Figure 1. Key Data for Event of July 8, 2007

NORTHWEST PHOENIX

10-Waddell

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	97	23	0	7	13	SW
2	95	25	0	8	14	SW
3	93	27	0	9	15	SW
4	91	31	0	3	11	SW
5	89	33	0	2	7	E
6	85	41	0	1	3	N
7	86	47	0	1	4	N
8	90	37	0	2	6	E
9	93	32	0	2	5	E
10	95	28	0	3	11	S
11	97	27	0	4	9	W
12	99	25	0	4	9	W
1	101	22	0	6	12	SW
2	103	20	0	6	13	SW
3	104	18	0	6	12	W
4	105	17	0	6	11	W
5	105	16	0	6	13	W
6	105	16	0	6	13	W
7	104	16	0	7	13	SW
8	102	17	0	6	12	W
9	100	19	0	7	15	W
10	98	21	0	9	17	SW
11	95	23	0	8	11	SW
12	93	65	0	3	7	E

NORTH PHOENIX

12-PHX Greenway

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	95	26	0	7	14	SW
2	93	29	0	6	12	SW
3	92	28	0	7	14	SW
4	90	32	0	7	15	W
5	89	35	0	7	13	SW
6	87	37	0	3	10	W
7	87	38	0	3	6	W
8	89	37	0	5	10	SW
9	91	33	0	7	13	W
10	92	32	0	7	12	SW
11	94	29	0	7	14	SW
12	96	28	0	7	13	SW
1	98	26	0	7	15	SW
2	100	23	0	8	15	SW
3	101	21	0	8	18	SW
4	103	19	0	8	17	SW
5	103	19	0	9	15	SW
6	103	19	0	8	15	SW
7	102	19	0	8	15	SW
8	100	20	0	7	15	SW
9	99	22	0	7	14	SW
10	96	25	0	9	17	SW
11	93	27	0	8	15	SW
12	91	28	0	7	13	SW

CENTRAL PHOENIX

15-Phx Encanto

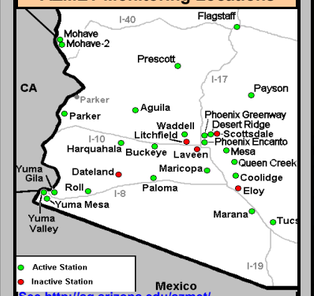
Hr	T(F)	RH	Rn	Spd	Max	Dir
1	96	25	0	7	14	SW
2	95	26	0	7	14	W
3	93	29	0	6	13	W
4	91	32	0	5	9	NW
5	88	38	0	5	10	NW
6	87	39	0	5	10	NW
7	87	40	0	4	8	NW
8	89	39	0	5	9	NW
9	91	36	0	5	12	W
10	92	34	0	7	13	W
11	94	33	0	6	11	W
12	96	29	0	7	14	W
1	98	26	0	8	15	W
2	100	24	0	8	16	W
3	101	22	0	8	14	W
4	103	21	0	7	15	W
5	103	19	0	8	15	W
6	103	19	0	8	15	W
7	102	19	0	8	15	W
8	101	20	0	7	14	W
9	98	24	0	8	15	W
10	96	26	0	9	18	W
11	94	27	0	8	16	W
12	93	65	0	3	7	E

SOUTHEAST PHOENIX

22-Queen Creek

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	87	32	0	4	9	S
2	89	34	0	10	20	SW
3	87	40	0	6	14	S
4	82	51	0	2	4	SE
5	82	50	0	3	6	E
6	79	56	0	2	5	SE
7	80	57	0	0	3	SE
8	86	47	0	3	6	SE
9	90	38	0	1	5	SW
10	93	34	0	1	5	N
11	94	36	0	2	6	NW
12	96	32	0	2	8	N
1	96	33	0	5	14	NW
2	97	31	0	6	13	NW
3	98	29	0	6	11	NW
4	99	28	0	6	12	NW
5	99	28	0	4	11	NW
6	98	29	0	3	7	NW
7	94	32	0	3	7	NW
8	91	34	0	3	6	NW
9	89	34	0	3	8	W
10	92	29	0	6	13	W
11	90	32	0	5	12	W
12	87	35	0	3	11	W

AZMET Monitoring Locations



See http://ag.arizona.edu/azmet/

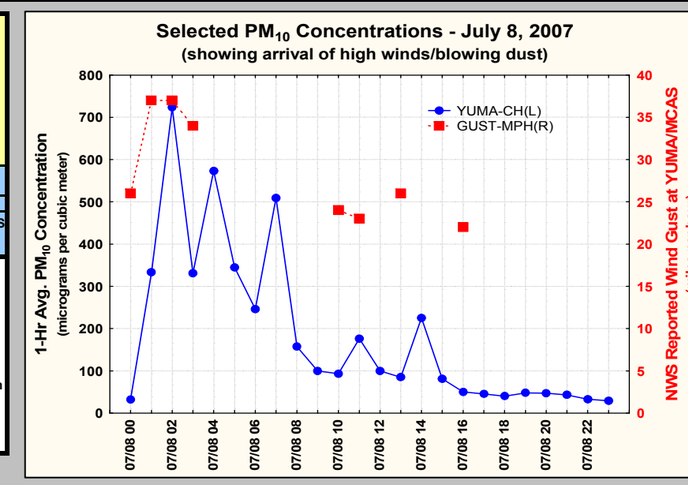
wind @3m agl / Dir corrected to true north

HIGHLIGHTING	Col.	Parameter
Max Wind	T(F)	Temp. (Deg. F.)
> 15 mph	RH	Rel Humidity %
>25 mph	Rn	Rain (Inches/hr)
HR - Time (End)	Spd	Avg Speed mph
A.M.	Max	Max Speed mph
P.M.	Dir	Wind Dir. (from)

PHX WINDS	KEY	PM10 PLOT
CEN. AZ WINDS	SAT IMAGES	
SO AZ WINDS	MONITOR SITES FORECAST	

SUMMARY OF EVENT

In the late evening of July 7th, outflow from a major thunder storm cell south east of Yuma began migrating toward Yuma. Shortly after midnight, high winds and dust arrived from the south to south-east.



PARKER

08-Parker

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	83	49	0	7	10	S
2	83	51	0	7	9	S
3	84	47	0	9	16	S
4	86	41	0	14	21	SW
5	85	45	0	15	22	SW
6	85	52	0	14	20	SW
7	84	58	0	10	14	SW
8	86	55	0	9	13	SW
9	89	48	0	12	16	SW
10	93	42	0	9	13	SW
11	96	37	0	7	11	SW
12	99	30	0	8	13	SW
1	102	27	0	9	13	SW
2	104	23	0	10	14	SW
3	105	22	0	11	17	SW
4	105	20	0	11	16	SW
5	104	24	0	9	14	S
6	101	29	0	10	14	S
7	98	30	0	9	13	SW
8	94	35	0	8	11	SW
9	88	41	0	7	10	S
10	88	35	0	9	12	S
11	86	37	0	9	12	S
12	85	41	0	10	15	S

BUCKEYE

26-Buckeye

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	92	31	0	7	13	SW
2	89	35	0	8	17	SW
3	89	37	0	9	16	SW
4	84	47	0	3	6	W
5	82	52	0	6	12	W
6	80	59	0	4	7	NW
7	82	58	0	5	9	NW
8	84	57	0	5	10	W
9	88	54	0	3	7	W
10	91	43	0	5	11	SW
11	93	39	0	6	9	SW
12	95	35	0	6	11	SW
1	96	35	0	7	12	SW
2	98	33	0	6	12	SW
3	98	32	0	7	14	SW
4	98	33	0	9	15	W
5	99	28	0	8	18	W
6	99	26	0	9	15	W
7	98	27	0	7	13	SW
8	95	28	0	7	12	SW
9	94	28	0	9	15	SW
10	92	29	0	9	15	SW
11	88	33	0	5	14	SW
12	87	34	0	7	11	W

MARICOPA

06-Maricopa

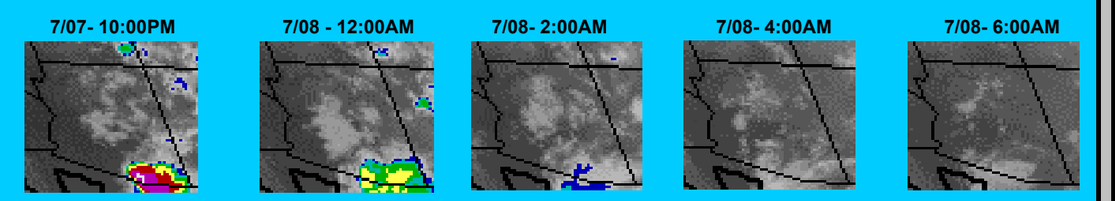
Hr	T(F)	RH	Rn	Spd	Max	Dir
1	94	30	0	6	16	SW
2	90	36	0	12	19	SW
3	88	41	0	12	19	SW
4	87	44	0	6	9	SW
5	88	41	0	4	7	W
6	87	42	0	3	6	W
7	89	40	0	4	7	N
8	90	41	0	4	7	NE
9	93	36	0	4	7	E
10	95	32	0	3	7	S
11	96	29	0	5	13	SW
12	98	27	0	7	14	SW
1	101	23	0	8	15	W
2	102	20	0	8	15	NW
3	104	18	0	9	16	W
4	105	18	0	10	18	W
5	105	18	0	11	17	W
6	104	18	0	10	17	W
7	102	18	0	9	14	W
8	100	20	0	8	14	W
9	98	24	0	9	15	W
10	95	27	0	8	13	W
11	91	30	0	7	11	W
12	91	26	0	6	10	W

COOLIDGE

05-Coolidge

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	89	37	0	10	24	SW
2	88	38	0	14	23	SW
3	85	45	0	7	13	SW
4	83	50	0	5	7	S
5	79	57	0	3	5	SE
6	76	66	0	4	4	SE
7	79	66	0	2	4	S
8	83	60	0	4	8	S
9	89	41	0	7	10	SW
10	91	41	0	5	9	S
11	93	37	0	7	13	S
12	96	30	0	7	16	SW
1	99	26	0	8	18	W
2	101	22	0	9	16	W
3	103	20	0	9	18	W
4	104	18	0	11	17	W
5	104	17	0	11	17	NW
6	103	19	0	11	17	NW
7	101	19	0	10	16	NW
8	99	20	0	10	16	NW
9	97	22	0	10	16	W
10	95	26	0	10	19	W
11	93	28	0	12	19	W
12	88	39	0	4	8	S

GOES-West Satellite



YUMA

14-YumaNorthGila

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	87	50	0	14	21	S
2	86	53	0	21	36	S
3	85	58	0	23	35	S
4	85	61	0	16	25	S
5	85	61	0	5	14	S
6	84	62	0	6	10	S
7	84	61	0	7	11	S
8	87	56	0	11	15	S
9	89	49	0	11	15	S
10	93	39	0	11	15	S
11	96	36	0	15	21	S
12	97	33	0	16	23	S
1	100	27	0	14	22	S
2	101	25	0	15	22	S
3	100	27	0	15	21	S
4	100	24	0	15	23	S
5	100	25	0	14	19	S
6	98	27	0	13	18	S
7	96	27	0	12	17	S
8	93	29	0	10	15	S
9	90	34	0	9	13	S
10	87	45	0	8	13	S
11	85	49	0	7	11	S
12	83	52	0	6	9	S

PALOMA

19-Paloma

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	89	37	0	9	22	SW
2	91	33	0	17	25	S
3	88	40	0	11	22	SW
4	81	57	0	4	7	NW
5	80	58	0	3	9	N
6	79	64	0	2	4	W
7	79	65	0	4	6	W
8	85	58	0	3	5	SW
9	90	43	0	5	10	SW
10	92	37	0	5	11	SW
11	95	33	0	5	10	SW
12	96	36	0	7	14	W
1	96	36	0	8	13	W
2	97	35	0	8	13	W
3	99	33	0	8	15	W
4	100	29	0	8	15	SW
5	98	32	0	8	15	W
6	97	33	0	8	16	SW
7	96	31	0	11	17	SW
8	95	28	0	12	18	SW
9	92	29	0	10	14	SW
10	88	32	0	8	11	SW
11	82	43	0	4	6	SW
12	78	54	0	4	6	SW

MARANA

13-Marana

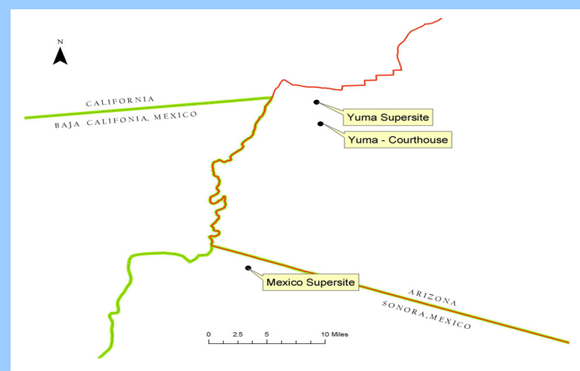
Hr	T(F)	RH	Rn	Spd	Max	Dir
1	89	39	0	6	20	S
2	84	42	0	5	10	S
3	83	44	0	6	9	SE
4	82	49	0	6	10	SE
5	80	52	0	7	12	SE
6	79	56	0	6	11	SE
7	80	54	0	6	11	SE
8	84	46	0	6	11	SE
9	88	38	0	4	7	SE
10	91	32	0	3	9	W
11	93	28	0	5	11	W
12	95	27	0	5	11	NW
1	97	24	0	7	15	NW
2	99	22	0	8	17	NW
3	100	21	0	9	16	NW
4	101	20	0	11	17	NW
5	101	20	0	10	17	NW
6	100	22	0	8	14	NW
7	99	23	0	7	11	NW
8	97	22	0	9	13	NW
9	94	24	0	7	11	NW
10	91	30	0	9	16	W
11	90	36	0	8	13	W
12	88	39	0	7	13	SW

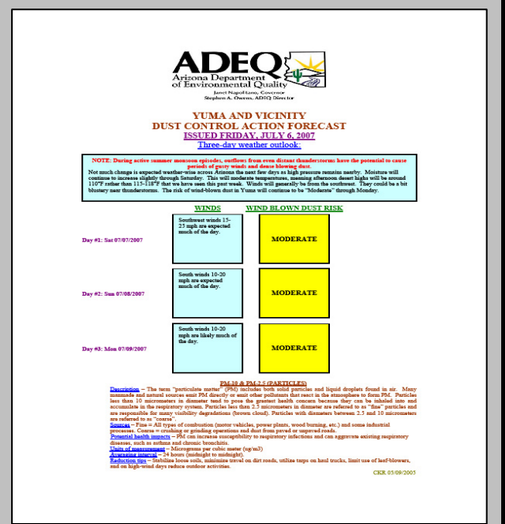
TUCSON

01-Tucson

Hr	T(F)	RH	Rn	Spd	Max	Dir
1	82	47	0	8	13	E
2	79	54	0	8	14	E
3	79	55	0	7	12	E
4	78	58	0	6	10	E
5	77	62	0	3	7	E
6	76	64	0	2	4	E
7	79	60	0	2	4	E
8	82	50	0	2	4	SE
9	86	43	0	2	6	SE
10	88	37	0	3	9	N
11	91	31	0	6	14	NW
12	93	29	0	8	17	W
1	95	26	0	9	16	NW
2	96	24	0	10	17	NW
3	98	22	0	11	21	NW
4	99	20	0	13	20	NW
5	99	20	0	11	20	NW
6	99	19	0	12	20	NW
7	98	21	0	11	19	NW
8	97	22	0	8	14	NW
9	95	24	0	7	12	NW
10	93	27	0	10	18	NW
11	89	38	0	10	17	W
12	88	40	0	3	13	NW

Location of PM10 Monitors in the Yuma Area





ADEQ Arizona Department of Environmental Quality

Janet Napolitano, Governor
Stephen A. Owens, ADEQ Director

YUMA AND VICINITY
DUST CONTROL ACTION FORECAST
ISSUED FRIDAY, JULY 6, 2007
Three-day weather outlook:

NOTE: During active summer monsoon episodes, outflow from even distant thunderstorms have the potential to cause gusty and dangerous winds and blowing dust.

Not much change is expected weather-wise across Arizona the next few days as high pressure remains nearby. Moisture will continue to increase slightly through Saturday. This will moderate temperatures, meaning afternoon desert highs will be around 110°F rather than 115-118°F that we have seen this past week. Winds will generally be from the southwest. They could be a bit blustery near thunderstorms. The risk of wind-blown dust in Yuma will continue to be "Moderate" through Monday.

	WINDS	WIND BLOWN DUST RISK
Day #1: Sat 07/07/2007	Southwest winds 15-25 mph are expected much of the day.	MODERATE
Day #2: Sun 07/08/2007	South winds 10-20 mph are expected much of the day.	MODERATE
Day #3: Mon 07/09/2007	South winds 10-20 mph are likely much of the day.	MODERATE

PM-10 & PM-2.5 (PARTICLES)

Description – The term "particulate matter" (PM) includes both solid particles and liquid droplets found in air. Many anthropogenic and natural sources emit PM directly or emit other pollutants that react in the atmosphere to form PM. Particles less than 10 micrometers in diameter tend to pose the greatest health concern because they can be inhaled into and accumulate in the respiratory system. Particles less than 2.5 micrometers in diameter are referred to as "fine" particles and are responsible for many visibility degradations (brown cloud). Particles with diameters between 2.5 and 10 micrometers are referred to as "coarse" PM.

Sources – Fine = All types of combustion (motor vehicles, power plants, wood burning, etc.) and some industrial processes. Coarse = crushing or grinding operations and dust from paved or unpaved roads.

Potential health impacts – PM can increase susceptibility to respiratory infections and can aggravate existing respiratory disease, such as asthma and chronic bronchitis.

Units of measurement – Micrograms per cubic meter (ug/m3)

Averaging interval – 24 hours (midnight to midnight)

Reduction tips – Particles loose soils, minimize travel on dirt roads, utilize tarps on haul trucks, limit use of leaf-blowers, and on high-wind days reduce outdoor activities.

CKR 05/09/2005

Prepared by A. Juniel and S. Kendall / ADEQ 10/29/07 DRAFT