San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

COMPLIANCE STAFF

- 80 staff (65 field-based, 15 office-based


State of California

San Joaquin Valley
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MARATHON
E-450


VAIO

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Asbestos
Renovations & Demolitions

Ted Strauss
Supervising Air Quality Inspector
Compliance Department

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Fast Facts!

- Used for thousands of years
- Industrial revolution
- Thermal system insulation/fireproofing
- Friction products & condensate control
- Chemical/weather resistant products
- Over 3600 products & building materials
- 30 Million Tons used since 1900

Known Carcinogenic

- Respiratory Hazard
- Asbestosis
- Lung Cancer
- Mesothelioma
- Long Latency Periods of 10 to 40 Years

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Asbestos Related Deaths

- Increases over the past few decades
- Expected to continue for years to come
  - 10,000 per year in the United States
- Miners, construction trades, boiler operators
- Family members of workers

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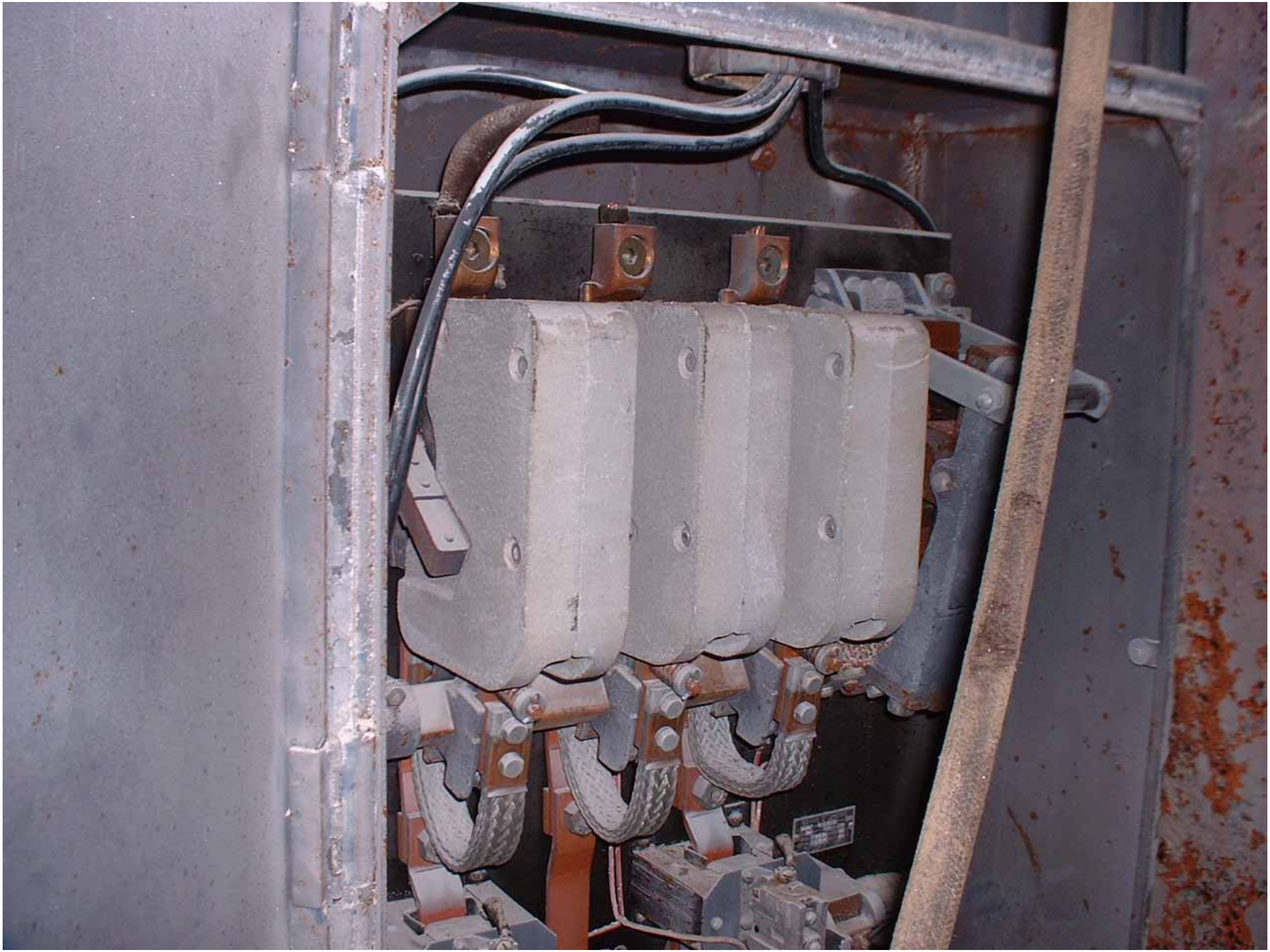
EPA Ban & Phase Out

- 1989 - “Ban & Phase-Out” Rule
- 1990 - overturned by Court of Appeals
- Ban is currently limited to:
  - “New Uses”
    - Sprayed on Acoustic Sealing
    - Fireproofing
  - Various paper and felt products
- That leaves everything else!
  - NAFTA imported products



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Asbestos NESHAP

- National Emission Standards for Hazardous Air Pollutants (NESHAP)
  - 40CFR Part 61, Chapter I, Subchapter C, Subpart M
- Asbestos building surveys
- Notifications
- Abatement and emission control
- Disposal and treatment

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Isolating Asbestos Emissions

- Adequately wetting the affected area
- Gently handle asbestos containing materials
- Seal in leak-tight containers
- Label and manifest asbestos waste
- Proper transport and disposal


Bobcat

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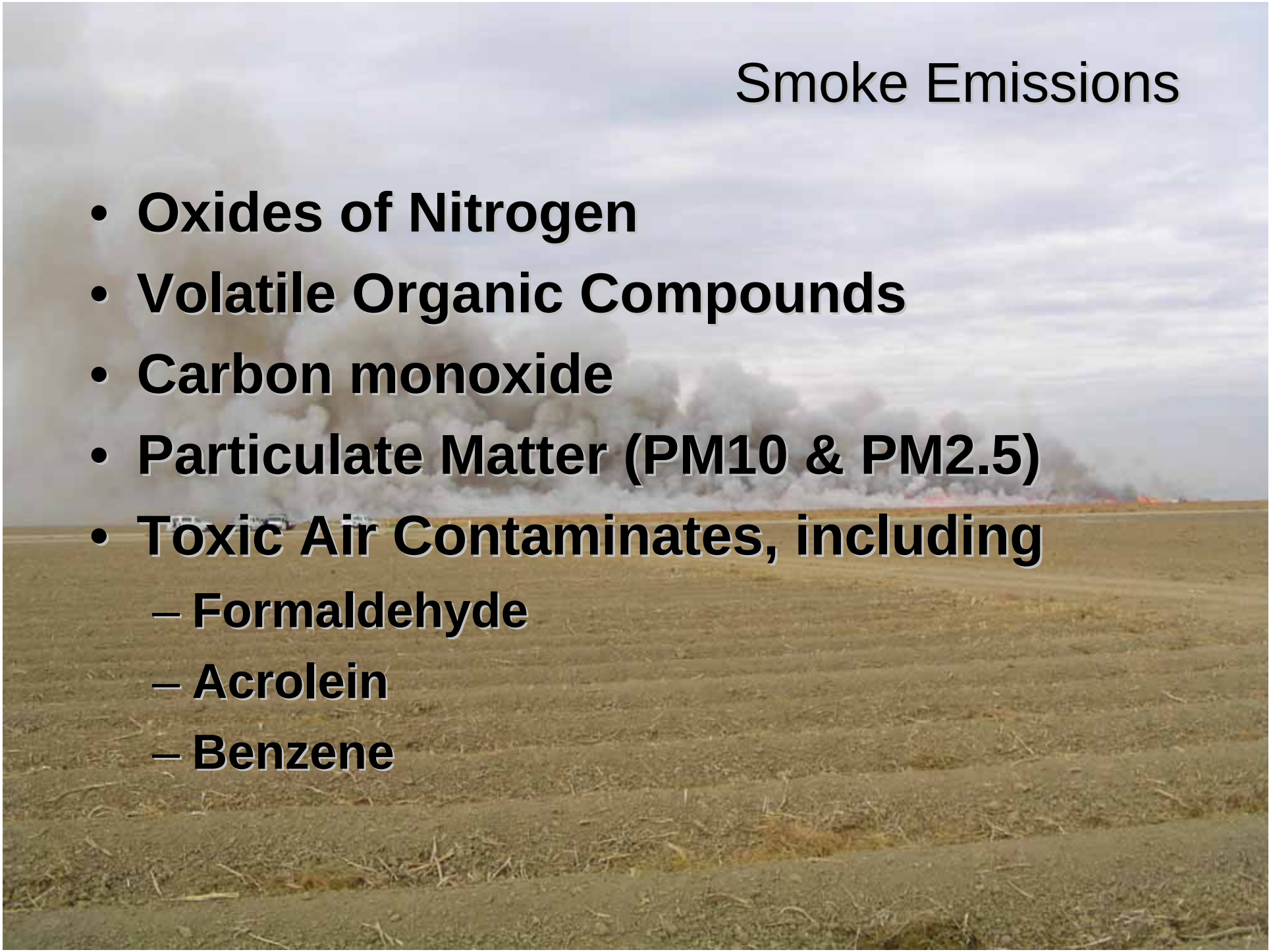
Open Burning

Ted Strauss
Supervising Air Quality Inspector
Compliance Department


Why should smoke
be managed?


There is no such thing as Clean Smoke!

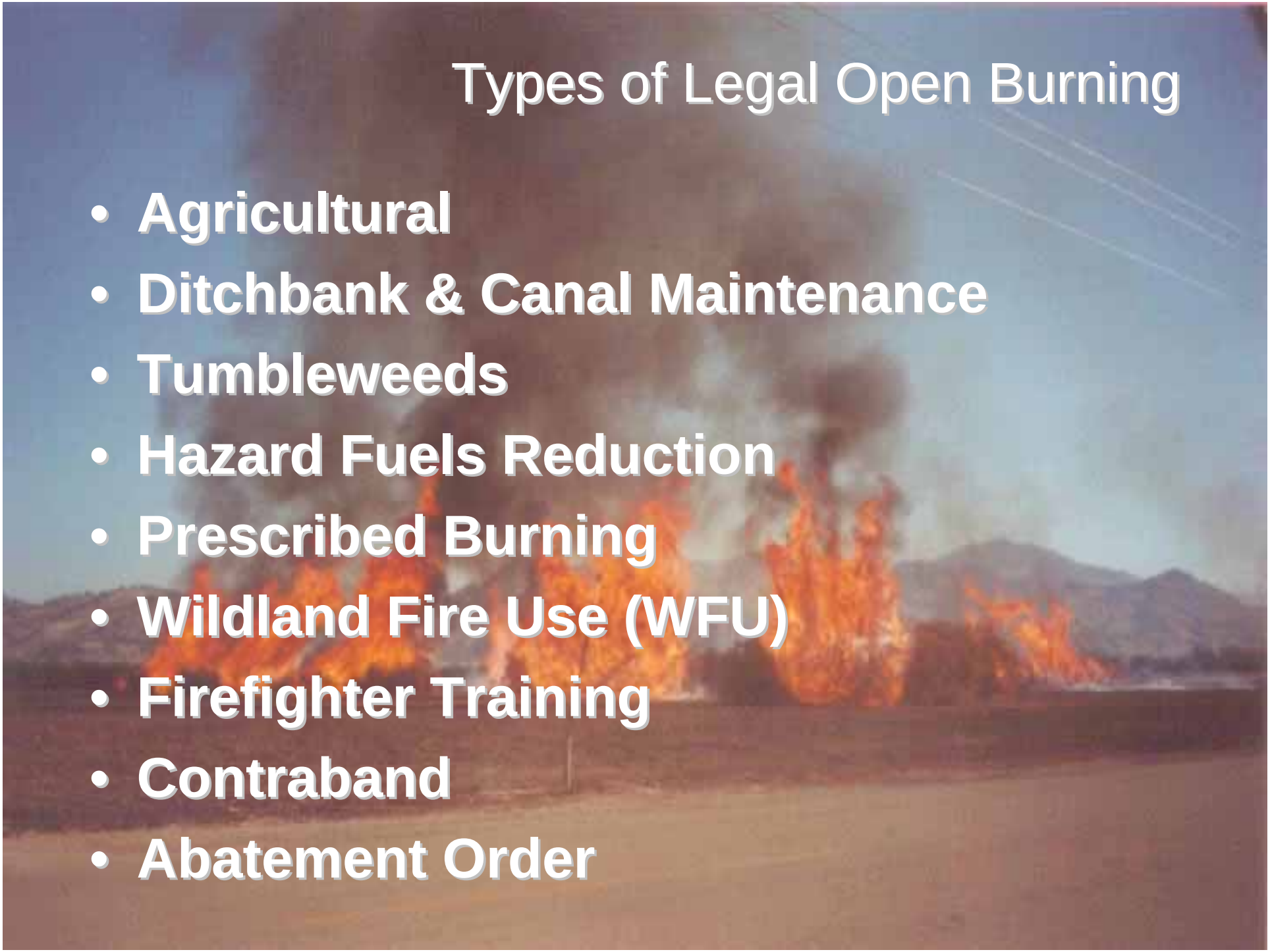


Smoke Emissions

- **Oxides of Nitrogen**
- **Volatile Organic Compounds**
- **Carbon monoxide**
- **Particulate Matter (PM10 & PM2.5)**
- **Toxic Air Contaminates, including**
  - **Formaldehyde**
  - **Acrolein**
  - **Benzene**

Open Burning Regulations

- California Health & Safety Code
  - Non-Ag Burning
  - Agricultural Burning & Prescribed Burning
- California Code of Regulations, Title 17
  - Agricultural Burning & Prescribed Burning
- District Rule 4103
  - Open Burning
- District Rule 4106
  - Prescribed & Hazard Reduction Burning
- District Rule 4102 - Nuisance

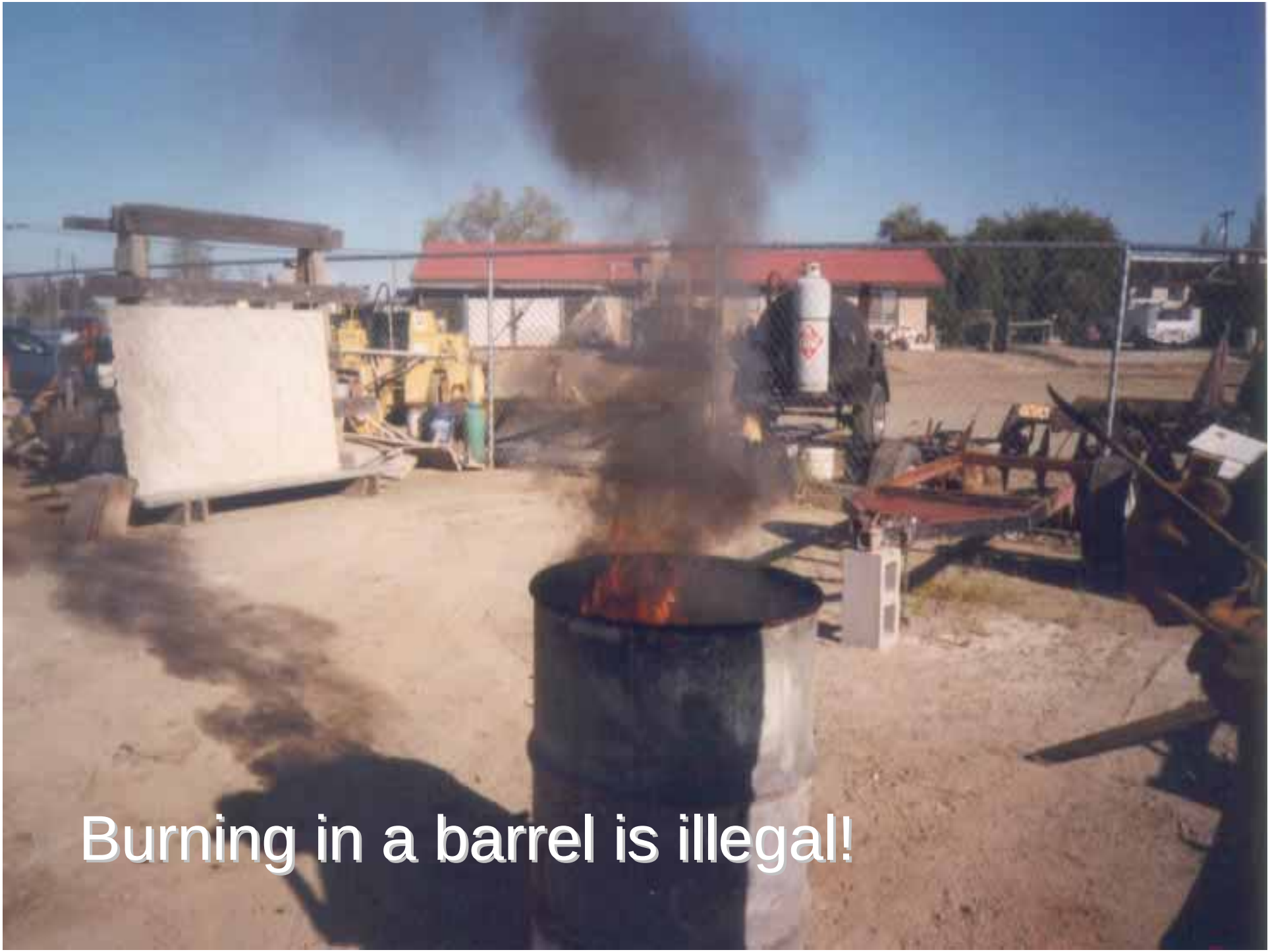


Types of Legal Open Burning

- **Agricultural**
- **Ditchbank & Canal Maintenance**
- **Tumbleweeds**
- **Hazard Fuels Reduction**
- **Prescribed Burning**
- **Wildland Fire Use (WFU)**
- **Firefighter Training**
- **Contraband**
- **Abatement Order**

Types of Illegal Open Burning

- **Garbage**
- **Landscaping**
- **Lumber**
- **Demolition Debris**
- **Plastics, Tires, Petroleum Products**
- **Anything manufactured or processed**


Burning in a barrel is illegal!

Smoke Management

- Burn Permits
- Burn Allocation System
- Fuel Types & Expected Emissions
- Burn Duration
- Accumulative Impacts
- Meteorological Conditions
- Forecasted Air Quality
- Sensitive Receptors
- Imminent & Substantial Economic Loss

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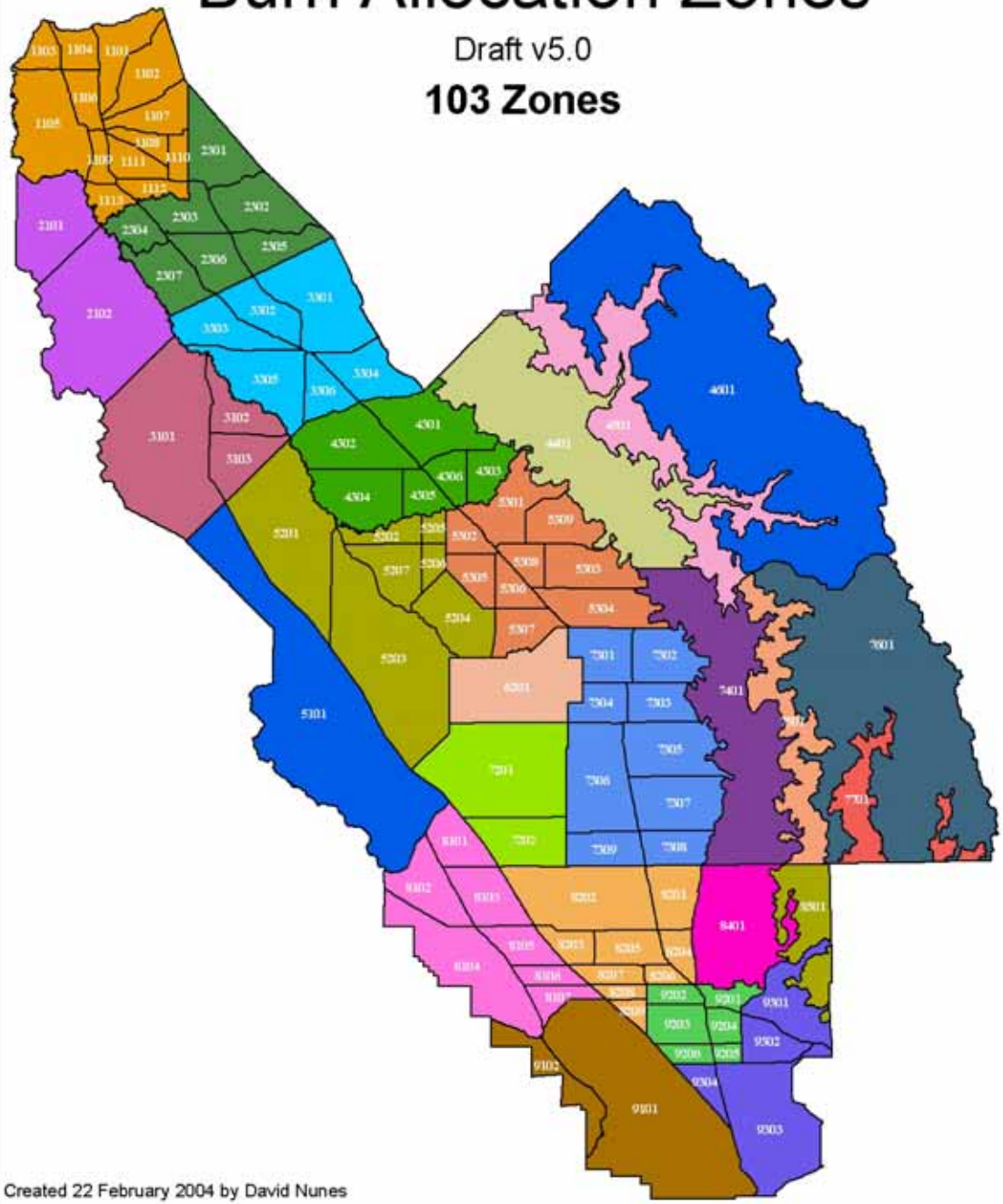
Burn Allocation Zones

Draft v5.0

103 Zones



Created 22 February 2004 by David Nunes

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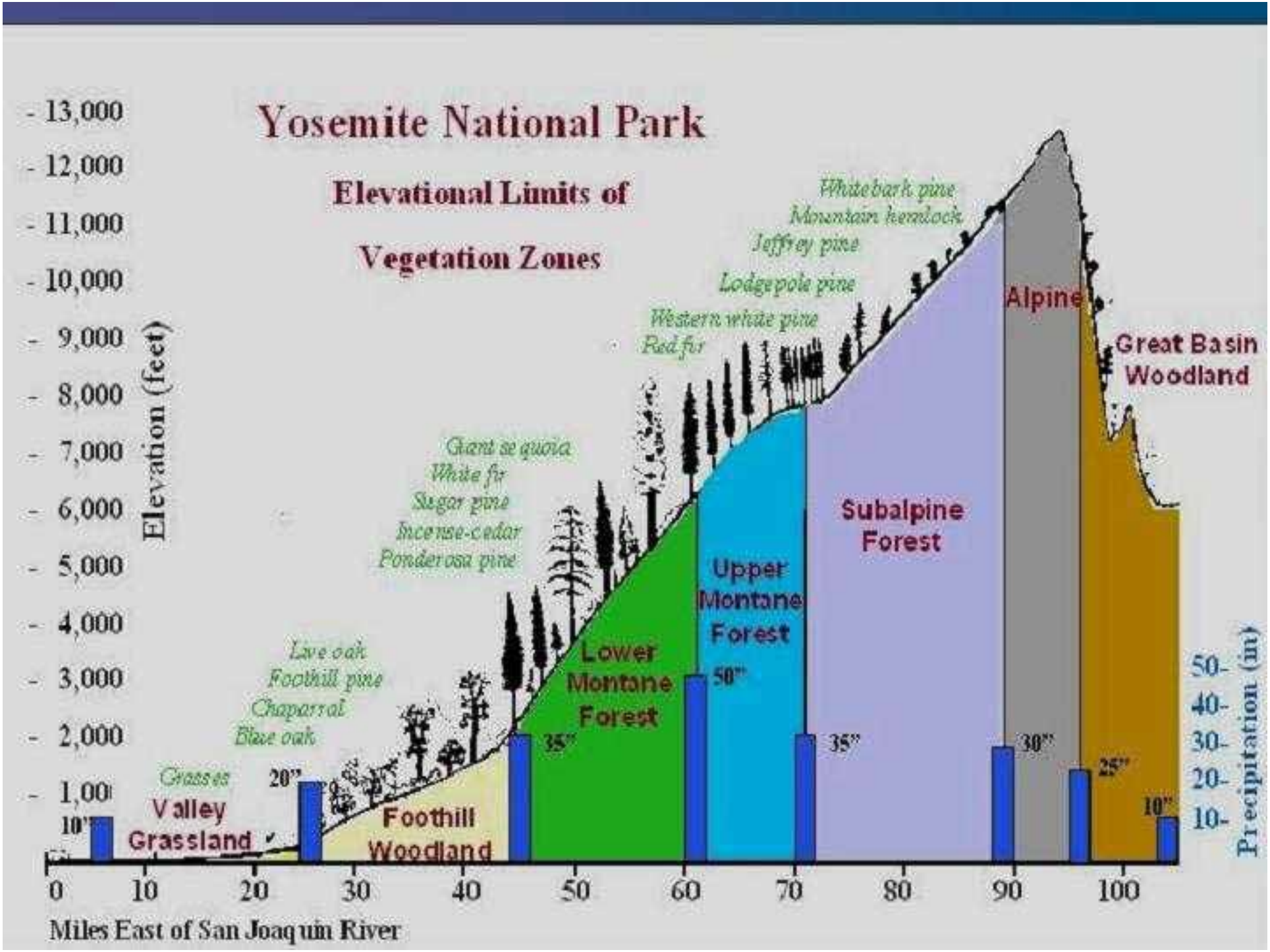
2005 Emissions Inventory

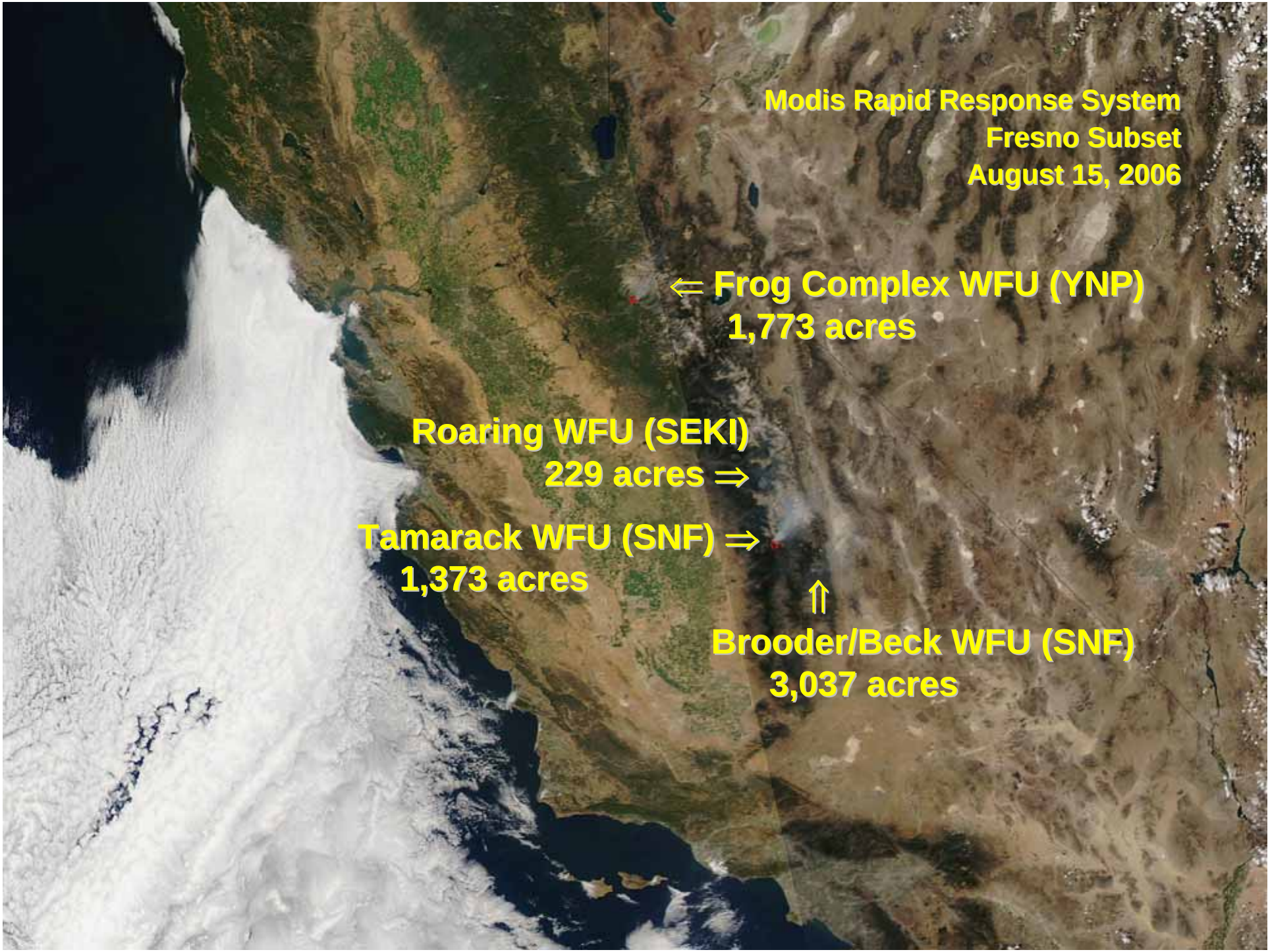
2005 Emissions SJV Air Basin (Tons/Year)

Category	Acres	PM10	PM2.5	NOx	SOx	VOC	CO
Total Inventory (ARB Est.)		**131,765**	**60,846**	**175,565**	**11,060**	**150,709**	**768,179**
Rx Burning	**12,382**	**1,467**	**1,295**	**537**	**849**	**834**	**10,294**
Ag Burning	**239,542**	**3,000**	**2,736**	**1,968**	**56**	**2,326**	**24,994**


Yosemite National Park
Elevational Limits of
Vegetation Zones
Elevation (feet)
13,000
12,000
11,000
10,000
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
Grasses
Valley Grassland
10"
Live oak
Foothill pine
Chaparral
Blue oak
20"
Foothill Woodland
Giant sequoia
White fir
Sugar pine
Incense-cedar
Ponderosa pine
35"
Lower Montane Forest
Whitebark pine
Mountain hemlock
Jeffrey pine
Lodgepole pine
Western white pine
Red fir
50"
Upper Montane Forest
35"
Subalpine Forest
30"
Alpine
25"
Great Basin Woodland
10"
Precipitation (in)
50
40
30
20
10
0
10
20
30
40
50
60
70
80
90
100
Miles East of San Joaquin River


Cabin Meadow Prescribed Burn
Sequoia National Park
NOV 9 2006


Brooder/Beck Wildland Fire Use
August 20, 2006


Modis Rapid Response System
Fresno Subset
August 15, 2006
⇐ Frog Complex WFU (YNP)
1,773 acres
Roaring WFU (SEKI)
229 acres ⇒
Tamarack WFU (SNF) ⇒
1,373 acres
⇑
Brooder/Beck WFU (SNF)
3,037 acres


Day Fire
September 2006

Alternatives


BEAR!

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Breakdowns

- **What is a breakdown?**
- **Why should a facility call in a breakdown?**
- **Who determines whether or not a breakdown is eligible for relief?**
- **Are there any other options?**

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Variances

- **What is a variance?**
- **What is the Hearing Board?**
- **What happens at a hearing?**
- **What's necessary for granting a variance?**

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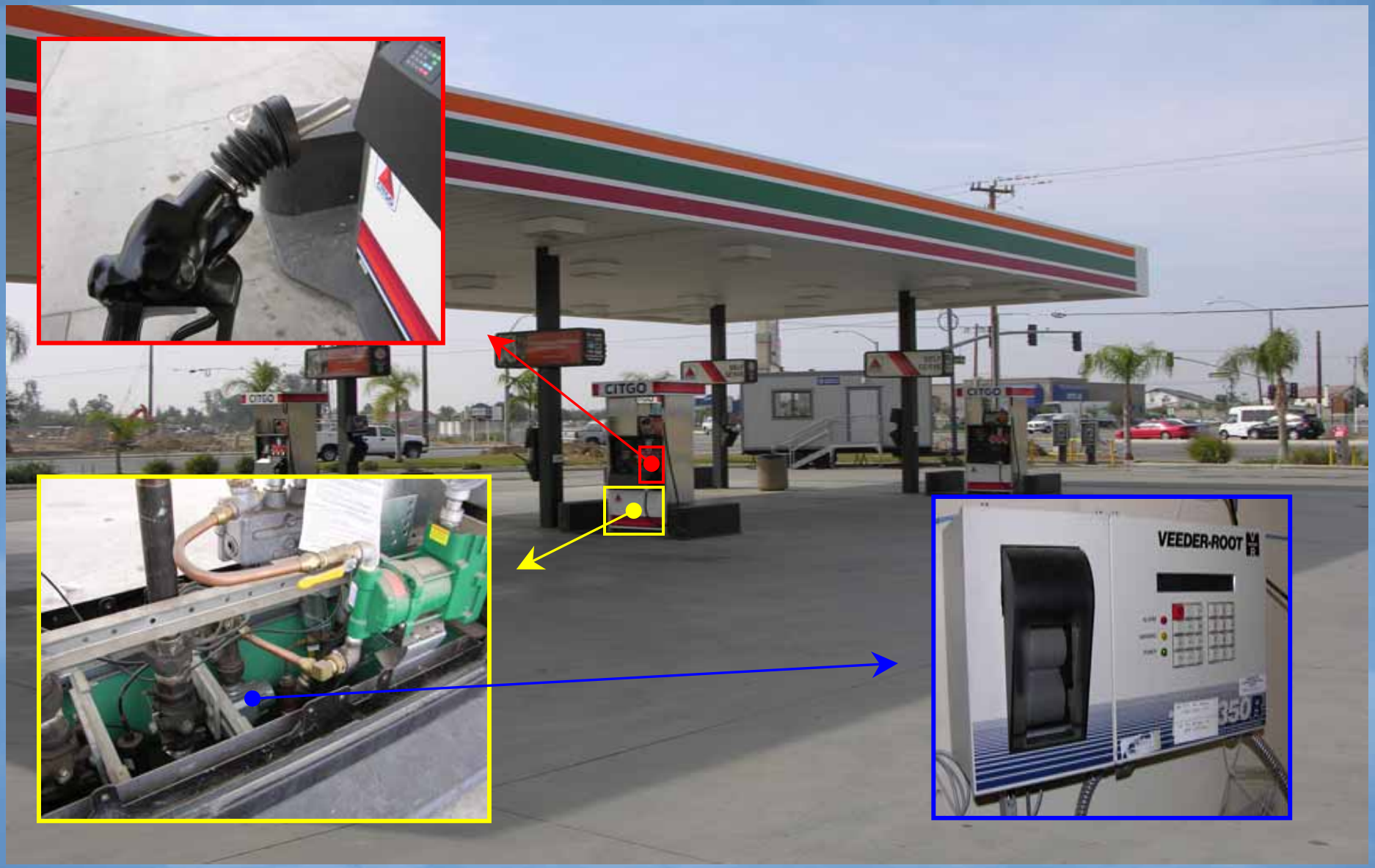

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Non-Ag Inspections

- **Most inspections are Non-Dairy**
- **District has more than 14,000 non-CAFO sources with more than 24,000 permits**
- **Wide range of source types**
- **Inspections include annuals, start-ups, complaints, breakdowns**

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Purpose of Inspections

- **Education**
- **Determine Compliance**

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Ensuring Effective Inspections

- **Inspections are:**
  - **Un-announced**
  - **Thorough**
  - **Annual, and not limited to known permits**

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Inspection Preparation

- **Pull permits and ATCs**
- **Pull previous reports, forms**
- **Prepare inspection and safety equipment**

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Inspection Procedure

- **Identify inspector**
- **Review records**
- **Determine status of ATCs**
- **Conduct inspection**


03/16/2006 14:48

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Inspection Procedure, Cont'd

- **Compare equipment and operation parameters to rules and PTO**
- **Check emissions**
- **Look for modifications**

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Post Inspection

- **Inform source of findings, especially problem areas**
- **Issue any paperwork**
- **Offer any help available**
- **Complete reports, process ATCs**

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- BREAK TIME!

Dairy Inspections

- Why do we regulate dairies?
  - Change in State Law (SB 700)
  - Generate substantial quantities of VOC and PM 10 emissions
  - Must come into attainment

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Ag Emissions (tons/day)

Type of Operation/Facility	PM_{10}	VOC	NOx
Tilling/Harvesting Operations	72.3	-	-
Unpaved Traffic Areas/Roads	18.0	-	-
Fugitive Windblown Dust	47.7	-	-
Ag Burnings (Pruning/field crops)	9.9	8.5	4.0
Ag Irrigation Engines	1.2	2.4	18.0
Livestock	7.0	62.4	-
Pesticides and Fertilizers		25.7	-
Mobile Farm Equipment	4.0	8.6	59.5
Total	160.1	107.6	81.5


Cows

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Fun Cow Facts

- Number of cows in SJV > 2,500,000
- Holstein milk cows weigh approx. 1,400 lbs
- Cows are milked for an average of 3-5 years
- Drink 30 gal of water and eat 95 lbs of feed/day
- Produce close to 7 gallons of milk each day
- Generate 80 to 140 pounds of manure per day
- Flatulate approx. 300 times/day

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Modern Dairies

- New dairies often have 2,000 to 10,000 Cows
- Can Cost $10,000,000 – $50,000,000
- Manure flushed from milk parlor and stalls
- As much wastewater as a small city
- May have 1,000 or more acres of farm land
- Mostly family owned

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Rule 4570

- Initial permits were very basic
- Applied to only large confined animal facilities
- Now have Rule 4570, permit conditions will be added to reflect mitigation measures
- Threshold also lowered, more dairies to be permitted
- Must apply for ATCs by 12/15/06

Permit Units

- Milking Parlor
- Cow Housing
- Liquid Manure Handling
- Solid Manure Handling
- Land Application of Manure
- Other – IC Engines, Gasoline Tanks, etc.

Milking Parlor

- Carousel (like a merry-go-round)
- Herringbone (cows back in at about a 45 degree angle)
- Parallel (cows back straight in)
- Usually these are double, i.e., double 12, 20, 24, etc.

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Cow Housing

- Free Stall Barn
- Open Corral

Liquid Manure Management

- Solids Separator
  - Mechanical
  - Settling Basins
- Storage/Treatment System
  - Lagoon
  - Storage Pond

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Mechanical Separator

- Removal of fibrous materials
- Solid removal rate of 20-50%
- Increases efficiency of treatment lagoon
- Separated solids can be composted or used for bedding or applied to land
- Reduction in odors from lagoon

Lagoons/Storage Ponds

- A lagoon is a earthen basin used to treat raw organic waste, and store treated solids and liquids.

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Solid Manure Handling

- Listed on permits and inspection report.
- How is manure dried and stored?
- What is it used for? On field? Bedding?

IC Engines

- Typically have a generator for the milking parlor and historically these have not had a permit.
- There may be other IC engines to operate wells.

Gasoline tanks

- Need to be on the permit.
- Typically are single walled tanks and would otherwise be exempt from normal GDF requirements.

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Conservation Management Practices Plan (CMPs)

- 6,400 sources currently
- Inspect once every 5 years
- Verify management practices that minimize PM

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Title V Permits Required

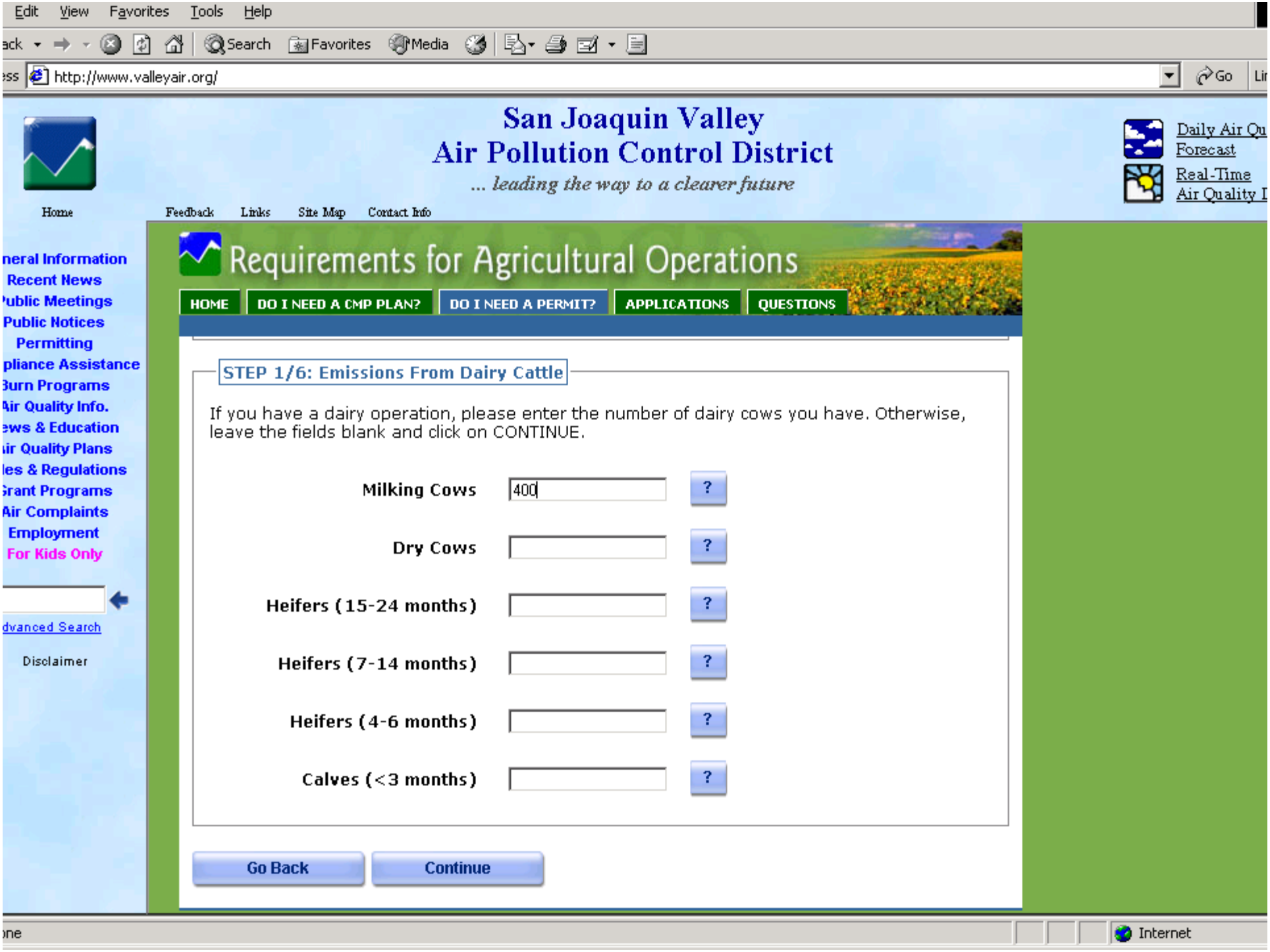
Emissions over 25 tons/year:

Generally:

> 750 Contiguous acres irrigated using stationary engines,

>18,000 head dairy, or

➢1,000,000 Birds


Edit View Favorites Tools Help
Search Favorites Media
http://www.valleyair.org/
Go
San Joaquin Valley
Air Pollution Control District
... leading the way to a clearer future
Daily Air Qu
Forecast
Real-Time
Air Quality I
Home
Feedback Links Site Map Contact Info
neral Information
Recent News
ublic Meetings
Public Notices
Permitting
pliance Assistance
Burn Programs
Air Quality Info.
ews & Education
ir Quality Plans
les & Regulations
Grant Programs
Air Complaints
Employment
For Kids Only
dvanced Search
Disclaimer
Requirements for Agricultural Operations
HOME
DO I NEED A CMP PLAN?
DO I NEED A PERMIT?
APPLICATIONS
QUESTIONS
STEP 1/6: Emissions From Dairy Cattle
If you have a dairy operation, please enter the number of dairy cows you have. Otherwise, leave the fields blank and click on CONTINUE.
Milking Cows
400
Dry Cows
Heifers (15-24 months)
Heifers (7-14 months)
Heifers (4-6 months)
Calves (<3 months)
?
Go Back
Continue
Internet

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Other Sources of Information

- District web site (www.valleyair.org) - Dairy permitting, BACT guidelines, emissions calculators, Rule
- Sheraz Gill – Our Dairy Expert in SJV – (559) 230-5900
- ARB web site: Dairy research
- ARB Contacts: Mike Fitzgibbon, Patrick Gaffney

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Penalty Resolution

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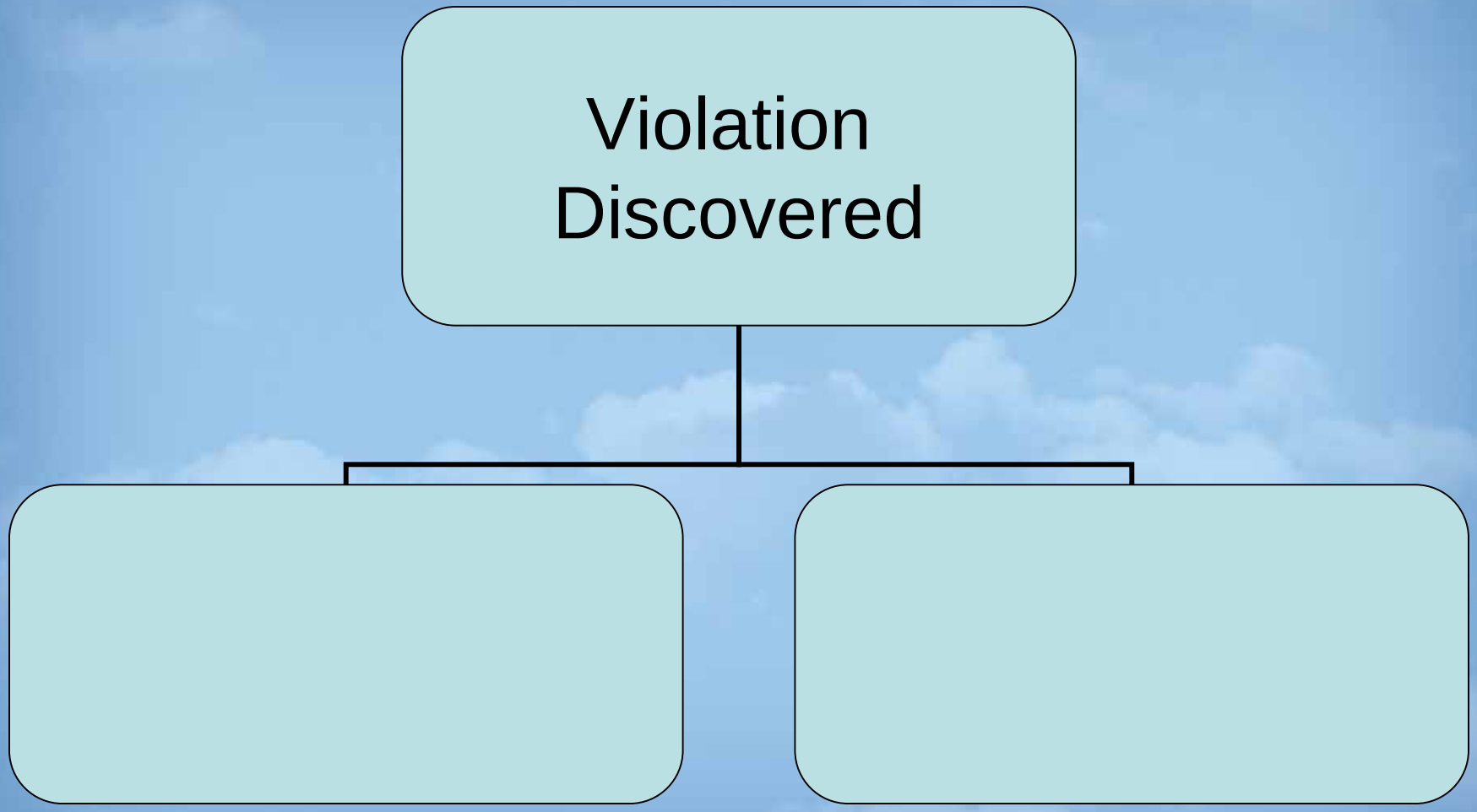

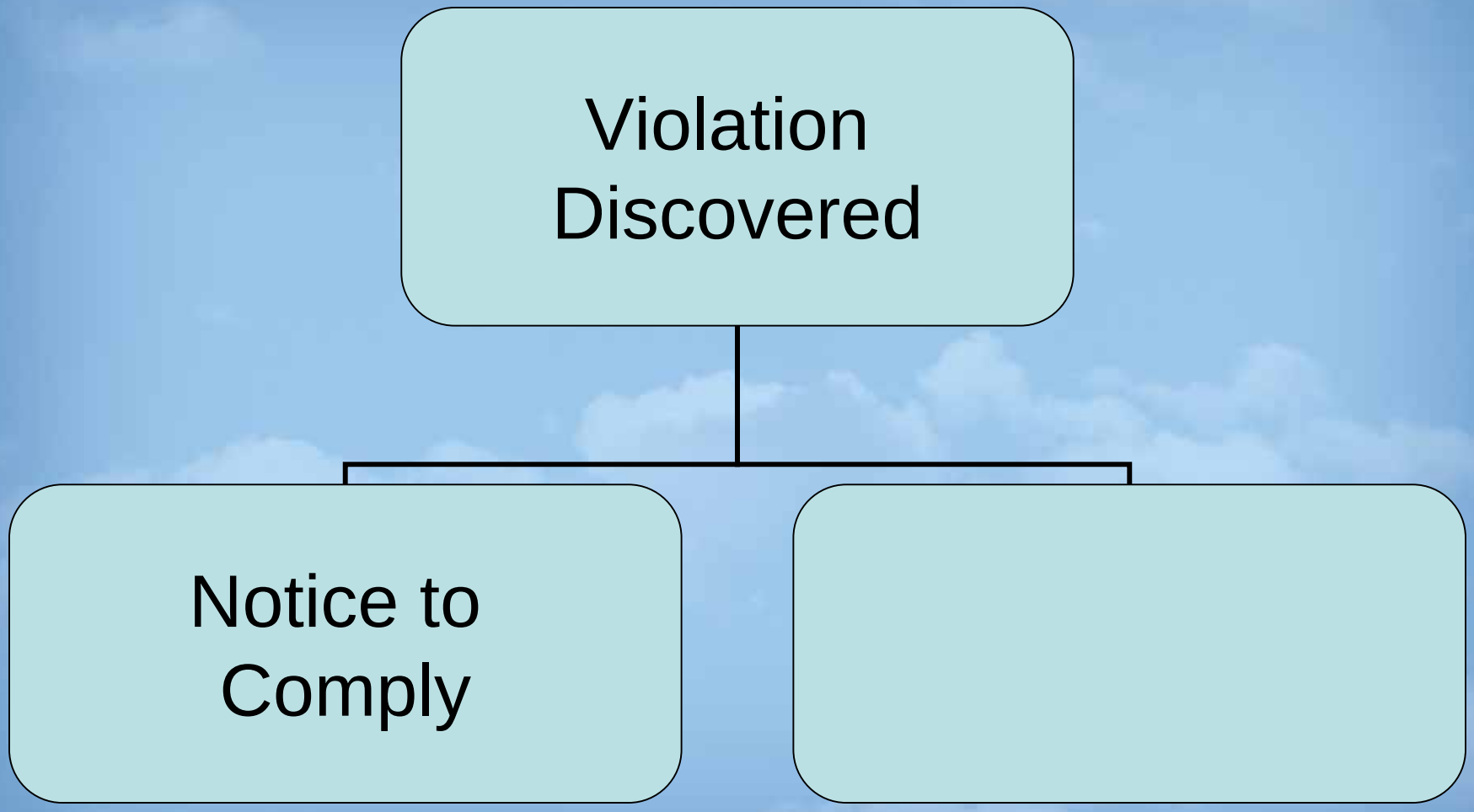
Violation Discovered
Notice to Comply

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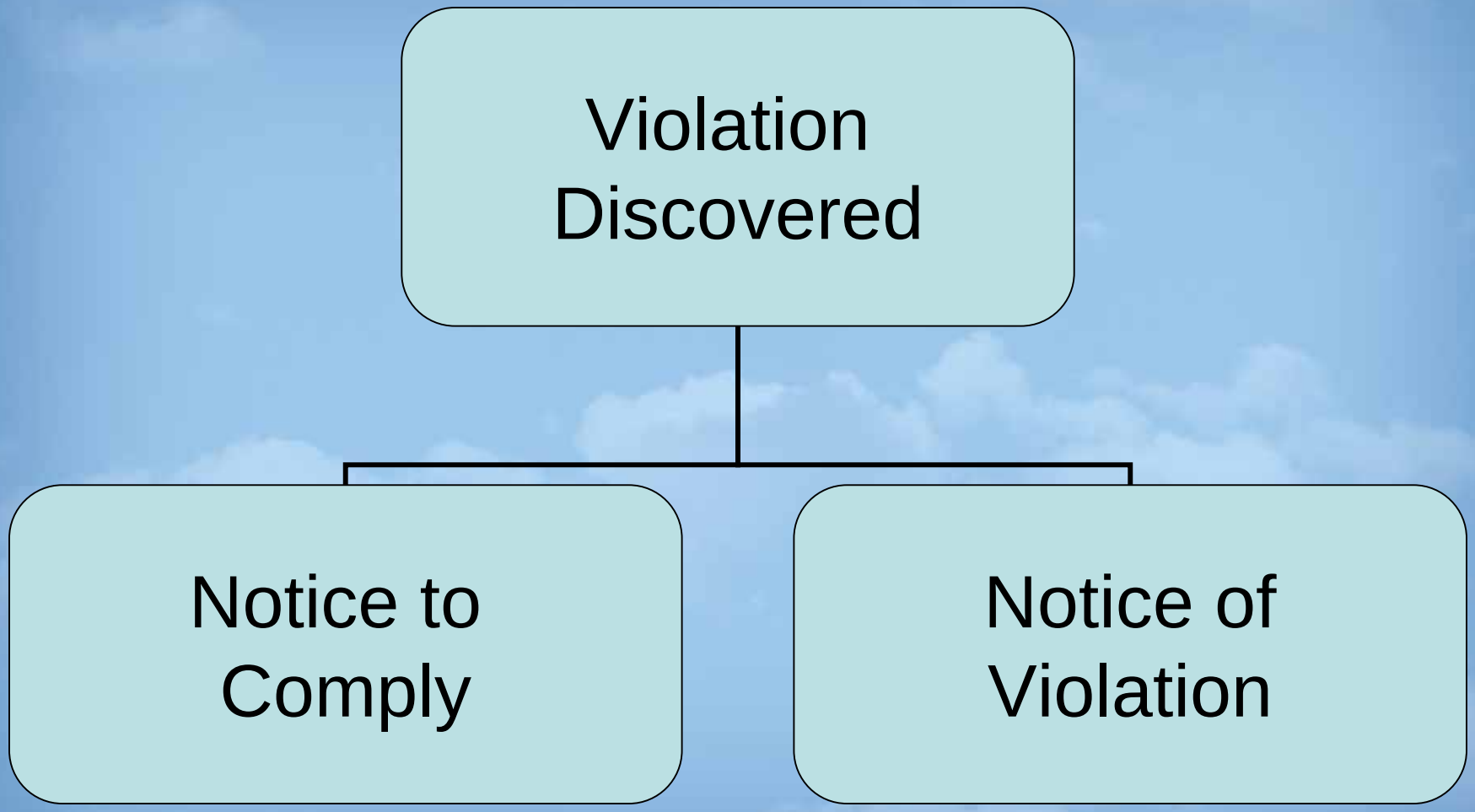

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Notice to Comply

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Notice to Comply

Minor violation

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Notice to Comply

Minor violation

No excess emissions

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Notice to Comply

Minor violation

No excess emissions

Does not hinder ability to determine compliance

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Notice to Comply

Minor violation

No excess emissions

Does not hinder ability to determine compliance

No failure of emissions standards

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Notice to Comply

Minor violation

No excess emissions

Does not hinder ability to determine compliance

No failure of emissions standards

No economic benefit

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Notice to Comply

Minor violation

No excess emissions

Does not hinder ability to determine compliance

No failure of emissions standards

No economic benefit

Not chronic

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Notice to Comply

Minor violation

No excess emissions

Does not hinder ability to determine compliance

No failure of emissions standards

No economic benefit

Not chronic

Not willful, intentional

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Notice to Comply

Minor violation

No excess emissions

Does not hinder ability to determine compliance

No failure of emissions standards

No economic benefit

Not chronic

Not willful, intentional

No nuisance

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Notice of Violation

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Notice of Violation

Report reviewed by Supervisor

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Notice of Violation

Report reviewed by Supervisor

Dropped

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Notice of Violation

Report reviewed by Supervisor

Dropped

or

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Notice of Violation

Report reviewed by Supervisor

Dropped

or

Proceed to penalty stage

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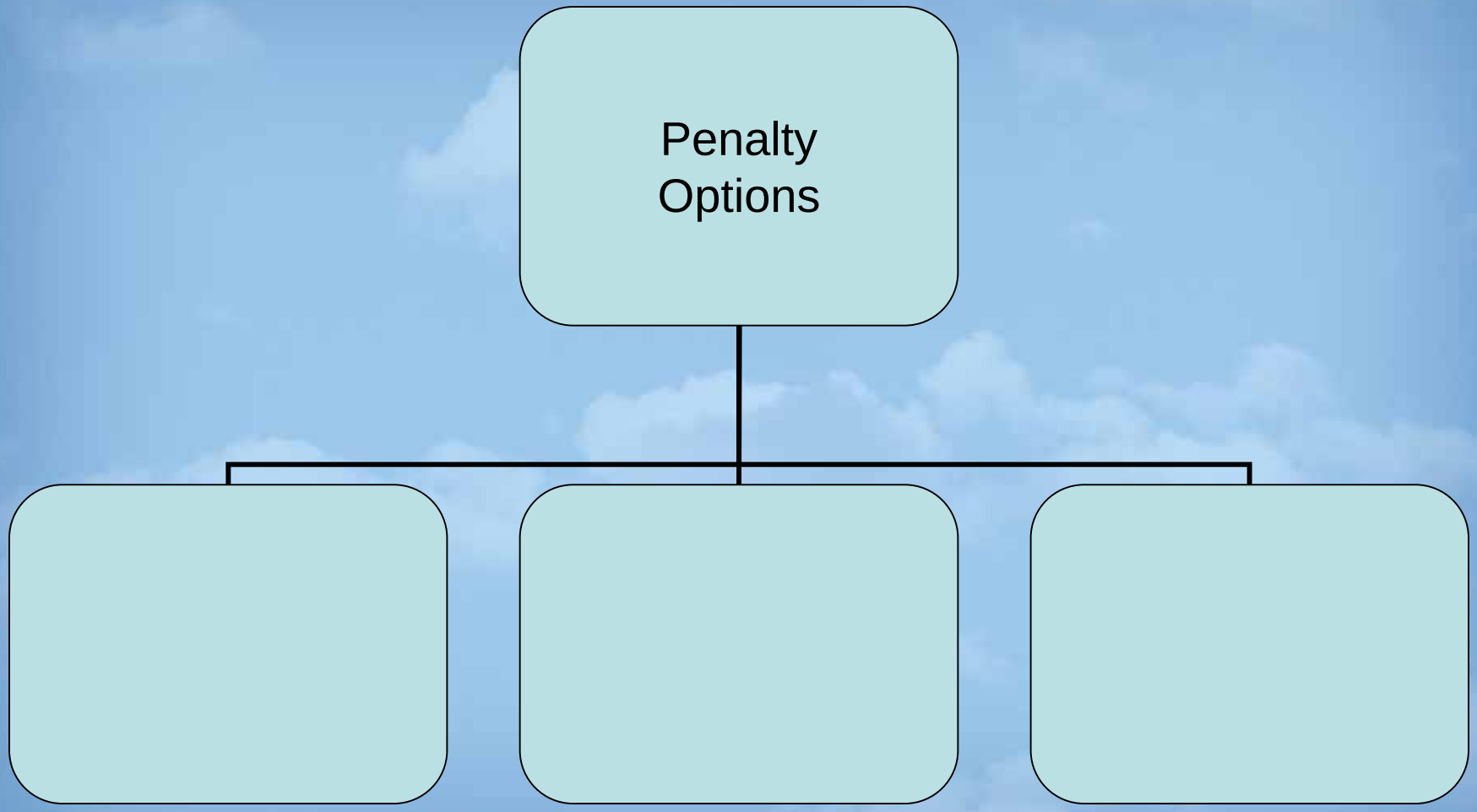

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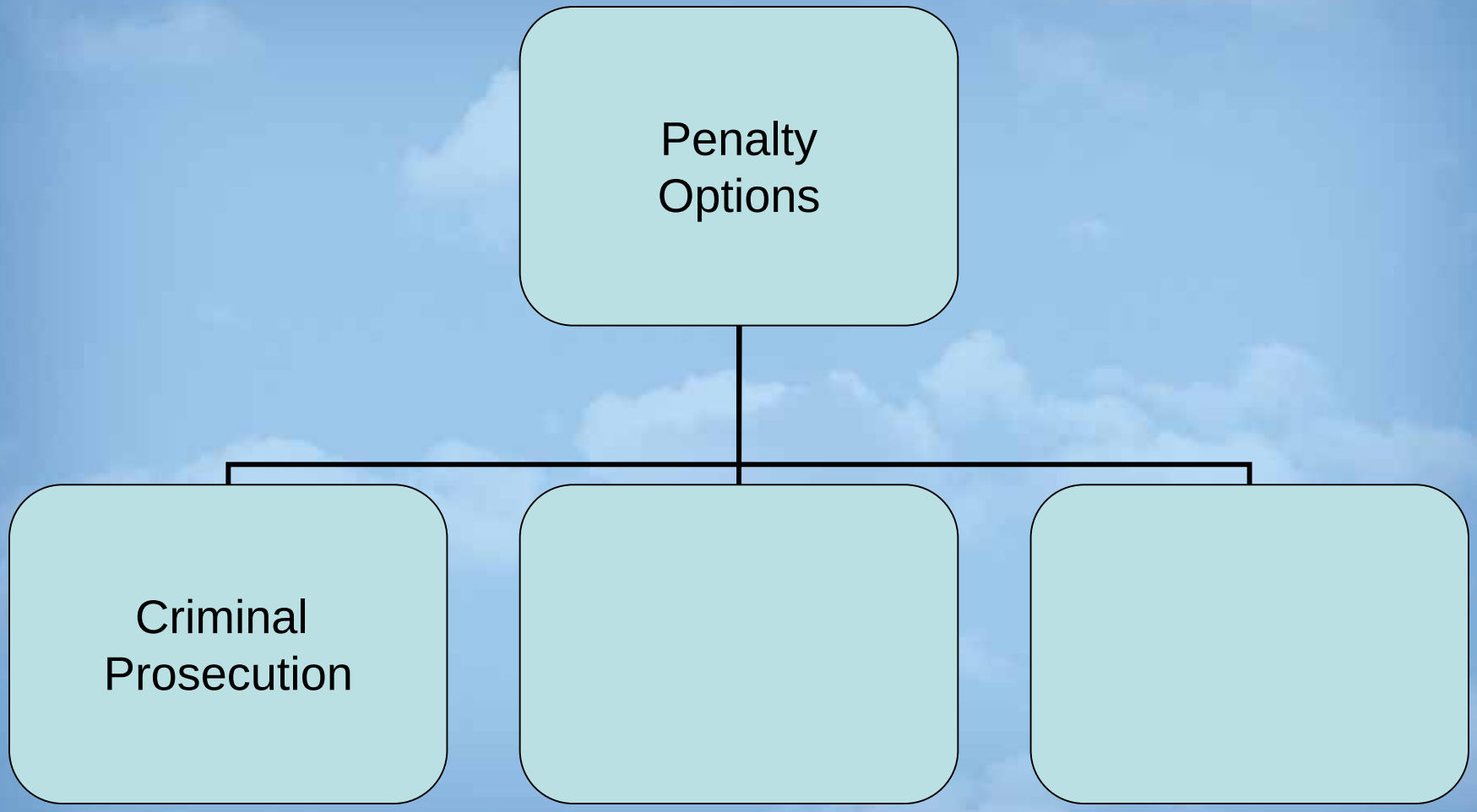

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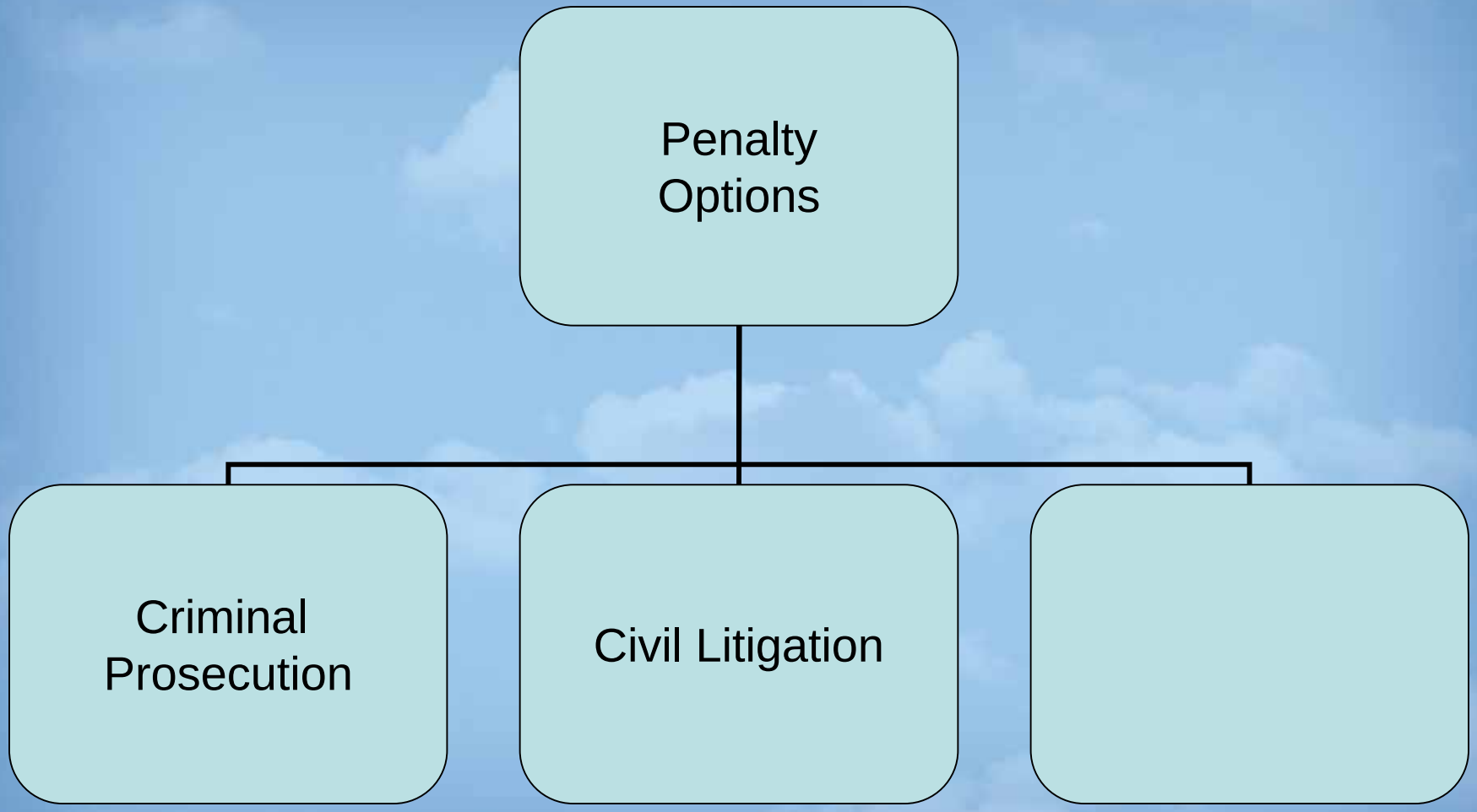

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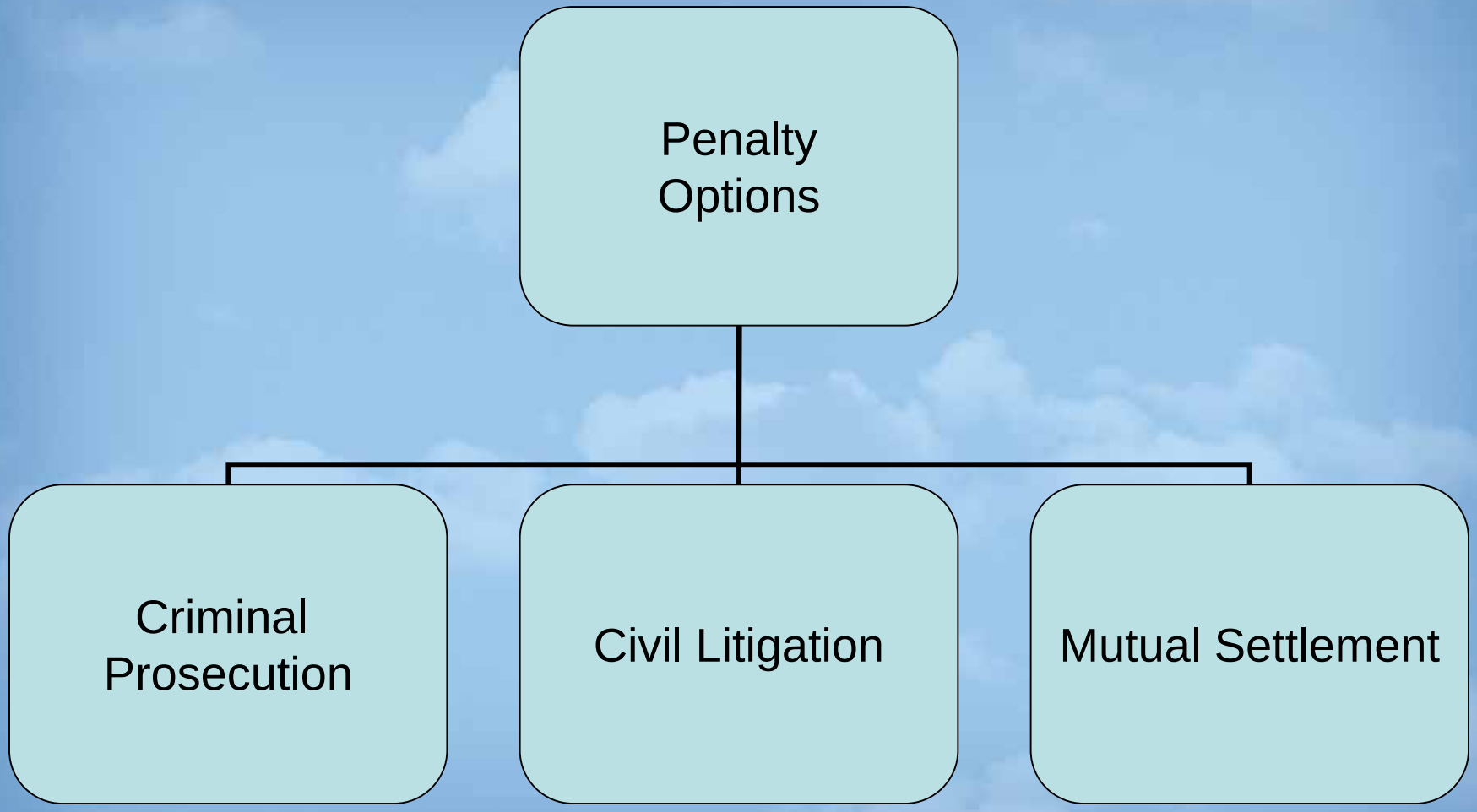

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Mutual Settlement

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Mutual Settlement

Penalty evaluation

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Mutual Settlement

Penalty evaluation

Settlement offer made

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Mutual Settlement

Penalty evaluation

Settlement offer made

Negotiations

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Mutual Settlement

Penalty evaluation

Settlement offer made

Negotiations

Settled

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Penalty Evaluation

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Questions?

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CLASS EXERCISE

- Break out sessions
- Break into groups
- Review inspection report
- Develop enforcement response
- Each group discuss their findings with class