

Workshop on Developing the 2006 PM10 Plan

August 30, 2005

Planning Division



Purpose of Workshop

- Present some of the key information (summarized in the Discussion Paper) that is being used to develop the *2006 PM10 Plan*, including air quality data, emissions data, emission control measures, and modeling
- Outline the process for the *2006 PM10 Plan*
- Invite comments and questions

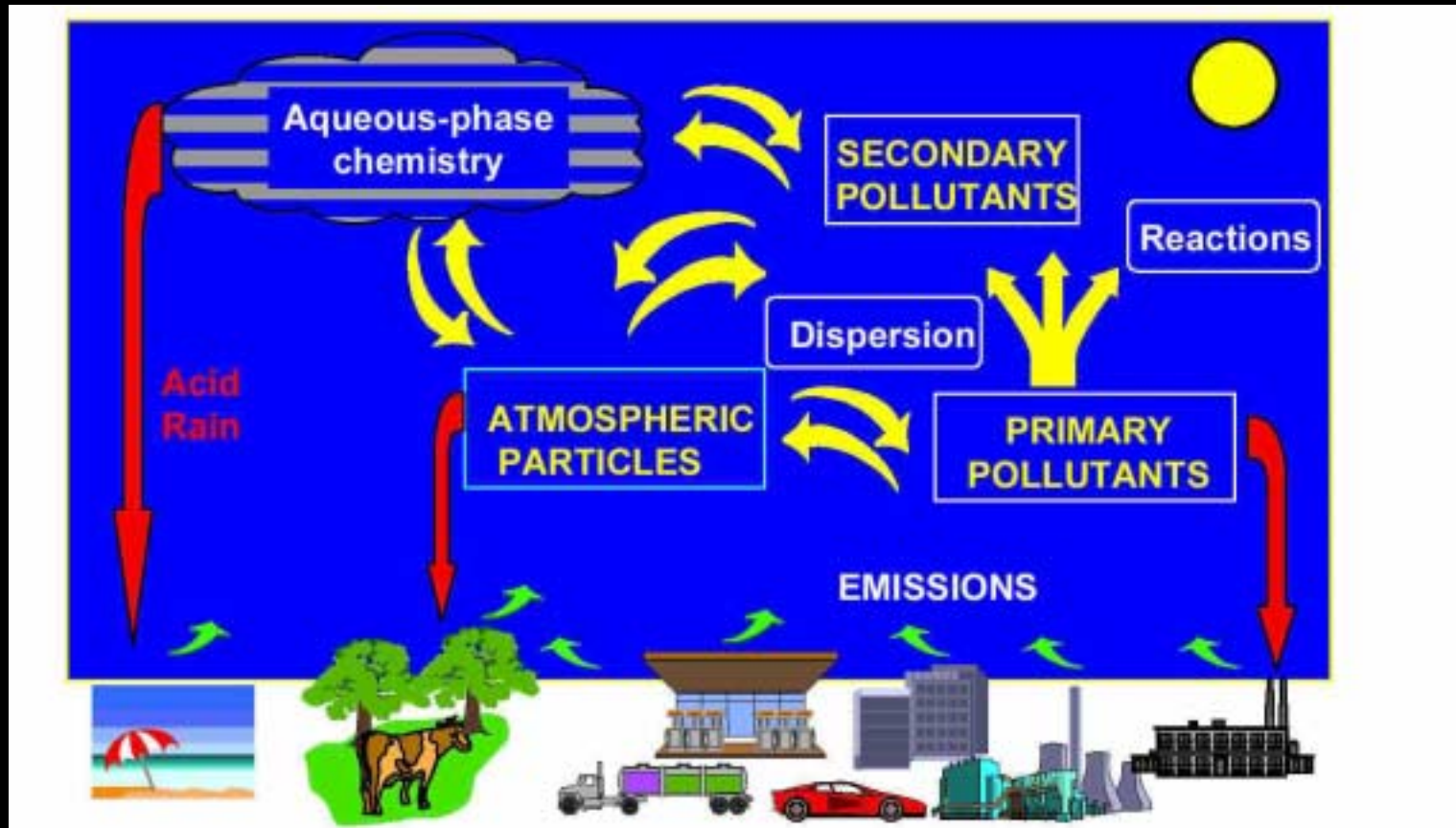


What is PM10?

- PM is solid, liquid, or semi-volatile materials (except pure water) in the atmosphere varying in size and composition
- PM10 - diameters of 10 microns or less
 - Primary sources (directly emitted to the atmosphere):
 - Wood combustion & fossil fuels, Ag operations, industrial processes, construction & demolition, entrainment of road dust, windblown dust, wildfires
 - Secondary precursors (forms in the atmosphere): SO_x, NO_x, VOCs, and ammonia



What is PM10?



PM Health Risks

- Premature death from heart and lung disease
- Aggravation of heart and lung diseases
 - Hospital admissions, doctor and ER visits
 - Medication use
 - School and work absences
- A strong correlation with
 - Lung cancer deaths, infant mortality, and developmental problems, such as low birth weight, in children



PM Affects Lungs and Heart

- Respiratory system effects
 - Chronic bronchitis, asthma attacks, respiratory symptoms (cough, wheezing, etc.), decreased lung function, airway inflammation
- Cardiovascular system effects
 - Heart attacks, cardiac arrhythmias, changes in heart rate and heart rate variability, blood component changes



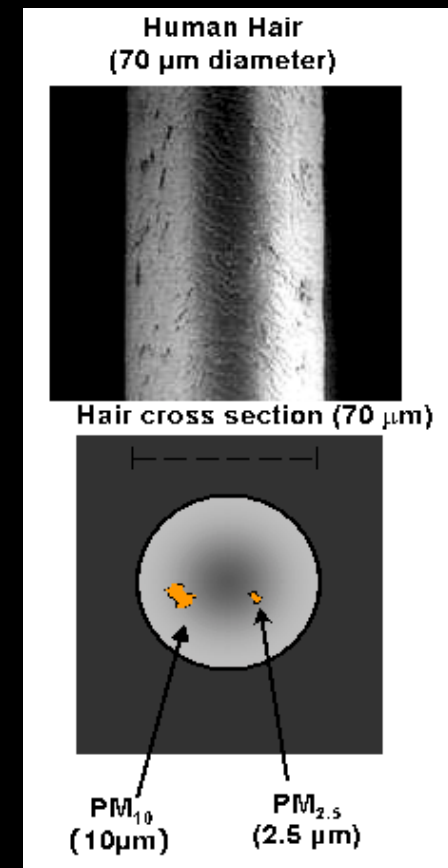
Some Groups Are More At Risk

- People with heart or lung disease
 - Conditions make them vulnerable
- Older adults
 - Greater prevalence of heart and lung disease
- Children
 - More likely to be active
 - Breathe more air per pound
 - Bodies still developing



PM10 Standards

- Federal Standards (NAAQS)
 - 24-hour standard: 150 micrograms/cubic meter
 - Annual standard: 50 micrograms/cubic meter
- California Standards
 - 24-hour standard: 50 micrograms/cubic meter
 - Annual standard: 20 micrograms/cubic meter



PM Attainment Status

- The District is designated as a serious nonattainment area for PM10
- The District is also designated nonattainment for PM2.5
- Nonattainment status triggers plan requirements



PM10 Plan Background

- The *2003 PM10 Plan* was adopted in June 2003 and amended in December 2003 and May 2005
- 2003 and 2005 Amendments had a narrow focus – not a complete plan revision



2006 PM10 Plan

- Addresses issues identified by the Federal Register approval notice for the *2003 PM10 Plan*
- Based on mid-course review with latest technical information to determine if the emissions reductions in the *2003 PM10 Plan* are sufficient to attain the NAAQS
 - CRPAQS
 - Inventory
 - Monitoring data
- Due To EPA by March 31, 2006



New in the 2006 PM10 Plan – Updated 24-hr. PM10 Trends

Station Name	2001	2002	2003	2004
Bakersfield – Golden	205	189	136	85
Corcoran – Patterson	165	168	150	139
Fresno – First	193	96	74	54
Hanford – Irwin	185	161	140	123
Merced – M Street	113	85	74	56
Modesto – 14 th Street	158	83	70	80
Oildale – Manor	158	93	106	82
Stockton – Hazelton	140	87	88	60
Turlock – Minaret	148	93	87	59

(NAAQS= 150 micrograms/cubic meter)



New in the 2006 PM10 Plan – Updated Annual PM10 Trends

Station Name	2001	2002	2003	2004
Bakersfield – Golden	59.6	59.2	52.1	42.7
Corcoran – Patterson	48.7	52.8	47.0	45.1
Fresno – First	42.5	39.0	34.7	30.9
Hanford – Irwin	56.7	53.5	46.7	43.1
Merced – M Street	38.6	38.7	32.0	28.0
Modesto – 14 th Street	36.7	33.2	25.1	27.2
Oildale – Manor	47.4	46.5	43.2	40.7
Stockton – Hazelton	35.5	35.1	27.6	28.6
Turlock – Minaret	39.5	36.2	30.7	30.0

(NAAQS= 50 micrograms/cubic meter)



New in the 2006 PM10 Plan – Corcoran Data Flag/Event

- EPA has approved a data flag indicating that a PM10 exceedance in Corcoran on September 3, 2004 was caused by natural events, specifically high winds
- This data is no longer included in the attainment calculations



New in the 2006 PM10 Plan – Emissions Inventory Changes

- CCOS 2.13 available at:
http://www.arb.ca.gov/app/emsinv/ccos/fcemssumcat_cc213.php
- Control measures through March 2005 reflected
- CCOS 2.13 contains more current controls and data than did previous inventories



Contingency Update

- Contingency measures provide automatic emission reductions if RFP or attainment milestones are not met
- *2005 Amendments* identified surplus emission reductions from incentive programs and rules that satisfy the intent of contingency measures
- Rule revisions for other contingency measures will be pursued if needed



2003 Rollback Prediction

Station Name	2001	2004	Winter 2010
Bakersfield – CA Ave.	190	83	137
Bakersfield – Golden	205	85	151
Clovis	155	63	120
Corcoran – Patterson	165	134	138
Fresno – Drummond	186	79	140
Fresno – First	193	54	144
Hanford – Irwin	185	123	143
Modesto – 14 th Street	158	80	121
Oildale – Manor	158	82	120

(NAAQS= 150 micrograms/cubic meter)



New in the 2006 PM10 Plan – Modeling Changes

- CMAQ model (improvement over previous plan)
- Results used to verify relationships between NOx and secondary PM formation
- Results used in rollback calculations



Attainment

- Based on work completed to date, emissions reductions in the *2003 Plan* as amended appear sufficient to attain PM10 NAAQS by 2010
- Air quality trends show definite improvement through mid-2005
- Modeling projects attainment by 2010

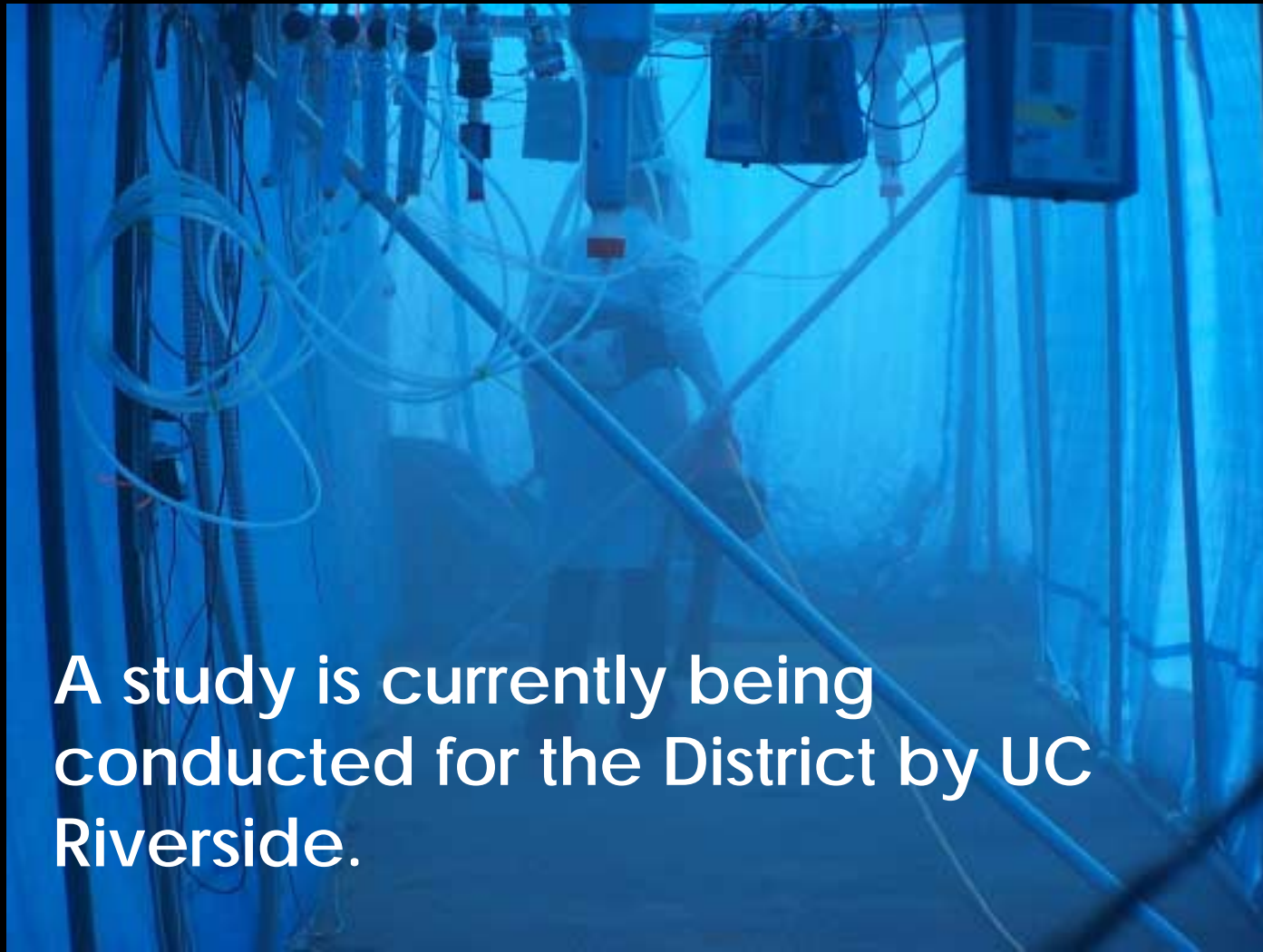


Update on Further Study Measures

- Soil Decontamination – Rule 4651 should be adopted 3Q/07 and effective 3Q/09
- CAFO Rule – Rule 4570 should be adopted 2Q/06
- Leaf Blowers – A study is currently being conducted for the District by UC Riverside.



Leaf Blower Study



A study is currently being conducted for the District by UC Riverside.



Related Topics - NEAP

- Because of the September 3, 2004 Corcoran exceedance data flag, the District must develop a Natural Events Action Plan (NEAP) to address and protect public health should another natural PM10 exceedance occur
- Will include a high wind/PM forecasting system and public outreach
- The NEAP is due to EPA March 3, 2006



Related Topics – Possible Changes to the PM Standards

- EPA must revise the PM NAAQS
- Considering replacing the PM10 standard with a PM10-2.5 standard that may use different averaging times and exclude rural PM in favor of urban PM
- PM2.5 standard may also be revised
- The District PM2.5 Plan is due to EPA April 2008



What's Next

- In 2005
 - The comment period for this workshop ends on September 13
 - The Draft Plan will be posted on September 27
 - The *2006 PM10 Plan* workshop on October 11
 - The NEAP workshop in mid-November
- In 2006
 - The *2006 PM10 Plan* to the Governing Board on January 19, 2006
 - The NEAP to the Governing Board on February 16, 2006



Questions and Comments



Thank you for attending

Send comments to:

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Comments due September 13, 2005 at 5:30 pm

More information - including listservs

is available at

www.valleyair.org

