



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

AGENDA: 12

Health Risk Assessment (HRA) Guideline Revisions

Board of Directors Meeting
November 17, 2014

Daphne Chong, M.S.
Toxicologist

- Background
- History of Health Risk Assessment
Guideline Revisions
- Impacts of Major Revisions
- Potential Implications
- Estimated Schedule
- Next Steps

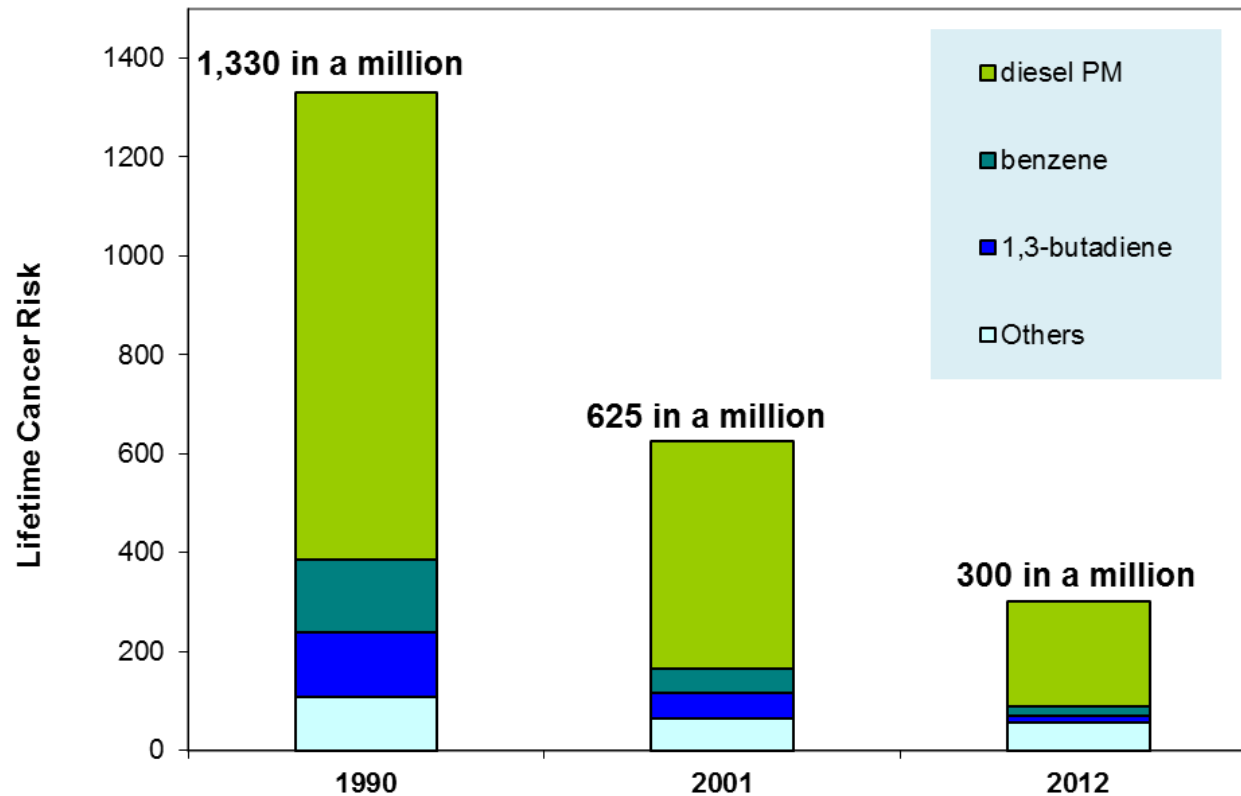


Background

- Air District's Toxics Control Program
 - Toxics New Source Review – permit new or modified sources
 - Air Toxics Hot Spots (AB2588) – toxic emissions from all existing facilities
 - California Environmental Quality Act (CEQA)
- Cal/EPA's Office of Environmental Health Hazard Assessment (OEHHA) develops Health Risk Assessment (HRA) guidelines
 - As mandated under the Children's Environmental Health Protection Act, current revisions include explicit consideration of children's health protection
- 80% reduction in pollutants and health risk in the Bay Area

80% Reduction of Toxics & Health Risk in Bay Area

Lifetime Cancer Risk from Air Pollutants





Health Risk Assessment Document History

- 2008: Noncancer Reference Exposure Levels (RELs) Derivation - protection of children's health
- 2009: Cancer Potency Factors Derivation - includes increased sensitivity of early life exposure to carcinogens
- 2012: Exposure Assessment Parameters
 - Breathing Rates
 - Resident and worker exposure durations
 - Multi-pathway exposures (e.g., ingestion, dermal, mother's milk)
- 2014: Draft HRA Guidance Manual - (update in process)
 - Estimated adoption early next year



Impacts of Major Revisions

- Increase Risk Estimate:
 - Breathing rates
 - Multi-pathway exposure factors
 - Age Sensitivity Factors (ASFs) – *already in use by BAAQMD*
- Decrease Risk Estimate:
 - Exposure durations
- Overall cancer risk may increase by 2 to 5 times for the same emissions



Potential Implications

- Increase Workload for Air District & Facilities
 - 150 new permit applications per year may require HRAs
 - Facilities may be required to adjust operations to comply
 - 750 existing facilities may require further prioritization analyses
 - 300 existing facilities may require AB2588 HRAs



Estimated Schedule

➤ **OEHHA HRA Guidance Manual**

- Public comment period ended August 2014
- OEHHA is responding to public comments
- Scientific Review Panel (SRP) – Nov. 12, 2014
- Adoption of Revised HRA Guidance Manual - following SRP's approval ~ 1Q 2015

➤ **HRA Tools – Hot Spots Analysis and Reporting Program**

- CARB updating software package
- CARB will provide training within 6 months of finalization of the manual



Next Steps

- Assess impacts to Air District's health risk-based rules, policies and programs
- Prepare rule/policy amendments
 - Initiate rule and policy review – 2015
- Work with stakeholders on outreach and risk communication



2014-15 Winter Spare the Air Campaign

Eric Stevenson, Technical Services Director

Lisa Fasano, Communications Officer

Wayne Kino, Enforcement Director

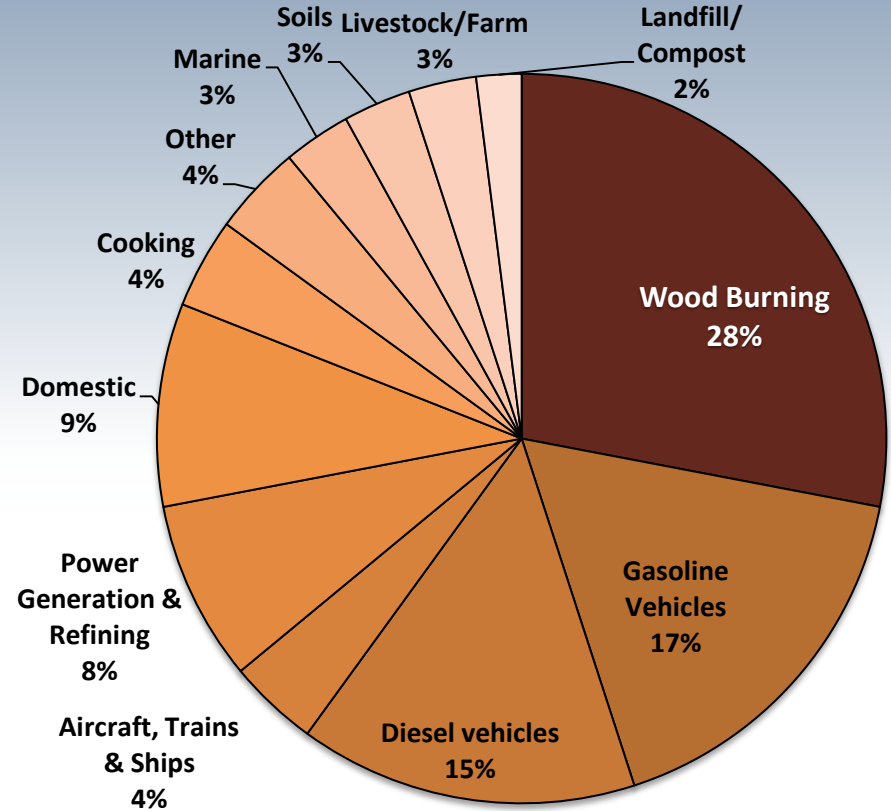
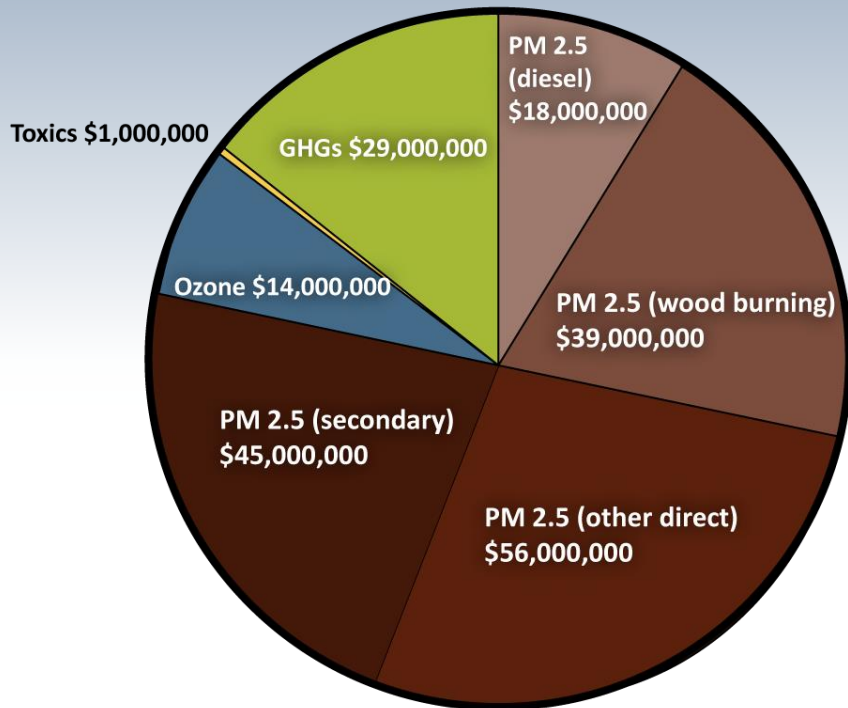


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PM_{2.5} Reduction Benefits



Source – 2010 Clean Air Plan

Source – Sources of Bay Area Fine Particles: 2010 Update and Trends

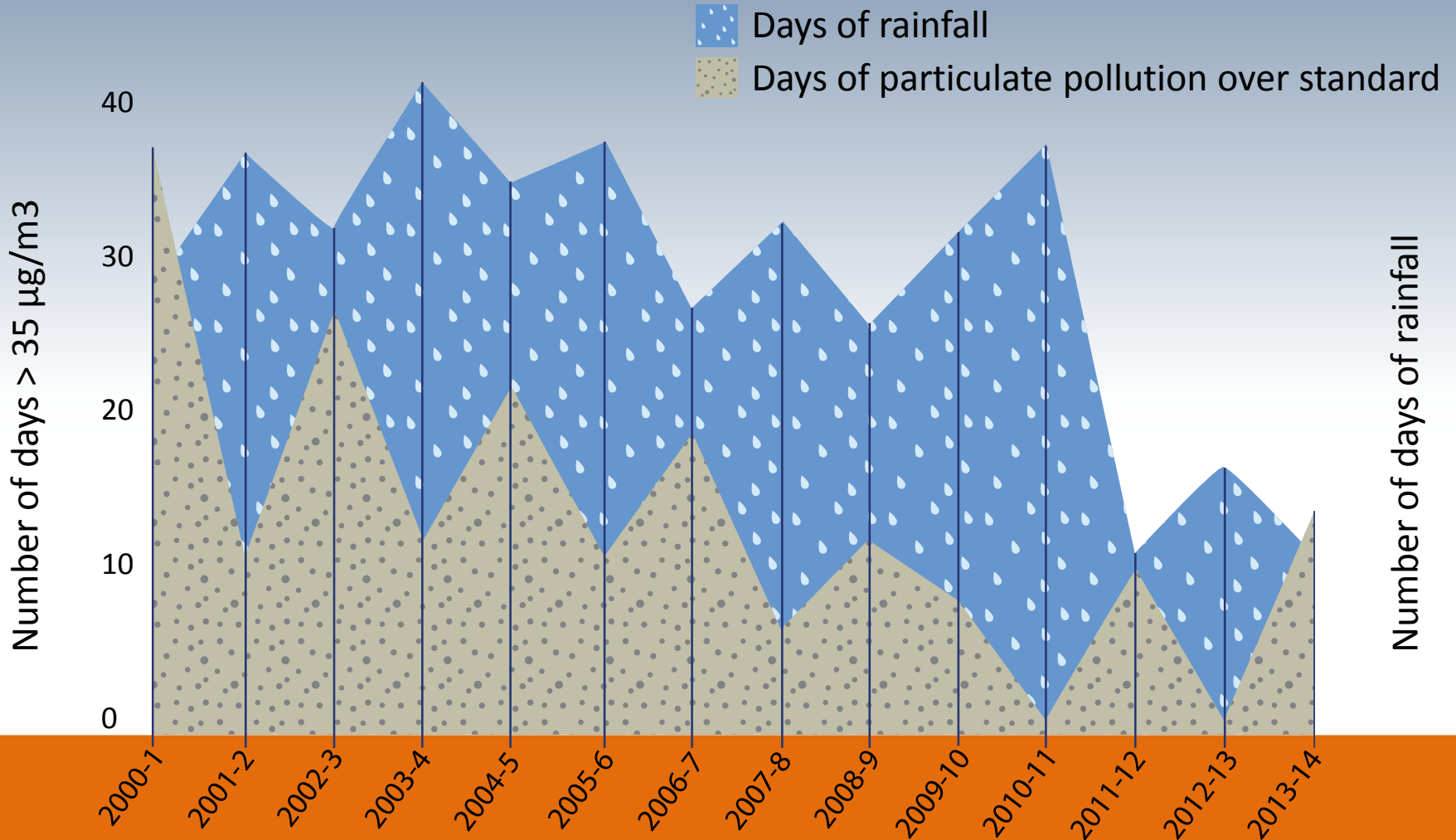


Winter PM_{2.5} Seasons

Year	Days > 35 $\mu\text{g}/\text{m}^3$	Winter Spare the Air Alerts
2011/2012	11	15
2012/2013	1	10
2013/2014	15	30



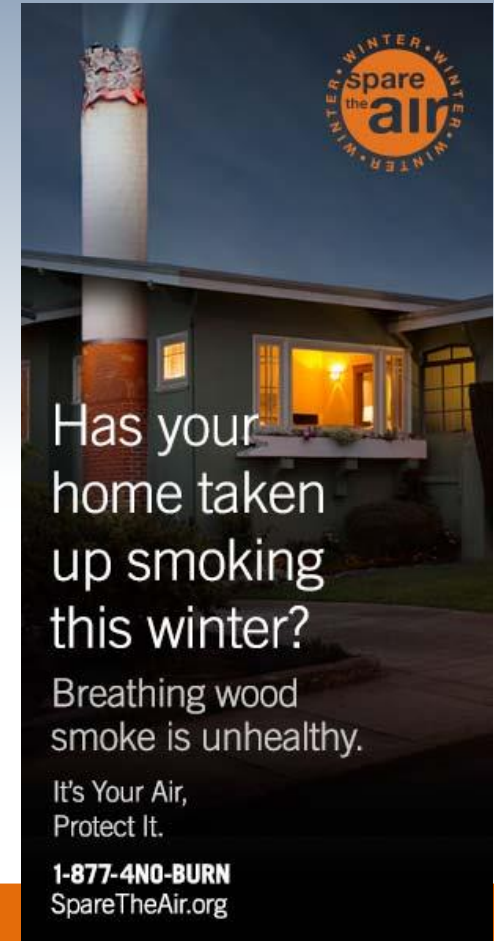
Meteorology & Progress





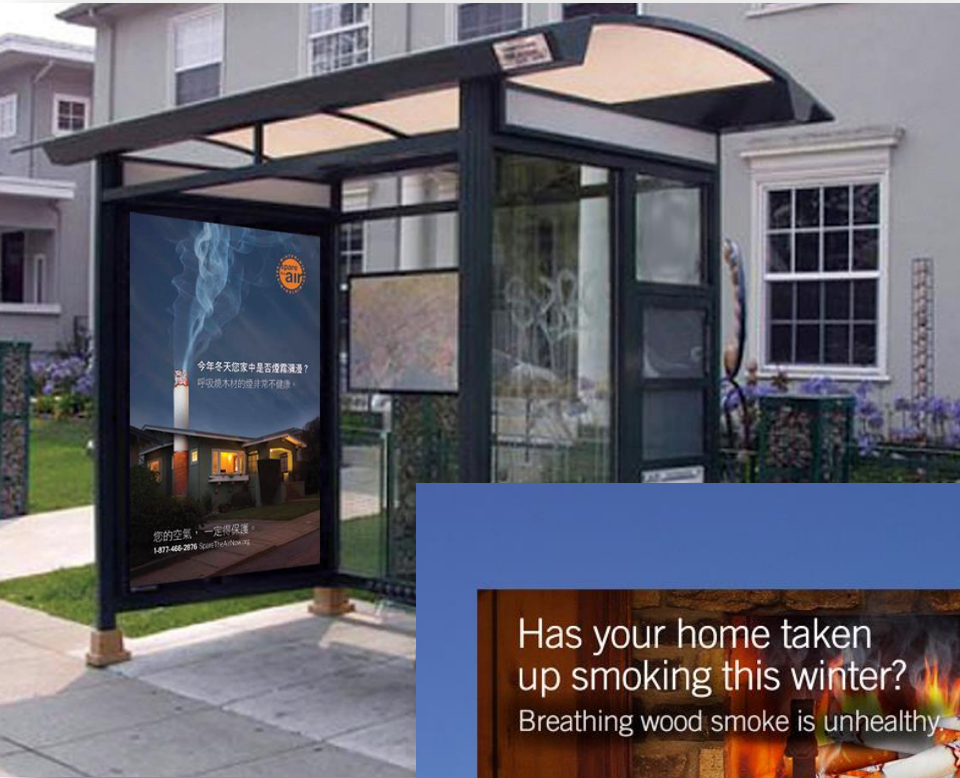
Outreach

- **Stronger messaging**
 - Media relations
 - Social media
 - Grassroots outreach
 - Door to Door outreach
 - Advertising





Advertising





Television





Outreach Placement

WSTA 2014-15

REGIONWIDE

(Includes multi-cultural)

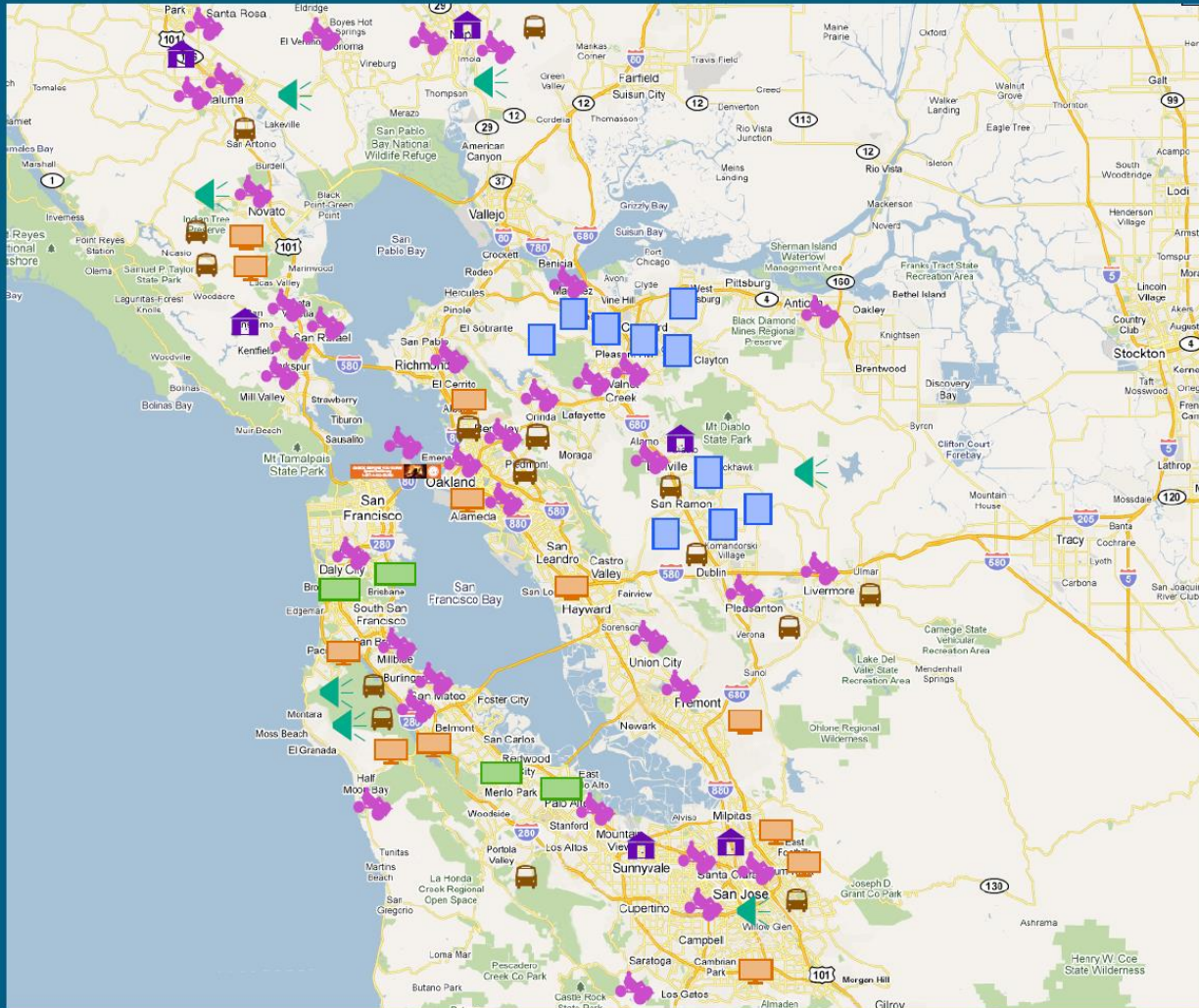
- BROADCAST TV
- CABLE TV
- PRINT
- ONLINE
- RADIO
- PANDORA
- SPOTIFY

TARGETED

- TREASURE ISLAND BANNER
- DOOR-TO-DOOR
- BICYCLE
- BILLBOARDS
- TRANSIT SHELTERS
- ZONED COMCAST
- ZONED RADIO

BUS ROUTES

- GOLDEN GATE TRANSIT
- MARIN/SONOMA COUNTIES
- LAVTA
- TRI VALLEY
- VTA
- SANTA CLARA COUNTY
- AC TRANSIT
- EAST BAY





Social Media

- Use social media to educate residents on the health effects of wood burning
- Leverage anti-wood smoke influencers to spread campaign awareness
- Showcase partners and health experts



Spare The Air
The Spare the Air program encourages Bay Area residents to reduce air pollution by driving less, carpooling, taking transit, and walking and biking.

San Francisco Bay Ar... www.sparetheair.org

Pins from:
Sunset Magazine
SLO Clean Air
SamTrans

10 Boards 441 Pins 18 Likes **Follow All** 160 Followers 154 Following

- Spare the Air in Action Spare The Air (82 Pins)
- Air Quality Facts Spare The Air (39 Pins)
- Just for Fun Spare The Air (89 Pins)
- Commute Alternatives Spare The Air (131 Pins)

Sandhya Patel @SandhyaABC7 Following

A winter @SparetheAir alert is in effect now & has been issued again for TUE. Air quality remains poor. pic.twitter.com/nNW5QUUbbm

Reply Retweet Favorited More

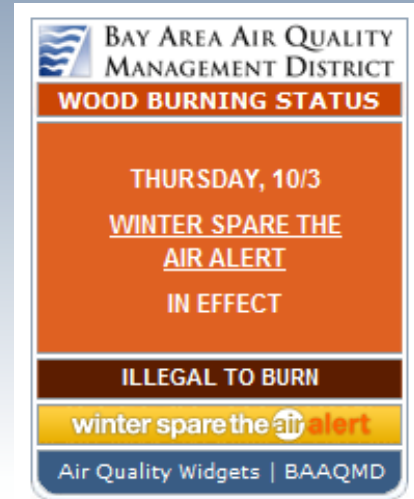
AIR QUALITY	
NORTH BAY	POOR
COAST & CENTRAL BAY	MED
INLAND EAST BAY	POOR



Alert Notification

It's your air, protect it

- Call 1-877-4NO-BURN
- Check the burn status at baaqmd.gov or sparetheair.org
- Sign up for email or text AirAlerts at sparetheair.org
- iPhone/Android app
- Sign up for phone alerts at sparetheair.org or by calling 800-430-1515





Wood Smoke Enforcement

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
WSTA Alerts	11	7	4	15	10	30
PM_{2.5} Excesses	13	9	1	11	1	15
Complaints	1,500	2,355	1,373	3,777	2,316	5,091
Info Packets	1,550	10,270	592	11,476	3,720	1,768
Violations	255	319	61	359	178	267
Exemptions	0	44	49	76	91	150 + 27 Seasonal



Enforcement Highlights

- **Violations: 267**

- 253 - 1st NOV Wood Smoke Awareness Course or \$100 penalty
- 14 - 2nd or 3rd NOV \$500 (increased with additional NOVs)
- 177 Total Exemptions – 150 permanent, 27 non-functional heater



- **Complaints: 5091**

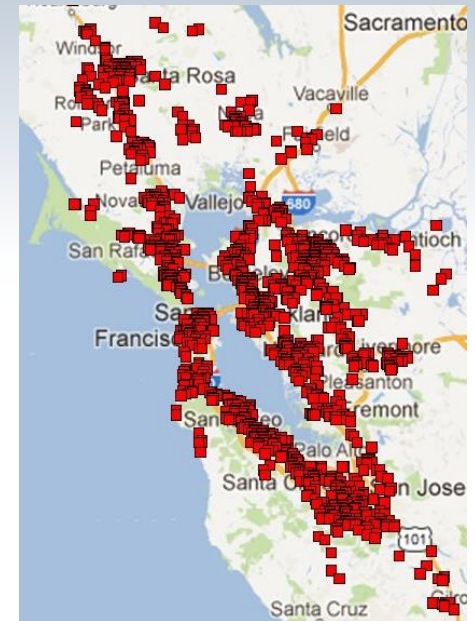
- 60% on Spare the Air Days
- 209 addresses with 5 or more complaints
- 15 addresses with 20 or more complaints
- 1 address with 43 complaints
- 83 complaints by 1 person





Enforcement Practices

- Complaint information is used to determine patrols and to concentrate enforcement on houses with multiple complaints
- Patrols deployment varied throughout the season
- Violations are documented and issued when discovered





Rule Development: Regulation 6, Rule 3

- Explore amendments to Rule:
 - Exemptions
 - Opacity
- Rule Development Schedule:
 - Currently exploring possible rule amendments
 - Public Workshops will be scheduled in all 9 counties targeted for 1st and 2nd quarters 2015
 - Rule amendments to the Board of Directors for adoption targeted for 3rd quarter 2015

Winter PM_{2.5} Seasons

Year	Days > 35 µg/m ³	Winter Spare the Air Alerts
2011/2012	11	15
2012/2013	1	10
2013/2014	15	30
2014/2015	0	1

- Spare the Air Alert Called for: 11/9
- Days > 35 µg/m³ 24-hr NAAQS: None