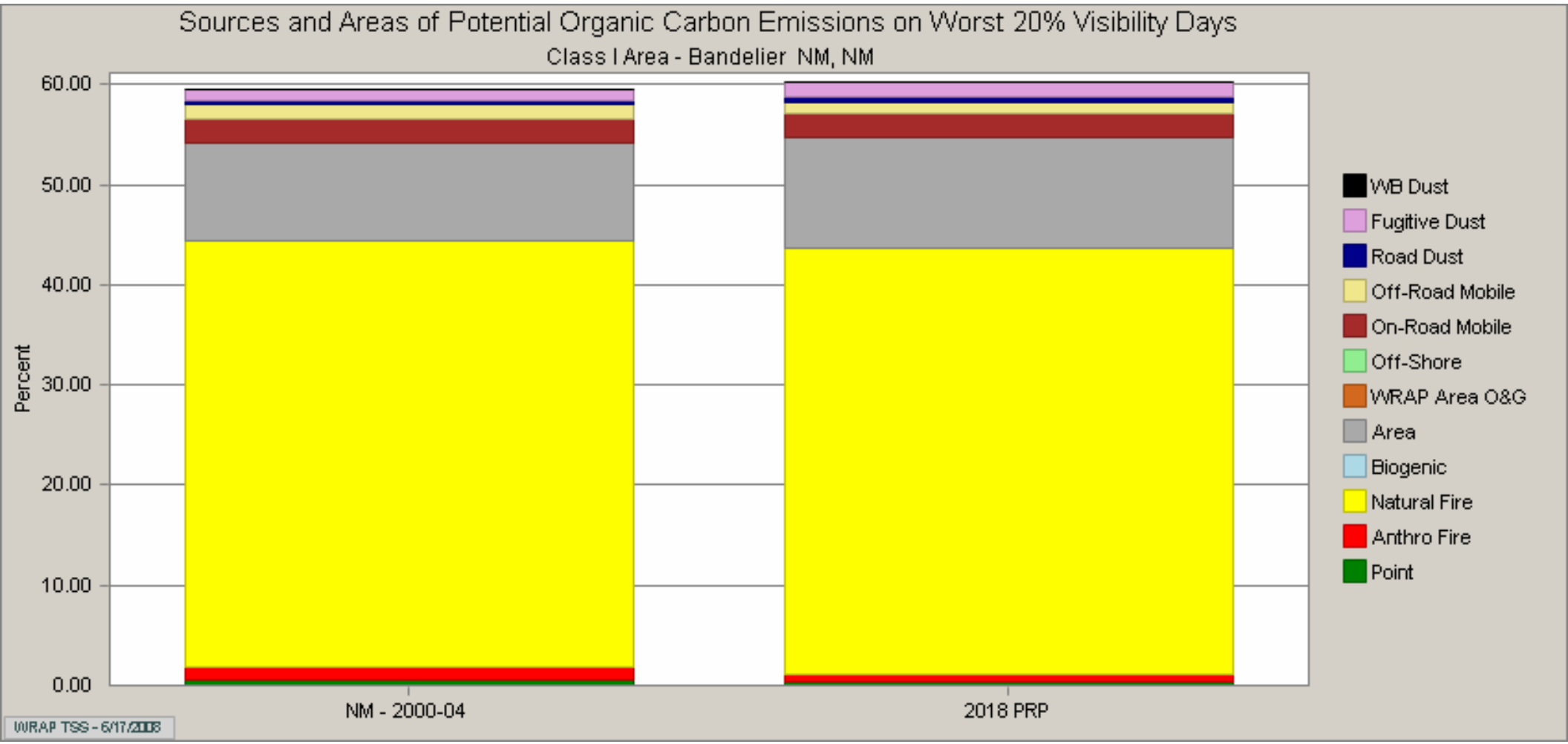
Bandelier National Monument [BAND]
Organic Carbon (OC)

The largest potential contributor to visibility impairment by OC at BAND in 2000-04 and 2018 is from natural fire, followed by Area sources (see bar graph). Looking at the map of Normalized Weighted Emissions Potential (WEP) for BAND, the nearest WEP% value to Bernalillo County is 30-50% for 2000-04 and > 50% for 2018.

Bernalillo's OC emissions from natural fire in 2002 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 natural fire emissions is minimal (0.09%), but Bernalillo County does contribute to OC emissions from Area Sources (20.%). Bernalillo County is in proximity to high WEP% values, so it is possible that Bernalillo County contributes significantly to the visibility impairment at BAND caused by OC.

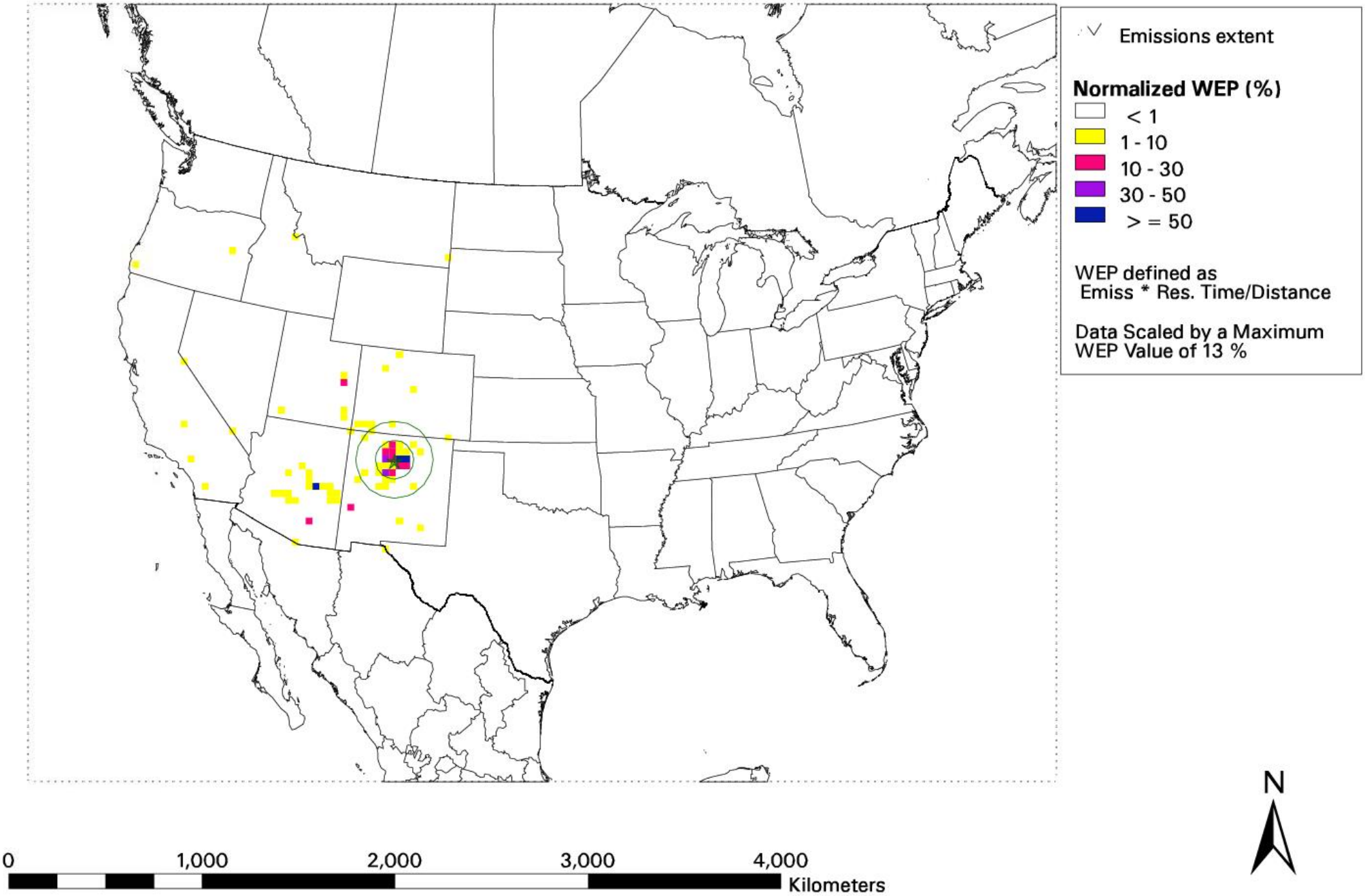

Sources and Areas of Potential Organic Carbon Emissions on Worst 20% Visibility Days
Class I Area - Bandelier NM, NM
Percent
60.00
50.00
40.00
30.00
20.00
10.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/17/2008

Bandelier National Monument, NM

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

2000-04 Baseline

20% Worst Visibility Days

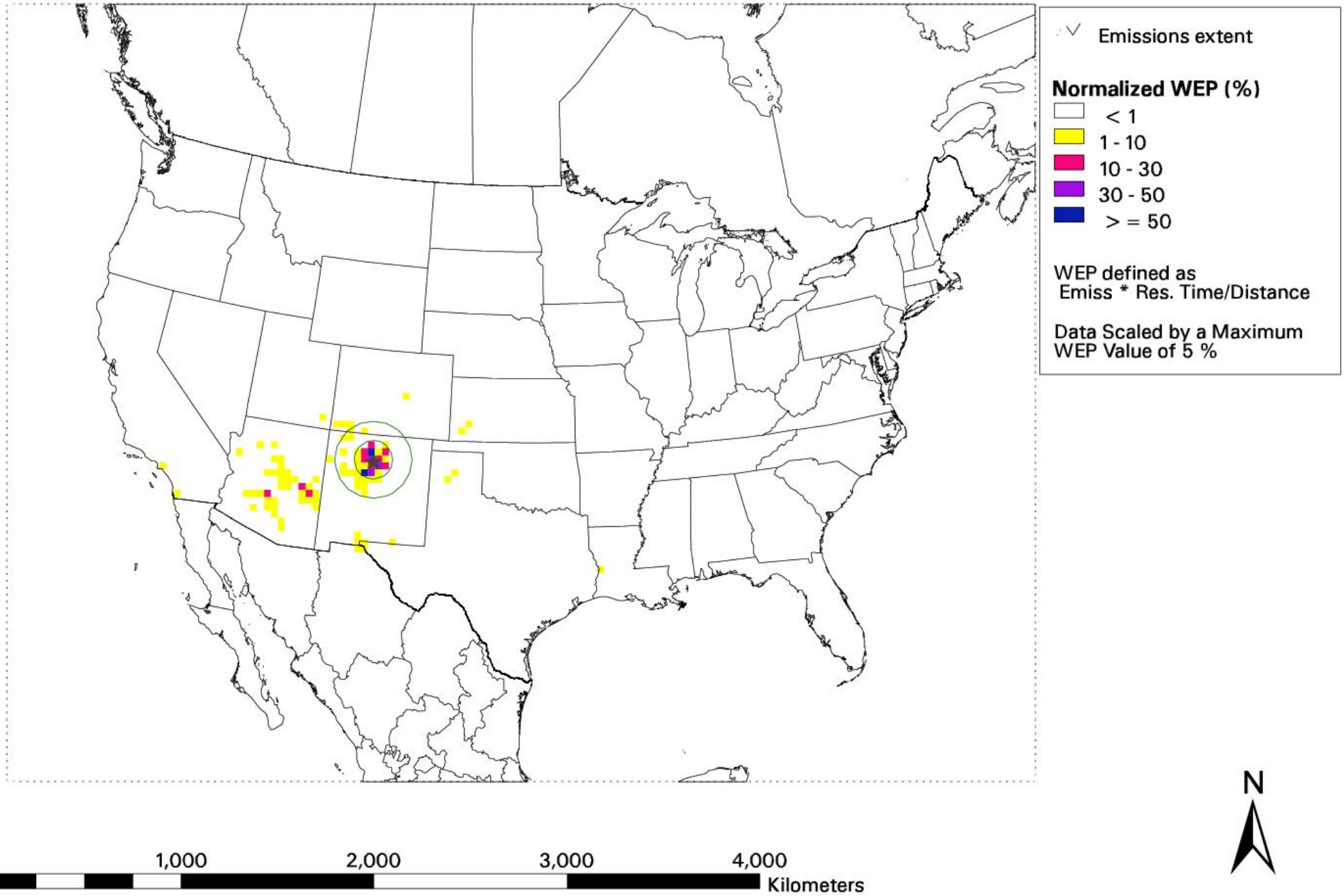


Bandelier National Monument, NM

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

2018 Preliminary Reasonable Progress

20% Worst Visibility Days

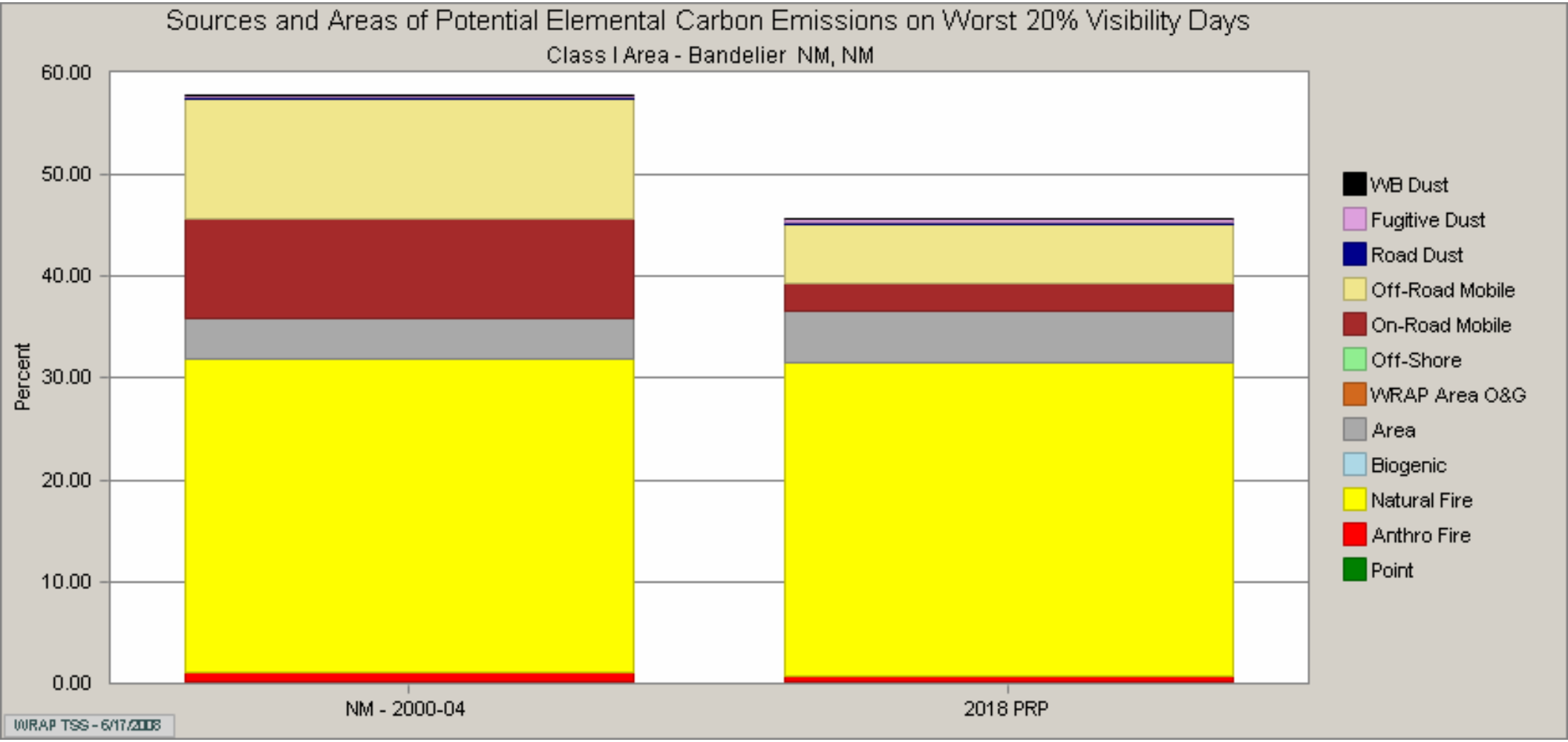


Bandelier National Monument [BAND]
Elemental Carbon (EC)

The largest potential contributor to visibility impairment by 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 BAND, the nearest WEP% value to Bernalillo County is 10-30% for 2000-04 and for 2018.

Bernalillo's EC emissions from natural fire in 2002 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'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'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 New Mexico's overall EC emissions inventory is small, and Bernalillo's contribution to EC emissions from natural fire emissions is minimal, but Bernalillo County is in proximity to moderate WEP% values, so it is possible that Bernalillo County contributes significantly to the visibility impairment at BAND caused by EC or not.

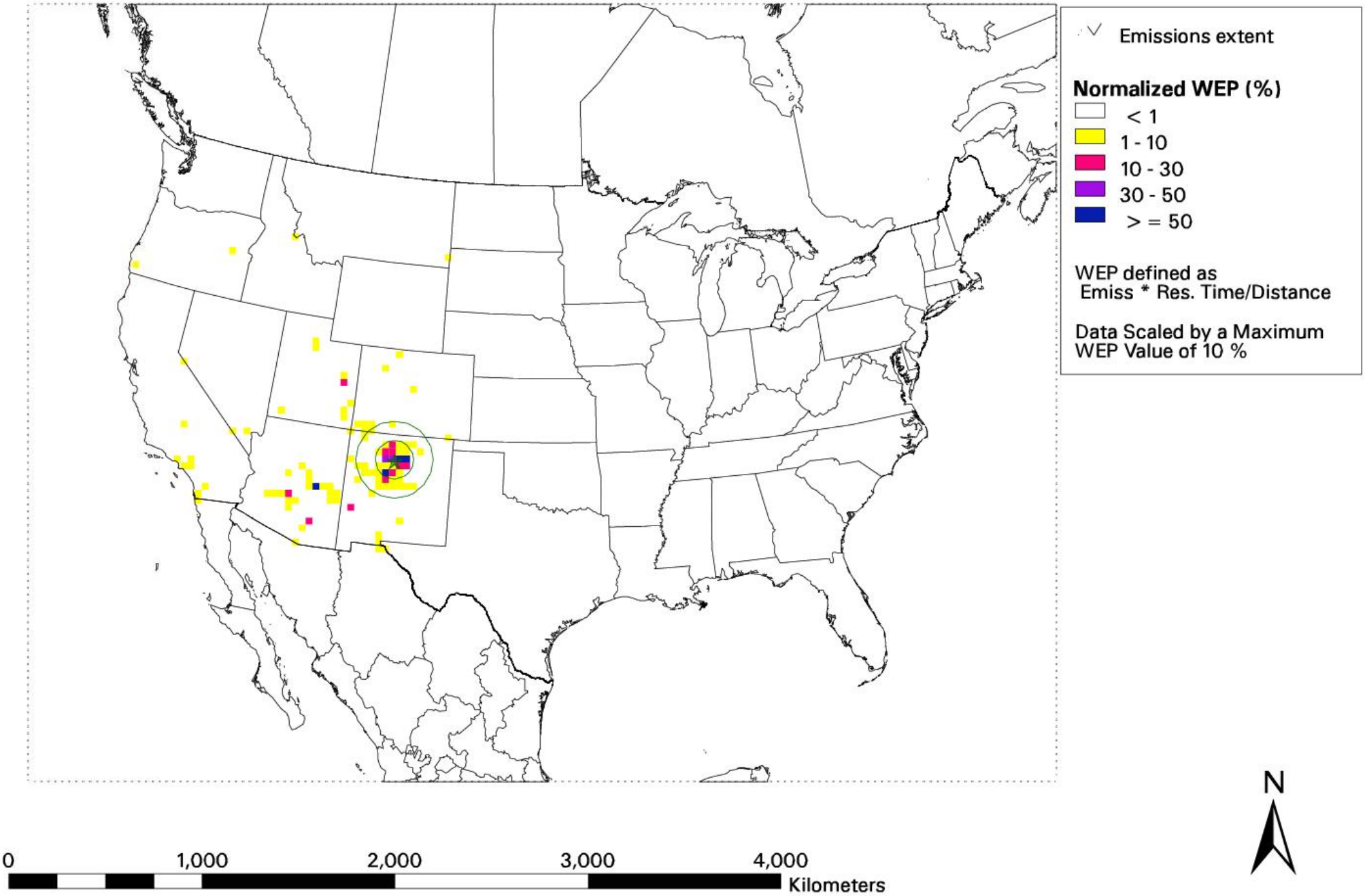

Sources and Areas of Potential Elemental Carbon Emissions on Worst 20% Visibility Days
Class I Area - Bandelier NM, NM
Percent
60.00
50.00
40.00
30.00
20.00
10.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/17/2008

Bandelier National Monument, NM

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

2000-04 Baseline

20% Worst Visibility Days

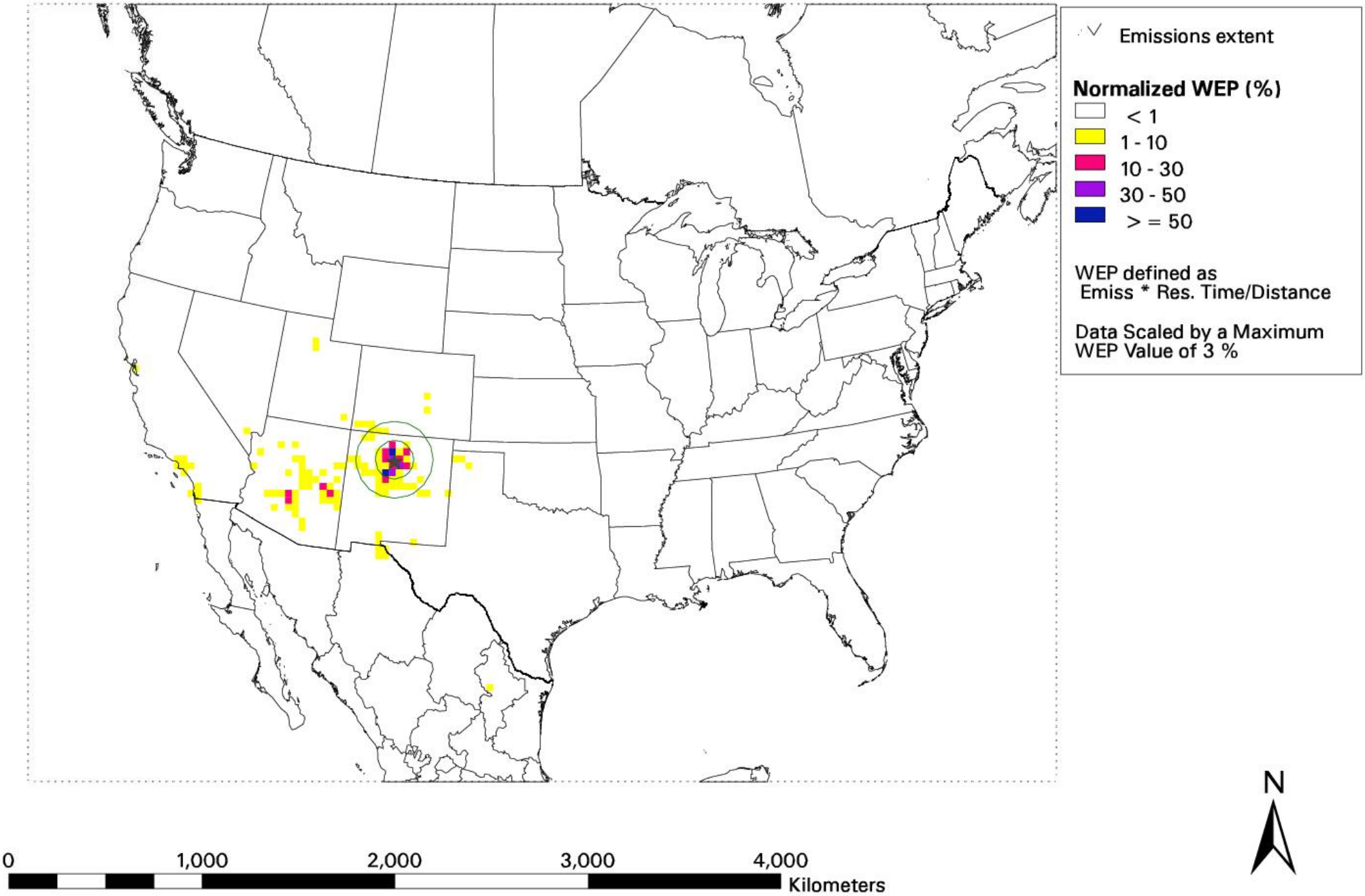


Bandelier National Monument, NM

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

2018 Preliminary Reasonable Progress

20% Worst Visibility Days



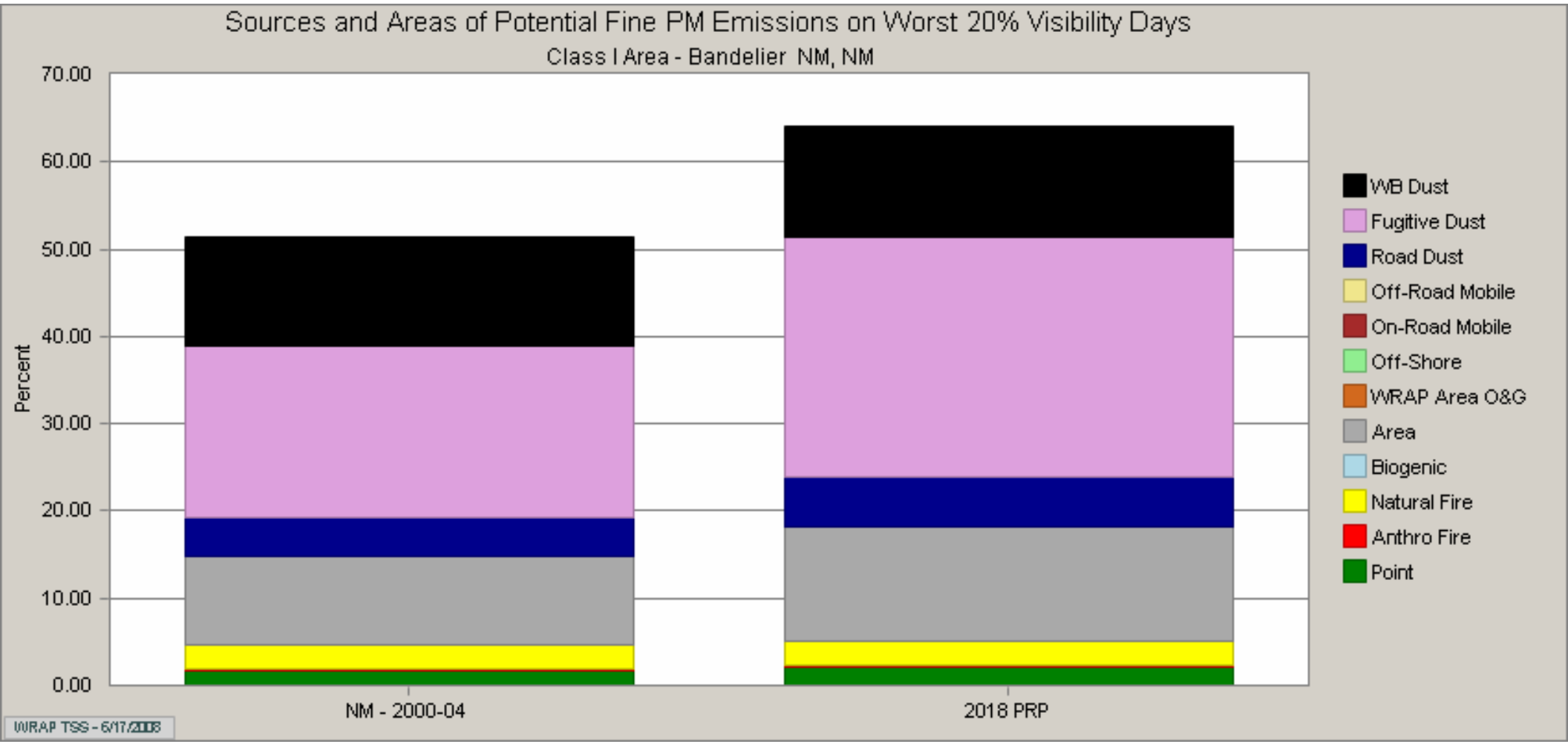
Bandelier National Monument [BAND]
Particulate Matter fine (PMf)

The largest potential contributor to visibility impairment in 2000-04 from PMf is due to Fugitive Dust, followed by WB Dust and Area Sources. The predicted values for 2018 show Fugitive Dust still contributing the most, but are followed by Area Sources and then WB Dust (see bar graph). Looking at the map of Normalized Weighted Emissions Potential (WEP) for WHPE, the nearest WEP% values to Bernalillo County are 10-30% and >50% for 2000-04 and 2018.

In 2002, Bernalillo'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 would be 22.5% of New Mexico's 7025.69 TPY. Bernalillo's WB Dust emissions in 2002 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.

In 2002, Bernalillo County was the largest contributor of PMf in New Mexico. Fugitive Dust accounts for the largest percentage of PMf emissions at BAND and is also the largest fraction of Bernalillo's PMf emissions in 2002.

The WEP% and the source apportionment data indicate that Bernalillo County is likely to contribute to the visibility impairment at BAND from PMf.

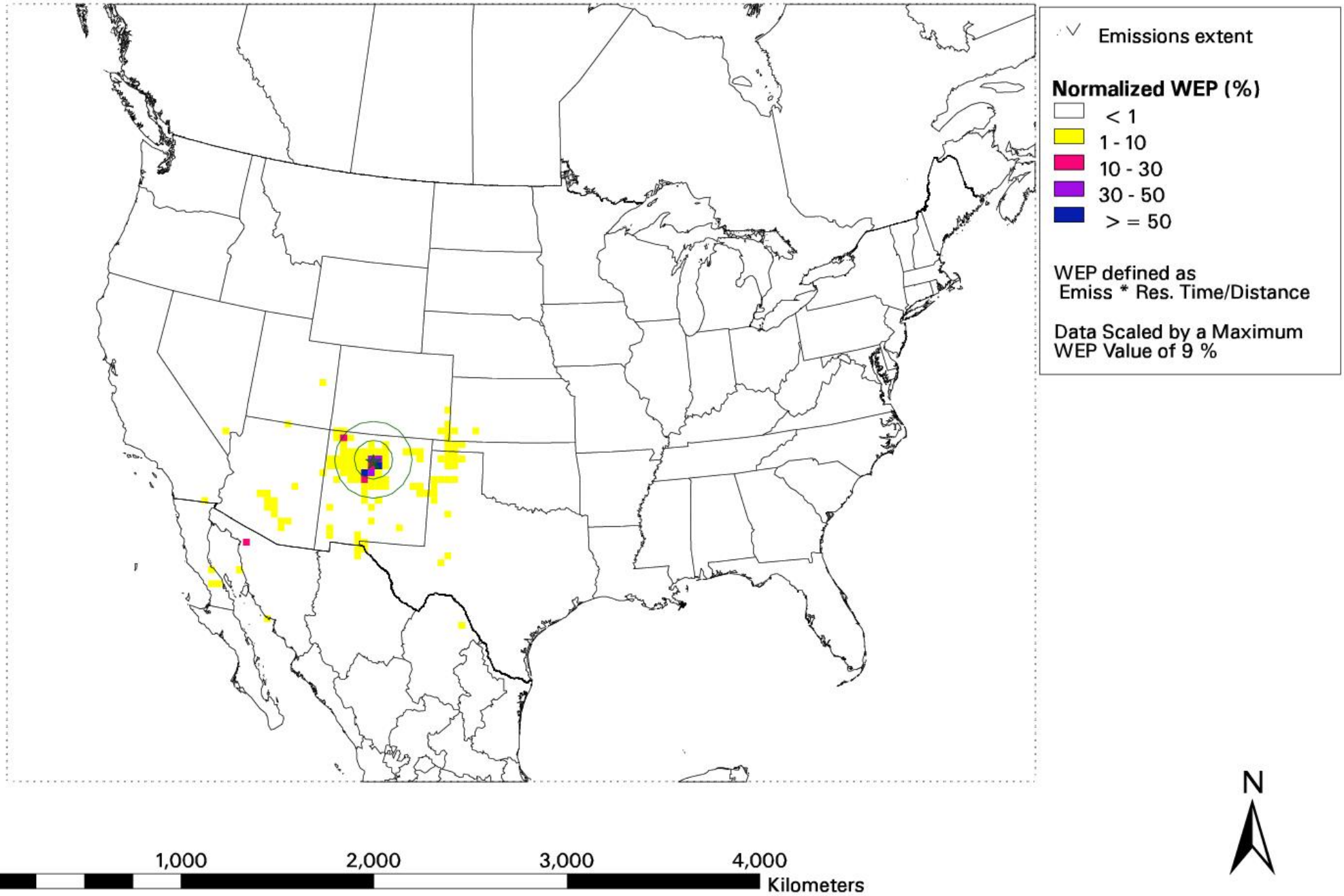

Sources and Areas of Potential Fine PM Emissions on Worst 20% Visibility Days
Class I Area - Bandelier NM, NM
Percent
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/17/2008

Bandelier National Monument, NM

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

2000-04 Baseline

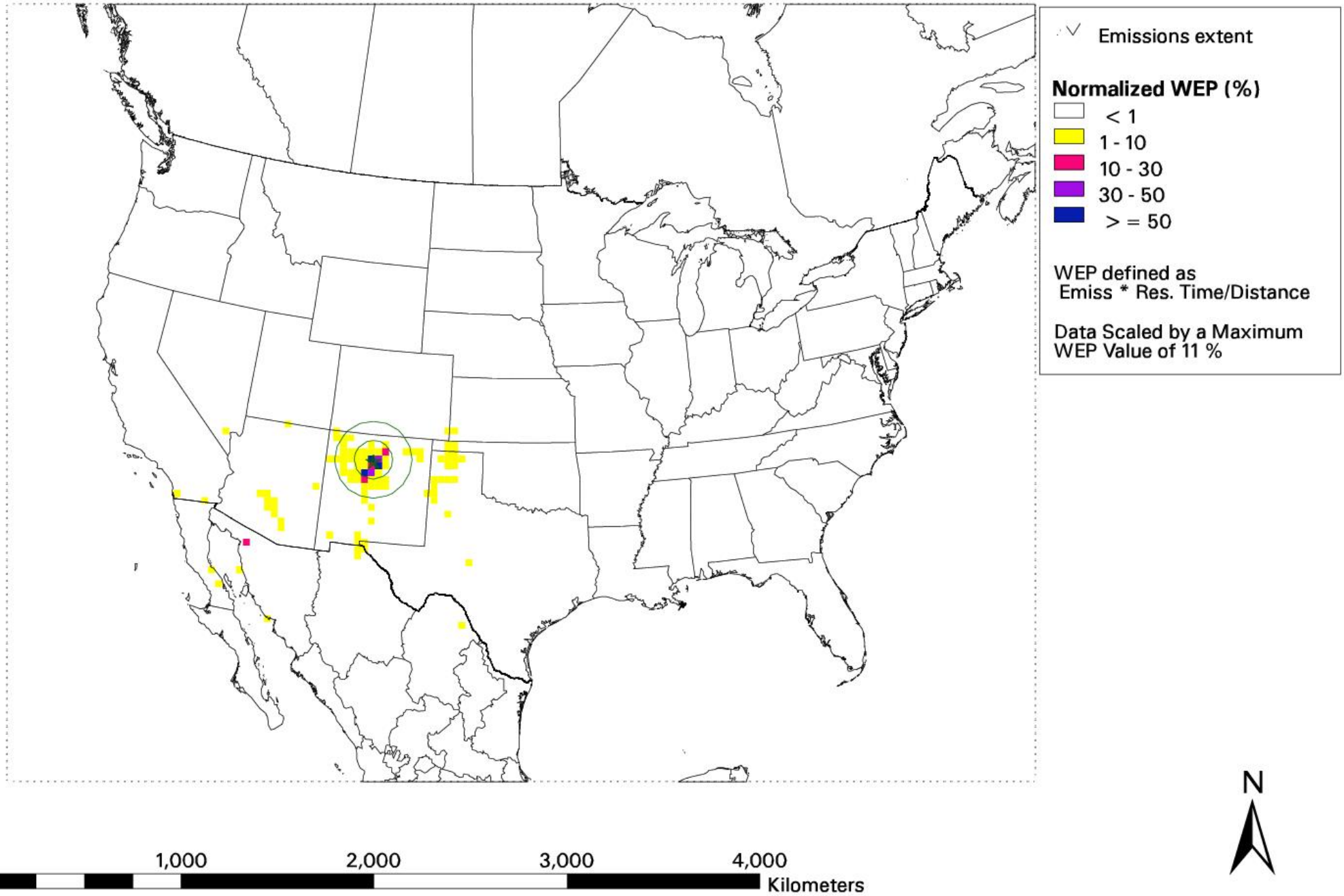
20% Worst Visibility Days



Bandelier National Monument, NM

Normalized Weighted Emission Potential (WEP) for Fine Particulate Matter (PMFINE) 2018 Preliminary Reasonable Progress

20% Worst Visibility Days



Bandelier National Monument
Particulate Matter coarse (PMc)

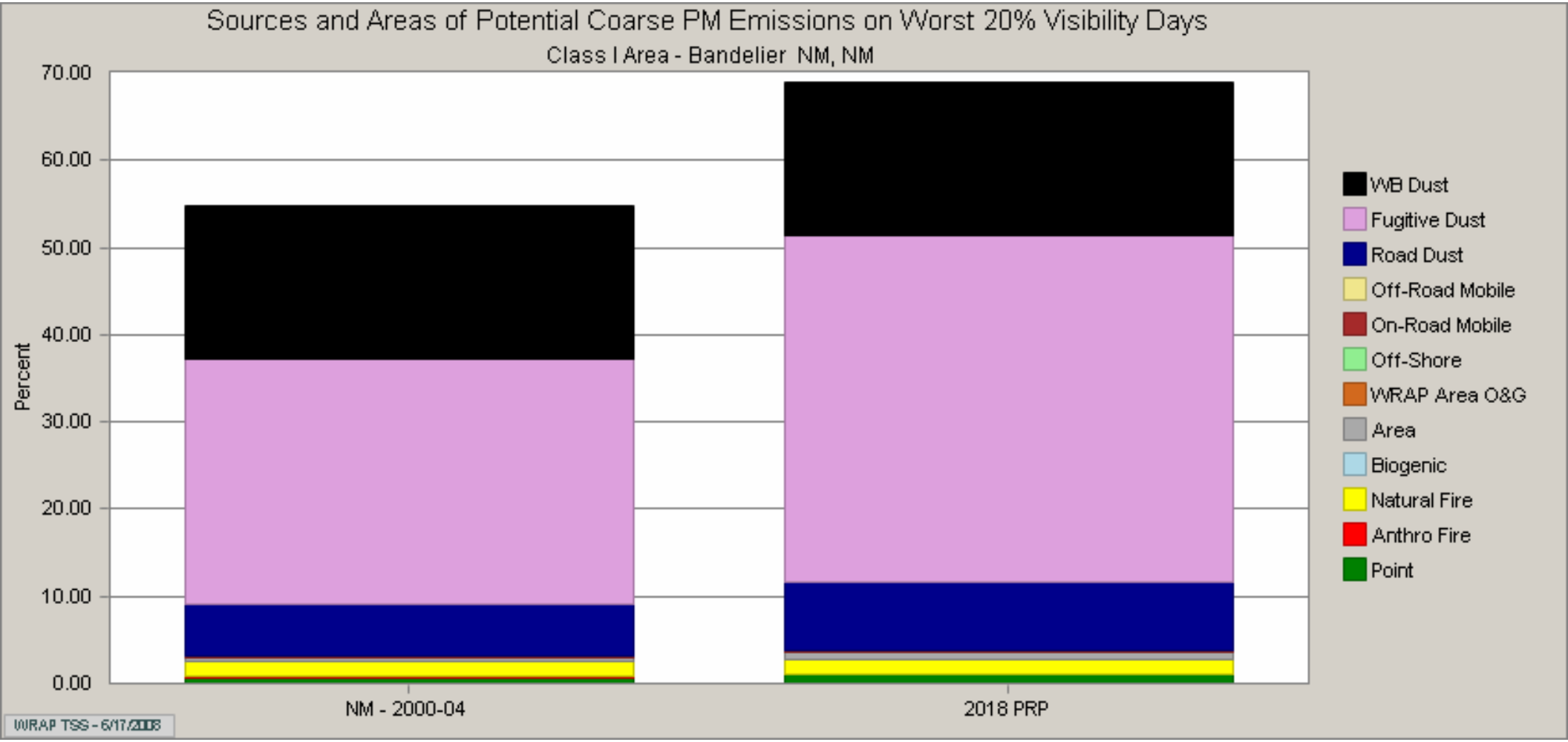
For the 2000-04 period, the largest potential contributor to visibility impairment in BAND for PMc emissions is Fugitive Dust, followed by WB Dust and Road Dust (see bar graph). Looking at the map of Normalized Weighted Emissions Potential (WEP) for BAND, the nearest WEP% value to Bernalillo County is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

In 2002 Bernalillo County was the largest contributor of PMc in New Mexico, with the largest fraction being Fugitive Dust, which was 15,226.65 TPY, or 29.5% of New Mexico's 51,532.7 TPY. The predicted PMc/Fugitive Dust emissions for Bernalillo County in 2018 are 15,103.21 TPY which would be 26.7% of New Mexico's 56,532.7 TPY.

In 2002, Bernalillo'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's PMc emissions from Road Dust were 868.11 TPY, which is 7.8% of New Mexico's 11,074.285 TPY; and the predicted emissions for Bernalillo County in 2018 are 1,239.0275 TPY, which would be 8.3% of New Mexico's 14,856.915 TPY.

The WEP% and the source apportionment data indicate that Bernalillo County is likely to contribute to the visibility impairment at BAND from PMc / Fugitive Dust

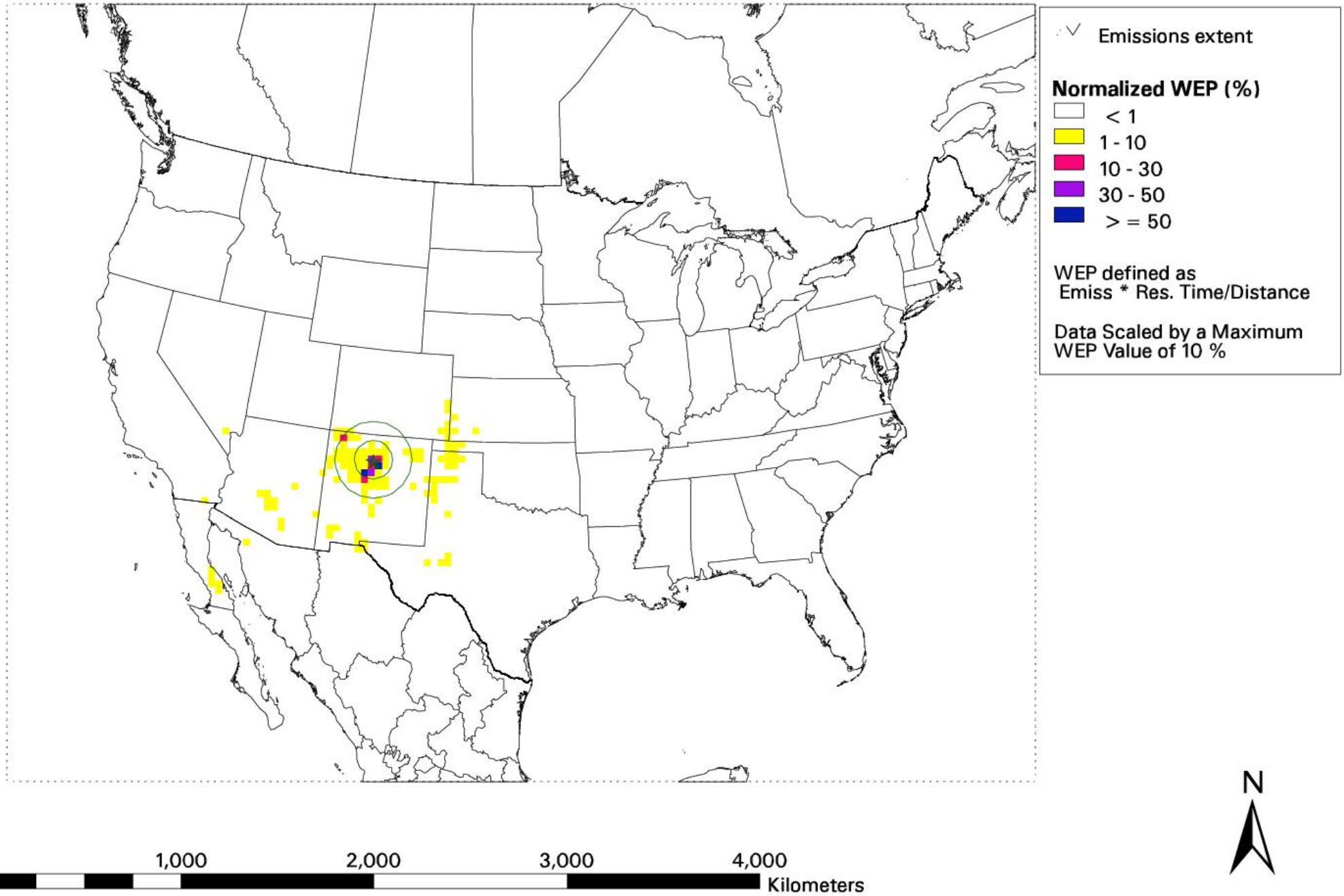

Sources and Areas of Potential Coarse PM Emissions on Worst 20% Visibility Days
Class I Area - Bandelier NM, NM
Percent
70.00
60.00
50.00
40.00
30.00
20.00
10.00
0.00
NM - 2000-04
2018 PRP
WB Dust
Fugitive Dust
Road Dust
Off-Road Mobile
On-Road Mobile
Off-Shore
WRAP Area O&G
Area
Biogenic
Natural Fire
Anthro Fire
Point
WRAP TSS - 6/17/2008

Bandelier National Monument, NM

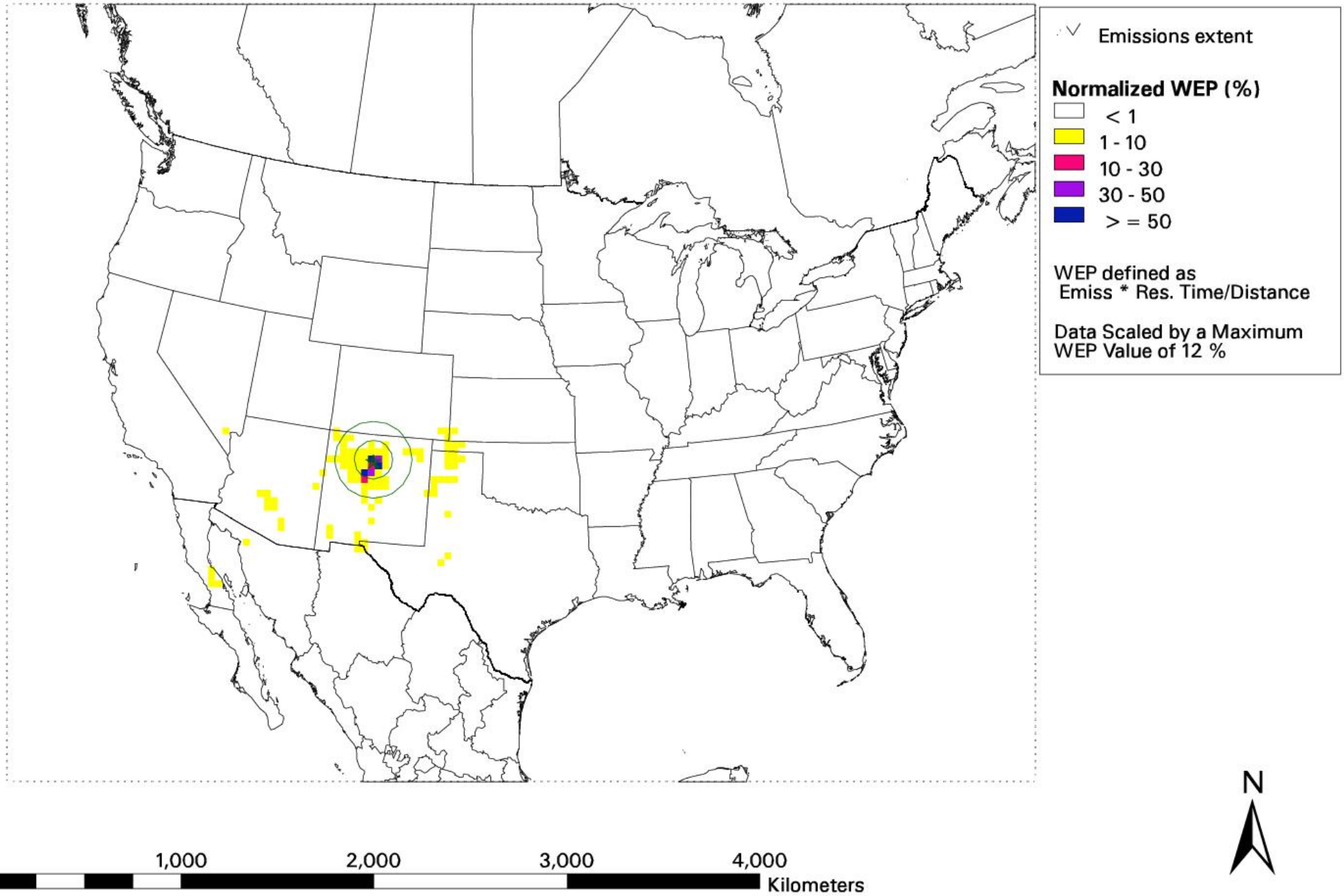
Normalized Weighted Emission Potential (WEP) for Coarse Particulate Matter (PMC)

2000-04 Baseline

20% Worst Visibility Days



Bandelier National Monument, NM

Normalized Weighted Emission Potential (WEP) for Coarse Particulate Matter (PMC) 2018 Preliminary Reasonable Progress

20% Worst Visibility Days