



Prescribed Burning: Smoke Management Regulations

Ann Hobbs

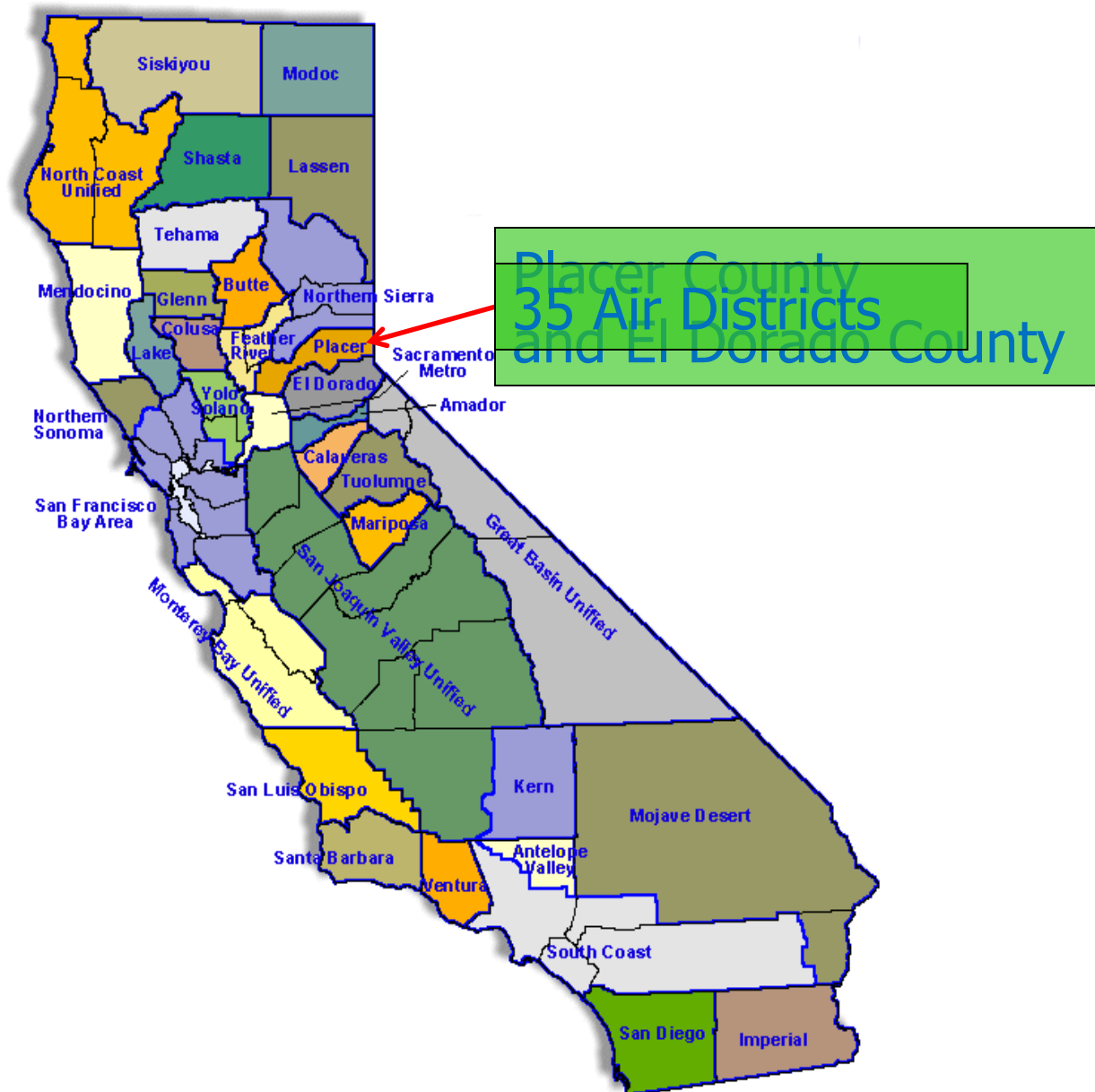
Burn Program Coordinator

Placer County Air Pollution Control District

Air Pollution Regulatory Framework

- ◆ Federal – U.S. Environmental Protection Agency
 - ◆ Clean Air Act (1970 with amendments in 1990)
- ◆ State – California Air Resources Board
 - ◆ California Clean Air Act – 1988
- ◆ Local – Air Pollution Control & Air Quality Management Districts
 - ◆ Local Rules and Regulations
 - ◆ Stationary sources of air pollution

CALIFORNIA AIR DISTRICTS



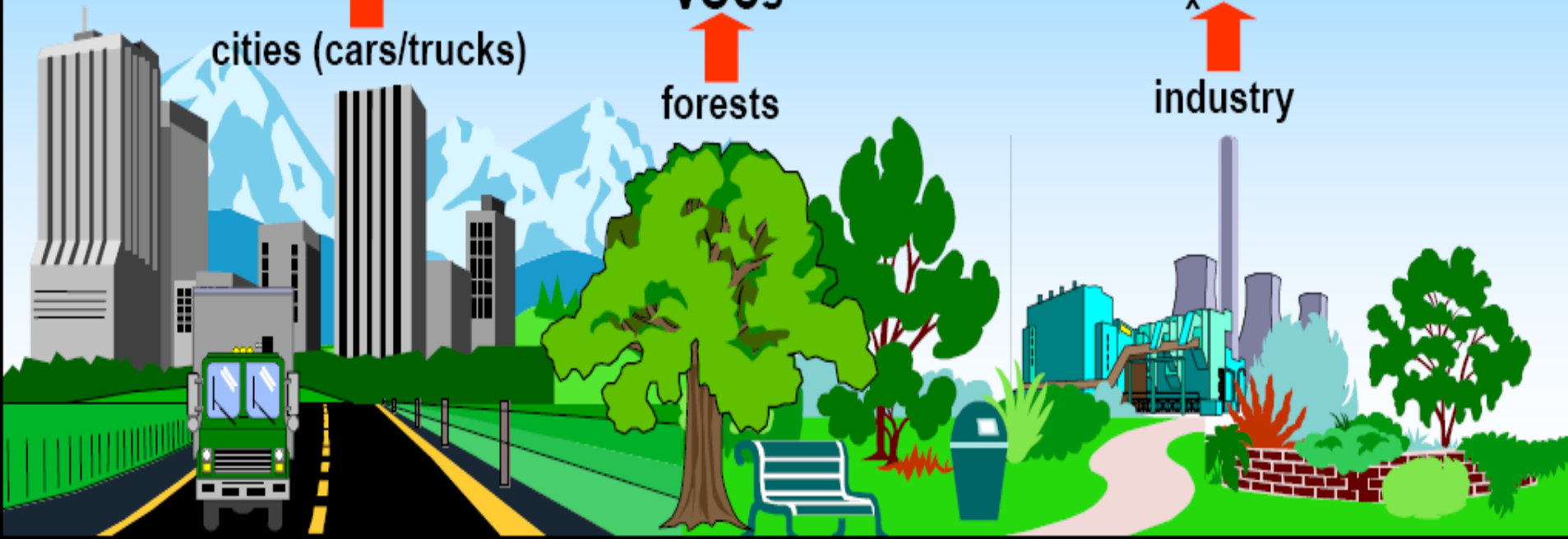
MAJOR OZONE PRECURSORS SOURCES



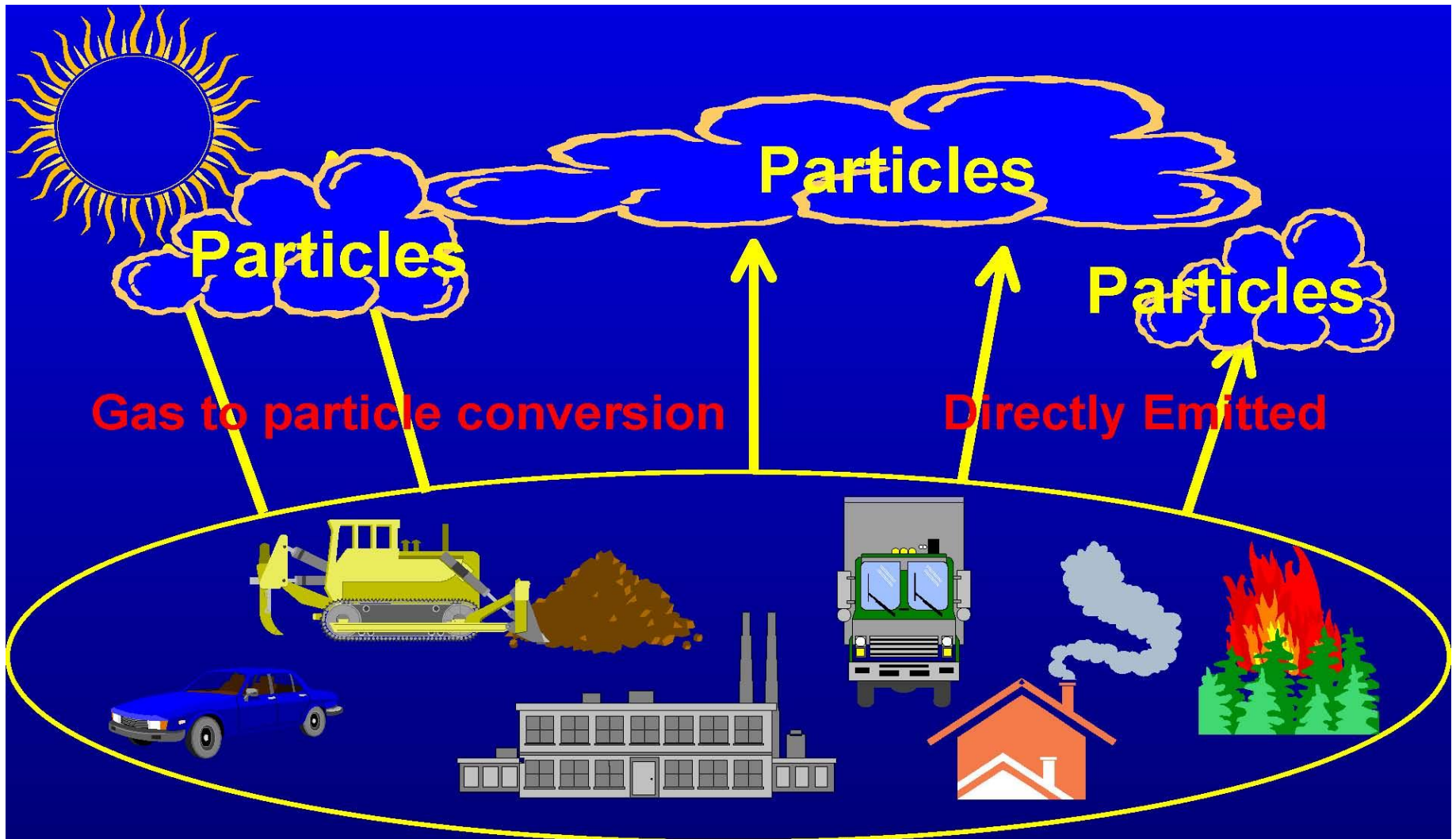
NO_x & VOCs
↑
cities (cars/trucks)

VOCs
↑
forests

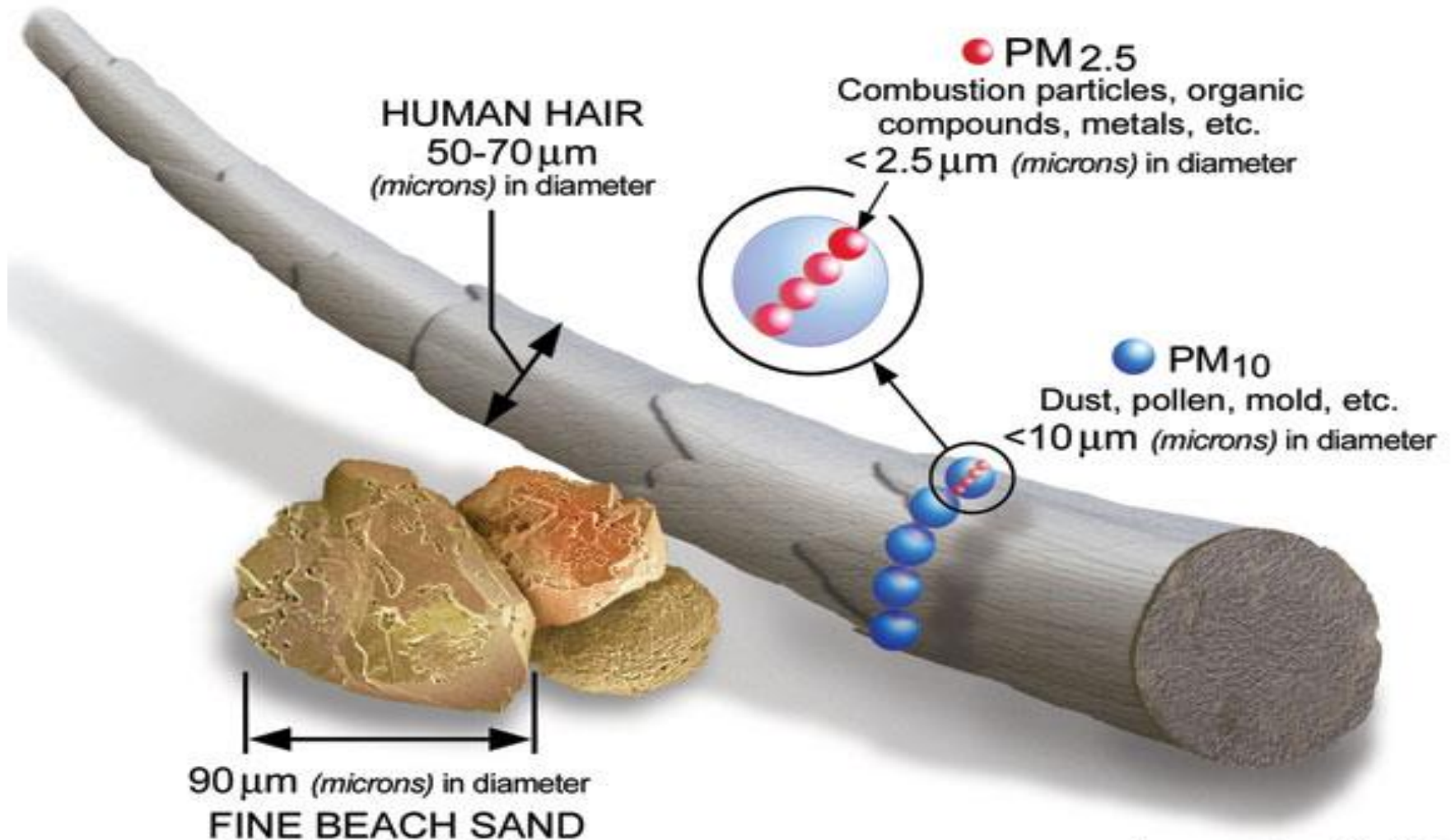
NO_x & VOCs
↑
industry



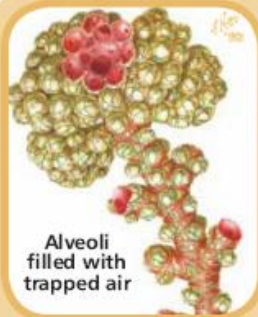
MAJOR PM SOURCES



PARTICLE SIZE



HOW POLLUTANTS AFFECT OUR HEALTH



Alveoli filled with trapped air

How Pollutants Cause Symptoms

Effects on Lung Function

- Narrowing of airways (bronchoconstriction)
- Decreased air flow

Airway Inflammation

- Influx of white blood cells
- Abnormal mucus production
- Fluid accumulation and swelling (edema)
- Death and shedding of cells that line airways

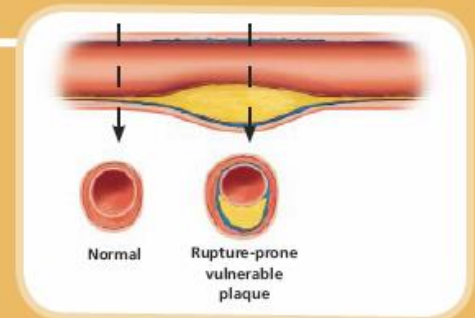


Increased Susceptibility to Respiratory Infection

How Pollutants May Cause Symptoms

Vascular Inflammation

- Increased risk of blood clot formation
- Narrowing of vessels (vasoconstriction)
- Increased risk of atherosclerotic plaque rupture



Air District Programs

- ◆ **Permitting and Inspections**
- ◆ **CEQA and Land Use Mitigation**
- ◆ **Air Quality Planning**
- ◆ **Incentive Programs**
- ◆ **Public Information**
- ◆ **Smoke Management Program**



Agricultural Burning Regulations

California Health & Safety Code Article 3 – Section 41850
Agricultural Burning administered through the Title 17 California
Code of Regulations-Subchapter 2 Smoke Management Guidelines
for Agricultural and Prescribed Burning

Sacramento Valley Air
Basin Smoke
Management Program

Agricultural Burning
including the growing of
crops or raising of fowl or
animals or disease or pest
prevention.

Phone communication
between District Staff

PFIRS for Rx Burns,
Ag Burns, and
Wildfire Information

Prescribed burning is the
planned application and
confinement of fire to
wildland fuels on lands
selected in advance of that
application to achieve specific
identified objectives.
Wildland Vegetation
Management
Forest Management
Range Improvement
Wildlife Habitat

PFIRS for Rx
burns

Program Objectives

- ◆ Minimize smoke impacts to the public and the air shed
 - ◆ Allows for the continuation of agricultural and prescribed burning as a resource management tool
 - ◆ Provides increased opportunities for agricultural and prescribed burning
 - ◆ Helps in the prevention of catastrophic wildfires by reducing vegetation through burning

Title 17 CCR Smoke Management Guidelines

- ◆ Required each air district to adopt a Smoke Management Program
- ◆ Planning: submits a Smoke Management Plan (SMP)
- ◆ Permitting: Air District may issue a Burn Permit or a different type of approval for the SMP
- ◆ Authorization: Based on the burn day status, the Air District authorizes burning
- ◆ Use PFIRS to manage our burn program

What is PFIRS ?

Prescribed **F**ire **I**nformation **R**eporting **S**ystem

- ◆ Communication tool
- ◆ Interactive mapping
- ◆ Not a regulatory tool

PFIRS FRAMEWORK

Communication Tool

- ◆ **Map of current projects**
 - ◆ **What burns are planned?**
 - ◆ Land Management Agencies (200+)
 - ◆ What burns are occurring?
 - ◆ Federal, state, local, private
 - ◆ **Where is smoke coming from?**
 - ◆ **Air Quality Regulators (60+)**
 - ◆ If public observes smoke, they can
 - ◆ CARB, Air Districts
 - ◆ look at the map and see if it's coming from a prescribed burn



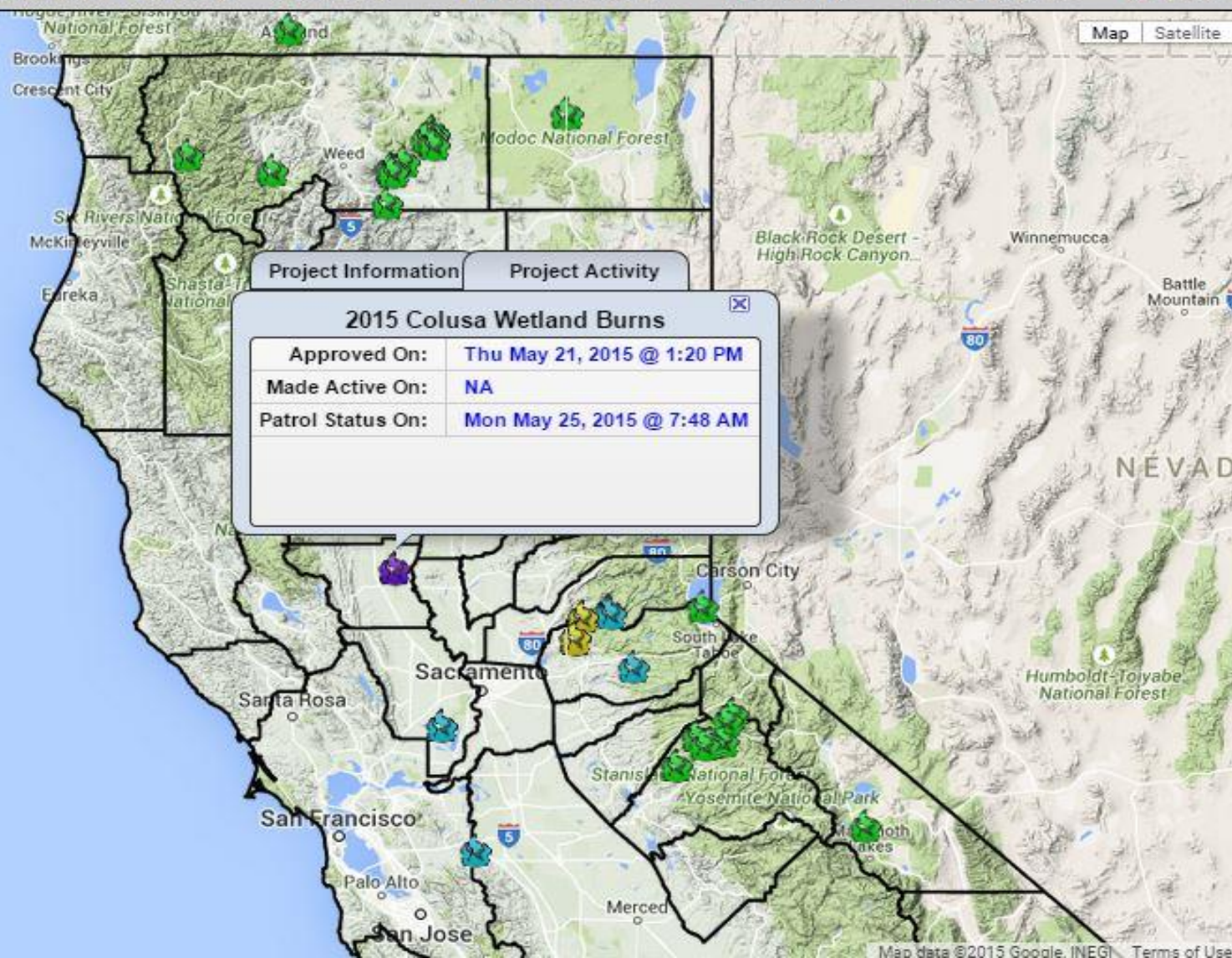
2016 Pilot Hill Prescribed Burn

Current Ignitions in PFIRS

Username: Password: [Log In](#) [Forgot Password?](#)

View Ignitions By: Agency Burn Status Select Start Date: Select End Date: [View](#) [Larger Map](#)

NPS USFS BLM USFWS CalFire CA Parks Tahoe Conservancy Local Fire Local Non-Fire Private



2015 Colusa Wetland Burns

Approved On:	Thu May 21, 2015 @ 1:20 PM
Made Active On:	NA
Patrol Status On:	Mon May 25, 2015 @ 7:48 AM

PFIRS Overview

- ◆ Land Managers Use
- ◆ Request An Account
- ◆ Fill in SMP application
- ◆ Review SMP
- ◆ Approve SMP
- ◆ Approve Ignitions



Request an Account

PFIRS

Prescribed Fire Information Reporting System

Front Page

ARB Products

Local Agencies

Support

Request a PFIRS Account

Password:

Log In

Forgot Password?

• About PFIRS

• Request Account

• Forgot Password?

• Contact Administrator

Thank you for your interest in PFIRS. To request a new account, you

- Your Name
- Address (Street, city, state, zip code)
- Phone Number
- Email Address
- Organization

All account requests will be forwarded to the PFIRS staff and your local air district for approval. If you experience any problems, please contact Jason Branz at jbranz@arb.ca.gov.

If you already have a PFIRS account and cannot login, please use either the [Forgot Password](#) form or the [PFIRS Contact](#) form to retrieve your account information.

Are you a Land Manager, or an Air District representative?

Land Manager

I am requesting a Land Manager account.

Air District

I am requesting an Air District staff account.

Accessing Your Account

PFIRS

Prescribed Fire Information Reporting System

Front Page

ARB Products

Local Agencies

Support

Current Ignitions in PFIRS

Username:

Password:

Log In

Forgot Password?

View Ignitions By:

Agency

Burn Status

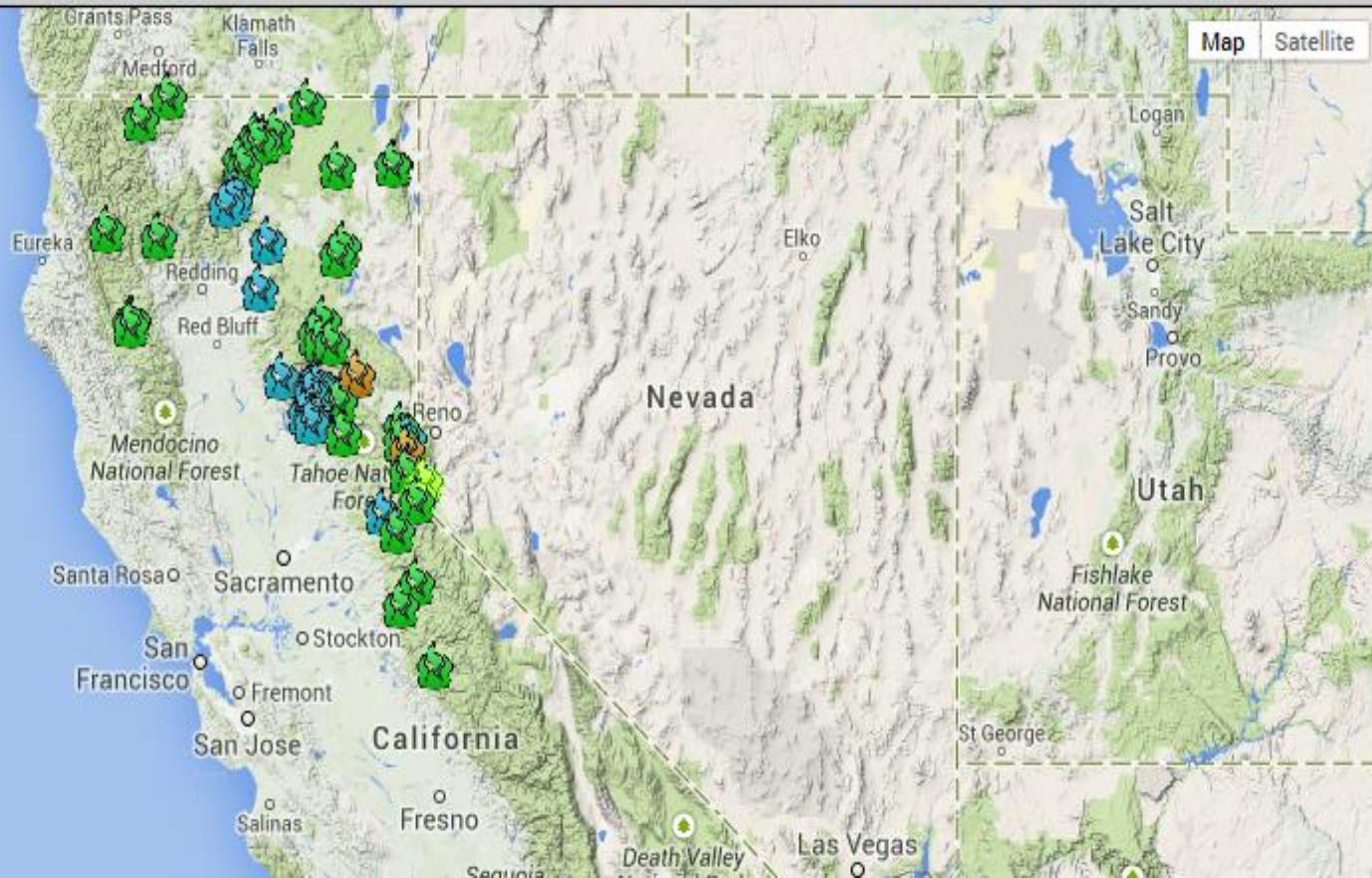
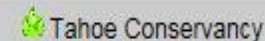
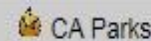
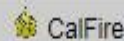
Select Start Date:

12/01/2012

Select End Date:

12/13/2012

View



Short Form SMP

- ◆ Contact Information
- ◆ Project Location Information
- ◆ Landowner Information
- ◆ Project Information
- ◆ Air District Information
- ◆ Smoke Sensitive Areas
- ◆ Preparer's Statement
- ◆ Needs to be approved before burning can take place.

Technical Improvements Tools From PFIRS

- ◆ Control Burn Notices (aka burn day)
- ◆ Sacramento Valley Acreage Allocation
- ◆ Fire Information Map
 - ◆ Integration of Air Monitoring Information - Statewide
 - ◆ Wildfire Information - Wildfire smoke affects allocation

PFIRS: ARB Products

PFIRS Prescribed Fire Information Reporting System

Front Page **ARB Products** Local Agencies

Current Ignitions

View Ignitions By: NPS USFWS CalFire CA Parks Tahoe Conservancy Private

Username: Password:

Select Start Date: Select End Date:

- > Controlled Burn Notices
- > Sac Valley Allocation
- > Fire Information Map

Map Satellite

42.61779143282346, -125.04638671875

Show Air Districts Show Webcams

Map data ©2014 Google, INEGI Terms of Use

Google

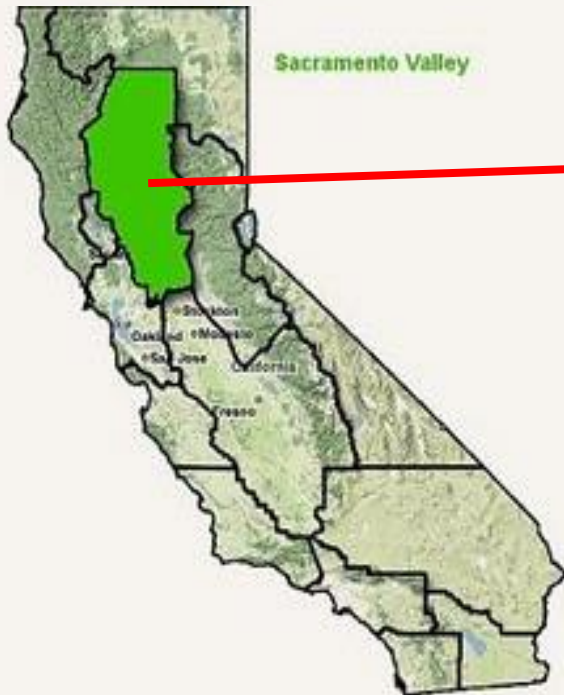
The image shows a screenshot of the PFIRS (Prescribed Fire Information Reporting System) web application. The main content is a map of California and surrounding areas, including Nevada, Utah, and Arizona. The map is overlaid with various fire-related information, such as fire districts and webcams. The interface includes a navigation menu at the top, a search bar, and a sidebar with navigation controls. A red box highlights the 'ARB Products' menu, which is expanded to show three options: 'Controlled Burn Notices', 'Sac Valley Allocation', and 'Fire Information Map'. The 'Fire Information Map' option is selected, and the map displays a grid of fire districts. The map also shows major cities and geographical features. The bottom of the screen displays the Google logo and the coordinates 42.61779143282346, -125.04638671875.

Page is updated by 3 p.m. each day

[Entire State](#)[North Coast](#)[NE Plateau](#)[Sac Valley](#)[Mtn Counties](#)[San Joaquin](#)[Lake Tahoe](#)[Lake County](#)[Bay Area](#)[NC Coast](#)[SC Coast](#)[Great Basin](#)[Mojave Desert](#)[Salton Sea](#)[South Coast](#)[San Diego](#)

The notices on this page do not necessarily reflect the burn status of your local area. You must contact your local fire permit official (local air district or fire agency) for final authorization to burn.

Fire Weather Links: [California](#) | [Oregon](#) | [Nevada](#) | [Arizona](#)



Sacramento Valley

Sacramento Valley

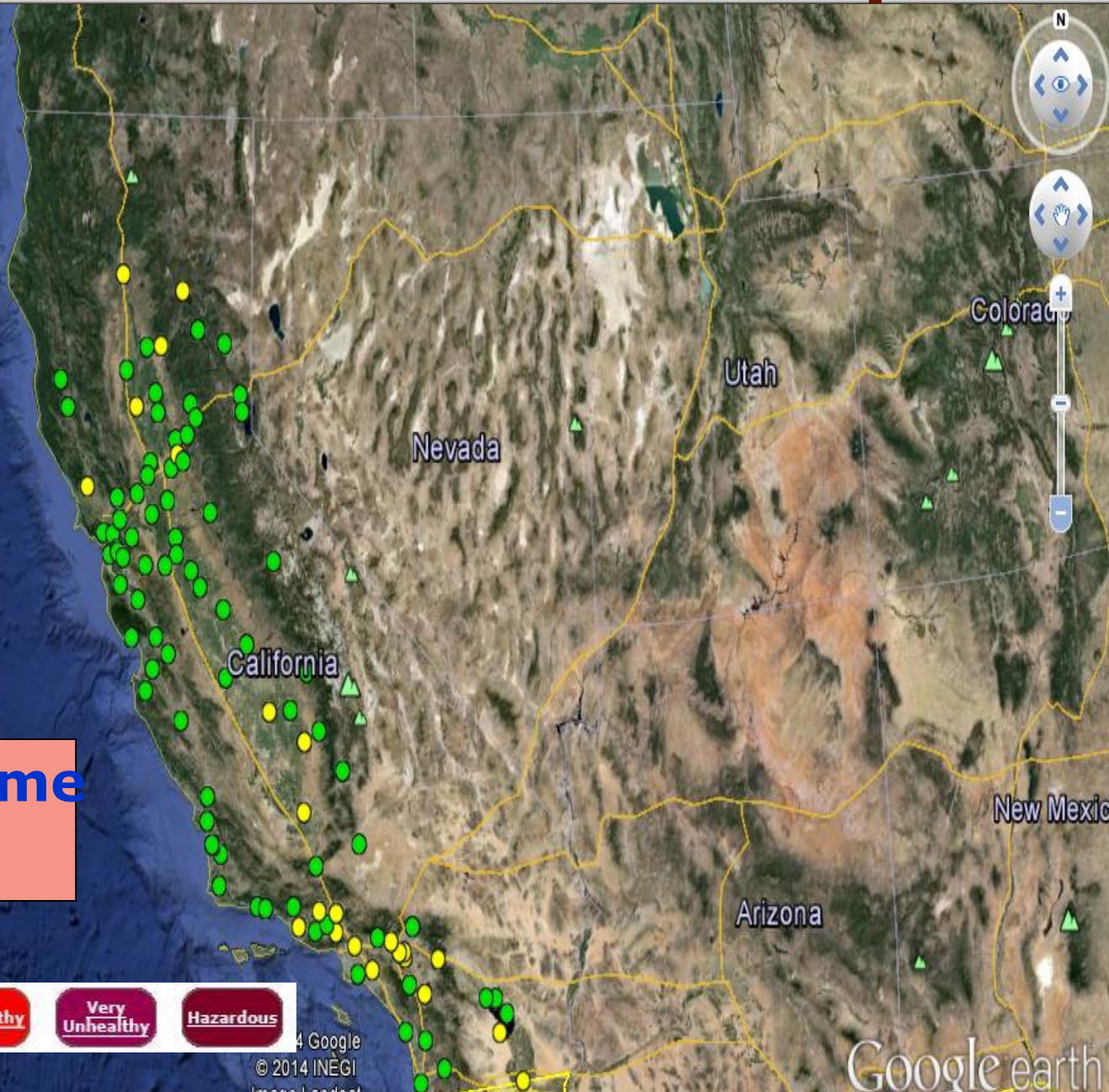
Basin	24-hr Decision Wed May 27
Sacramento Valley above 3000 ft	Burn (Fair)

PFIRS: Fire Information Map

- Drag Menu
- Using This Map
- Webcams
- Geographical Boundaries
- Fire Locations
- Smoke and Air Quality
- Smoke Products
- Air Quality
 - AirNow AQI
 - Latest Ozone
 - Latest PM 2.5
- Current Weather
- Fire Weather
- Weather Forecasts

Provides real-time information

- Good
- Moderate
- USG
- Unhealthy
- Very Unhealthy
- Hazardous



© 2014 INEGI
Image Landsat

Collaboration is KEY



- ◆ Continue to protect Air Quality while providing for opportunities to dispose of vegetation by burning where appropriate.
- ◆ Continue to strive towards achieving and maintaining air quality standards
- ◆ Work with those conducting prescribed fire operations to minimize, smoke impacts on the public.
- ◆ Maintain good working relationships with cooperators.