High Wind Event of April 19, 2018

Data Flagging and

EPA Concurrence Documentation

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City of Albuquerque

Environmental Health Department

Air Quality Program

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High Wind Event of April 19, 2018

As required by the 40 CFR § 50.14 - Treatment of air quality monitoring data influenced by exceptional events:

(3) Submission of demonstrations.

i. Except as provided under paragraph (c)(2)(vi) of this section, a State that has flagged data as being due to an exceptional event and is requesting exclusion of the affected measurement data shall, after notice and opportunity for public comment, submit a demonstration to justify data exclusion to the Administrator according to the schedule established under paragraph (c)(2)(i)(B).
ii. [Reserved]
iii. [Reserved]
iv. The demonstration to justify data exclusion must include:
   A. A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s);
   B. A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;
   C. Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the requirement at paragraph (c)(3)(iv)(B) of this section. The Administrator shall not require a State to prove a specific percentile point in the distribution of data;
   D. A demonstration that the event was both not reasonably controllable and not reasonably preventable; and
   E. A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event.

v. With the submission of the demonstration containing the elements in paragraph (c)(3)(iv) of this section, the State must:
   A. Document that the State followed the public comment process and that the comment period was open for a minimum of 30 days, which could be concurrent with the beginning of the Administrator's initial review period of the associated demonstration provided the State can meet all requirements in this paragraph;
   B. Submit the public comments it received along with its demonstration to the Administrator; and
   C. Address in the submission to the Administrator those comments disputing or contradicting factual evidence provided in the demonstration.
vi. Where the State has submitted a demonstration according to the requirements of this section after September 30, 2016 and the Administrator has reviewed such demonstration and requested additional evidence to support one of the elements in paragraph (c)(3)(iv) of this section, the State shall have 12 months from the date of the Administrator's request to submit such evidence. At the conclusion of this time, if the State has not submitted the requested additional evidence, the Administrator will notify the State in writing that it considers the demonstration to be inactive and will not pursue additional review of the demonstration. After a 12-month period of inactivity by the State, if a State desires to pursue the inactive demonstration, it must reinitiate its request to exclude associated data by following the process beginning with paragraph (c)(2)(i) of this section.

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Initial Notification the April 19, 2018 exceptional event

In AQS the data were flagged with the appropriate "R" flag necessary to show that the data were impacted by an event. The data were appropriately flagged by the 2018 data certification deadline of 5/1/2019.

The City of Albuquerque-EHD (Agency) submitted an initial notification to EPA Region 6 on 5/23/2019 and engaged in discussions with the EPA Regional office regarding the demonstration prior to formal submittal. A summary of those discussions and their impact on the final demonstration submittal follows:

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City of Albuquerque
Environmental Health Department

Timothy M. Keller, Mayor

Sandra K. Begay, Director

May 23, 2019

Jeffery J. Robinson, Branch Chief
Air Monitoring & Grants Section (6ARPM)
U.S. EPA, Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Dear Mr. Robinson,

Please consider this letter the City of Albuquerque's initial notification of intent to prepare demonstrations as a preliminary step before submitting a demonstration per the 2016 Exceptional Events Rule (EER) effective September 30, 2016. These demonstrations will address high wind events which occurred at site 35-001-0029 (South Valley) for parameter 81102 (PM10) on:

Date	PM10 Concentration
2018/01/15	157
2018/02/12	229
2018/04/19	283
2018/07/11	200

These events can be considered as having regulatory significance. The associated data has been appropriately flagged in the AQS system. Attached are the AQS AMP300 and AMP350 reports. Our agency looks forward to working with EPA Region 6 to establish a timeframe for the demonstrations.

Sincerely,

Jolene Slowen, Deputy Director
City of Albuquerque, Environmental Health Department, Air Quality Programs
1 Civic Plaza NW
Albuquerque, NM 87102

cc: Dwayne Salisbury, Air Quality Assurance Programs Monitoring Section Manager
Christella Armijo, Environmental Health Scientist, Air Quality Assurance Programs Monitoring Section

1 - Initial Notification Letter

EPA responded to the initial notification and set a conference call on June 5, 2018 to discuss the event demonstrations. The Agency and EPA Region 6 agreed that the data met the requirements for a demonstration submittal and that the event met the requirements of a Tier-2 without SIP demonstration. Following the conference call the Agency received Region 6's letter, dated June 14, 2019, detailing the elements agreed to in the conference call.

From:	Crawford, Dorothy <Crawford.Dorothy@epa.gov>
Sent:	Wednesday, June 5, 2019 12:11 PM
To:	Salisbury, Dwayne N.; Gates, Dan E.
Cc:	Verhalen, Frances
Subject:	RE: Exceptional Event Demonstration, PM10 2018 South Valley 35-001-0029, four exceedances

Thanks for talking today. Fran will be sending the response to your 5/23/19 letter. Some notes from today's call:

- The city has entered 'rj' (request for exclusion, High Wind) flags into AQS for each hour on the days of the four exceedances.
- City's research indicates winds during the exceedances exceeded the regulatory High Wind Threshold of 25 mph.
- It appears the four 2018 PM10 exceedances fit into the Tier 2 analyses category for areas without SIP/TIP/FIP since Bernalillo County has not been designated as non-attainment.
- We agreed to a target date for the demonstrations submittal.
- The city plans on a 30 day public notice of demonstrations prior to submittal.
- The city hopes to provide us with pre-public notice draft documents for review.
- Since the city's last Demonstration preparation and submittal in 2018, EPA has issued national guidance for High Wind events (*Guidance on the Preparation of Demonstrations in Support of Requests to Exclude Ambient Air quality Data Influenced by High Wind Dust Events Under the 2016 Exceptional Events Rule*).
- Suggest the city review the April 2019 High Wind guidance for various recommended Tier 2 analyses and 'conclusion statements' for the various Exceptional Event regulatory criteria.

Below is my understanding of the recommended topics in an Exceptional Event Demonstration for Tier 2 non-SIP/TIP/FIP areas, based on 2019 High Wind guidance:

- Conceptual Model
- Clear Causal
  - Clear Causal Analyses (see Table 3)
  - Historical Concentrations Comparison Analyses (see Table 4)
  - Conclusion statement
- Not Reasonably Controllable and Preventable
  - Basic Sources and Controls Analyses (see Table 1)
  - Reasonableness of Controls Analyses (see Table 2)
  - Implementation/enforcement of Controls
  - Conclusion statement
- Natural Event
  - Conclusion statement
- Public Notice
  - Address and provide copy of any comments, and conclusion statement

The subject Tables in the 2019 High Wind guidance provides *examples* of elements or factors for the analyses. Analyses and level of supporting documentation for any demonstration will vary on a case-by-case basis.

Dorothy Crawford
U.S. EPA, Region 6, Air Monitoring
(214) 665-2771

2 - EPA Region 6 email response and conference call notes

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270 – 2102

June 14, 2019

Jolene Slowen, Deputy Director
City of Albuquerque, Environmental Health Department
Air Quality Program
1 Civic Plaza NW
Albuquerque, NM 87102

Dear Ms. Slowen,

Thank you for the Initial Notification letter dated May 23, 2019, regarding the planned submittal of Exceptional Events Demonstrations for particulate matter less than 10 micrometers in diameter (PM_{10}) exceedances which occurred during 2018. Your letter listed four measurements from the South Valley monitor (AQS ID 35-001-0029-81102-3) which are in excess of the PM_{10} National Ambient Air Quality Standard level of 150 μm^3. We understand the City of Albuquerque believes the exceedances were caused by High Wind Dust events. The PM_{10} exceedances listed in the letter were:

Date	PM_{10} Measurement ($\mu g/m^3$)	AQS Flag
1/15/2018	157	rj, high winds
2/12/2018	229	rj, high winds
4/19/2018	283	rj, high winds
7/11/2018	200	rj, high winds

As agreed during the June 5, 2019, conference call between our staff, the City of Albuquerque plans to submit the Exceptional Event Demonstrations by October 11, 2019, after a 30-day public notice period. We appreciate all your efforts to run an effective ambient air monitoring program and look forward to reviewing the Demonstrations. Please call Frances Verhalen at 214-665-2172, if you have any questions.

Sincerely,

Branch Chief
Air Permits, Monitoring & Grants Branch

3 - EPA Region 6 response letter

4 - EPA AQS database Violation Day Count Report

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

VIOLATION DAY COUNT REPORT

Apr. 9, 2019

PM10 Total 0-10um STP (81102)
Micrograms/cubic meter (25 C) (001)
24-HR BLK AVG (X)
2018
New Mexico

CBSA: (10740) Albuquerque, NM

SITE ID	POC	COUNTY NAME	DATE OF VIOLATION	MAXIMUM VIOLATION VALUE	EXCEPT DATA?	NUMBER OF PRIMARY VIOLATIONS	NUMBER OF SECONDARY VIOLATIONS
35-001-0029	3	Bernalillo	2018/01/15	157	2	1	1
			2018/02/12	229	2	1	1
			2018/04/19	283	2	1	1
			2018/07/11	200	2	1	1

SUMMARY FOR SITE 35-001-0029 POC 3 YEAR 2018 MAXIMUM VIOLATION VALUE 283

VIOLATION DAYS	4
PRIMARY VIOLATIONS	4
SECONDARY VIOLATIONS	4
VALID DAYS MONITORED	352

< THIS REPORT CONTAINS EXCEPTIONAL EVENT DATA >

Flagged data, requested for Exclusion as an Exception Event-High Winds

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
AIR QUALITY SYSTEM
RAW DATA REPORT

Sep. 6, 2019

(81102) PM10 Total 0-10um STP

SITE ID: 35-001-0029 POC: 3
COUNTY: (001) Bernalillo
CITY: (74520) South Valley
SITE ADDRESS: 201 PROSPERITY SE
SITE COMMENTS:
MONITOR COMMENTS: SAMPLING BEGAN 08/06/2002.

STATE: (35) New Mexico
AQCR: (152) ALBUQUERQUE-MID RIO GRANDE
URBANIZED AREA: (0200) ALBUQUERQUE, NM
LAND USE: COMMERCIAL
LOCATION SETTING: RURAL

CAS NUMBER:
LATITUDE: 35.01708
LONGITUDE: -106.65739
UTM ZONE:
UTM NORTHING:
UTM EASTING:
ELEVATION-MSL: 1508
PROBE HEIGHT: 4

SUPPORT AGENCY: (0017) Albuquerque Environmental Health Department, Air Quality Division
MONITOR TYPE: SLAMS
COLLECTION AND ANALYSIS METHOD: (239) Teledyne API T640X at 16.67 LPM Br
PQAO: (0017) Albuquerque Environmental Health Department, Air Quality Division

REPORT FOR: APRIL 2018

DURATION: 1 HOUR
UNITS: Micrograms/cubic meter (25 C)
MIN DETECTABLE: .1

HOUR / DAY	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	OBS	MAXIMUM
1																									0	
2																									0	
3																									0	
4																									0	
5																									0	
6																									0	
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18																									0	
19	149.2rj	154.6rj	87.4rj	62.3rj	56.0rj	51.3rj	60.5rj	112.7rj	70.3rj	71.5rj	116.0rj	158.3rj	219.6rj	427.9rj	604.6rj	354.6rj	564.4rj	342.2rj	144.3rj	643.2rj	513.0rj	1024.rj	616.3rj	204.1rj	24	1024.8
20																									0	
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26																									0	
27																									0	
28																									0	
29																									0	
30																									0	
31																									0	
NO.:	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
MAX:	149.2	154.6	87.4	62.3	56.0	51.3	60.5	112.7	70.3	71.5	116.0	158.3	219.6	427.9	604.6	354.6	564.4	342.2	144.3	643.2	513.0	1024.	616.3	204.1		
AVG:	149.20	154.60	87.40	62.30	56.00	51.30	60.50	112.70	70.30	71.50	116.00	158.30	219.60	427.90	604.60	354.60	564.40	342.20	144.30	643.20	513.00	1024.8	616.30	204.10		

MONTHLY OBSERVATIONS: 24 MONTHLY MEAN: 283.71 MONTHLY MAX: 1024.8

Note: Qualifier codes with regional concurrence are shown in upper case, and those without regional review are shown in lower case. An asterisk ("*") indicates that the region has reviewed the value and does not concur with the qualifier.

5 - EPA AQS database Raw Data Report, Data Flagged for EER

City of Albuquerque Authority

The authority of the Agency is limited to those lands not under Native American Tribal authority. Within Bernalillo County these Tribal lands consist of, approximately, 334.6 square miles (miles^2). Bernalillo County consists of a total of 1,167.19 miles^2, excluding the Tribal land from the total Bernalillo County land area leaves approximately 832.59 miles^2, or approximately 71% of the total land area of Bernalillo County.

Conclusions

Based on the following EER documentation the Agency will provide data to support the following conclusion statements

Not Reasonably Controllable or Preventable

The documentation and analysis presented in this documentation demonstrates that all identified sources, with the exception of State and Tribal sources, that caused or contributed to the exceedance were reasonably controlled, effectively implemented, and enforced within Bernalillo County at the time of the event, therefore emissions associated with the high wind dust event were not reasonably controllable or preventable.

Human Activity Unlikely to Recur at a Particular Location or a Natural Event

Based on the documentation provided in this demonstration, the event qualifies as a natural event. The exceedance associated with the event meets the regulatory definition of a natural event at 40 CFR 50.14(b)(8). This event transported windblown dust from anthropogenic sources that were reasonably controlled at the time of the event within the jurisdiction of the Agency and accordingly, The City of Albuquerque-EHD has demonstrated that the event is a natural event and may be considered for treatment as an exceptional event.

Clear Causal Relationship between the Event/Monitored Concentration

On April 19, 2018 a high wind event occurred that generated PM10 and resulted in elevated concentrations at AQS ID 35-001-0029, South Valley-2ZV. The monitored PM10 concentrations of 283 µg/m^3 were in excess of typical days in any April and that wind speeds were high enough to entrain dust and overwhelm existing reasonable controls in place within the Agency's jurisdiction.

The comparisons and analyses, provided in this demonstration support the City of Albuquerque-EHD's position that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance on April 19, 2018 at AQS ID 35-001-0029, South Valley-2ZV site, and thus satisfies the clear causal relationship criterion.

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Prior Exceptional Events Rule (EER) and Mitigation Plan Evaluation

Bernalillo County typically experiences elevated and high winds meeting the EER wind speed criteria in the months of March-July. This time period is called our "windy season" and some years are more extreme than others. The South Valley-2ZV site has experienced high wind exceptional events in 2014 and 2016. In 2014 one exceptional event occurred on 5/7/2014. In 2016 three events occurred on 3/22/2016, 3/29/2016, and 5/6/16. All of these events were flagged as exceptional events and documentation was submitted to EPA Region 6 by the Agency. These events are not annual occurrences but they do occur seasonally based on a quarterly basis but not on a monthly basis. The event discussed in this demonstration is not an event that has recurred in the past five years at this site from 2013-2017 and in the current year of 2019 for any month of April of these years. In fact an April high wind exceptional event of this nature is a deviation from the normal seasonal pattern where these types of events, when they do occur, tend to occur between the months of March-July, but more often in March or May.

Based on "40 CFR § 50.14 - Treatment of air quality monitoring data influenced by exceptional events" documentation the site has accumulated 2 of the necessary 3 points for submitting a mitigation plan (40 CFR § 50.14 - Treatment of air quality monitoring data influenced by exceptional events, section V. Mitigation).

Table 1 - Event Count

Site	Year	Q1	Q2	Q3	Q4	# of Events
35-001-0029	2016	2	1	0	0	3
35-001-0029	2017	0	0	0	0	0
35-001-0029	2018	2	1	1	0	4
3 Year Event Count		2	2	1	0	7

Based on the 3 year event count the site does not meet the required number of three (3) annual seasonal events in a given three year period and is therefore not considered as "known seasonal" since these events do not recur every year. These events are "historically documented" and EER documentation has been submitted for the events that occurred in 2016. Yet, since these events do not result in annual recurrence and the value of the annual number of events is not 3 the Agency does not fall under the requirement for submitting a mitigation plan as described in "40 CFR § 50.14 - Treatment of air quality monitoring data influenced by exceptional events, section V. Mitigation.

The last time this site exceeded the PM10 NAAQS in April was 4/26/2012. Quarterly based seasons do show that typically values that exceed the PM10 NAAQS tend to occur in March (quarter 1) and May (quarter 2). Going back to 2011 the South Valley-2ZV site has experienced a total of 14 PM10 values that exceed the PM10 NAAQS.

Year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	# of exceedances for year
2011	0	0	0	1	1
2012	2	2	0	0	4
2013	0	0	0	0	0
2014	0	1	1	0	1
2015	0	0	0	0	0
2016	2	1	0	0	3
2017	0	0	0	0	0
2018	2	1	1	0	4
Total per quarter	6	5	2	1	14

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Narrative Conceptual Model

On Monday, April 19, 2018 Bernalillo County, New Mexico experienced a high wind event that generated windblown dust and caused one of the Agency's PM10 monitors to exceed the PM10 NAAQS. The event lasted approximately 10 hours from 14:00 to 23:00, although winds meeting the EER wind speed threshold were seen across the entire day. National Weather Service data show that the maximum sustained wind speed was 40 mph from 110 degrees with maximum wind gust at 50 mph from 120 degrees, sustained winds were 26.7 mph (see Table 3 - NWS Daily Weather Results for April 2018).

The event originated from the southeast from 80 to 120 degrees, traveling across the east and south-eastern counties of New Mexico, and directly impacted the South Valley-2ZV monitoring site. Currently this site in designated as meeting the attainment requirements for PM10. Yet, in 2016 this site experienced 3 exceedances of the PM10 NAAQS, all three 2016 events were flagged as high wind exceptional events. These events occurred on 3/22/2016, 3/29/16, and 5/6/16. There are not historically documented exceedances at this site for the PM10 NAAQS in April.

The 24 hour PM10 concentration recorded at the South Valley–2ZV (35-001-0029) site was 283 µg/m^3**.**

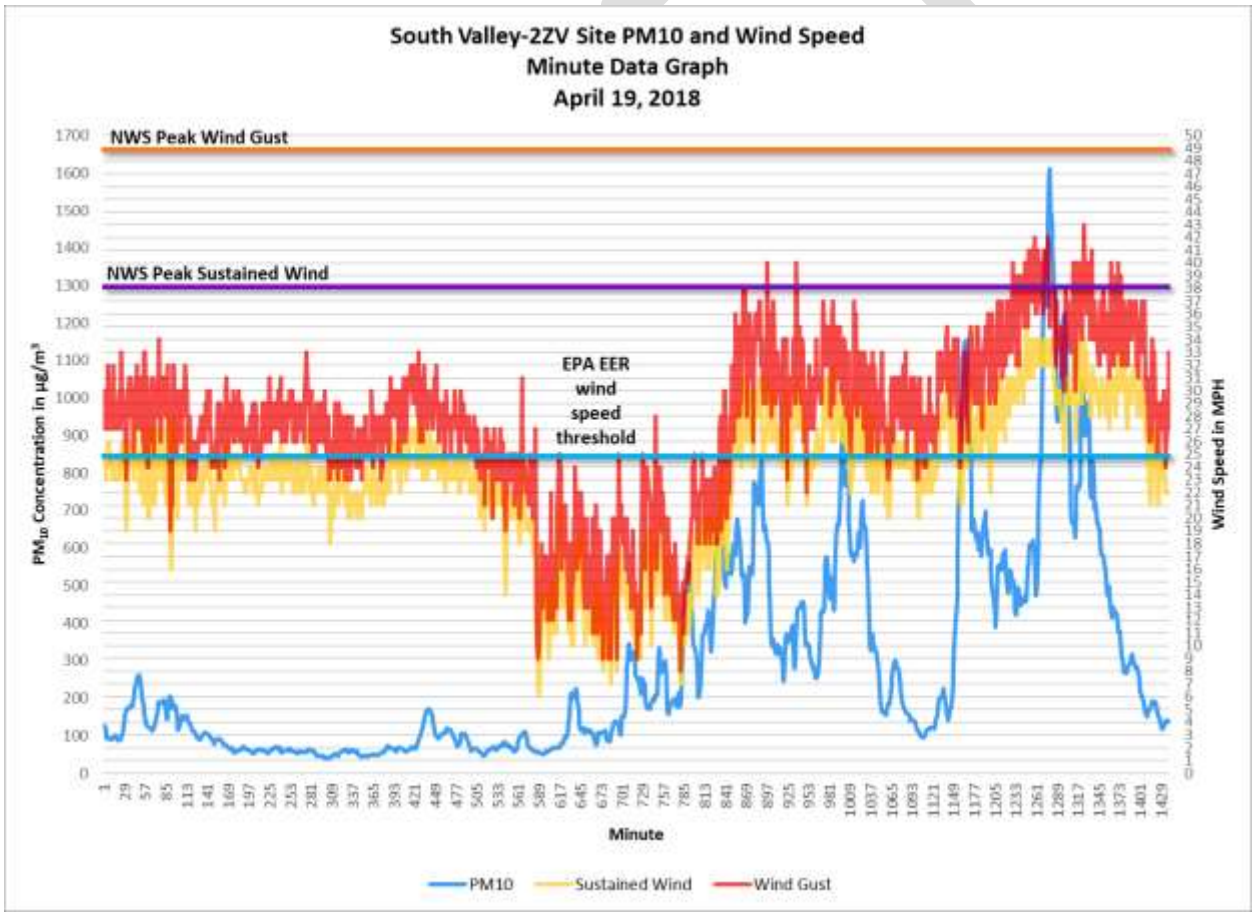

Figure 1 - Event Overview Graph, minute data

NWS data show that the wind speeds remained above the EER threshold of 25 MPH for 19 of the days 24 hours (79%).

Table 2 - NWS Hourly Data

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 5310 ft. Lat: 35.0419° N Lon: -106.6155° W
Station: **ALBUQUERQUE INTERNATIONAL AIRPORT, NM US WBAN: 72365023050 (KABQ)**

Local Climatological Data
Hourly Observations
April 2018
Generated on 04/03/2019

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Time (LST)	Station Type	Sky Conditions	Visibility	Weather Type (see documentation)	Dry Bulb Temp		Wet Bulb Temp		Dew Point Temp		Rel Hum %	Wind Speed (MPH)	Wind Dir (Deg)	Wind Gusts (MPH)	Station Press (inHg)	Press. Tend	Net 3-Hr Change (inHg)	Sea Level Press. (inHg)	Report Type	Precip Total (in)	Altimeter Setting (inHg)
					AU | AW | MW	(F)	(C)	(F)	(C)	(F)	(C)											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
19	0052	7	FEW:02 40	10.00		53	11.7	37	2.8	11	-11.7	18	28	090	37	24.80			30.01	FM-15	0.00	30.15
19	0152	7	FEW:02 40 FEW:02 230	10.00		51	10.6	36	2.2	12	-11.1	21	30	080	37	24.81	3	-0.02	30.02	FM-15	0.00	30.17
19	0200	4	41	9.94		51	10.6	36	2.2	12	-11.1	21	30	080		24.82	3	-0.02	30.02	FM-12		
19	0252	7	FEW:02 40 SCT:04 210	10.00		50	10.0	35	1.7	12	-11.1	22	29	080	36	24.81			30.03	FM-15	0.00	30.17
19	0352	7	FEW:02 40 FEW:02 300	10.00		49	9.4	35	1.7	12	-11.1	22	29	090	36	24.82			30.03	FM-15	0.00	30.18
19	0452	7	FEW:02 40 SCT:04 300	10.00		48	8.9	34	1.1	12	-11.1	23	28	090	33	24.83	1	-0.02	30.04	FM-15	0.00	30.19
19	0500	4	41	9.94		48	8.9	34	1.1	12	-11.1	23	28	090		24.84	1	-0.02	30.04	FM-12		
19	0552	7	FEW:02 150 SCT:04 200	10.00		48	8.9	34	1.1	12	-11.1	23	25	080	31	24.84			30.06	FM-15	0.00	30.20
19	0652	7	SCT:04 130 SCT:04 200	10.00		49	9.4	35	1.7	12	-11.1	22	29	090	36	24.86			30.07	FM-15	0.00	30.22
19	0752	7	FEW:02 250	10.00		52	11.1	37	2.8	13	-10.6	21	26	080	32	24.86	1	-0.03	30.08	FM-15	0.00	30.22
19	0800	4		9.94		52	11.1	37	2.8	13	-10.6	21	26	080		24.86	1	-0.03	30.08	FM-12		
19	0852	7	FEW:02 150 FEW:02 250	10.00		58	14.4	40	4.4	14	-10.0	18	25	080		24.85			30.06	FM-15	0.00	30.21
19	0952	7	SCT:04 150 SCT:04 250	10.00		62	16.7	42	5.6	13	-10.6	14	16	140	31	24.83			30.03	FM-15	0.00	30.19
19	1052	7	BKN:07 160 BKN:07 210	10.00		65	18.3	43	6.1	14	-10.0	14	14	120	25	24.81	8	+0.04	30.01	FM-15	0.00	30.17
19	1100	4		9.94		65	18.3	43	6.1	14	-10.0	14	14	120		24.82	8	+0.04	30.01	FM-12		
19	1152	7	BKN:07 140 BKN:07 210	10.00		68	20.0	45	7.2	15	-9.4	13	15	120	23	24.78			29.95	FM-15	0.00	30.13
19	1252	7	BKN:07 130 BKN:07 210	10.00		70	21.1	46	7.8	14	-10.0	11	14	150		24.73			29.90	FM-15	0.00	30.07
19	1352	7	BKN:07 150 BKN:07 210	10.00		74	23.3	47	8.3	14	-10.0	10	22	150	31	24.68	8	+0.14	29.83	FM-15	0.00	30.02
19	1400	4		9.94		74	23.3	47	8.3	14	-10.0	10	22	150		24.69	8	+0.14	29.83	FM-12		
19	1452	7	BKN:07 150 BKN:07 300	10.00		77	25.0	49	9.4	15	-9.4	9	29	190	43	24.65			29.79	FM-15	0.00	29.98
19	1552	7	SCT:04 160 BKN:07 250	10.00		75	23.9	48	8.9	17	-8.3	11	29	160	39	24.64			29.79	FM-15	0.00	29.97
19	1652	7	SCT:04 160 BKN:07 250	10.00		72	22.2	48	8.9	22	-5.6	15	28	140	38	24.63	6	+0.06	29.78	FM-15	0.00	29.95
19	1700	4		9.94		72	22.2	48	8.9	22	-5.6	15	28	140		24.63	6	+0.06	29.78	FM-12		
19	1752	7	SCT:04 160 BKN:07 250	10.00		70	21.1	48	8.9	24	-4.4	18	30	140	36	24.62			29.78	FM-15	0.00	29.94
19	1852	7	SCT:04 160 BKN:07 250	10.00		67	19.4	47	8.3	26	-3.3	21	32	130	38	24.60			29.76	FM-15	0.00	29.92
19	1952	7	SCT:04 160 BKN:07 250	10.00		64	17.8	46	7.8	26	-3.3	24	32	120	40	24.60	6	+0.02	29.76	FM-15	0.00	29.92
19	2000	4		9.94		64	17.8	46	7.8	26	-3.3	24	32	120		24.61	6	+0.02	29.76	FM-12		
19	2052	7	BKN:07 250	8.00		62	16.7	45	7.2	25	-3.9	24	38	110	47	24.58			29.73	FM-15	0.00	29.90
19	2152	7	BKN:07 250	10.00		61	16.1	45	7.2	26	-3.3	26	32	120	46	24.57			29.70	FM-15	0.00	29.88
19	2252	7	BKN:07 250	10.00		60	15.6	44	6.7	27	-2.8	28	34	120	46	24.56	6	+0.04	29.68	FM-15	0.00	29.87
19	2300	4		9.94		60	15.6	44	6.7	27	-2.8	28	34	120		24.57	6	+0.04	29.68	FM-12		
19	2352	7	SCT:04 130 BKN:07 210 OVC:08 270	10.00		59	15.0	44	6.7	28	-2.2	31	28	110	34	24.57			29.68	FM-15	0.00	29.88

Table 3 - NWS Daily Weather Results for April 2018

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data, and Information Service
Current Location: Elev: 5310 ft. Lat: 35.0419° N Lon: -106.6155° W
Station: **ALBUQUERQUE INTERNATIONAL AIRPORT, NM US WBAN: 72365023050 (KABQ)**

Local Climatological Data
Daily Summary
April 2018
Generated on 04/03/2019

National Centers for Environmental Information
151 Patton Avenue
Asheville, North Carolina 28801

Date	Temperature (F)							Degree Days (base 65F)		Sun (LST)		Weather	Precipitation (in)			Pressure (inHg)		Wind	Maximum Wind Speed = MPH Direction = Degrees			
	Max	Min	Avg	Dep	ARH	ADP	AWB	Heat	Cool	Rise	Set	Weather Type	TLC	Snow Fall	Snow Depth	Avg Stn	Avg SL	Avg Speed	Peak Speed	Peak Dir	Sust. Speed	Sust. Dir
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
01	70	46	58	6.6	21	19	42	7	0	0554	1828		0.00	0.0	0	24.65	29.82	8.1	21	260	17	240
02	75	43	59	7.3	16	12	41	6	0	0552	1829		0.00	0.0	0	24.50	29.64	15.0	38	260	30	270
03	70	50	60	8.0	15	10	40	5	0	0551	1829		0.00	0.0	0	24.66	29.80	15.0	30	270	24	310
04	73	38	56	3.8	21	16	40	9	0	0549	1830		0.00	0.0	0	24.75	29.97	7.1	24	220	18	190
05	72	47	60	7.5	19	18	42	5	0	0548	1831		0.00	0.0	0	24.70	29.87	6.4	31	270	22	260
06	77	46	62	9.2	23	24	45	3	0	0547	1832		0.00	0.0	0	24.58	29.73	6.2	28	280	23	280
07	83	46	65	12.0	29	32	49	0	0	0546	1833		0.00	0.0	0	24.55	29.67	10.4	39	250	28	260
08	79	55	67	13.7	24	26	49	0	2	0544	1833		0.00	0.0	0	24.56	29.64	18.1	47	290	36	290
09	70	44	57	3.4	19	14	40	8	0	0543	1834		0.00	0.0	0	24.82	30.00	10.9	32	310	25	090
10	71	44	58	4.1	27	22	42	7	0	0541	1835		0.00	0.0	0	24.88	30.13	5.5	29	090	25	090
11	83	47	65	10.8	17	16	44	0	0	0540	1836		0.00	0.0	0	24.70	29.85	8.6	32	280	24	270
12	81	48	65	10.5	13	12	43	0	0	0539	1836	DU	0.00	0.0	0	24.45	29.56	16.9	52	240	39	240
13	54	35	45	-9.8	29	11	33	20	0	0537	1837	DU	0.00	0.0	0	24.60	29.79	22.3	52	290	38	300
14	63	38	51	-4.1	21	9	35	14	0	0536	1838		0.00	0.0	0	24.81	30.08	10.2	31	310	23	320
15	71	36	54	-1.4	15	9	38	11	0	0535	1839		0.00	0.0	0	24.78	30.02	4.3	23	170	16	190
16	79	48	64	8.2	9	1	40	1	0	0533	1840		0.00	0.0	0	24.68	29.86	8.6	33	220	26	210
17	78	47	63	6.9	11	4	40	2	0	0532	1841	DU	0.00	0.0	0	24.61	29.74	20.7	55	270	44	290
18	69	37	53	-3.4	14	4	36	12	0	0531	1841		0.00	0.0	0	24.82	30.05	8.5	33	080	29	090
19	77	48	63	6.3	19	17	42	2	0	0530	1842		0.00	0.0	0	24.70	29.90	26.7	50	120	40	110
20	62	43	53	-4.0	31	21	41	12	0	0528	1843		T	0.0	0	24.62	29.78	15.8	40	280	32	280
21	68	35*	52	-5.4	45	29	41	13	0	0527	1844		0.00	0.0	0	24.77	30.01	5.2	30	270	18	270
22	75	43	59	1.3	35	28	44	6	0	0526	1845		0.00	0.0	0	24.77	29.98	6.5	19	180	16	190
23	80	50	65	7.0	25	27	47	0	0	0525	1845		0.00	0.0	0	24.75	29.91	7.2	20	190	17	190
24	83	50	67	8.7	25	24	46	0	2	0524	1846		0.00	0.0	0	24.75	29.90	13.0	48	090	40	090
25	74	45	60	1.3	37	31	45	5	0	0522	1847		0.00	0.0	0	24.82	30.03	11.3	47	080	37	090
26	81	45	63	4.0	24	21	45	2	0	0521	1848		0.00	0.0	0	24.75	29.91	12.9	45	100	39	110
27	75	50	63	3.7	26	26	45	2	0	0520	1849		0.00	0.0	0	24.80	29.99	11.5	37	090	30	090
28	80	55	68	8.4	31	33	49	0	3	0519	1849		T	0.0	0	24.70	29.84	9.5	47	260	37	260
29	83*	54	69	9.0	22	24	48	0	4	0518	1850		0.00	0.0	0	24.60	29.73	11.1	37	190	31	190
30	78	57	68	7.7	13	13	43	0	3	0517	1851		0.00	0.0	0	24.57	29.67	10.3	37	220	28	220
	74.5	45.7	60.1							Monthly Averages | Totals			T			24.70	29.86	11.4				
	5.5	2.7	4.1							Departure from Normal (1981-2010)			-0.61									

Degree Days	Monthly		Season-to-date		Number of days with... Temperature				Precipitation		Snow	Weather	
	Total	Departure	Total	Departure	Max >=90°	Max <=32°	Min <=32°	Min <=0°	>=0.01"	>=0.1"	>=1"	T-Storms	Heavy Fog
Heating	160	-117	3352										
Cooling	12	5	12		0	0	0	0	0	0	0		

Date of 5-sec to 3-sec wind equipment change	Sea Level Pressure				Greatest...		
			Date	Time	24-Hr...		Snow Depth
2007-05-22	Maximum	30.25	10	0852	Precip	Snowfall	
	Minimum	29.38	12	1721	0.00	0.0	0.0
					Date		
					28-28		

Station Augmentation

Name:N/A Lat: N/A Lon: N/A Elevation: N/A Distance: N/A Elements: N/A Equipment: N/A

Evaluation of other April data

The event of April 19, 2018 has not happened in the past 5 years (2013-2017) prior to the event. The data do show that compared to other years it is not normal for Bernalillo County to experience an event such as this, especially in April. While data do show occasional elevated PM10 values or elevated winds, this event was out of the normal expectation for any April for any other year.

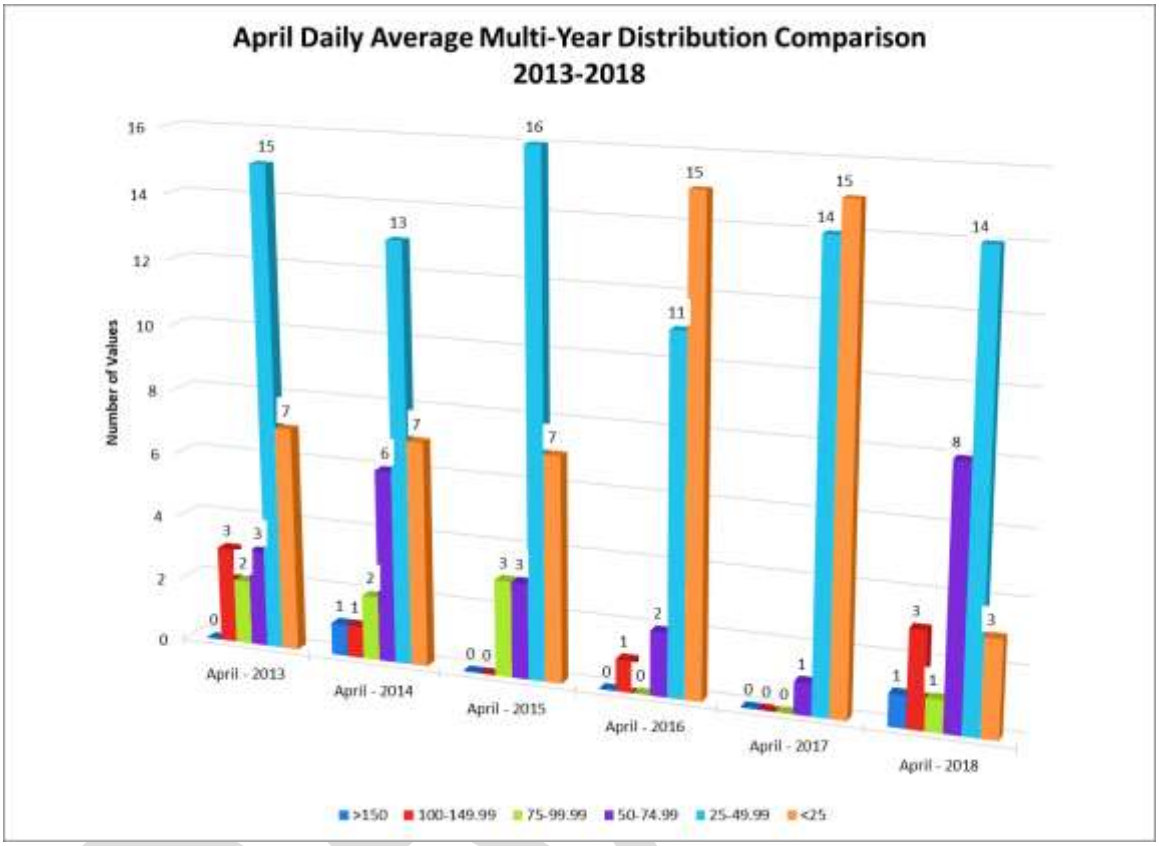

Figure 2 - Daily Average Distribution Comparison - Multi Year February

There is one year from the above graph where the daily average is above the NAAQS, the day in 2014 had a PM10 concentration of 150 µg/m^3, the day that exceeded the standard was April 19, 2018. During April of these years, April 19, 2018 does show to be an event that deviates from the normal monthly pattern. Additionally, for April 2018, there are 3 averages where the values are between 100-149.99 µg/m^3, this will increase the monthly average for April 2018. The data shows that in April the majority of PM10 concentrations for all years other than 2018 are below 100 µg/m^3.

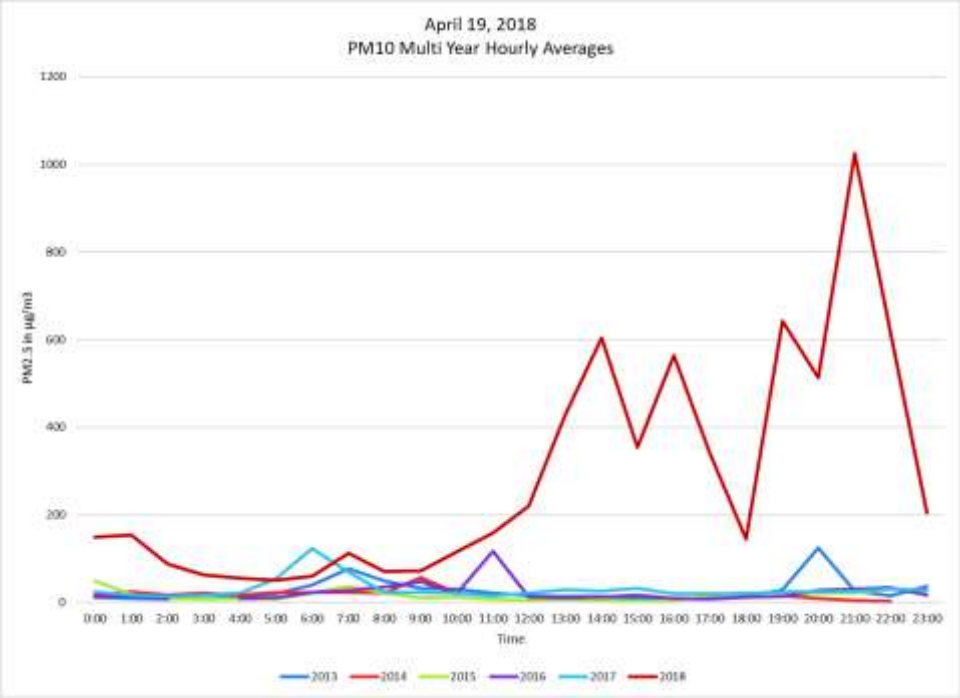

Figure 3 - April 19, 2018 Hourly Averages - Multi Year

Additionally, the monthly average PM10 concentration for 2018 is significantly higher than the monthly average PM10 concentration values for other years (see Figure 4).

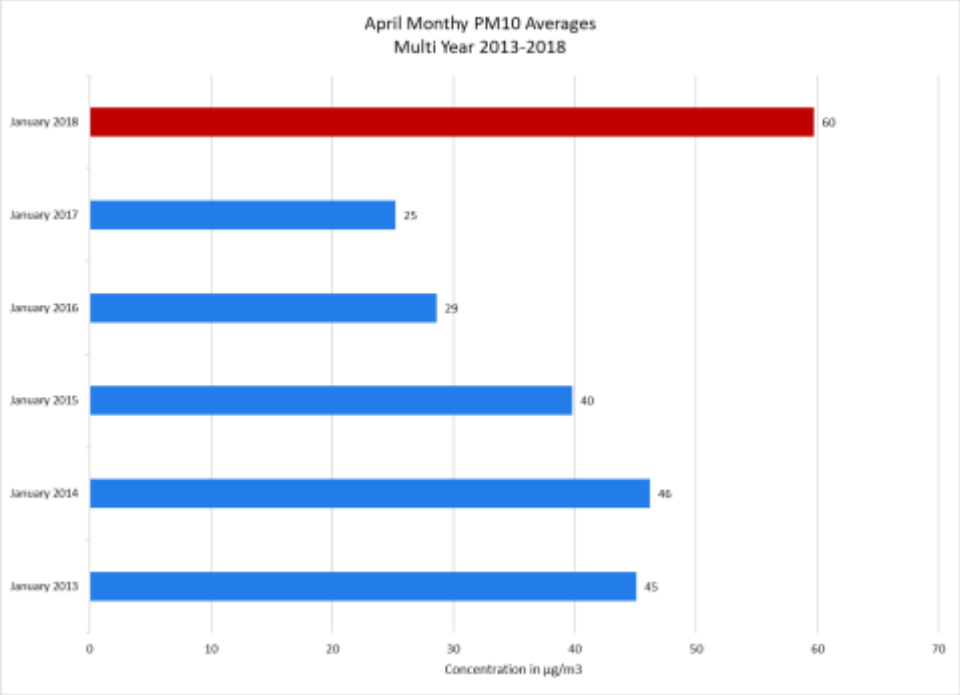

Figure 4 - Monthly Average - Multi Year

Monthly average data results from April 2018 also eclipse April monthly averages from the other years. It can be seen that the data has been impacted by elevated PM10 for the month of April 2018.

Excluding the event of April 19, 2018 from the monthly average graphs shows that excluding the event brings the monthly average closer to the rest of the evaluation years.

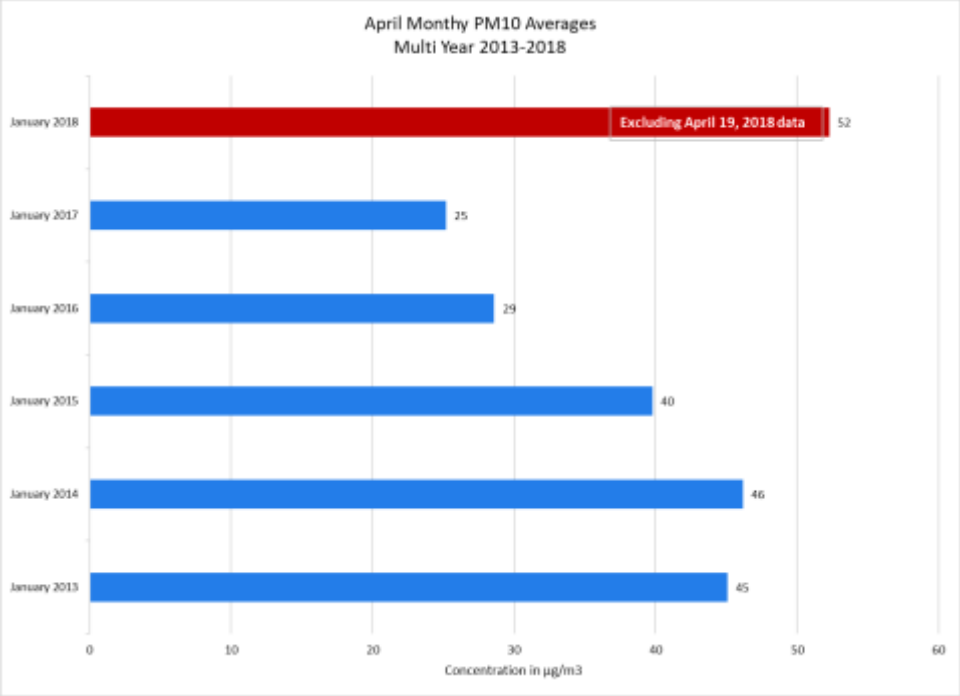

Figure 5 April Monthly PM10 Average =s Excluding Event Data

With the exclusion the monthly average drops from 60 µg/m^3 to 52 µg/m^3, an 8 µg/m^3 (13%) reduction.

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Data Evaluation

The evaluation of the minute data produce the following results for April 2018:

Table 4 - Minute Data Wind Speed Results

	Expected N PM10 minutes	Total N PM10 minutes	Correlation r WS:PM10	WS >25MPH minutes
April 2018	43200	43151	0.43	2286
April 19, 2018	1440	1435	0.46	601

Of the minutes where the wind speeds met the EER criteria of 25 MPH or greater the entire month of April 2018 had 2286 minutes with wind speeds meeting the EER criteria. Of these 601 minutes (26.3%) occurred on April 19, 2018. Correlation r value is moderately good for the day of the event between the wind speed and PM10 concentration.

Table 5 - Minute Data PM10 Concentration Results

	PM10 Concentration				
	<500	**500-<1000**	**1000-<1500**	**1500-<2000**	**>2000**
April 2018	42709	374	66	2	0
April 19, 2018	1143	255	37	2	0
% of total April PM10 Concentration	2.7	68.1	56.0	100	0

Of the minutes where PM10 concentrations were elevated from 500 µg/m^3 to over 2,000 µg/m^3 the entire month of April saw 442 minutes of elevated PM10 with 294 minutes (66.5%) occurring on April 19, 2018. The minute data does detail that the event was generated primarily by data in the 500-1,999 µg/m^3 range.

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PM2.5 Minute Data

PM2.5 at the South Valley-2ZV monitoring site was also impacted on April 19, 2018.

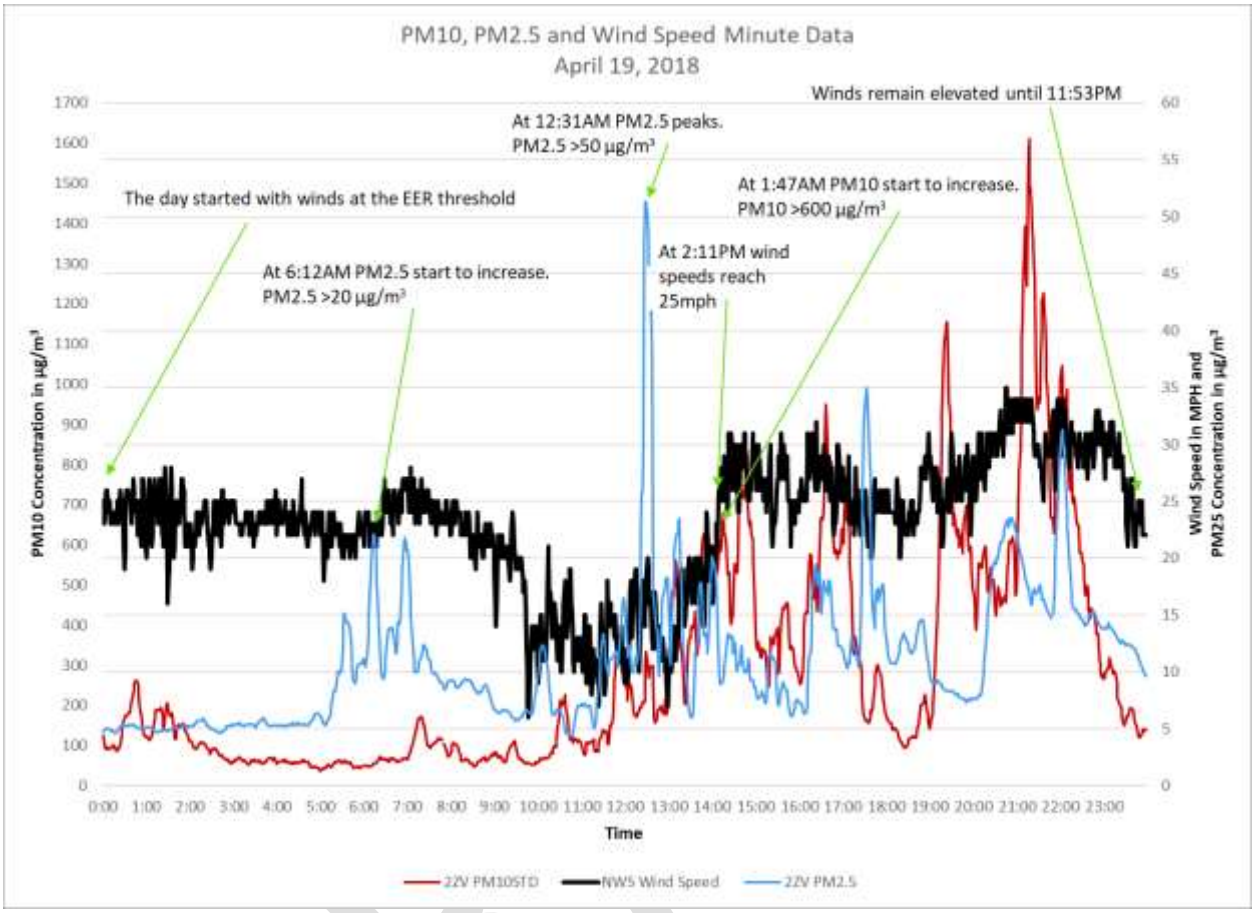

Figure 6 – PM10, PM2.5 and Wind Speed Minute Data April 19, 2018

The day of the 19th started off windy. At 12:01AM wind speeds were already at the EER wind speed threshold of 25 mph. April 18th ended the day with elevated winds above 20 mph but did not reach the EER wind speed threshold until 11:59PM

The point where PM10 did increase substantially did not start until 14:11 that afternoon and corresponds with an increase in wind gust activity. Prior to 14:11 wind gust tended to stay below 35 mph, but after 14:11 wind gust increased to over 35 mph at 14:17, wind gusts reached 40 mph by 14:56 and peak wind speeds reached 43 mph by 22:03. As winds and wind gusts increased and were sustained at or above the EER wind speed threshold there are increases in both PM10 and PM2.5 concentrations at the site. Winds did not drop below 25 mph until 11:53PM.

With the PM2.5 showing elevated concentrations this could point to the movement of particulate matter to the monitoring site inside Bernalillo County land outside of Bernalillo County.

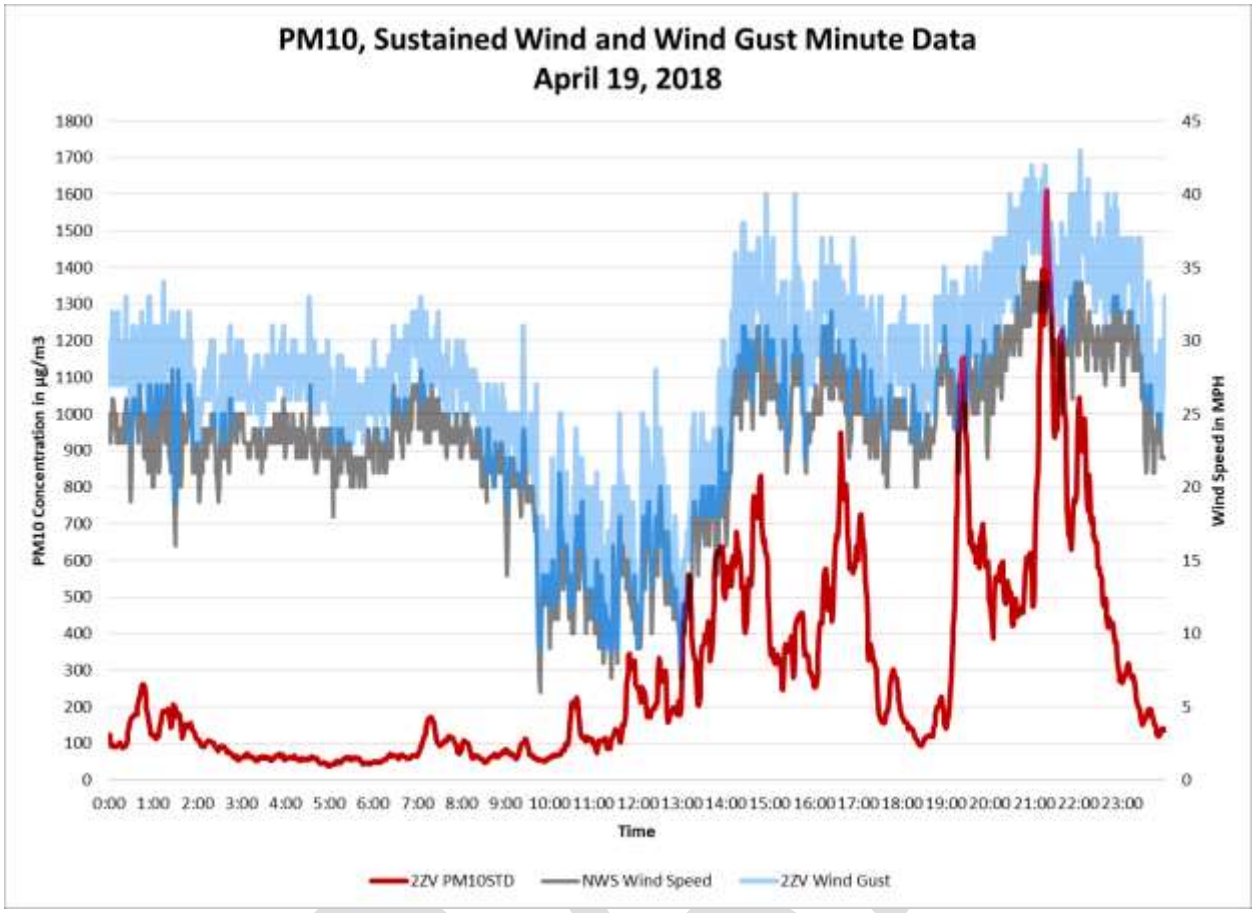

Figure 7 PM10 and Wind Speed Minute Data for April 19, 2018

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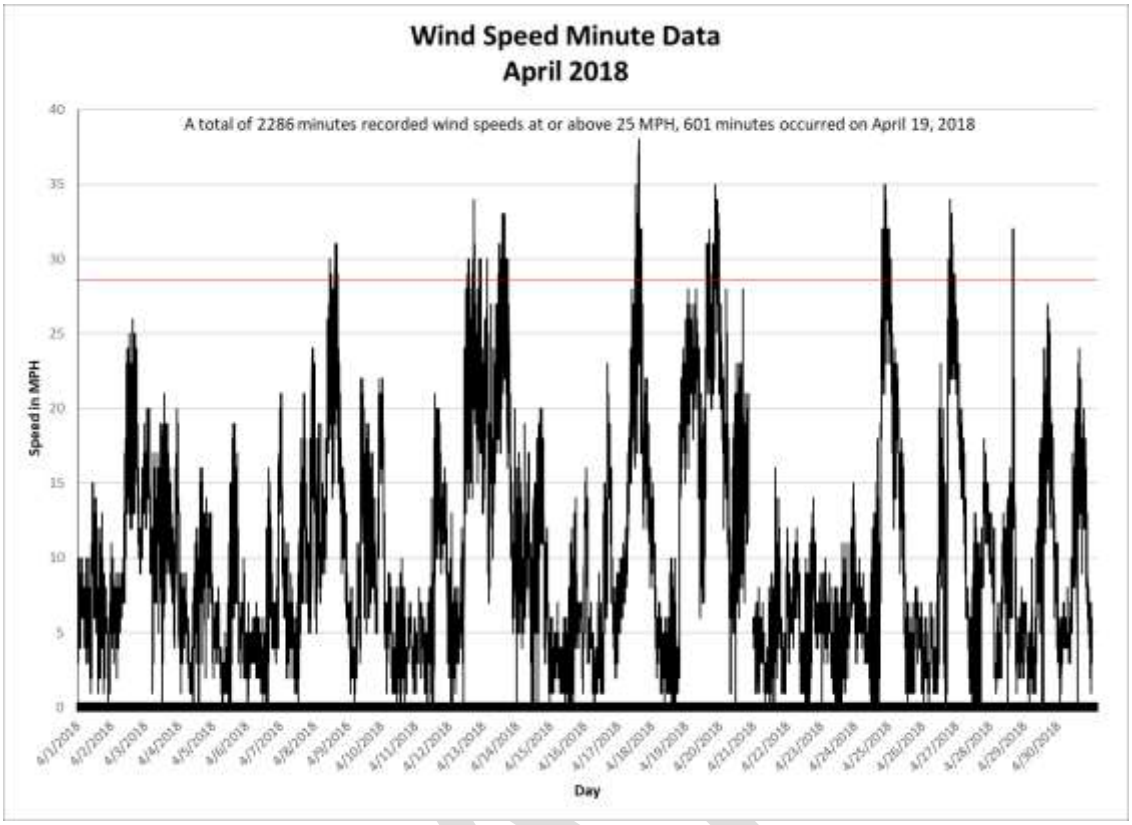

Figure 8 - Minute Wind Speed Data April 2018

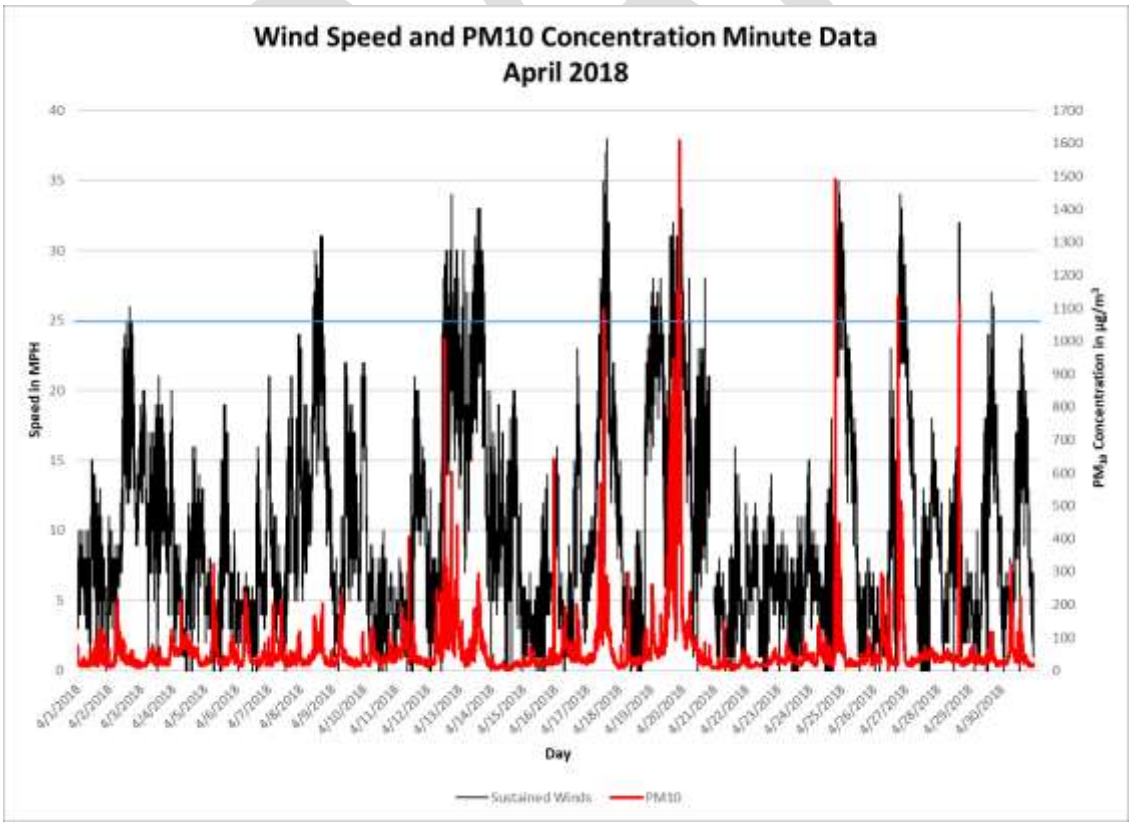

Figure 9 - Minute Wind Speed and PM10 Data April 2018

Elevated winds were experienced on other days in April such as on April 12th - 13th, 2018. This two day period did have a maximum sustained wind speed of 34 mph while April 19, 2018 had a sustained wind speed of 35 mph.

Table 6 Wind Speed Percentile Comparison

Percentile Wind speed	10th	25th	50th	75th	90th	95th	98th	99th
4/12 - 4/13/2018	5	10	19	24	27	28	30	31
4/19/2018	14	21	24	**27**	**30**	**31**	**33**	**34**

There is a significant difference in the percentile ranges of the two dates with the 19th being an overall windier day than the two day period of the 12th-13th.

The event of the 19th generated a large amount of airborne particulate matter for the entire day of the event compared to the event of 4/12-4/13/2018.

Table 7 PM10 Percentile Comparison

Percentile PM10	10th	25th	50th	75th	90th	95th	98th	99th
4/12 - 4/13/2018	21	33	69	134	210	253	307	408
4/19/2018	58	74	**167**	**430**	**658**	**830**	**1108**	**1269**

One primary difference is the EER wind speed threshold. On April 12th – 13th the number of minutes where the wind speed was 25 mph or greater is 560 minutes, calculated over the two day period this is only 19.4% of the total minutes. Compare that to the 601 minutes over a one day period April 19th which was 41.7% of all minutes being 25 mph or greater. Additionally, the winds on April 12th – 13th did not reach the EER wind speed threshold until the 81st percentile. For April 19th the threshold was met at the 59th percentile.

Elevated winds also occurred on 4/17/2018, 4/25/2018 and 4/27/2018. The number of minutes that met the EER wind speed threshold each day are:

Table 8 Wind Speed Comparison Data

Day	Number of minutes meeting EER threshold	Total Minutes for Day	Percentage of Total	Wind Direction degrees
4/12-4/13/2018	560	2880	19.4%	300-310
4/17/2018	247	1412	17.4%	220-280
4/25/2018	100	1423	7.0%	90
4/27/2018	260	1439	18.0%	90
4/19/2018	**601**	1440	**41.7%**	80-140

Wind direction does not appear to be the primary factor in determining elevated PM10 concentrations. It appears that the overall time period of the event, measured in minutes that meet the EER wind speed threshold, combined with wind direction, storm event activity, and type of winds help to determine the amount airborne particulate matter.

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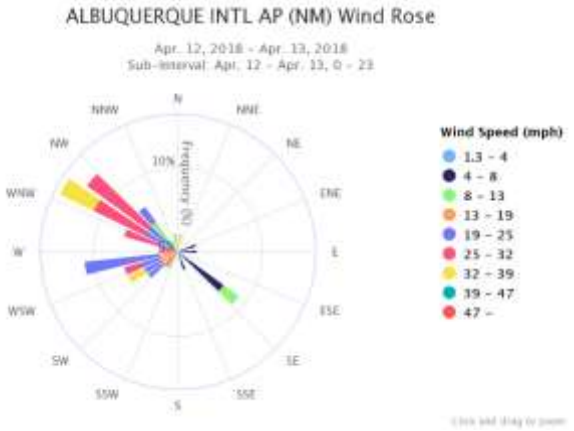
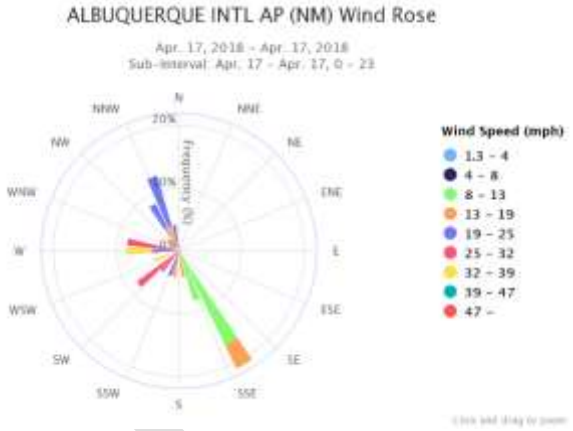
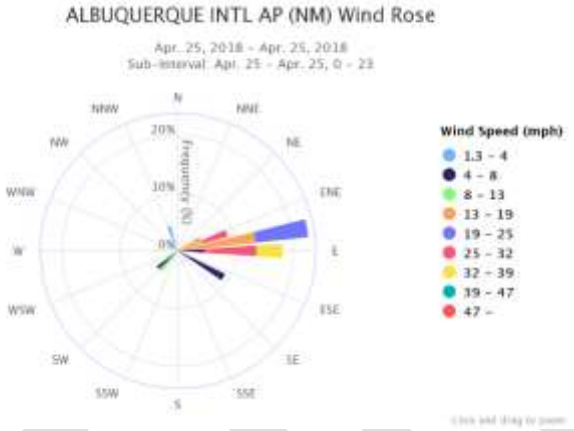


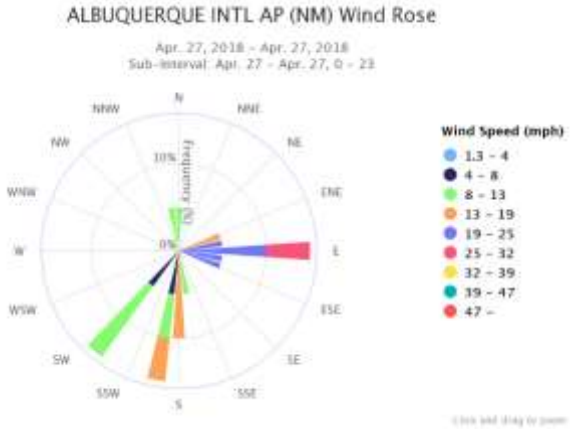
5 Wind Rose April 12-13, 2018



6 Wind Rose April 17, 2018



7 Wind Rose April 25, 2018



8 Wind Rose April 27, 2018

Evaluation of the data for NAAQS determination

Table 9 - NAAQS Determination Including all 2018 Events

2018 Quarter	Days in Quarter (N_q)	Days <18 Hours of Data	Days in Quarter with Data (n_q)	$N_q \div n_q$	Observed Exceedances in Quarter (v_q)	Estimated Exceedances in Quarter (e_q)
1 (1/15/18, 2/12/18)	90	3	87	1.03	2	2.07
2 (4/19/18)	91	3	88	1.03	1	1.03
3 (7/11/18)	92	1	91	1.01	1	1.01
4	92	5	87	1.06	0	0.00
Total	365	12			4	4.1

The three year average, assuming the prior two years are zero (0), is 1.3. Since 1.3 exceeds the allowable number of expected exceedances this monitoring site would fail the attainment test.

Table 10 - NAAQS Determination Excluding April 19, 2018 Events

2018 Quarter	Days in Quarter (N_q)	Days <18 Hours of Data	Days in Quarter with Data (n_q)	$N_q \div n_q$	Observed Exceedances in Quarter (v_q)	Estimated Exceedances in Quarter (e_q)
1 (1/15/18, 2/12/18)	90	3	87	1.03	2	2.07
2	91	3	88	1.03	0	0.00
3 (7/11/18)	92	1	91	1.01	1	1.01
4	92	5	87	1.06	0	0.00
Total	365	12			3	3.1

The three year average, assuming the prior two years are zero (0), is 1.02, rounded to one decimal place the three year average is 1.0. Since 1.0 does not exceed the allowable number of expected exceedances, this monitoring site would not fail the attainment test for 2018.

(Federal Register/ Vol. 71, No. 200 / Tuesday, October 17, 2006 / Rules and Regulations, Appendix K to Part 50—Interpretation of the National Ambient Air Quality Standards for Particulate Matter.)

> "The comparison with the allowable expected exceedance rate of one per year is made in terms of a number rounded to the nearest tenth (fractional values equal to or greater than 0.05 are to be rounded up; e.g., an exceedance rate of 1.05 would be rounded to 1.1, which is the lowest rate for nonattainment)."

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Percentile Ranking

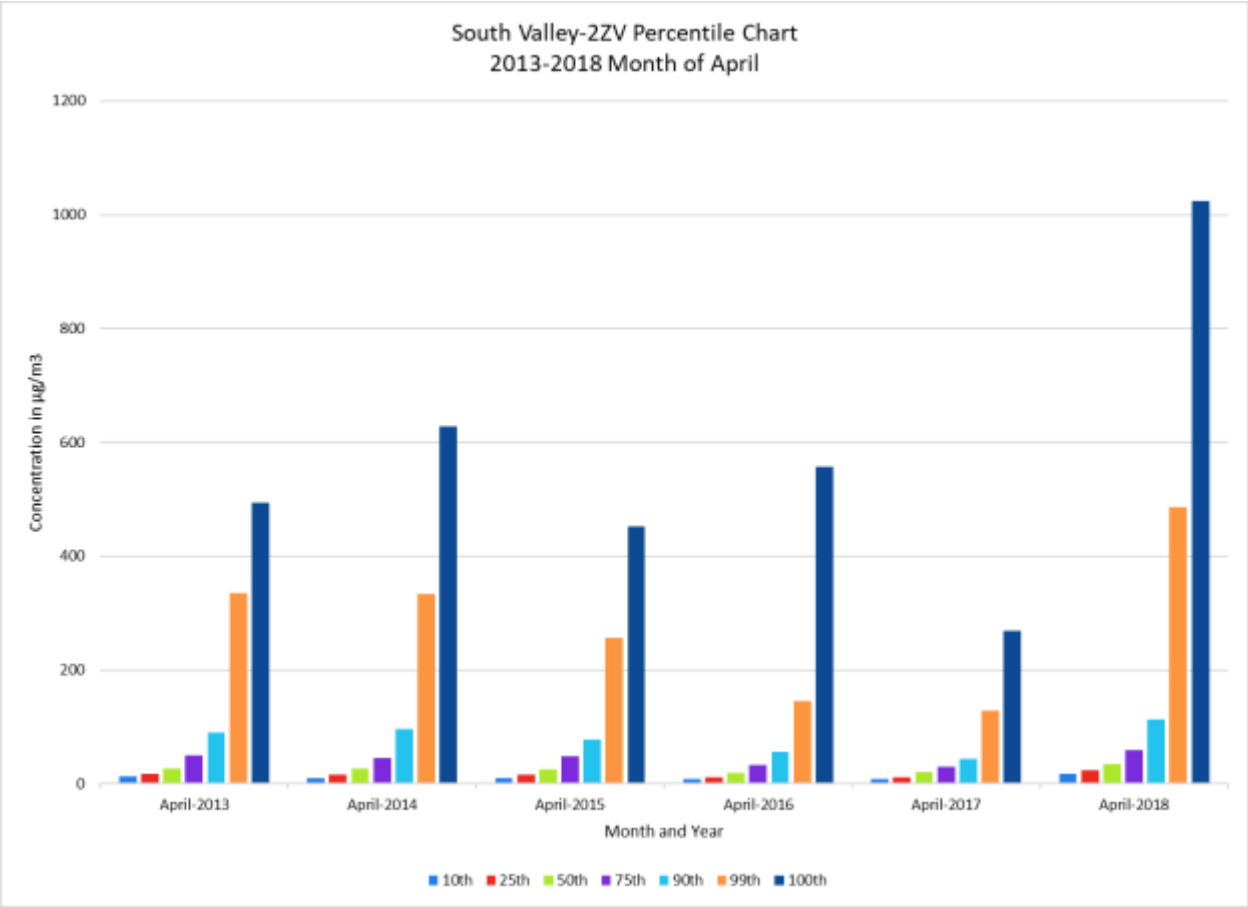


Figure 10 - Multi Year Percentile Ranking PM10

Table 11 - Percentile Ranking April of Year for PM10

Month & Year	10th	25th	50th	75th	90th	99th	100th
April-2013	12	18	27	51	90	335	494
April-2014	10	16	26	45	96	333	628
April-2015	9	15	26	48	77	257	452
April-2016	8	12	20	33	56	145	557
April-2017	8	12	20	30	44	128	269
April-2018	18	24	34	59	113	486	1025

Calculated data.

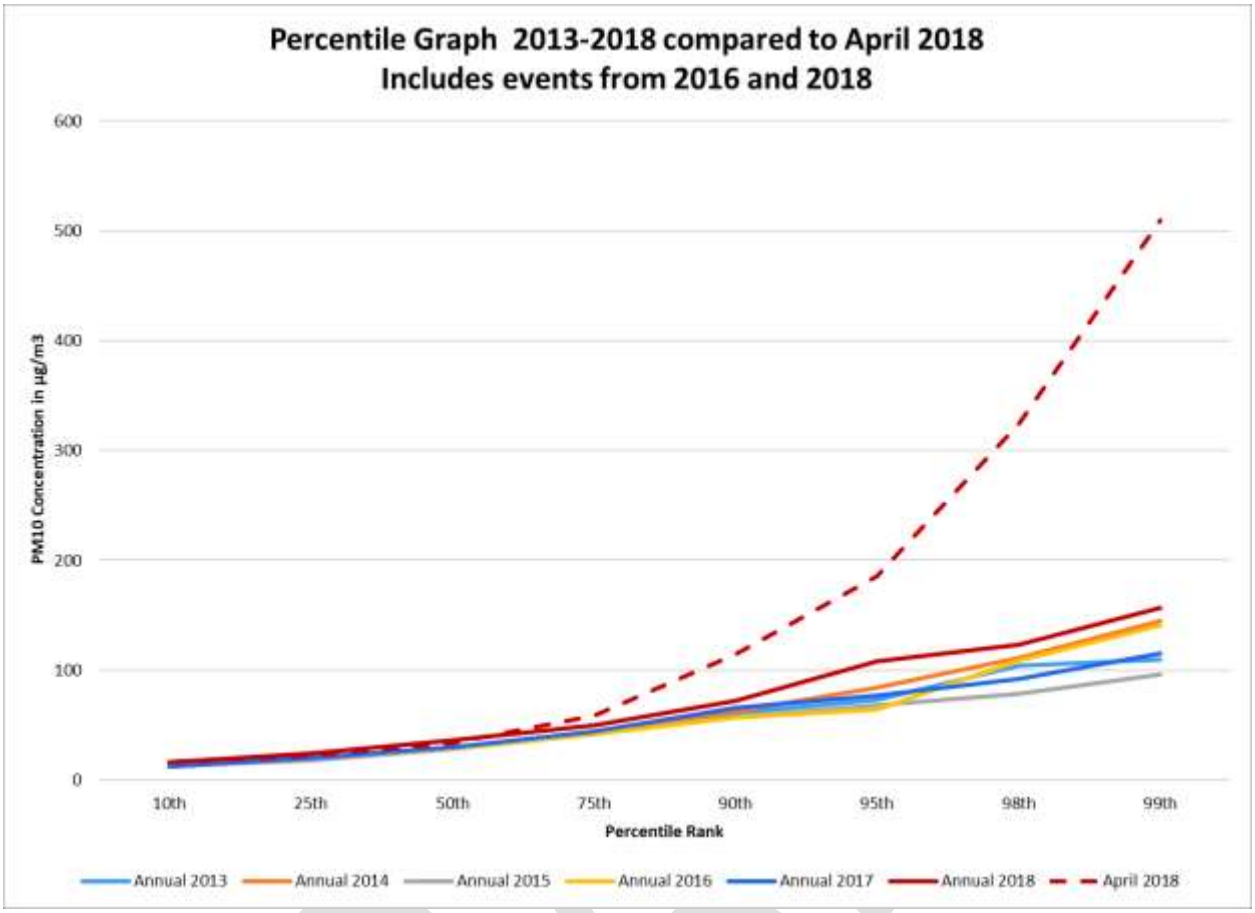


Figure 11 – PM10 Percentile Ranking Multi Year Compared to April 2018

The percentile graph shows that 2018 was an exceptional year and that it shows higher values across all percentile ranges. Additionally, April 2018 was higher from the 10th percentile range and higher than that of similar ranges for years 2013-2017.

Table 12 – PM10 Percentile Ranking Multi Year and April 2018 Data

Percentile	10th	25th	50th	75th	90th	95th	98th	99th
Annual 2013	15	20	30	43	61	73	104	110
Annual 2014	12	20	29	44	63	84	111	145
Annual 2015	13	18	28	42	57	68	79	96
Annual 2016	14	21	29	42	57	64	109	141
Annual 2017	12	20	30	44	66	77	92	115
Annual 2018	16	24	36	50	72	108	123	157
April 2018	16	22	34	59	114	186	324	510

Report AMP 230 for annual data. Calculated for April 2018.

The ratio of PM2.5:PM10 is an important comparison for this event. As sustained winds and wind gusts increased in strength, starting at 14:11, the ratio of PM2.5:PM10 drops from a peak 16.9% at 05:01AM to a low of 4.9% at 13:11. Trend line comparison shows a consistent drop in the PM2.5:PM10 ratio compared to the increase in wind speed.

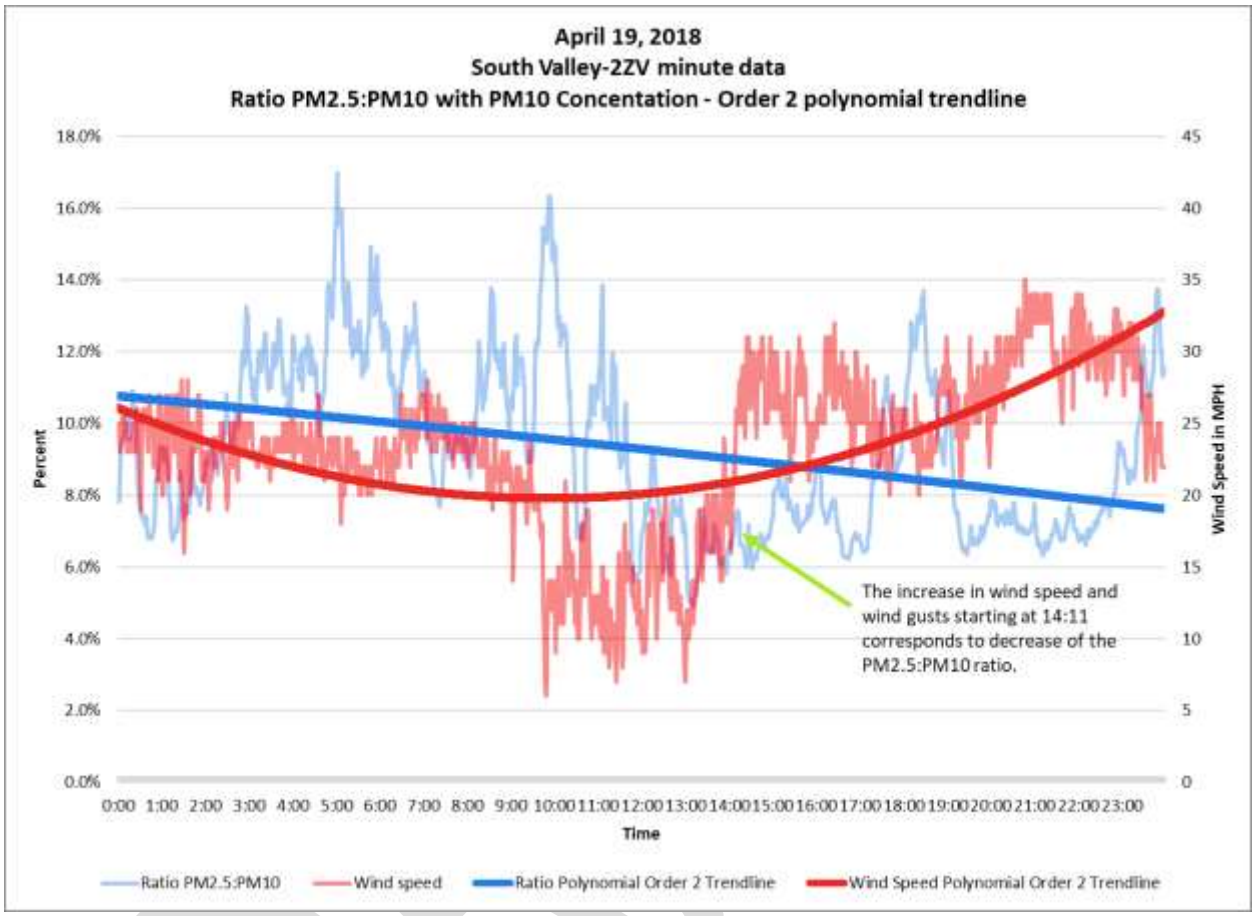


Figure 12 PM2.5 to PM10 Ratio Comparison

Black carbon is also an indicator of how wind speeds impacted the data.

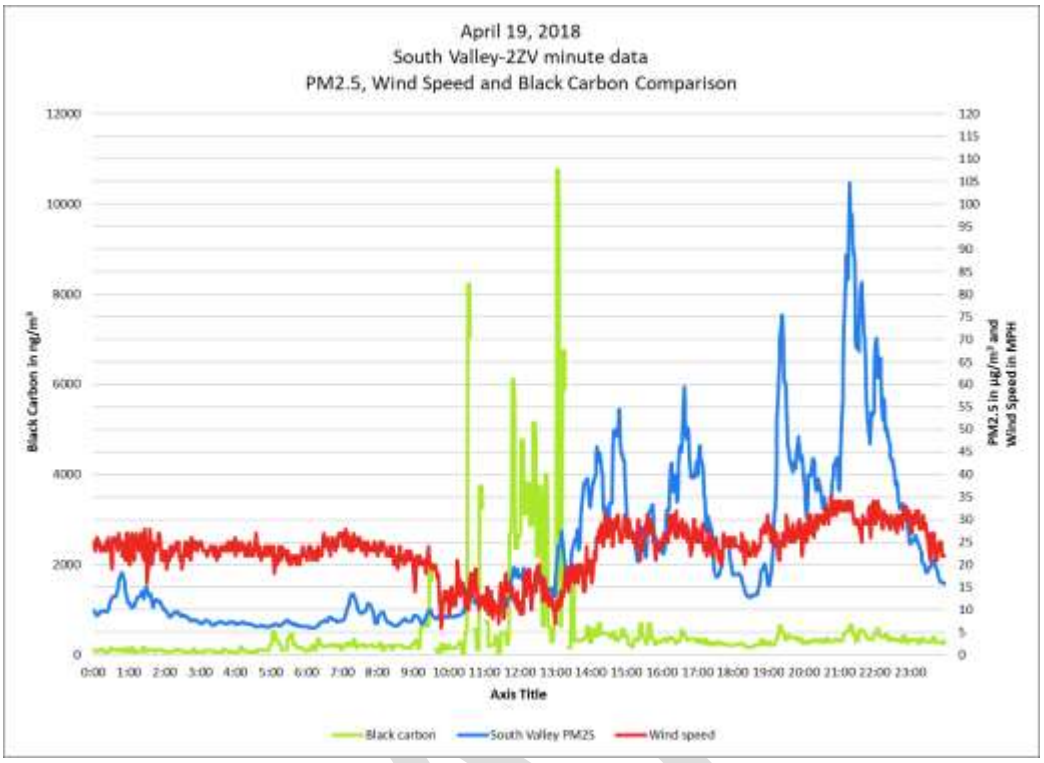


Figure 13 PM2.5, Black Carbon and Wind Speed Minute Data April 19, 2018

During the time periods where wind speeds were below 20 MPH black carbon was high, when wind speeds increased to over 20 MPH black carbon decreased significantly. This can bee see on April 18th as well where winds increased to over 20 MPH at 20:43 and black carbon dropped in response.

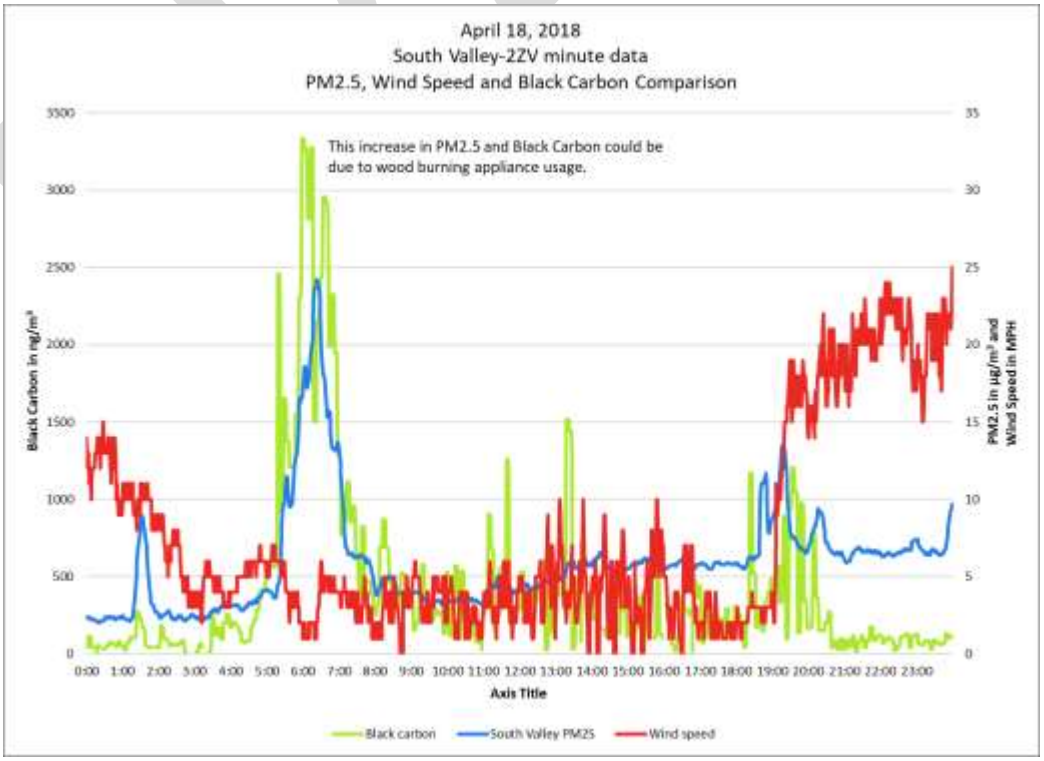


Figure 14 PM2.5, Black Carbon and Wind Speed Minute Data April 18, 2018

Other Monitoring Station Data

7 - Map of three PM10 Monitoring sites

The events largest impact was at the South Valley-2ZV monitoring site. Data evaluated for the Del Norte High School-2ZM (AQS ID 35-001-0023) and the Singer-2ZS (AQS ID 35-001-0026) do show an impact, but not as significantly as at the South Valley-2ZV site.

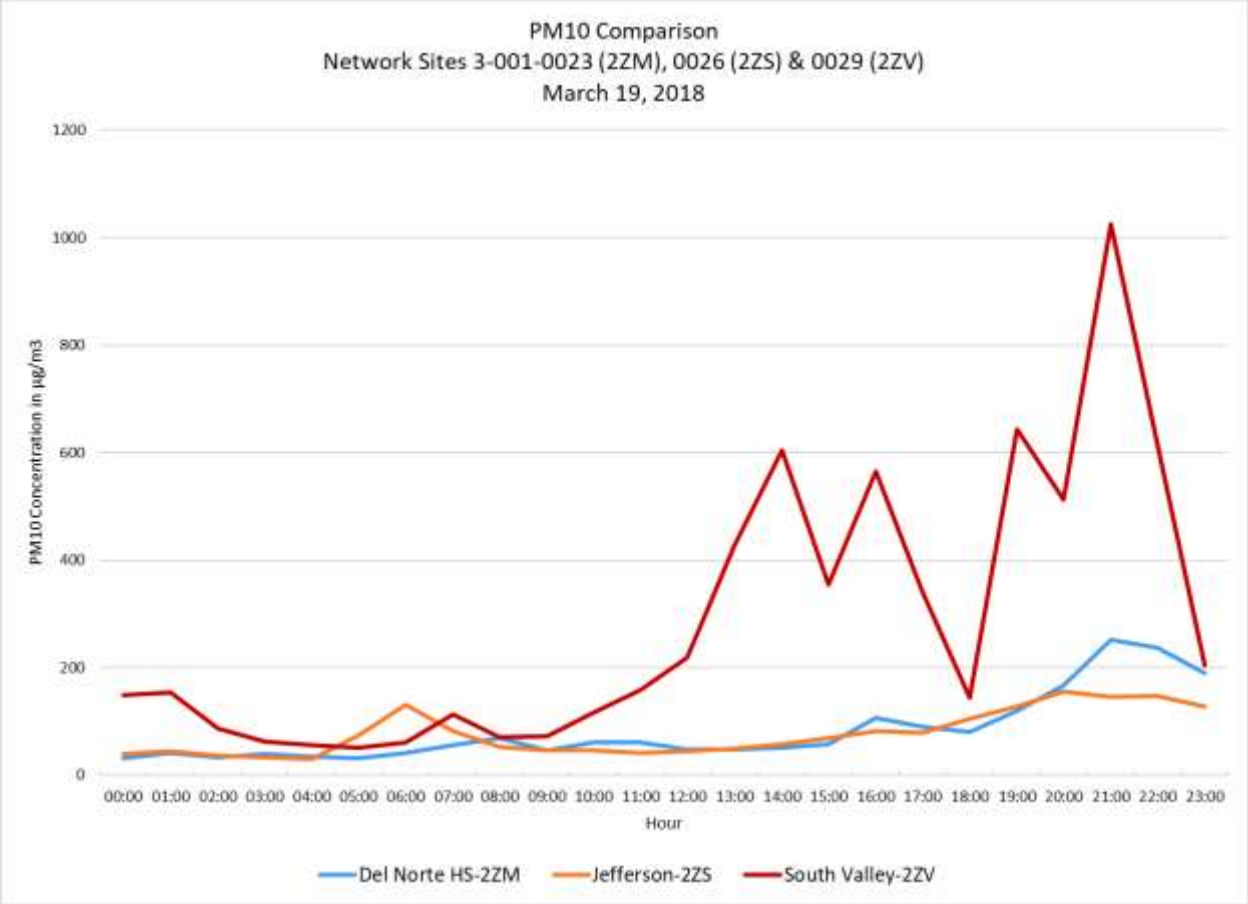


Figure 15 Multi Site Data Comparison for Event Date

While it would be useful to evaluate additional data from monitoring sites in other New Mexico counties, for 2018 there is only one other PM10 monitor outside of Bernalillo County. That site is located to the North at Santa Ana Pueblo in Sandoval County. This site (AQS ID 35-043-9028) does not have data for April 2018.

Although there is a lack of additional data from other monitoring sites outside of Bernalillo County this event is not isolated event at the South Valley-2ZV site and did show an impact on other monitoring sites within Bernalillo County. The event has been well documented as having originated outside of Bernalillo County, with high winds occurring in counties located to the east of Bernalillo County. The event moved into the county from the south across several other New Mexico Counties and Tribal lands into Bernalillo County with a direct impact on the South Valley-2ZV site and the area the site represents. It is not clear as to the potential impact of PM10 being transported into the county from other counties or from the Tribal lands, yet due to the lack of data other than wind speed data, it is difficult to evaluate that impact.

The impact on PM10-PM2.5 data shows that it was a vigorous event that suspended a huge volume of large particles over a short term time period.

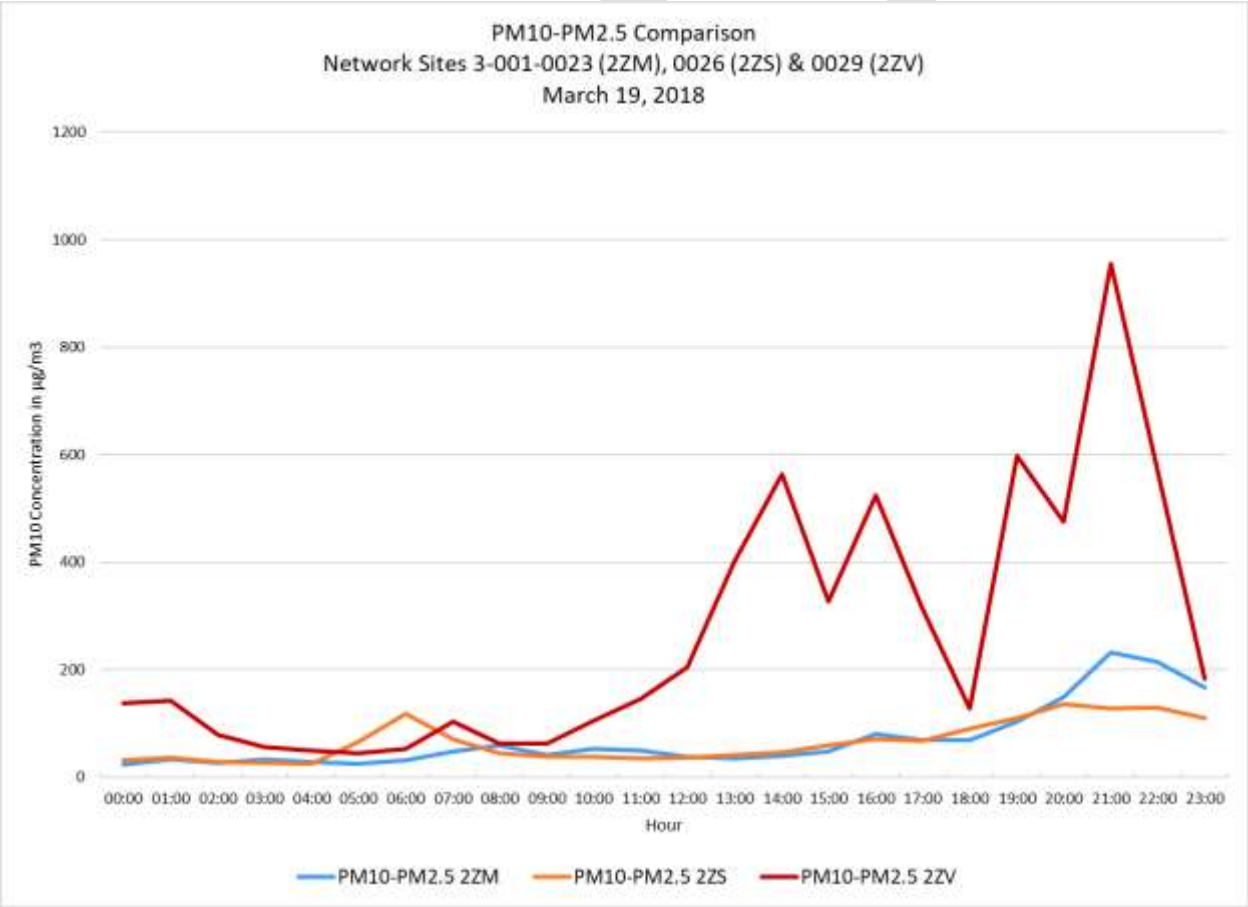


Figure 16 OM10-PM2.5 Multi Site Comparison of Event Date

The resulting graphs, PM10 and PM10-PM2.5, are almost identical. This shows that PM2.5 had little impact on the PM10 data results and the PM10 exceedance was primarily due to a large increase in the particulate range of PM10-PM2.5.

In addition to this the ratio of PM2.5 to PM10 is greatly impacted by the April 19, 2018 winds. During the event the South Valley-2ZV site's ratio of PM2.5 in PM10 dropped to below 10%, this is due to a large increase of PM10 as compared to the relatively smaller increase in PM2.5. It can also be seen that for the other two sites the ratio of PM2.5 to PM10 drops significantly during the event period and stays below 15% for the entire event period for all sites except for the Del Norte-2ZM site.

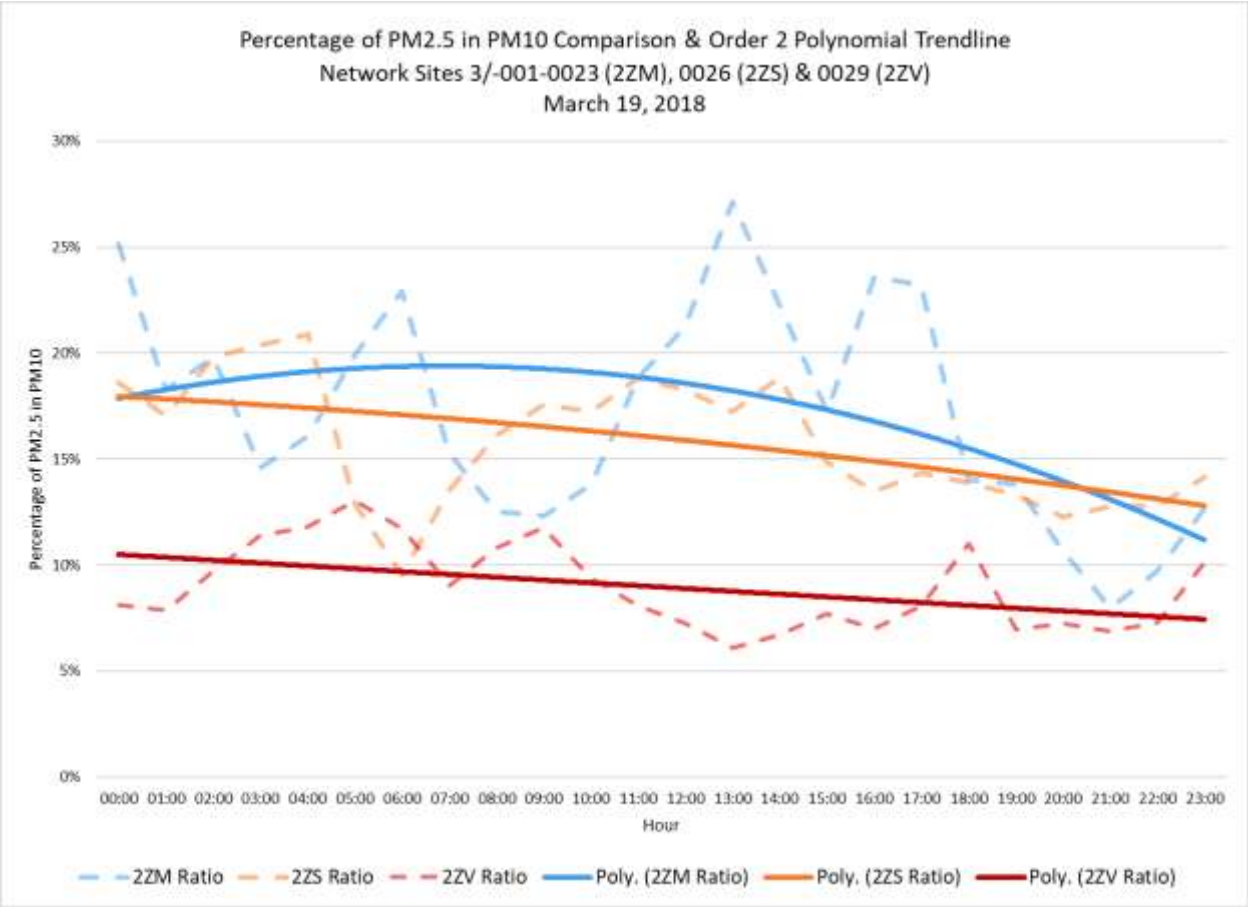
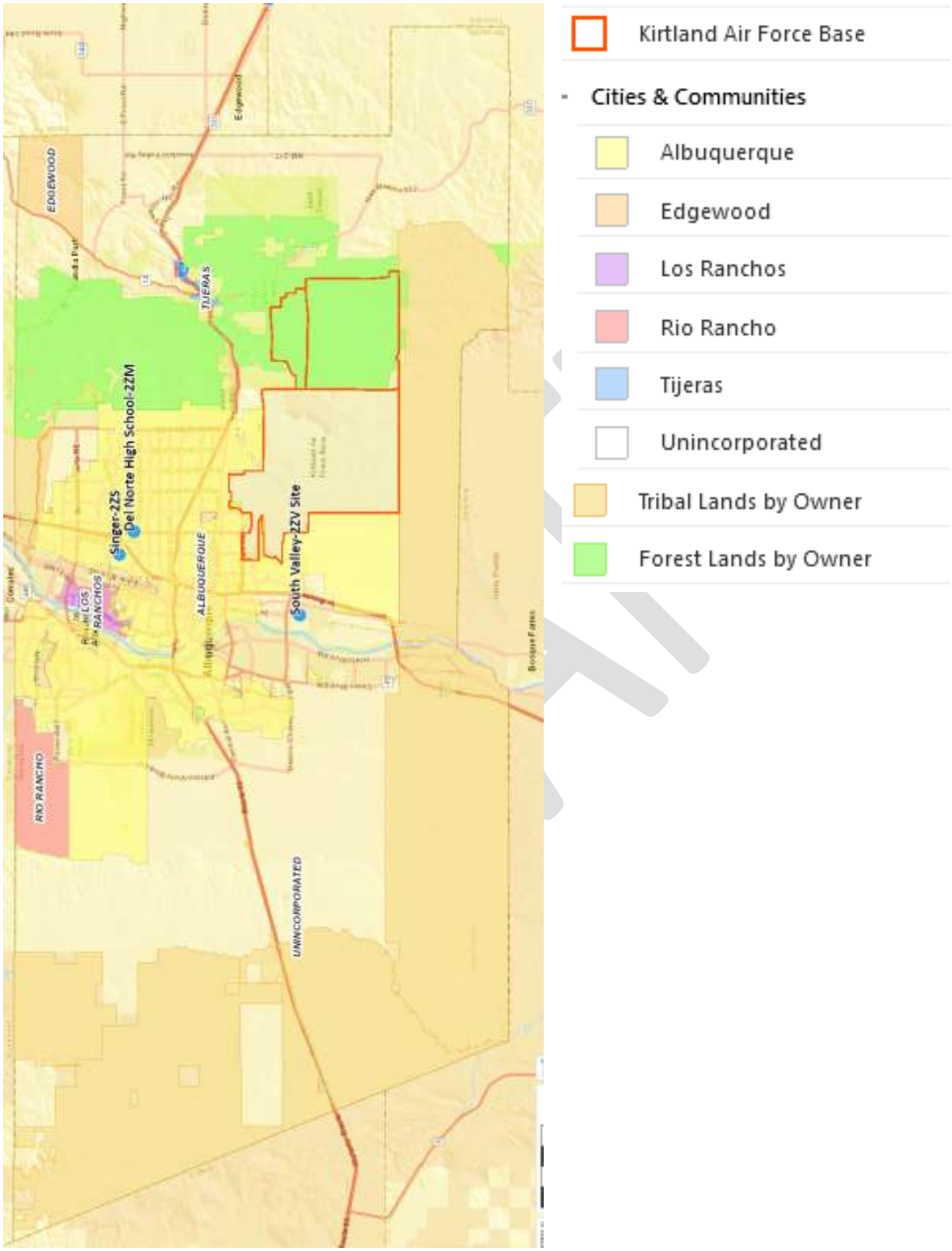


Figure 17 PM2.5 as a ratio of PM10

Typically, the ratio of PM2.5 to PM10 is 25% or higher. When the ratio of PM2.5 drops significantly this is a sign that winds are transporting large volumes of larger particles. Due to the length of the winds, from 0:00 through 23:59, it can be seen that the ratio of PM2.5 to PM10 is extremely low for entire day. The ratio drops at South Valley-2ZV and Jefferson-2ZS following an increase in sustained wind and wind gust activity at 14:11. The trendlines show that as the storm progressed the ratio dropped at all three sites to below 15% and specifically at South Valley-2ZV to below 10%.

County Overview



8 - County Map Overview Map with PM10 Sites

The County of Bernalillo has a wide variety of Cities, Communities and other Federal properties within its boundary. The County is made up of four Tribal Pueblos, Kirtland Air Force Base, Cibola National Forest, and five townships and metropolitan areas including the City of Albuquerque, the City Rio Rancho, Los Ranchos de Albuquerque, Tijeras, and Edgewood. Bernalillo County residents are represented by approximately 86 neighborhood associations. See Appendix A-Bernalillo County Neighborhood Associations.

Monitoring Site Area Description

***9** – County Map South Valley-2ZV site Location*

The South Valley-2ZV site was established to monitor PM10 in a potential sensitive area of the County. The site also monitors for PM2.5, Carbon Monoxide and Ozone. For PM10 the site is listed in the AQS database as meeting SLAMS siting criteria starting January 1, 2011. Based on the area's actual land use and zoning allowances the area allows a variety of usage and many areas have mixed residential and commercial properties. Often the land use pattern and the zoning pattern do not coincide for this area. Many properties contain a commercial activity and a residence on the same property. While most of the zoning is some level of commercial or industry these areas also allow for residences although these areas are rarely zoned for residential activities or mixed use activities, but the residential land usage may be allowed by zoning variances. The Agency does not have jurisdiction over the zoning within Bernalillo County.

The site features include, to the immediate north, a mixture of agricultural, small commercial and residential structures. To the far north lies the metro area of the City of Albuquerque. Further north is the City of Rio Rancho in Sandoval County and the Pueblo of Sandia which straddles the north eastern corner of Bernalillo County and Sandoval County.

To the east lies several commercial and residential properties, most of the commercial properties are junk yards and other automotive recycling facilities. Farther to the east lies the Tijeras Arroyo that can often channel easterly winds from the Manzano Mountains into the Rio Grande valley. Also to the east are Kirtland Air Force Base and the Albuquerque International Airport.

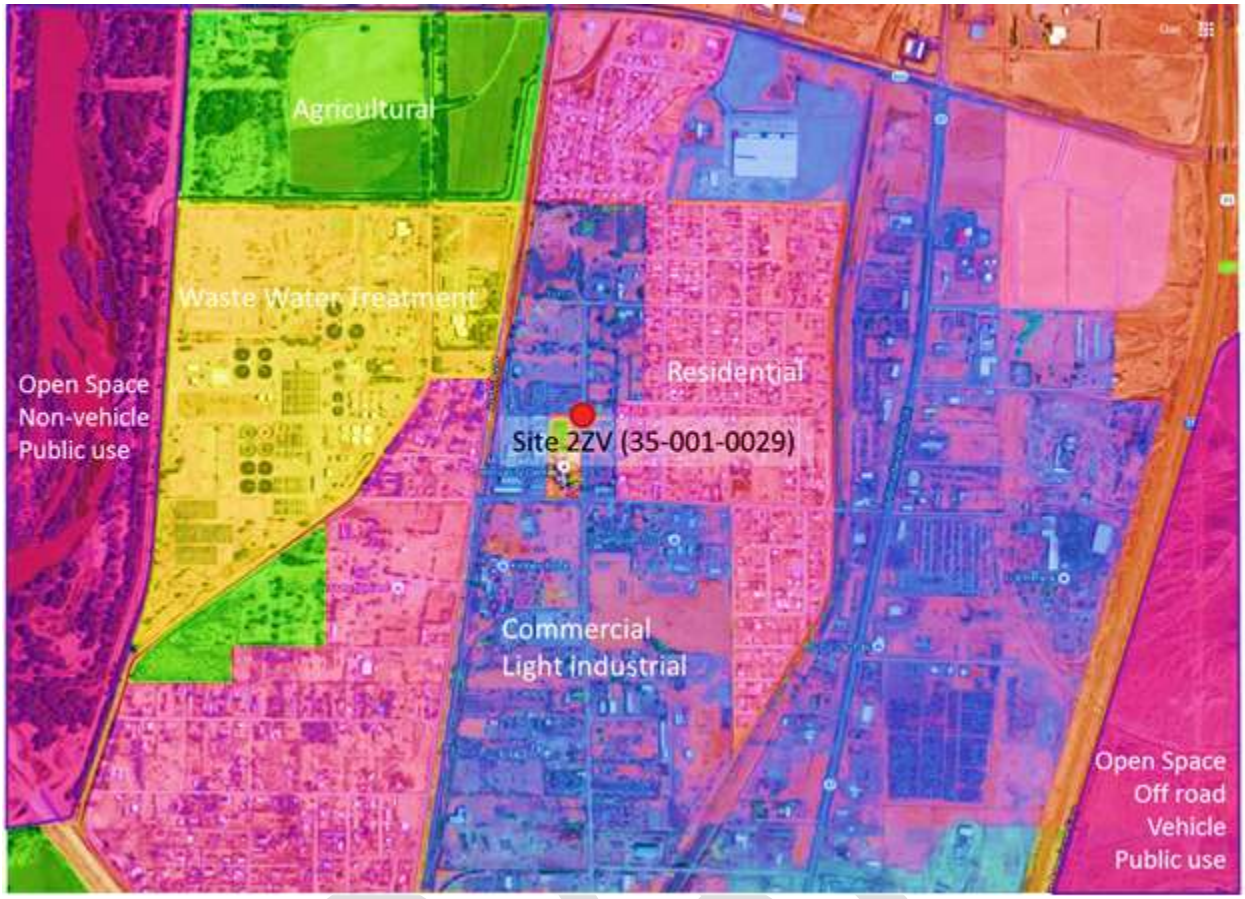
The South is comprised mostly of mixed residential and agricultural land. The Tribal lands of the Pueblo of Isleta straddles the southern border of Bernalillo County and Valencia County.

To the West lies the Rio Grande (River), immediately to the west is also the waste water treatment facility serving the metro City of Albuquerque and much of Bernalillo County. Further west is the Tribal lands of the Pueblo of Laguna and of Canoncito (Navajo Nation).

The South Valley-2ZV local anthropogenic sources of dust include small residential properties and small commercial properties. The residential properties typically provide no ground cover and are comprised of exposed dirt lots with exposed dirt yards and exposed dirt driveways. The commercial properties are similar to the residential properties with no ground cover and consist or small lots of exposed dirt. Several of the small commercial facilities include a residence on the property and may often be a combination of private residence and home based business including junk yards, semi-truck parking yards, pallet recycling, and fire wood storage.

The South Valley-2ZV site is located in an area where the dominant source of dust is anthropogenic. Due to the area having been a farming and grazing community it is unlikely that the area has remained untouched by human activity. Sources are predominately due to residential and small commercial properties with little to no vegetative cover and with the small commercial properties having no soil stabilization such as asphalt or cement paving. Other areas that also impact the area are due to recreational vehicle usage to the east and some active agricultural use to the northwest, west, southwest.

10 - South Valley-2ZV Area Specific Location

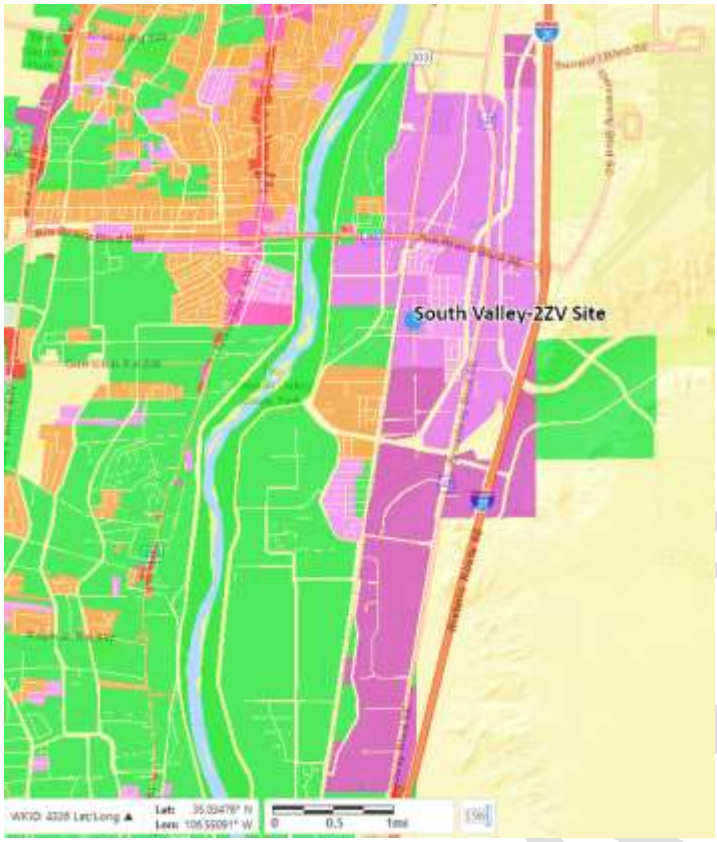


***11** - South Valley-2ZV Generalized land use of area*

The prolonged drought across the Southwest has also reduced normal vegetative cover. A USGS study suggests

> ". . . that sustained drought conditions across the Southwest will accelerate loss of grasses and some shrubs and increase the likelihood of dust production on disturbed soil surfaces in the future." (Responses of wind erosion to climate-induced vegetation changes on the Colorado Plateau, Seth M. Munson, Jayne Belnap, Gregory S. Okin, Proceedings of the National Academy of Sciences Feb 2011, DOI: 10.1073/pnas.1014947108).

This is an issue which the Agency is concerned. If the instances of high winds increase the probability of generating windborne dust then it is likely the area will experience an increase in events that exceed or nearly exceed the PM10 NAAQS. The fact that one high wind event occurred in 2014, three in 2016 and four in 2018 may point to the reality that the recurrence of these events will continue to increase.



Zone Map of the affected area (Bernalillo County Advanced Data Viewer, https://ash.bernco.gov)

12 - South Valley-2ZV Area Zone Map

Zoning Legend

- A-1 = Rural Agricultural – 1-Acre Minimum Zone
- A-2 = Rural Agricultural – 2-Acre Minimum Zone
- C-1 = Neighborhood Commercial Zone
- C-2 = Community Commercial Zone
- C-LI = Commercial Light Industrial Zone
- C-N = Community Neighborhood Commercial Zone
- M-1 = Light Manufacturing Zone
- M-2 = Heavy Manufacturing Zone
- M-H = Mobile Home & Single Family Residential Zone
- O-1 = Office & Institutional Zone
- R-1 = Single Family Residential Zone
- R-2 = Apartment Zone
- Sector Development Zone

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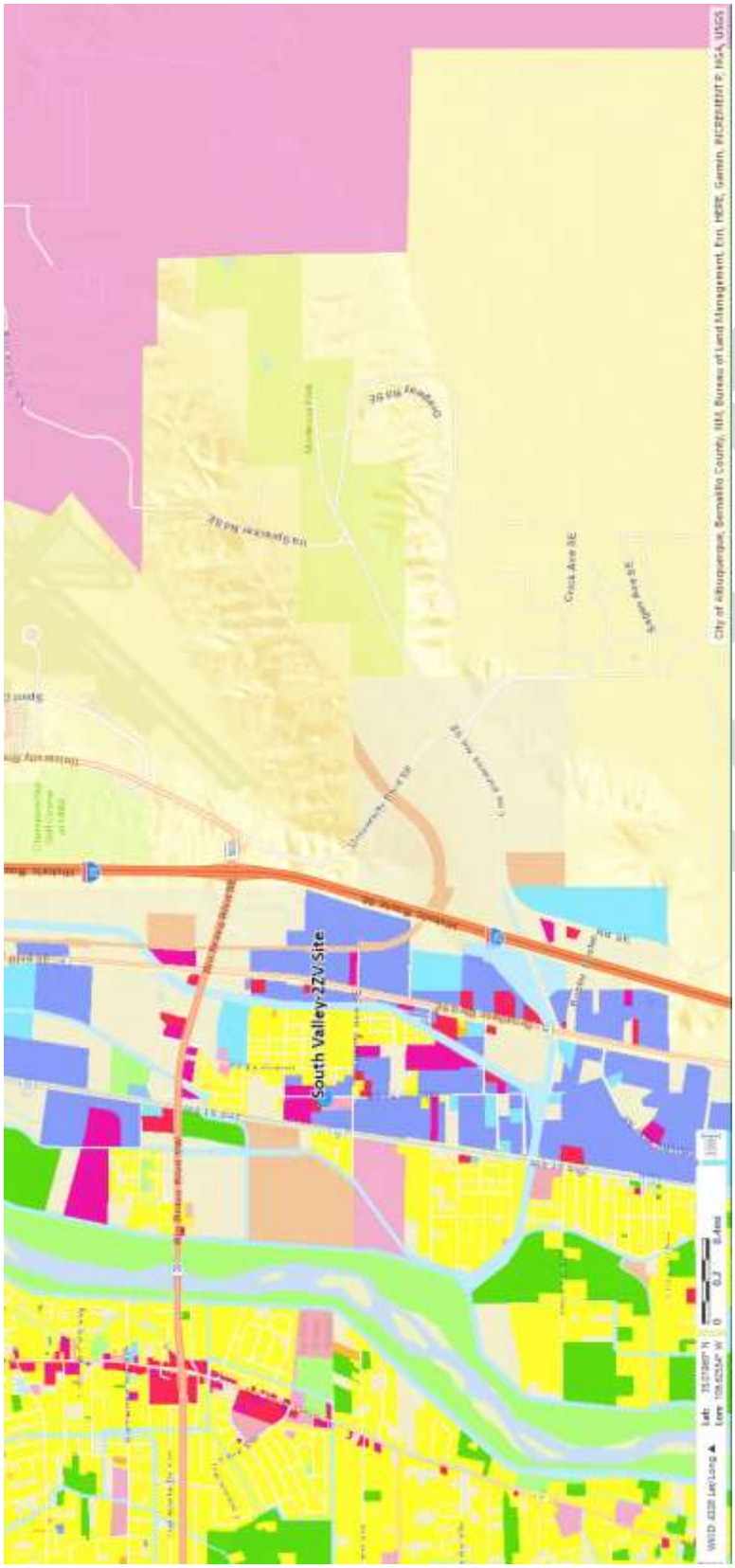
Land Use Pattern of the affected area (Bernalillo County Advanced Data Viewer, https://ash.bernco.gov)



Land Use Legend

- AGRICULTURE
- COMMERCIAL RETAIL
- COMMERCIAL SERVICE
- DRAINAGE / FLOOD CONTROL
- INDUSTRIAL / MANUFACTURING
- MULTI FAMILY
- PARKING LOTS / STRUCTURES
- PARKS / RECREATION
- PUBLIC / INSTITUTIONAL
- SINGLE FAMILY
- TRANSPORTATION / UTILITIES
- VACANT / OTHER
- WHOLESALE / WAREHOUSING

You can see the difference between zoning and actual land use when looking at the single family land use pattern located on zoned agricultural land and in areas zoned for light and heavy manufacturing.

13 - South Valley-2ZV Land Use Map

Monitoring Station Description

The South Valley-2ZV monitoring station (AQS ID 35-001-0029) was established 0n 3/22/2002, PM10 sample period start was 8/6/2002 and PM10 SLAMS begin date was 1/1/2011. For the evaluation period of this demonstration the equipment used at the site for PM10 monitoring are:

Table 13 - AQS PM10 Monitoring Methods for South Valley-2ZV

Date Range	Equipment	Method Code
1/1/13-4/17/13	INSTRMENTAL ANDERSEN SA246B BAM	076
4/18/13-1/5/2017	MET ONE BAM 1020	122
1/6/17-1/31/19	Teledyne API T640X Broadband spectroscopy	239

AQS Maintain Monitor Methods

Table 14 - Annual and Quarterly Data Capture for South Valley-2ZV Site

Year	Quarter	Data Capture	Annual Average
2013	1	98	88.5
	2*	70	
	3	98	
	4	88	
2014	1	92	92.5
	2	94	
	3	96	
	4	88	
2015	1	94	94.75
	2	93	
	3	94	
	4	98	
2016	1	93	92.25
	2	93	
	3	94	
	4	89	
2017	1	98	97
	2	98	
	3	98	
	4	94	
2018	1	97	97
	2	97	
	3	99	
	4	95	

* Data loss due to equipment failure. AMP 430 Report.

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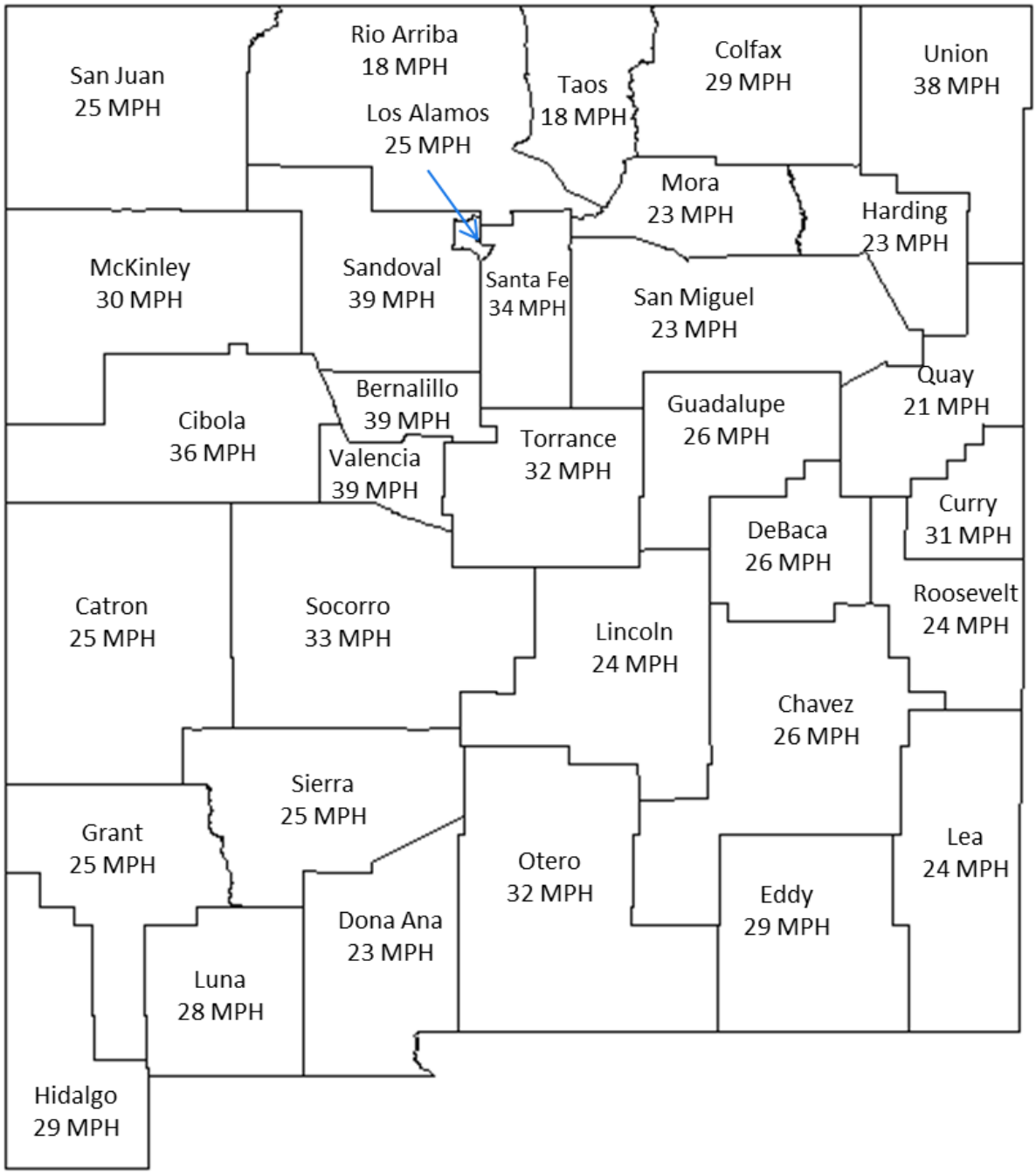
Cause and Point of Origin

On the day of the event 23 of the State's 33 counties (69%) experienced wind speeds at or above the EER wind speed threshold of 25 mph.

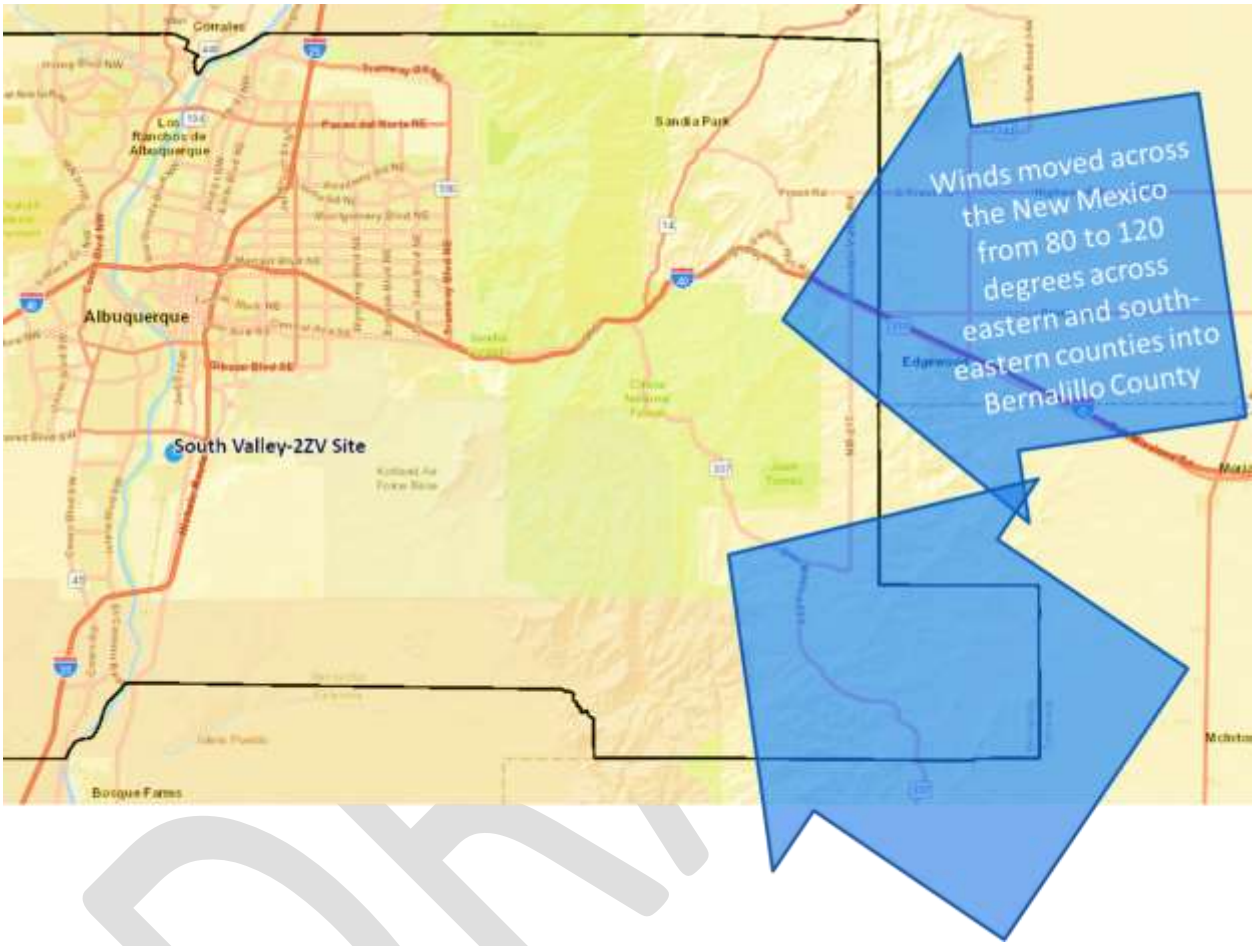


14 - New Mexico County Map of Max Wind Speeds on April 19, 2018

It is likely that due to the wind direction and recorded wind speeds of this event that dust was brought across the Bernalillo County line from the east. The impact of the wind speeds on counties to the east were at or above the EER wind speed threshold of 25 MPH and the potential for impact cannot be discounted.

The winds were predominately south (180 degrees) and South-easterly (170 degrees) and the winds were pushed across New Mexico's south-eastern counties across Isleta Pueblo (Tribal land) into Bernalillo County.

The winds impacted the Mountain View neighborhood containing residential, commercial and industrial properties and the South Valley-2ZV air monitoring station.



15 - Map of Generalized Wind Direction of the April 19, 2018 Event

Wind Rose pattern results are similar to the expected wind direction based on the wind patterns across the state. Whether based on the 24 hour period or the event period of 14:00-23:00 the winds are predominately from approximately 110 degrees.

Due to the direction of the winds it is possible that dust was transported from other New Mexico counties, Sandia Pueblo tribal lands, National Forest land, Federal Air Force Base, and Bernalillo County lands.

Most of Bernalillo County, and the counties to the east, are designated at 61% arid land. The exception is the mountain ranges of Sandia and Manzano that are classified as 27% arid land.

16 - County Map Arid Land Designations

Legend

Percent Aridland Area - % Aridland Area

- More than 80%
- 61 - 80%
- 41 - 60%
- 21 - 40%
- Less than 20%
- None

While the area is dominated by anthropogenic sources that is not the reason the area exceeded the PM10 NAAQS. Data shows that the winds experienced on this day were very high and exceeded the EER threshold resulting in large amounts of dust becoming airborne. The data shows that this event overwhelmed efforts to reasonably control how much dust become airborne due to human activities but the high winds overwhelmed those efforts. The data also shows that this is an event that has deviated from prior and current years and should not be expected to occur again for any April in the future.

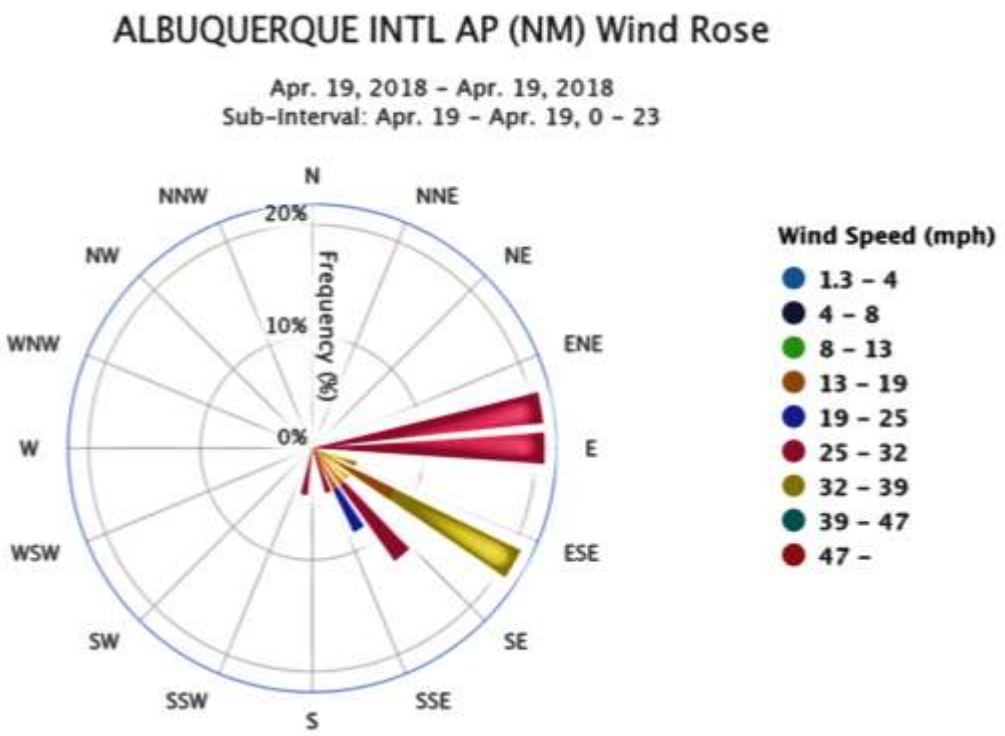


Figure 18 – Wind Rose 24-Hour Period on April 19, 2018

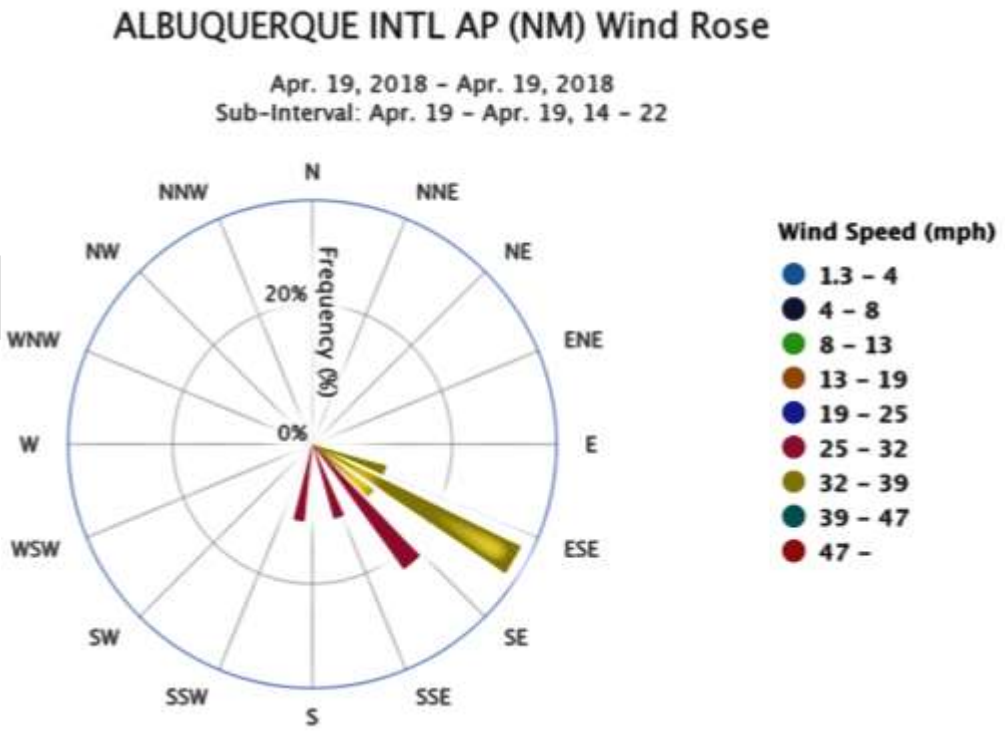


Figure 19 – Wind Rose Hours 14:00-22:00 on April 19, 2018

The HySplit analysis of the event shows winds moving into Bernalillo County from the direction of 180 degrees and reinforces the results of the Wind Rose patterns.

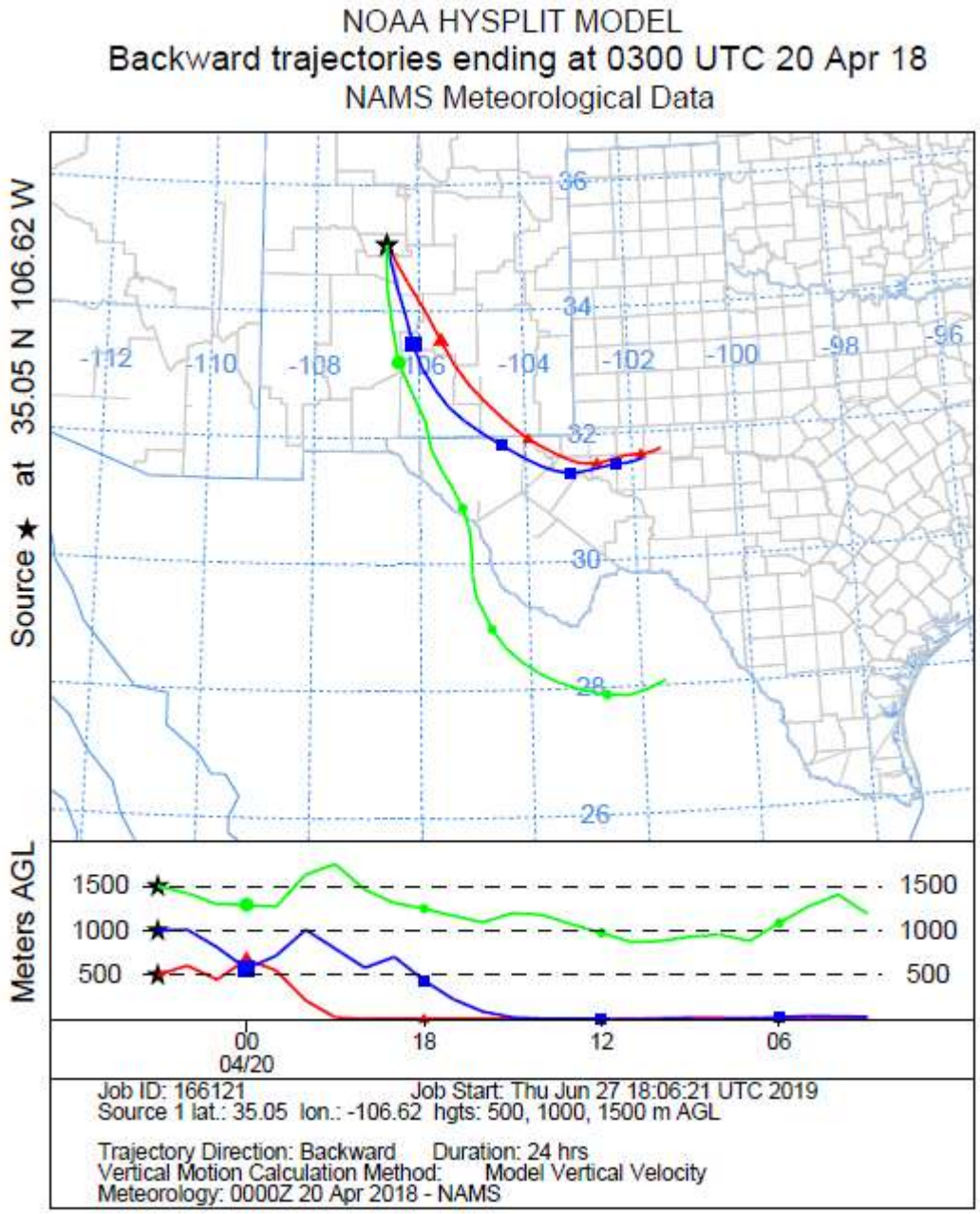
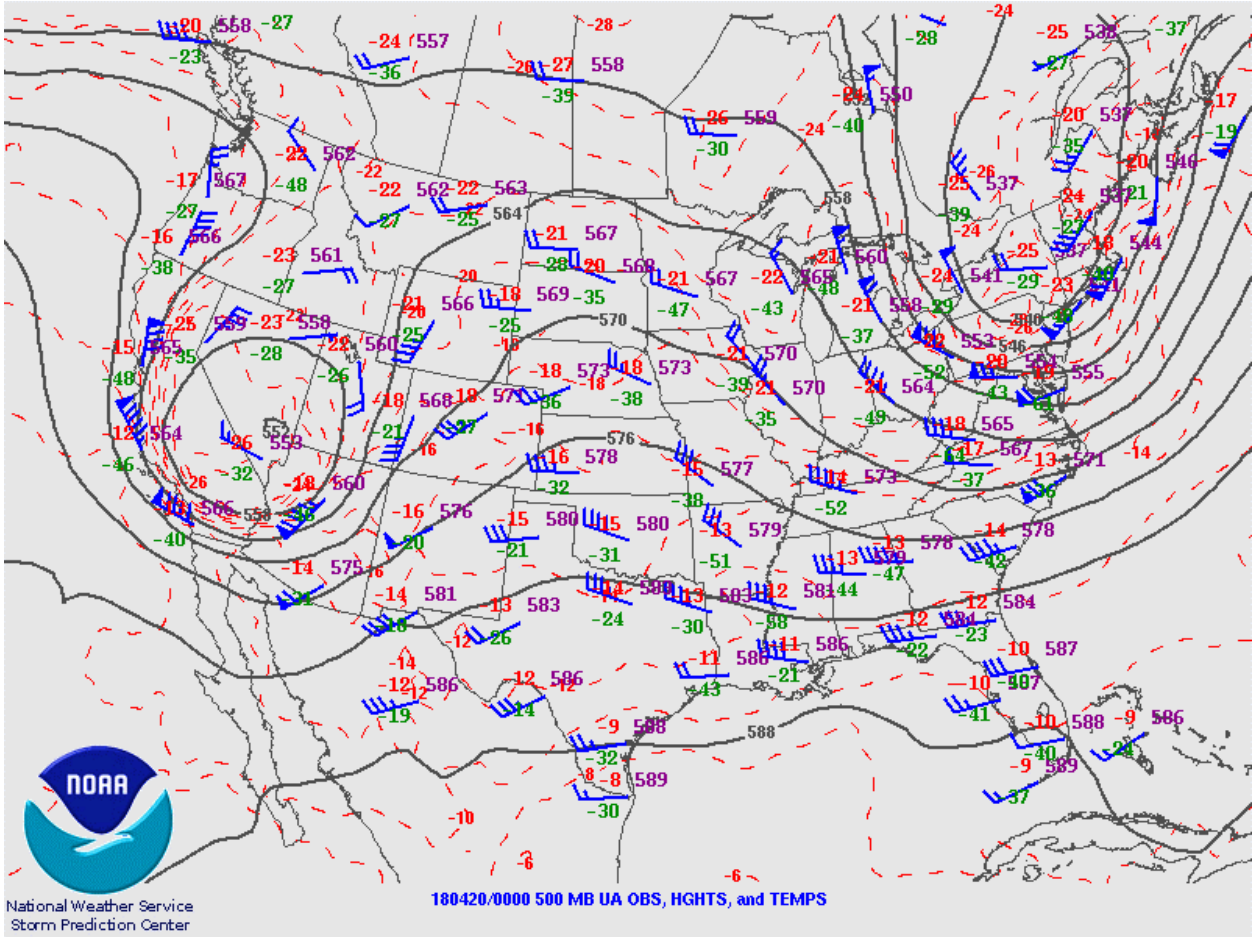


Figure 20 - Hysplit

This HySplit shows that the winds moved into Bernalillo County primarily from approximately 180 degrees. The HySplit shows that the winds crossed several New Mexico counties and over Tribal Land into Bernalillo County to the South Valley-2ZV site.

Meteorology

A closed low pressure system was centered over southern Nevada late in the day 19April2018. The low moved east toward the Four Corners overnight. Strong east to southeast winds developed in Albuquerque in response to the approaching low pressure system.



17 NOAA 500 millibar Observation

KABQ Observations Translated

KABQ 200752Z 12023G30KT 10SM FEW040 FEW120 SCT210 BKN270 15/M01 A2986 RMK AO2 PK WND 11032/0734 SLP043 BLDU E-S AND W-N MTN TOPS OBSC SE T01501011
Time: 0052 MST/0152 MDT
Wind: from 120 degrees, 26 MPH gusting 35 MPH
Peak wind: from 110 degrees, 37 MPH at 0034 MST
Remarks: Blowing dust East through South and West through North
****

KABQ 200652Z 11024G30KT 10SM SCT130 BKN210 OVC270 15/M02 A2988 RMK AO2 PK WND 12039/0553 SLP052 BLDU SW-NW T01501022 402500089
Time: 2352 MST on the 19th/0052 MDT on the 20th
Wind: from 110 degrees, 28 MPH gusting 35 MPH
Peak wind: from 120 degrees, 45 MPH at 2253 MST (4/19)
Remarks: Blowing dust Southwest through Northeast
****

KABQ 200552Z 12030G40KT 10SM BKN250 16/M03 A2987 RMK AO2 PK WND 12043/0504 SLP050 T01561028 10222 20156 56015
Time: 2252 MST on the 19th/2352 MDT on the 19th
Wind: from 120 degrees, 35 MPH gusting 46 MPH
Peak wind: from 120 degrees, 49 MPH at 2204 MST (4/19)
****

KABQ 200452Z 12028G40KT 10SM BKN250 16/M03 A2988 RMK AO2 PK WND 11042/0416 SLP058 T01611033
Time: 2152 MST on the 19th/2252 MDT on the 19th
Wind: from 120 degrees, 32 MPH gusting 46 MPH
Peak wind: from 110 degrees, 48 MPH at 2116 MST (4/19)
****

KABQ 200352Z 11033G41KT 8SM BKN250 17/M04 A2990 RMK AO2 PK WND 11041/0352 SLP068 T01671039
Time: 2052 MST on the 19th/2152 MDT on the 19th
Wind: from 110 degrees, 38 MPH gusting 47 MPH
Peak wind: from 110 degrees, 47 MPH at 2052 MST (4/19)
****

KABQ 200252Z 12028G35KT 10SM SCT160 BKN250 18/M03 A2992 RMK AO2 PK WND 12035/0231 SLP078 T01781033 56008
Time: 1952 MST on the 19th/2052 MDT on the 19th
Wind: from 120 degrees, 32 MPH gusting 40 MPH
Peak wind: from 120 degrees, 40 MPH at 1931 MST (4/19)
****

KABQ 200152Z 13028G33KT 10SM SCT160 BKN250 19/M03 A2992 RMK AO2 PK WND 13033/0151 SLP079 T01941033
Time: 1852 MST on the 19th/1952 MDT on the 19th
Wind: from 130 degrees, 32 MPH gusting 38 MPH
Peak wind: from 130 degrees, 38 MPH at 1851 MST (4/19)
****

KABQ 200052Z COR 14026G31KT 10SM SCT160 BKN250 21/M04 A2994 RMK AO2 PK WND 13037/2354 SLP083 T02111044
Time: 1752 MST on the 19th/1852 MDT on the 19th
Wind: from 140 degrees, 30 MPH gusting 36 MPH
Peak wind: from 130 degrees, 43 MPH at 1654 MST (4/19)

KABQ 192352Z 14024G33KT 10SM SCT160 BKN250 22/M06 A2995 RMK AO2 PK WND 18037/2312 SLP084 T02221056 10250 20183 56020
Time: 1652 MST on the 19th/1752 MDT on the 19th
Wind: from 140 degrees, 28 MPH gusting 38 MPH
Peak wind: from 180 degrees, 43 MPH at 1612 MST (4/19)
****

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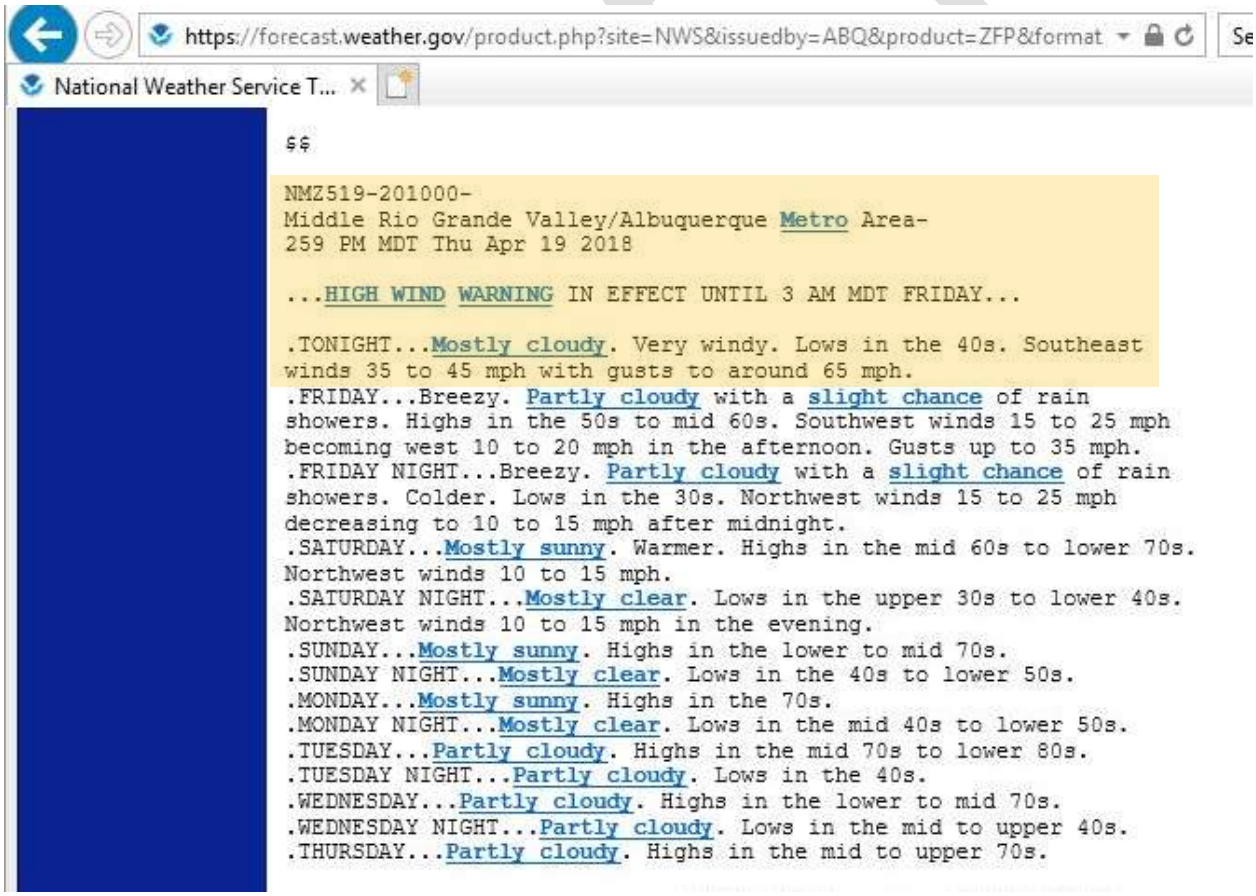
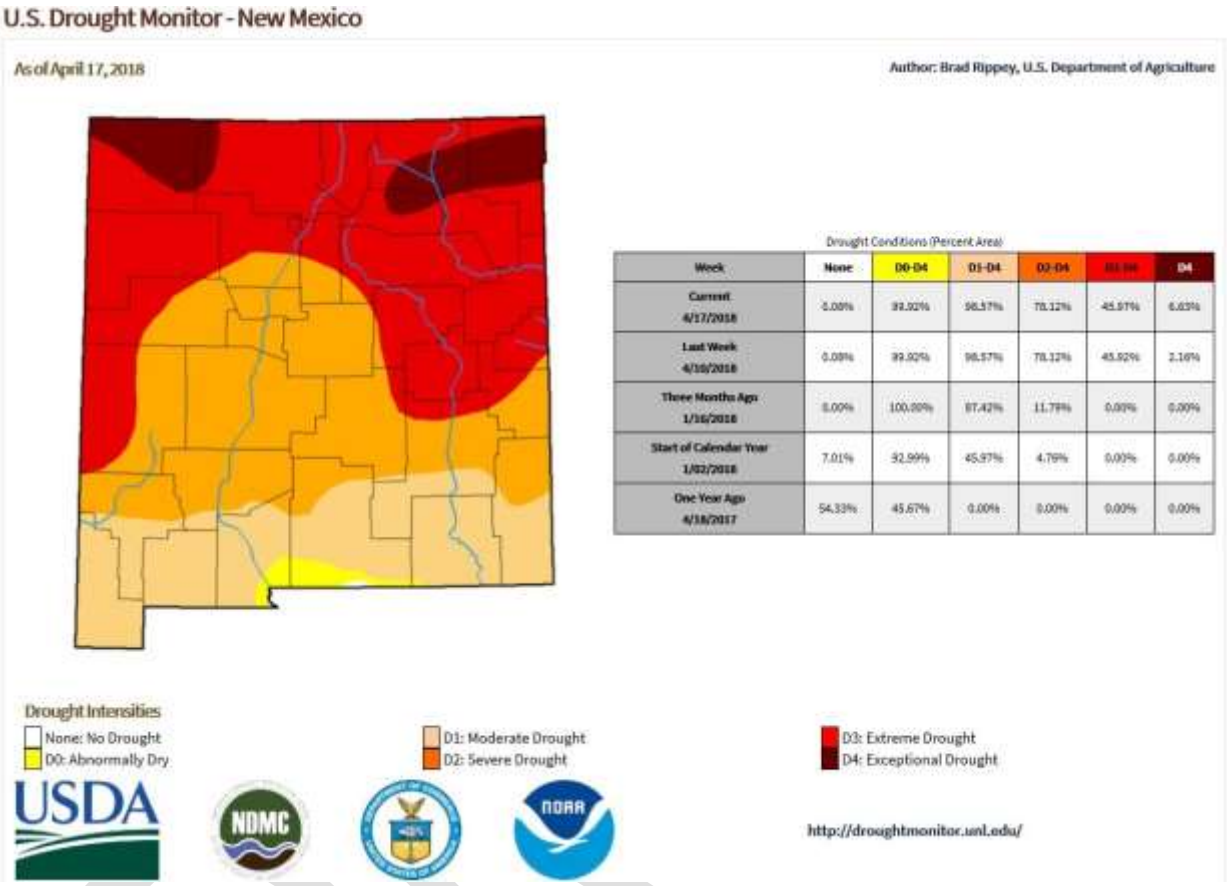
KABQ 192252Z 16025G34KT 10SM SCT160 BKN250 24/M08 A2997 RMK AO2 PK WND 19040/2156 SLP087 T02391083
Time: 1552 MST on the 19th/1652 MDT on the 19th
Wind: from 160 degrees, 29 MPH gusting 39 MPH
Peak wind: from 190 degrees, 46 MPH at 1456 MST (4/19)
****
KABQ 192152Z 19025G37KT 10SM BKN150 BKN300 25/M09 A2998 RMK AO2 PK WND 18038/2126 SLP088 BLDU SE-S T02501094
Time: 1452 MST on the 19th/1552 MDT on the 19th
Wind: from 190 degrees, 29 MPH gusting 43 MPH
Peak wind: from 180 degrees, 44 MPH at 1426 MST (4/19)
Remarks: Blowing dust Southeast through South
****
KABQ 192052Z COR 15019G27KT 10SM BKN150 BKN210 23/M10 A3002 RMK AO2 PK WND 15027/2052 SLP102 T02331100 58046
Time: 1352 MST on the 19th/1452 MDT on the 19th
Wind: from 150 degrees, 22 MPH gusting 31 MPH
Peak wind: from 150 degrees, 31 MPH at 1352 MST (4/19)
****



18National Weather Service Forecast Summary

The U.S. Drought Monitor (www.drought.gov) classified the drought status of Albuquerque/Bernalillo County as severe as of 17Apr2018. According to NWS data, the NWS KABQ weather station hadn't received measurable rain since 27Mar2018 and less than a tenth of an inch of rain fell in the 39 days before the 19-20Apr2018 wind event.



19 USDA Drought Monitor Report for New Mexico

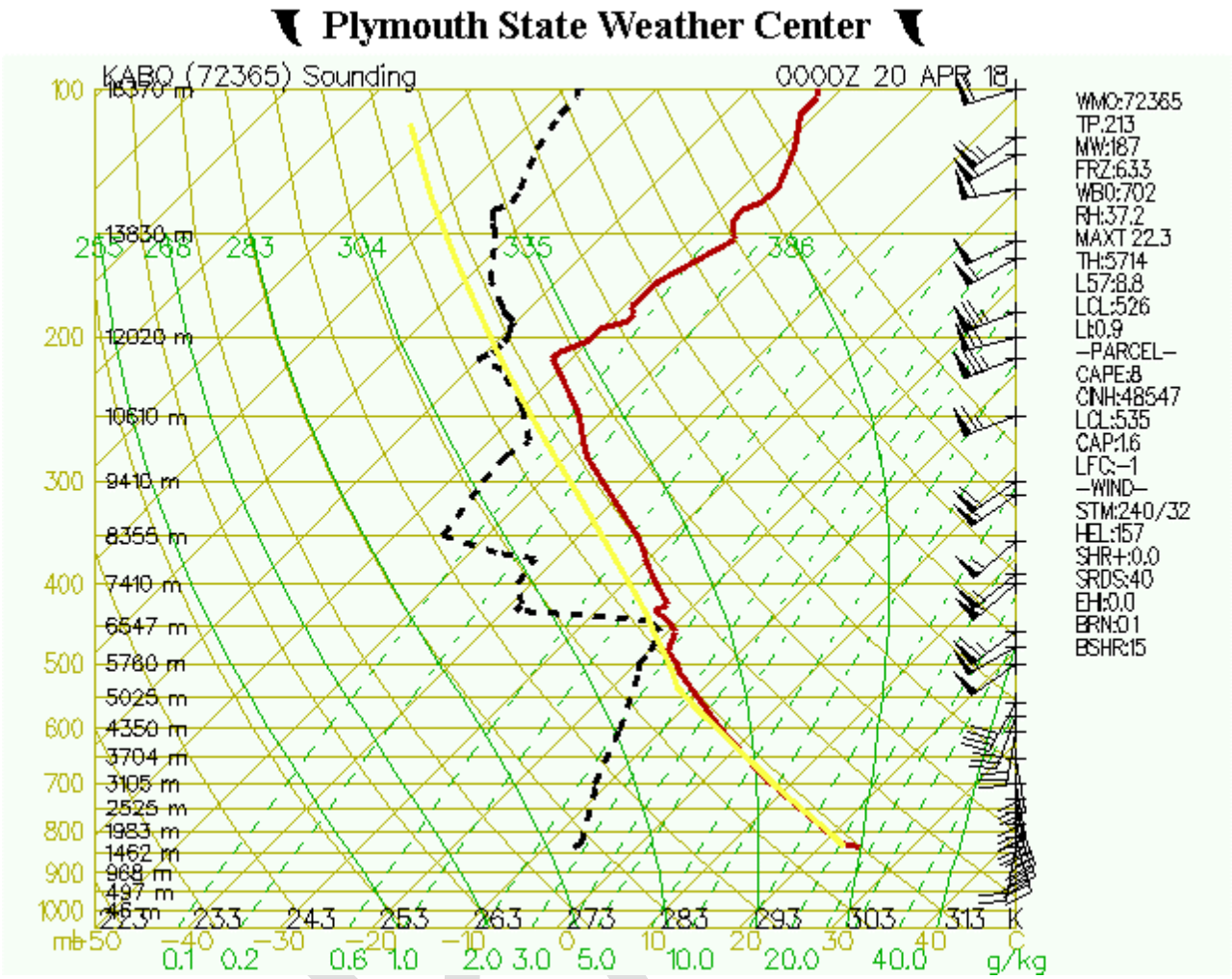


Figure 21 - 00Z_20Apr2018 Sounding

National Weather Service Storm Events Database

The National Weather Service Storm Events Database also provided information on this event.

Storm Events Database

Prev / Search Results / Next

Event Details:

Event	**High Wind**
Magnitude	**50 kts.**
State	**NEW MEXICO**
County/Area	**SANTA FE METRO AREA**
WFO	**ABQ**
Report Source	**ASOS**
NCEI Data Source	**CSV**
Begin Date	**2018-04-19 19:00 MST-7**
End Date	**2018-04-20 01:30 MST-7**
Deaths Direct/Indirect	**0/0** (fatality details below, when available...)
Injuries Direct/Indirect	**0/0**
Property Damage	**100.00K**
Crop Damage	**0.00K**
Episode Narrative	**An unseasonably strong upper level low pressure system west of New Mexico spread strong south to southeast flow across the state on April 19th and 20th. Widespread southerly winds of 25 to 35 mph with gusts up to 50 mph were reported across central and western New Mexico on the 19th. The strongest winds developed around the Santa Fe and Albuquerque metro areas after sunset when southeasterly winds increased to between 35 and 45 mph with gusts between 55 and 65 mph. Power lines were blown down in the Santa Fe resulting in numerous power outages. The east side of the Albuquerque area also saw power outages and traffic lights out through the night of the 19th. The storm system shifted east through the 20th and spread the stronger winds into eastern New Mexico where many areas saw southwest winds of 25 to 35 mph with gusts near 55 mph. The first significant line of showers and thunderstorms of the spring season developed over the far eastern plains and spread heavy rainfall, small hail, and gusty winds over the area. Many folks in Union, Harding, Quay, Curry, and Roosevelt counties saw their heaviest rainfall in over six months.**
Event Narrative	**The Santa Fe Municipal Airport reported peak wind gusts up to 58 mph. Santa Fe Emergency Management reported power lines blown down in parts of the city resulting in numerous power outages.**

20 *Storm Events Database Summary #1*

Storm Events Database

Prev / Search Results / Next

Event Details:

Event	**High Wind**
Magnitude	**58 kts.**
State	**NEW MEXICO**
County/Area	**SANDIA/MANZANO MOUNTAINS**
WFO	**ABQ**
Report Source	**Public**
NCEI Data Source	**CSV**
Begin Date	**2018-04-19 20:00 MST-7**
End Date	**2018-04-19 23:00 MST-7**
Deaths Direct/Indirect	**0/0** (fatality details below, when available...)
Injuries Direct/Indirect	**0/0**
Property Damage	**0.00K**
Crop Damage	**0.00K**
Episode Narrative	**An unseasonably strong upper level low pressure system west of New Mexico spread strong south to southeast flow across the state on April 19th and 20th. Widespread southerly winds of 25 to 35 mph with gusts up to 50 mph were reported across central and western New Mexico on the 19th. The strongest winds developed around the Santa Fe and Albuquerque metro areas after sunset when southeasterly winds increased to between 35 and 45 mph with gusts between 55 and 65 mph. Power lines were blown down in the Santa Fe resulting in numerous power outages. The east side of the Albuquerque area also saw power outages and traffic lights out through the night of the 19th. The storm system shifted east through the 20th and spread the stronger winds into eastern New Mexico where many areas saw southwest winds of 25 to 35 mph with gusts near 55 mph. The first significant line of showers and thunderstorms of the spring season developed over the far eastern plains and spread heavy rainfall, small hail, and gusty winds over the area. Many folks in Union, Harding, Quay, Curry, and Roosevelt counties saw their heaviest rainfall in over six months.**
Event Narrative	**A ranch five miles southeast of Placitas reported peak wind gusts up to 67 mph.**

21 *Storm Events Database Summary #2*

Prev / Search Results / Next

Storm Events Database

Event Details:

Event	**High Wind**
Magnitude	**56 kts.**
State	**NEW MEXICO**
County/Area	**ALBUQUERQUE METRO AREA**
WFO	**ABQ**
Report Source	**Emergency Manager**
NCEI Data Source	**CSV**
Begin Date	**2018-04-19 23:00 MST-7**
End Date	**2018-04-19 23:10 MST-7**
Deaths Direct/Indirect	**0/0** (fatality details below, when available...)
Injuries Direct/Indirect	**0/0**
Property Damage	**10.00K**
Crop Damage	**0.00K**
Episode Narrative	**An unseasonably strong upper level low pressure system west of New Mexico spread strong south to southeast flow across the state on April 19th and 20th. Widespread southerly winds of 25 to 35 mph with gusts up to 50 mph were reported across central and western New Mexico on the 19th. The strongest winds developed around the Santa Fe and Albuquerque metro areas after sunset when southeasterly winds increased to between 35 and 45 mph with gusts between 55 and 65 mph. Power lines were blown down in the Santa Fe resulting in numerous power outages. The east side of the Albuquerque area also saw power outages and traffic lights out through the night of the 19th. The storm system shifted east through the 20th and spread the stronger winds into eastern New Mexico where many areas saw southwest winds of 25 to 35 mph with gusts near 55 mph. The first significant line of showers and thunderstorms of the spring season developed over the far eastern plains and spread heavy rainfall, small hail, and gusty winds over the area. Many folks in Union, Harding, Quay, Curry, and Roosevelt counties saw their heaviest rainfall in over six months.**
Event Narrative	**Two power poles were blown down on Interstate 25 near mile marker 245. Cost of the damage is estimated.**

22 *Storm Events Database Summary #3*

NMZ511-518-521 **Albuquerque Metro Area - Jemez Mountains - Sandia/manzano Mountains - Santa Fe Metro Area**

19	1515MST					
	2310MST	0	0	145.0K	0.00K	High Wind

An unseasonably strong upper level low pressure system west of New Mexico spread strong south to southeast flow across the state on April 19th and 20th. Widespread southerly winds of 25 to 35 mph with gusts up to 50 mph were reported across central and western New Mexico on the 19th. The strongest winds developed around the Santa Fe and Albuquerque metro areas after sunset when southeasterly winds increased to between 35 and 45 mph with gusts between 55 and 65 mph. Power lines were blown down in the Santa Fe resulting in numerous power outages. The east side of the Albuquerque area also saw power outages and traffic lights out through the night of the 19th. The storm system shifted east through the 20th and spread the stronger winds into eastern New Mexico where many areas saw southwest winds of 25 to 35 mph with gusts near 55 mph. The first significant line of showers and thunderstorms of the spring season developed over the far eastern plains and spread heavy rainfall, small hail, and gusty winds over the area. Many folks in Union, Harding, Quay, Curry, and Roosevelt counties saw their heaviest rainfall in over six months.

23 *NOAA Storm Data summary for April 19, 2018*

APRIL 2018 VOLUME 60 NUMBER 4 STORM DATA AND UNUSUAL WEATHER PHENOMENAWITH LATE REPORTS AND CORRECTIONS, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATIONNATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION

DRAFT

City of Albuquerque Public Information and Outreach Efforts

At 04:19 the National Weather Service issued an advisory:

National Weather Service

Watches, Warnings & Advisories

One product issued by NWS for: Albuquerque NM

Hazardous Weather Outlook

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Hazardous Weather Outlook
National Weather Service Albuquerque NM
419 AM MST Mon Feb 12 2018

NMZ501>540-131200-
Northwest Plateau-Chuska Mountains-Far Northwest Highlands-
Northwest Highlands-West Central Plateau-West Central Mountains-
West Central Highlands-Southwest Mountains-
San Francisco River Valley-San Juan Mountains-Jemez Mountains-
West Slopes Sangre de Cristo Mountains-
Northern Sangre de Cristos above 9500 feet/Red River-
Southern Sangre de Cristos above 9500 feet-
East Slopes Sangre de Cristo Mountains-Upper Rio Grande Valley-
Lower Chama River Valley-Santa Fe Metro Area-
Middle Rio Grande Valley/Albuquerque Metro Area-
Lower Rio Grande Valley-Sandia/Manzano Mountains-Estancia Valley-
Central Highlands-South Central Highlands-Upper Tularosa Valley-
South Central Mountains-Raton Ridge/Johnson Mesa-
Far Northeast Highlands-Northeast Highlands-Union County-
Harding County-Eastern San Miguel County-Guadalupe County-
Quay County-Curry County-Roosevelt County-De Baca County-
Chaves County Plains-Eastern Lincoln County-Southwest Chaves County-
419 AM MST Mon Feb 12 2018

This hazardous weather outlook is for portions of northern and
central New Mexico.

.DAY ONE...Today and Tonight

As a low pressure system moves over Nevada and California today,
moist southwesterly flow aloft will push over New Mexico. This flow
will be strong over portions of the state with gusty winds expected
to mix down to the Chuska mountains and portions of the southwestern
mountains of New Mexico.

In addition, the southwesterly flow will push moisture over the San
Juan and Tusas mountains where a few to several inches of snow
accumulation are expected, mainly above 8,000 feet.
```

24 NWS Weather Advisory

At 11:35 AM the National Weather Service issued a Severe Weather Alert for the Bernalillo County area.

A Severe Weather Alert has been issued in your area...

High Wind Warning issued April 19 at 11:35AM MDT until April 20 at 3:00AM MDT by NWS Albuquerque

...STRONG TO DAMAGING WINDS EXPECTED THIS AFTERNOON INTO LATE THIS EVENING... .A potent storm system approaching from the west will spread strong to potentially damaging southerly winds across the region today. Winds will increase over western New Mexico this morning then spread eastward toward the Rio Grande Valley and high plains of eastern New Mexico this afternoon. A band of mainly dry rain showers and thunderstorms is expected to develop around the Rio Grande Valley by late this afternoon. These showers will be capable of enhancing strong winds across the region with severe downburst wind gusts over 60 mph and significant blowing dust. ...HIGH WIND WARNING NOW IN EFFECT UNTIL 3 AM MDT FRIDAY... * LOCATION...West Central Highlands, Santa Fe and **Albuquerque Metro Areas, Sandia/Manzano Mountains**, and the Estancia Valley. * WINDS...South to Southeast 30 to 45 mph with gusts of 55 to 65 mph. **Strongest sustained and peak winds are likely along the western foothills of the Sandia and Manzano Mountains and eastern foothills of the Albuquerque Metro area**. * TIMING...Winds will increase this afternoon, peak during the evening, then diminish late tonight. Downburst winds from any dry showers or thunderstorms will enhance wind gusts. * VISIBILITY...Locally reduced from 2 to 5 miles in areas of blowing dust. Visibility may be locally reduced below 1/4 mile near dry arroyo beds, open fields, and construction sites. * LOCAL IMPACTS...Strong winds will create hazardous cross winds on west to east oriented roadways, including Interstate 40 and parts of Interstate 25. Blowing dust may create sudden and very dangerous reductions to visibility. High profile vehicles may become unstable or even blow over, light weight objects may be tossed around, dead trees, tree limbs, and power lines may fall.

At 14:50 AM the National Weather Service issued a Severe Weather Alert for the Bernalillo County area.

A Severe Weather Alert has been issued in your area...

High Wind Warning issued April 19 at 2:50PM MDT until April 20 at 3:00AM MDT by NWS Albuquerque

...STRONG TO DAMAGING WINDS EXPECTED THIS AFTERNOON INTO FRIDAY MORNING... .A potent storm system approaching from the west will spread strong to potentially damaging southerly winds across the region this afternoon into Friday morning. Strong winds over western New Mexico will spread eastward toward the Rio Grande Valley and high plains of eastern New Mexico this afternoon and tonight. A band of mainly dry rain showers and thunderstorms is expected to develop around the Rio Grande Valley early this evening. These showers will be capable of enhancing strong winds across the region with severe downburst wind gusts over 60 mph and significant blowing dust. ...HIGH WIND WARNING REMAINS IN EFFECT UNTIL 3 AM MDT FRIDAY... * LOCATION...West Central Highlands, Santa Fe and **Albuquerque Metro Areas, Sandia/Manzano Mountains**, and the Estancia Valley. * WINDS...**South to Southeast 30 to 45 mph with gusts of 55 to 65 mph. Strongest sustained and peak winds are likely along the western foothills of the Sandia and Manzano Mountains and eastern foothills of the Albuquerque Metro area**. * TIMING...Winds will increase this afternoon, peak during the evening, then diminish late tonight. **Downburst winds from any dry showers or thunderstorms will enhance wind gusts**. * VISIBILITY...Locally reduced from 2 to 5 miles in areas of blowing dust. Visibility may be locally reduced below 1/4 mile near dry arroyo beds, open fields, and construction sites. * LOCAL IMPACTS...Strong winds will create hazardous cross winds on west to east oriented roadways, including Interstate 40 and parts of Interstate 25. Blowing dust may create sudden and very dangerous reductions to visibility. High profile vehicles may become unstable or even blow over, light weight objects may be tossed around, dead trees, tree limbs, and power lines may fall.

At 17:57 AM the National Weather Service issued a Severe Weather Alert for the Bernalillo County area.

A Severe Weather Alert has been issued in your area...

Red Flag Warning issued April 19 at 5:57PM MDT until April 19 at 6:00PM MDT by NWS Albuquerque

...RED FLAG WARNING IN EFFECT FROM 11 AM TO 9 PM TODAY FOR MUCH OF WESTERN AND CENTRAL NEW MEXICO DUE TO STRONG WINDS AND LOW HUMIDITIES... .Higher humidity is slowly entering the Rio Grande valley, leading to improved conditions. However, critical fire weather conditions will persist across western New Mexico through the early evening due to strong winds, a very dry and unstable airmass, and above normal temperatures. ...RED FLAG WARNING WILL EXPIRE AT 6 PM MDT THIS EVENING... Humidity is starting to increase, and this will gradually alleviate critical fire weather concerns. However, **strong winds will persist through the evening across the middle Rio Grande valley.**

The National Weather Service reported severe weather for the following areas.

Event Type	Date	County/Zone Name	Magnitude	Type	Narrative
High Wind	4/19/18	Santa Fe Metro Area	56 kt	Gust	Madrid peak wind gusts to 65 mph.
High Wind	4/19-4/20/18	Santa Fe Metro Area	50 kt	Gust	Santa Fe Airport peak wind gusts up to 58 mph.
High Wind	4/19/18	Sandia/Manzano Mts	58 kt	Gust	Ranch SE of Placitas peak wind gusts up to 67 mph.
High Wind	4/19/18	Albuquerque Metro Area	38 kt	Sustained	Albuquerque Acres sustained winds to 44 mph.
High Wind	4/26/18	Union County	39 kt	Sustained	Clayton sustained winds to 45 mph.
High Wind	4/19/18	Albuquerque Metro Area	56 kt	Gust	Two power poles down on I-25 near MM 245.
High Wind	4/19-4/20/18	Jemez Mts	56 kt	Gust	Seven power poles down in Sierra de los Pinos.

DRAFT

Prior to issuing a health alert, the Agency's staff meteorologist, Jeff Stonesifer, issued a Wind and Dust Alert for April 19, 2018 at 12:03 PM .

CITY OF ALBUQUERQUE

Wind and Dust Alert

WIND AND DUST FORECAST

Winds will increase this afternoon with sustained winds over 40 MPH expected tonight. The National Weather Service has issued a High Wind Warning beginning at 4 PM today and lasting through 3 AM Friday. Sustained winds could exceed 30 MPH earlier in the afternoon today so contractors should be prepared to shut down operations quickly today.

Computer models are suggesting there is a chance of rain tonight with the approaching low pressure system. Southwest winds aloft will bring some clouds over Albuquerque tonight. However the air mass below mountaintop level is very dry. There is a better chance that most of the rain will evaporate before reaching the ground tonight which may serve to make the winds worse.

Today: Southeast wind increasing to 30-40 mph with gusts to 55 mph by late afternoon. Partly cloudy. Highs 72-75.

Tonight: Southeast winds 40-45 mph with gusts to 65 mph. Partly cloudy with sprinkles possible. Lows 45-50.

This forecast is being sent as a public service to area contractors and businesses that must comply with Albuquerque-Bernalillo County's fugitive dust regulation. Please call David Duran at 768-1957 or Tony Romero at 228-6989 for assistance.

25 Agency Wind and Dust Forecast

19Apr2018 Albuquerque wind and dust forecast **Sent** 4/19/18 11:59AM

Overview

8,377 Recipients

List: AQP Master List

Delivered: Thu, Apr 19, 2018 11:59 am

Subject: 19Apr2018 Albuquerque wind and dust forecast

0	$0.00	$0.00
Orders	Average order revenue	Total revenue

Open rate	21.0%	Click rate	0.0%
List average	21.9%	List average	0.1%
Industry average (Government)	24.2%	Industry average (Government)	3.3%

1,762	1	0	0
Opened	Clicked	Bounced	Unsubscribed

26 Wind and Dust Forecast MailChimp Metrics

The forecast was also published on the City of Albuquerque's Facebook page.

27 Agency Wind and Dust Forecast Facebook Post

The Agency issued a health alert for blowing dust at 14:10. The health alert was sent to the public via the Agency's MailChimp account. The MailChimp service delivered the health alert to 8,083 email accounts. 1,870 of those emails were opened. Additionally, all media outlets and schools were sent the health alert. Other social media resources were utilized with the health alert information being posted on the Agency's Facebook page and links included in the Agency's twitter account.

City of Albuquerque Environmental Health Department issues Air Quality Health Alert due to blowing dust **Sent** 4/19/18 3:26PM

Overview

8,376 Recipients

List: AQP Master List **Delivered:** Thu, Apr 19, 2018 3:26 pm

Subject: City of Albuquerque Environmental Health Department issues Air Quality Health Alert due to blowing dust

0	$0.00	$0.00
Orders	Average order revenue	Total revenue

Open rate	20.9%	Click rate	0.0%
List average	21.9%	List average	0.1%
Industry average (Government)	24.2%	Industry average (Government)	3.3%

1,753	4	2	1
Opened	Clicked	Bounced	Unsubscribed

28 Agency's MailChimp Health Alert Metrics

CITY OF ALBUQUERQUE

Health Alert

Issue time: Thursday, April 19, 2018 at 3:30 PM

FOR IMMEDIATE RELEASE
CONTACT: Jeff Stonesifer (505)767-5624

CITY OF ALBUQUERQUE
ENVIRONMENTAL HEALTH DEPARTMENT ISSUES
HEALTH ALERT DUE TO BLOWING DUST

The City of Albuquerque Environmental Health Department's Air Quality Program is issuing a health alert for those with respiratory conditions. High winds may cause elevated levels of particulate matter. This alert is in effect for the following period:

Thursday, April 19, 2018 at 3:30 PM
To
Friday, April 20, 2018 at 3:00 AM

Blowing dust contributes to particulate pollution. People who are sensitive to blowing dust, such as those with asthma, chronic bronchitis and other respiratory and heart diseases, are encouraged to limit outdoor activity. Children and older adults may also be affected by particulate pollution. Schools and senior citizen facilities may want to provide indoor activities to minimize exposure to elevated outdoor particulate levels.

During blowing dust events, the following actions are recommended, especially for individuals sensitive to particulate pollution:

- Keep windows and doors closed. If needed for comfort, use air conditioners or heating systems on recycle/recirculation mode.
- Limit your time spent outdoors.
- If symptoms of heart or lung disease occur, (including shortness of breath, chest tightness, chest pain, palpitations or unusual fatigue) contact your health care provider.
- Individuals with heart or lung disease should follow their health management plan from their health care provider.
- Asthmatic individuals should follow a prescribed asthma management plan.
- Avoid outdoor exercise.

Click here for more information about how to stay healthy with Action Alerts.

ADD AIR TO YOUR FACEBOOK FEED.
Follow us on social media!

Copyright © 2017 City of Albuquerque Air Quality, All rights reserved.
Our mailing address is:
P.O. Box 1293
Albuquerque NM 87103
Want to change how you receive these emails?
You can update your preferences or unsubscribe from this list

29 Agency's MailChimp Health Alert Email

DRAFT

Stonesifer, Jeff W.

From:	Air Quality Program <aqd@cabq.gov>
Sent:	Monday, February 12, 2018 2:09 PM
To:	Stonesifer, Jeff W.
Subject:	Albuquerque Environmental Health Department issues a Health Alert for Blowing Dust

An air quality health alert from the city of Albuquerque. Click here to view in browser

CITY OF ALBUQUERQUE **Health Alert**

Issue time: Monday, February 12, 2018 at 2:10 PM

FOR IMMEDIATE RELEASE

CONTACT: Jeff Stonesifer (505) 767-5624

CITY OF ALBUQUERQUE
ENVIRONMENTAL HEALTH DEPARTMENT ISSUES
HEALTH ALERT DUE TO BLOWING DUST

The City of Albuquerque Environmental Health Department's Air Quality Program is issuing a health alert for those with respiratory conditions. High winds may cause elevated levels of particulate matter. This alert is in effect for the following period:

Monday, February 12, 2018 at 2:10 PM
To
Monday, February 12, 2018 at 7:00 PM

Blowing dust contributes to particulate pollution. People who are sensitive to blowing dust, such as those with asthma, chronic bronchitis and other respiratory and heart diseases, are encouraged to limit outdoor activity. Children and older adults may also be affected by particulate pollution. Schools and senior citizen facilities may want to provide indoor activities to minimize exposure to elevated outdoor particulate levels.

During blowing dust events, the following actions are recommended, especially for individuals sensitive to particulate pollution:

30- Outlook email Health Alert Notice sent to the Press Release mail list

The alert was also sent to the Agency's Twitter account.

31 Agency's Health Alert on Twitter

At 14:18, Monday April 19, 2018 the staff meteorologist, Jeff Stonesifer, also sent a Shutdown Notice to Contractors in Bernalillo County. This MailChimp email was sent to 8,083 email recipients and was opened by 1,746 of those recipients.

Media Coverage

WEATHER

Kristen's Thursday Morning Forecast

Posted: Apr 19, 2018 / 08:27 AM MDT / Updated: Apr 19, 2018 / 08:27 AM MDT

Our next spring storm will begin its approach to the Four Corners region Thursday, making for an active weather day across New Mexico. First and foremost, strong east/southeasterly winds will rip across the state — gusting up to 50mph in central NM (including the ABQ-metro). Critical to extreme fire danger will be found within western NM with the dangerous combination of strong winds and low humidity.

HIGH WIND WARNINGS (orange) & WIND ADVISORIES (yellow) issued for northwest half of #NewMexico — including #ABQ-metro. #NMwx

Timing: 4PM Thursday to 3AM Friday pic.twitter.com/qlpDRPSxLL— Kristen Currie (@KristenCurrieTV) April 19, 2018

Spotty storms will favor central, southern and eastern NM late Thursday into Friday. There is potential for these storms to be strong to severe — top threats: damaging winds and large hail. The threat for severe storms will be pushed into southeast NM on Friday afternoon. Snow showers will also develop over the higher terrain of northern NM late Thursday through early Saturday. Accumulating snowfall is likely over 9000ft.

MARGINAL RISK: isolated strong to severe t-storms possible across central & southern #NewMexico today — threats: damaging winds & hail. #NMwx #KRQEMornings pic.twitter.com/FGZixFWFUt— Kristen Currie (@KristenCurrieTV) April 19, 2018

The cold front attached to this spring storm will usher in cooler air to finish off the work week. Expect highs to drop ~10° between Thursday and Friday... leaving the ABQ-metro below seasonal averages in the low 60s.

***32** Local New Report Channel 13*

City issues blowing dust health alert

BY JOURNAL STAFF REPORT
Thursday, April 19th, 2018 at 3:41pm

SHARE
TWEET
LINKEDIN
EMAIL
PRINT
SUBSCRIBE

ALBUQUERQUE, N.M. — A health alert due to blowing dust is in effect through early Friday in Albuquerque, the city Environmental Health Department's Air Quality Program says.

The alert, which went into effect at 3:30 today, runs through 3 a.m. Friday.

"Blowing dust contributes to particulate pollution," the alert reads. "People who are sensitive to blowing dust, such as those with asthma, chronic bronchitis and other respiratory and heart diseases, are encouraged to limit outdoor activity. Children and older adults may also be affected by particulate pollution. Schools and senior citizen facilities may want to provide indoor activities to minimize exposure to elevated outdoor particulate levels."

33 *Albuquerque Journal Newspaper Website Notification of the Health Alert*

DRAFT

City issues health alert for blowing dust Thursday

by: KRQE Media
Posted: Apr 19, 2018 / 01:00 PM MDT / Updated: Apr 19, 2018 / 03:41 PM MDT

Winds are expected to increase Thursday afternoon with sustained speeds of over 40 MPH.

A High Wind Warning has been issued by the National Weather Service for central and northwestern New Mexico starting at 4 p.m. and lasting until 3 a.m. Friday.

Due to the high winds, contractors should be prepared to shut down operations.

The city also issued a health alert due to blowing dust. The health alert will go into effect Thursday from 3:30 p.m. and will remain in effect until 3 a.m. Friday.

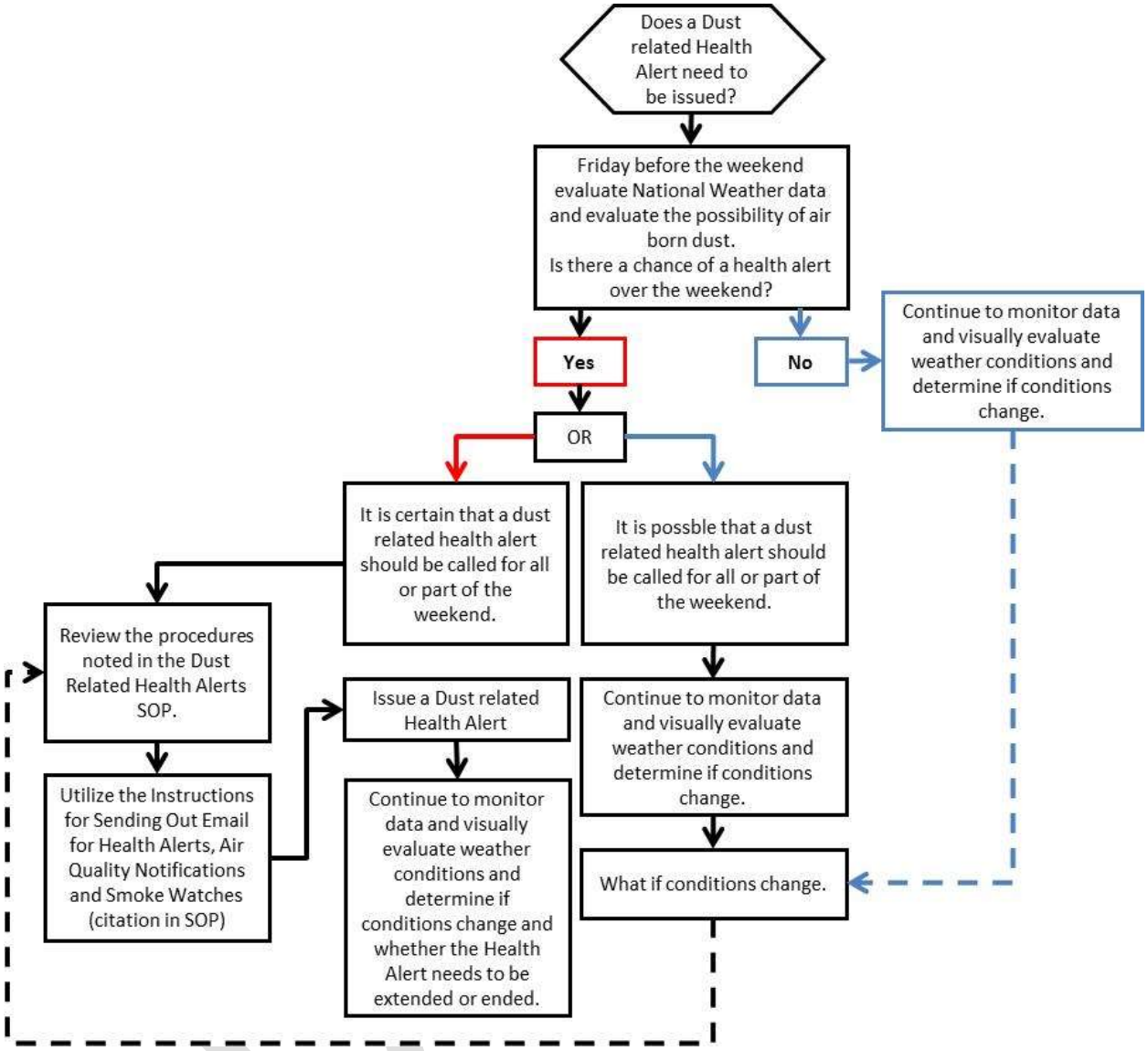
The Environmental Health Department recommends the following tips to those sensitive to blowing dust.

- Keep windows and doors closed. If needed for comfort, use air conditioners or heating systems on recycle/recirculation mode.
- Limit your time spent outdoors.
- If symptoms of heart or lung disease occur, (including shortness of breath, chest tightness, chest pain, palpitations or unusual fatigue) contact your health care provider.
- Individuals with heart or lung disease should follow their health management plan from their health care provider.
- Asthmatic individuals should follow a prescribed asthma management plan.
- Avoid outdoor exercise.

34 *- KRQE Website Notification of the Health Alert*

35 Local New Facebook Report KOAT News Channel 7

Decision Process for Dust Related Health Alerts



***36** - Decision Tree for Evaluating Need for a Health Alerts*

The City of Albuquerque utilizes a decision process for evaluating the need for dust related health alerts. For more on the Agency's process for determining a dust related health alert see Appendix B-HAWG SOP.

Reasonable Controls Analysis

Fugitive Dust Control Program

Although the Agency is currently in attainment for the PM10 NAAQS and does not have a PM10 SIP, in 2008 the Albuquerque-Bernalillo County Control Board (AQCB) adopted the PART 20 Fugitive Dust Control ordinance. The objective of the ordinance is to

> "ensure that every person shall use reasonably available control measures or other effective measures on an ongoing basis to prevent or abate fugitive dust, if the fugitive dust may with reasonable probability injure human health or animal or plant life or as may unreasonably interfere with the public welfare, visibility or the reasonable use of property, as required by 20.11.20 NMAC."

The ordinance defines

> '"Reasonably available control measure" or "control measure" means a device, system, process modification, apparatus, technique, work practice, or combination thereof, that mitigates fugitive dust and includes the measures in 20.11.20.23 NMAC and any other regulatory control program that results in equivalent protection of a disturbed surface or inactive disturbed surface area, whether or not the purpose of the control measure is to mitigate dust or to meet another requirement of 20.11.20 NMAC or any other statute or regulation.'

Since the area has not experienced an exceedance of the NAAQS in any April prior to the April 19, 2018 event shows the reasonableness of the efforts by the Agency implementing the Fugitive Dust Program and the reasonably available control measures.

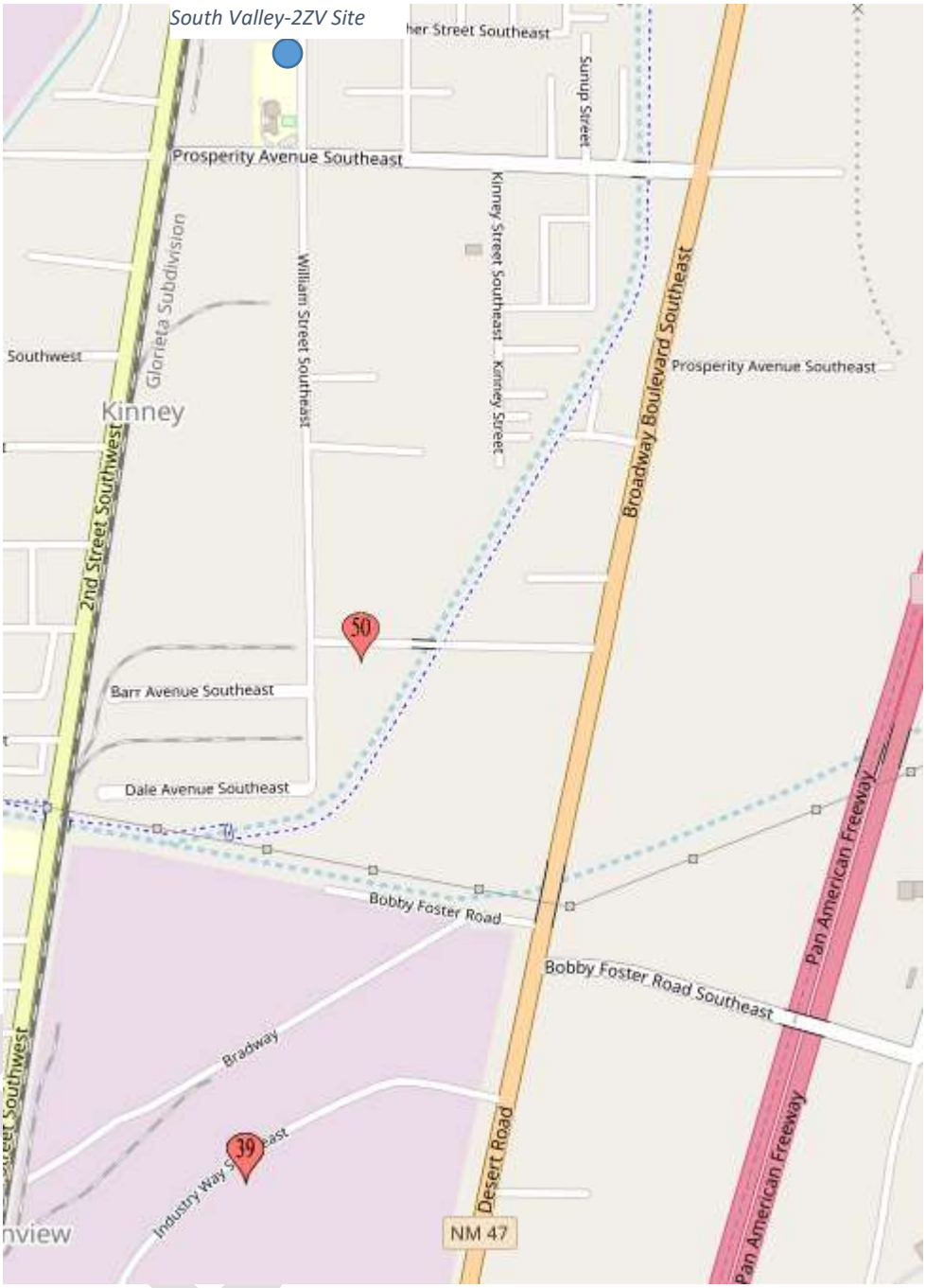
The Agency has statutory jurisdiction over the County of Bernalillo County with the exclusion of Native American Tribal lands.

> **"**STATUTORY AUTHORITY: 20.11.20 NMAC is adopted pursuant to the authority provided in the New Mexico Air Quality Control Act, NMSA 1978 Sections 74-2-4, 74-2-5; the Joint Air Quality Control Board Ordinance; Bernalillo county Ordinance No. 94-5, Sections 4 and 5; and the Joint Air Quality Control Board Ordinance, Revised Ordinances of Albuquerque 1994 Sections 9-5-1-4 and 9-5-1-5. [20.11.20.3 NMAC - Rp, 20.11.20.3 NMAC, 3/17/08]"

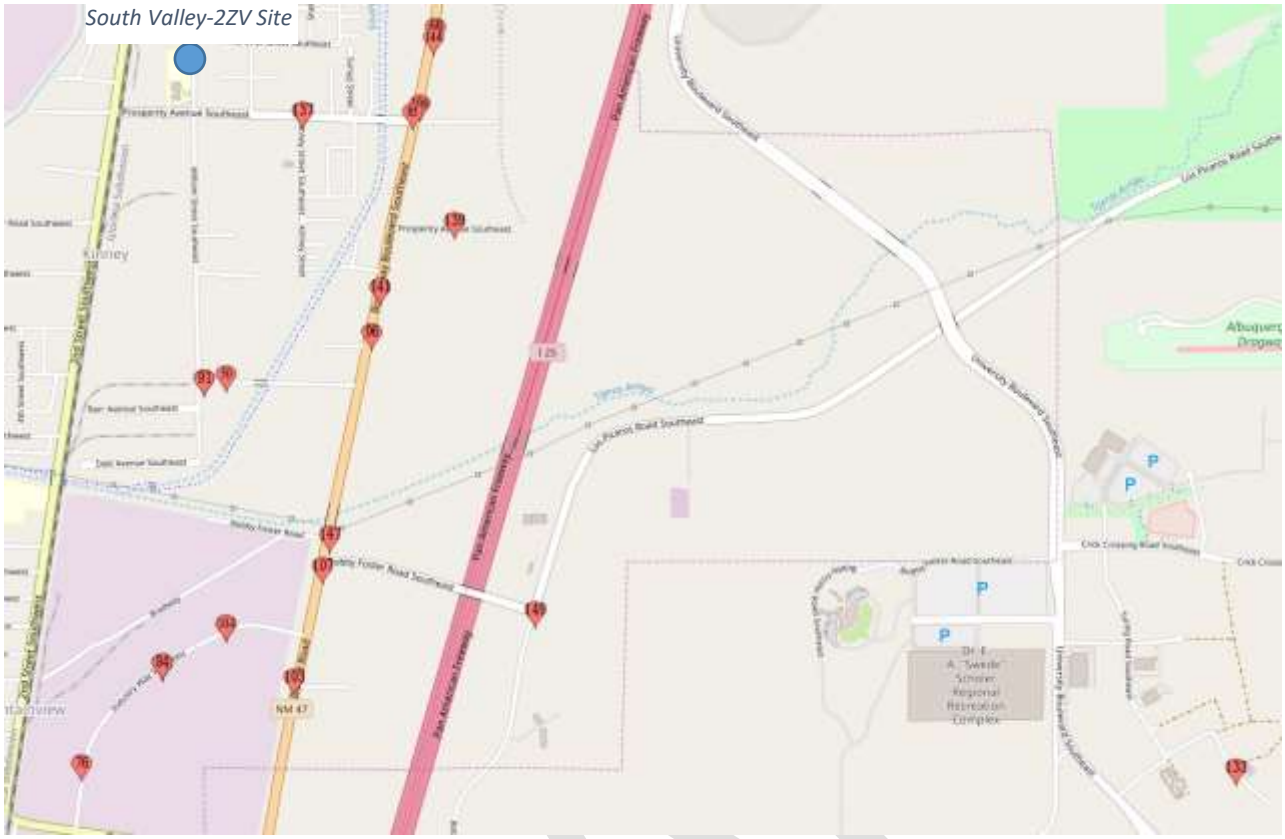
For more information concerning this ordinance please see Appendix C – Part 20.

The Agency had 93 new construction dust permits across the county. Approximately 2 (2%) new construction dust permits are located in the area impacted by the April 19, 2018 event. The Agency had 162 Routine (programmatic permits covering parking lots, salvage yards, etc.) across the County. Approximately 18 (11%) Routine permits are located in the area impacted by the April 19, 2018 event. Approximately 15 (9%) of the Routine permits were from the wind direction during the event period. See Appendix D - List of Permits active on April 19, 2018 for a list of permits.

DRAFT



37 - Map of New Construction Permits in the area around the South Valley-2ZV site



38 - Map of Routine Permits in the area around the South Valley-2ZV site

The Agency is confident that these controls are reasonable and effective since the County does not experience frequent exceedances of the NAAQS. With the exception of Tribal land within the County of Bernalillo and those counties outside Bernalillo County the ordinance was in place for those businesses or activities that may have contributed to the event.

Based on the documentation provided in this demonstration package, the event qualifies as a natural event. The April 19, 2018 associated with the event meets the regulatory definition of a natural event at 40 CFR 50.14(b)(8). This event transported windblown dust from anthropogenic sources within Bernalillo County, excluding Tribal lands, which were reasonably controlled at the time of the event. Accordingly, the Agency has demonstrated that the event is a natural event that should be considered for treatment as an exceptional event.

Response per the EER Demonstration requirements

i. Except as provided under paragraph (c)(2)(vi) of this section, a State that has flagged data as being due to an exceptional event and is requesting exclusion of the affected measurement data shall, after notice and opportunity for public comment, submit a demonstration to justify data exclusion to the Administrator according to the schedule established under paragraph (c)(2)(i)(B).

ii. [Reserved]

iii. [Reserved]

iv. The demonstration to justify data exclusion must include:

A. A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s);

RESPONSE: The Agency's documentation has provided a narrative conceptual model describing the event which caused the exceedance of the PM10 NAAQS. The Agency also discussed the area of the exceedance, identified potential sources that contributed to the exceedance, and how this impacted the monitor that exceeded the PM10 NAAQS.

B. A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;

RESPONSE: The Agency, in this demonstration, has shown that the event affected air quality in such a way that there is a clear causal relationship between the event and the monitored exceedance of the PM10 NAAQS. Winds were elevated and meet the EER wind speed threshold. The event originated outside of the County crossed New Mexico Counties outside of Bernalillo County and crossed Tribal Land not under the authority of the Agency.

C. Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times to support the requirement at paragraph (c)(3)(iv)(B) of this section. The Administrator shall not require a State to prove a specific percentile point in the distribution of data;

RESPONSE: The Agency has provided ample data comparisons that show the event concentrations for this event deviates from what is normal for any April on any other given year. The multi-year assessments shows that for any given year April is not a month where the Agency has experienced prior exceedances of the PM10 NAAQS.

D. A demonstration that the event was both not reasonably controllable and not reasonably preventable; and

RESPONSE: The Agency has provided information that Bernalillo County has reasonable control measures as noted by the adoption of PART 20 Fugitive Dust Control ordinance. This ordinance has full jurisdiction over all land within Bernalillo County with the exception of Tribal lands.

E. A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event.

RESPONSE: The Agency has recognized that the event was due to high winds and that the primary source of windborne dust was from anthropogenic sources that overwhelmed the areas reasonable controls.

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Appendices

Appendix A – Bernalillo County Neighborhood Associations
Appendix B – Health Alert Workgroup SOP
Appendix C – Part 20
Appendix D – List of Permits active on April 19, 2018

DRAFT

Appendix A - Bernalillo County Neighborhood Associations

Acequia Madre de Carnuel Association

Adobe Acres Neighborhood Association

Alameda North Valley Association

Alamosa Neighborhood Association

Alban Hills Neighborhood Association

Anderson Hills Neighborhood Association

Atrisco Viejo Neighborhood Association

Avalon Neighborhood Association

Blake Road Neighborhood Association

Bosque Dell Acres Neighborhood Association

Canyon Estates Neighborhood Association

Columbine Thompson Neighborhood Association

Conita Real Neighborhood Association

Crestview Bluff Neighbors Association

Daniel/Jacobson Neighborhood Association

East Gateway Coalition of Association

East Mountain District 5 Coalition

Echo Canyon Neighborhood Association

El Camino Real Neighborhood Association

El Paraiso Neighborhood Association

Foothill Neighborhood Association

Forest Park Property Owners Cooperative Association

Four Hills Village Association

Heatherland Hills Landowners Association

Hermosilla Estates Neighborhood Association

Horseshoe Valley Landowners Association

La Cienega Del Norte Neighborhood Association

Lee Acres Neighborhood Association

Loma Del Rey Neighborhood Association

Los Duranes Neighborhood Association

Los Poblanos Neighborhood Association

Los Suenos Neighborhood Association

Maria Diers Neighborhood Association

DRAFT

Merritt Acres Neighborhood Association

Mesa Del Sol Neighborhood Association

Monticello Neighborhood Association

Mountain Shadows Homeowners Association

Mountain View Community Action

Mountain View Commercial Property Association

Mountain View Neighborhood Association

Neighborhood Association of the Lands of Edward P. Bass

Neighbors of Nichols Road Neighborhood Association

North Albuquerque Acres Community Association

North Edith Corridor Association

North Valley Coalition, Inc.

Oakland Heights Homeowners Association

Paa-ko Communities Homeowner's Association

Pajarito Mesa Stake Holders Neighborhood Association

Pajarito Village Association

Paradise Hills Civic Association

Pinion Ridge Estates Neighborhood Association

Ponderosa Ranch Estates Landowners, Inc.

Ramble Wood Neighborhood Association

Rancho Verde Home Owners Association

Rio Oeste Homeowners Association

Route 66 West Neighborhood Association

Sabino Canyon Neighborhood Association

Adrienne Pease Linda WinterfeldNovember4

Sandia Heights Homeowners Association

Sandia Knolls Neighborhood Association

Sandia Mountain Ranch Neighborhood Association

San Jose Neighborhood Association

Sedillo Road Greater Neighborhood Association

Sierra Vista Estates Neighborhood Association

Sierra Vista West Neighborhood Association

Sky View Acres Neighborhood Association

South Skyland Neighborhood Association

DRAFT

South Valley Alliance

South Valley Coalition of Neighborhood Association

South Valley Los Padillas Neighborhood Association

South West Alliance of Neighbors

South Side Farms Community Association

Sunset Southwest Neighborhood Association

Sunstar Neighborhood Association

Tablazon Neighborhood Association

Taylor Ranch Neighborhood Association

Thunderbird Lane Neighborhood Association

Vecinos del Bosque Neighborhood Association

Ventana del Sol Homeowners Association

Vista Bonita Neighborhood Association

West Juan Tomas Neighborhood Association

West Mesa Neighborhood Association

Western Meadows Area Civic Association

Westgate Heights Neighborhood Association

Wildflower Neighborhood Association

Yakima Neighborhood Association

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Appendix B – Health Alerts Workgroup

Standard Operating Procedure (SOP)

Issuing a Dust Related Health Alert

HAWG

7/30/2018

The issuance of Dust Related Health Alerts is an important function of the City of Albuquerque's Environmental Health Department. Health alerts provide valuable information to the public and provides them the tools to better protect themselves and their families.

In Albuquerque and Bernalillo County there are situations where the weather generates significant winds that increase the amount of airborne dust. These situations most often are caused by unusual weather situations where winds are significantly high, often exceeding 25 MPH for a sustained period of time and often with gust greater than 30 MPH.

This SOP will provide you with the guidance and tools to use when evaluating the possibility that weather conditions will be extreme enough to cause a significant amount of airborne dust which in turn can impact the residents of Bernalillo County.

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☐ TOOLS YOU NEED

Hardware:

1. Laptop Computer with MS Word and internet access
2. Cell Phone

Websites:

1. National Weather Service (NWS) (http://www.srh.noaa.gov/abq/getforecastinfo.php?zone=NMZ519)
2. NWS Severe Weather Statement (http://forecast.weather.gov/product.php?site=NWS&issuedby=ABQ&format=TXT&version=1&glossary=1&product=SVS)
3. Albuquerque International Airport http://w1.weather.gov/data/obhistory/KABQ.html
4. Albuquerque Double Eagle II Airport http://w1.weather.gov/data/obhistory/KAEG.html

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The following is broken down by daily activities in order to simplify the process.

Friday Afternoon – Before leaving work check with the staff meteorologist and review the local forecast at http://www.srh.noaa.gov/abq/getforecastinfo.php?zone=NMZ519.

The following Decision Process contains the basic principles that you should consider for calling a Dust Health Alert.

☐ DECISION PROCESS

A. If no severe weather or high winds are forecast then finish the review and do not issue a dust related health alert.
    a. If a combination of the following is occurring then a health alert needs to be issued
        i. Email PM Alerts – several alarms over consecutive hours
        ii. Multiple hours of sustained winds above 25 mph
        iii. NWS Albuquerque Forecast office has issued high wind advisory, warning or alert for the Albuquerque area
    b. Does the staff meteorologist recommend a dust related health alert?

If the NWS has issued or will issue a high wind alert, and it may include blowing dust and reduced visibility, then you should consider calling a dust related health alert for the time period noted by the NWS.

If the severe weather or high winds aren't expected until later in the weekend then you should re-evaluate the data prior to the NWS issuing the alert. If the NWS still shows that the alert will happen then you should put into place the requirements for issuing a health alert. You should also visually observe your local weather conditions and watch for high PM alerts. If conditions worsen before the NWS issues their alert then you should issue the Dust Based Health Alert based on you visual observations, the alerts sent concerning high particulate matter, and the NWS issuing a high wind alert.

NOTE: You should review the high PM Alerts you receive. If the alerts are showing fairly low PM values, typically less than 150-200 µg/m^3, then you may want to wait to see if the values increase. If the values are in the 300 µg/m^3 or greater range you should consider calling a health alert. The reason being is that it takes numerous hours at lower concentrations to impact the total PM concentration than it does if the concentrations are much higher.

Saturday Morning – review and evaluate the NWS local forecast at http://www.srh.noaa.gov/abq/getforecastinfo.php?zone=NMZ519.

Repeat the Decision Process.

Sunday Morning – review and evaluate the NWS local forecast at http://www.srh.noaa.gov/abq/getforecastinfo.php?zone=NMZ519.

Repeat the Decision Process.

You can also reference the Procedural Checklist on page 5 of this SOP.

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☐ Procedural Checklist for the Weekend of: _____

❍ *Friday*

1. Call the National Weather Service (See Table 1)
2. Does Friday's data support a weekend Dust Health Alert? Yes No
3. If Yes:
    a. NWS has or will issue a high wind/dust alert on _____, or
    b. High winds are forecast that will impact Bernalillo County
    c. Prepare Dust alert materials
    d. Issue the Dust Health Alert
4. If No, wait until Saturday Morning

❍ *Saturday*

❍ Call the National Weather Service (See Table 1)

1. Does Saturday's data support a Dust Health Alert? Yes No
2. If Yes:
    a. NWS has or will issue a high wind/dust alert on _____, and/or
    b. I have received several high PM alerts Yes No
    if yes
    c. And the NWS forecasts high winds Yes No, or
    d. High winds are visually observed Yes No

If you receive 3 or more consecutive high PM alerts (≥ 300 µg/m^3) and the NWS has forecast high winds (they may not issue an alert) you should call a Dust Health Alert. You should review the high PM Alerts you receive. If the alerts are showing fairly low PM values, typically ≤150-200 µg/m^3, then you may want to wait to see if the values increase. If the values are ≥300 µg/m^3 you should consider calling a health alert. The reason being is that it takes numerous hours at lower concentrations to impact the total PM concentration than it does if the concentrations are much higher.

If you do not receive any, or you receive an occasional high PM alert, even if the NWS has forecast high winds, then you should continue to observe local conditions and monitor the weather and the high PM alerts. If the high PM alerts become more frequent and/or elevated, or the NWS issues a high wind/dust alert, then you should call a dust health alert.

❍ *Sunday*

❍ Call the National Weather Service (See Table 1)

1. Does Sunday's data support a Dust Health Alert? Yes No
2. If Yes:
    a. NWS has or will issue a high wind/dust alert on _____, and/or
    b. I have received several high PM alerts Yes No
    if yes
    c. And the NWS forecasts high winds Yes No, or
    d. High winds are visually observed Yes No

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Table 1. Contacts for information on haze (dust and/or smoke)

Individual/Organization	Phone/Email	What to ask
Albuquerque National Weather Service office	224-9007, or 244-9148 (emergency backup) They often post information at twitter.com/NWS Albuquerque	1) Identify yourself and ask to speak with **a forecaster** 2) "It's hazy outside. Do you know whether it's smoke or dust? Where is it coming from? Will it dissipate gradually or remain hazy through the day?" (This is the info you need for a health alert or notification.) 3) "I saw at XYZ website that smoke was heading for Albuquerque. Do you think it might be concentrated enough to reduce visibility? When would it most likely arrive in Albuquerque? How long might it be hazy?" (This is the information you need for a Smoke Watch.)
Josh Hall, US Forest Service	jdhall@fs.fed.us (505)438-5319 (505)697-1465	"Jeff is out of the office. Are there any forest fires that might affect Albuquerque in the next 24 hours?"
Claudia Standish, BLM Contractor	(505)920-0874, Oceanblues58@gmail.com	"Jeff is out of the office. Are there any forest fires that might affect Albuquerque in the next 24 hours?"

If you receive 3 or more consecutive high PM alerts (≥ 300 µg/m^3) and the NWS has forecast high winds (they may not issue an alert) you should call a Dust Health Alert. You should review the high PM Alerts you receive. If the alerts are showing fairly low PM values, typically ≤150-200 µg/m^3, then you may want to wait to see if the values increase. If the values are ≥300 µg/m^3 you should consider calling a health alert. The reason being is that it takes numerous hours at lower concentrations to impact the total PM concentration than it does if the concentrations are much higher.

If you do not receive any, or you receive an occasional high PM alert, even if the NWS has forecast high winds, then you should continue to observe local conditions and monitor the weather and the high PM alerts. If the high PM alerts become more frequent and/or elevated, or the NWS issues a high wind/dust alert, then you should call a dust health alert.

Specifics on Analyzing Wind Data

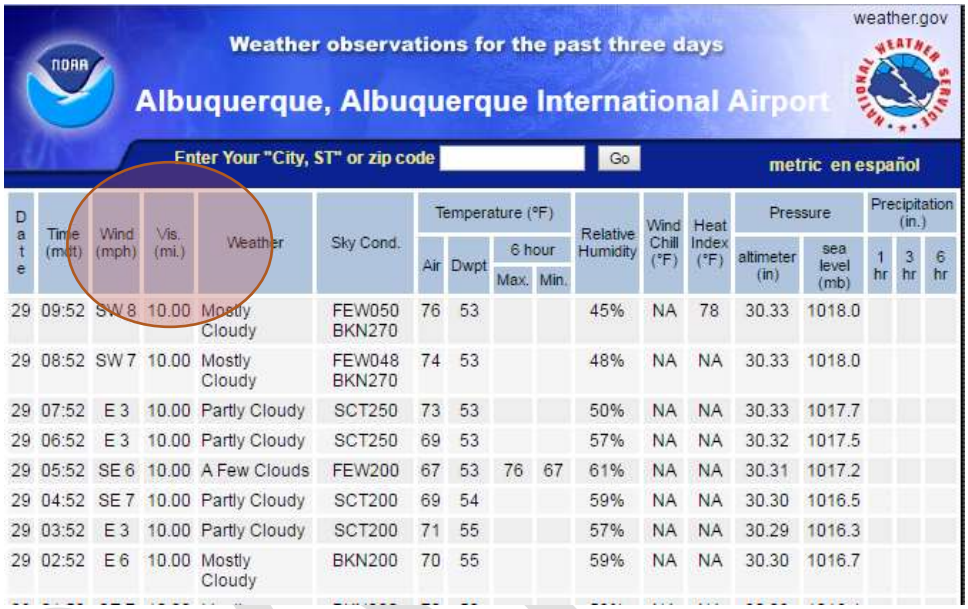
For Dust Related Health Alerts there are two aspects to wind data.

1. The first is the local monitoring stations wind speed data. If you have access to that information you should be considering a health alert if the local wind speeds exceed 25 mph for a sustained period. The sustained period is subjective to how strong the local monitoring stations wind speeds are, if they hover around 25 mph then you should consider a sustained period of 2 or more hours, if they are greater that 35 mph then the sustained period would be less. The sustained period

would also be subjective to the particulate matter concentration being reported and the NWS forecast or NWS alerts.

2. The second is the Airport wind speed data should be considered when wind speeds are 30 mph or greater. The same issue of the sustained winds as above should be considered. The reason for the difference is that the airport monitors are in an open area not impacted by trees or buildings. The site for the airport data is http://w1.weather.gov/data/obhistory/KABQ.html.

The data you will be looking at is the "Date", "Time", "Wind (mph)" and "Vis. (mi.)" columns. The Wind column will give you sustained wind speed, wind gust and wind direction data. If the Wind column is showing sustained wind speeds of 30 mph or greater then you should be prepared to call a Dust Related Health Alert.



weather.gov

Weather observations for the past three days

Albuquerque, Albuquerque International Airport

Enter Your "City, ST" or zip code Go metric en español

Date	Time (mdt)	Wind (mph)	Vis. (mi.)	Weather	Sky Cond.	Temperature (°F)				Relative Humidity	Wind Chill (°F)	Heat Index (°F)	Pressure		Precipitation (in.)		
						Air	Dwpt	6 hour Max.	6 hour Min.				altimeter (in)	sea level (mb)	1 hr	3 hr	6 hr
29	09:52	SW 8	10.00	Mostly Cloudy	FEW050 BKN270	76	53			45%	NA	78	30.33	1018.0			
29	08:52	SW 7	10.00	Mostly Cloudy	FEW048 BKN270	74	53			48%	NA	NA	30.33	1018.0			
29	07:52	E 3	10.00	Partly Cloudy	SCT250	73	53			50%	NA	NA	30.33	1017.7			
29	06:52	E 3	10.00	Partly Cloudy	SCT250	69	53			57%	NA	NA	30.32	1017.5			
29	05:52	SE 6	10.00	A Few Clouds	FEW200	67	53	76	67	61%	NA	NA	30.31	1017.2			
29	04:52	SE 7	10.00	Partly Cloudy	SCT200	69	54			59%	NA	NA	30.30	1016.5			
29	03:52	E 3	10.00	Partly Cloudy	SCT200	71	55			57%	NA	NA	30.29	1016.3			
29	02:52	E 6	10.00	Mostly Cloudy	BKN200	70	55			59%	NA	NA	30.30	1016.7			

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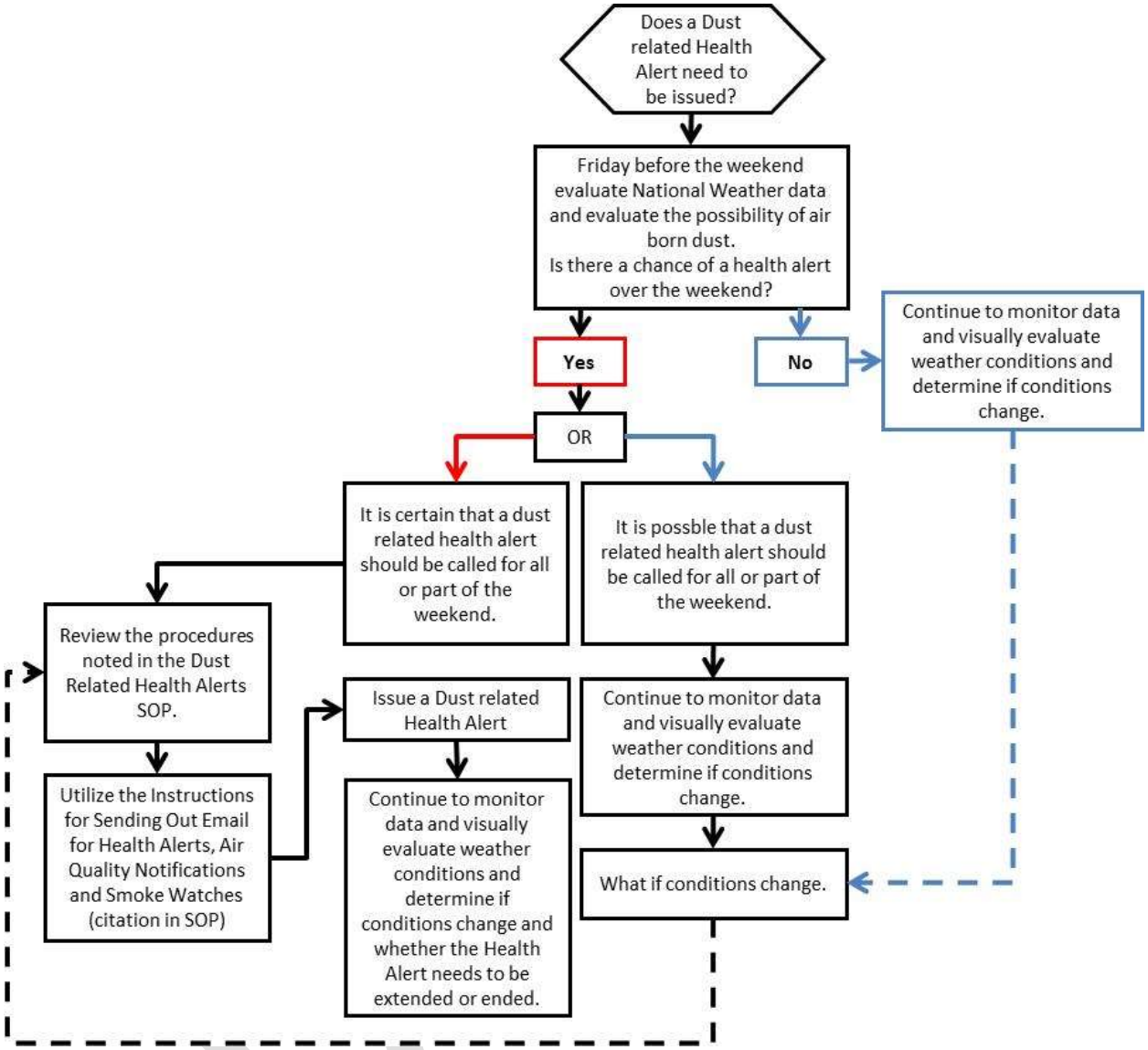
Decision Process for Dust Related Health Alerts



NWS Reports

The NWS reports often contain language that are key to evaluating the information provided. An example of the local forecast is shown below (http://www.srh.noaa.gov/abq/getforecastinfo.php?zone=NMZ519)

Local Forecast

```
NMZ519-062200-
MIDDLE RIO GRANDE VALLEY/ALBUQUERQUE METRO AREA-
331 AM MDT MON JUN 6 2016

TODAY: MOSTLY SUNNY THIS MORNING. PARTLY CLOUDY WITH ISOLATED
SHOWERS AND THUNDERSTORMS IN THE AFTERNOON. HIGHS IN THE 90S.
SOUTHEAST WINDS 10 TO 15 MPH SHIFTING TO THE SOUTH 10 TO 20 MPH IN
THE AFTERNOON.
TONIGHT: PARTLY CLOUDY. BREEZY. ISOLATED SHOWERS AND THUNDERSTORMS
IN THE EVENING. LOWS IN THE UPPER 50S TO MID 60S. SOUTHEAST WINDS
10 TO 20 MPH IN THE EVENING. BELOW CANYONS...SOUTHEAST WINDS 15 TO
25 MPH WITH GUSTS TO AROUND 35 MPH.
TUESDAY: PARTLY CLOUDY. HIGHS IN THE 90S. SOUTH WINDS 10 TO 15 MPH
IN THE AFTERNOON.
.TUESDAY NIGHT...MOSTLY CLEAR. LOWS IN THE UPPER 50S TO LOWER 60S.
SOUTH WINDS 10 TO 15 MPH.
WEDNESDAY: MOSTLY SUNNY. ISOLATED SHOWERS AND THUNDERSTORMS IN THE
AFTERNOON. HIGHS IN THE 90S. SOUTHWEST WINDS 10 TO 15 MPH.
.WEDNESDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE UPPER 50S TO MID 60S.
THURSDAY: PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. HIGHS IN THE LOWER TO MID 90S.
.THURSDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE LOWER TO MID 60S.
FRIDAY: PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. HIGHS IN THE UPPER 80S TO MID 90S.
.FRIDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE UPPER 50S TO LOWER 60S.
SATURDAY: PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. HIGHS IN THE MID 80S TO LOWER 90S.
.SATURDAY NIGHT...PARTLY CLOUDY WITH A SLIGHT CHANCE OF SHOWERS AND
THUNDERSTORMS. LOWS IN THE UPPER 50S TO LOWER 60S.
SUNDAY: PARTLY CLOUDY. HIGHS IN THE UPPER 80S TO LOWER 90S.
```

Header

Location

Report

What you should be looking for are specifics concerning winds. Elevated winds will likely show as over 25 MPH with gust information as well.

This report contains additional information but the information above provides a quick and easy to read forecast for a week. A quick look at this report on Friday, then Saturday and Sunday mornings should give you a general idea of the forecast and what you can expect over the weekend.

NWS Reports

The NWS reports often contain language that is important in evaluating the information provided. An example of the Hazardous Weather Outlook is shown below (http://forecast.weather.gov/product.php?site=NWS&issuedby=ABQ&product=HWO&format=TXT&version=2&glossary=1):

Hazardous Weather Outlook

Issued by NWS Albuquerque, NM

Current Version | Previous Version | Graphics & Text | Print | Product List | Glossary Off
Versions: 1 **2** 3 4 5 6 7

Header

```
000
FLUS45 KABQ 050914
HWOABQ

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE ALBUQUERQUE NM
314 AM MDT SUN JUN 5 2016

NMZ501>540-061200-
NORTHWEST PLATEAU-CHUSKA MOUNTAINS-FAR NORTHWEST HIGHLANDS-
NORTHWEST HIGHLANDS-WEST CENTRAL PLATEAU-WEST CENTRAL MOUNTAINS-
WEST CENTRAL HIGHLANDS-SOUTHWEST MOUNTAINS-
SAN FRANCISCO RIVER VALLEY-SAN JUAN MOUNTAINS-JEMEZ MOUNTAINS-
WEST SLOPES SANGRE DE CRISTO MOUNTAINS-
NORTHERN SANGRE DE CRISTOS ABOVE 9500 FEET/RED RIVER-
SOUTHERN SANGRE DE CRISTOS ABOVE 9500 FEET-
EAST SLOPES SANGRE DE CRISTO MOUNTAINS-UPPER RIO GRANDE VALLEY-
LOWER CHAMA RIVER VALLEY-SANTA FE METRO AREA-
MIDDLE RIO GRANDE VALLEY/ALBUQUERQUE METRO AREA-
LOWER RIO GRANDE VALLEY-SANDIA/MANZANO MOUNTAINS-ESTANCIA VALLEY-
CENTRAL HIGHLANDS-SOUTH CENTRAL HIGHLANDS-UPPER TULAROSA VALLEY-
SOUTH CENTRAL MOUNTAINS-RATON RIDGE/JOHNSON MESA-
FAR NORTHEAST HIGHLANDS-NORTHEAST HIGHLANDS-UNION COUNTY-
HARDING COUNTY-EASTERN SAN MIGUEL COUNTY-GUADALUPE COUNTY-
QUAY COUNTY-CURRY COUNTY-ROOSEVELT COUNTY-DE BACA COUNTY-
CHAVES COUNTY PLAINS-EASTERN LINCOLN COUNTY-SOUTHWEST CHAVES COUNTY-
314 AM MDT SUN JUN 5 2016

THIS HAZARDOUS WEATHER OUTLOOK IS FOR PORTIONS OF NORTH AND CENTRAL
NEW MEXICO.

.DAY ONE...TODAY AND TONIGHT

WIDESPREAD SHOWERS AND THUNDERSTORMS ARE EXPECTED THIS AFTERNOON
AND TONIGHT FROM THE NORTHERN MOUNTAINS SOUTHEASTWARD ACROSS MUCH
OF EASTERN NM. SOME STORMS MAY BE STRONG OR SEVERE WITH LARGE
HAIL AND DAMAGING WINDS...ESPECIALLY DURING THE AFTERNOON AND
EARLY EVENING. HOWEVER...GIVEN ABUNDANT ATMOSPHERIC MOISTURE FOR
EARLY JUNE...HEAVY RAINFALL AND FLASH FLOODING WILL BE A CONCERN
BOTH THIS AFTERNOON AND THROUGH THE OVERNIGHT HOURS.

.DAYS TWO THROUGH SEVEN...MONDAY THROUGH SATURDAY

SHOWERS AND THUNDESTORMS WILL REMAIN ON TAP THROUGH THE WORK
WEEK...FAVORING AREAS ALONG AND EAST OF THE CENTRAL MOUNTAIN CHAIN
MONDAY THROUGH WEDNESDAY. A FEW STRONG STORMS WILL BE POSSIBLE MONDAY
AFTERNOON AND EARLY EVENING ESPECIALLY NORTH OF I-40. HIGH TERRAIN
AREAS WILL BE FAVORED LATER IN THE WEEK.

.SPOTTER INFORMATION STATEMENT...

SPOTTERS ARE ENCOURAGED TO REPORT HAIL...STRONG WIND
GUSTS...RAINFALL AMOUNTS OR FLOODING THROUGH THE NATIONAL WEATHER
SERVICE ALBUQUERQUE WEB SITE AT WEATHER.GOV/ABQ OR BY CALLING
1.888.386.7637. YOU CAN ALSO SUBMIT STORM REPORTS AND PHOTOS ON
OUR FACEBOOK PAGE OR VIA TWITTER USING THE HASHTAG NMWX.
```

Location

Areas Covered by this report

The important areas noted in this report are the Middle Rio Grande Valley/Albuquerque Metro Area, and the Lower Rio Grande Valley – Sandia/Manzano Mountains.

Report

What is important here is that the report states that some storms may be strong or severe with damaging winds.

☐ What Materials do you need?

To submit a Dust Related Health Alert you will need the following materials and internet access:

1. Access to Constant Contact via the internet
2. Dust Related Health Alert template in Constant Contact
3. Contractor Notification Template in Constant Contact
4. Email lists for sending the Alert to the media and notifying contractors

Once it is determined that a Dust Related Health Alert should be issued you will need to complete the Dust Health Alert Template and email the alert to the appropriate people and agencies. The next page contains the Dust Related Health Alert template. To complete the template you will need to know the following information:

1. Date and time the Dust Related Health Alert was or will be issued
2. Time frame for the Dust Related Health Alert. If the NWS has issued an alert you can simply use their timeframe, if not then you may need to rely on local weather reports or the NWS local forecast to determine a time frame.
    a. Start date and time
    b. End date and time

This template is located in the Department's Constant Contact account.

DRAFT

FOR IMMEDIATE RELEASE

CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DEPARTMENT ISSUES HEALTH ALERT DUE TO BLOWING DUST

Issue Time: [Enter date here] at [Enter time here] AM/PM

The City of Albuquerque Environmental Health Department is issuing a health alert for those with respiratory issues. High winds may cause elevated levels of particulate matter in areas of Bernalillo County. This alert is in effect for the following time period:

starting at Day of week, month, day, year at time AM/PM
ending at Day of week, month, day, year at time AM/PM

Blowing dust contributes to particulate pollution. Individuals who are sensitive to blowing dust, such as those with asthma, chronic bronchitis or other respiratory or heart diseases, are encouraged to limit outdoor activity. Children and older adults may also be affected by particulate pollution. Schools and senior citizen facilities may want to provide indoor activities to minimize exposure to elevated outdoor particulate matter levels.

During blowing dust events the following actions are recommended:

- Limit your time spent outdoors.
- Avoid outdoor exercise.
- Keep windows and doors closed. If needed for comfort, use air conditioners or heating systems on recycle/recirculation mode if possible.
- If symptoms of heart or lung disease occur, including shortness of breath, chest tightness, chest pain, palpitations or unusual fatigue, contact your health care provider.

Media Contact

Name
Phone:
Email address:

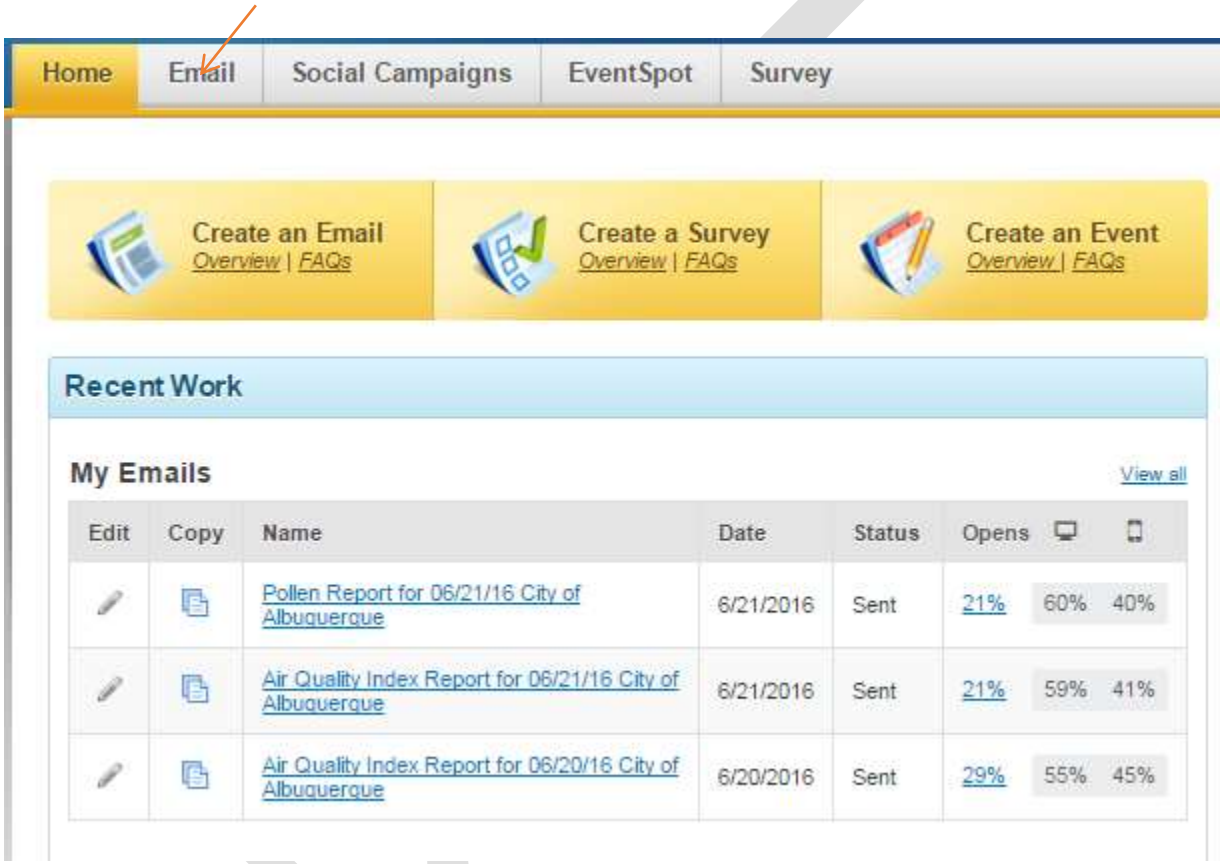
Sending the Dust Related Health Alert

To send the dust health alert you will need access to the internet and the Department's Constant Contact account at:

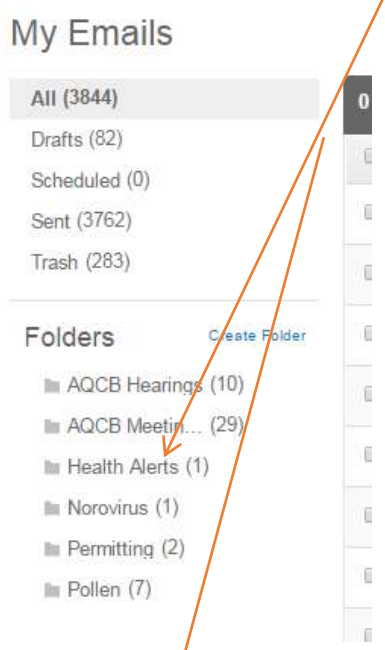
1. https://login.constantcontact.com/login/
2. LogIn ID:
3. Password:

Within Constant Contact you will see the following:

Select the "Email" tab.

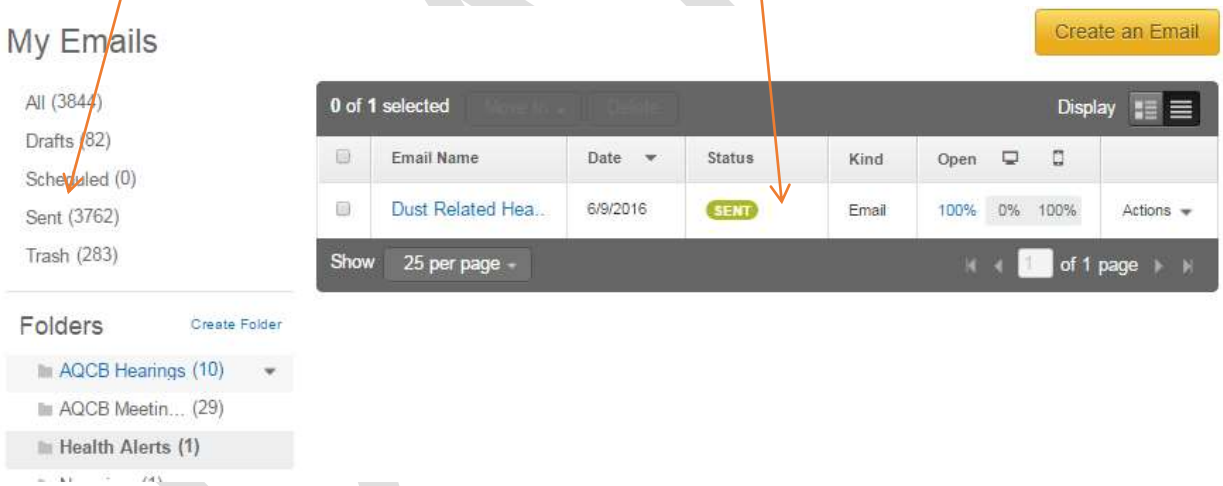


On the next screen select the “Health Alerts” tab/folder on the left hand side of the screen:



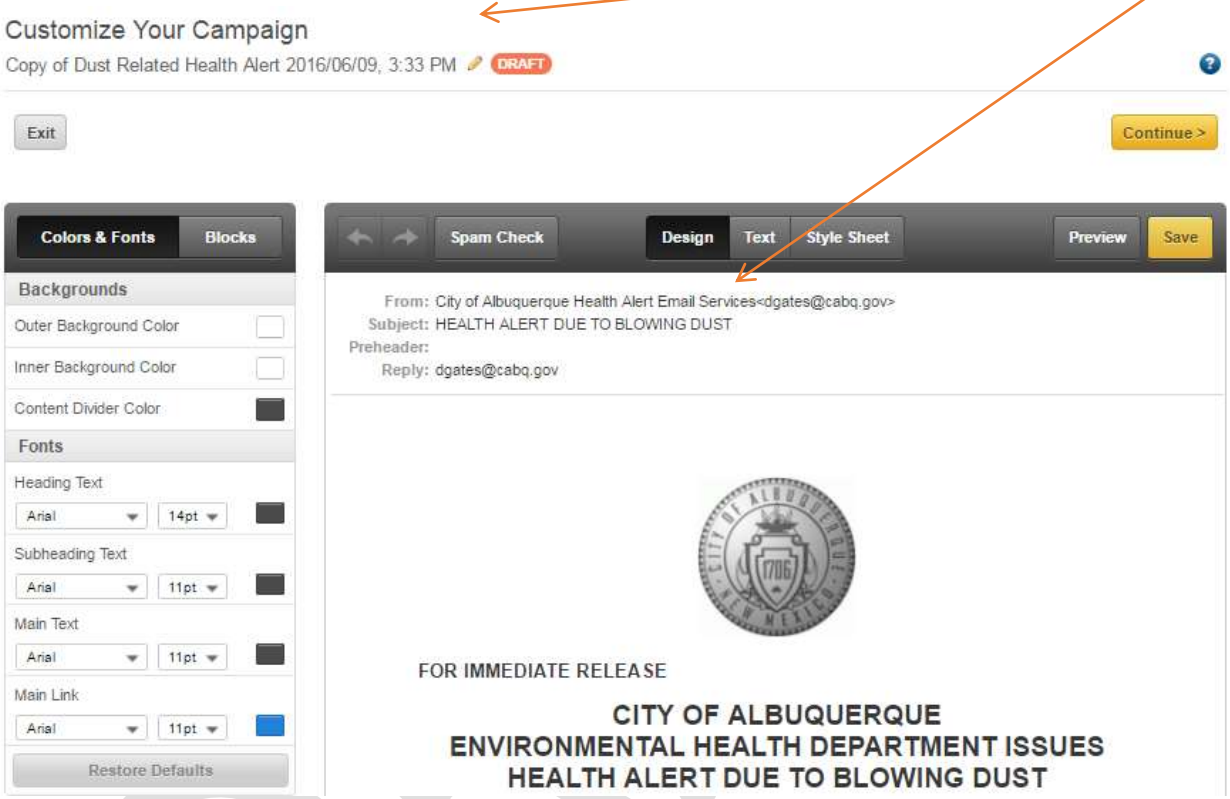
This is where the Health Alert templates will reside. In the folder you will see the Dust Related Health Alerts Template.

Select “Actions” then select “Copy”. This makes a copy of the template and the copy is what you should be working with.

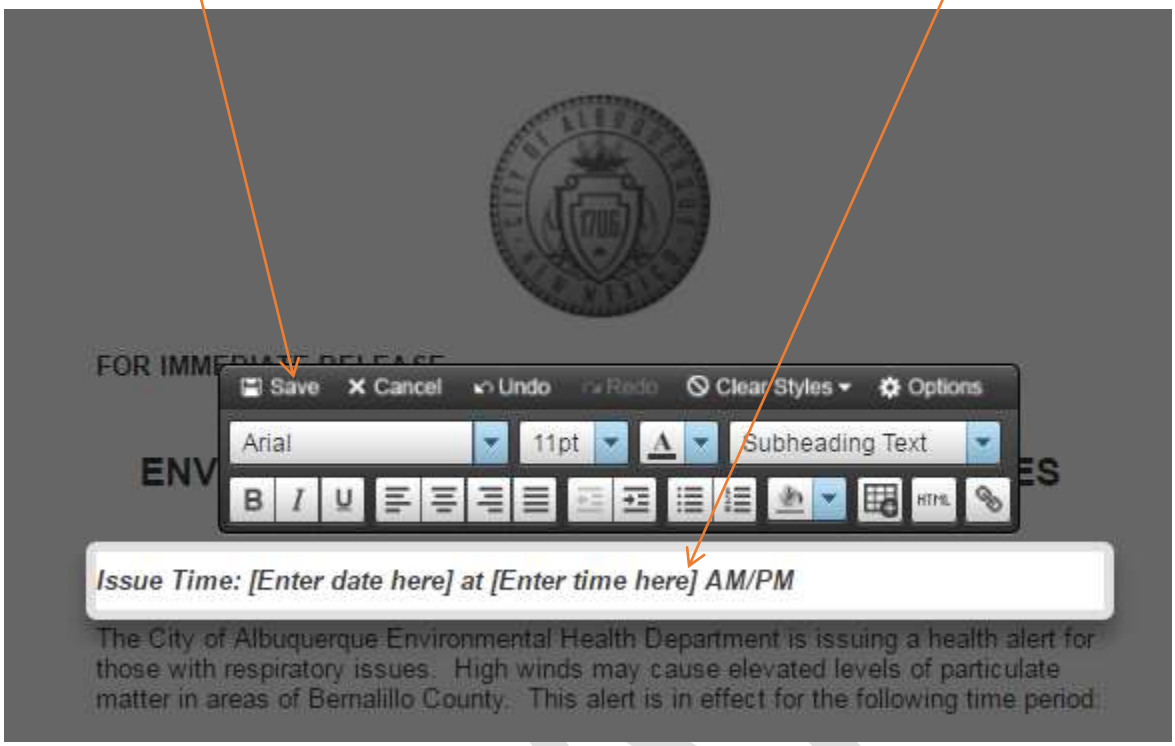


The next screen you will see is:

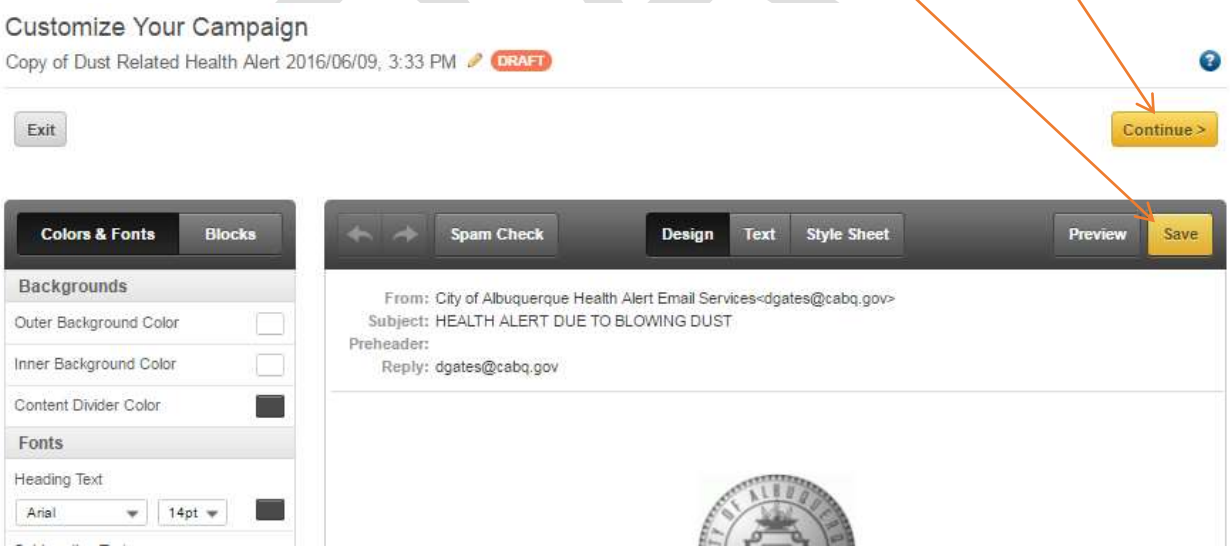
You will notice that the title of the template is “Copy of Dust Related Health Alert 2016/06/09, 3:33 PM”. The “Copy of” verifies that you are working from a template copy. You will need to change the title for the event you are calling. Change the Date and time of the event, for example, if the event is going to occur on March 23, 2017 at 05:00 PM then title the alert “Dust Related Health Alert for 3/23/2017 05:00 PM”, and type it here.



Constant Contact text is entered in blocks. To edit a block simply select the block to edit the text. When you are done select "Save" to save your information.

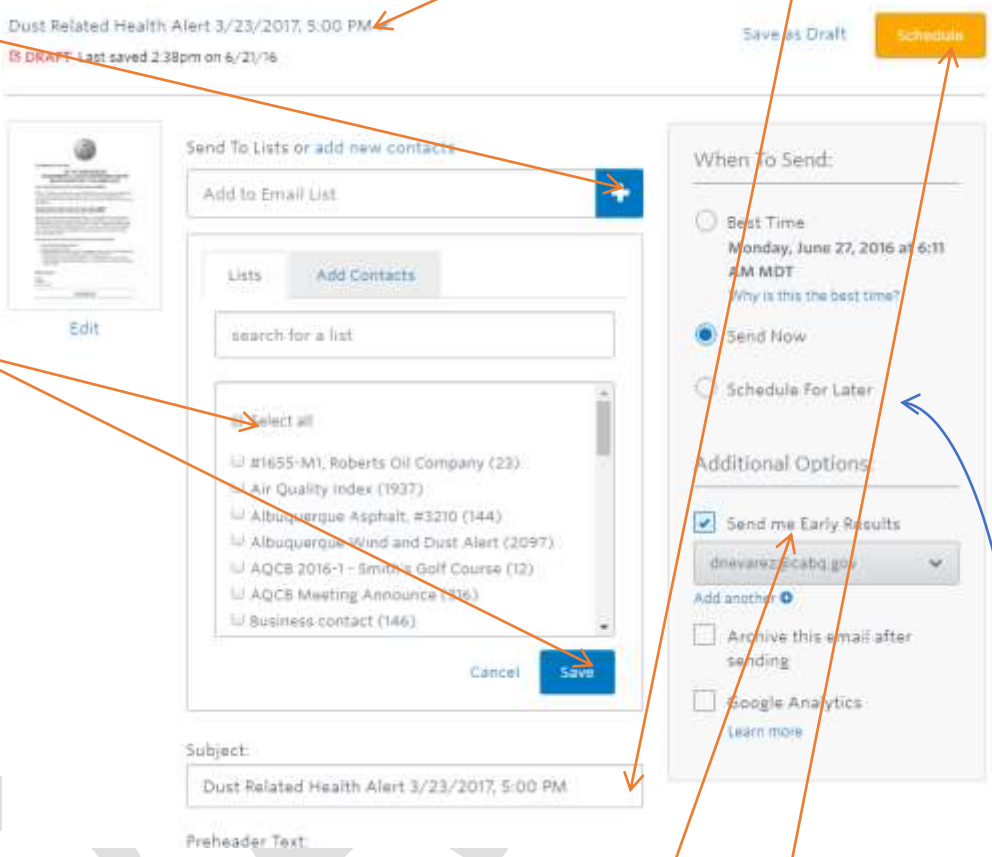


When you are done with your edits and saved your health alert select "Save" then "Continue".



After you click “Continue” you will see the following screen. Check your document title and subject then select the + to add an email list.

Once you click + you will see a new box appear, this is where you will select the health alerts email list. Once you select the email list select “Save” to add the list.



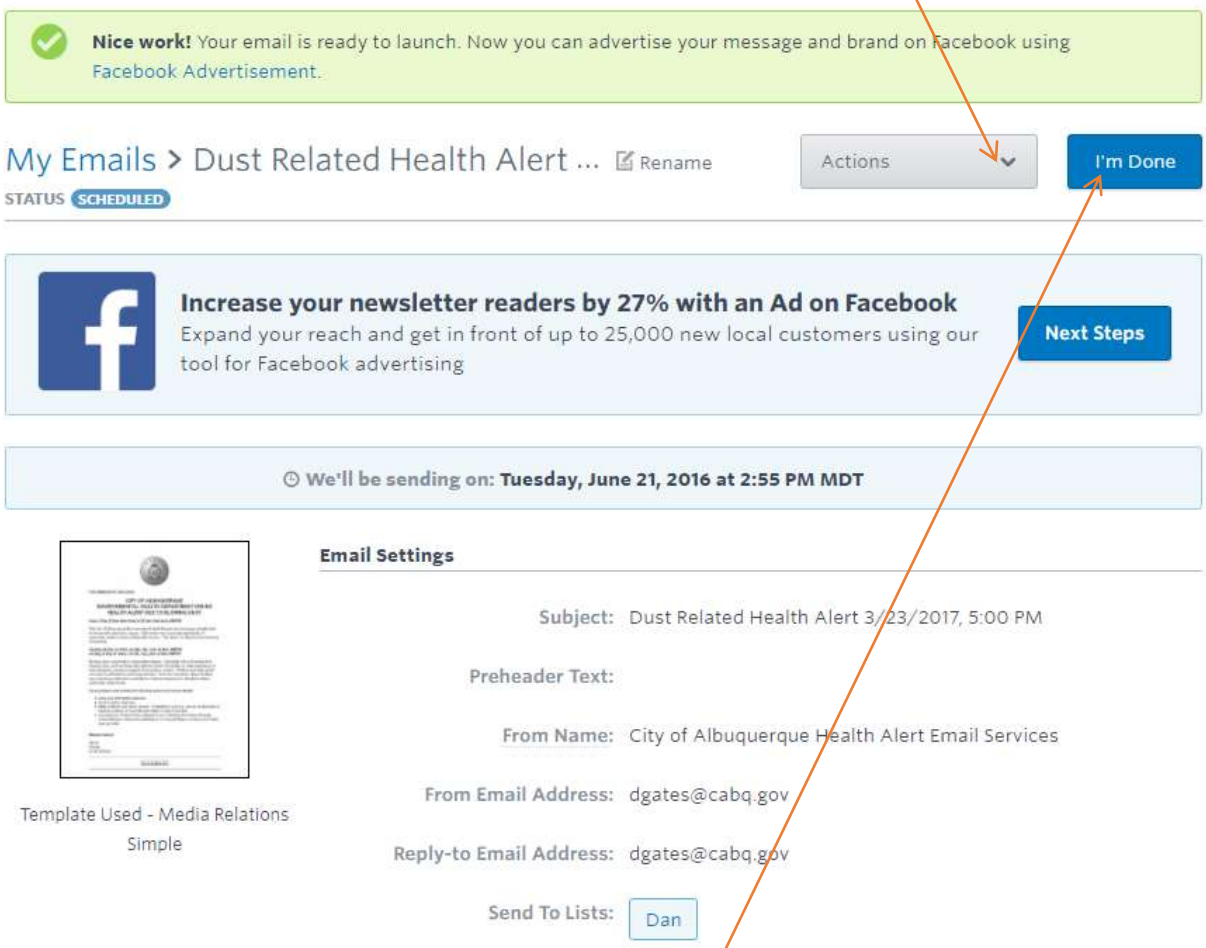
If you want to receive or send an early email to someone you can select that here.

Once all the information is correct select the “Schedule” button near the top-right of the page.

If you want to delay the sending of the alert you can select the radio button “Schedule for Later” and enter a date and time for the system to send the Alert.

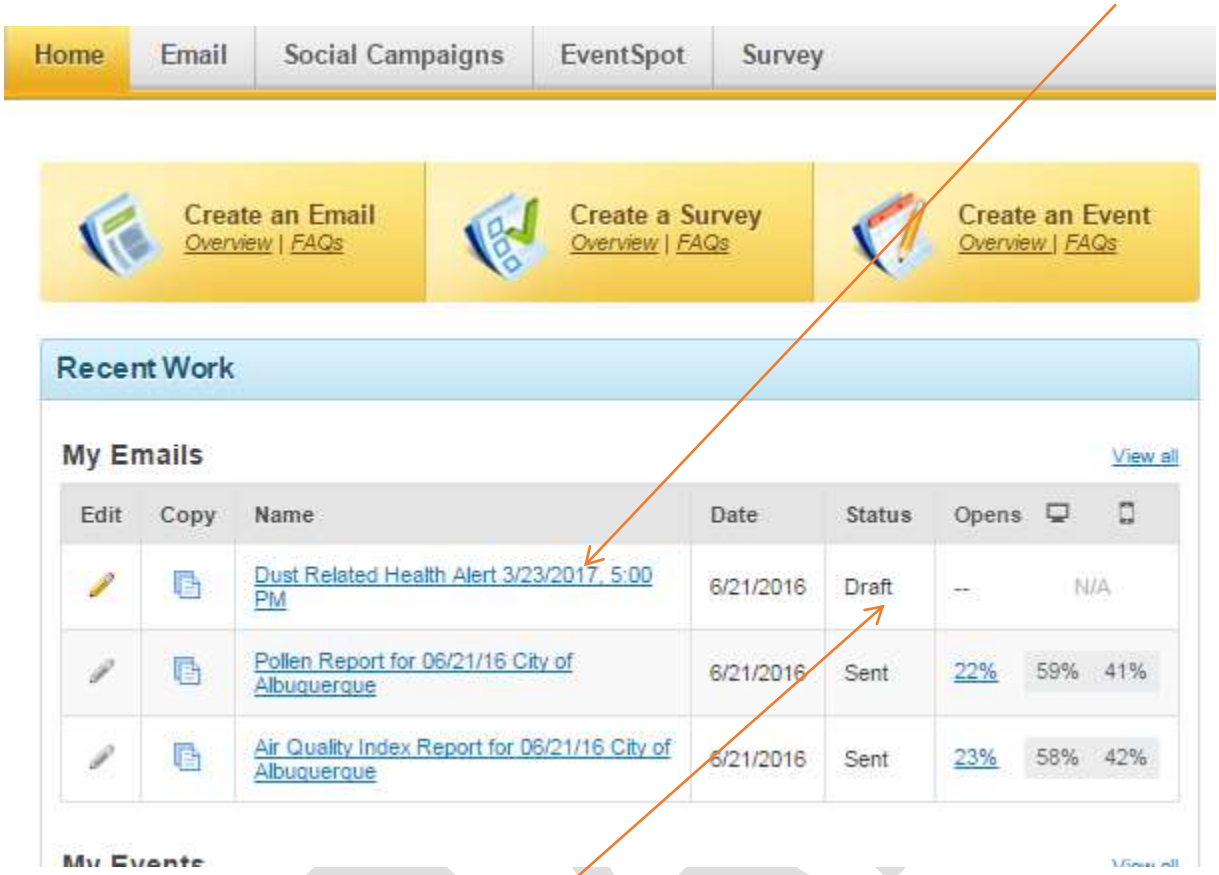
After you select “Schedule” you will see:

If you want to stop the scheduled Alert you can do so here by selecting “Actions” then “Unschedule”.



When you are done select “I’m Done” to schedule the alert.

When you are done you will see the Alert in the email list on the Constant Contact home page:



This will say "Scheduled" instead of "Draft". Once the Alert is sent it will say "Sent". Once the Alert is sent you will be able to see what percentage of the emails were opened.

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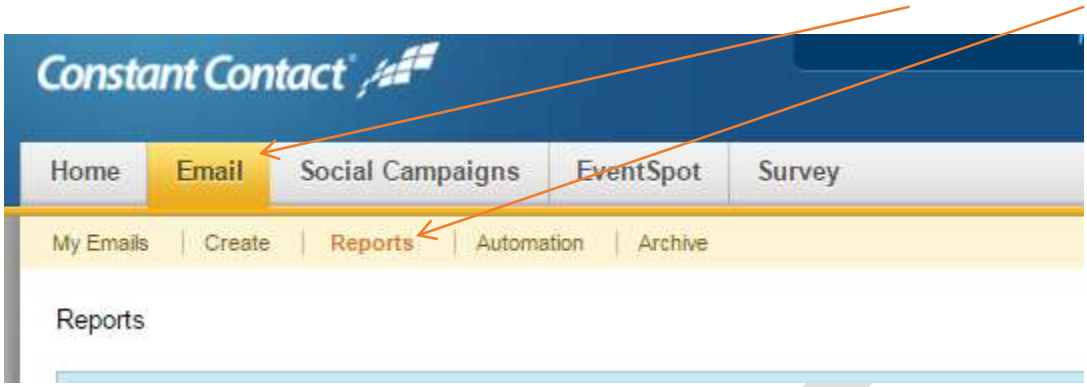
To see the specifics of who did or did not open the email you can select “Email” then “Reports”.



From there you will see a graph and all the emails that have been sent. To see specifics about your email find it in the list and select it.

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Appendix C – Part 20 Fugitive Dust Control

TITLE 20 ENVIRONMENTAL PROTECTION

CHAPTER 11 ALBUQUERQUE - BERNALILLO COUNTY AIR QUALITY CONTROL BOARD PART 20 FUGITIVE DUST CONTROL

20.11.20.1 **ISSUING AGENCY:** Albuquerque - Bernalillo County Air Quality Control Board. P.O. Box 1293, Albuquerque, New Mexico 87103. Telephone: (505) 768-2601. [20.11.20.1 NMAC - Rp, 20.11.20.1 NMAC, 3/17/08]

20.11.20.2 SCOPE:

A. 20.11.20 NMAC is applicable to all sources of fugitive dust in Bernalillo county, unless otherwise exempt.

B. **Exempt:** 20.11.20 NMAC does not apply to sources within Bernalillo county that are:

(1) located on Indian lands over which the Albuquerque - Bernalillo county air quality control board lacks jurisdiction;

(2) hard rock mining pits and operations contained within the mining pit and permitted pursuant to the state of New Mexico Mining Act; for the purposes of 20.11.20 NMAC, sand and gravel mining operations are not exempt;

(3) emergency maintenance operations that are intended to address an imminent threat to property or persons; however, reasonably available control measures must be employed once the emergency has been addressed, if appropriate, and a report of all activities shall be filed with the department no later than 10 days after the incident has been concluded and the department shall determine if additional action, including a permit application submittal, is required before additional non-emergency activities occur at the site; and

(4) stationary source operations subject to 20.11.41 NMAC, *Authority to Construct*, or 20.11.42 NMAC, *Operating Permits*, that produce fugitive dust as defined in 20.11.20 NMAC, but only if the source of fugitive dust is addressed and controlled through permit conditions required by a 20.11.41 NMAC or 20.11.42 NMAC permit; however construction at a stationary source site, whether it involves new construction or a site modification, is subject to 20.11.20 NMAC.

C. **Conditionally Exempt:** The following five sources of fugitive dust emissions in Bernalillo county shall be conditionally exempt from the requirements of 20.11.20 NMAC, unless the department determines that the fugitive dust emitted from a conditionally exempt source's active operations or inactive disturbed surface area may adversely and significantly affect human health within Bernalillo county:

(1) areas zoned for agriculture and used for growing a crop;

(2) bicycle trails, hiking paths and pedestrian paths, horse trails or similar paths used exclusively for purposes other than travel by motor vehicles;

(3) unpaved roadways on privately-owned easements serving residential dwellings;

(4) lots smaller than three-quarters of an acre used for any purpose; and

(5) unpaved roadways within properties used for ranching, or properties owned or controlled by the United States department of energy or department of defense, or United States department of agriculture forest service lands or United States department of interior park service lands if the public does not have motor vehicle access to the roadways.

[20.11.20.2 NMAC - Rp, 20.11.20.2 NMAC, 3/17/08]

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20.11.20.3 **STATUTORY AUTHORITY:** 20.11.20 NMAC is adopted pursuant to the authority provided in the New Mexico Air Quality Control Act, NMSA 1978 Sections 74-2-4, 74-2-5; the Joint Air Quality Control Board Ordinance; Bernalillo county Ordinance No. 94-5, Sections 4 and 5; and the Joint Air Quality Control Board Ordinance, Revised Ordinances of Albuquerque 1994 Sections 9-5-1-4 and 9-5-1-5.
[20.11.20.3 NMAC - Rp, 20.11.20.3 NMAC, 3/17/08]

20.11.20.4 **DURATION:** Permanent.
[20.11.20.4 NMAC - Rp, 20.11.20.4 NMAC, 3/17/08]

20.11.20.5 **EFFECTIVE DATE:** March 17, 2008, unless a later date is cited at the end of a section. [20.11.20.5 NMAC - Rp, 20.11.20.5 NMAC, 3/17/08]

20.11.20.6 **OBJECTIVE:** To ensure that every person shall use reasonably available control measures or other effective measures on an ongoing basis to prevent or abate fugitive dust, if the fugitive dust may with reasonable probability injure human health or animal or plant life or as may unreasonably interfere with the public welfare, visibility or the reasonable use of property, as required by 20.11.20 NMAC.
[20.11.20.6 NMAC - Rp, 20.11.20.6 NMAC, 3/17/08]

20.11.20.7 **DEFINITIONS:** In addition to the definitions in 20.11.20.7 NMAC, the definitions in 20.11.1 NMAC apply unless there is a conflict between definitions, in which case the definition in 20.11.20.7 NMAC shall govern.

A. **"Active operations"** means any anthropogenic activity that is capable of generating, or generates fugitive dust, including but not limited to: bulk material storage, handling or processing; earth moving; soil or surface disturbance (e.g. discing, trenching, blading, scraping, clearing, grubbing, topsoil removal); construction, renovation, or demolition activities; movement of motorized vehicles on any paved or unpaved roadway or surface, right-of-way, lot or parking area; or the tracking out or transport of bulk material onto any paved or unpaved roadway.

B. **"Anthropogenic"** means human-caused changes in the natural or built condition of the environment.

C. **"Bulk material"** means sand, gravel, soil, aggregate or any other inorganic or organic solid material capable of creating fugitive dust.

D. **"Business day"** means Monday through Friday, except city of Albuquerque holidays.

E. **"Construction activity"** means any activity preparatory to or related to building, altering, rehabilitating, demolishing or improving property that results in a disturbed surface area, including but not limited to grading, excavation, loading, crushing, pavement milling, cutting, clearing, grubbing, topsoil removal, blading, shaping, dry sweeping, blasting and ground breaking.

F. **"Crop"** means an agricultural plant harvested for consumption, utilization or sale.

G. **"Disturbed surface area" or "surface disturbance"** means the natural or manmade area of the earth's surface that, as a result of anthropogenic activity, may become a source of transported material, track-out, or visible fugitive dust.

H. **"Division"** means the city of Albuquerque air quality division or its successor agency.

I. **"Dust suppressant"** means hygroscopic materials, or non-toxic chemical

stabilizers used to reduce or control fugitive dust emissions during suspended operations and as a long term reasonably available control measure.

J. **"Earth moving activity"** means grading, cutting, filling, soil disturbance (e.g. discing, trenching, blading, scraping, clearing, topsoil removal, grubbing), soil mulching, loading or unloading of dirt or other bulk materials, including adding to or removing from open storage piles or stockpiles of bulk materials.

K. **"Fugitive dust" or "dust"** means organic or inorganic particulate matter. Water vapor, steam, or particulate matter emissions emanating from a duct or stack of process equipment are not fugitive dust.

L. **"Fugitive dust control construction permit" or "permit"** means a fugitive dust control permit approved by the department and issued pursuant to 20.11.20 NMAC that contains an approved fugitive dust control plan and authorizes active operations to begin when the permit is signed by a division manager, supervisor, scientist, field operations officer or health specialist.

M. **"Fugitive dust control plan" or "plan"** means the part or portion of the fugitive dust control construction permit or programmatic permit application that details the reasonably available control measures and other effective measures the permit applicant commits to use to reduce the quantity of visible fugitive dust, transported material, or track-out leaving the property or area under the control of the permittee and shall include contingency fugitive dust control measures, which shall be a requirement of every fugitive dust control permit.

N. **"Greenwaste"** means organic matter including, grass clippings, leaves, weeds, small shrub or tree limb cuttings, brush, stumps, and soils.

O. **"High wind event"** means a condition announced by the department consisting of wind speeds of approximately 30 miles per hour or greater that, when accompanied by dry soil conditions, that is likely to result in widespread reduced visibility due to blowing fugitive dust and that may result in elevated monitored particulate levels that may cause or contribute to an exceedance or violation of the national ambient air quality standards.

P. **"Inactive disturbed surface area"** means any disturbed surface area on which active operations have been suspended.

Q. **"Large area disturbance"** means a project or development, totaling more than 25 acres upon which active operations have been conducted and includes areas used for storage of bulk material, building or construction materials, machinery or vehicles.

R. **"Open storage pile"** means the accumulation of bulk material that is not fully enclosed, covered or chemically stabilized.

S. **"Owner or operator"** means a person who owns, leases, operates, controls, or supervises a source that directly or indirectly produces or is capable of producing fugitive dust.

T. **"Parking lot" or "parking area"** means a location where motor vehicles routinely park whether or not the area is zoned for parking.

U. **"Paved" or "paving" or "paved roadway"** means asphalt, recycled asphalt, concrete or asphaltic concrete, routinely-maintained asphalt millings, or combinations thereof, that cover a surface traveled or used by motor vehicles.

V. **"Permittee"** means a person and all legal heirs, successors, and assigns who has applied for and obtained a fugitive dust control construction or programmatic permit issued by the department pursuant to 20.11.20 NMAC.

W. **"Person"** means an individual, firm, partnership, corporation, association, organization, company, joint stock association, business trust, owner, or body politic, including a municipality, local, state or federal government agency or political subdivision, and includes an

employee, officer, operator, contractor, supplier, installer, user, leaseholder, trustee, receiver, assignee or other person acting in a similar representative capacity with the authority to control transported material or emissions of particulate matter generated at a disturbed surface area or generated by activities associated with a disturbed surface area or inactive disturbed surface area.

X. **"Privately-owned"** means real property that is not wholly or partially owned, leased or otherwise controlled by a federal, state or local government or governmental agency or political subdivision.

Y. **"Programmatic permit"** means a fugitive dust control permit valid for up to five years issued to a permittee that performs routine maintenance or routine ongoing active operations on real property, but does not include full depth reconstruction of a roadway or substantial removal and replacement of a manmade facility. A programmatic permit shall include an approved fugitive dust control plan and shall be effective when signed by a division manager, supervisor, scientist, field operations officer or health specialist.

Z. **"Property line"** means the exterior boundary of real property, as indicated by plats, plot maps or other indication of ownership limits.

AA. **"Publicly-maintained"** means under the jurisdiction of, or maintained by a federal, state, or local government or governmental agency or political subdivision.

BB. **"Publicly-owned"** means real property that is wholly or partially owned, leased or otherwise controlled by a federal, state or local government or governmental agency or political subdivision. Publicly-owned real property includes easements and rights-of-ways, streets, roadways, sidewalks, alleys and other public ways, parks, irrigation and drainage facilities, and any other publicly controlled real property that can be the source of fugitive dust.

CC. **"Reasonably available control measure" or "control measure"** means a device, system, process modification, apparatus, technique, work practice, or combination thereof, that mitigates fugitive dust and includes the measures in 20.11.20.23 NMAC and any other regulatory control program that results in equivalent protection of a disturbed surface or inactive disturbed surface area, whether or not the purpose of the control measure is to mitigate dust or to meet another requirement of 20.11.20 NMAC or any other statute or regulation.

DD. **"Responsible person"** means the person designated in a fugitive dust control permit application or permit amendment who agrees to be and shall be responsible for complying with 20.11.20 NMAC, and with the permit and plan to the extent specified in the permit.

EE. **"Short cut"** means a non-dedicated roadway or route used by motor vehicle drivers to save time by avoiding use of a dedicated and authorized roadway.

FF. **"Silt"** means bulk material that passes through a 200-mesh screen using the ASTM-D 2487-93, "*classification of soils for engineering purposes (united soil classification system*)" method, or most current ASTM (American society for testing and materials) method. Material that will pass through a 200-mesh screen is 74 microns or less in size.

GG. **"Source" or "source of fugitive emissions"** means the origin of fugitive dust emissions.

HH. **"Stabilized" or "stabilization"** means ongoing practices that are sufficient to prevent elevated monitored particulate levels that may cause or contribute to an exceedance or violation of the national ambient air quality standards by meeting the objective established in 20.11.20.6 NMAC and the requirements of the general provisions established in 20.11.20.12 NMAC.

II. **"Stockpile"** means the depositing of bulk material by mechanical means for the purpose of creating a pile formation on top of an existing natural or man-made surface.

JJ. **"Stop work order"** means an order issued by the department pursuant to the provisions of

20.11.20 NMAC that requires a person to cease active operations.

KK. **"Track-out" or "tracking"** means bulk material deposited by a motor vehicle or vehicles upon an unpaved or paved publicly or privately owned roadway if the bulk material can become airborne due to mechanical or wind action.

LL. **"Transfer of permit"** means an agreement approved in writing by the department that meets the conditions outlined in Paragraphs (1) through (6) of Subsection D of 20.11.20.14 NMAC.

MM. **"Transported material"** means particulate matter transported by wind, water or other action that, once deposited, can become airborne due to mechanical or wind action.

NN. **"Unpaved roadway"** means an unpaved route traveled by a motorized vehicle.

OO. **"Visible fugitive dust"** means airborne particulate matter from a source, resulting in particulate matter emissions that can be detected by the human eye or a detection method approved by the department. Visible fugitive dust can be an indicator of PM_{10}.

PP. **"Visible fugitive dust detection method"** means the method described in 20.11.20.26 NMAC,

which is one method used to determine compliance with 20.11.20 NMAC. [20.11.20.7 NMAC - Rp, 20.11.20.7 NMAC, 3/17/08]

20.11.20.8 **VARIANCES:** A person may request a variance from 20.11.20 NMAC in accordance with the procedures established in 20.11.7 NMAC.
[20.11.20.8 NMAC - Rp, 20.11.20.8 NMAC, 3/17/08]

20.11.20.9 **SAVINGS CLAUSE:** An amendment to *Fugitive Dust Control*, 20.11.20 NMAC, which is filed with the state records center and archives shall not affect actions pending for violation of a city or county ordinance, or prior versions of 20 NMAC 11.20 and 20.11.20 NMAC, *Airborne Particulate Matter*, 20.11.20 NMAC *Fugitive Dust Control*, or a permit. Prosecution for a violation of a prior statute, ordinance, part or permit shall be governed and prosecuted under the statute, ordinance, part or permit wording in effect at the time the violation was committed. [20.11.20.9 NMAC - Rp, 20.11.20.9 NMAC, 3/17/08]

20.11.20.10 **SEVERABILITY:** If any section, subsection, sentence, phrase, clause or wording of 20.11.20 NMAC or the federal standards incorporated herein is for any reason held to be unconstitutional or otherwise invalid by any court or the United States environmental protection agency, the decision shall not affect the validity of remaining portions of 20.11.20 NMAC.
[20.11.20.10 NMAC - Rp, 20.11.20.10 NMAC, 3/17/08]

20.11.20.11 **DOCUMENTS:** Documents incorporated and cited in 20.11.20 NMAC may be viewed at the Albuquerque environmental health department, 400 Marquette NW, Albuquerque, NM.
[20.10.20.11 NMAC - Rp, 20.11.20.11 NMAC, 3/17/08]

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20.11.20.12 GENERAL PROVISIONS:

A. Each person shall use reasonably available control measures or any other effective control measure during active operations or on inactive disturbed surface areas, as necessary to prevent the release of fugitive dust, whether or not the person is required by 20.11.20 NMAC to obtain a fugitive dust control permit. It shall be a violation of 20.11.20 NMAC to allow fugitive dust, track out, or transported material from any active operation, open storage pile, stockpile, paved or unpaved roadway disturbed surface area, or inactive disturbed surface area to cross or be carried beyond the property line, right-of-way, easement or any other area under control of the person generating or allowing the fugitive dust if the fugitive dust may:

(1) with reasonable probability injure human health or animal or plant life;

(2) unreasonably interfere with the public welfare, visibility or the reasonable use of property; or

(3) be visible for a total of 15 minutes or more during any consecutive one hour observation period using the visible fugitive dust detection method in 20.11.20.26 NMAC or an equivalent method approved in writing by the department.

B. Failure to comply with 20.11.20.12 NMAC, a fugitive dust control permit, plan, term or condition shall be a violation of 20.11.20 NMAC.

C. Prior to issuing a fugitive dust control construction permit authorizing commencement of active operations, the department shall:

(1) document, in the form of photographs in electronic or hard copy formats or video recordings, the conditions of the properties that are closest to the property subject to the permit and any other properties the department believes are appropriate;

(2) maintain the documentation for one year after completion of the permitted project;

(3) include in the permit a requirement that the permittee remedy damage to real properties caused by a violation of the permit; and

(4) make the documentation available as evidence, upon request, to all parties involved in a property damage dispute allegedly caused by fugitive dust.

D. A permittee whose violation of 20.11.20 NMAC results in fugitive dust being deposited upon real property beyond the limits of the permitted area shall take all actions necessary to remedy damage caused by a violation proven with credible evidence. Such remedies may include, but not be limited to, compensation, removal of the fugitive dust and/or repair of any damage after obtaining permission from property owners or operators before doing any remedial work on the damaged property. It shall be a separate violation of 20.11.20 NMAC to fail to remove the fugitive dust and repair the damage as specified in a written schedule or any extension agreed to by the permittee and the owner of the damaged property. If the parties cannot agree to a schedule, the department may establish deadlines and failure to comply with the deadlines shall be a separate violation of 20.11.20 NMAC. No violation will occur if the failure to perform the corrective action is for reasons beyond the control of the person performing the work including without limitation acts of God or government preemption in connection with a national emergency or if the owner of the allegedly damaged property refuses to grant reasonable permission and access to conduct the remediation activities.

E. Stockpiles shall be no higher than 15 feet above the existing natural or man-made grade that abuts the stockpile, unless otherwise approved in advance and in writing by the department.

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F. Each person shall comply with all applicable provisions of the Clean Air Act, the New Mexico Air Quality Control Act, joint air quality control board ordinances, regulations of the board, and permits issued by the department.
[20.11.20.12 NMAC - Rp, 20.11.20.12 NMAC, 3/17/08]

20.11.20.13 FUGITIVE DUST CONTROL PROGRAMMATIC PERMITS:

A. A fugitive dust control programmatic permit is required for single or multiple facility locations to address real property totaling three-quarters of an acre or more that is subject to routine maintenance, routine surface disturbance activities, or routine ongoing active operations. A programmatic permit application and fugitive dust control plan shall be submitted on forms provided by the department. Programmatic permits are valid for up to five years. The permittee shall pay the annual programmatic permit fee required by 20.11.2 NMAC, *Fees*, for each year covered by the programmatic permit. Receipt of the annual fee by the department shall result in an automatic annual renewal of the programmatic permit. A new programmatic permit application and fugitive dust control plan shall be submitted every five years or sooner if the surface disturbance activities or fugitive dust abatement strategies are modified. A filing and review fee is not required for a programmatic permit.

B. A person responsible for sloped (i.e. slopes having a steepness of three-to-one or steeper) and bottom portions of interior and riverside drains and canals used for irrigation purposes, and arroyos and public flood control facilities subject to routine maintenance or repair, sedimentation and water erosion shall obtain either a variance as provided by 20.11.7 NMAC or a programmatic permit as provided by Subsection A of 20.11.20.13 NMAC if the person does not elect to submit an application and obtain a fugitive dust control construction permit pursuant to 20.11.20.14 NMAC.

C. No signs or photographic documentation shall be required for the permits or activities subject to 20.11.20.13 NMAC. Appropriate permit application documentation shall be determined by the department. [20.11.20.13 NMAC - Rp, 20.11.20.13 NMAC, 3/17/08]

20.11.20.14 FUGITIVE DUST CONTROL CONSTRUCTION PERMITS:

A. A person who does not elect to obtain or who does not qualify for a fugitive dust control programmatic permit pursuant to 20.11.20.13 NMAC and who plans to conduct active operations that will disturb three-quarters of an acre or more shall comply with either Subsection A or B of 20.11.20.18 NMAC and obtain a fugitive dust control construction permit. No active operations shall commence until a department manager, supervisor, scientist, field operations officer or health specialist signs the fugitive dust control construction permit (permit) and a copy of the signed permit is available at the site of active operations. A permit shall consist of a complete permit application a fugitive dust control plan, any appended documents, any conditions attached to the

permit by the department, and a signature and effective date affixed by a department manager, supervisor, scientist, field operations officer or health specialist.

B. The permittee shall comply with the terms of the permit unless the department approves a transfer of the permit or issues a new permit for the active or inactive disturbed surface area of operation to a new permittee. If three-quarters of an acre or more of the real property that is subject to the permit is transferred or sold the new owner is responsible for complying with either 20.11.20.13 NMAC or 20.11.20.14 NMAC unless exempt. Upon receipt of an amended permit signed by a department manager, supervisor, scientist, field

operations officer or health specialist, the permittee who transferred or sold the real property no longer will be responsible for control of fugitive dust originating from the real property that has been transferred or sold. Permit amendment fees shall be paid as required by 20.11.20.14 NMAC.

C. If a person other than the permittee will be responsible for complying with the permit and

20.11.20 NMAC, then the permittee shall designate the responsible person or persons in the permit application who shall be responsible for active operations and inactive disturbed surface areas to the extent specified in the application. Before a responsible person shall be liable for a violation of the permit or 20.11.20 NMAC, the responsible person shall agree in writing to accept responsibility for compliance with the permit conditions. The responsible person shall be the first person the department attempts to contact regarding a violation of the permit or 20.11.20 NMAC. In addition, the department may approve, in writing, a permit amendment that adds or changes the responsible person who has agreed in writing to be responsible for complying with the permit and plan, to the extent specified in the permit. If the responsible person and permittee fail to comply with the provisions of 20.11.20 NMAC, the owner or operator, if different from the responsible person or permittee, shall be responsible for compliance with the permit.

D. An approved permit shall be valid for one year from the date of issuance by the department or until the project expiration date provided in the permit application, whichever is longer, but no more than five years from the date of issuance. If the project plan, expiration date, total disturbed surface area, completion date or the proposed control measures change in any manner, an amended or new permit is required. At least 10 business days before the expiration date, a fugitive dust control permit shall be renewed by the then-current permittee, or the permit shall expire as of the expiration date. Permit amendment or renewal fees shall be paid as required by Subsection H of 20.11.20.14 NMAC. Permits may be transferred to legal heirs, successors, and assigns, who shall become the new permittee. Permit transfers may qualify as an administrative amendment if:

(1) the department has received, on a form provided by the department, a written transfer agreement signed by the current and new permittee, and, if different than the new permittee, by the owner of the real property subject to the permit;

(2) a specific date of the transfer of the permit and plan responsibility, coverage, and liability is established in the transfer agreement;

(3) the department has determined that no change to the permit and plan other than the administrative change is necessary;

(4) the new permittee and owner have submitted the application information required by 20.11.20.15 NMAC if changes have been made to the permit and plan as deemed necessary by the department;

(5) no grounds exist for permit termination, as otherwise provided by 20.11.20 NMAC; and

(6) the transfer agreement has been approved in writing by the department.

E. After a permit is issued and before the start of active operations, the permittee shall install and maintain a project sign provided by the department or a project sign that meets the requirement of 20.11.20.14 NMAC. The department will establish uniform design guidelines for the sign to ensure that the sign is reasonably legible to the public. If the required information is provided in an existing project sign that has been established for another purpose, an additional sign shall not be required to comply with 20.11.20 NMAC. At

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a minimum, the sign shall contain the following:

(1) project name;
(2) permittee name;
(3) phone number of designated responsible person or owner;
(4) subcontractor name (optional);
(5) subcontractor phone number (optional);
(6) air quality division phone number;
(7) fugitive dust control permit number; and
(8) total acres of area to be disturbed.

F. The permittee or responsible person shall make the permit available to all employees, agents, sub- contractors, and other persons performing work in the area of active operations or inactive disturbed surface areas to assist in maintaining compliance with 20.11.20 NMAC. The permittee or responsible person shall explain the requirements of the permit to appropriate employees, contractors and agents working at the site. Upon request, the permittee shall provide information regarding how to obtain a copy of the permit from the department.

G. It is the responsibility of the permittee or responsible person to ensure that the permit or amended permit contains current contact information and that a copy is maintained at the work site and is provided to the department upon request. Failure to maintain and provide up-to-date contact information shall be a violation of 20.11.20 NMAC.

H. The department may amend or renew the permit if requested to do so by the permittee. No fee shall be charged for amending or renewing a permit, unless there will be an increase in the number of acres subject to surface disturbance. Both the department and the permittee must sign an amended permit before it will be effective. The department is not required to sign a renewed permit unless the renewed permit increases the number of acres subject to surface disturbance. An amended or renewed permit that involves an increase in the number of acres subject to surface disturbance shall require payment of fees as required by 20.11.2 NMAC.

[20.11.20.14 NMAC - Rp, 20.11.20.14 NMAC, 3/17/08]

20.11.20.15 FUGITIVE DUST CONTROL CONSTRUCTION PERMITS; MINIMUM PERMIT

APPLICATION REQUIREMENTS: Proposed fugitive dust control construction permit applications shall be submitted on forms provided by the department. Fugitive dust control plans may be submitted in any format including a copy of a program that complies with any other statute or regulation so long as the plan provides reasonably available control measures whose purpose is to mitigate fugitive dust and the plan meets the objectives of 20.11.20 NMAC. If extraneous information is supplied that does not apply to mitigation of fugitive dust, then the dust control measures shall be clearly identified in the plan or the permit application shall be deemed incomplete and shall be rejected. An incomplete permit application shall be processed as described in Subsection C of 20.11.20.18 NMAC. Proposed fugitive dust control permit applications shall include the following:

A. name, address, telephone number and fax number of permittee;

B. owner's name, address, telephone number and fax number if different from permittee;

C. if different than the permittee, the name, address, telephone number and fax number of the responsible person who is agreeing to, and shall be responsible for activities

on the permitted site; the department shall first attempt to contact the responsible person regarding a violation of the permit;

D. anticipated project start date which shall be no fewer than 10 business days from the department's receipt of the permit application for areas containing greater than three quarters of an acre but no greater than 25 acres, and no fewer than 20 business days from the department's receipt of the permit application for areas containing more than 25 acres;

E. anticipated project completion date;

F. project description;

G. project location including, if available, street address, major cross streets or nearby intersection;

H. total area of disturbance in acres or square feet;

I. a check or money order for the fees due, calculated using the tables provided on the permit application form, payable to the 'city of Albuquerque permits program' (fund 242);

J. a description of the sequencing of the active operations, if phasing is used to reduce the total disturbed area at any time;

K. estimated total volume of bulk material being handled in cubic yards, including any bulk material being imported, exported or relocated;

L. location from which bulk material is being imported to the site and a statement regarding whether the site where the imported material originates will have a separate fugitive dust control permit, or provide written information to the department as soon as known;

M. location to which bulk material from the site is being exported and a statement regarding whether the site to which the material is to be exported will have a separate fugitive dust control permit, or provide written information to the department as soon as known;

N. whether an approved drainage plan exists pursuant to city of Albuquerque or Bernalillo county ordinances and, upon request by the department, provide a copy of the drainage plan;

O. site map (e.g. zone atlas page, aerial photograph);

P. type of work being performed and appropriate reasonably available control measures, as described in 20.11.20.23 NMAC, or other effective control measures proposed to be used in the fugitive dust control plan;

Q. a statement that effective contingency fugitive dust control measures shall be taken by the permittee if the control measures required by Subsection P of 20.11.20.15 NMAC are not effective in maintaining compliance with 20.11.20 NMAC;

R. a commitment to comply with provisions of Subsection B of 20.11.20.16 NMAC if the permittee chooses to preserve the ability to qualify for a high wind affirmative defense;

S. high wind contingency measures that will be implemented when high winds occur;

T. a description of the actions the permittee will take to mitigate damage caused by fugitive dust if generated by active operations or an inactive disturbed surface area on the permitted site;

U. other proposed conditions;

V. signature of the permittee, and, if a different person, signature of the owner, operator and/or any responsible person certifying that the information in the fugitive dust control permit application is true, accurate and complete, and certifying that all actions

necessary to comply with 20.11.20 NMAC will be taken, including suspending active operations if necessary to comply with the provisions of 20.11.20 NMAC; and

W. a statement regarding whether bulk material will be stockpiled at the project site, the dimension of each stockpile, and the reasonably available control measures or other effective control measures that will be used at the stockpile area to comply with 20.11.20 NMAC.
[20.11.20.15 NMAC - Rp, 20.11.20.15 NMAC, 3/17/08]

20.11.20.16 HIGH WIND EVENT REQUIREMENTS; HIGH WIND EVENT AFFIRMATIVE DEFENSE:

A. **General requirements:** during a high wind event, all persons responsible for fugitive dust control activities on publicly or privately-owned real property where active operations are occurring or inactive disturbed surface areas exist shall use reasonably available control measures or other effective measures to prevent fugitive dust from leaving the property. All such persons shall implement the control measure required by Paragraph (5) of Subsection C, of 20.11.20.16 NMAC.

B. **High wind affirmative defense:** if the department initiates an administrative enforcement action against either a permittee or a responsible person, or both (respondent) alleging a violation of a permit or 20.11.20 NMAC during a high wind event, the respondent may assert an affirmative defense in the enforcement action if the respondent establishes by credible evidence that respondent complied with the requirements established in Subsection C of 20.11.20.16 NMAC. In order to successfully assert the affirmative defense, during the entire duration of a permit the respondent shall utilize the applicable controls described in Subsection C of 20.11.20.16 NMAC, regardless of whether or not a high wind event exists, with the exception of Paragraph (5) of Subsection C of 20.11.20.16 NMAC, which shall be required during a high wind event. The affirmative defense shall not be available if respondent has failed to diligently perform the control measures specified in Paragraphs (1) through (5) of Subsection C of 20.11.20.16 NMAC. The availability of the affirmative defense shall not change the respondent's potential liability for any damage caused by fugitive dust leaving the permitted property, and the affirmative defense shall not change the permittee's obligation to remove fugitive dust originating from the permitted source, or otherwise remedy the damage, as required by Subsection D of 20.11.20.12 NMAC. The board, its members, and employees and officials of the city of Albuquerque and the county of Bernalillo shall not incur individual liability for damage to persons or property caused by fugitive dust leaving the permitted property.

C. **Mandatory control measures:** to assert a high wind event affirmative defense as described in Subsection B of 20.11.20.16 NMAC, a permittee shall utilize the applicable control measures in Paragraphs (1) and
(2) of Subsection C of 20.11.20.16 NMAC on an ongoing basis. Without prior notice to the department, the permittee may use the measure in Paragraph (3) of Subsection C of 20.11.20.16 NMAC in place of the measure in Paragraph (1) of Subsection C of 20.11.20.16 NMAC. After receiving written permission from the department, the permittee may substitute the measures in Paragraph (4) for the measures in Paragraphs (1) and (2), or (2) and (3) of Subsection C of 20.11.20.16 NMAC. All permittees, whether or not they intend to assert a high wind affirmative defense, shall implement the measure in Paragraph (5) of Subsection C of 20.11.20.16 NMAC during a high wind event.

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(1) Use of wet suppression sufficient to attain and maintain eighty percent of the optimal moisture content of the soil as determined by a proctor analysis performed by a certified public or private materials testing laboratory. For proctor analyses, either the standard proctor (ASTM D-698) or the modified proctor (ASTM D- 1557) may be used. Daily, representative testing of the soil moisture content shall be taken on exposed new surfaces after the top one-half to one inch of the soil is removed at the sampling area. Three times each day, at intervals that are equally spaced throughout the work day, the respondent shall test and record the soil moisture content at three separate representative locations on the permitted property, which will result in a minimum of nine tests each day.

To demonstrate compliance, any set of three tests shall average 80 percent of the optimal moisture content of the soil and no individual test shall be less than 70 percent of the optimal moisture content of the soil. Failure to meet the soil moisture content standards as required by Subsection C of 20.11.20.16 NMAC for any set of three tests shall require that the respondent immediately apply necessary control measures at the portion or portions of the representative area where the soil moisture content tested as insufficient, and re-test the same representative locations, as necessary, until the soil moisture content complies with the standards as required by Subsection C of 20.11.20.16 NMAC. The respondent or the department shall use a reasonably accurate commercially-available instrument to determine soil moisture content. Where possible, methods for determining soil moisture content shall be consistent with ASTM standards (e.g. ASTM D-1556-90 - sand cone test, ASTM D2922-91 - nuclear density).
All tests for soil moisture content shall be documented and retained for the duration of the permit, and shall be made available to the department upon request.

(2) Use of properly-maintained fabric fencing material around the perimeter of the disturbed surface area with openings no wider than necessary to allow vehicles to enter or exit the area. The fencing material shall be anchored approximately six inches below the surface on the bottom edge, and when installed shall be approximately 24 or more inches above the existing natural or man-made surface. The fence shall be installed in a durable manner. For example, one durable installation method involves use of steel T-posts spaced approximately eight to 10 feet apart with steel mesh wire used as a reinforcement backing to the fabric. Use of fabric fencing standards associated with the national pollutant discharge system may be approved by the department if they are consistent with the requirements of Paragraph (2) of Subsection C of 20.11.20.16 NMAC. The department may also approve alternative fencing material if it provides equal or better control of fugitive dust. Alternatives may include solid walls or sturdy fences that effectively control fugitive dust. To maintain effectiveness of the fence, fugitive dust that accumulates on either side of the fencing shall be removed promptly.

(3) Use of chemical dust suppressants applied in amounts, frequency and rates recommended by the manufacturer, and maintained as recommended by the manufacturer sufficient to substantially reduce fugitive dust leaving the fugitive dust source while active operations are idle, usually used when active operations are suspended for more than 48 hours.

(4) A department-approved alternative dust control measure or measures that provide fugitive dust control that is equal to or better than measures in Paragraphs (1) and (2), or (2) and (3) of Subsection C of 20.11.20.16 NMAC. Before a permittee may substitute an alternative control measure, the department must approve the control measure in writing as a permit amendment.

(5) Stopping active operations that are capable of producing fugitive dust.

D. Active operations during an announced high wind event: The department

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shall use national weather service (NWS) data, recorded at either the Albuquerque international airport (Sunport) or Double Eagle II airport, in order to determine forecasted or actual wind speeds when announcing that a high wind event may or will occur. Wind velocity measurements taken in the field by the department, the responsible person, or permittee shall be taken at a representative active operation area on the permitted property or by the department within 200 feet of the permitted property being evaluated to determine whether active operations can be continued, resumed or initiated. Wind measurement results shall be documented and retained throughout the duration of the permit, and shall be made available to the department and the permittee and/or person responsible for controlling fugitive dust at the permitted property. A continuous one-hour wind velocity measurement with an average wind speed of less than 20 miles per hour, along with on-site stable soil conditions and effective dust control measures, as stated in the fugitive dust control plan, shall be sufficient to allow active operations during an announced high wind event. However, fluctuations in average wind speed and high wind gusts may re-occur and can cause ineffective dust control during active operations, which may result in a violation of 20.11.20 NMAC. Therefore, the responsible person or permittee shall continuously assess wind conditions and on-site soil conditions during an announced high wind event and shall maintain the reasonably available control measures which include stopping active operations as required by Paragraph (5) of Subsection C of 20.11.20.16 NMAC.

E. **Limitations on use of affirmative defense:** A respondent may not assert the affirmative defense described in 20.11.20.16 NMAC:

(1) against an action for injunctive relief; or

(2) to prohibit the EPA or a citizen's group from taking an enforcement action. [20.11.20.16 NMAC - Rp, 20.11.20.16 NMAC, 3/17/08]

20.11.20.17 **FILING, REVIEW AND INSPECTION FEES:** The fees required by 20.11.20 NMAC are
located in 20.11.2 NMAC, Fees. The filing and review fee portion of the total permit application fee due when a fugitive dust control construction application is filed is non-refundable.

[20.11.20.17 NMAC - Rp, 20.11.20.17 NMAC, 3/17/08]

20.11.20.18 FUGITIVE DUST CONTROL CONSTRUCTION PERMIT APPLICATION PROCESSING:

A. A person who is required to submit a fugitive dust control construction permit (permit) application and plan for active operations that will disturb at least three-quarters of an acre, but no more than 25 acres, shall submit the permit application and plan with the applicable fees to the department no fewer than 10 business days prior to the start of active operations. Within 10 business days of the department receiving the permit application, plan and fees, the department will approve the permit, approve the permit with conditions or deny the permit.

B. A person who is required to submit a permit application and plan for active operations that will disturb more than 25 acres shall submit the permit application and plan with the applicable fees to the department no fewer than 20 business days prior to the start of active operations. Within 20 business days of the department receiving the permit

application, plan and fees, the department will approve the permit, approve the permit with conditions or deny the permit.

C. The fugitive dust control plan may be in any form including a copy of a program that complies with any other statute or regulation so long as the plan provides reasonably available control measures whose purpose is to mitigate fugitive dust and the plan meets the objectives of 20.11.20 NMAC. If the plan does not specifically enumerate the control measures proposed to mitigate fugitive dust, the permit application shall be deemed incomplete and shall be rejected. If an incomplete application is rejected, a new or amended application may be filed and the time limits in Subsections A or B of 20.11.20.18 NMAC shall apply as if the initial application had not been filed.

D. If all requirements of 20.11.20 NMAC have been met by the applicant, the department shall issue a permit to the permittee, which shall authorize commencement of active operations. If the department has not approved, denied, or notified the applicant regarding the permit application within 30 business days of the department's receipt of the permit application, plan and fees, then the permit shall be automatically approved and operations may commence if the permittee uses the reasonably available control measures and fugitive dust control plan as submitted in the application. However, if the measures and plan are not effective, the department may initiate an enforcement action for violation of 20.11.20 NMAC.

[20.11.20.18 NMAC - Rp, 20.11.20.18 NMAC, 3/17/08]

20.11.20.19 PUBLIC AND PRIVATE UNPAVED ROADWAYS, SHORT-CUTS AND UNPAVED PARKING AREAS:

A. No unpaved roadway greater than one-quarter mile in length and no unpaved parking areas may be constructed or allowed to be constructed or reconstructed on any publicly-owned land or privately-owned real property, unless the owner has applied for and received a permit pursuant to 20.11.20.13 NMAC or 20.11.20.14 NMAC. Owners in possession of a valid fugitive dust control permit that wish to construct additional unpaved roadways shall apply for an amendment to their permit which shall include payment of any fees required by 20.11.2 NMAC. In addition, no unpaved short-cut of any length on private or public property may be constructed or be allowed to remain usable when it is evident the short cut is being used by motor vehicle drivers to save time by avoiding use of a dedicated and authorized roadway. A variance from Subsection A of 20.11.20.19 NMAC may be granted by the board in a manner consistent with the variance procedures provided in 20.11.7 NMAC.

B. Owners or operators shall use reasonably available control measures on all unpaved roadways and unpaved parking areas and shall comply with the general provisions established in 20.11.20.12 NMAC.

C. **Public unpaved roadway; complaints.** If the department receives a fugitive dust complaint regarding an unpaved public roadway, the department will forward the complaint by hand delivery, inter-office mail delivery or certified mail, return receipt requested, to the governmental agency responsible for maintenance of the roadway. Within 45 calendar days from the date the complaint was received by the responsible agency, the responsible agency shall make a reasonable effort to address the complaint, and the governmental agency shall provide the department with a written report of the actions taken to resolve the complaint. Failure of the responsible agency to submit a timely report shall be

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a violation of 20.11.20 NMAC.
[20.11.20.19 NMAC - Rp, 20.11.20.19 NMAC, 3/17/08]

20.11.20.20 ABRASIVE PRESSURE BLASTING OPERATIONS: A person who performs abrasive pressure blasting operations shall employ reasonably available control measures or other effective control measures at all times to comply with 20.11.20.12 NMAC and shall substantially reduce fugitive dust emissions that are leaving the property where the abrasive pressure blasting operations are taking place. A person who is conducting abrasive pressure blasting operations is not required to obtain a fugitive dust control permit from the department. However, stationary source permitting regulations, such as 20.11.41 NMAC and 20.11.42 NMAC, may apply to pressure blasting operations.
[20.11.20.20 NMAC - Rp, 20.11.20.20 NMAC, 3/17/08]

20.11.20.21 CONTROL OF GREENWASTE MATERIAL: To prevent greenwaste from becoming ground up by the abrasive action of tires, which may then be entrained into the atmosphere as particulate matter, all persons causing, directing or authorizing greenwaste to be deposited on publicly-owned real property shall promptly remove or cause the removal of the greenwaste.
[20.11.20.21 NMAC - Rp, 20.11.20.21 NMAC, 3/17/08]

20.11.20.22 DEMOLITION AND RENOVATION ACTIVITIES; FUGITIVE DUST CONTROL CONSTRUCTION PERMIT AND ASBESTOS NOTIFICATION REQUIREMENTS:
No person shall demolish any building containing over 75,000 cubic feet of space without first delivering to the department a fugitive dust control construction permit application and fugitive dust control plan with the fee required by 20.11.2 NMAC. No active operations shall commence until a department manager, supervisor, scientist, field operations officer or health specialist signs a fugitive dust control construction permit and a copy of the signed permit is available at the site of active operations. Failure to obtain a fugitive dust control construction permit prior to commencement of demolition activities as described in 20.11.20.22 NMAC shall be a violation of 20.11.20 NMAC. All demolition and renovation activities shall employ reasonably available control measures at all times, and, when removing asbestos containing materials (ACM), shall also comply with the federal standards incorporated in 20.11.64 NMAC, *Emission Standards for Hazardous Air Pollutants for Stationary Sources*. A person who demolishes or renovates any commercial building, residential building containing five or more dwellings, or a residential structure that will be demolished in order to build a nonresidential structure or building shall file an asbestos notification with the department no fewer than 10 calendar days before the start of such activity. Written asbestos notification certifying to the presence of ACM is required even if regulated ACM is not or may not be present in such buildings or structures. Failure to provide proper asbestos notification shall be a violation of the requirements of 20.11.64 NMAC. Knowingly violating provisions of 20.11.64 NMAC is a fourth-degree felony pursuant to the New Mexico Air Quality Control Act, 74-2-14.C.3 NMSA 1978.
[20.11.20.22 NMAC - Rp, 20.11.20.22 NMAC, 3/17/08]

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20.11.20.23 REASONABLY AVAILABLE CONTROL MEASURES FOR FUGITIVE DUST:

The permittee may include in the permit application one or more of the reasonably available control measures included in 20.11.20.23 NMAC or one or more alternative fugitive dust control measures, including measures taken to comply with any other statute or regulation if the measures will effectively control fugitive dust during active operations or on inactive disturbed surface areas. At minimum, all projects requiring a fugitive dust control construction permit shall utilize paved or gravel entry/exit aprons, steel grates or other devices capable of removing mud and bulk material from vehicle traffic tires, and erect a properly-maintained fabric fencing material around the perimeter of the disturbed surface area with openings no wider than necessary to allow vehicles to enter or exit the area. The fencing material shall be anchored approximately six inches below the surface on the bottom edge, and when installed shall be approximately 30 or more inches above the existing natural or man-made surface. To maintain effectiveness of the entry/exit apron, steel grate or other similar device (device), accumulated materials shall be removed promptly. To maintain effectiveness of the fence, fugitive dust that accumulates on either side of the fencing shall be removed promptly.

A. Unpaved roadways:

(1) paving using recycled asphalt, routinely-maintained asphalt millings, asphaltic concrete, concrete, or petroleum products legal for such use;

(2) using dust suppressants applied in amounts, frequency and rates recommended by the manufacturer and maintained as recommended by the manufacturer;

(3) using wet suppression; or

(4) using traffic controls, including decreased speed limits with appropriate enforcement; other traffic calming methods, vehicle access restrictions and controls; road closures or barricades; and off-road vehicle access controls and closures.

B. Paved roadways:

(1) cleaning up spillage and track out as necessary to prevent pulverized particulates from being entrained into the atmosphere;

(2) using on-site wheel washes; or

(3) performing regularly scheduled vacuum street cleaning or wet sweeping with a sweeper certified by the manufacturer to be efficient at removing particulate matter having an aerodynamic diameter of less than 10 microns (i.e. PM10).

C. Trucks hauling bulk materials on public and private roadways:

(1) using properly secured tarps or cargo covering that covers the entire surface area of the load;

(2) preventing leakage from the truck bed, sideboards, tailgate, or bottom dump gate;

(3) using wet suppression to increase moisture content of the bulk materials being hauled;

(4) using dust suppressants applied in amounts, frequency and rates recommended by the manufacturer; or

(5) maintaining a minimum of six inches of freeboard from the rim of the truck bed; freeboard means the vertical distance from the highest portion of the load abutting the bed and the lowest part of the top rim of the truck bed.

D. Active operations in construction areas and other surface disturbances:

(1) Short term control measures may include:

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(a) wet suppression;

(b) dust suppressants applied in amounts, frequency and rates recommended by the manufacturer and maintained as recommended by the manufacturer;

(c) watering the site at the end of each workday sufficiently to stabilize the work area;

(d) applying dust suppressants in amounts, frequency and rates recommended by the manufacturer on the worksite at the end of each workweek if no active operations are going to take place over the weekend or if active operations stop for more than two consecutive days;

(e) starting construction at the location that is upwind from the prevailing wind direction and stabilizing disturbed areas before disturbing additional areas;

(f) stopping active operations during high wind; or

(g) clean up and removal of track-out material.

(2) Long term control measures may include:

(a) site stabilization using dust suppressants applied in amounts, frequency and rates recommended by the manufacturer and maintained as recommended by the manufacturer;

(b) reseeding using native grasses as specified in 20.11.20.24 NMAC;

(c) xeriscaping;

(d) installing parallel rows of fabric fencing or other windbreaks set perpendicular to the prevailing wind direction either onsite or on a nearby property with the permission of the nearby property owner;

(e) surfacing with gravel or other mulch material with a size and density sufficient to prevent surface material from becoming airborne;

(f) mulching and crimping of straw or hay as specified in Subsection D of 20.11.20.24 NMAC;

(g) installing permanent perimeter and interior walls;

(h) using conventional landscaping techniques; or

(i) clean up and removal of track-out material.

E. Bulk material handling:

(1) using spray bars;

(2) applying wetting agents (surfactants) to bulk material;

(3) using wet suppression through manual or mechanical application;

(4) adding dust suppressants to bulk materials in amounts, frequency and rates recommended by the manufacturer and maintained as recommended by the manufacturer;

(5) stopping bulk material handling, processing, loading or unloading during high wind conditions;

(6) reducing process speeds; or

(7) reducing drop heights.

F. Industrial sites:

(1) paving roadways and parking area with recycled asphalt, asphaltic concrete, concrete, or petroleum products legal for use;

(2) performing regularly scheduled vacuum street cleaning or wet sweeping;

(3) regularly using wet suppression on unpaved areas;

(4) using dust suppressants applied in amounts, frequency and rates recommended by the manufacturer, and maintained as recommended by the manufacturer;

(5) installing wind breaks;

(6) installing enclosures;

(7) installing on-site anemometers to measure wind speed; the anemometer should trigger a suitable warning mechanism such as a strobe light or an audible alarm (that will not violate any applicable noise ordinance) to notify on-site personnel of high wind conditions;

(8) increasing wet suppression applications before and during high wind conditions; or

(9) stopping active operations during high wind conditions.

G. Demolition and renovation activities when asbestos-containing materials are not present:

(1) using constant wet suppression on the debris piles during demolition;

(2) using water or dust suppressants on the debris pile, applied in amounts, frequency and rates recommended by the manufacturer;

(3) using enclosures;

(4) using curtains or shrouds;

(5) using negative pressure dust collectors; or

(6) stopping demolition during high wind conditions.

H. Milling, grinding or cutting of paved or concrete surfaces:

(1) constantly using wet suppression;

(2) continuous wet sweeping during milling, grinding, or cutting operations;

(3) using dust suppressants applied in amounts, frequency and rates recommended by the manufacturer, and maintained as recommended by the manufacturer;

(4) using enclosures; or

(5) using curtains or shrouds.

I. Pressure blasting operations:

(1) using non-friable abrasive material;

(2) using curtains, enclosures or shrouds;

(3) using negative pressure dust collectors;

(4) using constant wet suppression;

(5) maintaining ongoing clean up of abrasive material; or

(6) stopping active operations during high wind conditions.

J. Spray painting and other coatings:

(1) using enclosures that comply with applicable fire codes; or

(2) using curtains, enclosures or shrouds.

K. High wind contingency measures:

(1) installing and using on-site anemometers to measure wind speed; the anemometer should trigger a suitable warning mechanism such as a strobe light or an audible alarm that will not violate any applicable noise ordinance to notify on-site personnel of high wind conditions;

(2) using constant wet suppression;

(3) using dust suppressants applied in amounts, frequency and rates recommended by the manufacturer;

(4) using wetting agents or surfactants on disturbed areas, bulk materials or stockpiles;

(5) slowing down process; or

(6) shutting down active operations.

L. Stockpile Formation:

(1) Active stockpiles:

(a) applying wet suppression on a regular basis;

(b) utilizing wind breaks (fabric fencing or other materials);

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(c) reducing vehicle speeds or using other traffic calming measures (e.g. sculpted piles); or

(d) restricting access to stockpile areas during non-work hours.

(2) Inactive stockpiles:

(a) maintaining a stable outer crust over stockpile area;

(b) using dust suppressants applied in amounts, frequency and rates recommended by the manufacturer, and maintained as recommended by manufacturer;

(c) restricting access to stockpile areas; or

(d) utilizing wind breaks (fabric fencing or other materials). [20.11.20.23 NMAC - Rp, 20.11.20.23 NMAC, 3/17/08]

20.11.20.24 NATIVE GRASS SEEDING AND MULCH SPECIFICATIONS:

A. If the fugitive dust control permit includes provisions to revegetate a disturbed area, the permittee may use the specifications described in 20.11.20.24 NMAC. When properly applied and maintained, these specifications have provided reasonably successful results in the past in Bernalillo county. They are included here as a reference for permittees and others who choose to use native revegetation as a long-term reasonably available control measure. However, use of these specifications does not guarantee success. Failure of any revegetation method as a long-term reasonably available control measure requires re-application or other control method approved by the department. The disturbed area shall maintain compliance with 20.11.20 NMAC.

(1) The native seed species used and rate of application should be as provided in Subsection F of 20.11.20.24 NMAC.

(a) If the area to be seeded is along a recreational trail of any type, the seed mixes for either type of soil listed in Subsection F of 20.11.20.24 NMAC should not include four-wing saltbush and the seeding rate should be reduced by one pound per acre.

(b) Seeds may be pre-mixed by a seed dealer. Each pre-mixed bag of seed should be sealed and labeled by the seed dealer in accordance with federal seed laws and New Mexico department of agriculture labeling laws. The label should include: variety, kind of seed, lot number, purity, germination, percent crop, percent inert, percent weed (including noxious weeds), origin, test data and net weight. Federal seed laws require that analysis shall be no older than five months for seed shipped interstate and no older than nine months for seed shipped intra-state.

(c) 48 hours before seeding, the owner or operator should give written notice to the department by hand delivery or facsimile, requesting inspection of the sealed seed bags to be used. The department may inspect the sealed seed bags and labels.

(2) **Fertilizer and soil amendments:** unless otherwise specified in the fugitive dust control permit, no fertilizer or other soil amendments are required on areas to be reseeded.

(3) **Mulch:** areas to be reseeded should be mulched as described below unless otherwise specified in the permit.

(a) **Hay mulch:** perennial native or introduced grasses of fine-stemmed varieties should be used unless otherwise specified in the plan. At least 65 percent of the herbage by weight of each bale of hay should be 10 inches in length or longer. Hay with noxious seed or plants should not be used. Rotted, brittle, or moldy hay are not considered acceptable. Marsh grass or prairie hay composed of native grass of species to be seeded is considered acceptable. Tall

wheat grass, intermediate wheat grass, switch grass, or orchard hay will be acceptable if cut prior to seed formation. Marsh grass hay should be composed of mid and tall native, usually tough and wiry grass and grass-like plants found in the lowland areas within the Rocky Mountain region. Hay should be properly cured prior to use. Hay that is brittle, short fibered or improperly cured is not considered acceptable. Hay mulch should be crosshatched crimped to minimum depth of two inches.

(b) **Straw mulch:** small grain plants such as wheat, barley, rye, or oats should not be used. Alfalfa or the stalks of corn, maize or sorghum are not considered acceptable. Material which is brittle, shorter than 10 inches or which breaks or fragments during the crimping operation are not considered acceptable. Straw mulch should be crosshatched crimped to minimum depth of two inches.

(c) **Gravel mulch:** gravel mulch should be a maximum of three-quarter to one inch in diameter and must have been crushed or screened with a minimum of one angular face. Experience has demonstrated that gravel mulch provides very successful results on steep slopes and other areas that may be difficult to stabilize.

(d) **Erosion control mats, fabric or blankets:** the type of erosion control mats, fabric or blankets used should be specified in the fugitive dust control permit.

B. Seed bed preparation:

(1) Prior to starting seed bed preparation, the final grades of all earthwork should be inspected and certified by a New Mexico licensed engineer, and a copy of the certification should be delivered to the department:

(a) no soil preparation should be performed when the surface is wet or muddy or when the soil is so moist that the soil is not fully loosened by the discing operation;

(b) if erosion, crusting or re-compaction occurs in an area before seeding, mulching and crimping are successfully completed, the area should be reworked, beginning with seedbed preparation.

(2) Mechanical preparation: the seedbed should be loosened to a minimum depth of six inches by disc or harrow. Areas of heavy or compacted soil may require additional preparation by chiseling or ripping if discing alone does not result in preparation to the full minimum depth of six inches. The soil should be worked to a smooth surface and should be free of clods, stones four inches in diameter and larger, and debris or foreign material that could interfere with seeding or crimping operations.

(3) Hand preparation: areas which cannot be prepared with mechanized equipment because of small size, irregular shape or slope may be prepared to a minimum depth of two inches using hand tools or a rototiller, as specified in the permit.

C. Seeding:

(1) Should not start until the seed bed preparation has been inspected and certified by a New Mexico licensed engineer, a New Mexico licensed landscape architect, or other professional approved by the department (e.g. a department certified erosion control specialist). Notice in writing or by facsimile providing certification pertaining to the seed bed preparation should be given to the department at least 48 hours prior to beginning seeding operations so that the department has an opportunity to inspect the site. No seeding operations should be conducted when steady wind speeds exceed 10 miles per hour.

(2) Seed application:

(a) **Drill seeding:** drill seeding is highly recommended. Seed should be

applied with a "rangeland" type seed drill equipped with packer wheels. Seed should be drilled to a maximum depth of one-half inch. Direction of seeding should be across slopes and on the contour whenever possible.

(b) **Broadcast seeding:** seed may be applied using the broadcast method when size, irregular shape, or slope exceeding three to one, prevents the use of a seed drill. Seed may be broadcast by hand or by a mechanical seeder provided that the seed is evenly distributed over the seeding area. Areas that are broadcast seeded should be seeded at a rate that is double the rate used for drill seeding. Areas of broadcast seeding should be hand raked to cover seed.

(c) **Seeding with gravel mulch:** areas to be gravel mulched should be seeded at double the standard seed rate with one-half the seed applied prior to application of gravel and one-half of the seed applied on the surface of the gravel. Water should be applied in a quantity sufficient to wash seed from the surface and into the gravel.

(d) **Hydro seeding:** hydro seeding with native grass will normally only be successful on areas that will be irrigated.

D. Hay or straw mulching:

(1) All seeded areas should be mulched unless otherwise specified in the fugitive dust control permit. On seeded areas that are level or have slopes that are a ratio of three to one or less, any of the four types of mulching below may be used. On erosion control areas or slopes steeper than a ratio of three to one, only gravel mulch or erosion control materials should be used.

(2) Hay mulch should be applied at a minimum rate of one and one-half tons per acre of air dry hay.

(3) Straw mulch should be applied at a minimum rate of two and one-half tons per acre of air dry straw. inches.

(4) Hay or straw mulch should be crosshatched crimped into the soil to a minimum depth of two

(a) The mulch should be spread uniformly over the area either by hand or with a mechanical mulch spreader.

(b) When spread by hand, the bales of mulch should be torn apart and fluffed before spreading.

(c) Mulching should stop when wind speeds exceed 15 miles per hour.

(d) The mulch should be wetted down and allowed to soften for approximately 15 to 20minutes prior to crimping.

(e) A heavy disc should be used to crimp or anchor the mulch into the soil to a minimum depth of two inches. A mulch-tiller with flat serrated discs at least one-quarter of an inch in thickness, having dull edges with discs spaced six inches to eight inches apart or similar equipment should be used. The discs should be of sufficient diameter to prevent the frame of the equipment from dragging the mulch.

(f) The crimping operations should be across the slope where practical, but not parallel to prevailing winds. In general, crimping should be in a north-south direction or in tight interlocking "S" curves to avoid straight east-west crimp lines.

(g) If small grain straw mulch is used, the mulch should be crimped in two directions in a cross-hatch pattern.

(5) **Gravel mulch:** gravel mulch should be laid evenly by hand or by equipment to a thickness of two inches.

(6) **Erosion control mats, fabric or blankets:** the type of erosion control mats, fabric or blankets

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used should be as specified in the fugitive dust control permit. Anchoring of the erosion control materials should be consistent with the manufacturer's recommendations.Upon completion of the reseeding project, the permittee should deliver written notice to the department in a timely manner, certifying completion of seeding project.

E. **Protection of native grass seeded area:** the person, owner or operator who has elected to use native seeding as a control measure shall be responsible for protecting and caring for the seeded area until plants are fully established. After project completion, the owner or operator shall repair any damage to seeded areas caused by pedestrian or vehicular traffic or vandalism. During periods of low rainfall, supplemental watering may be required to successfully establish the native grass seed. Because the owner is responsible for the fugitive emissions leaving the property, failure of the reseeding project shall not be a defense to enforcement of 20.11.20 NMAC. The owner or operator may find it necessary to reseed or use other reasonably available control measures to bring the property into compliance. The department strongly recommends that any area being seeded or mulched be adequately fenced and posted to prevent trespass traffic.

F. Seed specifications and rates should be used as established by the most recent edition of "*city of Albuquerque standard specifications for public works construction - native grass seeding"* section as updated by the city or as approved in writing by the department.

G. **Variations in seeding due to special environmental conditions:** the owner or operator may use a different seeding mixture in order to address special environmental conditions that make it unlikely for success of the reseeding effort. Use of an annual rye (*Lolium sp*.) or cool season grasses (e.g. barley at 10 pounds per acre) may be added to the seed specification in order to help stabilize soils, especially for disturbed areas comprising 25 acres or more when a significant amount of the publicly-owned land or privately-owned real property is not expected to be built upon within one year.

[20.11.20.24 NMAC - Rp, 20.11.20.24 NMAC, 3/17/08]

20.11.20.25 REVIEW MEETING: TIMELY PETITION FOR HEARING BEFORE THE BOARD:

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If a permit applicant or permittee (requestor) asks the department to meet informally to review and reconsider the department's decision regarding the applicant's permit application in the manner provided by 20.11.20.25 NMAC, the process shall not extend the 30-day deadline for filling a timely petition for a hearing before the board as provided by 20.11.81 NMAC. If a requestor is adversely affected by, or disagrees with the department's decision regarding the requestor's permit application, the requestor may request an informal review meeting to discuss the department's decision. The request shall be in writing or on a form provided by the department. Within five business days after the requestor receives the department's decision regarding the permit application, the requestor shall deliver the written request to a division manager. Within five business days after a division manager receives the request, a division manager or designee shall hold an informal review meeting with the requestor and an additional division representative (e.g. the person assigned to the permit application review) in an attempt to resolve disagreements. Within two business days after the informal review meeting, a division representative shall mail, hand deliver or deliver by facsimile a statement to the requestor stating whether the department has changed its decision regarding the permit application, and, if so, specifying the change and the reason for the change. A person who participated in a 20.11.20 NMAC permitting action before the department and who is adversely affected by the decision made by the department, may follow the procedures described in 20.11.81 NMAC to petition for a hearing before the board.
[20.11.20.25 NMAC - Rp, 20.11.20.25 NMAC, 3/17/08]

20.11.20.26 VISUAL DETERMINATION OF FUGITIVE DUST EMISSIONS:
The following method, hereafter called the "visible fugitive dust detection method", is used to visually determine the total amount of time that fugitive dust emissions are visible during a continuous one-hour observation period. If a trained department observer records visible fugitive dust crossing a property line of the property being investigated, for a total of 15 minutes or more during a continuous one-hour period, a violation of 20.11.20 NMAC has occurred. The observer does not have to be certified in procedures found in 40 CFR 60, Method 9, *Visual Determination of the Opacity of Emissions from Stationary Sources* (EPA Method 9). However, the observer shall receive training regarding how to identify a violation of 20.11.20 NMAC that is caused by anthropogenic activities and to distinguish fugitive dust that emanates from a source that is not required by a board regulation other than 20.11.20 NMAC to obtain a permit.

Training shall consist of attendance at and completion of the lecture portion of a Method 9 certification course and familiarity with the written materials provided during the course. The method described in Subsections A through D of 20.11.20.26 NMAC does not require the opacity of emissions to be determined during the observation period.

A. To correctly perform this method, the observer shall use two stopwatches. One stopwatch shall be used to record the continuous one-hour time period during which the observation is conducted. This period shall be known as the "observation period." The second stopwatch shall be used to record the total accumulated amount of

time that visible fugitive dust is crossing a property line during the observation period. The second stopwatch shall establish the "visible fugitive dust emission time".

B. Prior to the observation, the observer shall:

(1) determine the location of potential fugitive dust source(s) and the

location of the downwind property line for the source;

(2) sketch the location of the fugitive dust source(s), and, when available during the observation, record the observer's location on a copy of the fugitive dust control permit map or aerial photograph;

(3) sketch or photograph the location of the downwind property line and physical features that help define the property line;

(4) sketch or photograph the observer's location during the observations;

(5) sketch the position of the sun relative to the observer;

(6) document that the visible fugitive dust is not originating from an upwind source other than the source being evaluated; and

(7) maintain a minimum distance of at least 15 feet from the visible fugitive dust being observed, and a maximum distance of no more than one-quarter mile away.

C. The observer shall record:

(1) observer's name and affiliation;

(2) date of observation;

(3) company name, property owner or operators, if known;

(4) description of the fugitive dust sources;

(5) wind speed and direction (explain method of determining the wind speed, i.e., hand-held anemometer); and

(6) sky conditions.

D. The observer shall record the time of day when the observation begins. The observer shall start the first stopwatch to begin recording the observation period and shall observe along the property line. With the second stopwatch, the observer shall record the length of time visible fugitive dust is crossing the property line. The observer shall stop the second stopwatch when the visible fugitive dust is no longer detected crossing the property line. The observer shall continue this procedure during the continuous one-hour observation period or until the visible fugitive dust emission time totals 15 minutes or greater during the continuous one-hour observation period, which is a violation of 20.11.20 NMAC. The observer shall record the time of day when the observation ends. If the observer determines that the visible fugitive dust being observed is of an intensity that may cause immediate danger to human health or safety, then, before the observation period is completed, the observer shall attempt to immediately contact the responsible person, permittee or owner. [20.11.20.26 NMAC - Rp, 20.11.20.26 NMAC, 3/17/08]

20.11.20.27 ENFORCEMENT:

A. All persons shall use control measures that are effective in maintaining compliance with 20.11.20 NMAC. Violation of a fugitive dust control permit or fugitive dust control plan approved by the department is a violation of 20.11.20 NMAC. If a violation occurs or is occurring, the department may issue a verbal warning, issue a written warning, initiate an administrative enforcement action and assess an administrative civil penalty, and take all other actions authorized by law and equity, including issuing a stop work order as authorized by 20.11.20.27 NMAC.

B. If the department determines a person has violated or is violating a requirement or prohibition of

20.11.20 NMAC, the department may initiate an administrative enforcement action and assess an administrative civil penalty for a past or current violation, or both, as authorized by 74-2-12.A.(1) NMSA. As also authorized by 74-2-12.A.(2) NMSA and 74-2-12.1 NMSA, the department may commence a civil action in New Mexico district court for

appropriate relief, including a temporary or permanent injunction. In addition, as authorized by 74-2-14 NMSA, the department also may commence or cause a criminal action to be commenced.

C. As authorized by 74-2-12.H NMSA, in connection with an administrative enforcement action, the director may issue subpoenas for attendance and testimony of witnesses and the production of relevant papers, books and documents and may adopt rules for discovery procedures.

D. If a person (requestor) asks the department for an informal review meeting to consider the department's decision regarding an administrative compliance order in the manner provided by 20.11.20.27 NMAC, the process shall not extend the 30-day deadline for submitting a written request to the department director requesting a public hearing as provided by 74-2-12.C NMSA. If a person receives an administrative compliance order from the department, that person ("requestor") may request an informal review meeting to discuss the

administrative compliance order. The request shall be in writing or on a form provided by the department. The requestor shall deliver the written request for an informal review meeting to the director and a division manager within five business days after the requestor has received the administrative compliance order. Within five business days of receiving the request, a division manager or designee shall hold an informal review meeting with the requestor and a division representative (e.g. division manager, compliance officer, or person issuing the order) in an attempt to resolve the administrative compliance order. Within two business days after the informal review meeting, a division representative shall mail, hand deliver or deliver by facsimile a statement to the requestor with the department's final decision regarding the administrative compliance order and the reasons for the decision. If the requestor is adversely affected by the final decision made by the department, the requestor may follow the procedures described in Subsection E of 20.11.20.27 NMAC.

E. A person who receives an administrative compliance order and chooses not to sign the compliance order or similar document as requested by the department, and comply with its terms, may request a hearing consistent with 74-2-12.C NMSA. The decision following the hearing may be appealed consistent with 74-2-9.A NMSA.

F. Payment of an administrative civil penalty shall not prevent the department from taking additional enforcement actions, if the violation is repeated or an additional violation occurs. Payment of an administrative civil penalty for a prior or additional violation shall not be a defense to a subsequent action taken by the department to resolve an additional violation. Actions by the department may include suspension or revocation of a permit, as provided by 74-2-12.B NMSA, and issuance of a stop work order.

G. The permittee or responsible person as identified in the permit shall take all actions required by the permit to prevent a violation of 20.11.20 NMAC, including stopping active operations, if necessary. If the permittee or responsible person as identified in the permit fails to take all required actions, the owner or operator, if different, shall take all actions required to prevent or satisfactorily resolve a violation of 20.11.20 NMAC, including stopping active operations, if necessary.

H. The department may issue a stop work order, which shall suspend all active operations except for the required application of reasonably available control measures. The department also may revoke a permit issued by the department if the permittee fails to implement the reasonably available control measures required by the fugitive dust control

permit.

I. If a person fails to obtain a permit as required by 20.11.20 NMAC, the department may issue a stop work order which shall require all active operations at a site to stop except for application of reasonably available control measures.

J. The stop work order, which shall be effective 24 hours after the person, permittee, owner, operator, or responsible person named in a permit receives the stop work order, unless an earlier deadline for stopping work or other activities is imposed by the department for good reason. The stop work order shall remain in effect until the person, permittee, owner, operator, or responsible person named in the permit demonstrates to the satisfaction of the department that the activities of the person, permittee, owner, operator or responsible person named in the permit comply with the provisions of 20.11.20 NMAC.

[20.11.20.27 NMAC - Rp, 20.11.20.27 NMAC, 3/17/08]

20.11.20.28 PUBLIC OUTREACH AND TRAINING:

A. The department shall provide or approve public education regarding reducing fugitive dust. The department shall maintain an electronic information system using the Internet in order to provide access to the general public and regulated business community regarding fugitive dust control programs, activities, regulations, regulatory requirements, forms and information.

B. The department shall implement a program to provide training at no cost to individuals who are or may be required to comply with provisions of 20.11.20 NMAC. Approximately twice per year, the department shall provide or approve training workshops on fugitive dust and its control to persons who conduct or participate in projects involving active operations and to other interested persons. When a person attends the training and successfully passes a test, the department or approved trainer shall issue a certificate stating that the person has successfully completed the training.

[20.11.20.28 NMAC - Rp, 20.11.20.28 NMAC, 3/17/08]

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20.11.20.29 COMPLAINTS: The department shall respond to complaints from residents, businesses and others in a timely manner, but in no case shall the initial response take longer than three business days. [20.11.20.29 NMAC - Rp, 20.11.20.29 NMAC, 3/17/08]

HISTORY OF 20.11.20 NMAC:

Pre-NMAC History: The material in this part was derived from that previously filed with the commission of public records - state records center and archives.
Regulation No. 8, Airborne Particulate Matter,
filed 3/24/82. Regulation No. 8, Airborne
Particulate Matter, filed 2/17/83.

History of Repealed Material:

20 NMAC 11.20, Airborne Particulate Matter (filed 5/29/96); repealed 3/1/04.
20.11.20 NMAC, Fugitive Dust Control (filed 1/28/04) repealed 3/17/08.

Other History: Regulation No. 8, Airborne Particulate Matter (filed 2/17/83) was renumbered and reformatted into first version of the New Mexico Administrative Code as 20 NMAC 11.20, Airborne Particulate Matter, effective 12/01/95.
20 NMAC 11.20, Airborne Particulate Matter (filed 10/27/95) replaced by 20 NMAC 11.20, Airborne Particulate Matter, effective 07/01/96.
20 NMAC 11.20, Airborne Particulate Matter (filed 5/29/96) renumbered, reformatted and replaced by 20.11.20 NMAC, Fugitive Dust Control, effective 3/1/04.
20.11.20 NMAC, Fugitive Dust Control (filed 1/28/04) replaced by 20.11.20 NMAC, Fugitive Dust Control, effective 3/17/08.

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Appendix D – Fugitive Dust Permits
New Construction Permits

Permit Number	Name	Entered Date	To Date	Street Address
6396-C	PULTE AT MIREHAVEN	12/20/2013	1/13/2019	7601 JEFFERSON ST NE STE 320
6418-C	MONTECITO WEST	1/16/2014	1/17/2019	7601 JEFFERSON NE STE 180
6444-C	EL PORTAL AT PASEO	1/21/2014	1/22/2019	PO BOX 3529
6457-C	SOUTH VALLEY DRINKING WATER PHASE 7A	1/29/2014	1/30/2019	2400 BROADWAY SE
6485-C	TOWNSEND PROJECT	2/24/2014	2/25/2019	4900 MENAUL BLVD NE
6486-C	SAD 228 RAINBOW BLVD PROPERTY OWNERS	2/25/2014	2/25/2019	4900 LANG AVE NE
6490-C	SW PRE-K THRU 8 SCHOOL	2/25/2014	2/28/2019	915 OAK ST SE
6614-C	FEDEX GROUND-ALBUQUERQUE NM	5/7/2014	5/14/2019	470 CENTRAL RD
6694-C	ALBUQUERQUE BIOPARK	6/12/2014	6/19/2019	1293 PO BOX NW
6699-C	SUNPORT PARK HOSPITALITY LLC	6/16/2014	6/18/2020	817 CENTRAL AVE NE
6711-C	VALLE PRADO UNIT 1	6/19/2014	6/24/2019	6330 RIVERSIDE PLAZA LN NW
6821-C	SIERRA SUNSET PARK	9/11/2014	9/12/2019	1 CIVIC PLZ NE
6836-C	GOFF BLVD IMPROVEMENTS	9/18/2014	9/19/2019	2400 BROADWAY BLVD SE
6867-C	STOCKPILE SITE	9/30/2014	9/30/2019	6020 INDUSTRY WAY SE
6984-C	DOUBLE EAGLE II AIRPORT APRON AND TAXI WAY RECONSTRUCTION	11/24/2014	12/1/2019	PO BOX 9948
6998-C	NORTH DIVERSION CHANNEL OUTFALL GRADE CONTROL STRUCTURES MODIFICATION PROJECT	12/9/2014	12/10/2019	2600 PROSPECT AVE NE
7004-C	TIBURON HEIGHTS	12/11/2014	12/12/2019	27560 PO BOX SW
7062-C	REGINALD F CHAVEZ ELEMENTARY SCHOOL	1/27/2015	1/29/2017	915 LOCUST ST SE
7075-C	PUBLIC SERVICE COMPANY OF NM (PNM) SOUTH VALLEY SOLAR ENERGY CENTER	1/30/2015	2/5/2019	2401 AZTEC RD SE
7076-C	REGINALD CHAVEZ ELEMENTARY SCHOOL	2/2/2015	12/30/2016	915 OAK ST SE
7092-C	PNM ESTRELLA SOLAR ENERGY CENTER	2/10/2015	9/28/2018	2401 AZTEC RD SE MS Z120
7093-C	PNM SANTOLINA SOLAR ENERGY CENTER	2/10/2015	2/18/2019	2401 AZTEC RD SE MS Z120
7320-C	COUNTY WIDE ROAD IMPROVEMENT PROJECT PHASE 3	5/13/2015	5/14/2020	1801 4TH ST NW # A
7367-C	TRACT 1	6/10/2015	12/28/2018	371 CENTENNIAL PKWY STE 200
7371-C	STOCK PILE @ PRINCE STREET WAREHOUSE	6/10/2015	6/11/2020	6020 INDUSTRY WAY SE
7573-C	FREDDY'S AT COORS AND CENTRAL	10/13/2015	10/14/2018	5571 MIDWAY PARK PL NE
7588-C	WESTERN UNITED ELECTRIC SUPPLY CORP OFFICE & WAREHOUSE	10/21/2015	10/23/2018	7535 2ND ST NW BLDG D
7589-C	PMG PARADISE CLINIC	10/21/2015	10/27/2018	3987 PO BOX

7647-C	CIRCLE K	11/17/2015	11/20/2018	3092 FM 1502
7702-C	NORTH DIVERSION CHANNEL GRADE CONTROL STRUCT.	12/18/2015	12/23/2018	205 RIO BRAVO BLVD SW STE
7796-C	VILLAGE @ LA ORILLA	1/13/2016	1/15/2019	6501 PALOMAS AVE NW
7803-C	CARNUEL WATER SYSTEM IMPROVEMENTS - PHASE IIIA	1/20/2016	1/1/2015	PO Box 568 NW
7927-C	SUNSET VILLA	4/6/2016	4/12/2019	12809 DONETTE CT NE
8037-C	FAMILY SCHOOL NW - APS	6/6/2016	10/31/2018	915 OAK ST SE
8061-C	REPAIR REDUNDANT POWER B27496	6/14/2016	6/28/2019	2050 WYOMING BLVD SE
8256-C	PASEO DEL RIO APARTMENTS	9/15/2016	9/16/2018	12490 PO BOX
8274-C	SOLIDS DEWATERING FACILITY REHABILITATION	9/23/2016	9/23/2019	4201 2ND ST SW
8289-C	LOS DIAMANTES SUBDIVISION	9/30/2016	7/31/2019	6300 JEFFERSON ST NE
8304-C	MONTECITO VISTA	10/10/2016	10/31/2018	7601 JEFFERSON ST NE STE 320
8357-C	4410 COORS BLVD SW	10/31/2016	11/30/2018	3109 LOVE RD SW
8373-C	DESERT SANDS SUBDIVISION	11/10/2016	7/31/2019	9150 E. DEL CAMINO DR STE 118
8412-C	NW K THOUGH 8 SCHOOL	12/2/2016	10/31/2018	915 OAK ST SE
8422-C	ONE CENTRAL	12/13/2016	12/20/2018	2000 16TH ST NE
8484-C	STERLING DOWNTOWN	1/19/2017	1/25/2019	320 GOLD AVE SW STE 918
8492-C	DESERT WILLOW FAMILY SCHOOL	1/25/2017	2/25/2019	3987 PO BOX
8540-C	JUAN TABO HILLS WEST	2/27/2017	3/17/2020	57060 PO BOX
8555-C	JACKSON MIDDLE SCHOOL - CLASSROOM ADDITION	3/8/2017	3/14/2019	915 LOCUST ST SE
8575-C	DESERT RIDGE PLACE UNIT 3	3/16/2017	3/16/2019	8504 WAKERFORD PL NE
8583-C	ANDALUCIA TRACT 6B STE DEVELOPMENT	3/17/2017	3/21/2022	6020 INDUSTRY WAY SE
8619-C	EAGLE RANCH NM MVD - RETAIL	4/6/2017	3/27/2022	6149 EDITH BLVD NE
8639-C	LA CUENTISTA UNIT ll	4/20/2017	4/18/2019	440 ALAMEDA AVE NE STE E
8645-C	COORS PAVILION	4/26/2017	5/1/2019	8220 SAN PEDRO ST NE STE 500
8653-C	BITI NETWORK UPGRADE	5/5/2017	5/8/2020	2050 WYOMING BLVD SE
8655-C	STORMCLOUD SUBDIVISION UNIT 5	5/9/2017	9/30/2019	1443 PO BOX
8700-C	LEGACY 1 @ JOURNAL CENTER	5/24/2017	5/26/2019	6300 RIVERSIDE PLAZA LN SW STE 220
8702-C	I-25 & RIO BRAVO INTERCHANGE RECONSTRUCTION CN A300280	5/25/2017	6/20/2020	PO BOX 91750
8761-C	CRUZ ESTATES	6/26/2017	6/28/2019	3109 LOVE ROAD SW
8762-C	CORNERSTONE OFFICE BUILDING	6/27/2017	6/28/2020	2509 LUCERO RD SW
8773-C	U-HAUL CENTER AT COORS & I-40	7/3/2017	12/31/2018	1700 10TH ST
8779-C	PRELIMINARY GRADING AND DRAINAGE FOR DAYTONA ELECTRIC UPGRADES	7/6/2017	8/13/2017	1293 PO BOX SW

8804-C	SMALL DIAMETER WATER REHABILITATION 2017-1, 848.03104	7/19/2017	7/26/2019	1 CIVIC PLAZA CITY HALL FL 5
8855-C	MCMAHON PROPERTY MASS GRADING	8/7/2017	8/1/2019	2403 SAN MATEO SUITE W-24 NE
8873-C	STOCKPILE @ WE THE PEOPLE LLC PROPERTY	8/17/2017	8/21/2022	6020 INDUSTRY WAY SE
8931-C	GLENDESTO SUBDIVISION	9/20/2017	9/21/2020	7601 JEFFERSON ST NE STE 320
8934-P	BROADWAY INDUSTRIES	9/22/2017	9/8/2022	5505 BROADWAY BLVD SE
8953-C	RAIN TUNNEL	10/3/2017	10/31/2018	425 EDMON RD NE
8964-C	NM GAME AND FISH REGIONAL OFFICE COMPLEX	10/6/2017	3/29/2019	1 WILDLIFE WAY
8972-C	SOUTHWEST WATER RECLAMATION PLANT PRIMARY CLARIFIERS 5-8 ORDER CONTROL	10/12/2017	12/6/2019	4201 2ND ST SW
8981-C	PARADISE VIEW RETIREMENT TOWNHOMES	10/17/2017	4/30/2019	1606 CENTRAL SE STE 201
8989-C	6500 RIO GRANDE NW	10/19/2017	9/28/2018	6500 RIO GRANDE BLVD NW
9017-C	RIO GRANDE CROSSING (DEMO)	11/13/2017	12/31/2018	26207 PO BOX
9032-C	ALBUQUERQUE RV & BOAT STORAGE	11/20/2017	11/1/2018	3200 CALLE DE LAURA NE
9075-C	2017 A ARTERIAL STREETS REHABILITATION	1/3/2018	1/13/2020	PO BOX 1293
999999-RV	Test Facility	1/12/2018	3/23/2019	1 Civic Plaza ST NW
9092-C	DEL NORTE HIGH SCHOOL SOCCER FIELD	1/16/2018	1/17/2020	915 OAK ST NE
9093-C	HOWEWOOD SUITES ADDITION	1/16/2018	1/17/2020	5400 SAN ANTONIO BLVD NE
9108-C	CROSSDOCK FACILITY - AQE	1/30/2018	12/5/2018	3700-B KAVANAUGH BLVD NW
9114-C	LAS LOMITAS PLAZA DEVELOPMENT	2/1/2018	2/12/2020	3284A HAWKINS ST NE
9115-C	FACTORY HOMES DIRECT	2/1/2018	2/2/2022	600 SAN JOSE SE
9123-C	INDUSTRIAL WATER ENGINEERING	2/6/2018	2/7/2020	425 EDMON RD NE
9124-C	PG ENTERPRISES STOCKPILE LOCATION	2/8/2018	1/31/2022	301 MURRAY RD SE
9143-C	CNM + APS JOINT USE FACILITY	2/9/2018	2/15/2020	525 BUENA VISTA DR SE
9148-C	I-40/LOUISIANA INTERCHANGE	2/13/2018	2/22/2019	PO BOX 9825 SW
9149-C	NM FLAP52000(1) 2ND ST SW CORRIDOR	2/13/2018	12/31/2018	4600 PEDRONCELLI CT NW
9167-C	NUSENDA BUILDING A	2/22/2018	2/28/2020	3987 PO BOX
9208-C	CAMPBELL COMPOUND	3/9/2018	1/1/2019	5203 JUAN TABO BLVD NE STE 2E
9209-C	STORMCLOUD UNIT 4	3/9/2018	7/31/2019	7601 JEFFERSON ST NE STE 320
9211-C	CALABACILLAS ARROYO GRANDE CONTROL STRUCTURE MODIFICATION & BANK PROTECTION PROJECT	3/12/2018	10/5/2018	2600 PROSPECT AVE NE
9223-C	COTTONWOOD MALL INTERIOR NON-STRUCTURAL DEMO	3/20/2018	3/23/2019	10,000 COORS BYP NW
9228-C	COOL SPRINGZ TRAMPOLINE PARK	3/22/2018	3/30/2020	425 EDMON RD NE

999999-RV	Test Facility	3/23/2018	3/23/2019	1 Civic Plaza ST NW
9269-C	WAGNER RIO BRAVO	4/4/2018	4/18/2020	180001 SMITH RD SE
9294-C	REPAVE PARKING LOT BLDG 20451	4/26/2018	4/26/2019	2050 WYOMING BLVD SE

Routine (programmatic) Permits

Permit Number	Name	To Date	Street Address
P05-0007	AMERICAN TRANSPORTATION SYSTEM CORP	5/20/2020	3524 BROADWAY BLVD SE
P04-0013	NM UNDERGROUND CONTRACTORS, INC.	4/29/2019	5028 BROADWAY BLVD SE
P05-0002	HASSE CONTRACTING COMPANY, INC.	8/5/2019	9964 PO BOX
P05-0045	FINCHAM, INC.	5/25/2020	1845 PO BOX
P04-0016	C T TOWING, INC.	4/29/2019	9320 SAN PEDRO DR NE
P05-0032	GOLDEN EQUIPMENT COMPANY	5/27/2020	9321 PO BOX
P04-0009	SYSCO NEW MEXICO LLC	4/15/2019	19040 PO BOX
P05-0008	NM EARTH INDUSTRIES, INC.	9/23/2021	6900 WASHINGTON ST NE
P05-0028	LONGMIRE FAMILY TRUST	5/14/2020	6201 INDUSTRY WAY SE
P05-0037	KEERS INDUSTRIES, INC.	5/13/2020	3327 TOWER RD NW
P05-0038	CH TAYLOR CHARLES H. AND AGNES TAYLOR REVOCABLE TRUST	5/8/2020	5601 WILSHIRE AVE NE
P05-0009	JAYNES CORPORATION	8/6/2019	9303 SAN PEDRO DR NE
P05-0012	AUI, INC.	8/5/2019	721 CANDELARIA BLVD NE
P05-0015	CORONADO WRECKING & SALVAGE CO., INC.	5/13/2020	601 COMANCHE RD NE
P05-0025	WILLIAM THOMAS TRUCKING	5/12/2020	10506 PO BOX NW
P05-0030	MIDDLE RIO GRANDE CONSERVANCY DISTRICT	7/29/2021	311 DON ST SE
P05-0036	COUNTY SERVICES, INC.	5/12/2020	5904 FLORENCE AVE NE
P05-0029	PIONEER EQUIPMENT SALES	5/20/2020	1337 PO BOX
P05-0021	RIO CONCHOS CONSTRUCTION	5/29/2020	2906 BROADWAY BLVD NE
P05-0022	IRON HORSE WELDING	5/14/2020	7420 READING AVE SE
P05-0014	SOUTH COORS TRUCK SALVAGE	4/22/2020	4200 BROADWAY BLVD SE
P05-0005	THERMO FLUIDS, INC.	8/4/2019	10194 PO BOX
P04-0002	SOUTHWEST AUTO RECYCLERS	5/1/2019	1931
P07-0038	SALL'S BROTHERS CONSTRUCTION	6/2/2022	4124
P07-0019	NEW MEXICO EXPO	1/25/2022	7707 LOMAS BLVD NE
P07-0060R1	BMC WEST	4/27/2022	5702
P07-0056	BROADWAY TRUCK SALVAGE	6/24/2021	5100 BROADWAY BLVD SE
P05-0042	BUILDOLOGY INC.	5/7/2020	1125 OLD COORS RD SW

P05-0040	RODGERS PLUMBING AND HEATING CO., INC.	6/25/2020	42 LONGWATER DR
P05-0048	NEW CONCEPTS INC.	5/4/2020	4025
P07-0059	STEVEN CARMAN	2/2/2021	7301 READING DR SE
P05-0001	COPART	7/29/2019	8546 PO BOX
P07-0024	EL MEXICANO TRUCK SALVAGE	3/20/2022	119 Llano Del Sur SE
P07-0031	EL PINTO RESTAURANT	3/20/2022	3405 BROADWAY BLVD SE
P05-0041	HILLTOP LANDSCAPE ARCHITECTS	5/13/2020	3601 PAN AMERICAN FWY NE
P07-0023	ALBUQUERQUE PUBLIC SCHOOLS (APS)	3/22/2022	5721 INDUSTRY WAY SE
P07-0005	THE BURLINGTON NORTHERN AND SANTE FE RAILWAY COMPANY	5/16/2022	508
P08-0035	KIRTLAND AIR FORCE BASE CONSTRUCTION AND DEMOLITION DEBRIS LANDFILL	2/9/2023	PO BOX 9254
P07-0070-R1	GUZMAN CONSTRUCTION SOLUTIONS, LLC	10/5/2022	14185 DALLAS PWKY STE 300
P05-0049	TOBIAS BUILDERS	5/21/2020	1200 OLD COORS DR SW
P07-0036	D&A AUTO SALES	3/27/2022	10500 4TH ST NW
P07-0018	T & T STONE	3/27/2022	7909 EDITH BLVD NE
P04-0003	PACE IRONWORKS	6/25/2019	915 LOCUST ST SE RM 8
P04-0006	A-ALBUQUERQUE TOWING	5/28/2019	1624 1ST ST NW
P05-0047	A-1 FIREWOOD INC.	4/29/2020	2050 SE WYOMING
P05-0054	SAGEBRUSH SALES	5/27/2020	7501 HOLLY AVE NW
P05-0061	ALSTATE STEEL INC.	6/30/2021	5228 EDITH BLVD NE
P06-0007	ADVANCED CHEMICAL TRANSPORT, INC.	6/24/2021	6020 INDUSTRY WAY SE
P08-0001R1	B&F TRUCKING	12/19/2023	4321 BROADWAY BLVD SE
P08-0008R1	PRAXAIR	8/9/2023	4548-A TOWER SW
P08-0024R1	UNITED PETROLEUM TRANSPORTS	11/14/2023	7421 READING RD
P08-0032R1	AMERICAN RECOVERY	8/17/2023	305 CONCHAS ST SE
P08-0034R1	CIBOLA NATIONAL FOREST	8/9/2023	3134 BRIDGE BLVD SW
P08-0036R1	SOILS AMENDMENT FACILITY	2/2/2023	6300 STATE RD SW
P08-0037R1	101 PIPE & CASING	11/29/2023	208 MURRAY RD SE
P08-0038	U PULL AND PAY, LLC	7/22/2021	208 MURRAY RD SE
P08-0046R1	HEADS UP LANDSCAPE CONTRACTORS	11/16/2023	6110 COORS BLVD SW
P08-0048R1	BAKER UTILITY SUPPLY	8/10/2023	2520 2ND ST SW

P08-0045R1	PRO-BUILD	9/24/2023	4312 SOUTH GEORGIA PL
P08-0055	CORDERO TRUCKING	4/3/2018	30566 PO BOX
P09-0002	MCT INDUSTRIES INC	7/30/2019	2113 OSUNA RD NE
P09-0011	NM MUTUAL	4/10/2019	4201 SECOND ST SW
P10-0001	CATHOLIC CEMETERY ASSOCIATION DBA GATE OF HEAVEN	5/8/2020	5609 ALAMEDA PL NE
P10-0002R1	AMERICAN IRON & METAL	2/17/2023	4560 BROADWAY BLVD SE
P10-0004	LKQ OF NM	5/27/2020	7525 2ND ST NW
P10-0010	W&G INVESTMENT LLC.	5/13/2020	4320 2ND ST NW
P10-0011	4 RIVERS EQUIPMENT	5/27/2020	7801 TIBURON DR NE
P10-0012	ACE AUTO PARTS, INC.	5/20/2020	1307 CAMINO AMPOR NW
P10-0015	B&G TRUCK SALVAGE	5/7/2020	5201 BALLOON FIESTA PARKWAY NE
P10-0016	UNIVERSAL CONSTRUCTORS, INC.	5/1/2020	5201 BALLOON FIESTA PARKWAY NE
P10-0017	ABQ TRUCK EQUIPMENT, INC.	4/7/2020	7999 WYOMING BLVD NE
P11-0003	RMCI, INC.	6/10/2021	1801 LACROSSE AVE
P11-0004	SOILUTIONS, INC.	6/23/2021	5701 BROADWAY BLVD SE
P12-0004	PAREX USA	6/13/2021	6201 INDUSTRY WAY SE
P04-0008	PLANT WORLD INC.	4/21/2019	2301 CANDELARIA RD NE
P04-0019	PACHECO TRUCKING INC.	4/29/2019	4320 BROADWAY BLVD SE
P04-0014	WATER QUEST INC.	4/23/2019	5510 BROADWAY BLVD SE
P05-0002	BRANNEX TRUCK PARTS & SALES	8/5/2019	9964 PO BOX
P04-0020	ACE REBAR, INC.	4/10/2019	6008 PO BOX
P04-0011	ACME TOWING & RECOVERY, INC.	4/15/2019	10599 PO BOX
P05-0016	SOUTHWEST LANDFILL	6/1/2020	91447 PO BOX
P05-0019	BERNALILLO COUNTY ROAD MAINTENANCE	6/4/2020	1479 PO BOX
P05-0020	WAGNER EQUIPMENT CO.	5/20/2020	4100 1/2 BROADWAY BLVD SE
P04-0002	STAR PAVING CO.	5/1/2019	1931
P07-0041R1	WELSH EARTHMOVING INC.	12/27/2023	250 EL PUEBLO BLVD NE
P07-0038	KELLY UTILITY	6/2/2022	4124
P07-0029R1	SUMMIT CONSTRUCTION, INC.	2/8/2023	119 ALAMEDA RD NE
P07-0063	DUKE CITY DINER	2/7/2023	5018 2ND ST NW
P07-0030	BENJAMIN BENAVIDEZ	3/31/2022	5811 BROADWAY BLVD SE

P05-0041	EARTH PRODUCTS	5/13/2020	3601 PAN AMERICAN FWY NE
P07-0003R1	SENA'S PLACE	5/3/2022	23397 PO BOX
P07-0004	PENSKE TRUCK LEASING CO. L.P.	2/13/2022	3176 PO BOX
P04-0003	EAST NOB HILL LLC.	6/25/2019	915 LOCUST ST SE RM 8
P04-0004	JAMES ROBERT TROMBLEY TRUST	4/11/2019	5816 PAJARITO RD SW
P04-0006	SHAVINGS UNLIMITED LLC	5/28/2019	1624 1ST ST NW
P05-0017	NEW MEXICO DEPT. OF - DISTRICT 3	6/29/2021	2400 BROADWAY SE
P05-0047	VACANT LOT	4/29/2020	2050 SE WYOMING
P05-0054	CURTIS SLADE	5/27/2020	7501 HOLLY AVE NW
P12-0008	AMERICAN FENCE COMP. OF NM	6/3/2021	5425 EDITH BLVD NE
5297-P	JOURNEYMAN & APPRENTICE TRAINING PROGRAM	12/16/2021	WEST OLD ROUTE 66
5335-PR1	CORONADO STORAGE PLUS	2/1/2023	6300 RIVERSIDE PLZ NW SUIT 200
5384-P	J & E AUTO SALVAGE & SALES	6/1/2020	MSC07 4100 SAFETY & RISK SERVIC
5453-P	ABC FOREIGN AUTO PARTS	12/27/2022	311 OSAGE PL SW
5457-PRV1	ABQ FOREIGN AUTO PARTS, INC.	2/5/2023	PO BOX 21037
5490-P	RITEWAY PALLET MFG, INC	1/29/2023	6001 PAN AMERICAN FWY NE
5968-P	EARTH DAY RECYCLING	5/31/2023	6400 COORS BLVD NW
6076-PR1	WOOD YOU RECYCLE	11/30/2023	12717 LOMAS BLVD NE
6115-PR1	I-25 STUDIOS LLC	11/30/2023	1900 EDITH BLVD NE
6202-PR1	REGENTS OF THE UNIVERSITY OF NEW MEXICO	8/15/2023	3111 LOVE RD SW
6957-P	SUNSET TRUCKING	11/14/2019	2050 WYOMING BLVD SE
6967-P	RIO GRANDE NURSERY	11/17/2019	5565 EAKES RD NW
7083-P	SANDIA FARMS	2/2/2020	4310 MEADE AVE SW
7591-P	EPISCOPAL DIOCESE OF RIO GRANDE	10/23/2020	1293 PO BOX
7651-P	PETE & ROGUE'S HAIR STYLING	11/23/2020	3738 ARNO RD NE
7957-P	MOUNT CALVARY CEMETERY	10/21/2020	30670 PO BOX
P10-0019	RAYS SAND AND GRAVEL	5/23/2021	1000 WOODWARD PL NE
8091-P	WESTON SERVILLA HOLDINGS LLC	6/28/2021	2050 WYOMING BLVD SE
8091-P	KIRTLAND AIR FORCE BASE BULK FUELS FACILITY	6/28/2021	2050 WYOMING BLVD SE
8196-P	WESTSIDE FARMS	8/19/2021	5841 HAWKING DR SE
8272-P	EMPTY LOT	9/21/2021	6208 EVESHAM RD NW
8393-P	RIVERSIDE WEST LLC	12/5/2021	206 GRAPE ST SE
3710-P	EMBASSY SUITES	4/10/2022	400 PROSPERITY AVE SE
3710-P	A&J REAL ESTATE INC.	4/10/2022	400 PROSPERITY AVE SE
8627-P	KIRTLAND AIR FORCE BASE	4/11/2022	91193 PO BOX
8683-P	PESCADOR TOWING LLC	6/10/2022	5400 PO BOX SE
8683-P	MESA DEL SOL LAND CORNER OF ABQ STUDIOS LOT	6/10/2022	5400 PO BOX SE
8780-P	DONNIE TERRY	7/10/2022	314 MITCHELL AVE SE

6581-P-RV1	CHAMPION TRUSS INC.	7/18/2022	1001 PROSPERITY AVE SE
P07-0061-RV1	VICA HEATING & AIR CONDITIONING, LLC	4/27/2022	4500 BROADWAY BLVD SE
P07-0061-RV1	JOSE V GARCIA	4/27/2022	4500 BROADWAY BLVD SE
5394-P-RV1	SNL TECHNICAL AREAS I, II, III, IV, V	7/10/2022	1501 SAN PEDRO DR SE
P07-0068-RV1	PETE'S TOP QUALITY LANDSCAPE LLC	6/22/2022	4600 LINCOLN RD NE
8910-P	VETERAN'S HEALTH ADMINISTRATION	9/12/2022	118 LLANO DEL SUR RD SE
8913-P	Z PROPERTIES	9/13/2022	9227 PO BOX AVE NW
5747-PR1	BRASIER ASPHALT	9/20/2022	4220 BROADWAY BLVD SE
8965-P	H.O. CONSTRUCTION INC.	9/13/2022	4624 GRANDE AVE NW
8966-P	SW INVESTMENTS	9/13/2022	4624 GRANDE AVE NW
P07-0022R1	GANDYDANCER LLC	2/22/2022	5404 BROADWAY BLVD SE
P07-0055R1	RAY'S SAND AND GRAVEL	9/21/2022	9003 BATES RD SE
P07-0062R1	SAIZ TRUCKING & EARTHMOVING INC.	8/30/2022	5801 BOBBY FOSTER RD SE
P07-0013R1	JESUS SOLIS	2/17/2022	3111 LOVE RD SW
P07-0073R1	TOWN RECYCLING, LLC	6/1/2022	13412 EXECUTIVE HLS SE
P06-0008R2	HUMATECH	11/8/2022	1530
5526-PR1	FIVE J'S AUTO PARTS, INC.	12/21/2022	PO BOX 348
P07-0011R1	RAKS BUILDING SUPPLY	2/22/2022	1512 COORS BLVD SW
P07-0035R1	JOEL & PATRICIA PEROVICH	1/17/2023	65945 PO BOX
P07-0064R1	VIGIL CONTRACTING LLC	1/22/2023	6101 PAN AMERICAN FWY NE
P07-0002R1	JPR DECORATIVE GRAVEL	2/2/2023	25805 PO BOX
P07-0065R1	KOMATSU SOUTHWEST	3/30/2023	10300 CENTRAL AVE SW
9229-P	CONTECH CONSTRUCTION PRODUCTS INC.	3/27/2023	6380 COORS BLVD NW
5357-PR1	ZOMEWORKS CORPORATION	3/22/2023	13724 ELENA GALLEGOS PL NE
P08-0010R1	OSUNA PROPERTIES LLC	4/10/2023	12700 CENTRAL AVE SE
7955-PR1	SANDIA SPEEDWAY	1/14/2024	2145 DON ANDRES RD SW

P09-0007-R1	UNIVERSAL WASTE SYSTEMS OF NEW MEXICO	2/21/2024	1011 BUENA VISTA DR SE
P09-0012-RV1	ABF FREIGHT SYSTEM INC.	4/17/2024	2401 AZTEC RD NE MS Z100
P09-0012-RV1	DUKE CITY BMX	4/16/2024	2401 AZTEC RD NE MS Z100
P09-0004R1	ACE METAL RECYCLING/ACE METALS INC	4/30/2024	10048 PO BOX NE
P09-0013-R1	PUBLIC SERVICE COMPANY OF NM	4/26/2024	7120 WYOMING BLVD NE STE 20
P04-0015-R1	NMGC SERVICE CENTER	5/15/2024	1 CIVIC PLZ NW
P05-0051-RV1	ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY (AMAFCA)	6/17/2024	2600 PROSPECT AVE NE
P05-0051-RV1	FORMER LOS ANGELES LANDFILL	6/17/2024	2600 PROSPECT AVE NE
P04-0010-RV1	BARELA LANDSCAPING MATERIALS, INC.	5/15/2024	7713 BATES RD SE

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