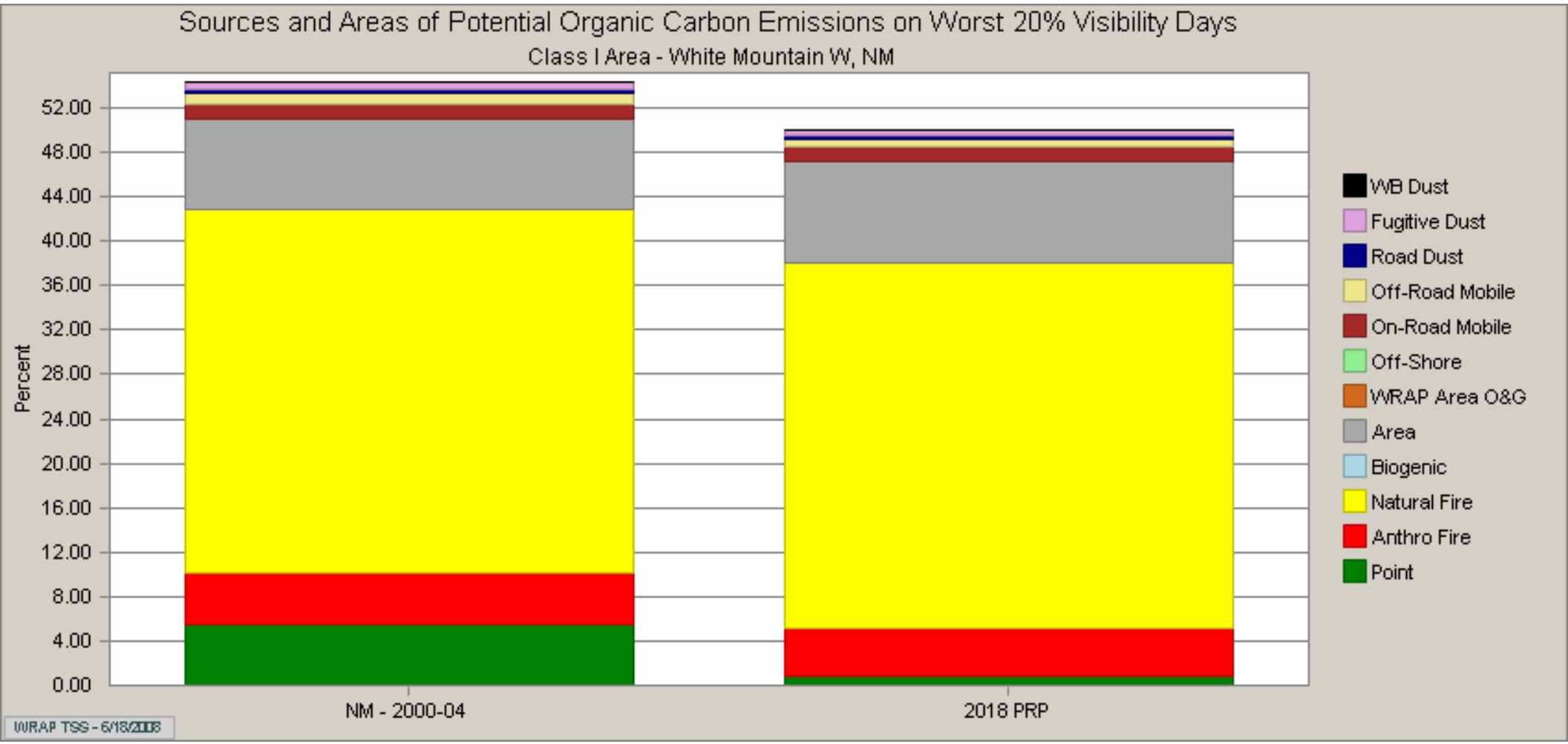
White Mountain Wilderness Area [WHIT]
Organic Carbon (OC)

The largest potential contributor to visibility impairment by OC at WHIT in 2000-04 and 2018 is from Natural Fire, followed by Area Sources, Point Sources, and Anthropogenic Fire (see bar graph). Looking at the map of Normalized Weighted Emissions Potential (WEP) for WHIT, the nearest WEP% values to Bernalillo County are 1-10% for 2000-04 and 2018.

In 2002, Bernalillo's OC emissions from natural fire were 14.947 TPY, which is 0.09% of New Mexico's 16,271.936 TPY, and the predicted emissions in 2018 remain constant at 2002 values. Bernalillo County's OC emissions from Area sources in 2002 were 506.5 TPY which is 20% of New Mexico's 2529.24 TPY, and the predicted emissions in 2018 are 569.04 TPY which is 20% of New Mexico's 2847.89 TPY.

The 2002 emissions inventory indicates that Bernalillo County's contribution to OC emissions from natural fire is minimal (0.09%), and Bernalillo County is in proximity to only low WEP% values, so it is unlikely that Bernalillo County's OC emissions contribute significantly to the visibility impairment at WHIT.

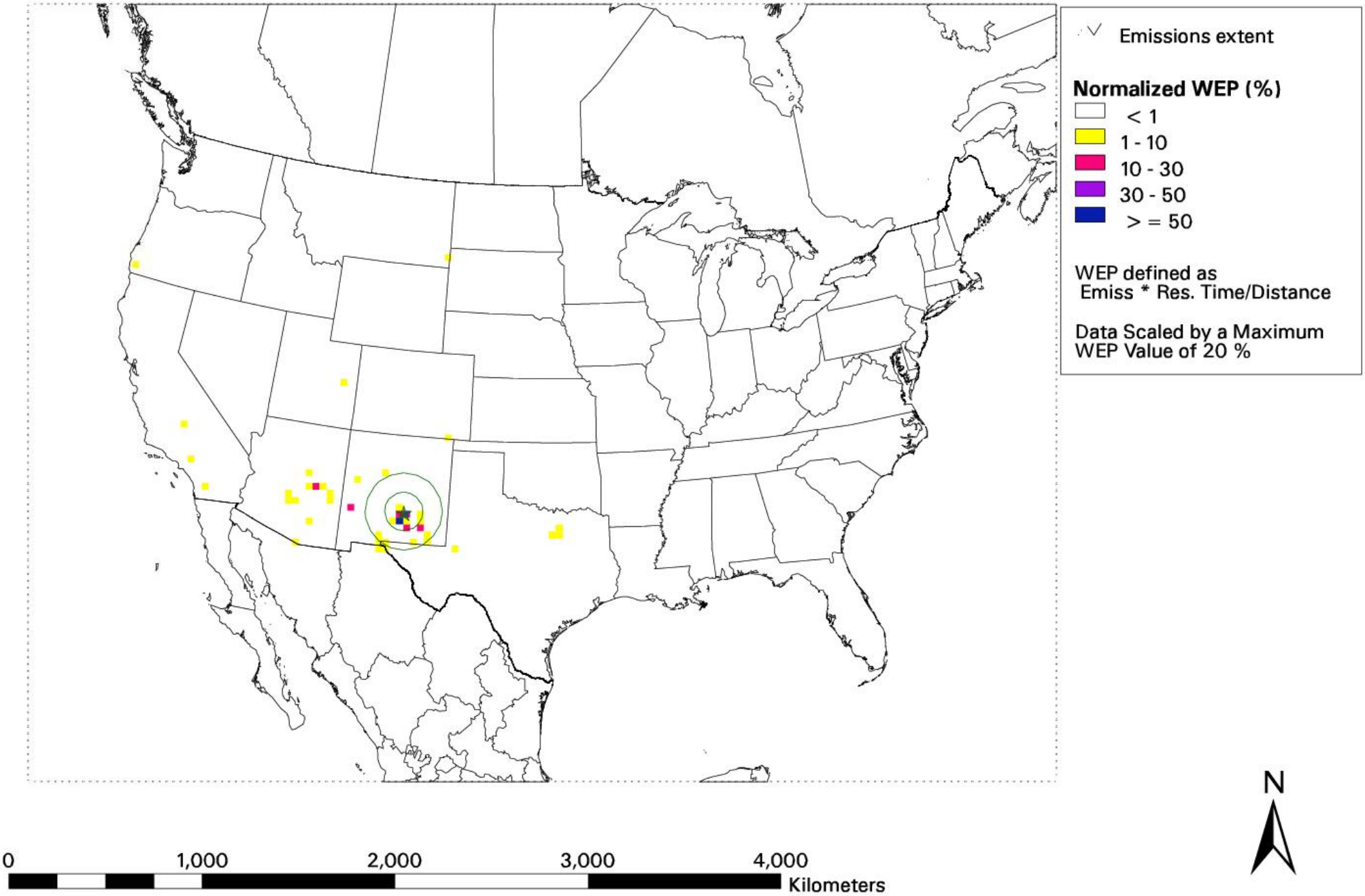

Sources and Areas of Potential Organic Carbon Emissions on Worst 20% Visibility Days
Class I Area - White Mountain W, NM
Percent
52.00
48.00
44.00
40.00
36.00
32.00
28.00
24.00
20.00
16.00
12.00
8.00
4.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/18/2008

White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Organic Carbon (POA)

2000-04 Baseline

20% Worst Visibility Days

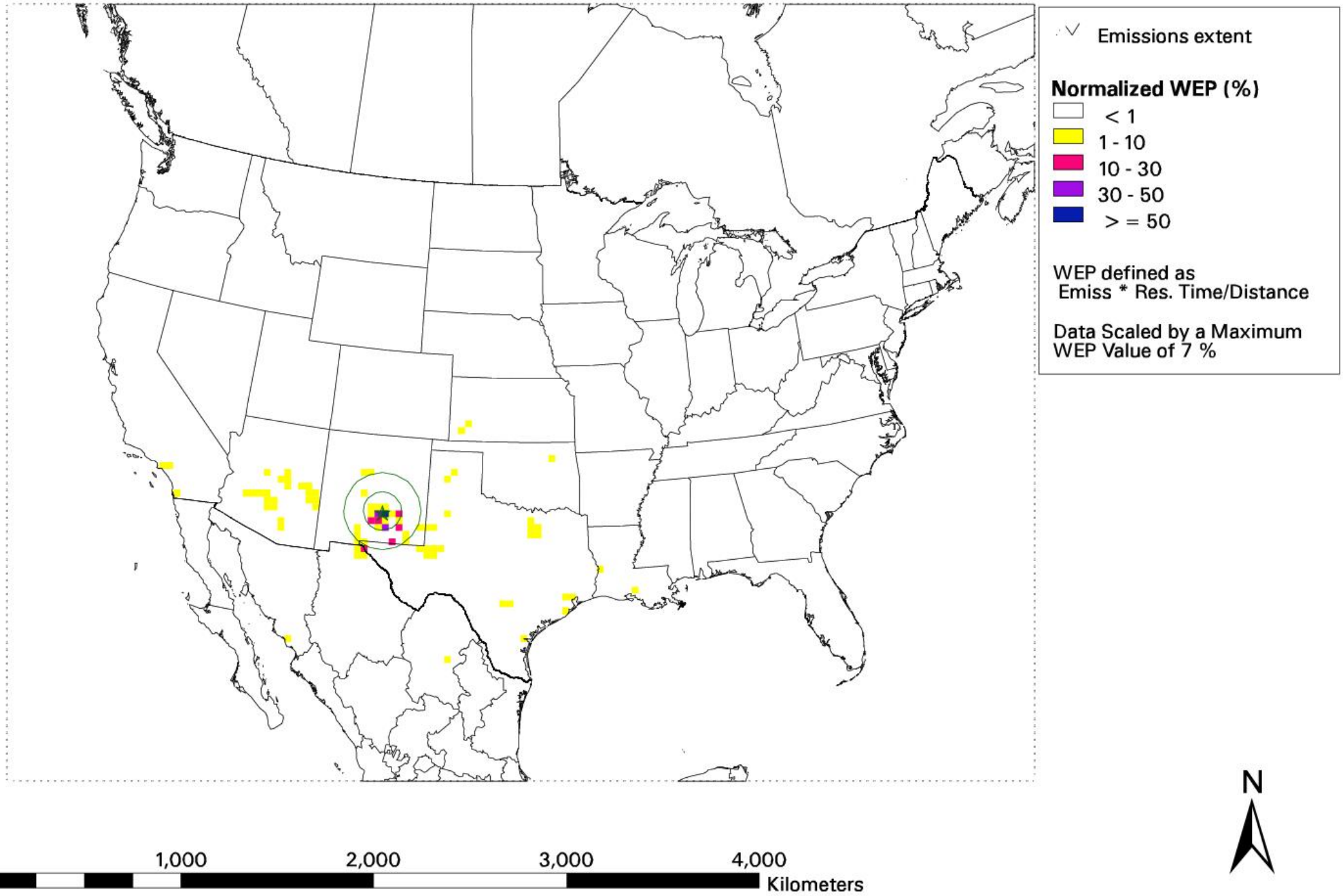


White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Organic Carbon (POA)

2018 Preliminary Reasonable Progress

20% Worst Visibility Days

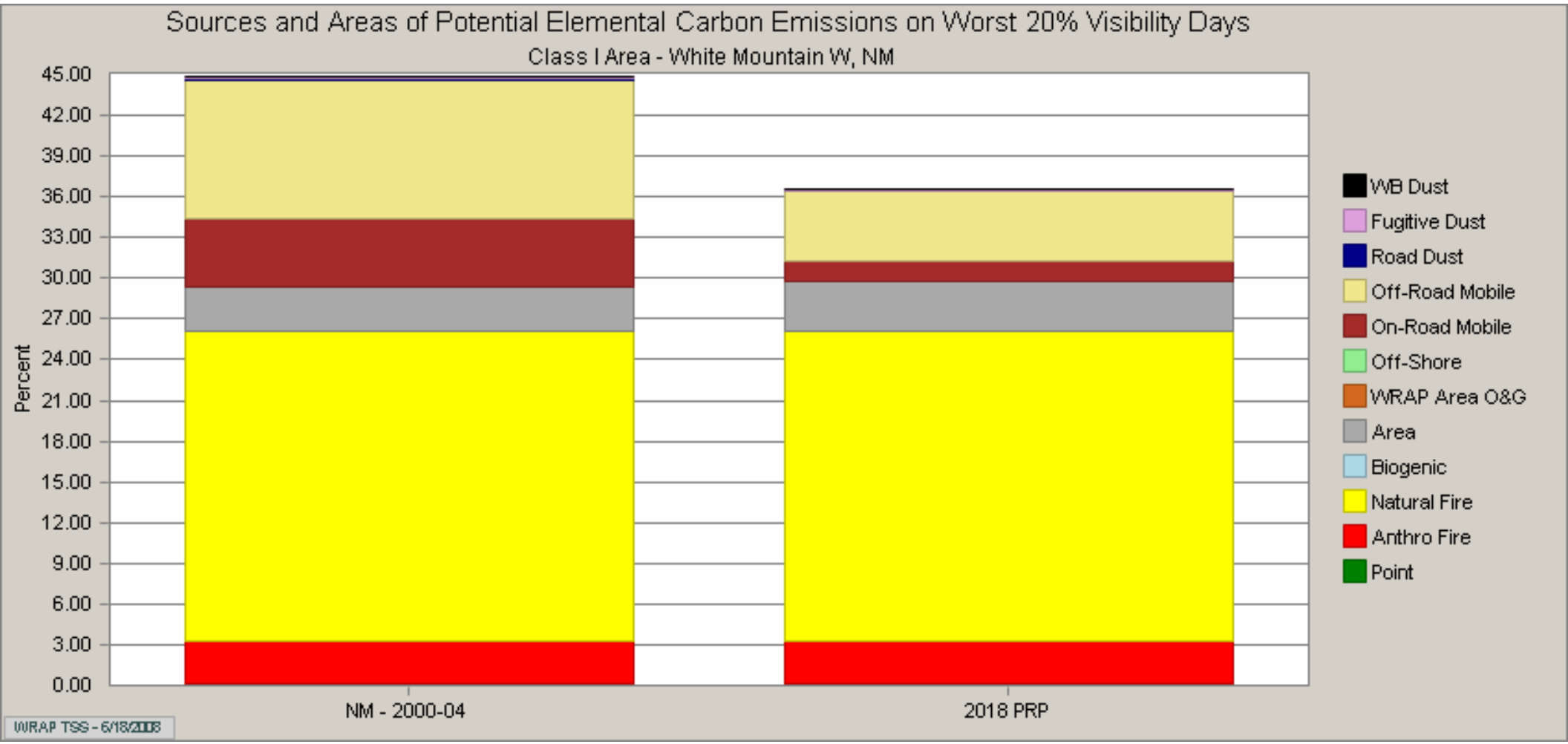


White Mountain Wilderness Area [WHIT]
Elemental Carbon (EC)

The largest potential contributor to visibility impairment at WHIT from EC in 2000-04 and 2018 is Natural Fire, followed by Off-Road Mobile and On-Road Mobile (see bar graph). Looking at the map of Normalized Weighted Emissions Potential (WEP) for WHIT, the nearest WEP% values to Bernalillo County are 1-10% for 2000-04 and 2018.

IN 2002, Bernalillo County's EC emissions from Natural Fire were 2.307 TPY, which is 0.07% of New Mexico's 3293.129 TPY, and the predicted emissions for Bernalillo County in 2018 remain constant at 2002 values. Bernalillo County's EC emissions from Off-Road Mobile were 171.0425 TPY in 2002, which is 11.2% of New Mexico's 1526.44 TPY, and the predicted emissions for Bernalillo County in 2018 are 81.73 TPY, which is 9.2% of New Mexico's 884.855 TPY. Bernalillo County's EC emissions from On-Road Mobile in 2002 were 170.2 TPY, which is 22.5% of New Mexico's 756.1025 TPY, and the predicted emissions for Bernalillo County in 2018 are 44.395 TPY, which is 21.7% of New Mexico's 204.775 TPY.

The 2002 emissions inventory indicates that Bernalillo County's contribution to natural fire emissions is minimal (0.07%), but Bernalillo County does contribute to Off-Road and On-Road emissions, and is in proximity to low WEP% values, so it is possible that Bernalillo County's EC emissions contribute significantly to the visibility impairment at WHIT.

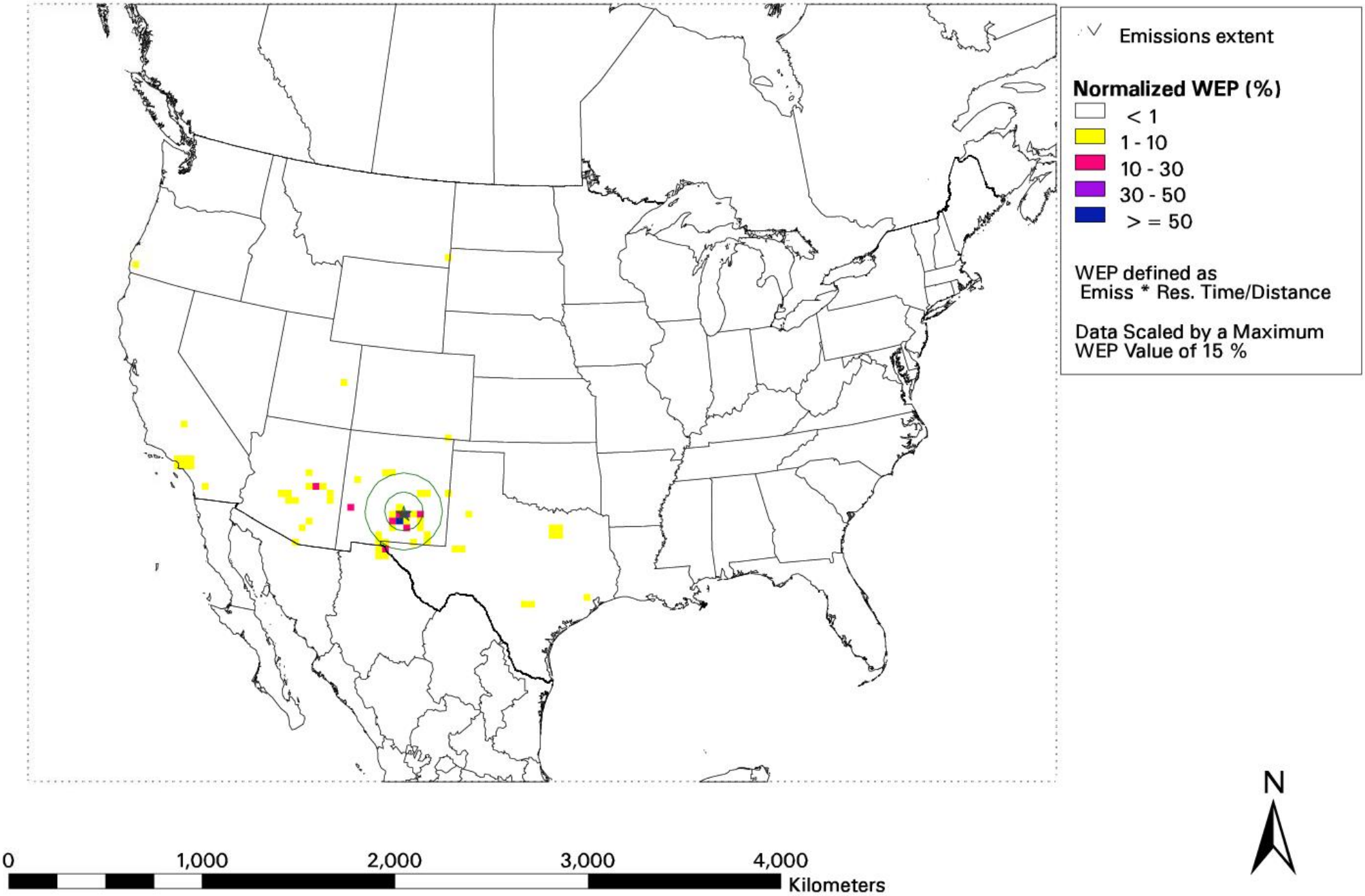

Sources and Areas of Potential Elemental Carbon Emissions on Worst 20% Visibility Days
Class I Area - White Mountain W, NM
Percent
45.00
42.00
39.00
36.00
33.00
30.00
27.00
24.00
21.00
18.00
15.00
12.00
9.00
6.00
3.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/18/2008

White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Elemental Carbon (PEC)

2000-04 Baseline

20% Worst Visibility Days

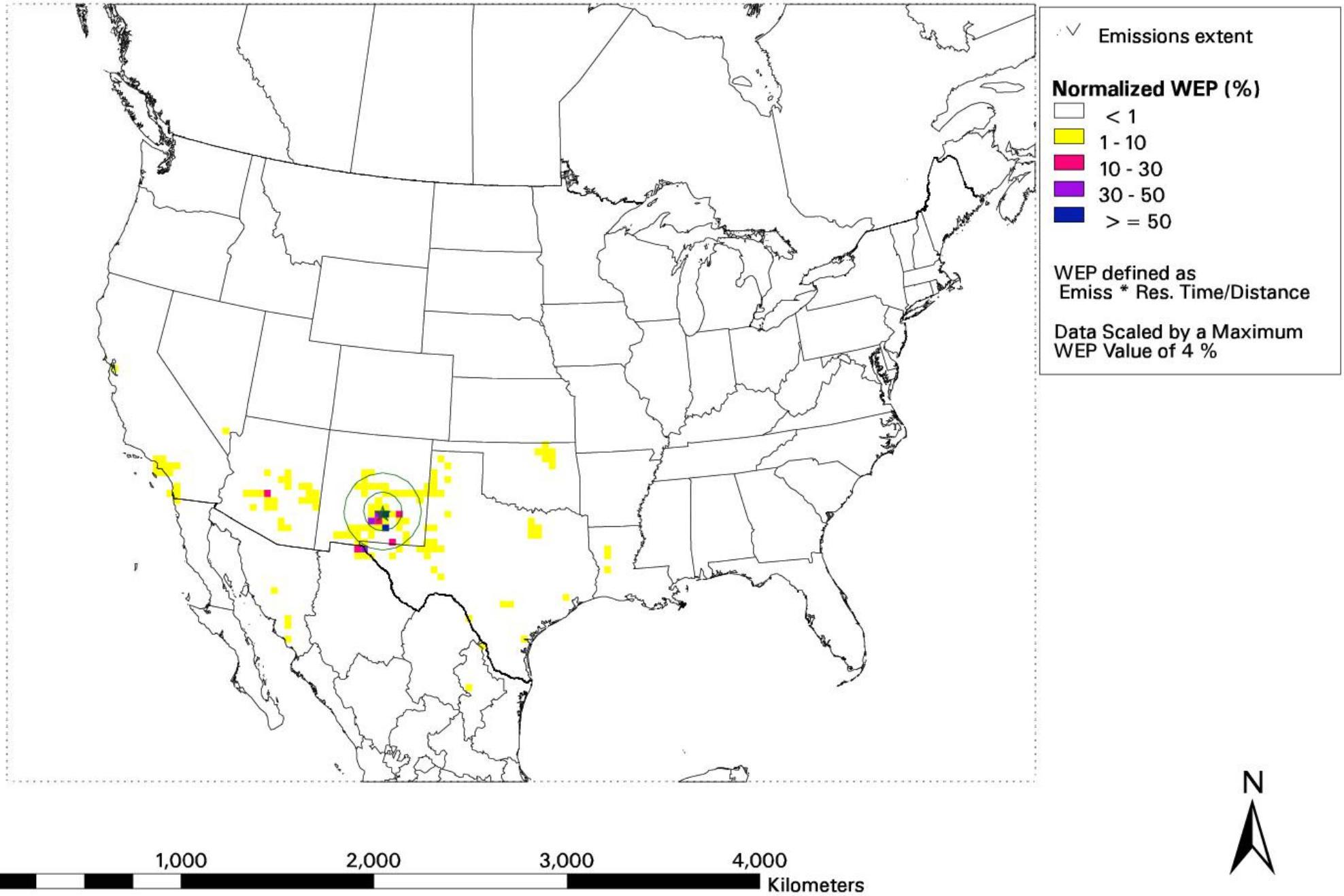


White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Elemental Carbon (PEC)

2018 Preliminary Reasonable Progress

20% Worst Visibility Days



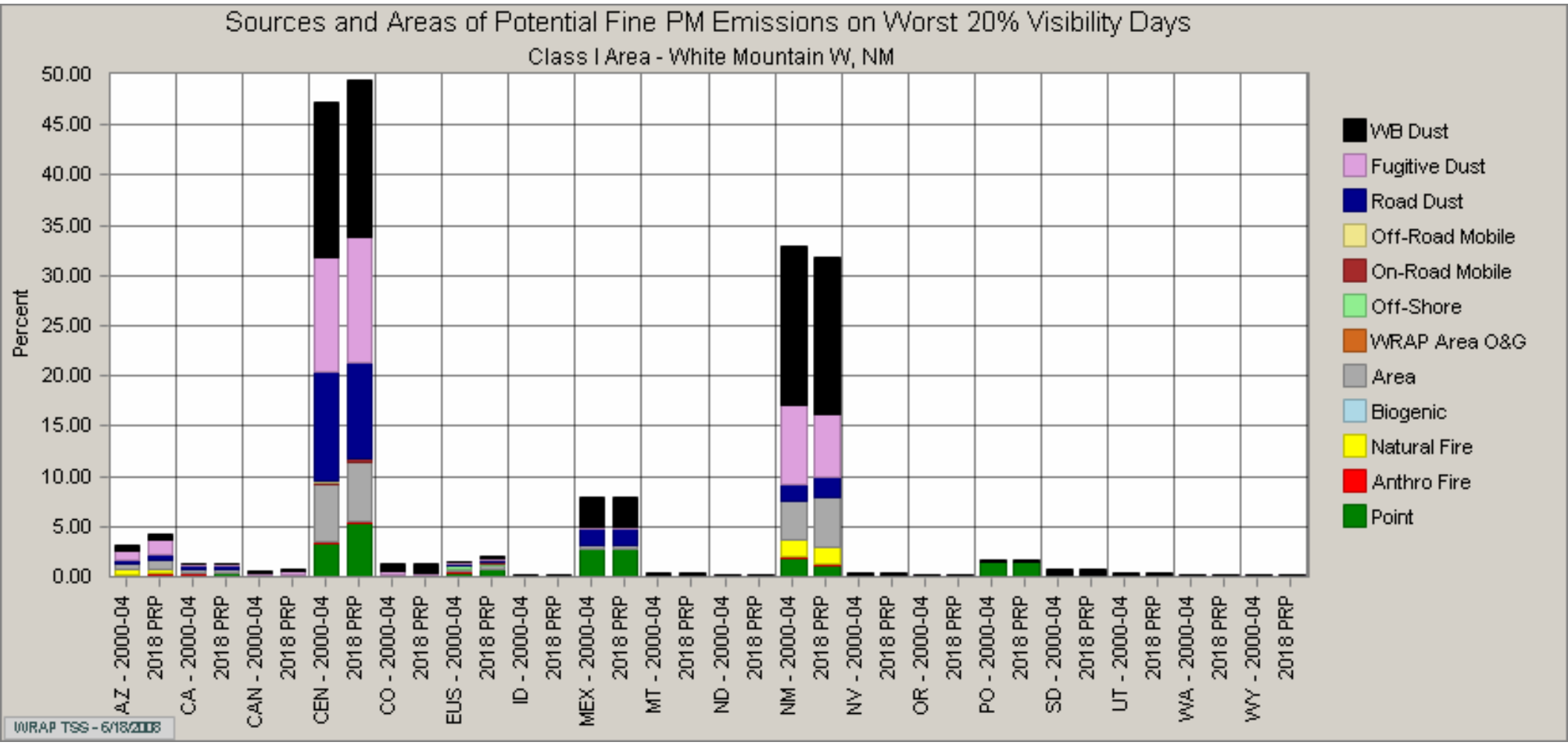
White Mountain Wilderness Area [WHIT]
Particulate Matter fine (PMf)

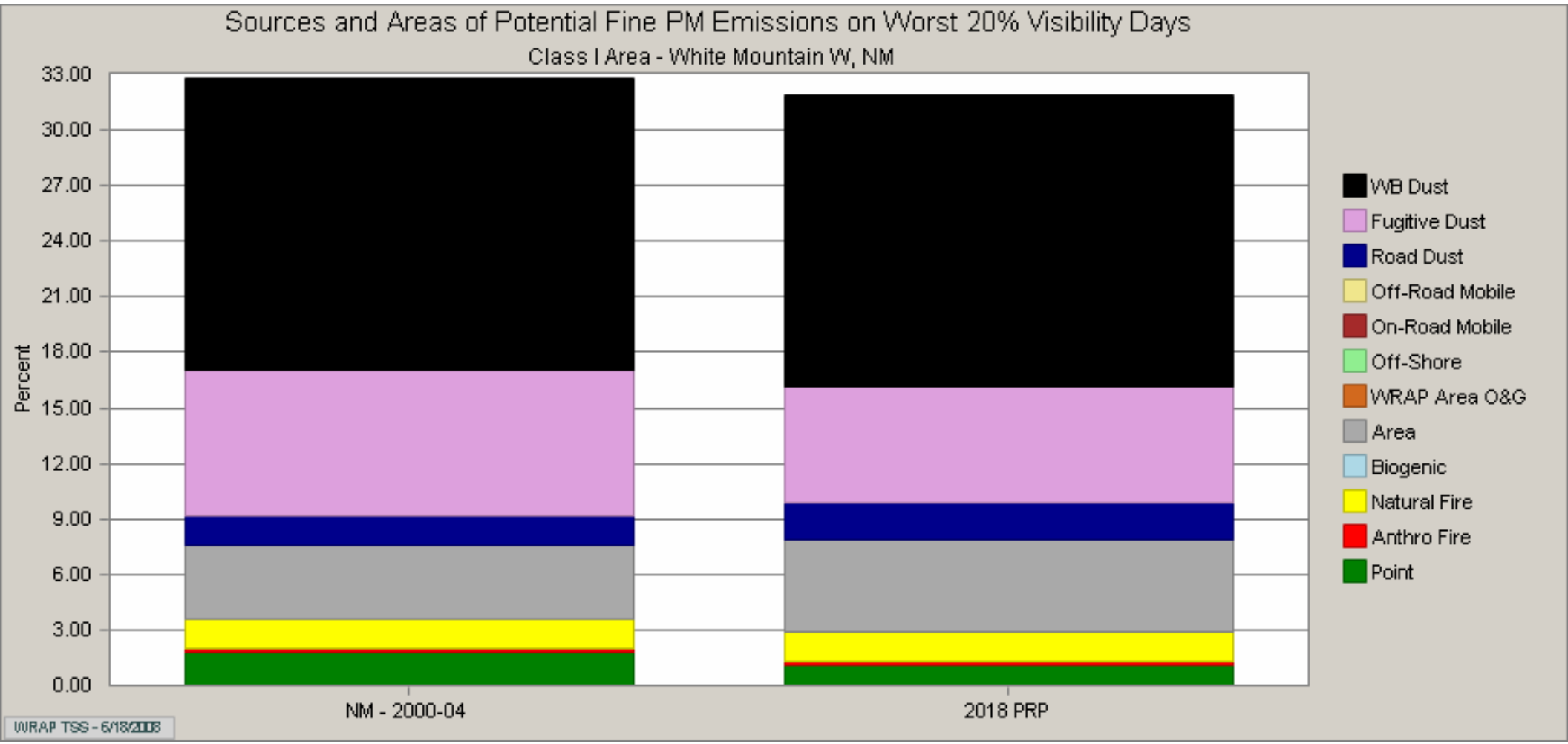
The largest potential contributor to visibility impairment in 2000-04 and 2018 from PMf is due to WB Dust, followed by Fugitive Dust and Area Sources (see bar graph). Looking at the map of Normalized Weighted Emissions Potential (WEP) for WHIT, the WEP% values closest to Bernalillo County are 10-30% for both 2000-04 and 2018.

In 2002, Bernalillo County's PMf emissions from WB Dust were 93.5505 TPY, which is 0.57% of New Mexico's 16,398.8 TPY, and the predicted emissions for Bernalillo County and New Mexico in 2018 remain constant at 2002 values.. Bernalillo County's PMf emissions from Fugitive Dust were 1593.21 TPY which is 23.6% of New Mexico's 6751.05 TPY, and the predicted emissions for Bernalillo County in 2018 are 1579.9 TPY which is 22.5% of New Mexico's 7025.69 TPY.

In 2002 Bernalillo County was the largest contributor of PMf in New Mexico. However, WB Dust was the largest fraction of PMf emissions impacting WHIT, while the largest fraction of PMf emissions in Bernalillo County was due to Fugitive Dust. This would indicate that Bernalillo County is less likely to contribute to the visibility impairment at WHIT from PMf, but this parsing of individual categories of dust may not preclude Bernalilllo's impact on WHIT. Therefore, it is possible that Bernalillo County's PMf emissions contribute to the visibility impairment at WHIT.

The impacts on WHIT from PMf and PMc differ from those of OC and EC in that the largest contributor of PMf and PMc emissions to WHIT is CENWRAP. In the other cases, New Mexico is the most significant contributor to visibility degradation of Class I Areas inside New Mexico. This downwind effect could handicap the efforts of New Mexico and Bernalillo County to reduce visibility impacts at WHIT.


Sources and Areas of Potential Fine PM Emissions on Worst 20% Visibility Days
Class I Area - White Mountain W, NM
Percent
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
AZ - 2000-04
2018 PRP
CA - 2000-04
2018 PRP
CAN - 2000-04
2018 PRP
CEN - 2000-04
2018 PRP
CO - 2000-04
2018 PRP
EUS - 2000-04
2018 PRP
ID - 2000-04
2018 PRP
MEX - 2000-04
2018 PRP
MT - 2000-04
2018 PRP
ND - 2000-04
2018 PRP
NM - 2000-04
2018 PRP
NV - 2000-04
2018 PRP
OR - 2000-04
2018 PRP
PO - 2000-04
2018 PRP
SD - 2000-04
2018 PRP
UT - 2000-04
2018 PRP
WA - 2000-04
2018 PRP
WY - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/18/2008

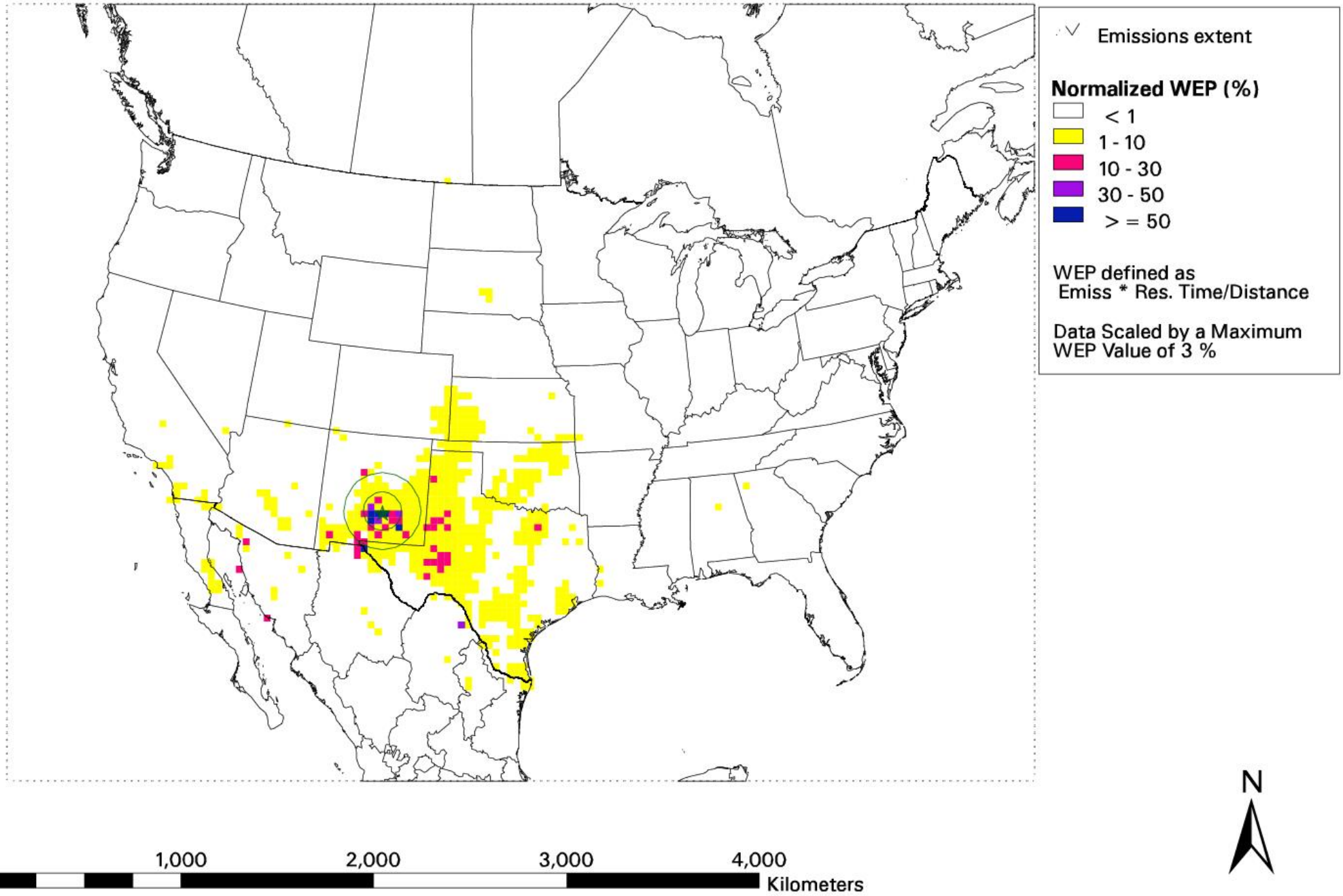

Sources and Areas of Potential Fine PM Emissions on Worst 20% Visibility Days
Class I Area - White Mountain W, NM
Percent
33.00
30.00
27.00
24.00
21.00
18.00
15.00
12.00
9.00
6.00
3.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/18/2008

White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Fine Particulate Matter (PMFINE)

2000-04 Baseline

20% Worst Visibility Days

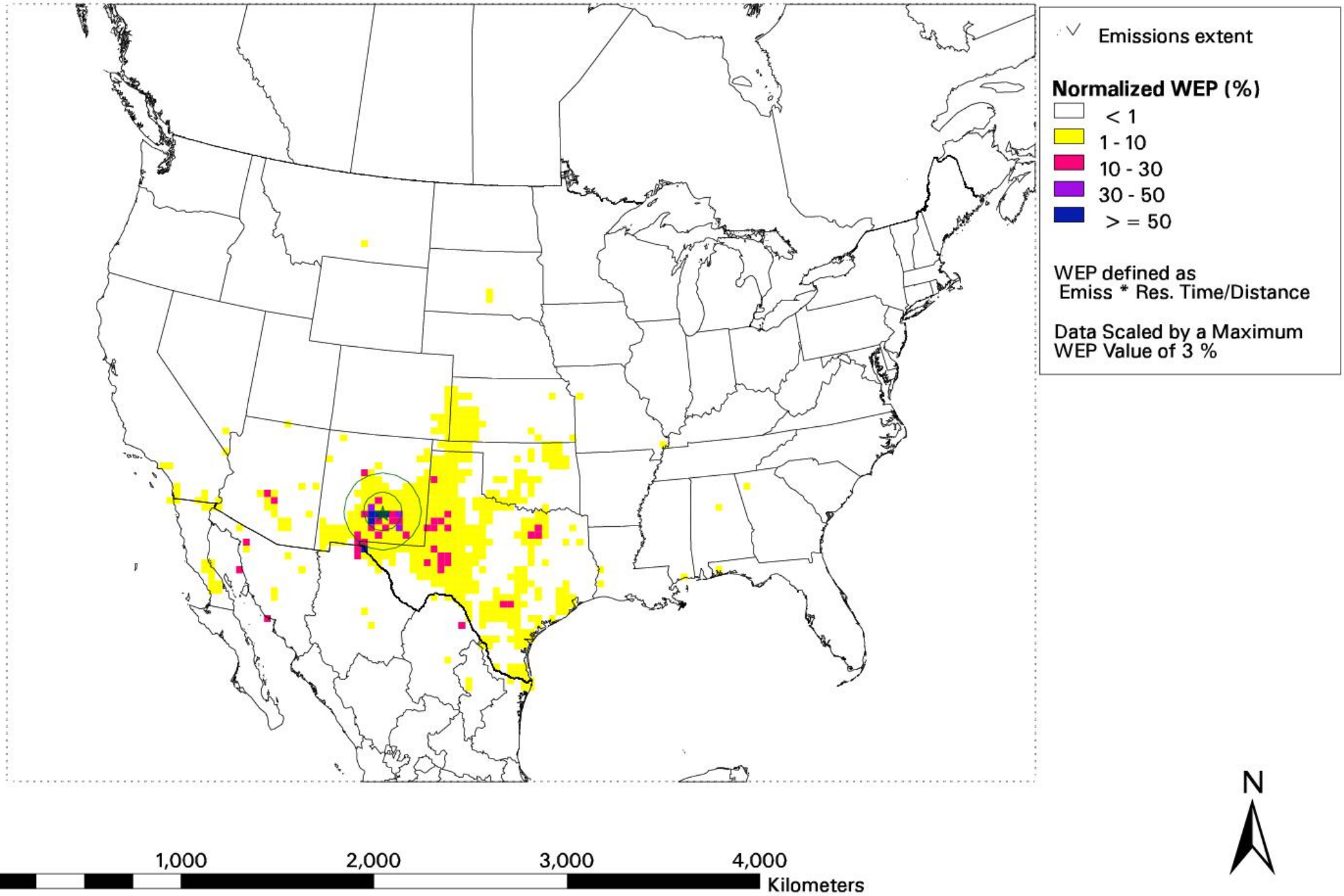


White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Fine Particulate Matter (PMFINE)

2018 Preliminary Reasonable Progress

20% Worst Visibility Days



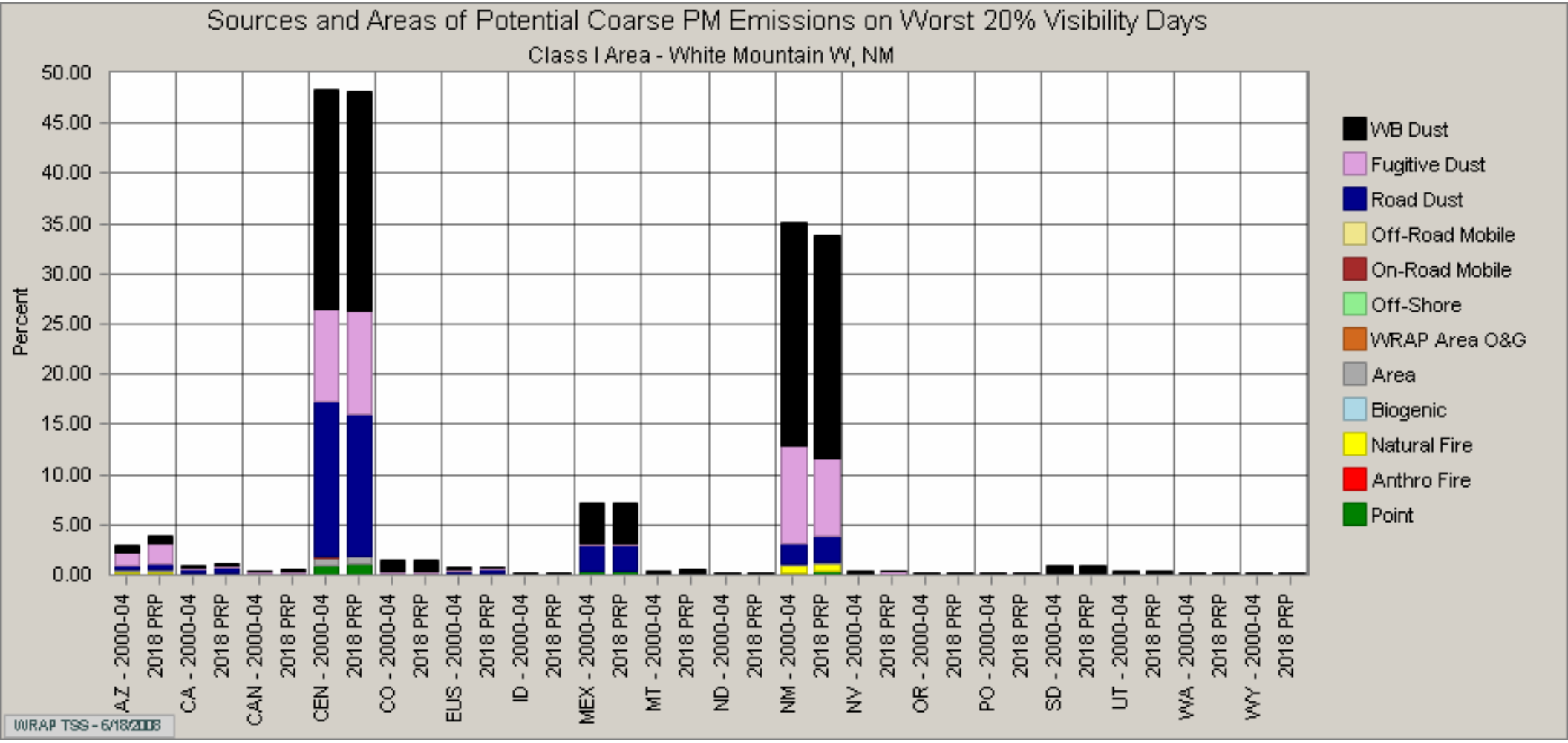
White Mountain Wilderness Area [WHIT]
Particulate Matter coarse (PMc)

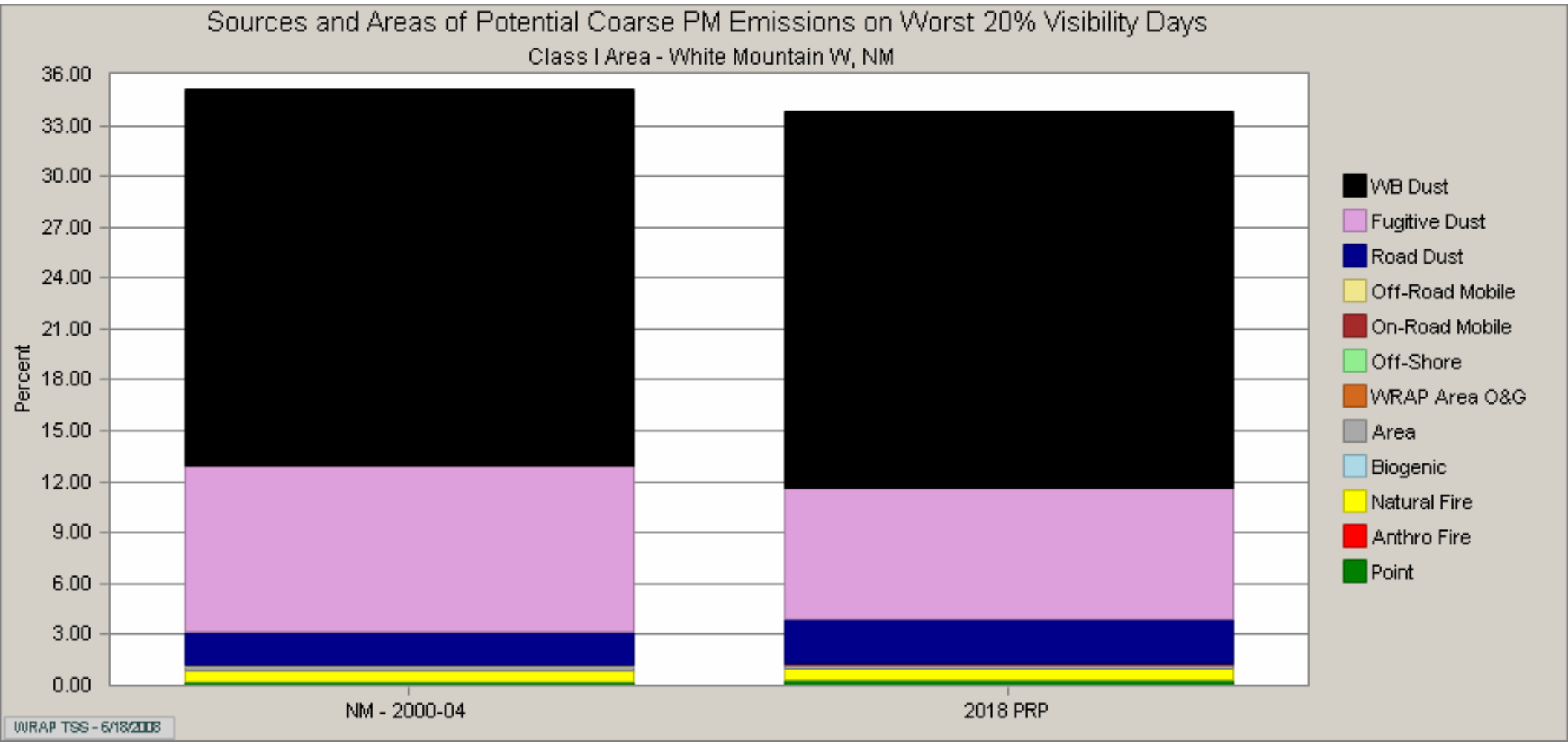
For the 2000-04 period, the largest potential contributor to visibility impairment at WHIT from PMc emissions is WB Dust, followed by Fugitive Dust and Road Dust (see bar graph). Looking at the map of Normalized Weighted Emissions Potential (WEP) for WHIT, the WEP% value closest to Bernalillo County is 10-30% for both 2000-04 and 2018.

In 2002, Bernalillo County's PMc emissions from WB Dust were 841.9548 TPY, which is 0.57% of New Mexico's 147,589.19 TPY, and the predicted emissions for Bernalillo County and New Mexico in 2018 remain constant at 2002 values.

In 2002 Bernalillo County was the largest contributor of PMc in New Mexico. However, WB Dust was the largest fraction of PMc emissions impacting WHIT, while the largest fraction of PMc emissions in Bernalillo County was due to Fugitive Dust. This would indicate that Bernalillo County is less likely to contribute to the visibility impairment at WHIT from PMc, but this parsing of individual categories of dust may not preclude Bernalilllo's impact on WHIT. Therefore, it is possible that Bernalillo County's PMc emissions contribute to the visibility impairment at WHIT. Although this may be an artifact of downwind effects.

The impacts on WHIT from PMf and PMc is unique from those of OC and EC in that the largest contributor of PMf and PMc emissions to WHIT is CENWRAP. In the other cases, New Mexico is the most significant contributor to visibility degradation of Class I Areas inside New Mexico. This downwind effect could handicap the efforts of New Mexico and Bernalillo County to reduce visibility impacts at WHIT.


Sources and Areas of Potential Coarse PM Emissions on Worst 20% Visibility Days
Class I Area - White Mountain W, NM
Percent
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
AZ - 2000-04
2018 PRP
CA - 2000-04
2018 PRP
CAN - 2000-04
2018 PRP
CEN - 2000-04
2018 PRP
CO - 2000-04
2018 PRP
EUS - 2000-04
2018 PRP
ID - 2000-04
2018 PRP
MEX - 2000-04
2018 PRP
MT - 2000-04
2018 PRP
ND - 2000-04
2018 PRP
NM - 2000-04
2018 PRP
NV - 2000-04
2018 PRP
OR - 2000-04
2018 PRP
PO - 2000-04
2018 PRP
SD - 2000-04
2018 PRP
UT - 2000-04
2018 PRP
WA - 2000-04
2018 PRP
WY - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/18/2008

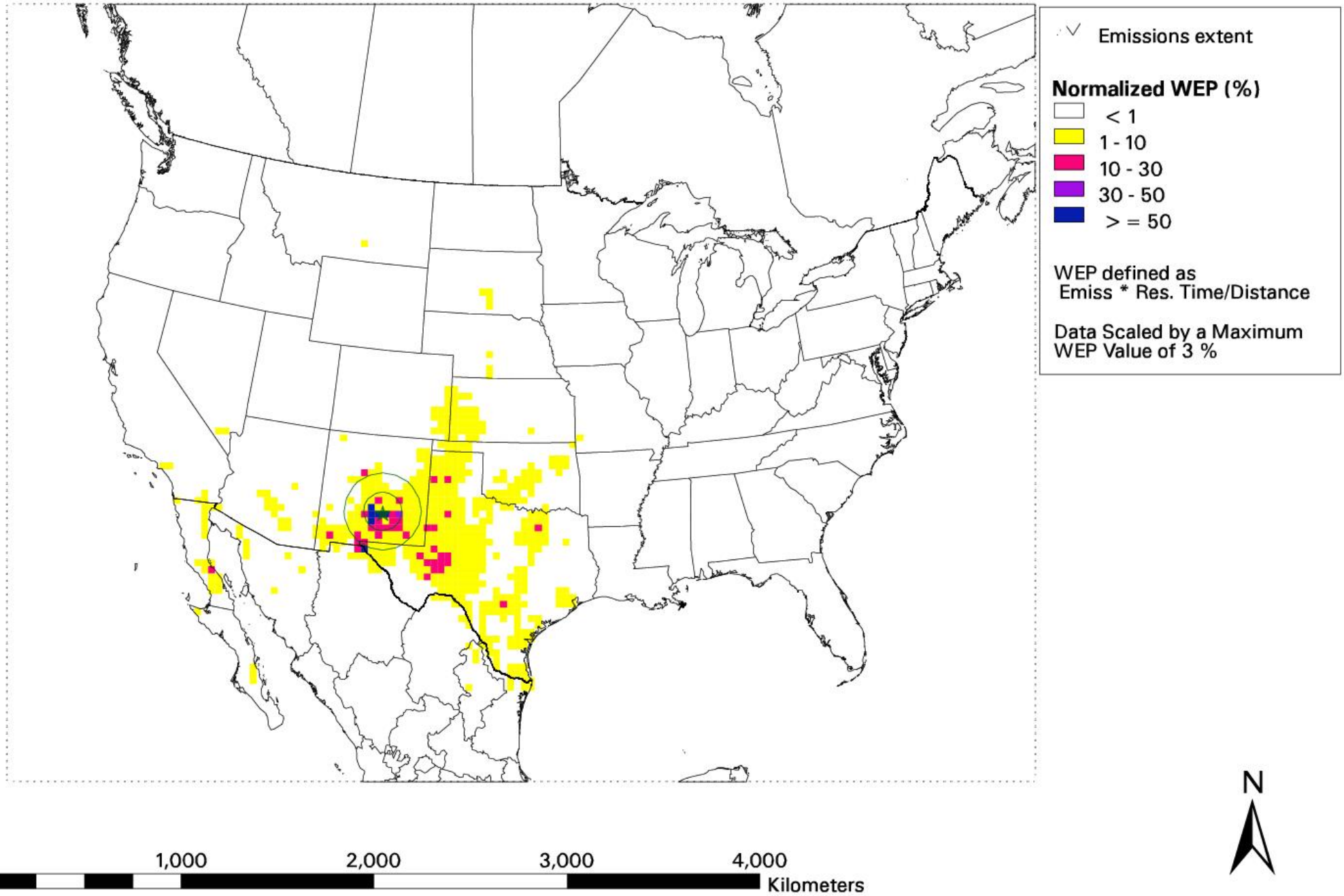

Sources and Areas of Potential Coarse PM Emissions on Worst 20% Visibility Days
Class I Area - White Mountain W, NM
Percent
36.00
33.00
30.00
27.00
24.00
21.00
18.00
15.00
12.00
9.00
6.00
3.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/18/2008

White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Coarse Particulate Matter (PMC)

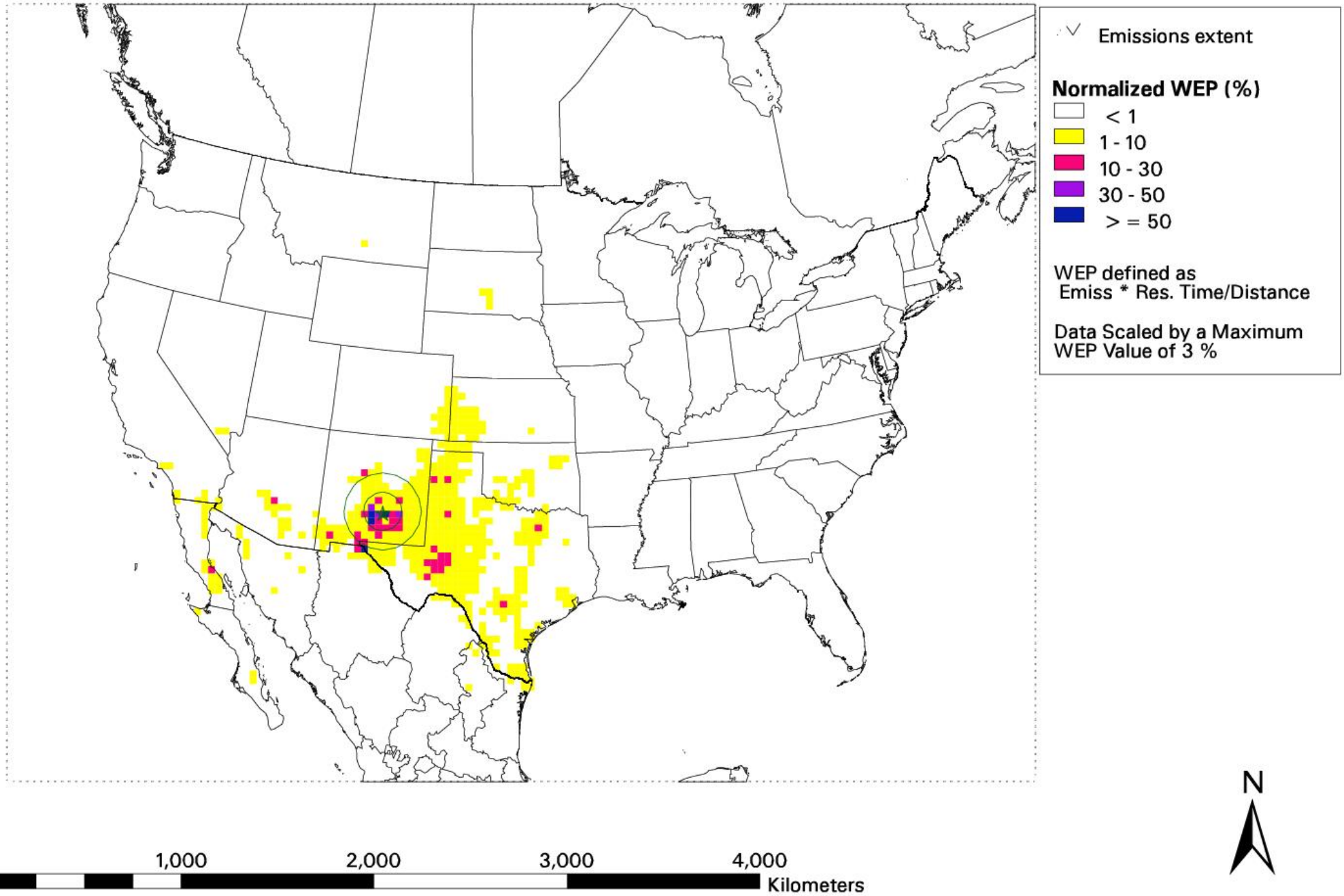
2000-04 Baseline

20% Worst Visibility Days



White Mountain Wilderness, NM

Normalized Weighted Emission Potential (WEP) for Coarse Particulate Matter (PMC)

2018 Preliminary Reasonable Progress

20% Worst Visibility Days