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Overview of the Air Quality Assurance Programs

**Ambient Air Monitoring
&
Quality Assurance**

A/B Air Quality Control Board Orientation

March 30, 2009



Why Do We Monitor The Ambient Air?

- Protect the public health.
- Quantify & compare our air quality to National and State Standards.
- Understand pollutant source/cause.



What Do We Monitor In The Ambient Air?

- Particulate Matter (PM)
 - PM_{2.5}
 - PM₁₀
- Ground-level Ozone (O₃)
- Oxides of Nitrogen
- Carbon Monoxide

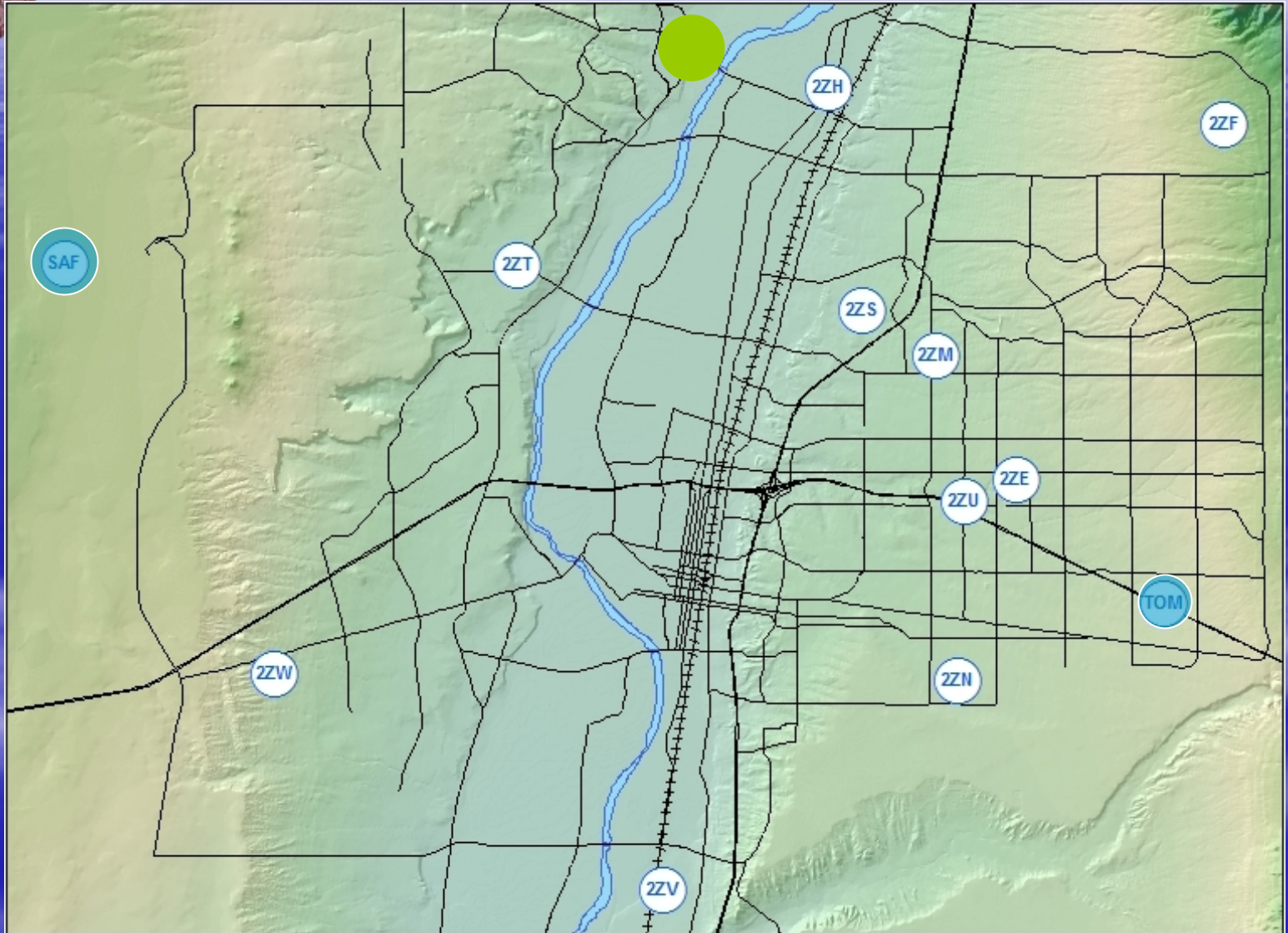


Specialized Monitoring

- Specialized Monitoring
 - Pollen Speciation
 - Aethalometers used to study carbon species
 - Nephelometers used for visibility/PM correlations
 - PM_{2.5} Speciation sampler for nitrates, sulfates,
- **Toxics** (Periodic, Various Locations)
 - Heavy Metals, Carbonyls, Semi-Volatiles and Volatile Organics



Albuquerque Monitoring Network





Air Quality Index & Pollen Reporting



768-4734 or 766-SMOG (7664)

Air Quality Index Reporting



**Air
Monitoring
Data**

**Report
Pollution
Levels**

<http://www.cabq.gov/airquality/aqi.html>



Speciate Pollen

Date: 4/15/03
 East West

Counter: Dan Gates **Conc.**

Ash (Fraxinus)	205	366
Birch (Betulaceae)	0	0
Chenopodiaceae	0	0
Cottonwood (Populus)	80	143
Elm (Ulmus)	0	0
Ephedra (Mormon tea)	0	0
Grass	0	0
Juniper, Cedar (Juniperus)	4	7
Maple (Acer)	0	0
Mulberry (Morus)	209	373
Oak (Quercus)	0	0
Pine (Pinaceae)	31	55
Ragweed (Ambrosia)	0	0
Rumex	0	0
Sagebrush (Artemesia)	0	0
Willow	0	0
Unidentified:	0	0

Other Type: (T)ree, (W)eed, (G)rass

Trace(s) Counted: 1 2 3 4 5 6 7 8 9 10
 1 2 3 4 5 6 7 8 9 10

Flow Rate: 10 # of Traces Counted: 1
 Microscope Used: Lab Microscope

Pollen Count: 529
 Vair: 0.56

Daily Concentration: 944

	Trees	Weeds	Grasses
Count	529	0	0
Conc.	945	0	0
Category		Absent	Absent
	High		

Comment:

Pollen Slide

Pollen Report

<http://www.cabq.gov/airquality/pollen>



Standards and Methods

- Always watching out for proposed and new air quality standards
- Important because sometimes method does not change but the calculation may



Revised 2008 Ozone Standard

- Previous standard, set in 1997, was 0.080 parts per million (ppm). Because of rounding in the measurement the standard actually became 0.084 ppm.
- EPA revised the 8-hour “primary and secondary” ozone standards to a level of 0.075 ppm without rounding.
- EPA was criticized by the scientific community for not strengthening the standards to levels recommended by their advisory committee.



Albuquerque's Compliance Status

- Preliminary data shows the community meeting the new standard.
- For years 2006-2008 the 4th highest annual average is 0.071 ppm¹ measured at North Valley air monitoring station.
- We are 94.6%¹ of the new standard.

1 – Calendar year 2008 ozone data is preliminary and is still under evaluation.



What's up and coming?

- By January 1, 2011
 - New national requirement for high sensitivity measurements of:
 - Carbon monoxide
 - Total Nitrogen
 - Sulfur Dioxide
 - PM Coarse (10 -2.5)
 - New Lead monitoring requirement and standard



Upcoming Program Activities

- Coordinating with Bernalillo County to improve the South Valley Monitoring site.
- Web upgrade
 - New air monitoring station maps
 - Addition of trends graphs of pollutants
 - New data retrieval protocols