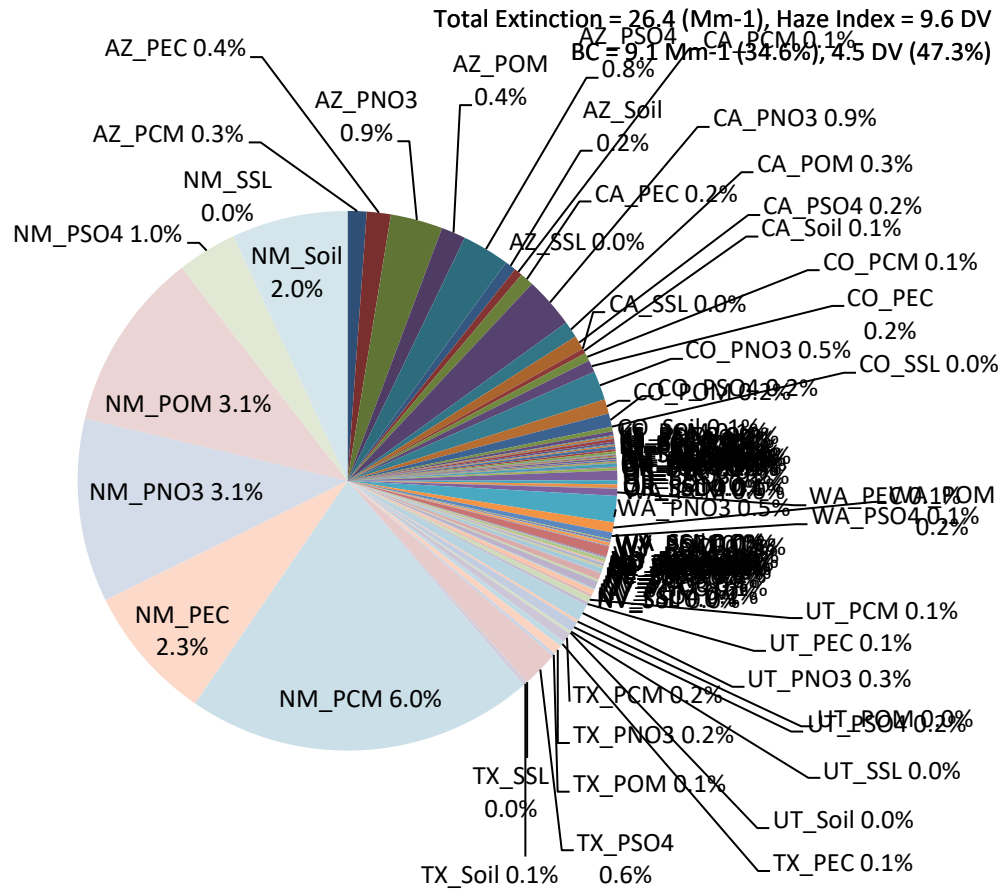
Contribution to Total Extinction (Mm-1) at Wheeler Peak, W20 = 8.52 DV, avgW20

Total Extinction = 26.4 (Mm-1), Haze Index = 9.6 DV

BC = 9.1 Mm-1 (34.6%), 4.5 DV (47.3%)



**Contribution to Total Extinction (Mm-1) at Wheeler Peak, W20 = 8.52 DV, avgW20**





**Contribution to Total Extinction (Mm<sup>-1</sup>) at White Mountain, W20 = 8.52 DV, avgW20**

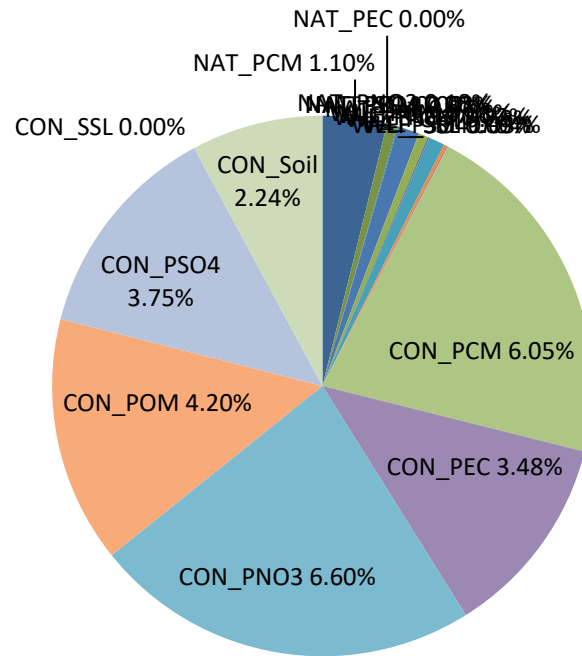
Total Extinction = 26.4 (Mm<sup>-1</sup>), Haze Index = 9.6 DV  
BC = 9.1 Mm<sup>-1</sup> (34.6%), 4.5 DV (47.3%)

Species	Contribution (%)
CON_PNO3	6.60%
CON_POM	4.20%
CON_PSO4	3.75%
CON_PSO2	3.20%
CON_PSO3	2.80%
CON_PSO4	2.24%
CON_PNO2	1.10%
CON_PNO3	1.10%
CON_PNO2	0.00%
CON_PNO3	0.00%
CON_PNO2	0.00%
CON_PNO3	0.00%

**Contribution to Total Extinction (Mm-1) at White Mountain, W20 = 8.52 DV, avgW20**

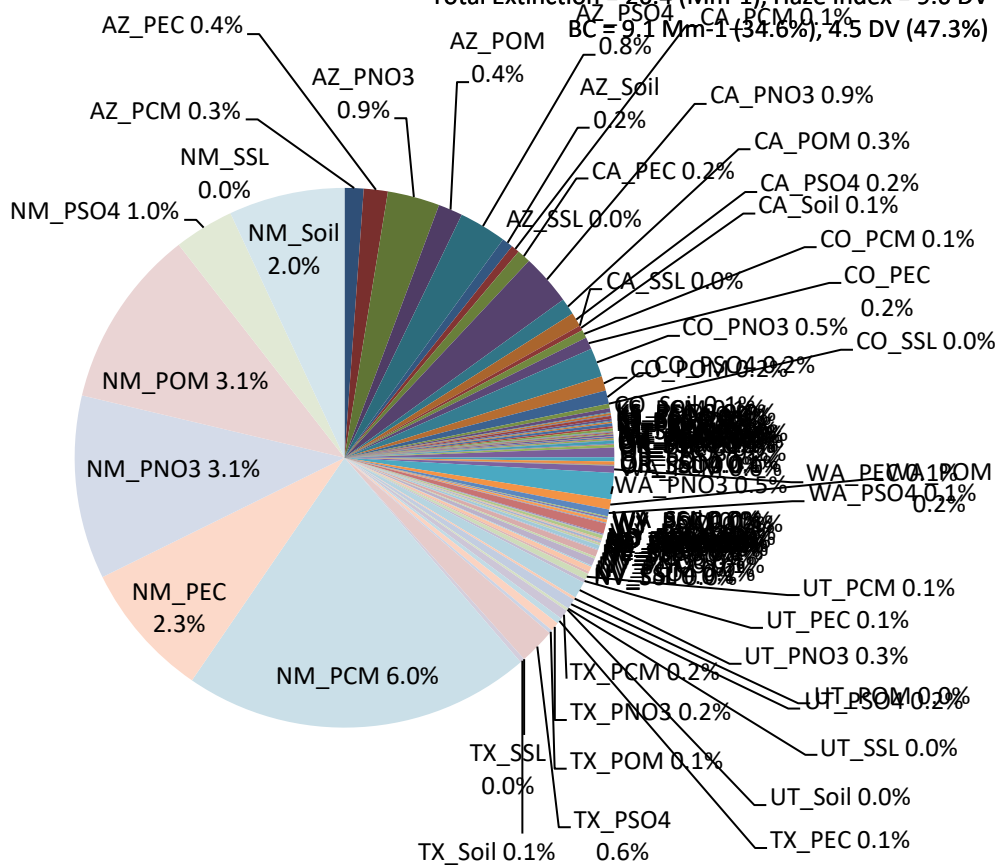
Total Extinction = 26.4 (Mm<sup>-1</sup>), Haze Index = 9.6 DV

BC = 9.1 Mm-1 (34.6%), 4.5 DV (47.3%)



[illegible]

Total Extinction = 26.4 (Mm<sup>-1</sup>), Haze Index = 9.6 DV  
 AZ PSO4 CA PCM 0.1%  
 AZ PCM BC = 9.1 Mm<sup>-1</sup> (34.6%), 4.5 DV (47.3%)

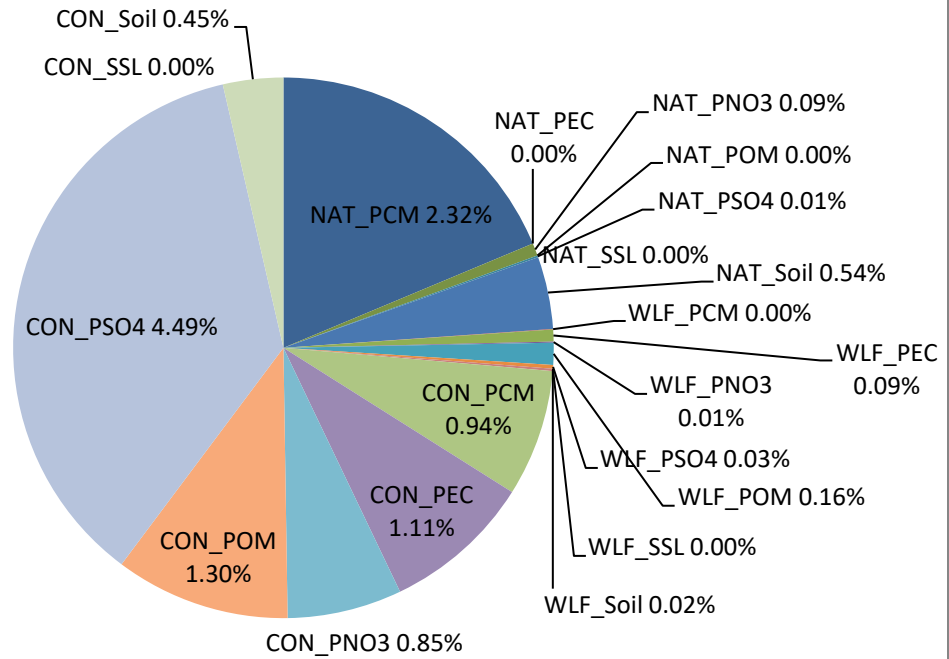


## Texas IMPROVE sites

### Big Bend National Park

**Contribution to Total Extinction (Mm-1) at Big Bend National Park, W20 = 11.31 DV,  
avgW20**

Total Extinction = 36.4 (Mm-1), Haze Index = 12.7 DV  
BC = 8.7 Mm-1 (23.9%), 3.1 DV (24.3%)



**Total Extinction = 36.4 (Mm<sup>-1</sup>), Haze Index = 12.7 DV  
BC = 8.7 Mm<sup>-1</sup> (23.9%), 3.1 DV (24.3%)**

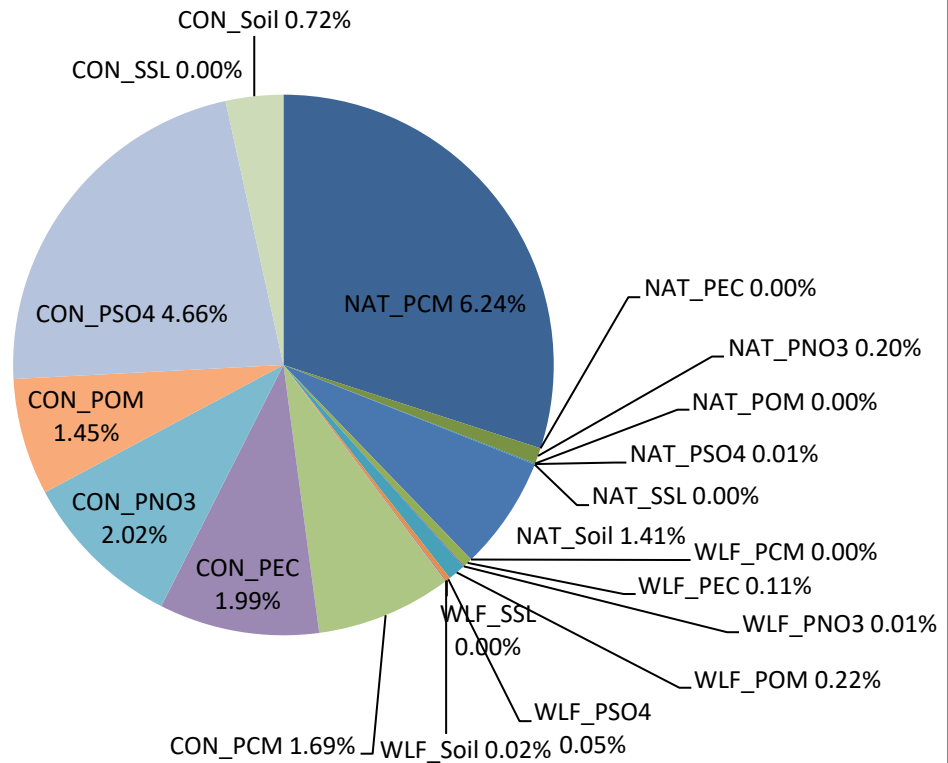
**Contribution to Total Extinction (Mm-1) at Guadalupe Mountains National Park, W20 = 11.10 DV, avgW20**

Total Extinction = 35.1 (Mm-1), Haze Index = 12.4 DV  
BC = 9.1 Mm-1 (25.9%), 3.4 DV (27.2%)

Species	Contribution (Mm-1)
NAT_PCM	6.24%
CON_PSO4	4.66%
CON_POM	1.45%
CON_PNO3	2.02%
CON_PEC	1.99%
CON_PCM	1.69%
CON_Soil	0.72%
CON_SSL	0.00%
NAT_PEC	0.00%
NAT_PNO3	0.20%
NAT_POM	0.00%
NAT_PSO4	0.01%
NAT_SSL	0.00%
NAT_Soil	1.41%
WLF_PCM	0.00%
WLF_PEC	0.11%
WLF_PNO3	0.01%
WLF_POM	0.22%
WLF_PSO4	0.05%
WLF_Soil	0.02%
WLF_SSL	0.00%

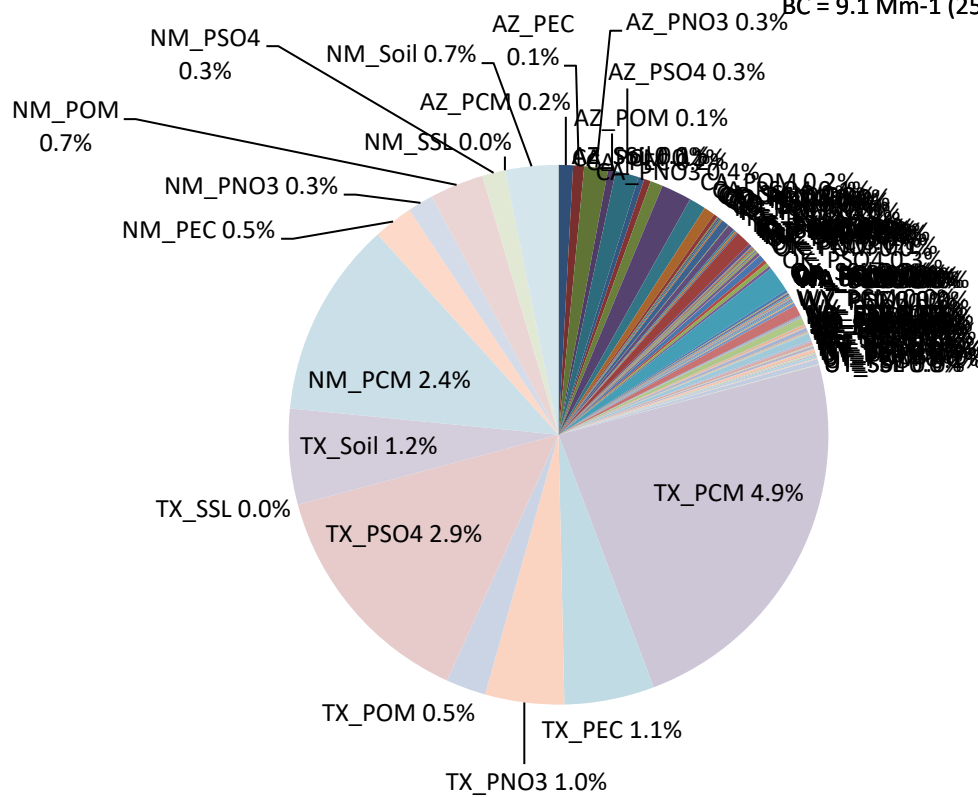
### 11.10 DV, avgW20

BC = 9.1 Mm-1 (25.9%), 3.4 DV (27.2%)



### 11.10 DV, avgW20

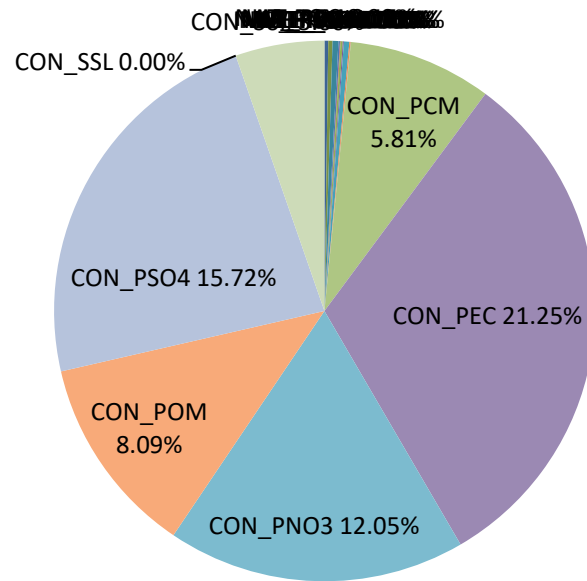
BC = 9.1 Mm-1 (25.9%), 3.4 DV (27.2%)



## Houston

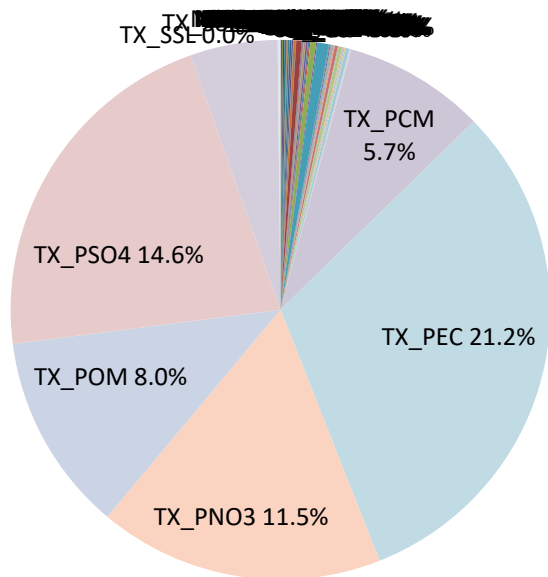
**Contribution to Total Extinction (Mm-1) at Houston, W20 = 24.78 DV, avgW20**

Total Extinction = 154.0 (Mm-1), Haze Index = 27.3 DV  
BC = 8.5 Mm-1 (5.5%), 0.7 DV (2.6%)



**Contribution to Total Extinction (Mm-1) at Houston, W20 = 24.78 DV, avgW20**

Total Extinction = 154.0 (Mm-1), Haze Index = 27.3 DV  
BC = 8.5 Mm-1 (5.5%), 0.7 DV (2.6%)



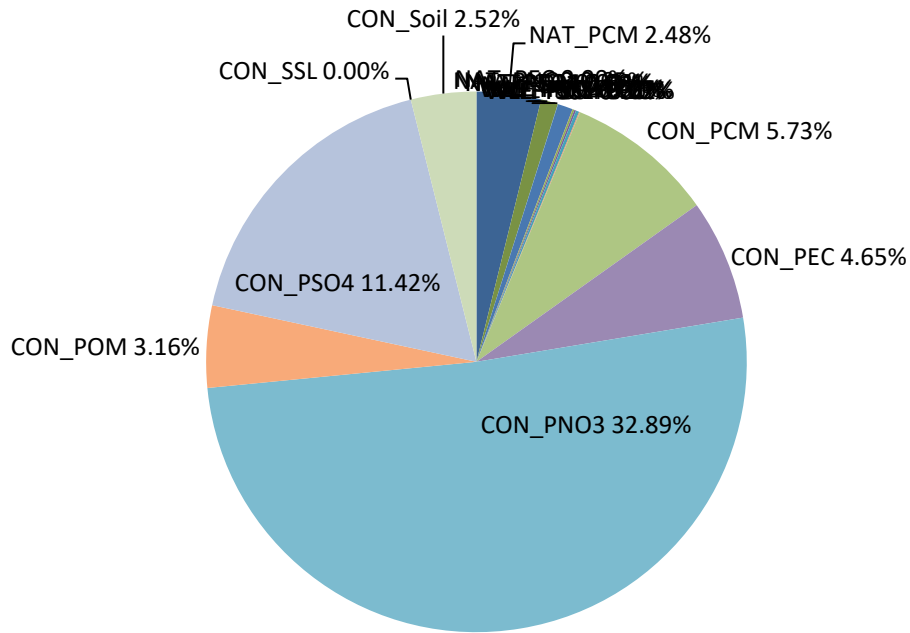


## OKLAHOMA IMPROVE sites

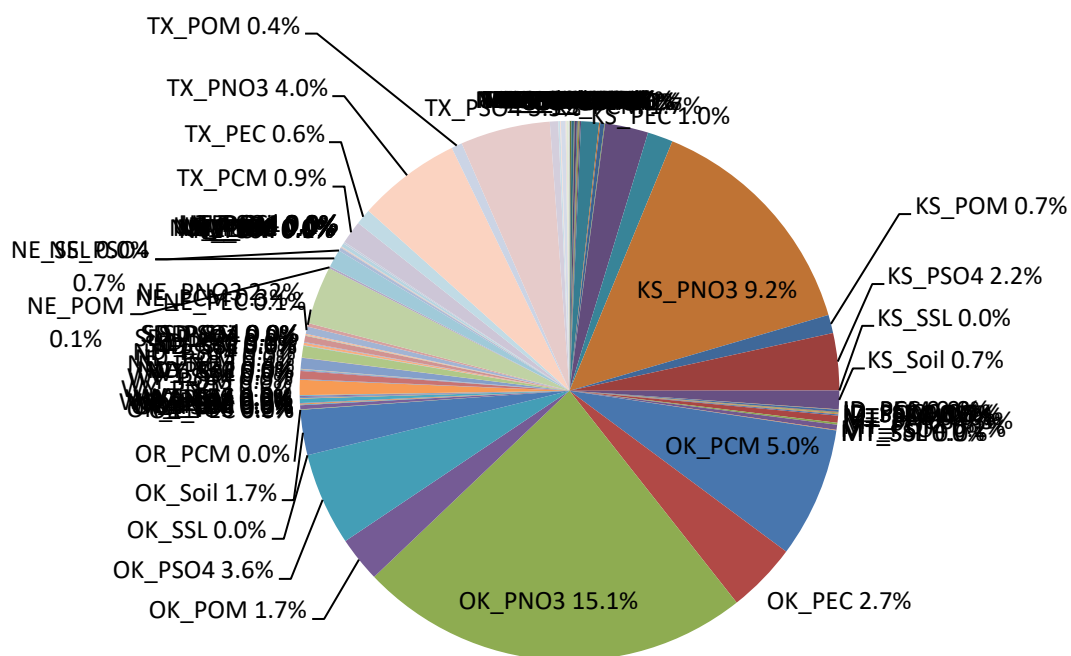
### Cherokee Nation

**Contribution to Total Extinction (Mm<sup>-1</sup>) at Cherokee Nation, W20 = 19.28 DV, avgW20**

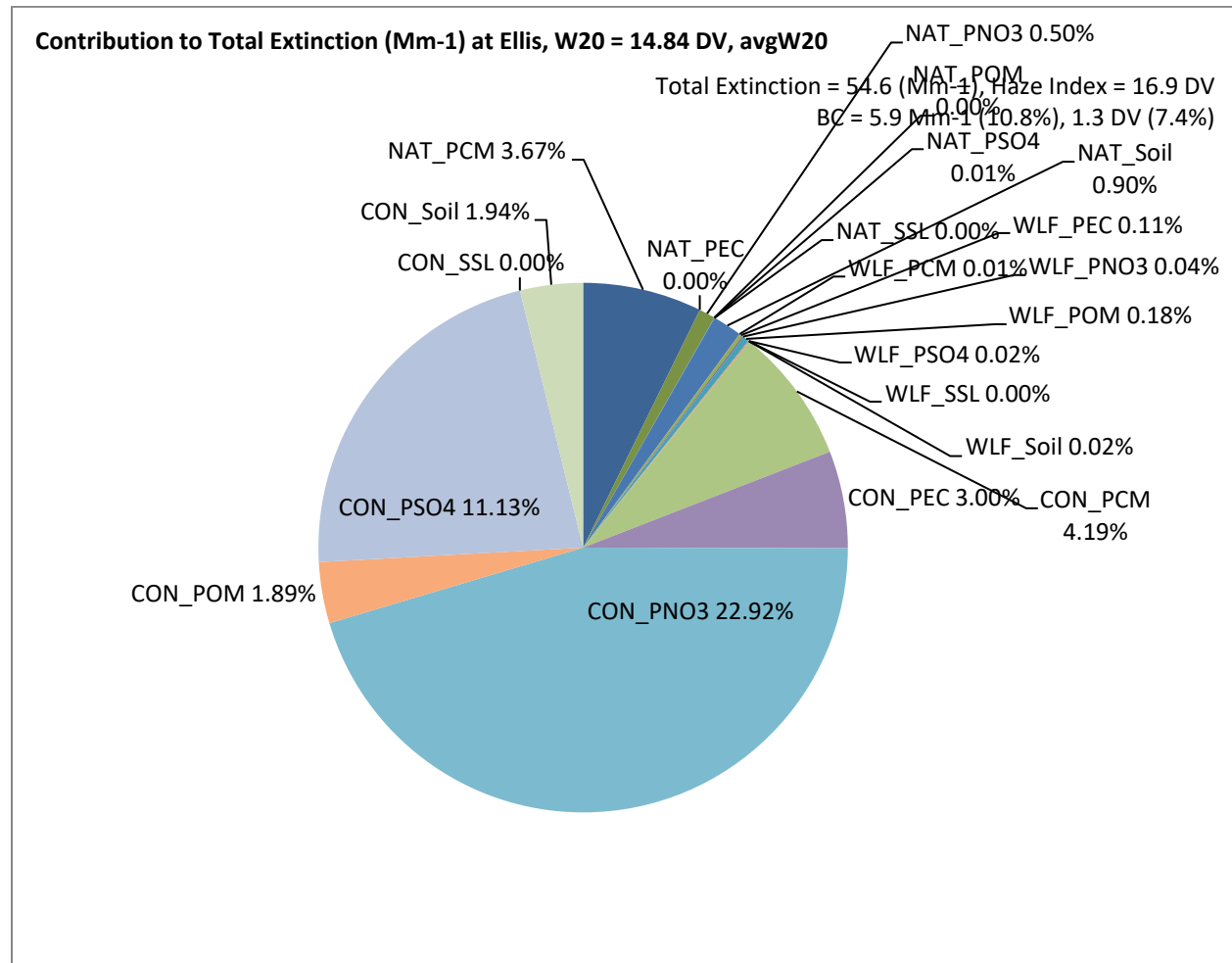
Total Extinction = 89.3 (Mm<sup>-1</sup>), Haze Index = 21.8 DV  
BC = 5.7 Mm<sup>-1</sup> (6.4%), 0.7 DV (3.3%)



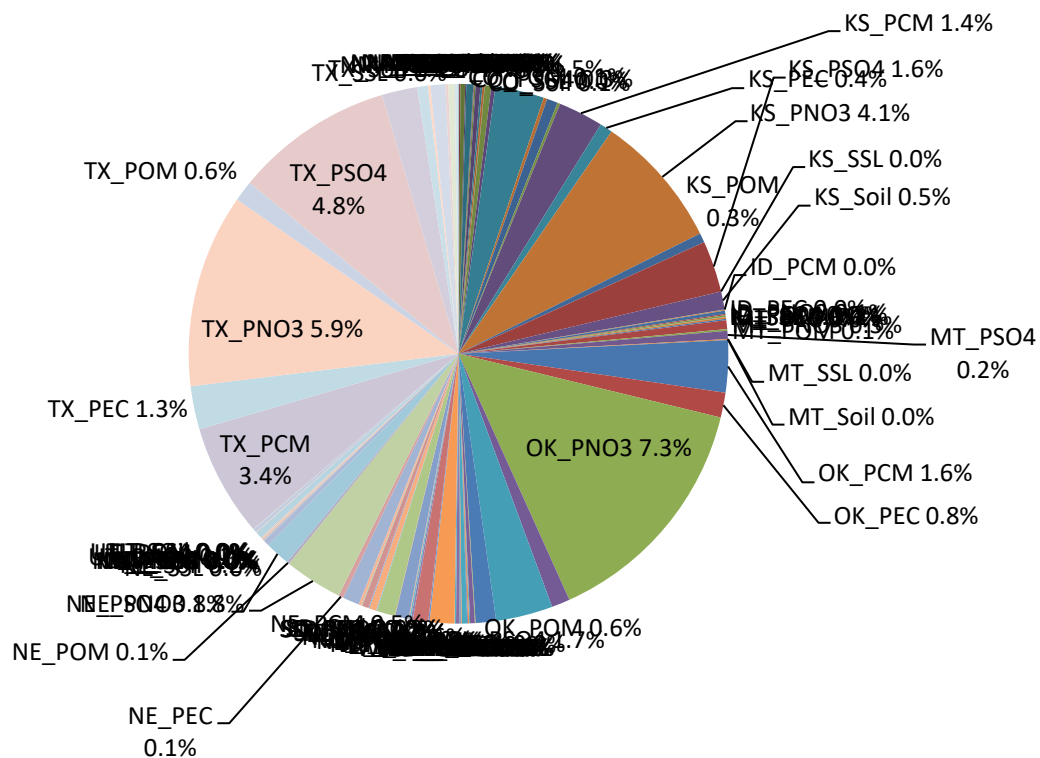
**Total Extinction = 89.3 (Mm<sup>-1</sup>), Haze Index = 21.8 DV  
BC = 5.7 Mm<sup>-1</sup> (6.4%), 0.7 DV (3.3%)**



## Ellis



**Total Extinction = 54.6 (Mm<sup>-1</sup>), Haze Index = 16.9 DV  
BC = 5.9 Mm<sup>-1</sup> (10.8%), 1.3 DV (7.4%)**

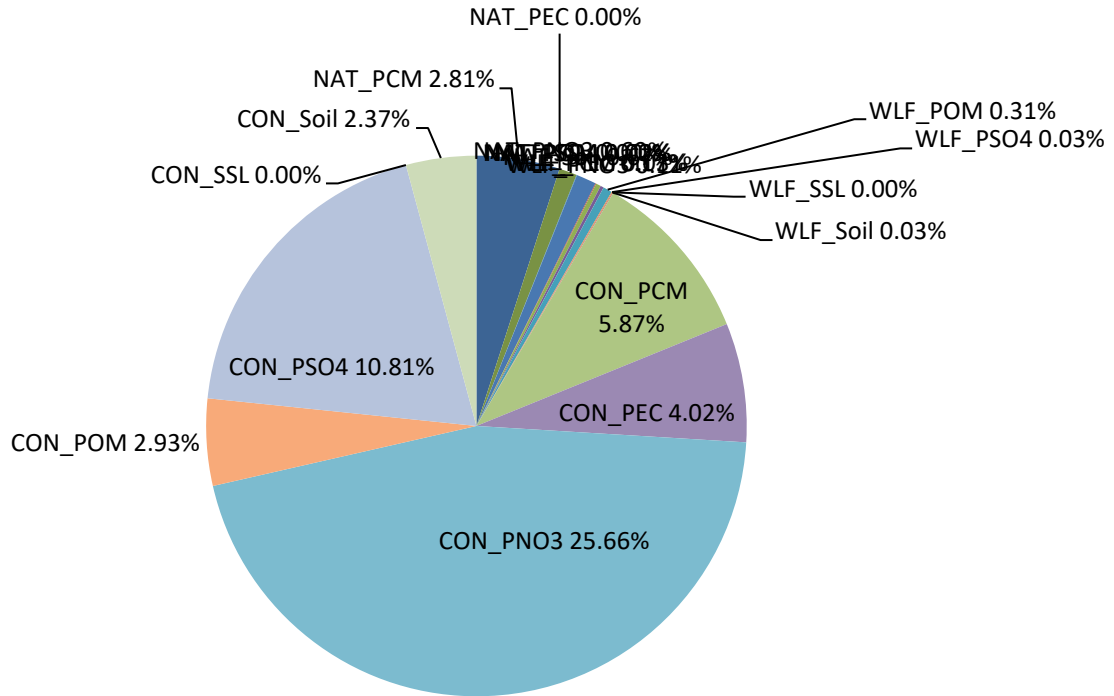


## Wichita Mountains Wildlife Refuge

### Contribution to Total Extinction (Mm-1) at Wichita Mountains, W20 = 16.20 DV, avgW20

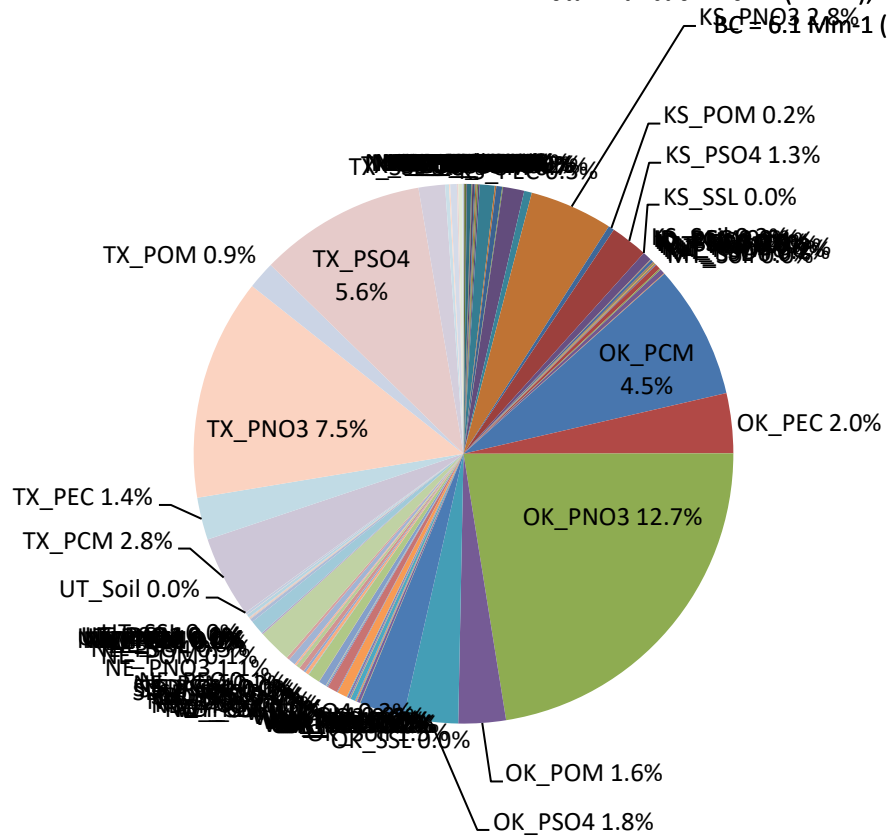
Total Extinction = 67.7 (Mm-1), Haze Index = 18.9 DV

BC = 6.1 Mm-1 (9.1%), 1.1 DV (5.6%)



**Contribution to Total Extinction (Mm-1) at Wichita Mountains, W20 = 16.20 DV, avgW20**

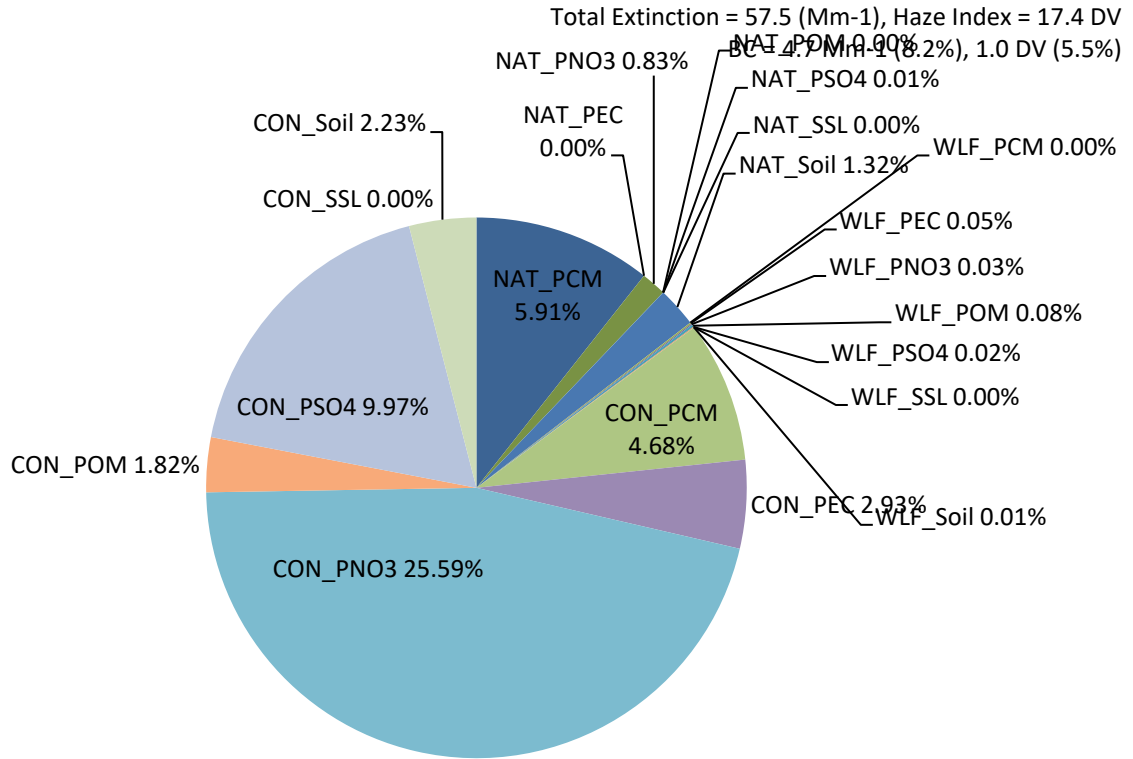
Total Extinction = 67.7 (Mm-1), Haze Index = 18.9 DV  
 BC = 6.1 Mm-1 (9.1%), 1.1 DV (5.6%)



## Kansas IMPROVE sites

### Cedar Bluff

#### Contribution to Total Extinction (Mm-1) at Cedar Bluff, W20 = 15.50 DV, avgW20



[illegible]

Total Extinction = 57.5 (Mm<sup>-1</sup>), Haze Index = 17.4 DV  
BC = 4.7 Mm<sup>-1</sup> (8.2%), 1.0 DV (5.5%)

CO\_SS  
0.0%

CO Soil 0.1%

KS PEC 1.5%

KS PNO3 9.0%

\_KS POM 0.8%

S PSO4 2.1%

KS\_SSL  
0.0%

TX PSO4 2.8%

TX PNO3 3.1%

TX PEC 0.4%

TX PCM 1.4%

NE\_PSO  
1.0%

NE PCN 10

SD POM C

SD Soil 0.1%

SDcRN63-0.08

SD PCM 0.3%

ND, PEC 0.0% NB

0.1%  $\bar{Y}$  POWER

WY\_PEC 0.1%

OK PSO4 1 7

OK\_POM

OK

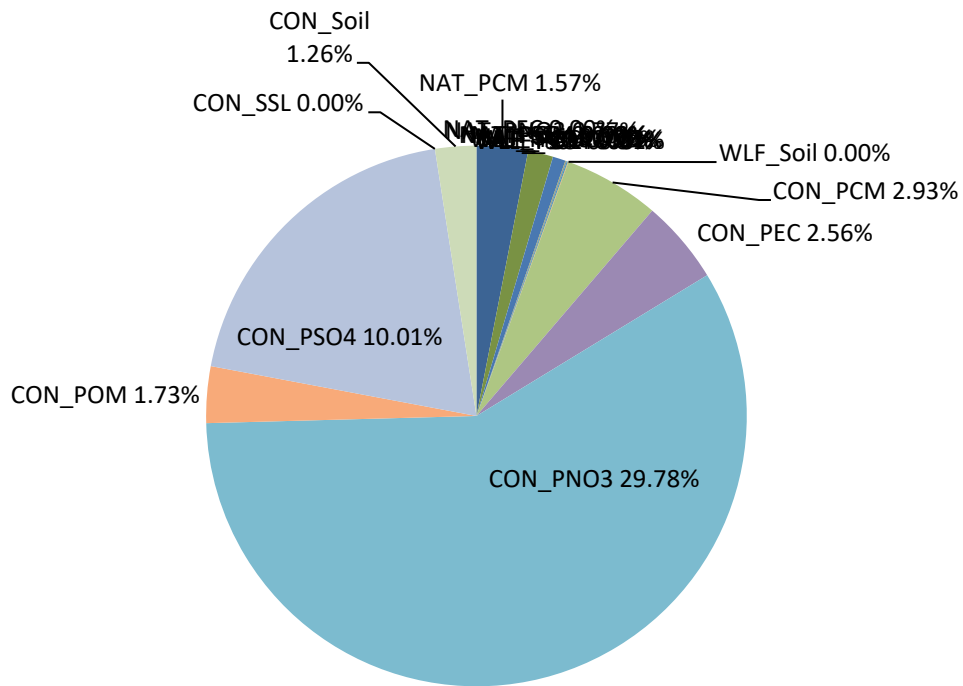
OK\_PNO3 4.2%\_



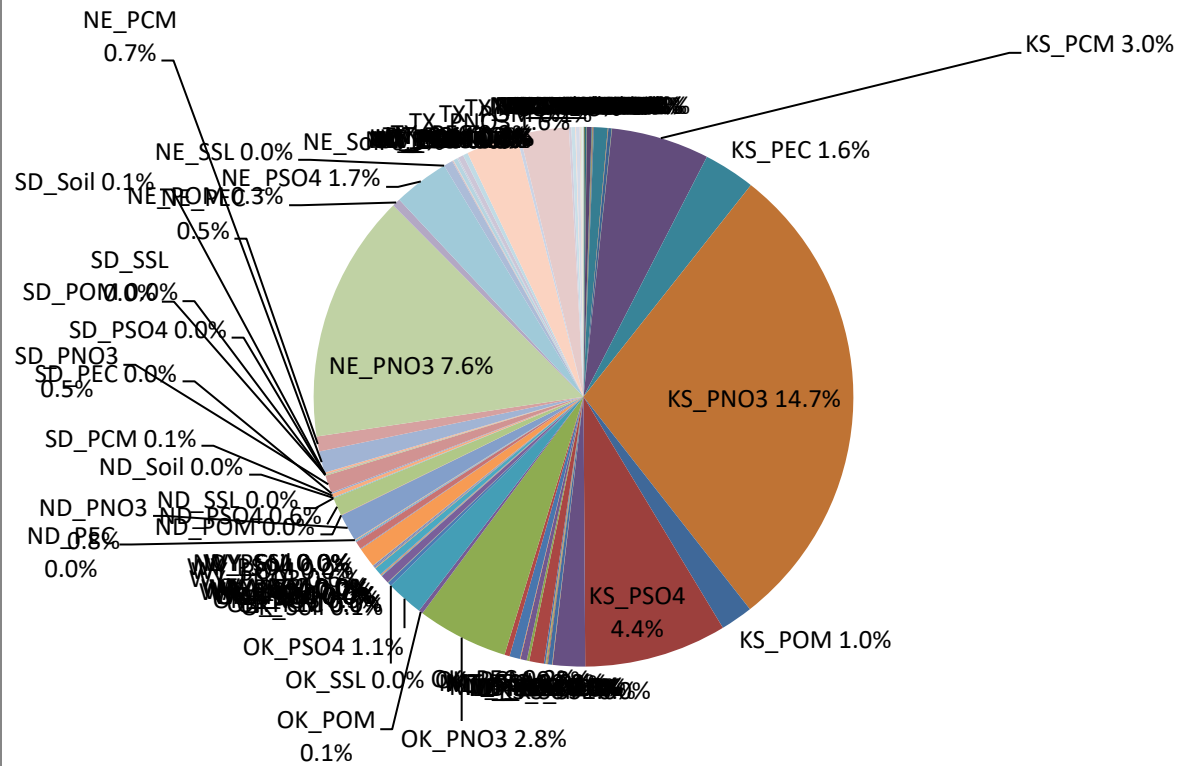
## Sac and Fox Nation

### Contribution to Total Extinction (Mm-1) at Sac and Fox, W20 = 22.00 DV, avgW20

Total Extinction = 119.8 (Mm-1), Haze Index = 24.7 DV  
BC = 5.1 Mm-1 (4.3%), 0.5 DV (2.0%)



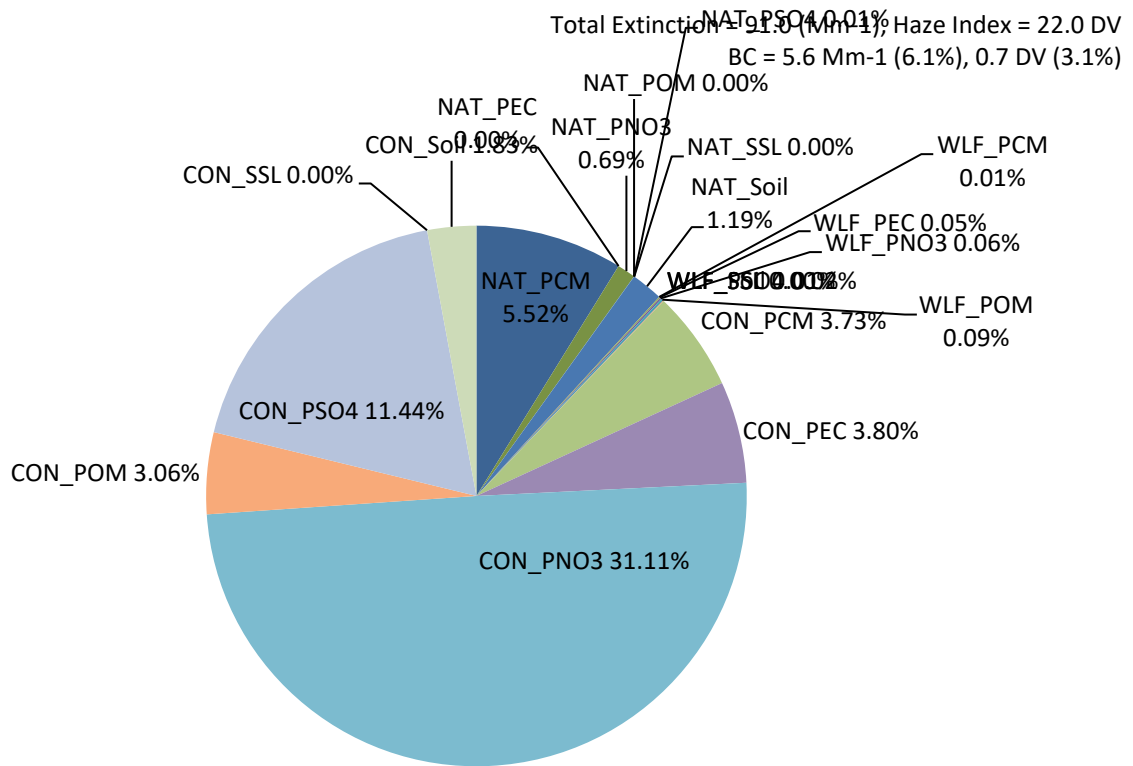
Total Extinction = 119.8 (Mm<sup>-1</sup>), Haze Index = 24.7 DV  
BC = 5.1 Mm<sup>-1</sup> (4.3%), 0.5 DV (2.0%)



**Contribution to Total Extinction (Mm<sup>-1</sup>) at Tallgrass, W20 = 19.75 DV, avgW20**

Total Extinction = 91.0 (Mm<sup>-1</sup>); Haze Index = 22.0 DV  
BC = 5.6 Mm<sup>-1</sup> (6.1%), 0.7 DV (3.1%)

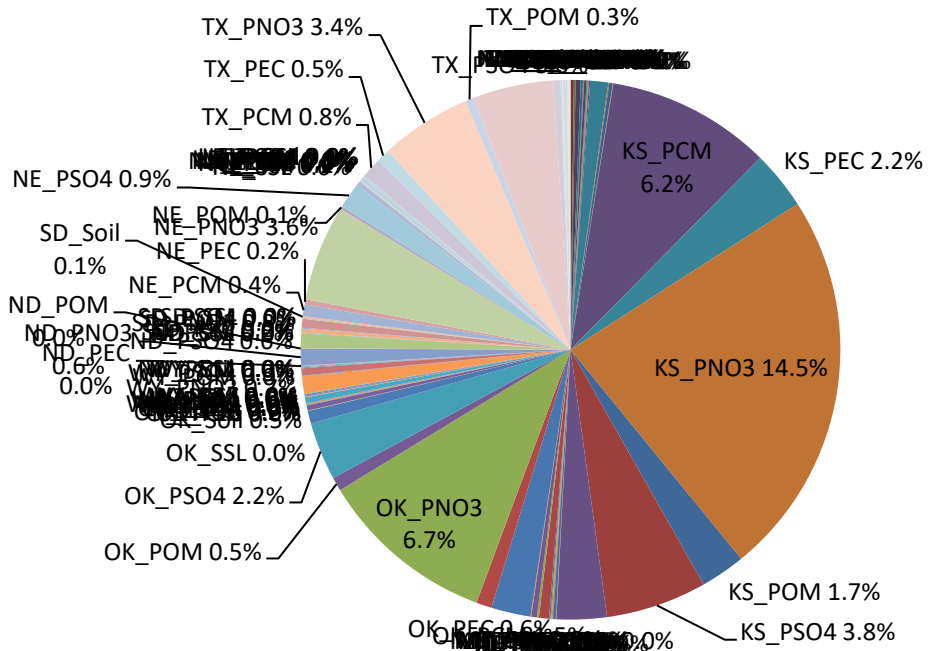
Species	Contribution (%)
CON_PNO3	31.11%
CON_PSO4	11.44%
CON_POM	3.06%
CON_PEC	3.80%
CON_PCM	3.73%
NAT_PCM	5.52%
CON_Soil	1.83%
NAT_Soil	1.19%
NAT_PNO3	0.69%
WLF_PNO3	0.06%
WLF_POM	0.09%
WLF_PEC	0.05%
WLF_PCM	0.01%
NAT_PSO4	0.01%
NAT_POM	0.00%
NAT_PEC	0.00%
CON_SSL	0.00%
NAT_SSL	0.00%
WLF_SSL	0.00%



**Contribution to Total Extinction (Mm-1) at Tallgrass, W20 = 19.75 DV, avgW20**

Total Extinction = 91.0 (Mm-1), Haze Index = 22.0 DV

BC = 5.6 Mm-1 (6.1%), 0.7 DV (3.1%)

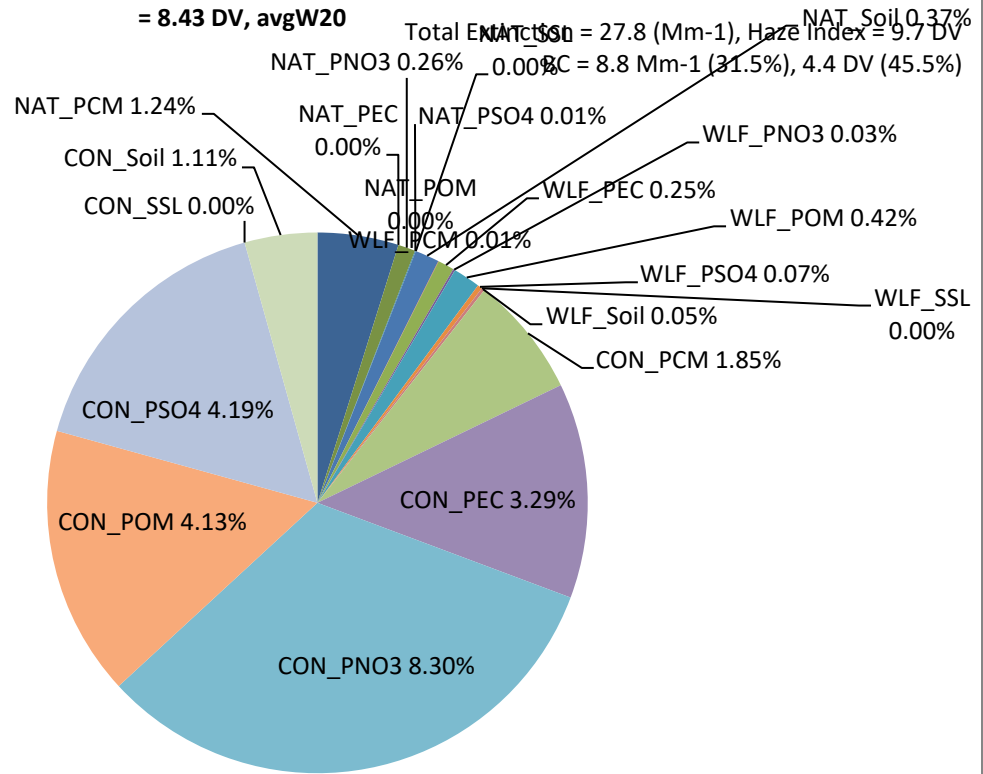


## Southern Colorado IMPROVE sites

### Great Sand Dunes National Monument

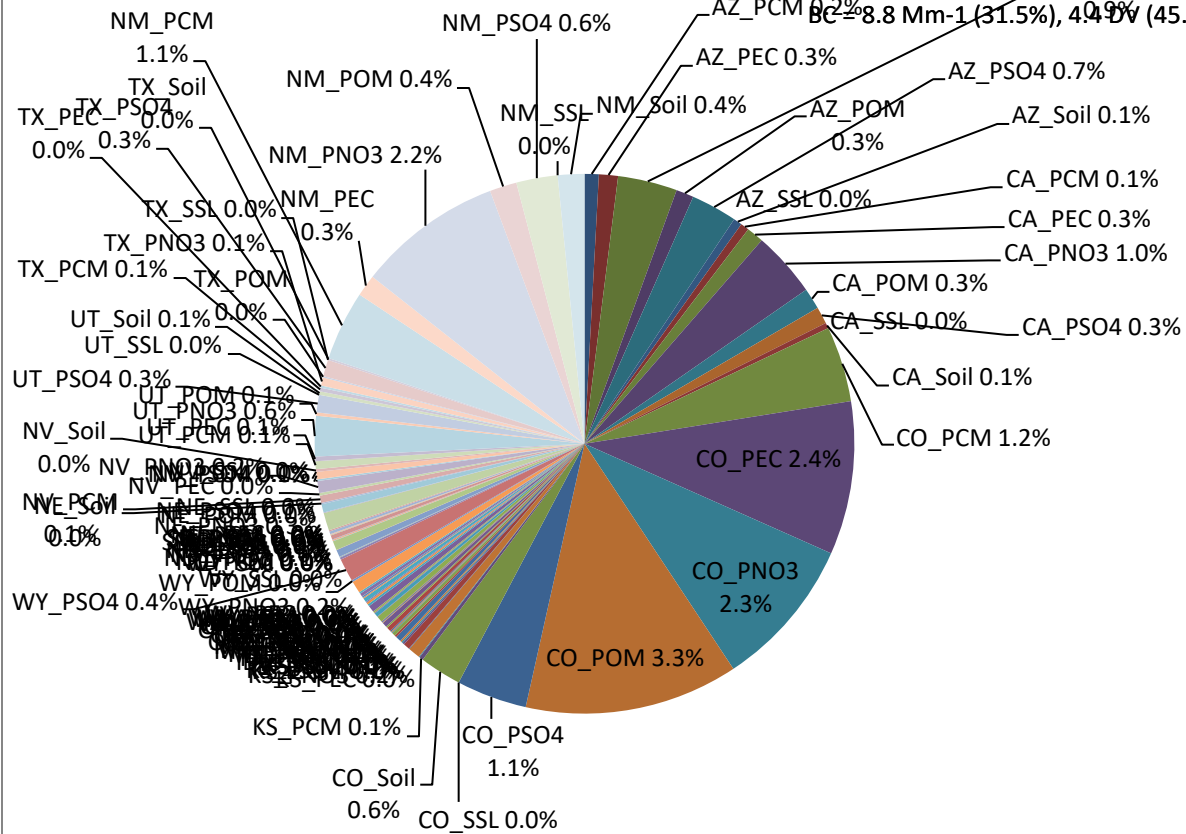
#### Contribution to Total Extinction (Mm-1) at Great Sand Dunes National Monument, W20

= 8.43 DV, avgW20



**= 8.43 DV, avgW20**

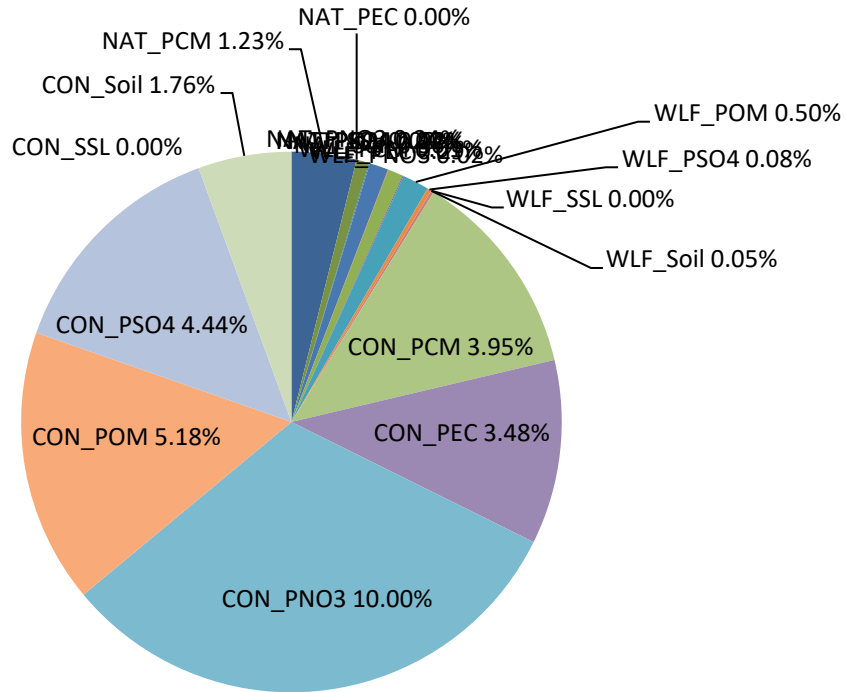
~~Total Extinction = 27.8 (Mm-1), Haze Index = 9.7 DV~~  
~~AZ\_PCM BC = 8.8 Mm-1 (31.5%), 4.4 DV (45.5%)~~



## Mesa Verde National Park

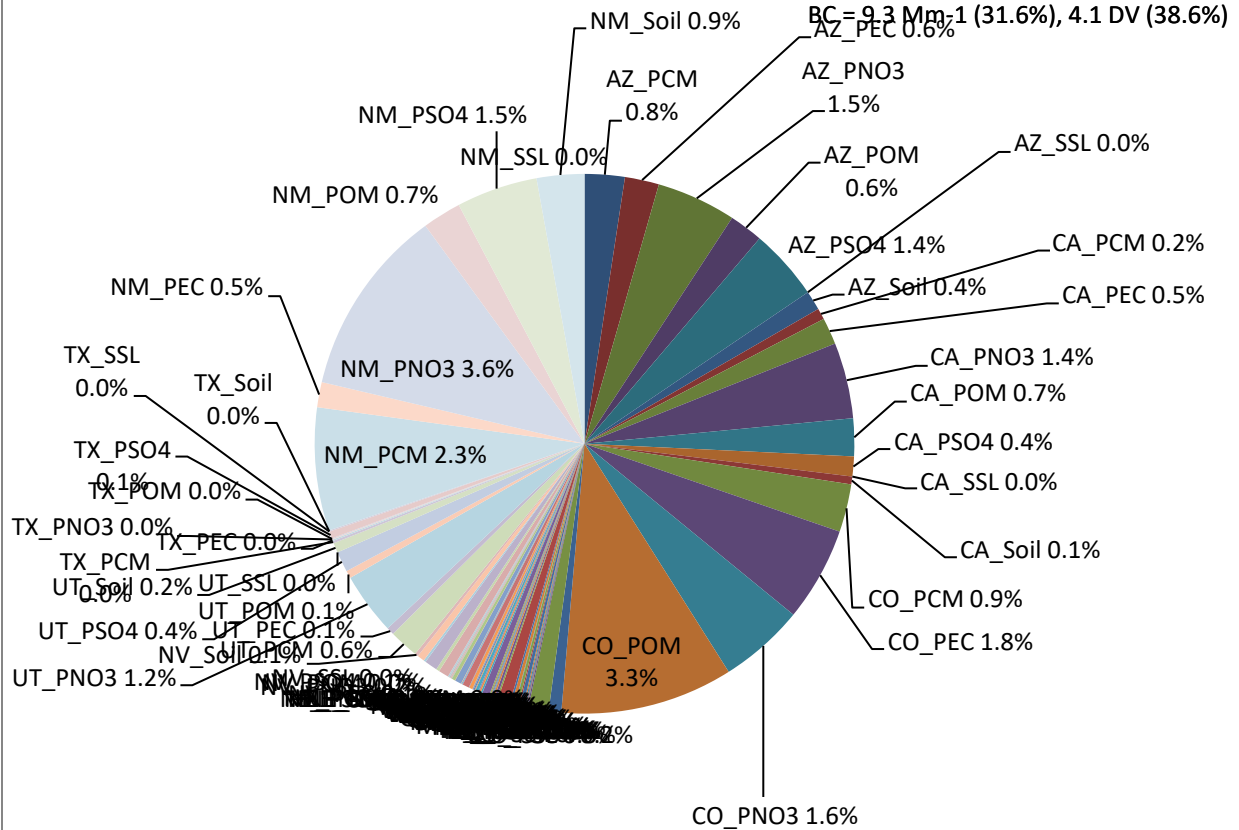
**Contribution to Total Extinction (Mm-1) at Mesa Verde National Park, W20 = 9.75 DV,  
avgW20**

Total Extinction = 29.3 (Mm-1), Haze Index = 10.7 DV  
BC = 9.3 Mm-1 (31.6%), 4.1 DV (38.6%)



**avgW20**

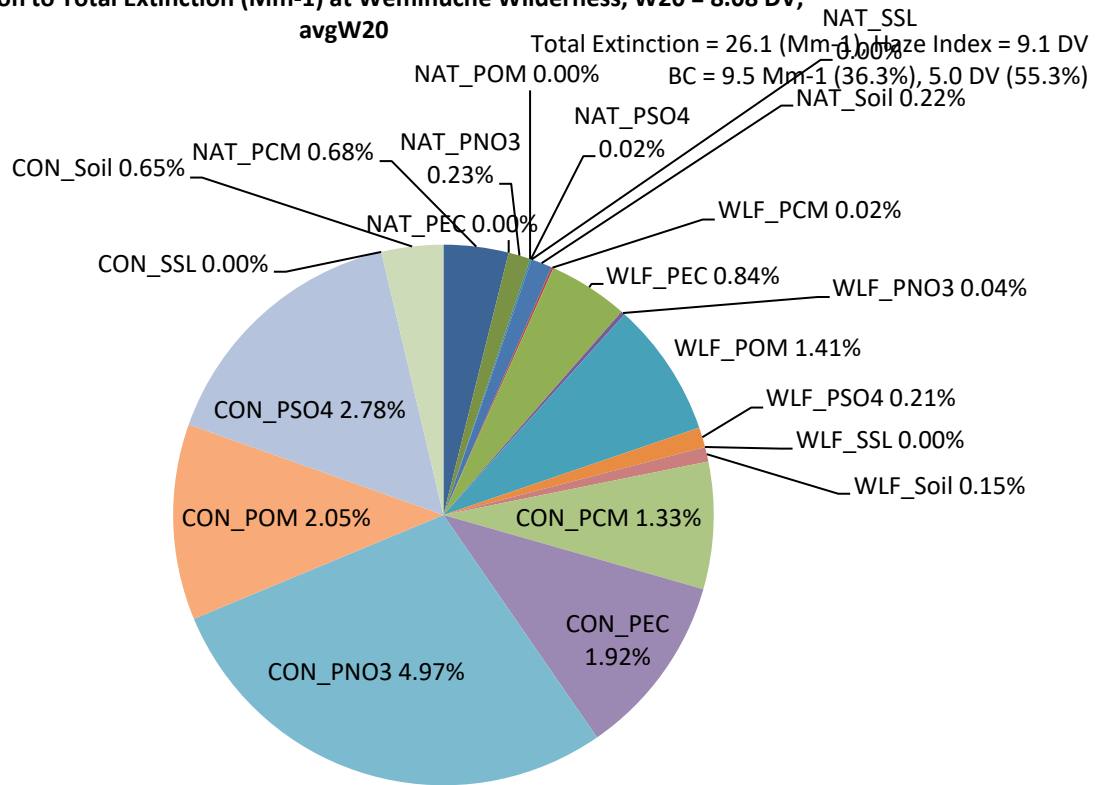
Soil 0.9% BC = 9.3 Mm<sup>-1</sup> (31.6%), 4.1 DV (38.6%)





## Weminuche Wilderness

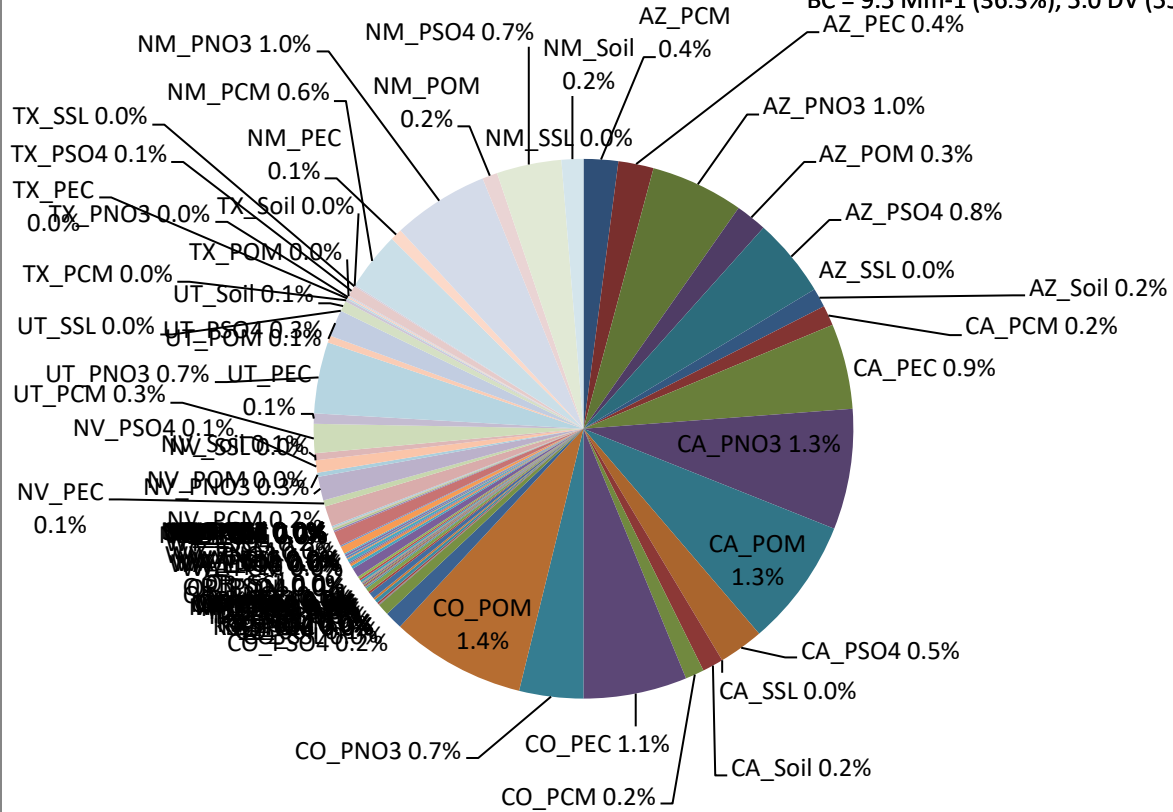
**Contribution to Total Extinction (Mm-1) at Weminuche Wilderness, W20 = 8.08 DV, avgW20**



**Contribution to Total Extinction (Mm-1) at Weminuche Wilderness, W20 = 8.08 DV,  
avgW20**

Total Extinction = 26.1 (Mm-1), Haze Index = 9.1 DV

BC = 9.5 Mm-1 (36.3%), 5.0 DV (55.3%)



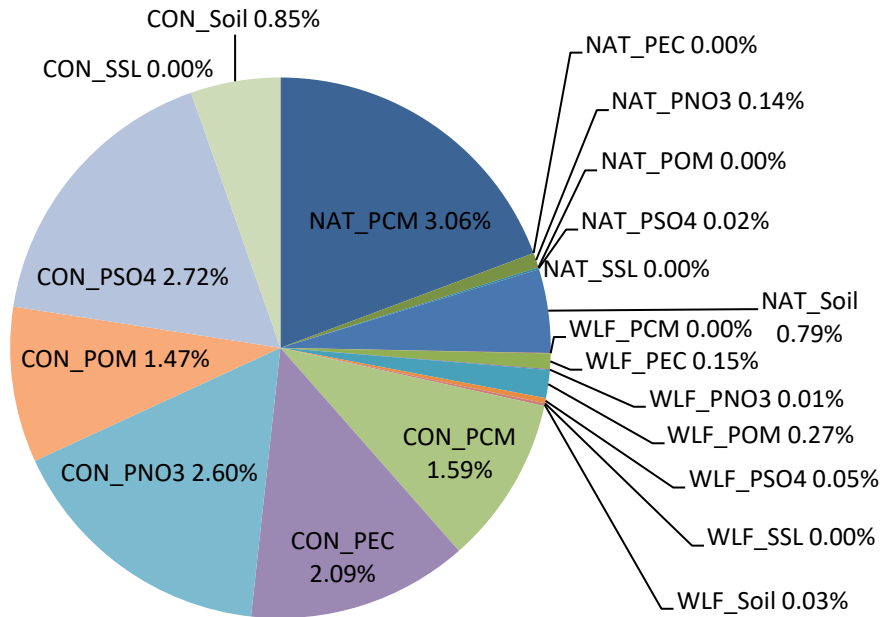
## Eastern Arizona IMPROVE sites

### Chiricahua National Monument

#### Contribution to Total Extinction (Mm-1) at Chiricahua National Monument, W20 = 10.07

DV, avgW20

Total Extinction = 32.5 (Mm-1), Haze Index = 11.1 DV  
BC = 9.6 Mm-1 (29.6%), 4.3 DV (38.8%)

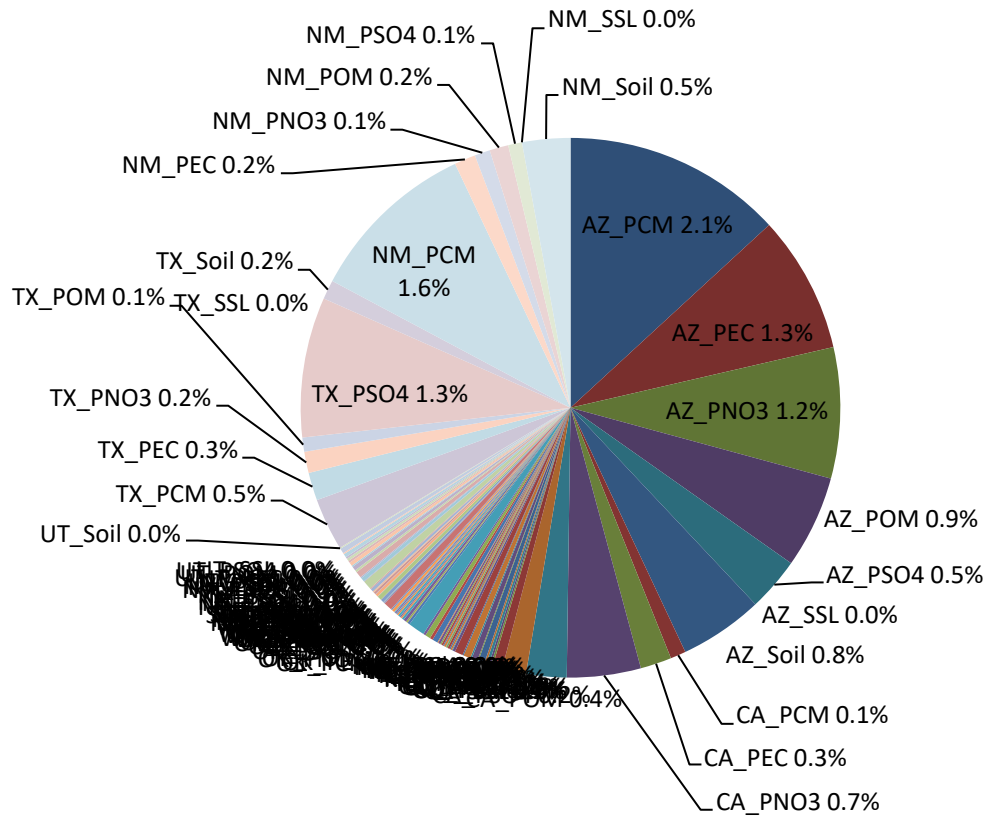


**Contribution to Total Extinction (Mm-1) at Chiricahua National Monument, W20 = 10.07**

**DV, avgW20**

Total Extinction = 32.5 (Mm-1), Haze Index = 11.1 DV

BC = 9.6 Mm-1 (29.6%), 4.3 DV (38.8%)



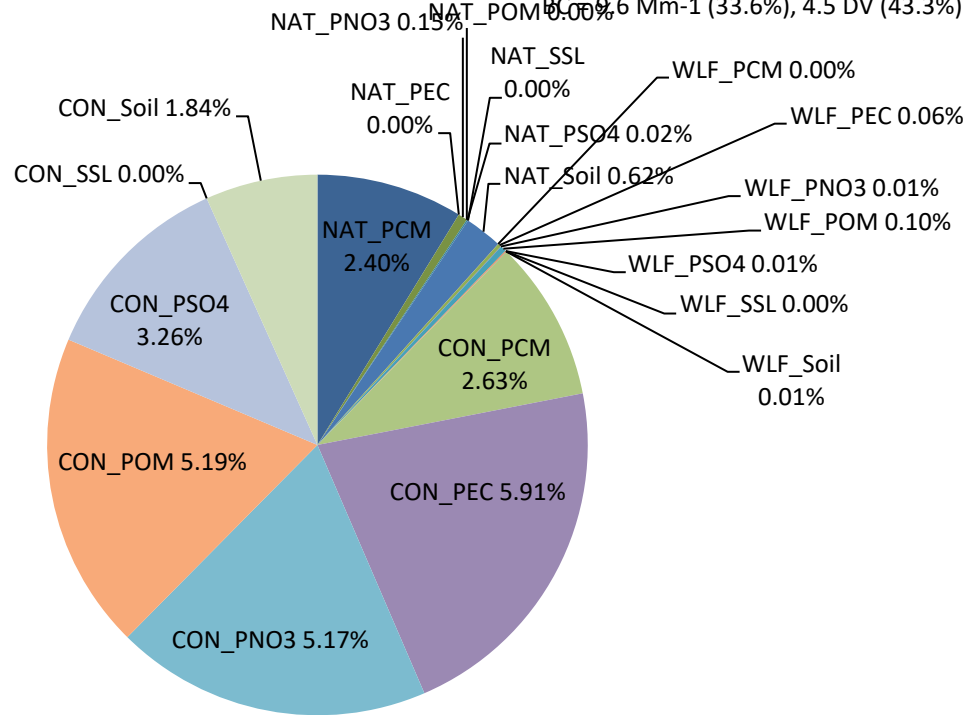
## Petrified Forest National Park

### Contribution to Total Extinction (Mm-1) at Petrified Forest National Park, W20 = 9.08

DV, avgW20

Total Extinction = 28.6 (Mm-1), Haze Index = 10.4 DV

PC = 9.6 Mm-1 (33.6%), 4.5 DV (43.3%)



# Contribution to Total Extinction (Mm-1) at Petrified Forest National Park, W20 = 9.08

DV, avgW20

Total Extinction = 28.6 (Mm-1), Haze Index = 10.4 DV

BC = 9.6 Mm-1 (33.6%), 4.5 DV (43.3%)

