

2018 Summer Spare the Air Season Summary and Winter Spare the Air Season Overview

Board of Directors Meeting
October 17, 2018

Lisa Fasano
Communications Officer



Advertising

- Current campaign launched 2016, expanded and continued through 2018
- Focused heavily on carpooling benefits
 - Lowers stress
 - Improves quality of life
- Andy Washburn TV
- The Beard TV



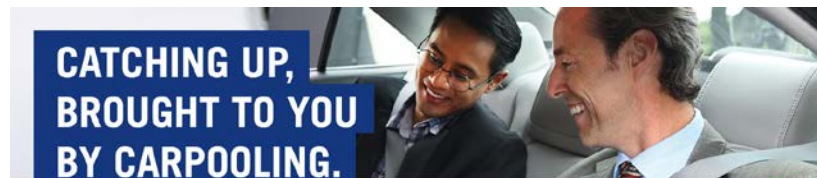
BAYAREACOMMUTETIPS.ORG 



LESS STRESS,
BROUGHT TO
YOU BY
CARPOOLING.



BAYAREACOMMUTE
TIPS.ORG

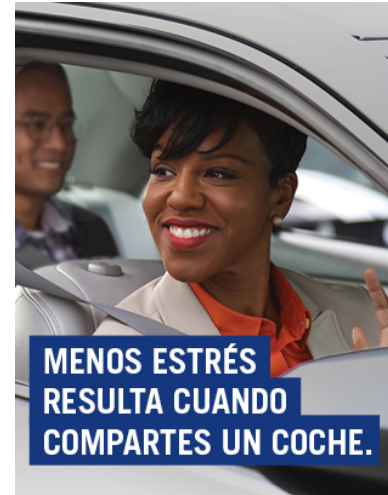


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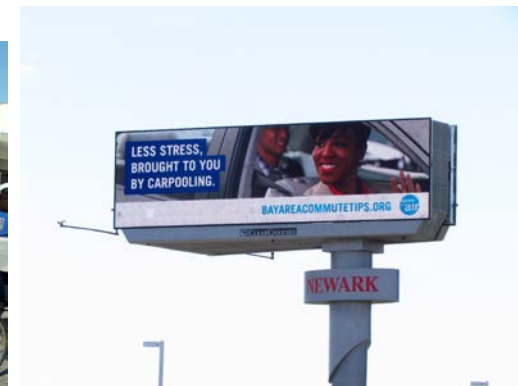
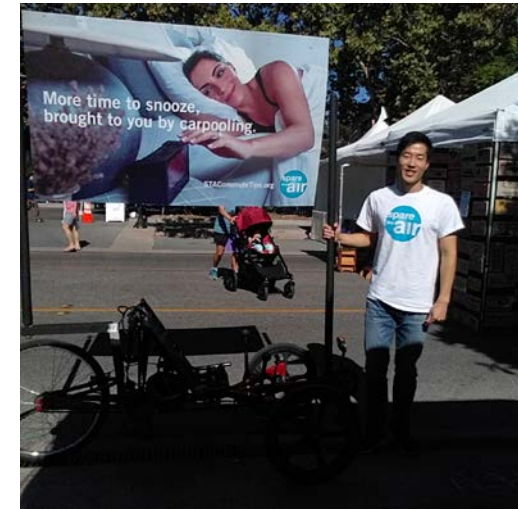


Campaign Highlights

- Ads in six languages
 - Mandarin, Cantonese, Vietnamese, Tagalog, Spanish, English
- Advertising included TV, Radio, Digital, Outdoor & Movie theater
- 65+ Bay Area events with staff
- Bicycle outreach in 27+ communities

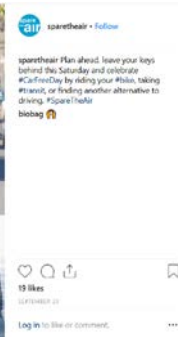


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Social Media

- Focused heavily on carpooling, teleworking and taking transit
- Overall Impressions throughout campaign:
 - Facebook – 227,910
 - Twitter – 456,330
 - Instagram – 7,641
- Social Media followers:
 - Twitter: 12,380
 - Facebook: 8,554
 - Instagram: 961



Media Relations

- Called 13 Spare the Air Alerts
 - 1,963 stories overall
 - 104 Broadcast TV segments
- Significant coverage due to wildfires
 - Air Quality Alerts from August through October
 - Smoke also triggered Spare the Air Alerts



Employer Program

- Cross-promotions with MTC/511, SF Dept. of the Environment, [Commute.org](https://www.commute.org) & businesses
- Refreshed website
- Carpool Now event at SAP Center in Palo Alto
- Future Carpool Now events
 - Illumina in Foster City
 - University Circle in East Palo Alto
 - Nokia
 - Sunnyvale City Center
- Other upcoming employer events
 - Best and Brightest in San Francisco
 - HR West in Oakland



The screenshot shows the website for the Spare the Air Employer Program. At the top, there is a navigation bar with the title 'SPARE THE AIR EMPLOYER PROGRAM' and links for 'ABOUT US', 'CONTACT US', and 'REGISTER'. Below this are four main menu items: 'HOW TO START A COMMUTE PROGRAM', 'COMMUTE PROGRAM BENEFITS FOR BUSINESSES', 'THE ULTIMATE COMMUTE PROGRAM RESOURCE', and 'FREE MARKETING TOOLKITS'. The 'THE ULTIMATE COMMUTE PROGRAM RESOURCE' link is highlighted in blue. The main content area features a large image of four people in an office setting. Text on the page reads: 'Help your employees find a better way to work. Join the Spare the Air Employer Program today.' Below this is a sub-headline: 'Find free resources to support your commute program, with step-by-step guides, best practices, marketing materials and more.' A 'LEARN MORE' button is positioned below the text. At the bottom of the page, there is a horizontal navigation bar with tabs for various counties: 'ALAMEDA', 'CONTRA COSTA', 'MARIN', 'NAPA', 'SAN FRANCISCO', 'SAN MATEO', 'SANTA CLARA', 'SOLANO', and 'SONOMA'. The 'ALAMEDA' tab is currently selected and highlighted in blue. Below the county tabs is a list of resource categories: 'EMPLOYER ASSISTANCE', 'BICYCLING', 'CARPOOLING/VANPOOLING', 'CARSHARING', 'COMMUTER BENEFITS', 'FLEXWORK', and 'GUARANTEED RIDE HOME'. Each category is listed in a separate row with a light blue background.

Research

- 83% recall of Spare the Air mentions from news
- 72% think it's important to reduce air pollution – up from 66% in 2017
- Increased use of public transit in week prior to survey – from 34% to 40%



Research (Cont.)

- Respondents whose primary mode of transportation is public transit increased from 15% to 17%
- Respondents who encountered Spare the Air messaging on social media increased from 12% to 14%



2018–2019

WINTER SPARE THE AIR
PROGRAM OVERVIEW

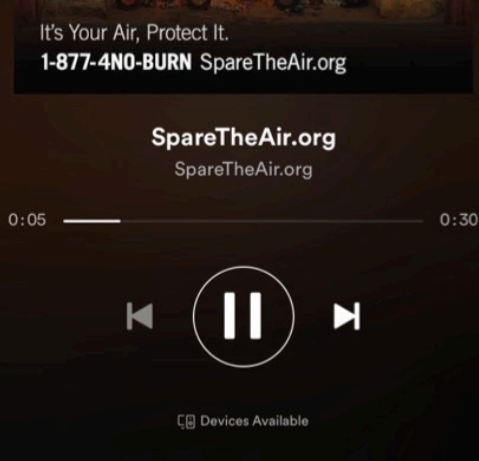


Advertising

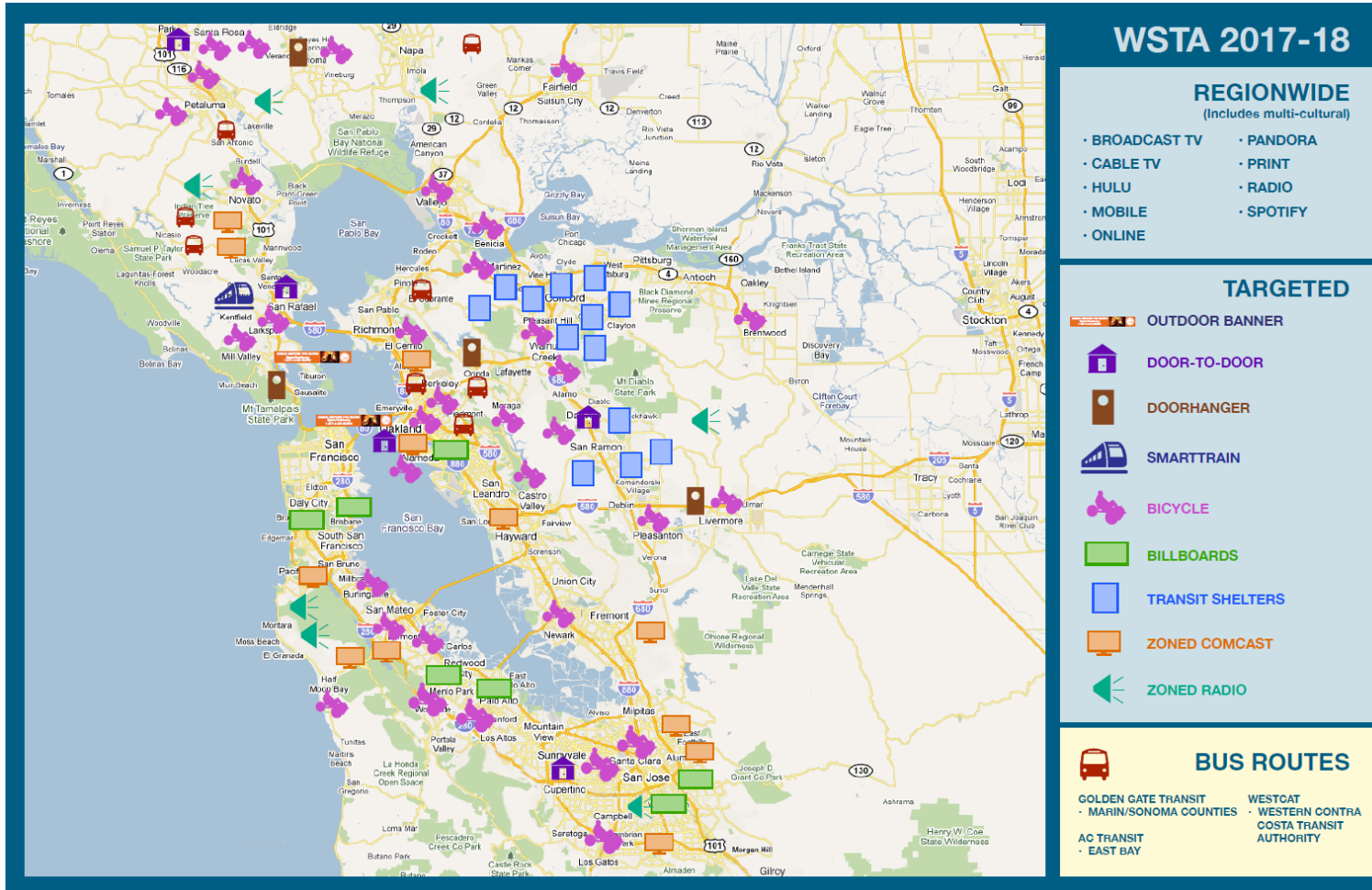
**IT MAY FEEL COZY,
BUT WOOD SMOKE IS
UNHEALTHY TO BREATHE.**



Please don't burn wood this winter.
1-877-4NO-BURN SpareTheAir.org



Advertising



Social Media

Spare The Air @SpareTheAir

Multi-day #WinterSpareTheAirAlerts: The @AirDistrict is issuing the season's first three Alerts for 12/8 - 12/10, banning wood burning, manufactured fire logs or any other solid fuel, both indoors and outdoors through midnight on Sunday. sparetheair.org

11:57 AM - 7 Dec 2017

39 Retweets 12 Likes

Instagram

Has your home taken up smoking this winter? Breathing wood smoke is unhealthy.

It's Your Air. Protect It. 1-877-4ND-BURN SpareTheAir.org

sparetheair: Wood smoke is secondhand smoke. sparetheair #wednesdaywisdom

15 likes January 21

Spare The Air @SpareTheAir · Feb 7

1 Like

Spare the Air, Bay Area December 4, 2017 · 🌐

Stanford study shows wood smoke can harm the brain.

Stanford study shows wood smoke can harm the brain

A new study released by Stanford shows the effects of breathing wood smoke may not just be in your lungs.

ABC7NEWS.COM | BY JONATHAN BLOOM

See more from Jonathan Bloom.

Like Comment Share

👍👎🗨️ 17 Top Comments ▾

16 Shares

Send Save

Saved by Spare The Air

Open

Tried this Pin? Be the first to share how it went

Add photo or note

You saved to Pollution stinks! Give the gift of clean air to your loved ones. Rethink your wood fire this winter. For more information visit SpareTheAir.org

Comments

Spare the Air, Bay Area January 10 · 🌐

Exposure to wood smoke—like cigarette smoke—has been linked to serious respiratory illnesses and even increased risk of heart attacks.

#WednesdayWisdom

Spare the Air, Bay Area Government Organization

Send Message



Door-to-Door Outreach

- Door-to-Door Outreach in Five Bay Area Cities

- Fremont
- Redwood City
- Concord
- Novato
- Santa Rosa

- Door Hangers

- Antioch
- Oakland
- Vallejo
- Willow Glen - San Jose

- All survey respondents receive a \$5 gift card



1-877-4NO-BURN
SPARETHEAIR.ORG

winter
spare
the
air

To sign up for Winter Spare the Air Text Alerts, text the word "START" to 817-57.

Antes de quemar leña, asegúrese que no está prohibido. Llame al 877-466-2876. Para español, marque la extensión 2.

在您燃燒木材之前，請查詢燒煤是否合法。請致電 877-466-2876。廣東話專線分機3。國語專線分機4。

Trước khi đốt củi, hãy tìm hiểu xem có bị cấm hay không. Gọi 877-466-2876. Bấm số 5 để nghe tiếng Việt.

1. Do you currently own or use any of the following wood burning devices in your home?
 Wood Burning Fireplace Fire Pit Gas Fireplace
 Wood Stove Chiminea None
Is it your only source of heat? Yes No
2. Do you burn wood, firelogs or pellets during the winter? Yes No
If yes, how often? _____
3. Have you received any information this year about Winter Spare the Air Alerts? Yes No
Where did you hear or see this information? _____
4. Did you know it is illegal to burn firewood or firelogs when a Winter Spare the Air Alert is in effect? Yes No
5. Are you aware that wood burning is the #1 source of wintertime air pollution? Yes No
6. Are you aware of the health impacts of wood burning? Yes No
If yes, what have you heard? _____
7. Are you interested in receiving Winter Spare the Air Alerts by e-mail or phone? Yes No
If yes, please provide your e-mail/phone number _____
8. Would you consider not burning wood or reducing your wood burning during the Winter season? Yes No
If no, why not? _____
9. How long have you lived in this home? _____ Own Rent
10. Where and to whom should we send your gift card?
 Safeway Peet's Coffee

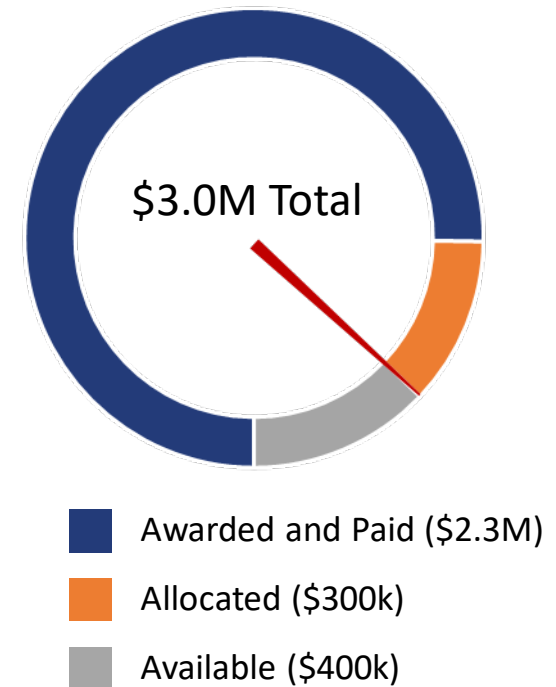
Address

Wood Smoke Reduction Grant Program Results

- Program Launched on August 26, 2016
- To date: 5,118 applications reviewed
 - 923 changeouts completed totaling \$2.3 million
 - ✓ 785 fireplaces, 138 woodstoves
 - ✓ ~121 tons of PM emission reduced/yr

Project Type	# of projects
Decommission a Fireplace or Stove	54
Replace with Natural Gas	830
Replace with Electric Heat Pump	39

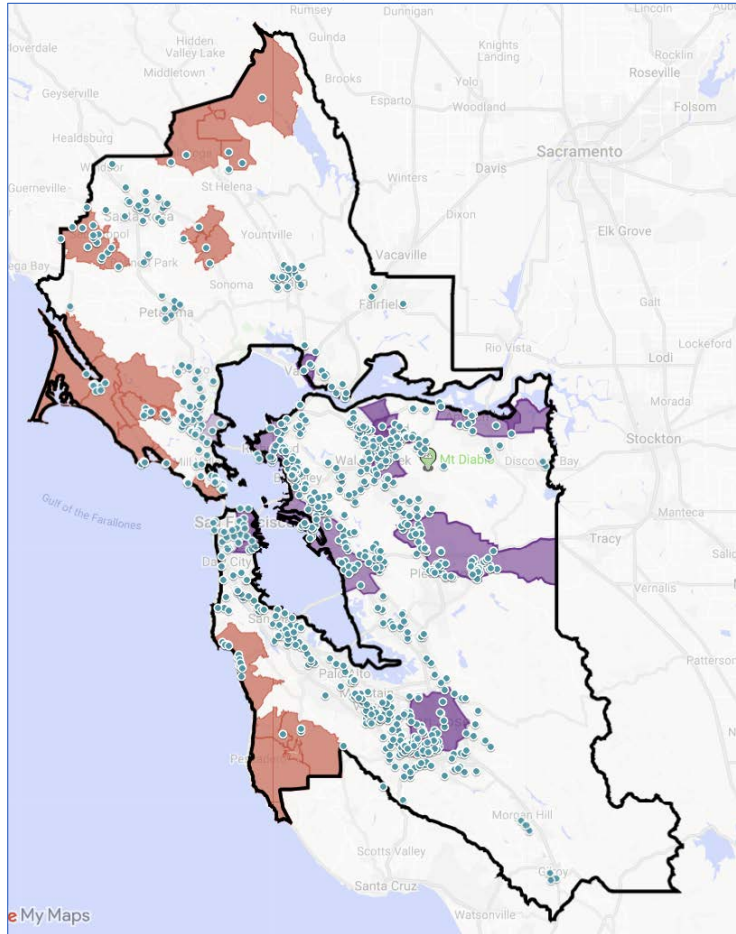
- 170 projects currently in progress
- Next Steps: Return to Executive Committee with proposal for 2019 program



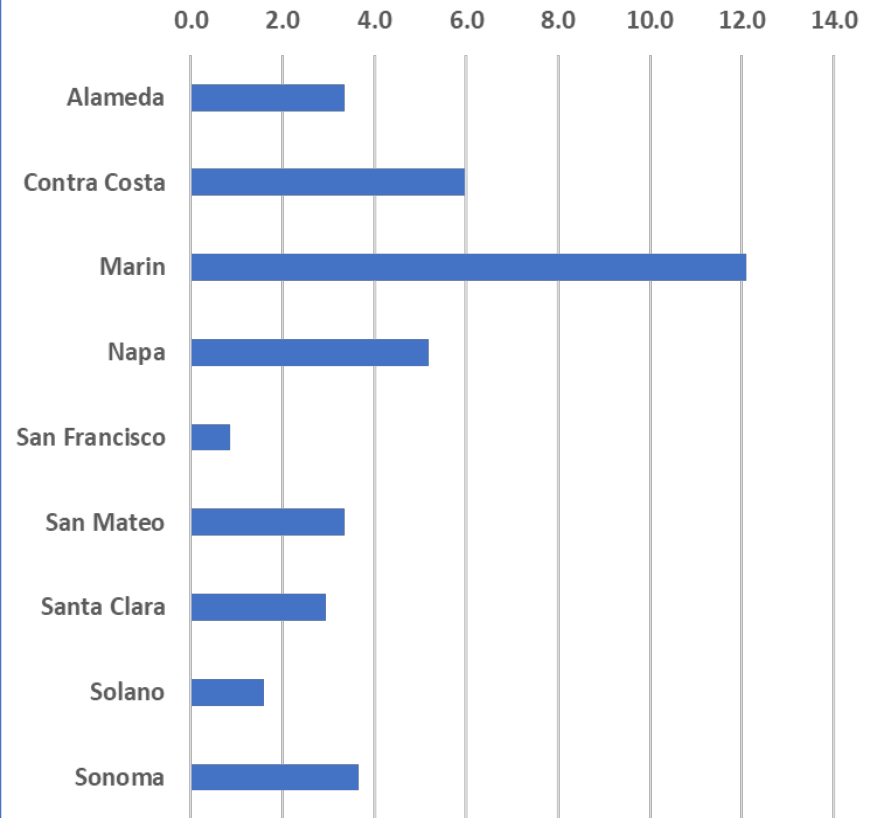
Wood Smoke Reduction Grant Program Results

923 Total Changeouts

Distribution of projects by location



of changeouts per 10,000 households



Climate Technology Review and Outreach



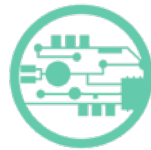
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Derrick Tang
Manager, Technology Implementation Office

Mission: Scale up emerging technologies that reduce greenhouse gas emissions



Connect **Emerging Technologies**



and

Customers

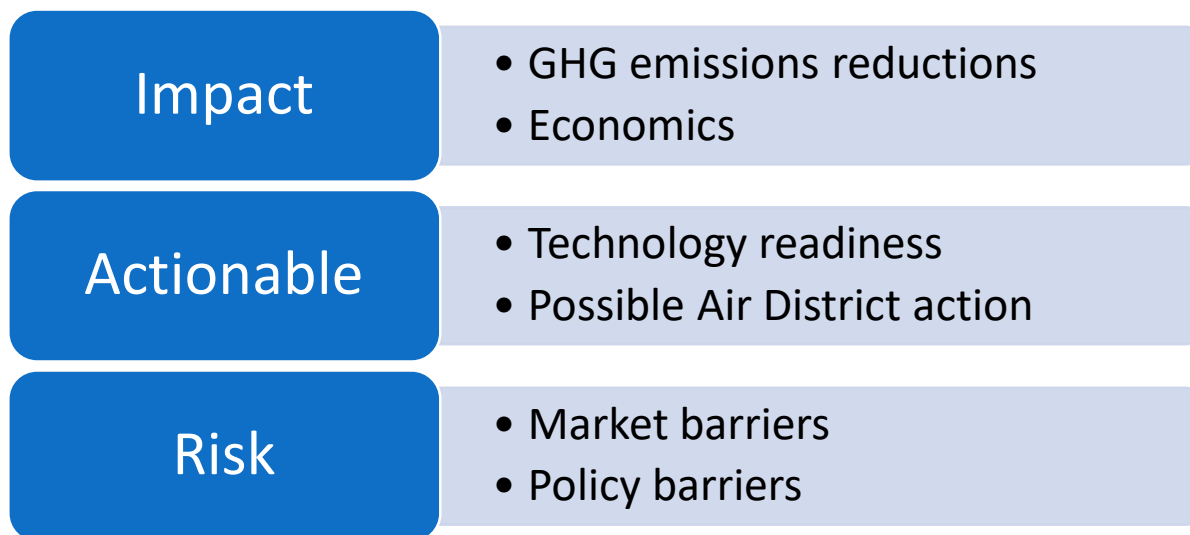


- Evaluate benefits and costs of emerging technologies, identify technologies with high-potential for impact and scale
- Educate customers and offer matchmaking services
- Loans, loan guarantees, grants and financing partnerships

Climate Technology Review



Technology Implementation Office (TIO) evaluated 188 emerging technologies:



Sectors: Agriculture, Buildings, Cement, Combined Heat and Power/Power Generation, Iron and Steel, Petroleum, Semiconductors, Waste

Actions to Accelerate Technologies



For each sector, identified top three technologies and recommended most suitable Air District action:



Regulate



Incentivize



Educate

Regulate: An Example Measure



Boiler maintenance in petroleum systems



- Boiler emissions come from combusted fuel and the boiled substances themselves
- Reducing leaks and buildup on burners can achieve 10% fuel savings
- No new installation cost; recurring maintenance cost but can be positive return on investment
- Air District could make boiler maintenance a permit condition

Educate: An Example Measure



Low-emissivity window coatings for commercial buildings



- New coatings reflect heat and can reduce HVAC loads by 21%
- Can be manufactured in new windows or applied as retrofit
- Along with other building measures, share these opportunities with stakeholders with authority to regulate or incentivize in this sector

Incentivize: An Example Technology



Battery backup and hydrogen fuel cells to replace diesel generators



- Higher capital costs than diesel generators but lower operating costs, less maintenance, and zero emissions
- Emerging technologies using second-life batteries
- Large base of potential customers
- Key technology solutions for Diesel Free commitments



Shortcut nitrogen removal (“anammox”) for wastewater treatment



- Bacterial process that eliminates the need for aeration and lowers sludge volumes
- Sharply reduces energy use and can result in net consumption of CO₂
- Demonstration unit has shown promising results for rapid return on investment

Next steps: Outreach About Technology and Financing Opportunities



- Share technologies with facilities to identify initial loan projects for “Climate Tech Finance” program
- Share financing opportunities with technology companies
- Share climate technology review results with partner agencies and investors for incentives, regulation, and investment

Next steps: Outreach About Technology and Financing Opportunities (Cont.)



- Outreach Channels
 - ✓ Quarterly Climate Tech Network meetings
 - ✓ Webinars
 - ✓ Conference sponsorships
 - ✓ Technology expos

Climate Tech Finance

baaqmd.gov/CTF

Update on the Air Sensor International Conference

Board of Directors Meeting
October 17, 2018

Eric Stevenson
Director, Meteorology and Measurement

Air Sensor International Conference (ASIC)

- Event: September 12, 2018 through September 14, 2018 in Oakland, CA
- Over 600 people attended
 - 15 countries
 - 16 states
- Included representatives from government, academia, industry, advocacy groups and the public
- 8 training sessions
- Air District participated in 4 of 40+ Sessions
 - Opening panel, overall welcome and technical presentations



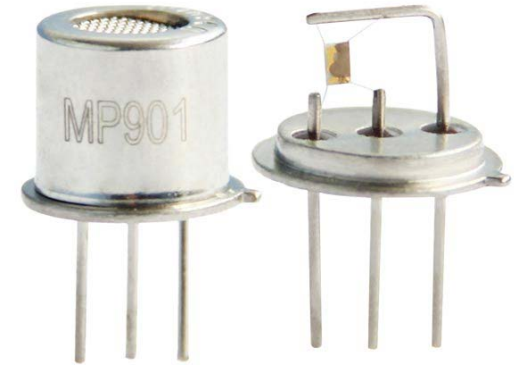
Topics Covered

- Community Air Protection (AB 617)
 - Regulations and Performance Standards
 - Indoor Air Quality
 - Data Analytics
 - Citizen and Community Science
 - Gas and Vapor Sensing
 - Data Assimilation
 - Community Perspectives
 - Low and Middle Income Countries
 - Youth Education
 - Field Experience
 - Particle Sensing
 - Data Communication
 - Mobile Technologies
 - Federal Connections
 - International Perspectives
 - Exposure and Health
 - Monitor Siting
 - Emerging Technologies
 - Source Characterization
 - Data Sharing and Harmonization
- Poster sessions and training (to provide better understanding of topics presented during the conference)

Adoption Challenges

Heard many viewpoints on what's needed

- Continued work on sensor technology and testing
- Development of better data management techniques
- Standardization of data communication protocols
- Develop better ways to provide context and understanding of the measurements for the general public





Continued Growth

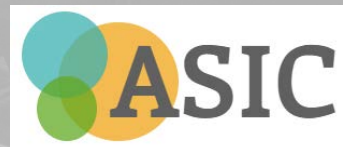
Continued enthusiasm for widespread sensor use

- Capacity for communities to engage in air quality measurement continues to develop
- Technologies continue to grow and adapt to needs of the public and government agencies
- Uses and applications of sensor design continue to expand
- More mature industries are starting to move into sensor development, data management and data communications



45 Vendors/Exhibitors

- BAAQMD
- CARB
- SCAQMD
- Airthinx
- Aclima
- PurpleAir
- Aeroqual
- 2B Technologies
- Aethlabs
- Agilaire LLC
- Ambilabs
- APOS AQ
- Atmosfir Optics
- Axetris AG
- Clarity IO
- Earthworks
- EME Systems
- Berkeley Air Monitoring Group
- EDF
- Envirosuite
- IQAir
- Kaiterra
- Klear Environmental Group
- Kuak Technologies
- MetOne Instruments
- MDPI
- Mountain Air Engineering
- Omniscient
- Scentroid
- Sunset CES
- STI
- TRC Companies
- TSI Inc.
- US EPA
- University of Illinois
- uRADMonitor
- Vaporsens, Inc
- Vaisala
- Wynd Technologies



World-wide Participation

Advocacy Groups

- 350
- Blue Ridge Environmental Defense League
- Asian Health Services
- Alaska Native Tribal Health Consortium
- EDF
- Sierra Club
- Barry Commoner Center for Health and the Environment
- Central California Asthma Collaborative
- Coalition for Clean Air

International Organizations

- Academia de Ciencias SIMES
- Academia Sinica
- Beijing EPA

- Swiss Federal Lab
- European Commission – Joint Research Center

Government Organizations, Cities and Counties

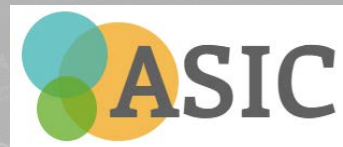
- Various air districts
- U.S. EPA
- CDPH
- DTSC
- Cal EPA
- CDC
- Cal Tech
- Carnegie Mellon
- City and County of Denver
- City of Cleveland
- City of Portland
- Albuquerque
- Clark County

Academia

- City University of Hong Kong
- Boston University School of Public Health
- Columbia University
- City University of Hong Kong
- MIT
- NYU
- DRI
- Duke University

Others

- Davis Senior High School
- Albany High School
- Google
- LBL





Big Take Aways

Successful conference that brought a wide range of interested parties together

- Wide range of important topics covered
- Provided information on what issues need to be addressed from various viewpoints
- Brought together new equipment and evolving technologies
- Provided different points of view and expanded on potential future uses and needs of sensors



Next Steps

Quickly evolving technologies and uses point to a need of an ongoing conference

- Working with ARB and South Coast to ensure future conferences address our needs
- Incorporating positive experiences and lessons learned into next conference
- Continuing to work with manufactures and others to best implement sensor technologies
- Moving forward with developing and implement a Community Sensor Center to build community capacity and employ relevant technologies

Summary of Ozone Seasons

Year	National 8-Hour	State 1-Hour	State 8-Hour
2015*	5	4	11
2016	15	5	15
2017	6	6	6
2018	3	2	3

Spare the Air Alerts: 6/22/18, 6/23/18, 6/30/18, 7/26/18, 8/8/18, 8/9/18, 8/18/18, 8/19/18, 8/23/18, 8/24/18, 9/3/18, 9/25/18, 9/26/18

Days > 0.070 ppm 8-hour NAAQS: 8/3/18, 8/9/18, 8/18/18

*Based on NAAQS of 0.075 ppm that was in place during that year

Calendar Year Summary

Year	National Ozone Exceedances	Days > 35 $\mu\text{g}/\text{m}^3$ due to Wildfires ($\text{PM}_{2.5}$)	Total Days > 35 $\mu\text{g}/\text{m}^3$ ($\text{PM}_{2.5}$)
2014	5*	0	3
2015	5*	3	9
2016	15	0	0
2017	6	14	18
2018	3	2	6

For Ozone - Days > 0.070 ppm 8-hour NAAQS: 08/03/18, 8/9/18, 8/18/18

* Based on NAAQS of 0.075 ppm that was in place during those years

For Wintertime - Days > 35 $\mu\text{g}/\text{m}^3$ 24-hr NAAQS: 12/15/17, 12/24/17, 12/30/17, 12/31/17, 1/1/18, 1/2/18, 1/3/18, 1/4/18

(Other exceedances occurred due to wildfires outside of the November 1 – February 28 timeframe)