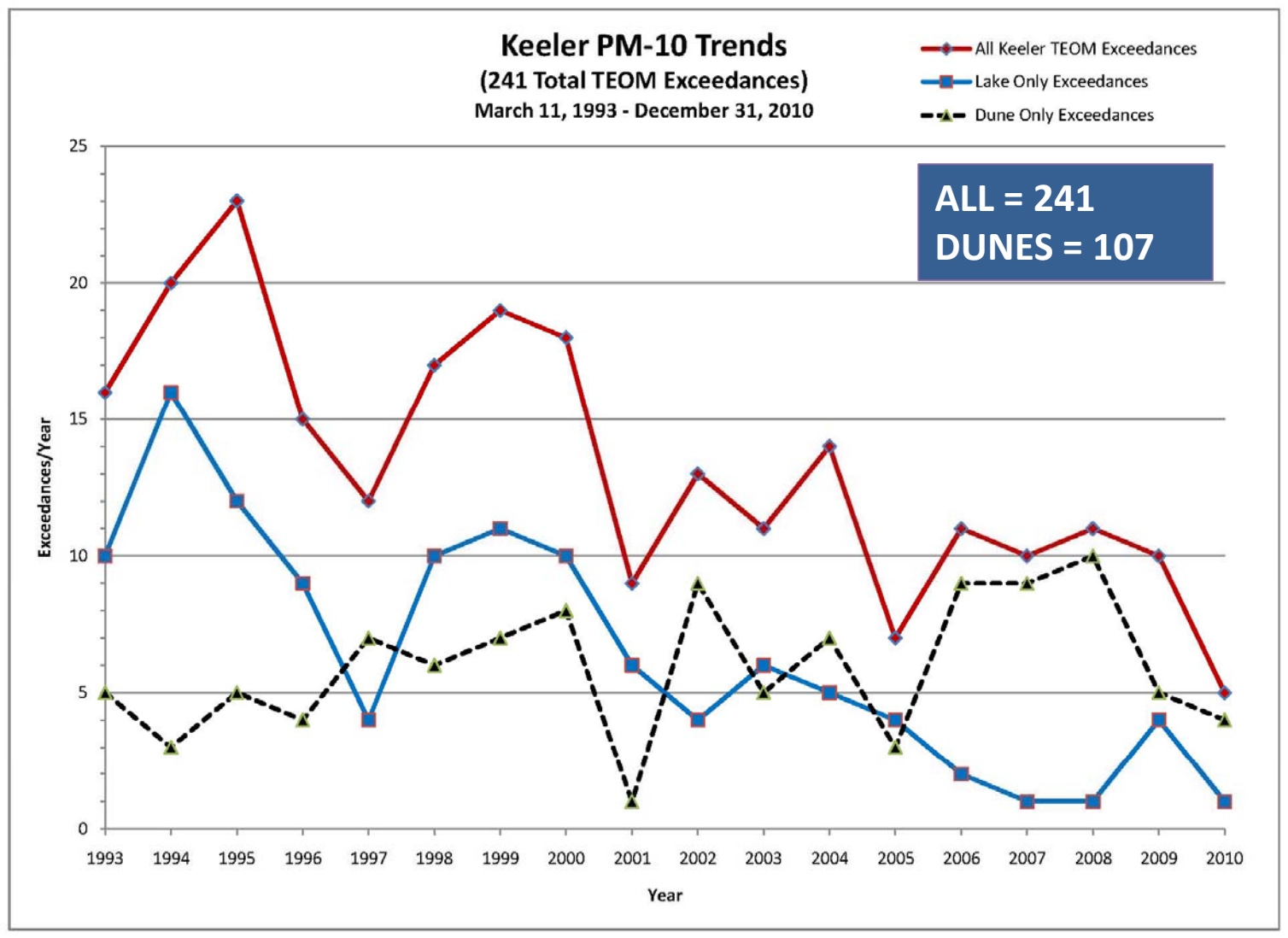
Keeler Dunes
Dust Control Strategy

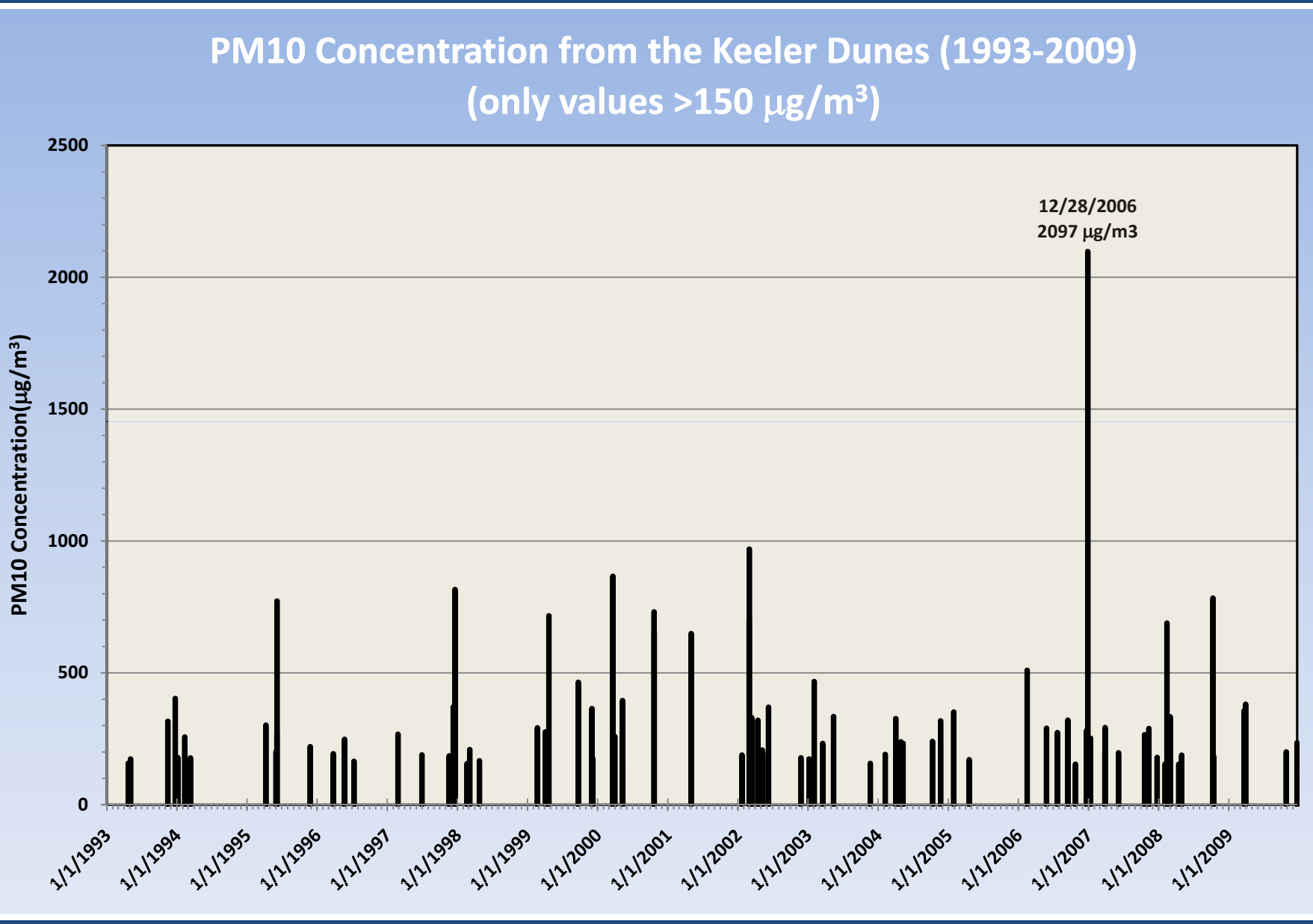
Great Basin Unified
Air Pollution Control District

Keeler Dunes Meeting
August 24, 2011

Keeler PM10 Data

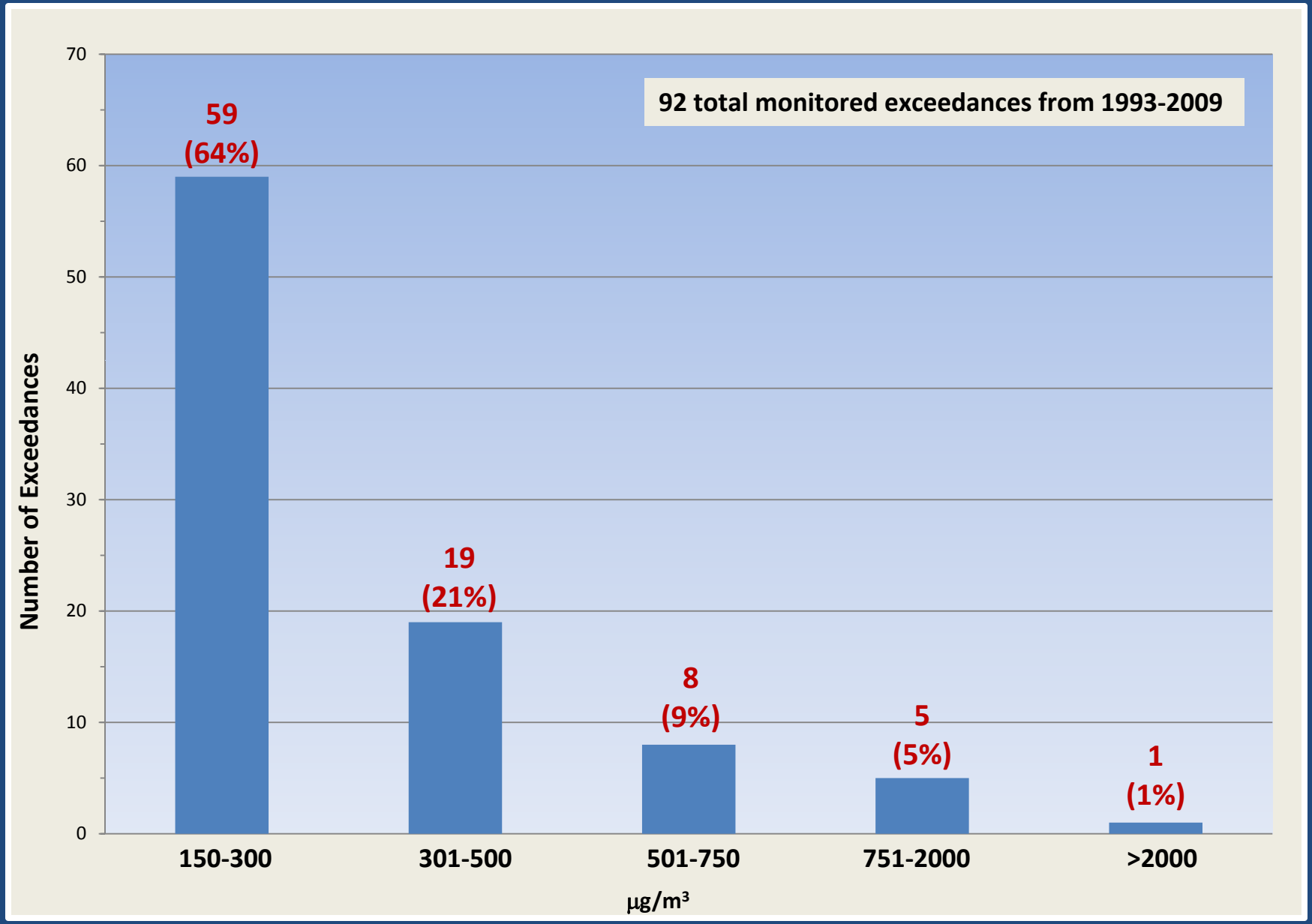


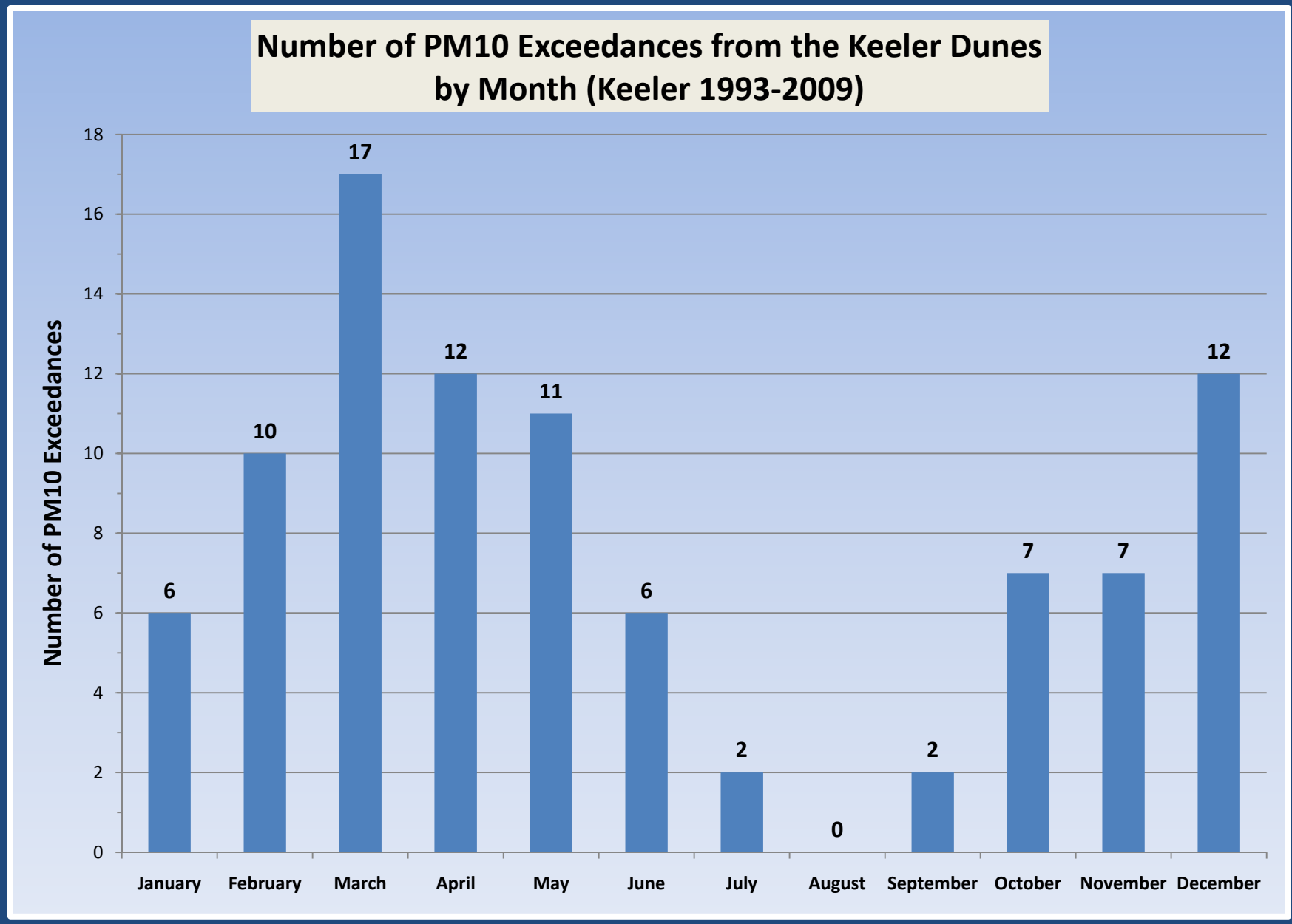
Graph of the number of monitored exceedances of the Federal PM_{10} standard per year measured at the Keeler Monitoring station from 1993 to 2010. There were 241 total exceedances monitored of which 107 were from the dunes only.



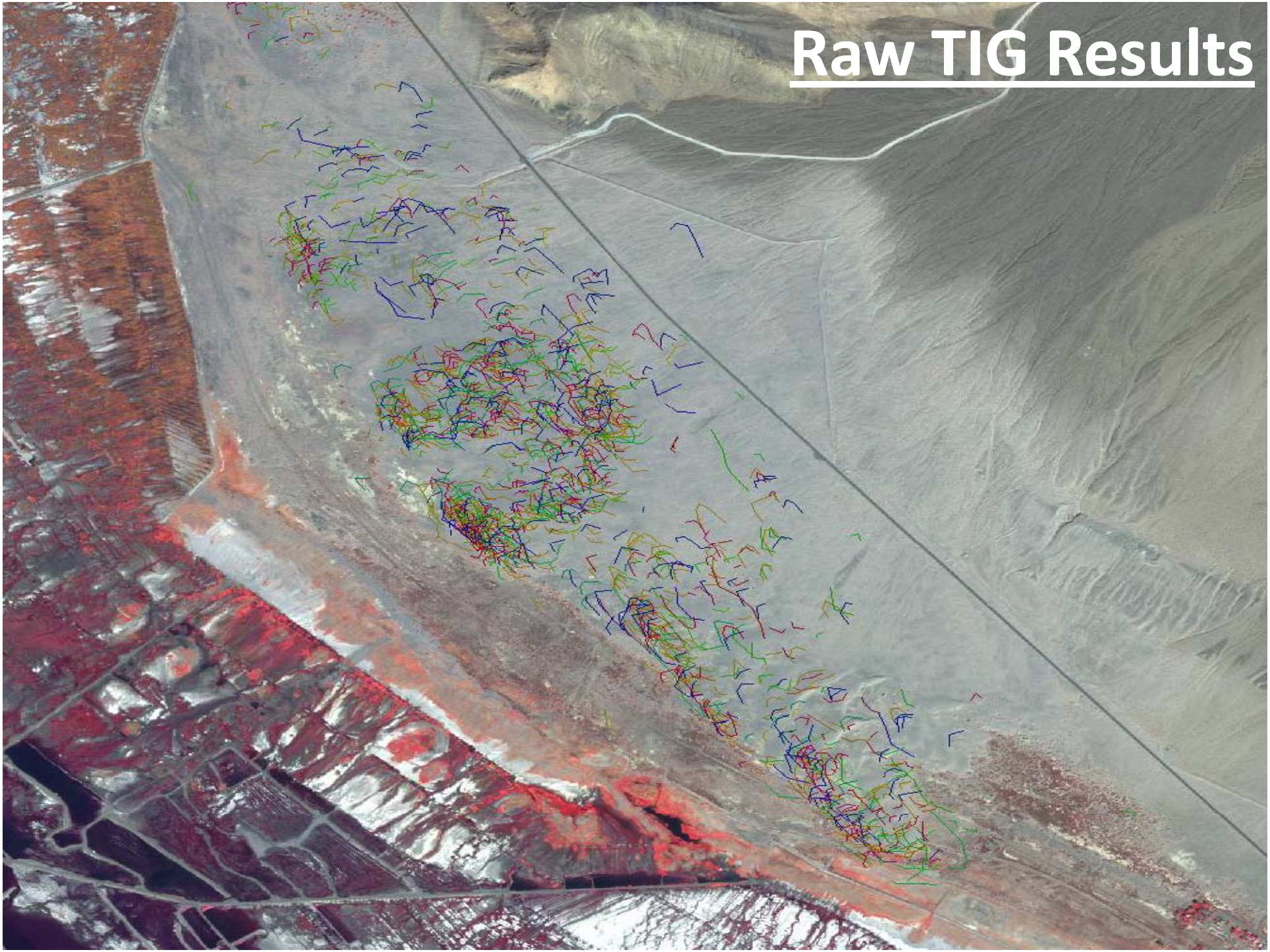
Graph of the PM_{10} concentrations from the Keeler Dunes for exceedance days, measured at the Keeler Monitoring station from 1993 to 2009.

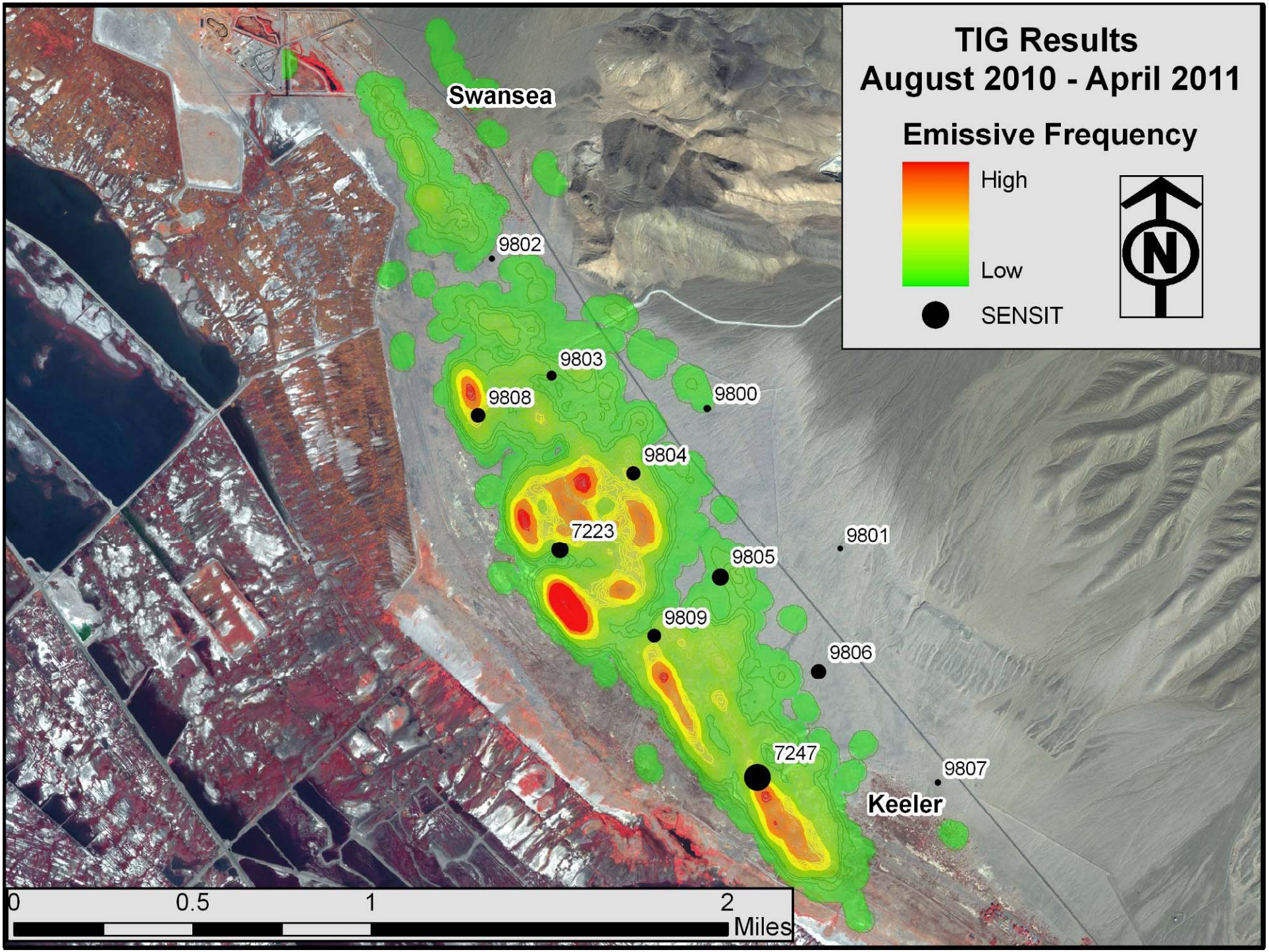
Frequency of Monitored PM10 Concentrations >150 μg/m³ (1993-2009)

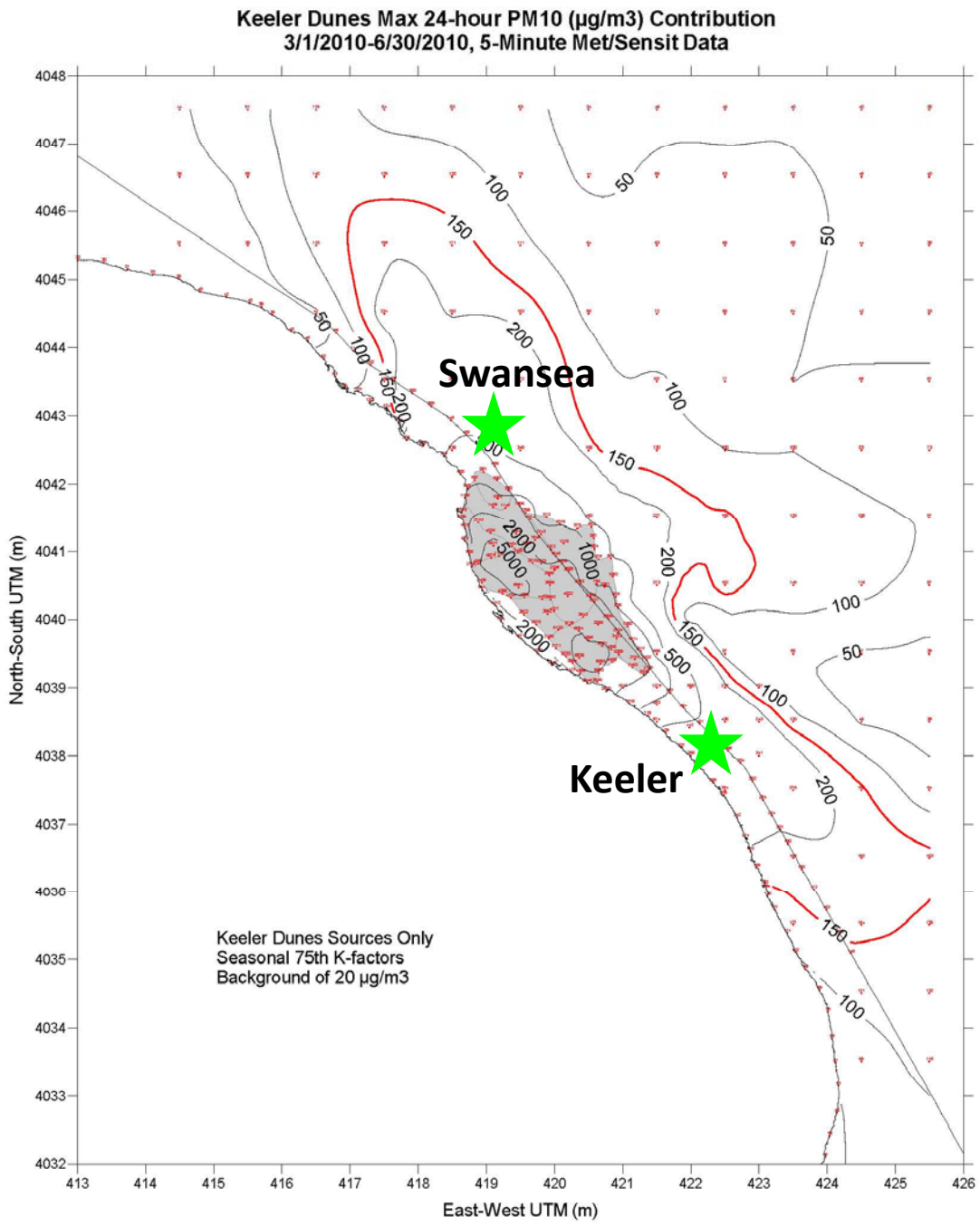



Number of PM10 Exceedances from the Keeler Dunes by Month (Keeler 1993-2009)
Number of PM10 Exceedances
0
2
4
6
8
10
12
14
16
18
6
10
17
12
11
6
2
0
2
7
7
12
January
February
March
April
May
June
July
August
September
October
November
December

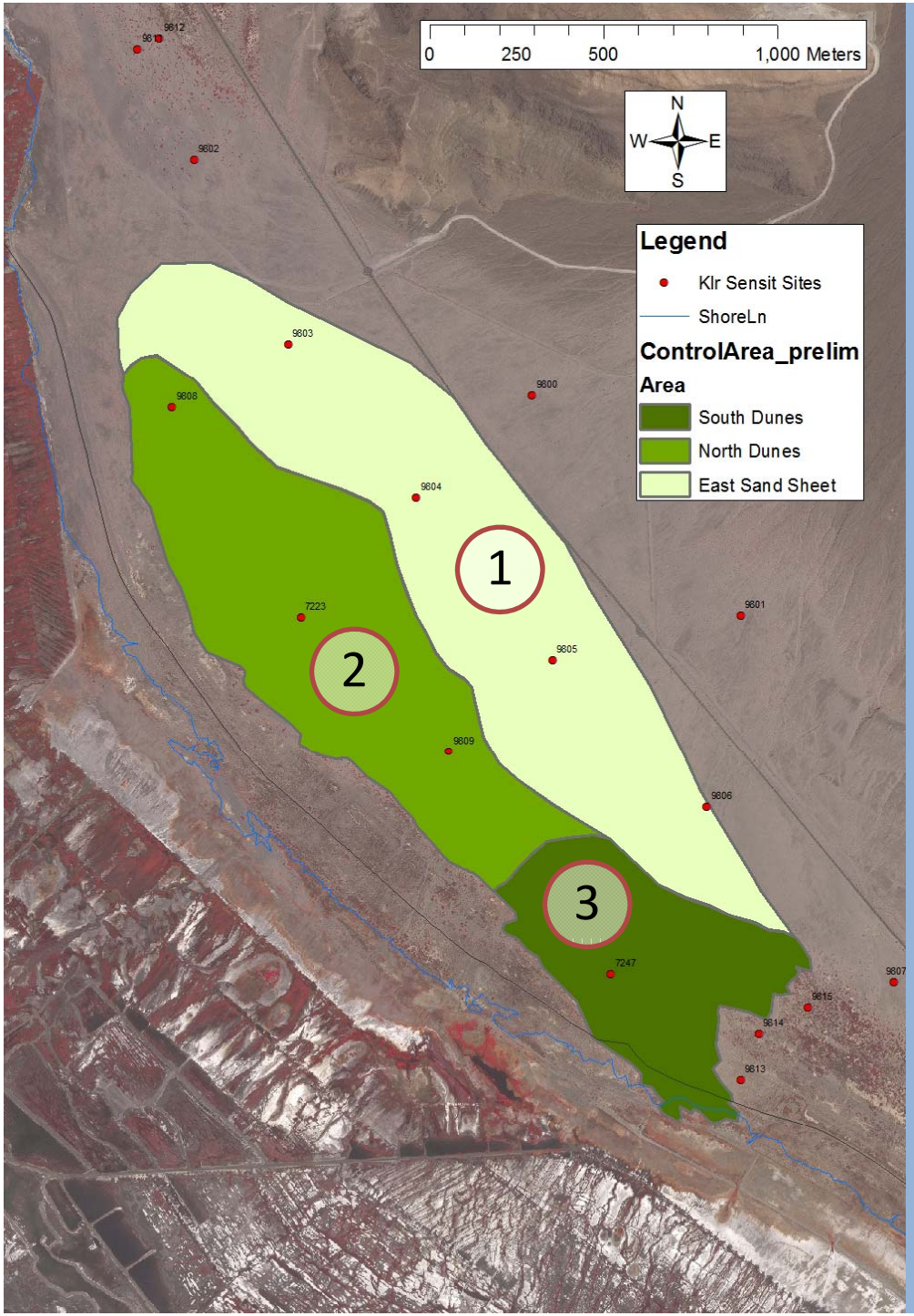
Raw TIG Results




TIG Results
August 2010 - April 2011
Emissive Frequency
High
Low
SENSIT
N
Swansea
9802
9803
9808
9800
9804
7223
9801
9805
9809
9806
7247
9807
Keeler
0
0.5
1
2
Miles



Air Quality Model Results (Spring 2009)



Preliminary Dust Control Project Areas

Increasing Control Level

1. East Sand Sheet (0.37 sq mi)
2. North Dunes (0.28 sq mi)
3. South Dunes (0.14 sq mi)

Total Control Area ~ 0.70 to 0.75 sq mi

Air Quality Goals

Main Goals

- Lower PM10 emissions from dunes
- Attain PM10 standard in Keeler

Secondary Goals

- No ‘Brute Force’ measures
- Tailor dust control ‘intensity’ to emissiveness of subareas.

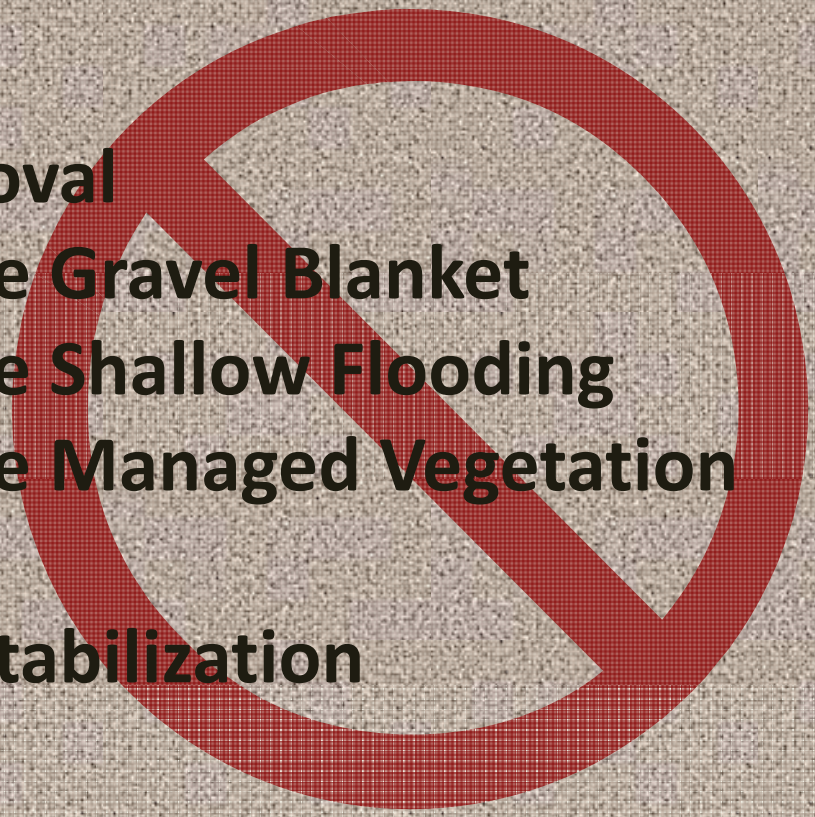
Other Goals

- Preservation of cultural resources
- Natural appearing and aesthetically pleasing
- Self sustaining on long term basis
- Minimal impact to existing natural resources

Dust Control Methods Eliminated for Keeler Dunes

NO

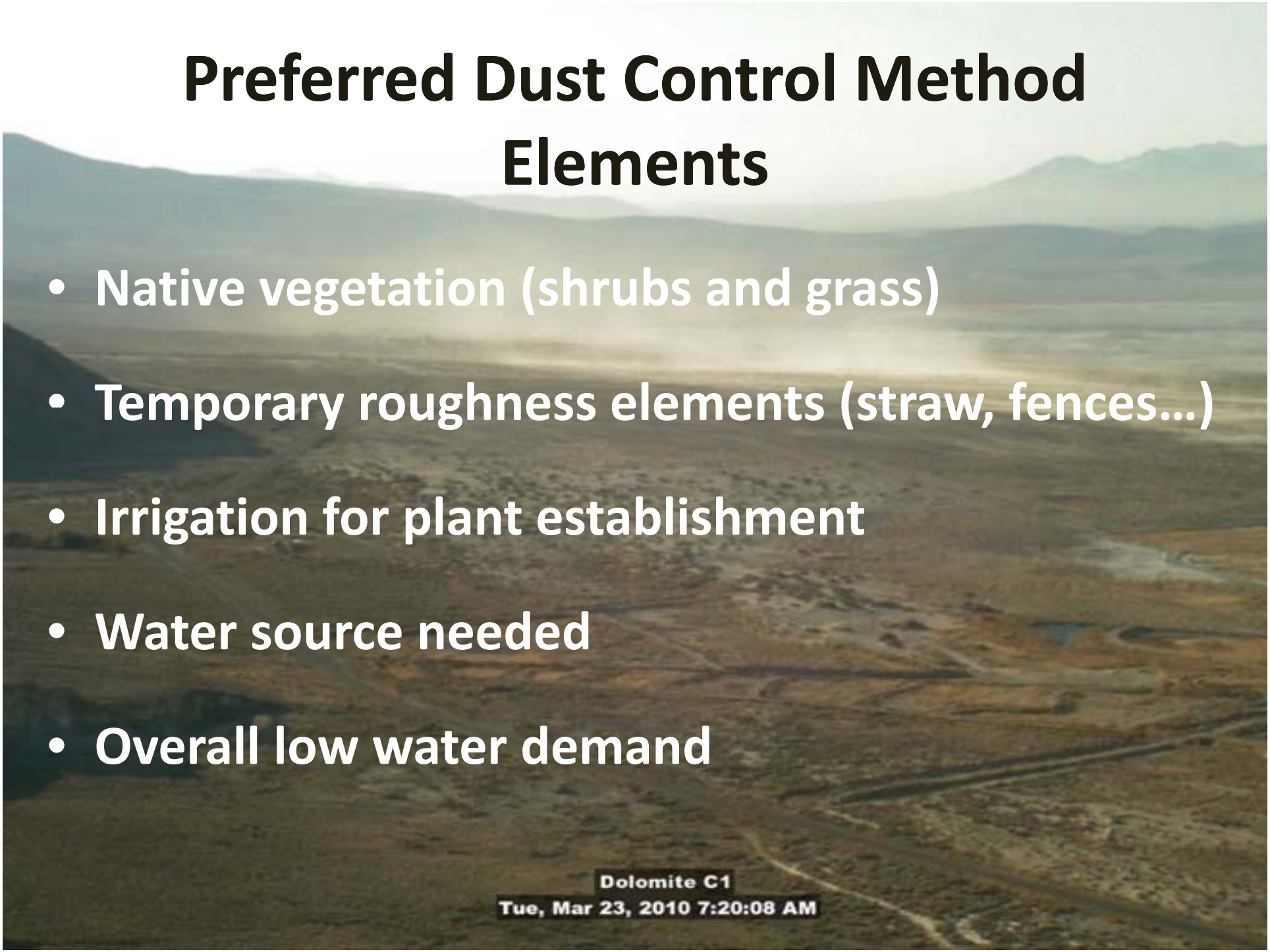
- Dune Removal
- Owens Lake Gravel Blanket
- Owens Lake Shallow Flooding
- Owens Lake Managed Vegetation
- Trash
- Chemical Stabilization



Appearance of control area will not be like Owens Lake!

Preferred Dust Control Method Elements

- Native vegetation (shrubs and grass)
- Temporary roughness elements (straw, fences…)
- Irrigation for plant establishment
- Water source needed
- Overall low water demand



Project Schedule

- Control strategy development by end of 2011
- Environmental work complete by end of 2012
- Controls should be in place by end of 2014
- SIP requires PM10 attainment by end of 2017