



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AGENDA: 14

Update on Clean Air Filtration Program

**Board of Directors Meeting
September 1, 2021**

**Tracy Lee, Manager
Compliance and Enforcement Division
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Outcome



- Informational update on Air District Clean Air Filtration Program

Outline



- Overview of Historic and Current Wildfires
- Health Concerns with Wildfire Smoke
- Other Impacts from Wildfires
- Recap of Wildfire Air Quality Response Program Strategies and Initiatives
- Clean Air Filtration Program:
 - Home Air Filtration Program
 - Air Filtration Program Expansion
 - Education and Outreach

Requested Action



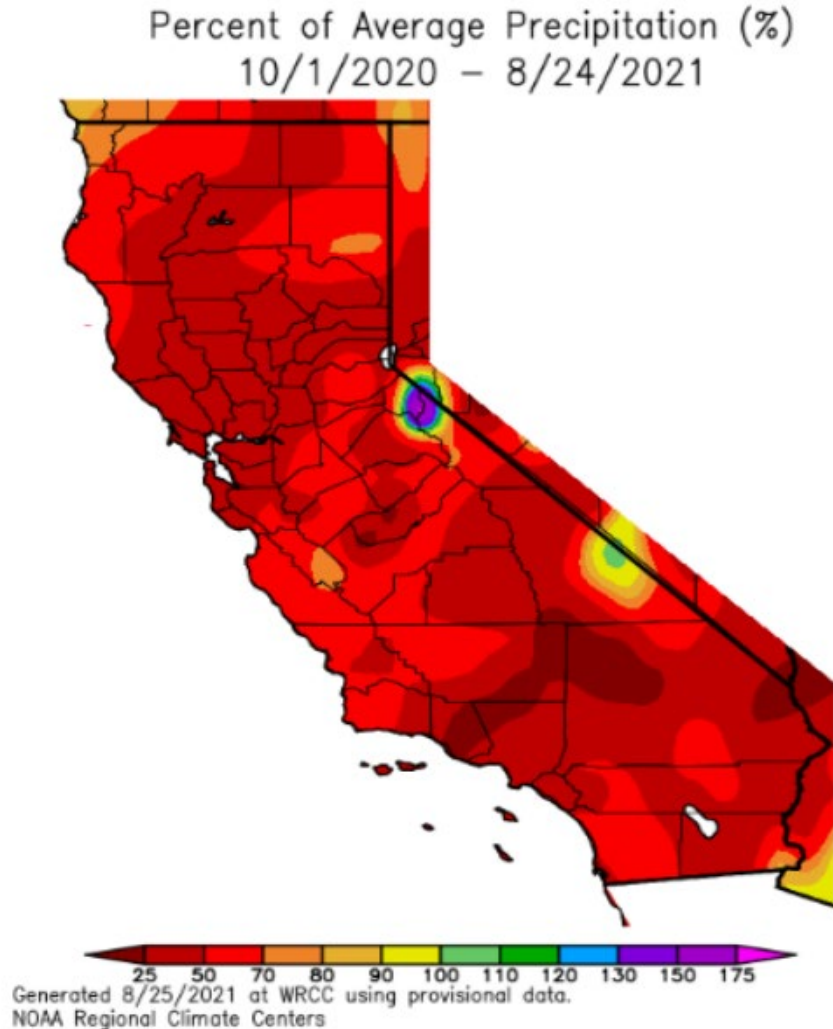
- None – informational presentation

Largest CA Wildfires Since 2007



NAME	YEAR	ACRES
August Complex	2020	1,032,649
SCU Lightning Complex	2020	396,624
Creek Fire	2020	377,693
LNU Lightning Complex	2020	363,220
North Complex	2020	318,930
SQF Complex	2020	170,384
Mendocino Complex	2018	459,123
Carr	2018	229,651
Thomas	2017	281,893
Rim	2013	257,314
Rush	2012	271,911 CA/ 43,666 NV
Klamath Theatre Complex	2008	192,038
Basin Complex	2008	162,818
Zaca	2007	240,207
Witch	2007	197,990

Climate Change Impacts on Wildfires



- **Low rainfall and extreme drought conditions**
 - ~35% of typical rainfall in Bay Area
- **Warmer temperatures and extreme heat**
 - Worldwide, 2016 was the warmest year on record and 2020 was the second warmest
- **Longer seasons, more intense fires**

Wildfires Burning as of August 29, 2021



Name	Acres	Containment	Location
Dixie	764,135	48%	Lassen National Forest
Monument	163,155	23%	Shasta-Trinity National Forest
Caldor	156,515	19%	Eldorado National Forest
McFarland	122,653	94%	Shasta-Trinity National Forest
River Complex	98,832	23%	Klamath National Forest
Antelope	71,447	50%	Klamath National Forest
French	24,916	22%	Greenhorn Mountains

Northern California Wildfires (August 31, 2021)



McCash
Monument

**Antelope
River Complex**

McFarland

Dixie

Caldor

French

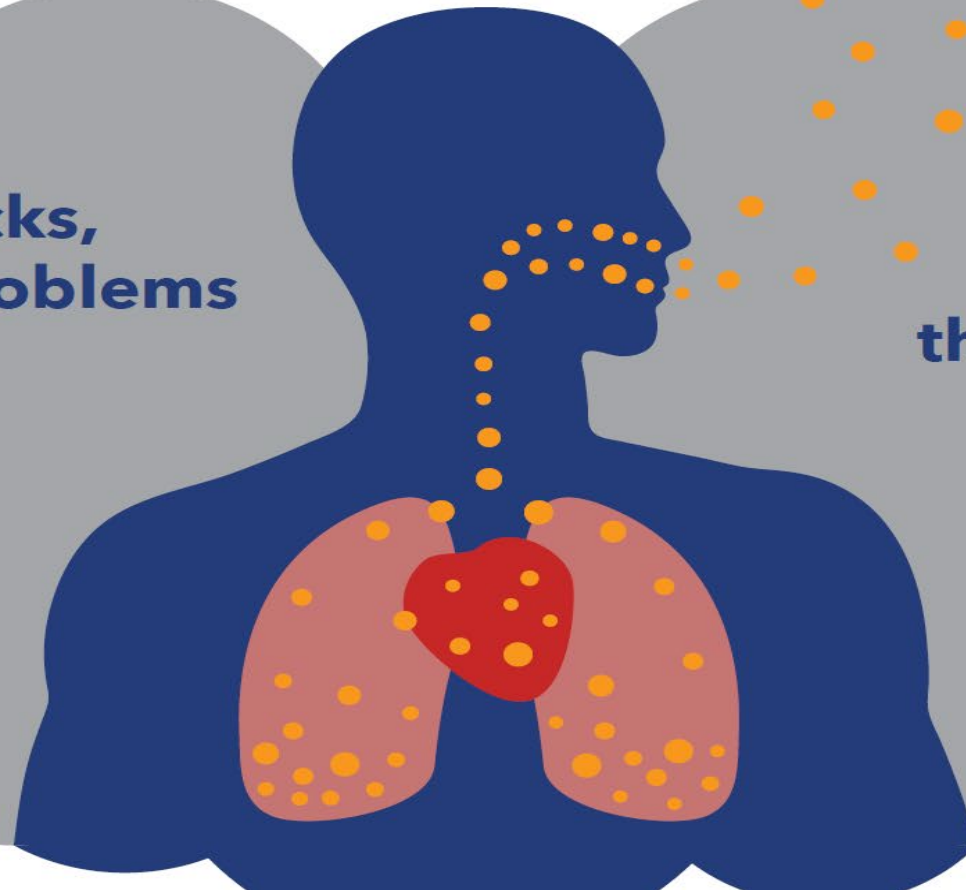
Wildfire Smoke Health Impacts



WILDFIRE POLLUTION HARMS HEALTH

**Asthma attacks,
breathing problems**

**Premature
death**



**Eye, lung,
throat irritation**

**Heart disease
effects
worsened**

Other Impacts from Wildfires

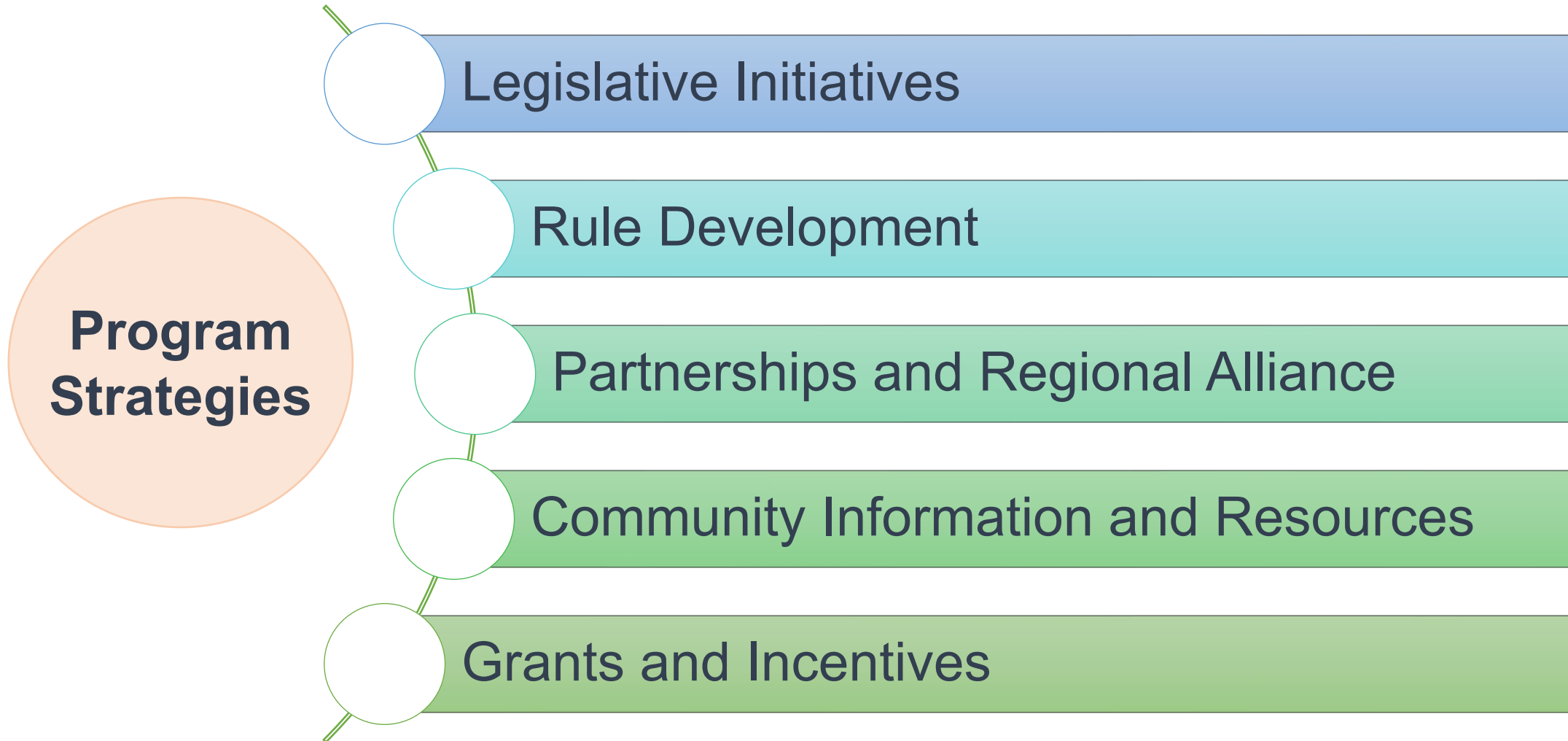


- Wildfire emissions are additive to emissions from Industrial and Mobile Sources
- Diesel Engine Use
 - During Public Safety Power Shutoffs (PSPS)
 - During Grid Power Shortages/Heat Emergencies – Emergency Load Reduction Program (ELRP)
- Wildfires linked to Covid 19 deaths



Credit: TAI Engineering

Wildfire Air Quality Response Program (WAQRP)



WAQRP Initiatives



Wildfire Prevention and Preparedness	Clean Air Filtration
<ul style="list-style-type: none"> • Chipping Pilot Program (\$150,000) • Fire Hazard Reduction (Reg 5) • Year-round Mandatory Burn Ban (Rule 6-3) • Meteorology and Measurements • Public Education, Information and Messaging 	<ul style="list-style-type: none"> • Cleaner Air Centers – Assembly Bill 836 (\$3 million) • Home Air Filtration Program (\$250,000) • Partnerships with County Office of Emergency Services (\$100,000) • American Red Cross Pilot Program and Partnership



Clean Air Filtration Program



Home Air Filtration Program – May 2021

- Partnership with Regional Asthma Management & Prevention (RAMP)
- Program to provide ~2000 home air filters to low-income individuals suffering from poorly controlled asthma
- Program to operate through 7 home visiting programs:
 - Alameda County Public Health (Alameda County)
 - Roots Community Clinic (Alameda County)
 - Contra Costa Health Services (Contra Costa County)
 - Lifelong Medical (Contra Costa County)
 - San Mateo County Family Health Services (San Mateo County)
 - Santa Rose Community Health Centers (Sonoma County)
 - Breathe CA (San Francisco, San Mateo, Santa Clara Counties)



Expansion of Clean Air Filtration Program



- Expand program to all Bay Area Counties by providing an additional \$100,000 (~1000 air filters) under Executive Officer's expenditure authority for a total of ~3000 air filters Bay Area wide
- Program aims to focus on health equity and those most vulnerable to wildfire smoke:
 - Low income and disadvantaged communities
 - Individuals suffering from severe asthma
 - Sheltering facilities for the unhoused
- Seeking additional partners in Solano, Marin and Napa
- Explore opportunity to solicit and accept air filter donations through Bay Area Clean Air Foundation



Clean Air Filtration Program Education and Outreach



CREATE A CLEANER AIR SPACE

STAYING INDOORS WITH WINDOWS AND DOORS CLOSED IS THE BEST WAY TO PROTECT YOUR HEALTH.

Weatherize your home in preparation for wildfires by sealing leaky windows and doors.

Avoid activities that create smoke or other particles indoors.

Upgrade to an HVAC system that allows for both heating and cooling and have the mechanism to switch to RECIRCULATE to prevent smoke from entering the space.

Choose a room that fits everyone and is comfortable to spend time in. Close windows and doors.

Purchase a non-ozone producing air purifier (HEPA) to create a cleaner air room or a MERV 13 or greater filter for your HVAC system.

During high heat and heavy smoke events, keep indoor air cool or run fans.

Individuals with health conditions should talk to their physicians to develop a personal plan for smoke.

Masks are not a substitute for staying indoors and must be fitted properly for best protection. If unable to visit a cleaner air center or a cooling center, those that must be outside for extended periods of time may benefit from using a tight fitting N95 mask to reduce their exposure.

If you cannot seal your home, identify locations in your community that have cleaner filtered air spaces such as:

- cooling centers
- indoor shopping malls
- local libraries
- community centers
- civic centers
- local government buildings

THE BEST WAYS TO USE AN AIR PURIFIER

- 1 Place the air purifier so that it is 6" away from the nearest object including walls. This helps with air intake, so the air purifier can draw in more air and trap and remove more allergens and smoke.
 - 2 Place on a flat surface like the floor for stability. Make sure it will not fall on anyone.
 - 3 Air purifiers are for indoor use only. Windows and doors should be closed when using the air purifier. When windows and door are open, pollutants like car exhaust and wildfire smoke can come in. Air purifiers work best in closed spaces.
 - 4 It is recommended that the air purifier be placed in your bedroom at night and turned on while you sleep. This allows your body to benefit from clean, filtered air throughout the night.
 - 5 It is recommended that the air purifier run all the time on low. When wildfire smoke is making the outside air quality unhealthy, run the air purifier on high. Even on high they are energy efficient and low cost. For more information about air quality and wildfires, go to <http://baaqmd.gov/wildfiresafety>.
 - 6 Filters need to be changed regularly. Most purifiers have a pre-filter that needs to be replaced every 3 months and a HEPA filter that needs to be replaced at least every 12 months. Your unit has a filter sensor that lights up when you need to change the filter. Read the manufacturer's instruction for your machine. When changing a filter, disconnect the power cord, change the filter, and plug it back in. It is best to take the machine outside to change the filter, so the dust collected on the filter does not re-enter the house.
- ### 7 SAFETY TIPS
- If your air purifier has a child/pet locking feature, turn it on so children and pets don't tamper with the settings.
 - Do not place objects on top of the unit, as that will block air flow.
 - Do not place the air purifier in an enclosed room where explosive, flammable or toxic gases are present.
- Air purifiers funded by*
- BAY AREA AIR QUALITY MANAGEMENT DISTRICT**





Questions?

Summary of Ozone Seasons

Year	National 8-Hour	State 1-Hour	State 8-Hour
2017	6	6	6
2018	3	2	3
2019	9	6	9
2020	9	6	10
2021	5	4	5

- Spare the Air Alerts (7): 5/31, 6/17-6/19, 7/10, 8/27-8/28
- Days > 0.070 ppm 8-hour NAAQS (5): 6/17-6/18, 8/27-8/29

Calendar Year PM_{2.5}

Year	Days > 35 $\mu\text{g}/\text{m}^3$ due to Wildfires (PM _{2.5})	Total Days > 35 $\mu\text{g}/\text{m}^3$ (PM _{2.5})	PM _{2.5} Spare the Air Alerts
2017	14	18	33
2018	16	20	21
2019	1	1	10
2020	23	25	46
2021	2	2	5

- Spare the Air Alerts (5): 8/19-8/20, 8/27-8/29
- Days > 35 $\mu\text{g}/\text{m}^3$ 24-hr NAAQS (2): 8/27-8/28