

BOARD MEETING DATE: January 6, 2023

AGENDA NO. 7

REPORT: Legislative, Public Affairs and Media Report

SYNOPSIS: This report highlights the November 2022 outreach activities of Legislative, Public Affairs and Media Office, which includes Major Events, Community Events/Public Meetings, Environmental Justice Update, AB 617 Update, Speakers Bureau/Visitor Services, Communications Center, Public Information Center, Small Business Assistance, Media Relations, and Outreach to Community Groups and Federal, State and Local Governments.

COMMITTEE: No Committee Review

RECOMMENDED ACTION:  
Receive and file.

Wayne Nastri  
Executive Officer

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## **BACKGROUND**

This report summarizes the activities of Legislative, Public Affairs and Media Office for November. The report includes Major Events, Community Events/Public Meetings, Environmental Justice Update, AB 617 Update, Speakers Bureau/Visitor Services, Communications Center, Public Information Center, Small Business Assistance, Media Relations, and Outreach to Community Groups and Governments.

## **MAJOR EVENTS (HOSTED AND SPONSORED)**

Each year, staff engage in holding and sponsoring several major events throughout South Coast AQMD's four-county jurisdiction to promote, educate, and provide important information to the public regarding reducing air pollution, protecting public health, and improving air quality while minimizing economic impacts.

No major events were hosted or sponsored in November.

## **COMMUNITY EVENTS/PUBLIC MEETINGS**

Staff engage with residents and stakeholders of diverse communities to provide information about the agency, incentive programs, and ways individuals can help reduce air pollution through events and meetings sponsored by South Coast AQMD or in partnership with others. Attendees typically receive the following information:

- Tips on reducing their exposure to smog and its health effects;
- How to file a complaint;
- Clean air technologies and their deployment;
- Invitations to or notices of conferences, seminars, workshops, and other public events;
- South Coast AQMD incentive programs;
- Funding/grants opportunities by South Coast AQMD and partner agencies;
- Ways to participate in South Coast AQMD's rules and policy development; and
- Assistance in resolving air pollution-related problems.

Staff attended and/or provided information and updates at the following November events and meetings:

### AllenCo Energy

On November 1, staff participated in a virtual stakeholder meeting hosted by Los Angeles County Department of Public Health related to AllenCo Energy. Staff provided an update on monthly compliance activities, including surveillance and air monitoring.

### San Gabriel Valley Council of Governments

On November 2, staff participated virtually in the City Manager Steering Committee to share information on Check Before You Burn, clean air tips for the holidays, and the Commercial Electric Lawn and Garden Equipment Incentive and Exchange program.

### San Bernardino County Transportation Authority (SBCTA)

On November 3, staff participated in-person at the SBCTA City Manager Technical Advisory Committee. Staff shared information on Check Before You Burn and other programs.

### Inland Empire Fire Safe Alliance

On November 9, staff participated in-person at the Inland Empire Fire Safe Alliance meeting. Updates were provided on Check Before You Burn and the Commercial Electric Lawn and Garden Equipment Incentive program.

### University of California, Riverside (UCR)

On November 11, staff attended the UCR Solar Valley Consortium webinar about the rollout of utility-scale solar energy and energy storage in California.



#### Santa Ana Chamber of Commerce

On November 15, staff participated virtually in the Santa Ana Chamber of Commerce Government Affairs Committee meeting and shared updates on the Check Before You Burn program.

#### South Bay Cities Council of Governments

On November 17, staff participated in an Open House in-person event hosted by the South Bay Cities Council of Governments. Staff provided information on South Coast AQMD programs such as Check Before You Burn, Residential EV Chargers, and Replace Your Ride.

#### Clean Healthy Air, Clean Healthy Altadena (CHA CHA)

On November 30, staff attended an in-person CHA CHA Clean Air Day meeting to provide updates about the 2022 AQMP and the Check Before You Burn program.

#### San Gabriel Valley Economic Partnership

On November 30, staff attended a Legislative Action Committee meeting to provide updates on the Check Before You Burn program, 2022 Revised Draft Air Quality Management Plan and 33<sup>rd</sup> Annual Clean Air Awards.

### **ENVIRONMENTAL JUSTICE UPDATE**

The following are key environmental justice (EJ) related activities in which staff participated during November. These events and meetings involve communities affected disproportionately from adverse air quality impacts.

#### California Safe Schools

On November 3, staff participated in the in-person 8<sup>th</sup> Annual EJ & Enforcement Symposium. The symposium focused on stakeholder collaboration, multi-agency initiatives and the critical need for enforcement in EJ communities.

#### Pacoima Community Initiative

On November 4, staff participated in the Pacoima Community Initiative's monthly virtual meeting. Staff presented on how to report air quality issues and the South Coast AQMD mobile app.

#### Environmental Justice Index (EJI)

On November 9, staff attended the U.S. Department of Health and Human Services webinar to learn how to use the EJI tool, a comprehensive place-based index that identifies and characterizes the cumulative impacts of environmental, social and chronic health conditions facing communities across the nation.

### 8<sup>th</sup> Annual Environmental Justice 2022 Enforcement Symposium Workshop

On November 16, staff participated virtually in the 8<sup>th</sup> Annual EJ & Enforcement Symposium Workshop. U.S. EPA Region 9 and CalEPA presentations focused on the 2023 Environmental Justice Enforcement Action Plan.

### Justice40 Initiative

On November 17, staff attended the U.S. Department of Transportation webinar on implementation of the Justice40 Initiative. The Biden-Harris Administration created the Justice40 Initiative to allocate at least 40 percent of the overall benefits from federal investments to disadvantaged communities.

### **WHY HEALTHY AIR MATTERS AND CLEAN AIR PROGRAM FOR ELEMENTARY STUDENTS UPDATE**

Annual reports for the 2021-2022 academic year have been completed by Lee Andrews Group for the Why Healthy Air Matters (WHAM) and Clean Air Program for Elementary Students (CAPES).

### **AB 617 UPDATE**

The following are key AB 617-related activities in which staff participated during November. These events, workshops, and meetings involve AB 617 communities and support the Community Steering Committees (CSCs), Community Air Monitoring Plans (CAMPs), and Community Emissions Reduction Plans (CERPs).

### Wilmington, Carson, West Long Beach (WCWLB)

On November 3, approximately 98 people participated in the CSC meeting and a member discussed their participation in a public health survey. Updates were provided on oil and gas implementation monitoring and rule development efforts in the Community Emission Reduction Plan. CSC members commented about notifications for oil well surveys, clarification on tanks regulated under Rule 1178, Proposed Amended Rule 1178, and monitoring techniques.

### East Los Angeles/Boyle Heights/West Commerce (ELABHWC)

On November 17, approximately 60 people participated in the fourth quarterly CSC meeting. Staff presented on the residential air filtration system project and provided an update on Baker Commodities Order for Abatement. Representatives from the Coalition for Clean Air and Gladstein, Neandross & Associates presented on the Joint Electric Truck Scaling Initiative pilot project, which included a community survey. In addition, a representative from Aclima, Inc. presented data from their 2021 mobile air monitoring campaign in ELABHWC.

## **SPEAKERS BUREAU/VISITOR SERVICES**

South Coast AQMD regularly receives requests for staff to speak on air quality-related issues from a wide variety of organizations, such as trade associations, chambers of commerce, community-based groups, schools, hospitals, and health-based organizations. South Coast AQMD also hosts visitors from around the world who meet with staff on a wide range of air quality issues.

### California State University, Los Angeles (Cal State LA)

On November 3, provided an overview of South Coast AQMD, health impacts of air pollution and environmental justice to students at Cal State LA.

## **COMMUNICATION CENTER STATISTICS**

The Communication Center handles calls on South Coast AQMD's main line, 1-800-CUT-SMOG®, the Spanish line, and after-hours calls to those lines. Total calls received in the month of November are summarized below:

Calls to South Coast AQMD's Main Line and 1-800-CUT-SMOG®	2,044
Calls to South Coast AQMD's Spanish Line	30
Clean Air Connection	0
Total Calls	2,074

## **PUBLIC INFORMATION CENTER STATISTICS**

The Public Information Center (PIC) handles phone calls and assists individuals who walk-in for general information. Email advisories provided information on upcoming meetings and events, program announcements and alerts on time-sensitive issues.

Information for the month of November is summarized below:

Calls Received by PIC	30
Calls to Automated System	148
Total Calls	178
Email Advisories Sent	9,090

## SMALL BUSINESS ASSISTANCE

South Coast AQMD notifies local businesses of proposed regulations so they can participate in the agency's rule development process. South Coast AQMD works with other agencies and governments to identify efficient, cost-effective ways to reduce air pollution and shares that information broadly. Staff provided personalized assistance to small businesses both over the telephone and via virtual on-site consultation, as summarized below for November.

- Provided permit application assistance to 145 companies, and
- Processed 57 Air Quality Permit Checklists.

Types of businesses assisted:

Architecture Firms	Engineering Firms	Restaurants
Auto Body Shops	Gas Stations	Retail Facilities
Auto Repair Centers	Gasoline Dispensing	Telecommunication
Construction Firms	Facilities	Centers
Dry Cleaners	Manufacturing Facilities	Warehouses

## MEDIA RELATIONS

The Media Office handles all South Coast AQMD outreach and communications with television, radio, newspapers and all other publications, and media operations. The November report is listed below:

Major Media Interactions	52
Press Releases	2
News Carousel	3

### Major Media Topics:

- **KNX:** Staff participated in a pre-recorded Zoom interview with Brian Lowe, regarding the Check Before you Burn program..
- **Los Angeles Times:** Tony Briscoe requested inspection report information on air monitoring efforts at Exide and updates on plastic facilities permitted in the area. Staff is working on request.
- **Inside EPA:** Curt Barry inquired about the Revised Draft AQMP and the related issues. Written responses were provided.
- **San Francisco Chronicle:** Joe Rubin inquired if Bay Area Air Quality Management District received lead emissions data and calculations from South Coast AQMD on gun ranges in Southern California and the status of the On Target gun range investigation. A response was provided.

- **Channel 35, LA CityView:** Outlet interested in hosting Board Member Nithya Raman for airtime whenever possible and topics of interest were provided. Staff is working on inquiry.
- **1580 KBLA Radio:** Radio host Dominique Diprima to publish PSAs for the Clean Air Awards. An interview is being scheduled.
- **Capital & Main:** Staff participated in an interview with Dan Ross regarding Ethylene Oxide.
- **South Coast AQMD Issues a Windblown Dust Advisory for Portions of Riverside and San Bernardino Counties:** Pitches were sent to local media outlets resulting in media coverage.
- **Associated Press:** Staff was interviewed by Josh Funk regarding U.S. EPA's Response to Petitions to Address Harmful Emissions from Locomotives.
- **Prism Realty:** Edwin Abad inquired if Baker Commodities in Vernon will resume business at some point. A written response was provided.
- **Nano Affix/University of Milwaukee:** A student requested information on air monitoring and equipment. Questions were provided and staff is working on responses.
- **NBC 4:** Carmen Karcher requested an interview regarding the first strong Santa Ana windstorm of the season. Referred reporter to National Weather Service.
- **Wired Magazine:** Reporter Amy Martyn inquired about hydrogen sulfide releases from the Dominguez Channel. Staff is working on response.
- **KCRW:** Reporter Caleigh Wells inquired about Van Nuys Airport air quality monitoring updates. A written response was provided.
- **Southern California Public Radio:** Reporter Julia Barajas inquired how to obtain all air quality complaints about Baker and Hyperion. The reporter was advised to file a Public Records Request.
- **Spectrum News 1:** A reporter inquired to see if the volcano eruption in Hawaii was affecting Southern California air quality. A written response was provided.

#### News Releases:

- **South Coast AQMD Issues a Windblown Dust Advisory for Portions of Riverside County - October 15, 2022 (English and Spanish):** Informed residents of windblown dust advisory

#### Social Media Posts:

- [Air Quality Forecast \(11/05\):](#) 1,315 Twitter Impressions --RT by @LAFDtalk and @805weather
- [Windblown Dust Advisory \(11/15\):](#) 7,474 Twitter Impressions --RT by @Socal\_RedCross, @AirResources, @805Weather, @NWSSanDiego, @BelenNBCLA, @RivCoReady, @CityOfRC, @RCFD\_PIO

- [Air Quality Forecast \(11/20\)](#): 1,622 Twitter Impressions -- RT by @LAFDtalk, @StewartTVNews
- [Air Quality Forecast \(11/27\)](#): 1,906 Twitter Impressions -- RT by @805Weather, @LAFDtalk, @StewartTVNews

#### News Carousel:

- **Keep up with the Latest News from South Coast AQMD - November 2, 2022:** Provided a link to the October/November/December 2022 edition of the Advisor Newsletter.
- **There's still time to submit nominations for the 33rd Annual Clean Air Awards - November 9, 2022:** Provided a link to the Clean Air Awards nominations page.
- **Register now to attend the Clean Air Awards – November 30, 2022:** Provided a link to the event that will take place virtually on Jan. 6, 2023.

#### OUTREACH TO COMMUNITY GROUPS AND FEDERAL, STATE AND LOCAL GOVERNMENTS

Outreach was conducted personally and virtually in November to communicate with elected officials or staff from the following cities:

Alhambra	Corona	Inglewood
Arcadia	Cudahy	Jurupa Valley
Artesia	Desert Hot Springs	La Habra
Baldwin Park	Diamond Bar	La Habra Heights
Banning	Downey	Lake Elsinore
Beaumont	Duarte	La Mirada
Bell	Eastvale	La Puente
Bell Gardens	El Monte	La Quinta
Bellflower	El Segundo	Lawndale
Big Bear Lake	Fontana	La Verne
Brea	Fullerton	Lakewood
Burbank	Gardena	Loma Linda
Calimesa	Glendale	Lomita
Canyon Lake	Glendora	Long Beach
Carson	Hawaiian Gardens	Los Angeles
Cathedral	Hawthorne	Lynwood
Chino	Hemet	Manhattan Beach
Cerritos	Hermosa Beach	Maywood
Coachella	Huntington Beach	Menifee
Colton	Indian Wells	Monrovia
Commerce	Indio	Montclair
Compton	Industry	Moreno Valley

Murrieta	Redlands	South El Monte
Norco	Redondo Beach	South Gate
Norwalk	Rialto	South Pasadena
Ontario	Rolling Hills	Temecula
Palm Desert	Rolling Hills Estates	Temple City
Palm Springs	San Dimas	Torrance
Palos Verdes Estates	San Fernando	Upland
Paramount	San Gabriel	Vernon
Perris	San Marino	West Hollywood
Pico Rivera	Santa Clarita	Whittier
Placentia	Santa Fe Springs	Wildomar
Rancho Cucamonga	Sierra Madre	Yorba Linda
Rancho Palos Verdes	Signal Hill	

Communication was conducted in November with elected officials and/or staff from the following state and federal offices:

- US Senator Dianne Feinstein
- US Senator Alex Padilla
- US Representative Judy Chu
- US Representative Lou Correa
- Senator Josh Newman
- Senator Anthony Portantino
- Senator Susan Rubio
- Assembly Member Mike Fong
- Assembly Member Chris Holden
- Assembly Member Freddie Rodriguez
- Assembly Member Blanca Rubio
- Assembly Member Thurston Smith

Staff represented South Coast AQMD in November and/or provided updates or a presentation to the following governmental agencies and business organizations:

Alhambra Chamber of Commerce  
Arcadia Chamber of Commerce  
California Chamber of Commerce  
California Department of Forestry and Fire Protection  
California Department of Transportation  
California Geologic Energy Management Division  
Crestline Chamber of Commerce  
El Monte South El Monte Chamber of Commerce  
Foothill Transit  
Glendora Chamber of Commerce  
Harbor Association of Industry and Commerce  
Lake Arrowhead Chamber of Commerce  
League of California Cities, Inland Empire and Los Angeles Divisions

Los Angeles County Department of Public Health  
Los Angeles County Economic Development Corporation  
Metropolitan Water District  
Mountain Transit  
Omnitrans  
Orange County Transportation Authority  
Riverside Transit Agency  
Running Springs Chamber of Commerce  
San Bernardino County Transportation Authority  
San Fernando Valley Council of Governments  
San Gabriel Valley Basin Water Quality Authority  
San Gabriel Valley Council of Governments  
San Gabriel Valley Economic Partnership  
Santa Ana Chamber of Commerce  
South Bay Cities Council of Governments  
Southern California Association of Governments  
SunLine Transit Agency  
USDA Forest Service  
Western Riverside Council of Governments

In November, staff represented South Coast AQMD and/or provided updates or a presentation to the following community and educational groups and organizations:

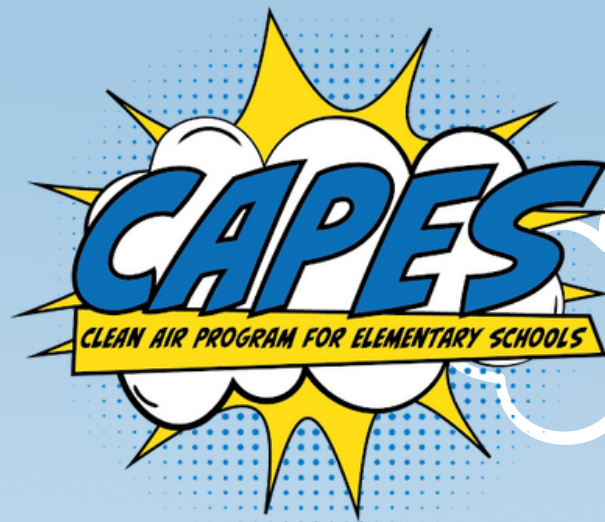
Cal Poly Pomona  
California Institute of Technology  
California Safe Schools  
California State University, Fullerton  
Coachella Valley Unified School District  
Clean Healthy Air, Clean Healthy Altadena  
City of Hope  
Coalition for Clean Air  
Edison High School, Huntington Beach  
Inland Empire Fire Safe Alliance  
Mt. San Antonio College, Walnut  
Oak Knoll Montessori School, Pasadena  
Ontario - Montclair Unified School District  
San Bernardino County Department of Education  
University of La Verne

#### **Attachments**

1. CAPES Annual Report
2. WHAM Annual Report



# Annual Report 2021-2022 Year 2



South Coast AQMD's Air Quality Education Program for Elementary  
School Students

Prepared by  
**Lee Andrews Group**



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# INTRODUCTION



The South Coast Air Quality Management District (South Coast AQMD) is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange, Riverside and San Bernardino counties, including the Coachella Valley. The region is home to more than 17 million people—about half the population of the entire state of California.

The Clean Air Program for Elementary Students (CAPES) is South Coast AQMD's elementary school air quality education program. CAPES provides air quality education and awareness to elementary schools within environmental justice communities throughout South Coast AQMD's four-county jurisdiction. Since its inception in 2019, CAPES has hosted assemblies with thousands of students, and engaged elementary school students to educate them on the importance of air quality, the impact of air pollution, and actions students can take to improve the environment.

In the 2019-20 school year, CAPES in person presentation could not be implemented due to the COVID-19 pandemic. Schools moved to a distance-learning format, which was an issue since CAPES was created to be implemented in an in-person format. Lee Andrews Group assisted South Coast AQMD to transition CAPES into a virtual format to accommodate both distance and hybrid-learning models.

CAPES materials were drafted to provide educators the flexibility in administering the materials. Most schools returned to in-class instruction in the 2021-22 school year, with some restrictions. **During the 2021-2022 school year, CAPES reached over 6,000 students within South Coast AQMD's jurisdiction.**

# PROCESS FOR YEAR 2 (2021–2022)

Developing CAPES education materials into virtual, hybrid, and in person formats included the following activities:

- Facilitating weekly project team meetings to discuss project deliverables;
- Coordinating the development of three educational topics to create videos, worksheets and lesson plans;
- Drafting, reviewing, and approving of three scripts for Year Two topics: Careers in the Environmental Field, Clean Air Choices, and Clean Air Hero Tools;
- Promoting CAPES to schools and non-school programs (such as Boys and Girls Clubs, Boy and Girl Scout Troops) in Los Angeles, Orange, Riverside, and San Bernardino Counties;
- Coordinating with South Coast AQMD on the development and execution of an Earth Day Virtual event;
- Coordinating with Orange County Water District to promote CAPES to schools during their Water Education Festival;
- Securing the services of a science teacher to develop lesson plans and worksheets for Year Two topics that are in alignment with Next Generation Science Standards (NGSS);
- Coordinating the development of CAPES first to sixth grade curriculum;
- Ensuring the curriculum is accessible via Microsoft Office and Google Classroom;
- Researching, negotiating, and acquiring talent for CAPES videos;
- Managing the contract process for the approved CAPES talent;
- Securing a production team to film the Year Two CAPES videos;
- Securing a filming location for the three Year Two CAPES videos;
- Managing and staffing at the production of the CAPES Year Two videos on February 19, 2021;
- Coordinating with South Coast AQMD and the production team on video edits;
- Securing approval of the Year Two CAPES videos;
- Developing and securing approval of the Year Two outreach list of schools
- Creating a Smartsheet database for CAPES outreach;
- Maintaining the CAPES registration form on Smartsheets;
- Managing the outreach process via email, phone calls, and in-person visits to sign up educators;
- Engaging with educators who registered for CAPES and provided technical support to implement the program;



- Developing and executing the CAPES survey;
- Creating a Year Two Annual Report for the CAPES Program;
- Managing the procurement process for CAPES promotional items including:
  - Researching and providing recommendations for promotional items;
  - Coordinating with selected vendors for the promotional items;
- Coordinating and delivering 6,009 CAPES promotional bags to 115 schools total in Los Angeles, Orange, Riverside, and San Bernardino counties.



# THE RESULTS

The overall goal for CAPES is to have **20 schools** participate in the program with 8 schools in Los Angeles County, 4 schools in Orange County, 4 schools in Riverside County and 4 schools in San Bernardino County

Due to the design and execution of a robust and assertive engagement strategy, CAPES reached over 6,000 students in Year Two. A total of 115 schools from South Coast AQMD's jurisdiction participated in CAPES. Below is the breakdown of schools by county:

<u><a href="#">Los Angeles County</a></u>
Academia Moderna
Carlos Santana Arts Academy
Pico Canyon Elementary School
66th Street Elementary School
6th Avenue Elementary School
Allesandro Elementary School
Alta California Elementary School
Anatola Elementary School
Andasol Avenue Elementary School
Balboa Magnet Elementary School
Beckford Charter Elementary School

Blythe Street Elementary School
Breed Street "STEM" Elementary School
Broadway Elementary School
Calahan Street Elementary School
Calvert Charter for Enriched Studies
Cantara Street Elementary Visual and Performing Arts Magnet
Capistrano Avenue Elementary School
Castlebay Lane Charter Elementary School
Chandler Elementary School
Charles White Elementary School
Chase Street Elementary School
Chatsworth Park Urban Planning Magnet School

El Dorado Avenue Elementary School
El Oro Way Charter for Enriched Studies
Encino Charter Elementary School
Fletcher Drive Elementary School
Garden Grove Elementary School
Germain Academy for Academic Achievement
Gledhill St Magnet Elementary School
Harding Street Elementary School
Hart Street Elementary School
Haskell Elementary STEAM Magnet
Haynes Charter for Enriched Studies
Jaime Escalante Elementary School
Justice Street Academy Charter School
Kester Avenue Elementary School
Knollwood Elementary School
Lake Balboa College Prep Magnet School
Lane Elementary School

Langdon Avenue Elementary School
Liggett Street Elementary School
Limerick Avenue Elementary School
Lockhurst Drive Charter Elementary School
Lorne Street Elementary School
Marianna Ave Elementary School
Mayall Academy of Arts and Technology Magnet
Melvin Avenue Elementary School
Napa Street Elementary School
Newcastle Elementary School
Normont Elementary School
Parthenia Academy of Arts and Technology
Porter Ranch Community School
President Avenue Elementary School
Primary Academy for Success School
Reseda Elementary School
Robert Hill Lane Elementary School

Rosa Parks Learning Center
San Gabriel Avenue Elementary School
San Jose Street Elementary School
Serrania Charter for Enriched Studies
Sherman Oaks Center for Enriched Studies
Stagg Street Elementary School
Superior Street Elementary School
Tarzana Elementary School
Twentieth Street Elementary School
Van Deene Avenue Elementary School
Vintage Magnet Elementary School
Welby Way Elementary School
Wilmington Park Elementary School

<a href="#"><u>Orange County</u></a>
Beechwood Elementary School
Buena Vista Virtual Academy
Commonwealth Avenue Elementary School
Charles G. Emery Elementary School
Crescent Elementary School
Crosby Elementary School
Davis Magnet School
Dr. Jonas E. Salk Elementary School
El Sol Science and Arts Academy of Santa Ana
Esencia Elementary School
Fairmont Elementary School
James A. Whitaker School
Jefferson Elementary School
Jim Thorpe Fundamental Elementary School
John Murdy Elementary School
Lawrence Elementary School



Linda Vista Magnet Elementary School
Madison Elementary School
Monroe Elementary Language Academy
Nohl Canyon Elementary School
Orangethorpe Elementary School
Palmyra Elementary School
Pio Pico Elementary School
Riverdale Tech Academy Elementary School
Serrano Elementary School
Stonegate Elementary School
Villa Park Elementary School
Westmont Elementary School
Bryant Ranch Elementary School
Los Coyotes Elementary School
Monroe Elementary School

<a href="#"><u>Riverside County</u></a>
Cesar Chavez Elementary School
Mountain Vista Elementary School
Palm View Elementary School
Peter Pendleton Elementary School
Valley View Elementary School
Westside Elementary School

<a href="#"><u>San Bernardino County</u></a>
Windrows Elementary School
North Verdemont Elementary School
Captain Leland F. Norton Elementary School
Kimbark Elementary School



Feedback from participating educators provided insight on satisfaction with the program. Provided below are some highlights of the survey feedback, along with comments received:

**100%** of respondents indicated that they were very satisfied or satisfied with CAPES

**96%** of respondents indicated that it was extremely easy or very easy to implement the program

**97%** of respondents indicated that the program met standards extremely well or very well

**85%** of respondents shared that they would participate in the program again.

## SURVEY COMMENTS

Of the 265 classrooms participating in CAPES, 196 responded to the CAPES Implementation Survey. Provided below are comments from those educators who wrote feedback on the program:

<u>Educator Comments</u>
My students enjoyed the zoom.
The students enjoyed the interactive polls and seeing the results.
My students enjoyed this presentation.
The presentation was very fun, engaging, and educational.
My students enjoyed the presentation as well as the interactive surveys. It was fun and engaging.
Great information; easily understood by first graders.

The students enjoyed the interactive surveys.

It was very engaging and my students loved the polls.

I would like to see more programs like this.

It was a great presentation. My students learned a lot and had fun doing it.

They loved it! We used recycled materials to make satellites the day of the presentation. The videos you used and the questions engaged the class. We had fun learning with you!

My class loved the presentation! They were actively engaged the whole time. They shared the information with their families for homework.

Thank you for the informational presentation.

It was engaging and a fun way to learn about air quality.

It was great. My students and I loved it. Short, sweet to the point and great videos!

Thank you. It was very informative and engaging.

It was great! The kids loved it!

Thank you so much for this opportunity.

Great way to tie things into Earth day.

Thank you very much for providing the presentation. My fifth graders enjoyed it very much.

The students enjoyed participating in the quiz after each part. It was very interactive.

Thank you for a great learning experience!

Excellent presentation!

Great presentation!

Thank you for the informational assembly.
Thank you for the presentation. The kids enjoyed participating and enhanced their knowledge of ways to be earth friendly.
My students enjoyed the presentation and learned ways to be environmentally friendly.
It was fun and entertaining.
Thank you!!!
Great presentation! Students are actively checking the air quality and have downloaded the app.
My students enjoyed the presentation. They particularly liked the fact that a person close to their age was the one presenting.
I liked that it was interactive.... The presentation was very informative... thank you!
Very informative.
Do you have any website they can look at to check the air quality? Many of my students don't have phones.
Thank you for sharing your presentations with my class. They enjoyed them, asked good questions, which led to a great conversation
The students enjoyed it very much. Thank you!
It was very engaging and students loved the assessment questions.
Great assembly! Good information and presented in a student friendly way!
I loved how interactive it was, it was an appropriate pace for the students.
The students really enjoyed the event--thank you so much!!
Great opportunity for our students...for my first graders, a little stretch break mixed in would have been awesome...even some light except use that gets them breathing and aware of their breath, to connect to the importance of air quality.
I liked how the presentation was in segments and the kids were asked a simple question at the end of each of the presentations. The time frame was perfect.

Thank you for the awesome information and videos on pollution, water ecosystems, etc.

It was a very informative event.

Loved how interactive the zoom was.

Thank you for such a wonderful and engaging presentation.

Great program. Nice addition to our Earth Day activities.

The kids really enjoyed the interactive questions and were very pleased to see their results for the polls.

Great presentation. Kids loved it!

Thank you for putting on this event for our students. Very helpful and informational.

Everything was great!

Students enjoyed the quiz after each video, it kept them engaged and participating.

Thank you for helping our students understand the importance of making better choices for our environment.

The students really enjoyed it. They liked the songs and the survey questions.

It was a great presentation. Students were engaged. Thanks.

The students enjoyed being able to answer questions. Great way to engage them.

They loved the video of the trash factory. Kids need more exposure like these. well done.

The students really enjoyed the event--thank you so much!!

Great presentation!!!

Thank you.

Thank you!
Thank you.
My students enjoyed the presentation and became much more aware about air quality. They still bring up the "color" of the air and if it is a good day to exercise.
Thank you for this rare opportunity to engage young children in learning about how the environmental state affects our daily lives.
It was great. Students made me message their parents the name of the app so they could download it.
Although my students knew a lot of the information already, they still enjoyed themselves and loved how interactive it was.
The cartoons and student presenters were very engaging!
Thank you for the opportunity to learn about air quality and the environment.
The presentation was great and the students loved the quizzing because it made it interactive.
Excellent presentation! Increased my students' understanding of air quality and they enjoy using the air quality app to track our community air quality.
Students really enjoyed the webinar.
This was a very creative way of sparking student interest and making students reflect on their role as citizens..
My students loved the interactive polls, and I loved that it kept them engaged in the videos. I also loved the virtual hosts, they were so kid friendly!
The students enjoyed the examples of recycle, reduce, and reuse.
Thank you for your presentation. I have a very energetic class, and your event kept them all engaged.
My students really enjoyed the presentation.
It was fun and the kids are looking forward to receiving their goodie bags and certificates.
It would be great to have more presentations like these in the future.

The information presented was very kid friendly. The videos and questions kept the kids very engaged.
The presentation was informative and interesting.
The students enjoyed it very much. Thank you.
The students loved watching the "student" scientists explain things. I think it assured them that someone at any age can love science and the Earth, not just adults.
Students enjoyed the interactive multiple choice.
We are looking forward to next year!
I really like having the videos available for students to choose from. My students chose 10 to watch and created mock Instagram slides for each one. It was great!
The kids really enjoyed the polls. I loved that it was a virtual event and we joined other people.
Students had a great time participating in this Earth Day webinar. The interactive polls were a great way to engage students virtually.
It was a great program, thank you.
It was so fun. I will attend next year.
Thank you!
In an ideal world, there would be a presentation for primary grades and a separate one for intermediate elementary.
The students had fun with the videos and participating in the polls about keeping our Earth healthy.
Thank you for helping to raise awareness of environmental issues with this assembly.
Thank you for providing our kiddos with important information.
My students were able to make a connection to what we were already learning about recycling.
My students loved watching the presentation

Thank you for such a wonderful presentation. It was so informative and entertaining as well. My students loved it, especially the poll questions. Thank you once again for doing this for our students. Not only did they enjoy themselves they learned so much and are more aware of what is going on in our world.
My students are loving the air quality app.
My class was very engaged. Thank you!
They enjoyed the videos and poll.
We liked the videos, but hands-on activities would be great.
Thank you for including my Special Education students in this event!
Students stayed engaged throughout the event with the polls.
Great visuals, great questions, and excellent pacing of the presentation.
Perhaps do two separate presentations. One for lower grades and one for upper. Sound system was low. My students and I couldn't hear well.
Great presentation.
It was great, students definitely are more aware of air quality.
Thought it was fun and well run for the kids. Kept my first graders' attention the whole presentation. Thank you!
Thank you so much for an informative presentation!
They loved the presentation!!!
The young actors were great and quite animated. My students learned so much from them. Thank you for your presentation.
Thank you for offering this.



# RECOMMENDED APPROACH TO FEEDBACK

Of the 111 comments, over 98% of comments received were positive, and educators were grateful for the opportunity to share this content with their students. Three comments provided constructive feedback for consideration. One recommended a break in the program for students so that the material would not feel repetitive. Two recommended two separate Clean Air Day and Earth Day presentations for early elementary grades and one for later elementary grades. Currently, we are only offering one presentation for all elementary students, regardless of grade. Most participants were pleased with the content provided and appreciated that the hosts were youth talent.

To further engage those educators who participate in either Clean Air Day or Earth Day Virtual events, they are invited to participate in the program to access the age-appropriate materials. These materials are readily available to all educators who register for the program and would like to incorporate the interactive worksheets with their students.

A vast majority of participation comes from virtual events such as Clean Air Day and Earth Day. The recommendation is to continue hosting virtual events for both days to engage as many students as possible throughout the South Coast AQMD jurisdiction while continuing to offer the program every year for educators who cannot participate in one of the two virtual events.

## CONCLUSION

South Coast AQMD and Lee Andrews Group are now actively engaged in the design and execution of Year Three activities including: curriculum development, script development, and outreach to schools and organizations. CAPES continues to serve students throughout South Coast AQMD's jurisdiction. By participating in CAPES, students throughout Los Angeles, Orange, Riverside, and San Bernardino Counties will be equipped to make healthier, clean air choices, and serve as positive clean air heroes for their families, friends, and in their communities.

# Annual Report 2021-2022

## Year 3



South Coast AQMD's Air Quality Education Program for Middle School  
and High School Students

Prepared by  
**Lee Andrews Group**



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# INTRODUCTION



Why Healthy Air Matters (WHAM) is South Coast Air Quality Management District's (South Coast AQMD) middle and high school air quality education program. The program aims to increase awareness of air quality issues within the South Coast Air District and empower youth to drive positive change during a time when they are developing and forming their own habits. The STEM-based curriculum educates students about air quality issues specific to the South Coast Air District. The curriculum was developed by South Coast AQMD and meets Next Generation Science Standards (NGSS), which are a set of K-12 science standards that are required to be met at every grade level.

Since the program's inception in 2019, WHAM has been implemented in environmental justice communities throughout South Coast AQMD's four-county jurisdiction and has reached thousands of students and their families.

## ACADEMIC YEAR THREE (2021-2022)

### Deliverables

Year Three of the WHAM program consisted of securing participation in 300 high school classrooms and 100 middle school classrooms. Lee Andrews Group worked with South Coast AQMD to identify schools and organizations for outreach to roll out the newly developed curriculum. Outreach was conducted to thousands of educators across four counties, held both virtual and in-person events, created marketing and collateral materials, tracked all program information, and coordinated with South Coast AQMD on a weekly basis.

## **Creation of Curriculum (Middle and High School)**

During Year Two (2020-2021) of the program, Lee Andrews Group hired an academic specialist who worked closely with South Coast AQMD staff over the course of several months to develop two sets of curriculum for high school and middle school students. The curriculum was rolled out during 2021 and implemented it into over 400 classrooms. Both curriculums are aligned with the Next Generation Science Standards (NGSS) and are composed of four units each, with engaging hands-on activities and experiments for students.

The high school curriculum is composed of the following units:

### **Lesson 1: How Does Air Pollution Spread?**

- Students learn how air pollution spreads. Students begin doing research and choose a mock Hearing Board scenario, where they discuss how the scenarios could potentially impact their communities.

### **Lesson 2: What are the Risks to Your Community from Air Pollution?**

- Students learn about the MATES V study. Students also learn about how air pollution affects the human body.

### **Lesson 3: Measuring Particulate Matter at Your School**

- Students measure particulate matter in their communities with a hand-held AirBeam sensor.

### **Lesson 4: Public Hearing Mock Trial**

- Students participate in a public hearing mock trial.

The middle school curriculum is composed of the following units:

### **Lesson 1: Who is Responsible for Healthy Air?**

- In this lesson, students will be introduced to the concept of air quality and air pollution; learn about South Coast AQMD and the agency's role in cleaning the air.

### **Lesson 2: Too Small to See: Identifying and Measuring Different Types of Pollution**

- In this lesson, students will participate in four different activities to learn about the chemistry of air pollution, particulate matter, scientific notation, and ozone.

### **Lesson 3: How Does Air Pollution Affect Our Health?**

- In this lesson, students will learn about the air quality index and ozone. Students will also learn how they can share what they've learned.

### **Lesson 4: How Can We Minimize Air Pollution?**

- In this lesson, students will learn about electrolysis and hydrogen fuel cell technology. Students will design their own vehicles to improve air quality.



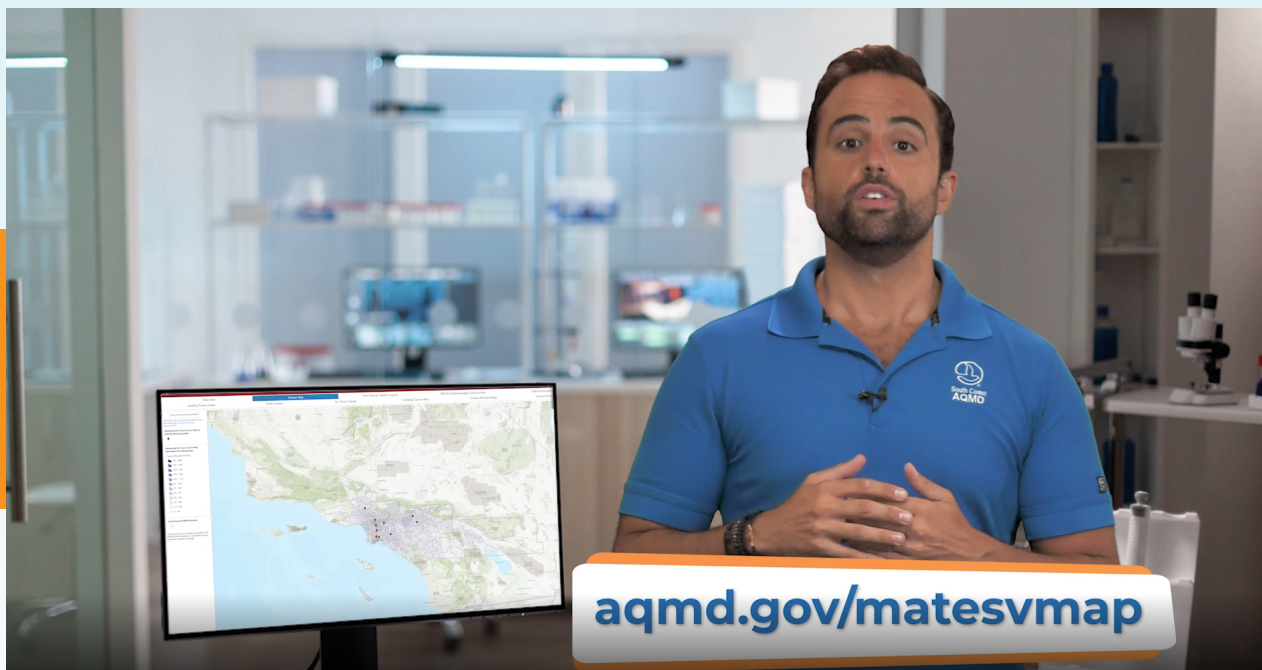


Year Three (2021-2022) of the program saw the full roll out of all the updated curriculum materials to over 400 participating classes. This included all the updated materials below:

- PowerPoint presentations
- Lesson videos
- Promotional videos
- Teacher and student workbooks (digital and print)

### **Video Production**

Eight educational videos were filmed during Year Two of the program. Each of the videos is tied to a unit from the curriculum, with four videos covering middle school units, and four videos covering high school units. Lee Andrews Group collaborated with South Coast AQMD to develop video concept ideas, scripts based on lessons, and a production timeline. After the video concepts were created, Lee Andrews Group hired and coordinated with a video production team to film and edit all eight videos. These videos are currently being utilized to assist teachers with implementation of the curriculum.



### **Implementation**

After defining the primary objectives and developing an outreach framework, Lee Andrews Group developed a step-by-step process that outlined the actions necessary to achieve the project's implementation goals. This process was devised and approved after multiple iterations.

### **Program Evaluation and Reporting**

Below are the methods of data collection and reporting that were used to help evaluate the program and keep all team members updated on current proceedings:

1. Utilized a streamlined program evaluation methodology, which includes a questionnaire and surveys to collect data from school administrators and teachers;
2. Regularly updated South Coast AQMD through weekly project meetings; and
3. Prepared report summarizing all elements of the WHAM program including:
  - a. Planning process,
  - b. Implementation,
  - c. General procedures, including any customization for schools,
  - d. Full evaluation of the program from administrators, teachers, and students,
  - e. Summary of reasons why schools did not participate, and
  - f. Recommendations for the future of the program.

## **PROGRAM ELEMENTS**

### **Outreach**

Year Three of the WHAM program was implemented by educators virtually and in-person. Efforts were made on maximizing and improving those existing virtual aspects and developing additional options, as needed. Distance and hybrid learning allowed for greater accessibility for teachers and students who were previously unable to participate in the program. Hybrid learning option increased school participation in the program significantly and was adaptable to the changing environment and resources.

The team continuously developed relationships with school administration staff, principals, and teachers to make implementation a smooth process. In Year Three, the Lee Andrews Group team implemented a similar outreach strategy to Year Two by engaging school districts first to determine requirements, if any, then working towards securing participation at the school site and teacher level. Lee Andrews Group worked with South Coast AQMD to update the criteria system to identify and prioritize outreach to schools that fall within the AB 617, AB 2588, MATES V, and CalEnviroScreen categories.



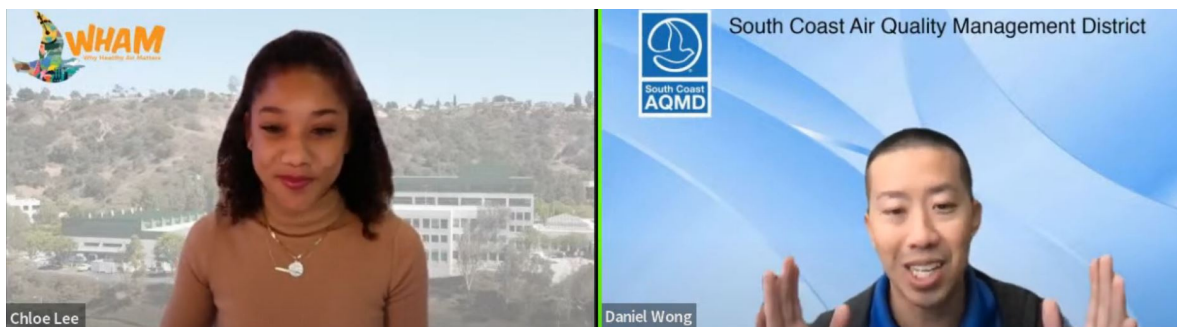
### **Team Models**

Based on experience, research and discussions with school district administrators, Lee Andrews Group determined that approaching school district leadership was the most appropriate method to initiate outreach. Each member of the Lee Andrews Group team focused on a set number of schools for outreach and communication with to maintain consistency. This strategy proved successful and allowed for individualized support and attention to each school district and classroom teacher. Our team is trained and empowered to utilize the tactics that they deem most effective when implementing outreach measures and ultimately securing relationships. The team leveraged these relationships to educate their audience about the benefits of the WHAM program to students and their communities.

The Lee Andrews Group team met regularly with South Coast AQMD to provide recommendations and gather feedback and approval for the program. Weekly meetings with South Coast AQMD were utilized to discuss goals, deliverables, key performance indicators, and milestones to ensure that the project remained on track toward timely completion. Additionally, these weekly meetings allowed for questions to be addressed and the opportunity to present our recommendations. Consistent internal meetings were held to discuss the progress of strategic and efficient planning, to further develop the internal infrastructure needed to implement the outreach plan, and to divide tasks as needed. Internal meetings with senior leadership were held on the status of the program and informed them of any elevated matters requiring their attention.

### **Relationship Management**

From the onset of this project, Lee Andrews Group used their existing personal relationships with key decision makers in many of the targeted school districts and high schools. Lee Andrews group utilized relationships from Years One and Two to help expedite participation in Year Three. A master contact list was created with school staff from established relationships over the course of the first two years of the program, which consists of over 1,000 contacts. This list ensured continuous open lines of communication to note school cultures and procedures, which allowed for a smooth implementation process.

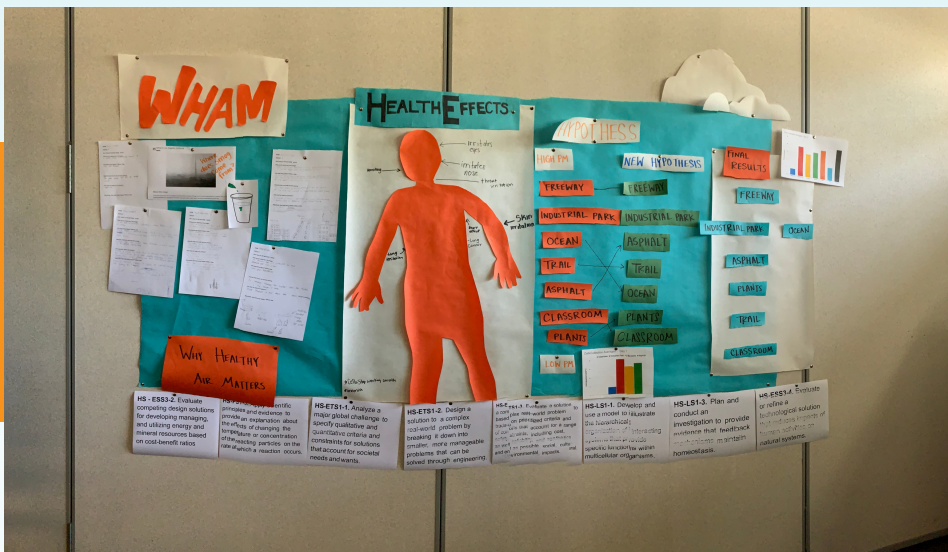




## **Messaging**

Branding and messaging are critically important to the program. Lee Andrews Group worked with South Coast AQMD to develop collateral and outreach materials designed to introduce potential participants to and invoke interest in the program. Key messaging was designed to explain:

1. South Coast AQMD's mission involving environmental justice and why the program was created,
2. How the program reinforces a Science, Technology, Engineering and Math (STEM)-based educational curriculum that offers specific examples introducing disciplinary core ideas (DCIs) specific experiments that reinforce science and engineering practices (SEPs) and crosscutting concepts (CCCs) that reinforce DCIs when linked together,
3. The accessibility of the program to students of all learning modalities (visual, auditory kinesthetic and tactile), and that each lesson in the program is designed with multiple access points for learning by using a diversity of experiments and activities, and
4. The use of applied science for students to draw larger social justice implications surrounding the issue of clean air.



## **Implementation**

Lee Andrews Group accomplished the following objectives during the implementation phase:

- Delivered and retrieved experiment kits to participating classrooms;
- Provided implementation support to over 400 classroom teachers;
- Offered participation incentives to teachers; and
- Had successful implementations in 300 high school classrooms and 109 middle school classrooms.

Year Three offered additional opportunities for implementation beyond the traditional options, continuing the utilization of virtual webinars. South Coast AQMD and Lee Andrews Group collaborated to produce a series of Zoom webinars with South Coast AQMD staff members as hosts. This series of webinars, also known as the WHAM Virtual Guest Speaker Series, were successful and allowed us to reach the 400-classroom deliverables by the end of June 2022.

Listed below are the dates and attendance rates for each WHAM Virtual Guest Speaker Series session that was held.

Session 1 (02/25/22)  
HS-19; MS-24

Session 2 (02/11/22)  
HS-14; MS-3

Session 3 (03/23/22)  
HS-6; MS-3

Session 4 (04/05/22)  
HS-15; MS-4

Earth Day (04/22/22)  
HS-39; MS-18

Session 5 (05/26/22)  
HS-3; MS-1

Summer Session 1 (06/28/22)  
HS-15

**Totals:**  
**HS: 111**  
**MS: 53**



Along with the regularly scheduled webinars, the WHAM program hosted a special Earth Day event to encourage students to take action in their communities. This special presentation consisted of several moving parts, including a virtual presentation and an in-person assembly at Fremont High School, an AB 617 school in South Los Angeles. This in-person event presented WHAM and South Coast AQMD materials to over 250 students. This became the reintroduction of in-person events to the program, and Year Four (2022-2023) will continue to implement them as much as possible.

During Year Three, the WHAM program was successfully implemented in **409** classrooms, including **300** high school classrooms and **109** middle school classrooms. The breakdown of classroom implementation is as follows:

High School	Classroom Count
Los Angeles	166
Orange	36
Riverside	38
San Bernardino	60
<b>Total:</b>	<b>300</b>

Middle School	Classroom Count
Los Angeles	71
Orange	11
Riverside	22
San Bernardino	5
<b>Total:</b>	<b>109</b>

The highest participation levels were seen in Los Angeles County schools. School districts within Los Angeles County were more flexible in welcoming outside curriculum that does not have to go through a district-level approval process, allowing principals and teachers to implement the program easily. Additionally, a higher number of schools within LA County were in summer session when the program was extended and incorporated WHAM into their summer classrooms.

Riverside County high school's had strong participation due to strong existing relationships with school district staff. San Bernardino and Orange Counties were more difficult to secure program participation due to school district requirements such as board agreements, and district-level processes. Both counties had districts that were willing to participate, but ultimately could not due to the circumstances of the year.

March was the most common time for implementation during the school year. The onboarding questionnaires indicated 31% requested March as a start date (Figure 1). Most teachers took advantage of the guest speaker option, with over 75% of all onboarding questionnaires requesting a guest speaker visit. This element of the program proved to be the most successful and was well received by teachers and students alike.

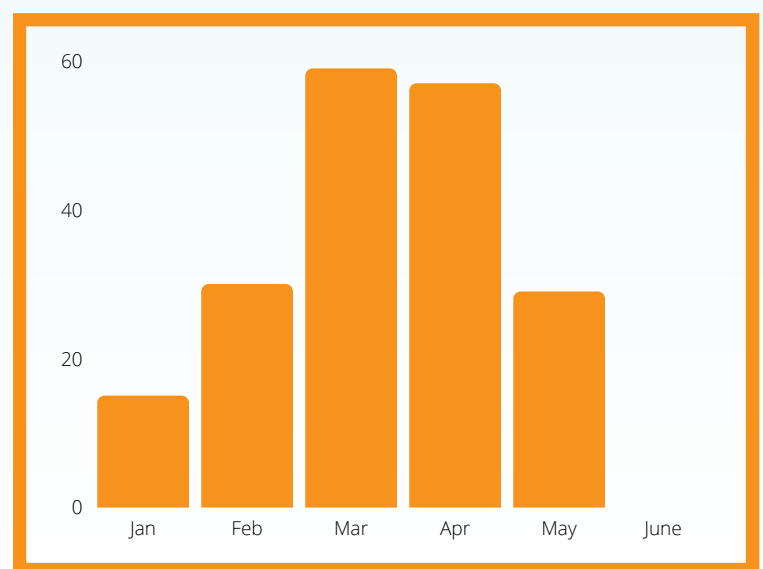


Figure 1: 2022 implementation requests by month; data collected from Year Three Onboarding Questionnaires

### **Tracking System**

During the 2020-2021 school year, Lee Andrews Group transitioned tracking



methods to Smartsheet, a project management software where all data could be easily reported in one space and viewed/edited in real-time. All program data was transferred from previous Microsoft Excel documents to various Smartsheets, ensuring no information was lost. All team members were trained on how to utilize the database, streamlining the process of tracking implementations and implementation requests. Other Smartsheet databases exist to track additional information, such as kit distribution, participation feedback and contact information.

### **Updated Criteria System**

The criteria system to prioritize schools was updated. The following four criteria were used as a basis for the school selection process:

1. Assembly Bill (AB) 617 – identifies environmental justice communities that are disproportionately impacted by air pollution. High schools and middle schools falling within the parameters identified in AB617 designated communities and located within the South Coast AQMD jurisdiction were prioritized as primary targets for Year Three implementation.
2. Assembly Bill (AB) 2588 – identifies high schools that are located within two miles of air toxic “hot spot” facilities. Schools were selected and prioritized as secondary targets for program implementation.
3. Multiple Air Toxics Exposure Study V (MATES V) – interactive map that estimates carcinogenic risk from exposure to air toxics by geographic location.
4. California Communities Environmental Health Screening Tool (CalEnviroScreen 4.0) – identifies communities that are disproportionately burdened by, and vulnerable to, multiple sources of pollution. Only data for air pollution is considered for the criteria category. Of the various indicator maps that are offered, the following will be used to select high schools that fall within the 50% and above percentile for the following:
  - a. Exposure Indicators - Ozone, PM2.5, diesel particulate matter, pesticide use, toxic releases from facilities, traffic density, and
  - b. Environmental Effect Indicator - cleanup sites, hazardous waste generators and facilities, solid waste sites and facilities.

## **Methodology**

The initial focus for Lee Andrews Group's work consisted of working with South Coast AQMD's team to determine primary objectives for the program. The three primary objectives of South Coast AQMD were identified as: 1) implementing the WHAM program in 367 high schools and 100 middle schools; 2) engaging and developing relationships with school leadership, faculty, and teachers; and 3) promoting South Coast AQMD's message.

Once South Coast AQMD's objectives were clearly defined, Lee Andrews Group turned its attention to determining how to go about accomplishing the objectives. Our team identified the tactics that would be necessary to employ. We determined that to accomplish these objectives, the following actions would need to be taken:

1. Identify high schools and middle schools within the four regions and then narrow that list to a target list of high schools meeting the criteria established by the South Coast AQMD;
2. Identify high school administrators to connect with in order to initiate relationships and collect contact information;
3. Determine the requirements for program implementation, and how to meet those requirements;
4. Develop a process for scheduling and distributing materials; and
5. Utilize our project database to record and track all program data.

## **Research**

Extensive research regarding this program was completed in Year One; however the implications of COVID-19 required the adaptation of the program to a completely virtual format. This change in program structure required the team to conduct research on virtual learning schedules by school district, how the program was going to be adapted virtually, best methods of outreach in a virtual space, and the requirements for allowing volunteers to be virtually present in the classroom. This research proved successful and aided us in securing program implementation. For Year Three, hybrid teaching formats were still common, so having flexibility was extremely important.





### **Staffing**

Lee Andrews Group had many staff members aid in the outreach process to generate as much interest in the program as possible. Each relationship manager was responsible for outreach to roughly 80 schools and were required to keep in constant communication with administrative staff and teachers to secure implementations. Over the course of the year, the project had four full-time staff, as well as two additional relationship managers.

### **Outreach Plan**

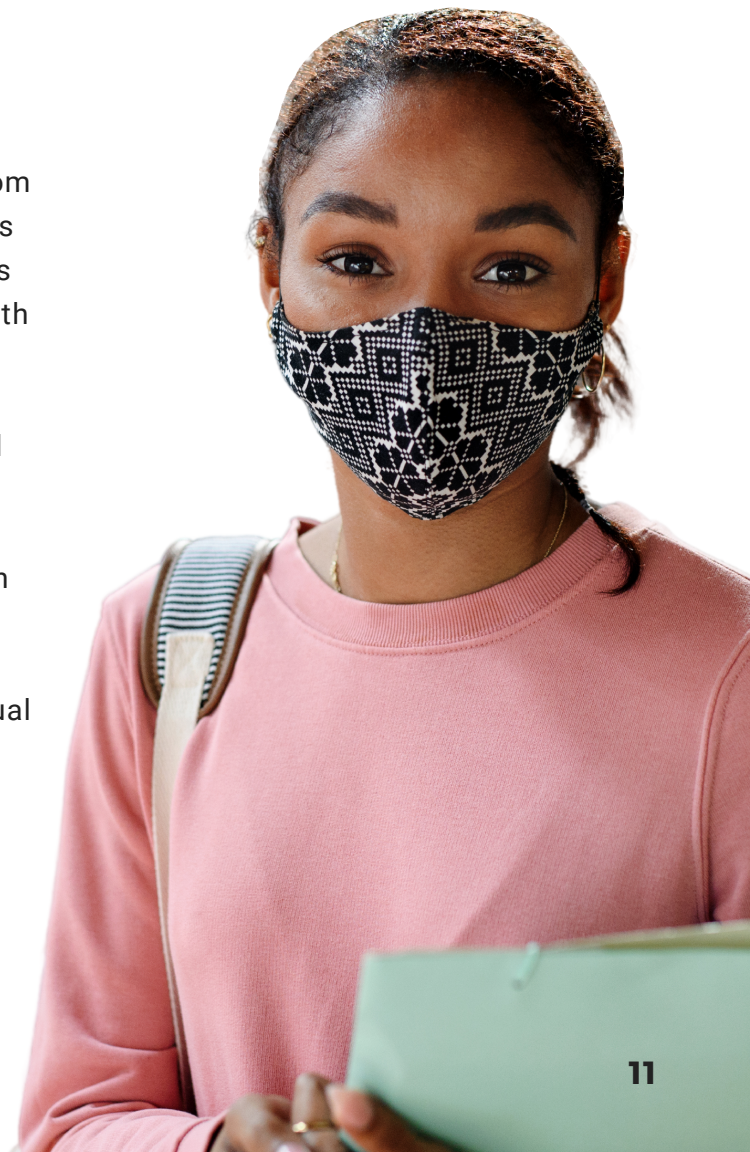
In coordination with South Coast AQMD, Lee Andrews Group developed an outreach plan with set deadlines, as well as specific messaging strategies to be used when introducing the program.

The levels of outreach included:

1. Initial engagement at the district level with superintendents and elected school board members;
2. School site engagement with principals and vice principals;
3. Classroom teacher engagement.

### **School Policies & Procedures**

One of the main features of the WHAM program is offering classroom teachers the option to have a South Coast AQMD guest speakers cover topics from desired lesson plans in the classroom. Lee Andrews Group worked with school districts and school sites to determine the requirements visitors such as South Coast AQMD staff had to comply with to present to students. Lee Andrews Group conducted initial research to determine the school requirements and prepare any needed documents accordingly. The research showed that requirements for a virtual visitor are not as rigorous as an in-person visitor. In some rare cases, a LiveScan was still required, however it was much easier to have South Coast AQMD staff visit each classroom virtually. The virtual guest speaker option eased engagement into the schools.



## Marketing Materials

Lee Andrews Group coordinated with South Coast AQMD to develop a strong marketing campaign that conveys South Coast AQMD's key messages and is relevant to both middle school and high school audiences. We assisted in the creation of marketing materials that promote the WHAM program and its importance, thereby introducing the program, encouraging participation, and ultimately resulting in the successful implementation of the program. During Year One, Lee Andrews Group worked closely with South Coast AQMD to determine and design the collateral materials that would best help school administrators, faculty, and teachers understand and welcome the WHAM program. Continuing with the proven strategy of building upon what works, Lee Andrews Group updated or created the following collateral materials to aid in disseminating key information about the WHAM program.

- Welcome letter to existing school districts and teachers;
- Welcome letter for new school districts, middle and high schools;
- Introductory PowerPoint presentation;
- WHAM brochure;
- Frequently Asked Questions (FAQs); and
- South Coast AQMD volunteer guide.



In addition to improving collateral, we also increased WHAM's digital presence on popular platforms and currently trending applications. This approach bookended our engagement efforts toward teachers with students' colloquial interests in the program.

Other materials developed to inform how the program is designed and implemented include:

- Onboarding questionnaire;
- Teacher post-implementation evaluation survey; and
- Student post-participation evaluation survey.





## Outcomes

Outreach was conducted to over 600 school sites and organizations in all four counties. The outreach to hundreds of school sites provided new information that is integral to the WHAM program outreach process. Similarly, the 409 implementations completed during Year Three were due to a combination of outreach efforts, new marketing tactics, and additional participation opportunities during the summer which allowed for additional flexibility. See Attachment 2 for a full list of schools and organizations in which outreach was conducted.

### Teacher Feedback (2021-2022)

As with previous years, the WHAM program always requests a post-program survey from all participants. In Year Three, over 20 teachers chose to fill out the survey. The teacher responses on the survey indicated that the most beneficial lesson for High School was Lesson 3: Measuring Particulate Matter at Your School, and for middle school it was Lesson 3: How does Air Pollution Effect Our Health. Teachers taught the program in an average of 3 class periods, with an average of 23 students per class. Please refer to the appendix for a complete summary of the data collected via the Teacher Survey.

Some teachers chose to leave additional written feedback as a part of their survey submission. Please see the chart below for some notes and suggestions from participating teachers during Year Three of the program.

Teacher Name	School	District	Feedback
Susannah H.	Science, Technology, Engineering, Art & Math Academy of Hollywood	LAUSD	"I'm not sure how to get the sand thing in lesson one to work better - it didn't really stick. I loved the idea, though! Also, maybe have a standard username login for all the AirBeam Apps."

Teacher Name	School	School District/ County	Feedback
Mark M.	New Horizon Irvine Upper School	Orange County Private School	"Diversifying the content provided and using a platform with more interactivity (Such as a Nearpod rather than a PowerPoint Presentation) would go a long way to help students engage with the material better."
Katrina B,	Fountain Valley High School	HBUHSD	"Overall, I enjoyed using this curriculum with my students. I used the lessons to supplement my unit on the Atmosphere. The student worksheet for Particulate Matter Lab was not thorough and I did have to modify that lesson a bit to create 4 large groups (9 students each). I added more roles so each student would be involved (ex. AirBeam Sensor Holder, Cell Phone Keeper, Automobile Counter, Scent Sentry, etc) - otherwise the kids would be off task. Other than that, everything went well!"
Willa A.	Esperanza College Prep	Independent charter	"The program was great! I wish it had been easier to set up the sensors. The phones weren't updated, so the directions didn't match. We didn't have time to do every lesson but they all looked great!"
Emily D.	Simon Rodia Continuation	LAUSD	"It was really great. I did end up adjusting all the worksheets. The example AQMD trial was very confusing to the students. I walked them through it, but it didn't seem to have any resolution. The students were highly engaged and took part in explorative learning. I think they will remember these lessons."

<b>Teacher Name</b>	<b>School</b>	<b>School District/ County</b>	<b>Feedback</b>
Kathy M.	Walnut High School	Walnut Valley USD	"Great content, I just hope the AQMD can help us clean up our air in significant ways. The State of the Air report this week ranked LA county as having the highest levels of ozone pollution in the country."
Michael P.	Sylmar Charter High School	LAUSD	"Great program. It made my students think about the air around them."
Sabrina C.	Benjamin Franklin High School	LAUSD	"It was great, I recommend for the guest speaker session to make some more engaging components such as polls or asking questions throughout presentation."
Patricia P.	Citrus Valley High School	Redlands USD	"Our guest speaker (Rezvan Ramezani) was great! Thank you everyone for putting this together. I had many students engaged and on camera! :)"
Patricia J.	Bell Gardens High School	Montebello USD	"The speakers spoke a little too fast at times for the students. My students were trying to listen and process the information to understand the material, but with the constant information they were a little confused. They presented wonderful information, it might be best to split it up into 2 days with a lab conducted by the teacher in between the 2 visits from the staff. It was just too much for them to grasp at once."

Teacher Name	School	School District/ County	Feedback
My N.	Pacifica High School	Garden Grove USD	"I loved how real and impactful the videos were. They were very relatable to myself and the students."
Kara G.	Downtown Magnets High School	LAUSD	"Although I was only able to share one video with my students, I think it was a great piece to add to my lesson plan. I hope to use the program more at length in the future."
Sufyan T.	Rancho Dominguez Preparatory	LAUSD	"My summer kids enjoyed the program just as much as my semester kids. I look forward to teaching this again next year."

In addition to a teacher survey, the WHAM Team collected over 560 student surveys from students all over the South Coast Basin. These surveys served as an important indicator for the team to see how much information the students were able to retain. In total there were 565 surveys submitted, with 388 coming from high school students, and 177 from middle school students. Please refer to the appendix for a complete summary of the survey findings.

## Year 3 Lessons Learned

### Outreach

- **Top-down approach** – Outreach is most successful when starting with the district/superintendent level. It is also beneficial to engage school site principals at the same time, to reach them through two touch points.
  - Organizations require a significant amount of planning time to ensure there is availability to implement the program.
- **Format** – As in-person presentations are becoming more available, continue to use in-person outreach as a main form of spreading the program's message.
- **Messaging** – Outreach should focus on educating school districts on South AQMD's background and mission, followed by the educational and community goals through the WHAM program.

- **School staffing needs** - There has been a higher-than-normal turnover in school administrators and teachers which has necessitated continuous outreach to maintain relationships and secure participation. It is anticipated that outreach will require a minimum of three contact attempts for first-time participants. Outreach includes emails, phone calls, virtual meetings, and in-person meetings. Lee Andrews Group will continue utilizing a variety of contact methods to secure participation.

### **Virtual Programming Accommodations**

- **Distance learning** – Online resources are imperative since teachers have less in-person instruction time in some cases. Program resources need to complement the curriculum and hands-on experiments, such as virtual guest speakers and lecture videos.

### **Program Implementation**

- **Curriculum** – During Year One of the program, teacher feedback showed that the KMS curriculum best fits in middle schools. With this, South Coast AQMD opted to have their own curriculum developed to accommodate both middle and high school grade levels.
- **Virtual Guest Speakers** – South Coast AQMD staff availability is limited, so virtual guest speaker visits need to be limited based on South Coast AQMD's discretion
- **Timing** – The WHAM program should be prepared to accommodate the highest demand of virtual guest speaker visits between April and May. This is when the highest number of implementations took place during Years Two and Three of the program.
- **Live Webinar Series** – With the live webinars yielding so much participation, the WHAM program will continue to implement these sessions as an installation during the coming school years over the course of the entire year versus just the spring semester.

### **School Targeting/Criteria**

- **Criteria** – The WHAM team concluded that there was overlap amongst the criteria scoring categories. To streamline the scoring process, two categories were eliminated, and the others were updated. SB 535 and Goods Movement were the eliminated categories, while the Multiple Air Toxics Exposure Study was updated from IV to V. The OEHHA CalEnviroScreen was also updated from 3.0 to 4.0.
- **List Expansion** – During Year Three, the program received requests to participate from alternative and continuation schools, after school programs, and additional school clubs. With this, the program has expanded its target list to include all types of schools, clubs, after school programs, and other organizations. The Year Four list will continue to add to this list as needed.

## YEAR FOUR (2022-2023)

### **Methodology**

The Methodology will remain the same; however, the team will apply some updated outreach tactics to secure participation from organizations outside the traditional classroom setting. This will include the expansion of the virtual speaker series, the addition of in-person events, a dedicated outreach plan focused on organizations, and a social media plan.

### **Deliverables**

The deliverables for Year Four are to secure implementation of the program in 300 high school classrooms and 100 middle school classrooms, and continue the expansion of outreach to clubs, after school programs, and other organizations. Examples of target organizations include Boy and Girl Scouts in all four counties. The scouts organization has a large presence in Los Angeles, Orange, and the Inland Empire. Year Four will focus on the ability to partner with these organizations long term.

The primary method of outreach for these organizations will be to reach out to program leaders or community liaisons to establish a relationship. The approach that is utilized for traditional schools does not work as effectively on organizations, as their structure is different. Reaching out directly to the program leaders is the most effective way to engage the right staff who will be able to introduce the program to the students they serve. Additionally, Lee Andrews Group will be able to utilize existing relationships at the school level to secure participation from organizations that meet at local schools, such as Boys and Girls clubs or after school programs. Lee Andrews Group will continue researching and meeting with youth organizations and establishing new relationships to garner participation in the program.

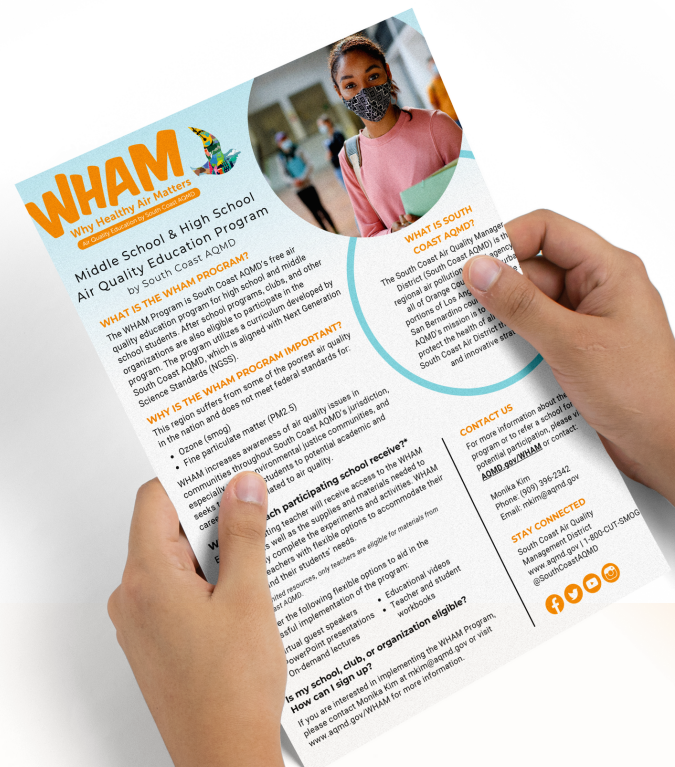
### **Outreach Process**

Lee Andrews Group will utilize a comprehensive outreach approach including all levels of school governance and administration, teachers, educational staff, parents, youth organizations, elected officials, and other stakeholders. It is most effective to continue outreach to the highest administrative level and work through school districts to school principals while simultaneously reaching out at the teachers to provide information on the program. This allows teachers to learn about how the program can fit into their personal classes while giving WHAM staff the opportunity to learn about school requirements (e.g., agreements, insurance, tuberculosis testing, LiveScans and background checks) and allowing them to address them right away.

Lee Andrews Group will also provide technical assistance and other support resources to participants to ensure that schools and organizations have all the tools necessary to successfully implement the program. Below are some key steps to ensuring our outreach strategies are as effective as possible during Year Three.

### Key Steps:

- Developing collateral materials on an as-needed basis,
- Maintaining an efficient approval process,
- Utilizing social media effectively to promote the program,
- Recording all feedback from educators who participate in the program,
- Continue developing the program based on feedback,
- Utilizing all enhanced digital learning opportunities to provide flexible teaching options,
- Securing press coverage of the program through various media outlets,
- Researching school district clearance requirements, and
- Running all schools through criteria database to establish a comprehensive outreach list.





### **Regional Impact**

Through the WHAM program, South Coast AQMD has delivered additional resources to environmental justice and disadvantaged communities throughout the South Coast region. Based on efforts in Year One and Year Two of WHAM, South Coast AQMD has reached 540 classrooms and approximately 13,500 student households. In addition, the agency has exposed students to various career pathways in the STEM field, advocated for healthy lifestyles, and promoted South Coast AQMD's air quality messages.

### **Conclusion**

For Year Three, Lee Andrews Group will secure 300 high school and 100 middle school classroom implementations by utilizing existing and new relationships with school districts, using updated marketing strategies, and outreaching to additional youth organizations, including Scouts and Clubs. Lee Andrews Group will conduct outreach within the four counties, prioritizing schools and organizations in accordance with the environmental justice criteria guidelines. All participating classes will utilize the new curriculum along with the updated program materials including PowerPoints, educational videos, and experiment kits. As implementations take place, Lee Andrews Group will be responsible for tracking all program data via project management software to capture participant information and feedback. All the strategies presented above will allow Year Three to be successful and provide a foundation for the program for years to come.



# APPENDIX



### 2021-2022 School Participation List

Academies of Education and Empowerment @ Carson Complex	High School	<b>LA</b>
Academy of Scientific Exploration / Cesar Chavez Learning Academies	High School	<b>LA</b>
Applied Technology Center	High School	<b>LA</b>
Bell Gardens High School	High School	<b>LA</b>
Bell High School	High School	<b>LA</b>
Benjamin Franklin Senior High School	High School	<b>LA</b>
Bonita High School	High School	<b>LA</b>
Boyle Heights Science Technology Engineering and Mathematics Magnet High School	High School	<b>LA</b>
Chatsworth Charter High School	High School	<b>LA</b>
Diamond Bar High School	High School	<b>LA</b>
Early College Academy - Los Angeles Trade Tech College	High School	<b>LA</b>
Ednovate - Esperanza College Prep	High School	<b>LA</b>

Edward R. Roybal Learning Center	High School	<b>LA</b>
Frida Kahlo High School	High School	<b>LA</b>
Helen Bernstein High School	High School	<b>LA</b>
Helen Bernstein High School - Science, Technology, Engineering, and Mathematics Academy of Hollywood	High School	<b>LA</b>
Hilda Solis Learning Academy	High School	<b>LA</b>
Hollywood High School	High School	<b>LA</b>
Huntington Park Science, Technology, Engineering, Arts, and Mathematics Magnet	High School	<b>LA</b>
Institute of Knowledge High School	High School	<b>LA</b>
John C. Fremont High School	High School	<b>LA</b>
John Hope High School	High School	<b>LA</b>
Jordan High School	High School	<b>LA</b>
Garfield High School	High School	<b>LA</b>
Los Angeles Senior High School	High School	<b>LA</b>

Marco Antonio Firebaugh High School	High School	<b>LA</b>
Monroe High School	High School	<b>LA</b>
North Hollywood High School	High School	<b>LA</b>
Rancho Dominguez Preparatory School	High School	<b>LA</b>
Rodia High School	High School	<b>LA</b>
Roosevelt High	High School	<b>LA</b>
Santa Monica High School	High School	<b>LA</b>
Sotomayor Arts and Sciences Magnet	High School	<b>LA</b>
South East High School	High School	<b>LA</b>
South Gate High School	High School	<b>LA</b>
Sylmar Charter High	High School	<b>LA</b>
University Senior High (8886) LAUSD	High School	<b>LA</b>
Venice High School	High School	<b>LA</b>

Woodrow Wilson Senior High School	High School	<b>LA</b>
Aliso Niguel High School	High School	<b>OC</b>
Anaheim High School	High School	<b>OC</b>
Corona Del Mar High School	High School	<b>OC</b>
Cypress High School	High School	<b>OC</b>
El Modena High School	High School	<b>OC</b>
Fountain Valley High School	High School	<b>OC</b>
Pacifica High School	High School	<b>OC</b>
Orange High School	High School	<b>OC</b>
Samueli Academy	High School	<b>OC</b>
Santiago High School (Garden Grove)	High School	<b>OC</b>
Valley High School	High School	<b>OC</b>
Centennial High School	High School	<b>RS</b>

Coachella Valley High School	High School	<b>RS</b>
Corona High School	High School	<b>RS</b>
Desert Mirage High School	High School	<b>RS</b>
West Shores High School	High School	<b>RS</b>
Chino Hills High School	High School	<b>SB</b>
Colton High School	High School	<b>SB</b>
Eisenhower High School	High School	<b>SB</b>
Fontana High School	High School	<b>SB</b>
Henry J Kaiser High School	High School	<b>SB</b>
Ontario High School	High School	<b>SB</b>
Orangewood High School	High School	<b>SB</b>
Pacific High School	High School	<b>SB</b>
Redlands East Valley High School	High School	<b>SB</b>



Palomares Academy of Health Sciences	Middle School	<b>LA</b>
Patrick Henry Middle School	Middle School	<b>LA</b>
Los Angeles Center For Enriched Studies Middle School	Middle School	<b>LA</b>
Robert Frost Middle School	Middle School	<b>LA</b>
Southeast Middle School - DREAMS Magnet	Middle School	<b>LA</b>
Walter Reed Middle School	Middle School	<b>LA</b>
Wilmington Middle School	Middle School	<b>LA</b>
Dr. Julian Nava Learning Academy	Middle School	<b>LA</b>
Robert Fulton College Prep	Middle School	<b>LA</b>
South Gate Middle School	Middle School	<b>LA</b>
75th Street Elementary School (6th Grade)	Middle School	<b>LA</b>
Henry T Gage Middle School	Middle School	<b>LA</b>
Maywood Center for Enriched Studies	Middle School	<b>LA</b>

Walnut Park Middle School Science Technology Engineering and Mathematics Academy	Middle School	<b>LA</b>
Arroyo Seco Museum Science Magnet	Middle School	<b>LA</b>
Northridge Middle School	Middle School	<b>LA</b>
West Athens School	Middle School	<b>LA</b>
New Horizons Upper school	Middle School	<b>OC</b>
South Junior High School	Middle School	<b>OC</b>
Chemawa Middle School	Middle School	<b>RS</b>
Mountain Vista Elementary School (6th grade)	Middle School	<b>RS</b>
Sea View Elementary School (6th grade)	Middle School	<b>RS</b>
West Shores Middle School	Middle School	<b>RS</b>
Mecca Elementary School (6th grade)	Middle School	<b>RS</b>
Oasis Elementary School (6th Grade)	Middle School	<b>RS</b>
Saul Martinez Elementary School (6th grade)	Middle School	<b>RS</b>

Walnut Park Middle School Science Technology Engineering and Mathematics Academy	Middle School	<b>LA</b>
Arroyo Seco Museum Science Magnet School	Middle School	<b>LA</b>
Northridge Middle School	Middle School	<b>LA</b>
West Athens Elementary School	Middle School	<b>LA</b>
New Horizons Irvine Upper School	Middle School	<b>OC</b>
South Junior High School	Middle School	<b>OC</b>
Chemawa Middle School	Middle School	<b>RS</b>
Mountain Vista Elementary School (6th grade)	Middle School	<b>RS</b>
Sea View Elementary School (6th grade)	Middle School	<b>RS</b>
West Shores Middle School	Middle School	<b>RS</b>
Mecca Elementary School (6th grade)	Middle School	<b>RS</b>
Oasis Elementary School (6th Grade)	Middle School	<b>RS</b>
Saul Martinez Elementary School (6th grade)	Middle School	<b>RS</b>

Duke Middle School	Middle School	<b>RS</b>
Toro Canyon Middle School	Middle School	<b>RS</b>
Palm View Elementary School (6th Grade)	Middle School	<b>RS</b>
Valle Del Sol Elementary School (6th grade)	Middle School	<b>RS</b>
Clement Middle School	Middle School	<b>SB</b>

Total number of participating High Schools: **127**  
 Total number of participating Middle Schools: **32**  
 Total number of schools: **159**



# Teacher Participation Survey Matrix

## Survey Totals

23 Surveys Submitted \* 20 High School Teachers \* 3 Middle School Teachers

Question	Name of Lesson	Proportion of Total Responses
What lesson was the most beneficial (HS)?	HS 3: Measuring Particulate Matter at Your School	40%
What lesson was the least beneficial (HS)?	HS 4: Public Hearing Mock Trial	20%

Question	Name of Lesson	Proportion of Total Responses
What lesson was the most beneficial (MS)?	MS 3: How Does Air Pollution Affect Our Health?	100%
What lesson was the least beneficial (MS)?	MS 2: Too Small to See: Identifying and Measuring Different Types of Pollution	66%

Average Number of Classrooms Taught Per Teacher

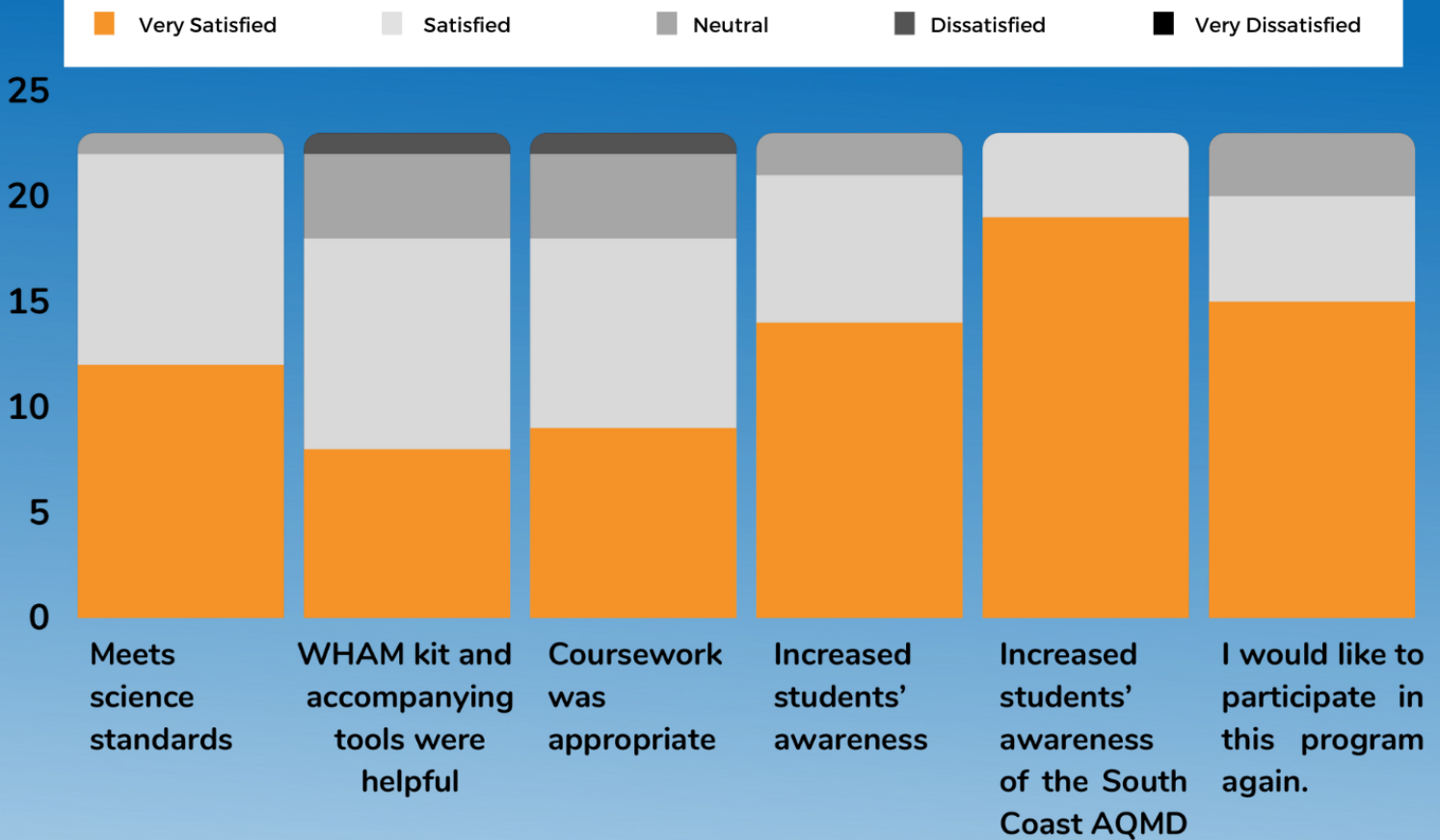
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Average Number of Students Per Classroom

23

# Survey Findings Continued

## Teacher Program Evaluations:



## Teacher Suggestions/Feedback:

Overall, I enjoyed using this curriculum with my students. I used the lessons to supplement my unit on the Atmosphere. The student worksheet for Particulate Matter Lab was not thorough and I did have to modify that lesson a bit to create 4 large groups (9 students each). I added more roles so each student would be involved (ex. Airbeam Sensor Holder, Cell Phone Keeper, Automobile Counter, Scent Sentry, etc) - otherwise the kids would be off task. Other than that, everything went well!

The speakers spoke a little too fast at times for the students. My students were trying to listen and process the information to understand the material, but with the constant information they were a little confused. They presented wonderful information, it might be best to split it up into 2 days with a lab conducted by the teacher in between the 2 visits from the staff. It was just too much for them to grasp at once..

Have the program tailored to the different subjects (Biology, Chemistry, Physics) so it can be more relatable to content taught in class outside of the WHAM content specifically.

# Speaker Series Survey Matrix

## Survey Totals

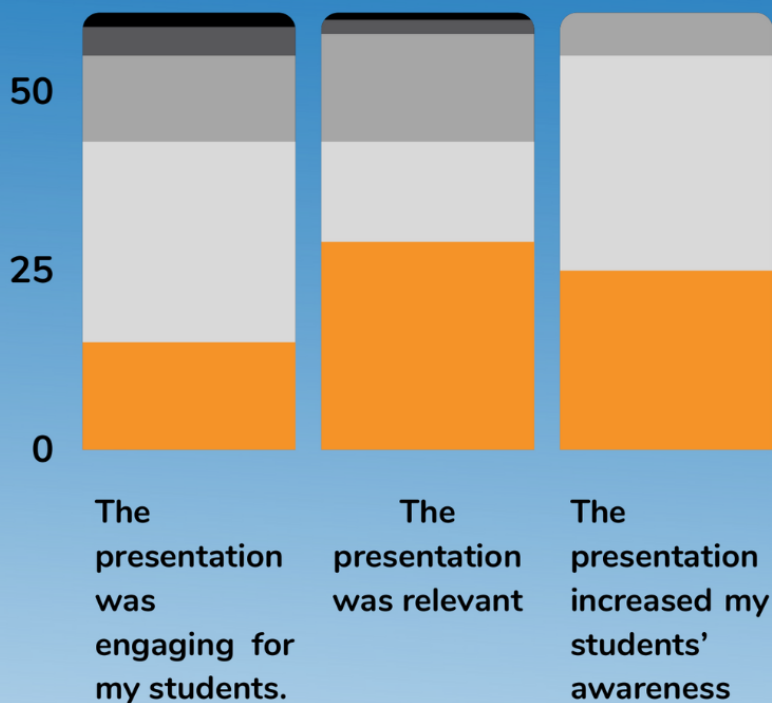
61 Surveys Submitted \* 46 High School Teachers \* 15 Middle School Teachers

### Teacher Presentation Evaluations:

Very Satisfied Satisfied Neutral Dissatisfied Very Dissatisfied



75



Number of Middle Schools	10
Number of High Schools	33
Total Number of Classrooms	107
Classrooms Per Teacher	1.8

## Teacher Suggestions/Feedback:

More pictures and chemistry formulas for students to understand material

Interactive presentation with more polling to keep student interest

Many students struggle to see the relevancy to their personal lives. A presenter or presentation about communities most affected by air quality inequities would help make the lesson more engaging.

It will help to make it more interactive to aid the high school students engagement

My students were very jazzed to participate in today's webinar, thank you for the opportunity. They are really engaged in the curriculum you all have developed!



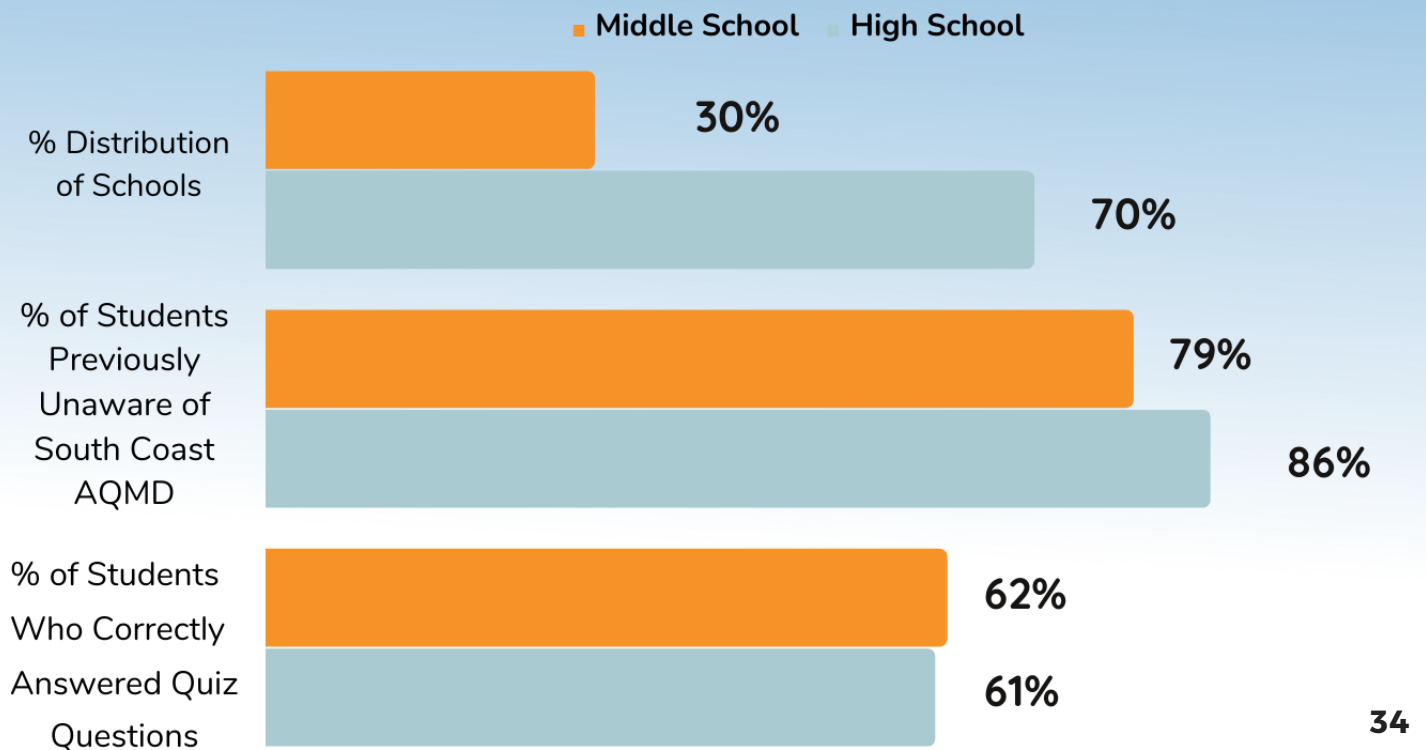


# Student Survey Matrix



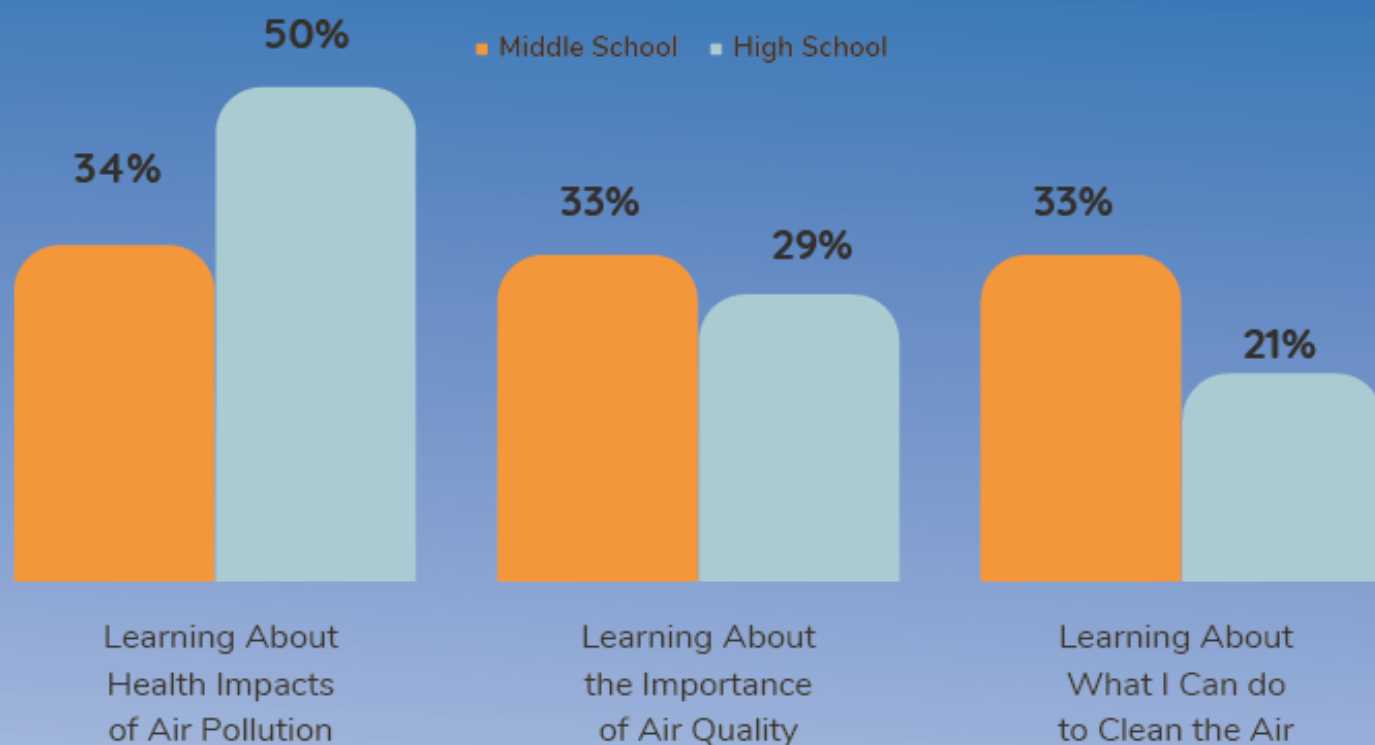
## Survey Totals

- 565 Surveys Submitted
- 388 High School Students
- 177 Middle School Students



# Survey Findings Continued

Student Answers: What is the most important aspect of WHAM?



Student Answers: What can you do to help clean the air we breathe?

Over 400 students listed habitual changes they would commit to to help clean the air.

“ I can plant a tree in my backyard and use a bike any time I need to go somewhere in my neighborhood ”

“ I can start by encouraging my friends to use public transportation when we go hang out, instead of taking our cars. ”