



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS REGULAR MEETING

July 15, 2020

**THIS MEETING WILL BE CONDUCTED UNDER PROCEDURES AUTHORIZED BY
EXECUTIVE ORDER N-29-20 ISSUED BY
GOVERNOR GAVIN NEWSOM**

- **THE PUBLIC MAY OBSERVE THIS MEETING THROUGH THE WEBCAST OF THE MEETING BY CLICKING THE LINK AVAILABLE ON THE AIR DISTRICT'S AGENDA WEBPAGE FOR THE MEETING AVAILABLE AT**

www.baaqmd.gov/bodagendas

- **THE PUBLIC MAY PARTICIPATE REMOTELY VIA ZOOM AT THE FOLLOWING LINK OR BY PHONE**

<https://bayareametro.zoom.us/j/96768273173>

877 853 5247 (Toll Free) or 888 788 0099 (Toll Free)

WEBINAR ID: 967 6827 3173

- **THOSE PARTICIPATING BY PHONE WHO WOULD LIKE TO MAKE A COMMENT CAN USE THE "RAISE HAND" FEATURE BY DIALING "*9". IN ORDER TO RECEIVE THE FULL ZOOM EXPERIENCE, PLEASE MAKE SURE YOUR APPLICATION IS UP TO DATE**

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Comments@baaqmd.gov

BOARD OF DIRECTORS REGULAR MEETING AGENDA

WEDNESDAY
JULY 15, 2020
9:30 A.M.

Chairperson, Rod Sinks

1. CALL TO ORDER - ROLL CALL

PUBLIC MEETING PROCEDURE

The Board Chair shall call the meeting to order and the Clerk of the Boards shall take roll of the Board members.

This meeting will be webcast. To see the webcast, please visit www.baaqmd.gov/bodagendas at the time of the meeting. Closed captioning may contain errors and omissions and are not certified for their content or form.

***Email Comment on Agenda Items:** The public may comment on each item on the agenda. Email Comments for items on the agenda must be submitted to Comments@baaqmd.gov prior to the Board taking up the particular item and indicate the agenda item to which the comment relates. Emailed comments will be considered as the agenda item is taken up by the Board. Emailed comments containing 250 words or less will be read aloud by staff. Emailed comments exceeding 250 words may be summarized during the meeting, if feasible.*

CONSENT CALENDAR (ITEMS 2-7)

Staff/Phone (415) 749-

2. Minutes of the Board of Directors Special Meetings of June 3, 2020 and June 17, 2020

Clerk of the Boards/5073

The Board of Directors will consider approving the draft minutes of the Board of Directors Special Meetings of June 3, 2020 and June 17, 2020.

3. Board Communications Received from June 3, 2020 through July 14, 2020

J. Broadbent/5052
jbroadbent@baaqmd.gov

A copy of communications directed to the Board of Directors received by the Air District from June 3, 2020 through July 14, 2020, if any, will be distributed to the Board Members by way of email.

4. Notices of Violations Issued and Settlements in Excess of \$10,000 in the Month of May 2020
J. Broadbent/5052
jbroadbent@baaqmd.gov

In accordance with Resolution No. 2012-08, the Board of Directors will receive a list of all Notices of Violations issued, and all settlements for amounts in excess of \$10,000 during the month of May 2020.

5. Air District Personnel on Out-of-State Business Travel
J. Broadbent/5052
jbroadbent@baaqmd.gov

In accordance with Section (b) of the Air District Administrative Code, Fiscal Policies and Procedures Section, the Board is hereby notified that the attached memorandum lists Air District personnel who have traveled on out-of-state business in the preceding months.

6. Authorization to Amend a Contract with Bentley Systems, Inc., for Roadway Elevations Data for Nine Counties in the Bay Area
J. Broadbent/5052
jbroadbent@baaqmd.gov

The Board of Directors will consider authoring the Air District to purchase roadway elevations for the entire Bay Area roadway network, as an extension to the existing contract with Bentley Systems, Inc., in an amount not to exceed \$257,000. The elevation data will be used as important inputs in community-scale models for estimating Assembly Bill (AB) 617 community impacts from on-road traffic.

7. Projects with Proposed Grant Awards Over \$100,000
J. Broadbent/5052
jbroadbent@baaqmd.gov

The Board of Directors will consider approving projects with proposed grant awards over \$100,000 and authorize the Executive Officer/APCO to enter into all necessary agreements with applicants and partners for the recommended projects.

COMMITTEE REPORTS

8. Report of the Stationary Source Committee Meeting of June 17, 2020
CHAIR: J. Bauters
J. Broadbent/5052
jbroadbent@baaqmd.gov

The Committee received the following reports:

A) Update on the Development of Draft Amendments to Regulation 6, Rule 5 (Rule 6-5): Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units

1) None; receive and file.

B) Update on Implementation of Regulation 11, Rule 18 (Rule 11-18): Reduction of Risk from Air Toxic Emissions at Existing Facilities

1) None; receive and file.

C) Update on the Odor Attribution Study in the South Bay

1) *None; receive and file.*

For the full Committee agenda packet and materials, click on the link below:

www.baaqmd.gov/bodagendas

9. Report of the Mobile Source Committee Meeting of June 18, 2020

CHAIR: D. Canepa

J. Broadbent/5052
jbroadbent@baaqmd.gov

The Committee received the following reports:

A) Projects and Contracts with Proposed Grant Awards Over \$100,000

1) *Approve recommended projects with proposed grant awards over \$100,000 as shown in Attachment 1; and*

2) *Authorize the Executive Officer/APCO to enter into all necessary agreements with applicants for the recommended projects.*

B) Revise Allocation of Fiscal Year Ending (FYE) 2021 Transportation Fund for Clean Air Funding

1) *Approve the proposed increase to the allocation of Transportation Fund for Clean Air (TFCA) in FYE 2021, as shown in Table 2; and*

2) *Authorize the proposed change to cost-effectiveness limits for the Air District-sponsored programs and projects shown in Table 3.*

For the full Committee agenda packet and materials, click on the link below:

www.baaqmd.gov/bodagendas

10. Report of the Climate Protection Committee Meeting of June 18, 2020

CHAIR: T. Barrett

J. Broadbent/5052
jbroadbent@baaqmd.gov

The Committee received the following report:

A) Update on Heat Pump Water Heater Grants

1) *None; receive and file.*

For the full Committee agenda packet and materials, click on the link below:

www.baaqmd.gov/bodagendas

11. Report of the Legislative Committee Meeting of June 25, 2020

CHAIR: M. Abe-Koga

J. Broadbent/5052
jbroadbent@baaqmd.gov

The Committee received the following reports:

A) Sacramento Legislative Budget Update

1) None; receive and file.

B) Air District Sponsored Bill

1) None; receive and file.

C) State Legislation Update

1) The Legislative Committee (Committee) will discuss and review bills and take positions where appropriate.

At the direction of the Board of Directors, the Committee will review and consider taking a position on Assembly Constitutional Amendment (ACA) 5 (Weber).

For the full Committee agenda packet and materials, click on the link below:

www.baaqmd.gov/bodagendas

12. Report of the Ad Hoc Committee on Equity, Access, and Inclusion Meeting of July 1, 2020

CHAIR: D. Hurt

J. Broadbent/5052
jbroadbent@baaqmd.gov

A) Report Back from Committee Chair Davina Hurt's Meeting with Bay Area Environmental Justice Leaders

1) None; receive and file.

B) Consideration of Revised Ad Hoc Committee on Equity, Access, and Inclusion Charter

1) The Ad Hoc Committee will consider recommending the Board of Directors approve the revised charter based on Committee comments at its March 25, 2020 meeting.

C) Discussion of Key Deliverables of the Ad Hoc Committee on Equity, Access, and Inclusion

1) None; receive and file.

D) California Air Resources Board's Environmental Justice Work

1) None; receive and file.

E) Update on Office of Diversity, Equity, & Inclusion | Internal Efforts to Advance Racial Equity

1) None; receive and file.

For the full Committee agenda packet and materials, click on the link below:

www.baaqmd.gov/bodagendas

13. Report of the Advisory Council Meeting of May 12, 2020
BOARD LIAISON: R. Sinks

J. Broadbent/5052
jbroadbent@baaqmd.gov

The Council received the following reports:

A) Particulate Matter (PM) Symposium Overview

1) None; receive and file.

B) Community Particulate Matter (PM) Discussion Overview

1) None; receive and file.

C) Update on Air District Particulate Matter (PM) Potential Policy Strategies

1) None; receive and file.

For the full Council agenda packet and materials, click on the link below:

<https://www.baaqmd.gov/about-the-air-district/advisory-council/agendasreports>

PRESENTATIONS

14. **Spare the Air Advertising Campaign Video and Update**

The Board of Directors will receive an update on the Air District's Spare the Air Campaign.

15. **COVID-19 Shelter-in-Place and Changes in Particulate Matter_{2.5} (PM_{2.5}) Concentrations in the Bay Area**

The Board of Directors will receive a presentation on the effects of COVID-19 and the changes in PM_{2.5} in the Bay Area.

PUBLIC COMMENT ON NON-AGENDA MATTERS

16. **Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3**

Emailed comments indicating the comment pertains to non-agenda matters will be considered under this item. Emailed comments containing 250 words or less will be read aloud by staff. Emailed comments exceeding 250 words may be summarized during the meeting, if feasible.

BOARD MEMBERS' COMMENTS

17. *Any member of the Board, or its staff, on his or her own initiative or in response to questions posed by the public, may: ask a question for clarification, make a brief announcement or report on his or her own activities, provide a reference to staff regarding factual information, request staff to report back at a subsequent meeting concerning any matter or take action to direct staff to place a matter of business on a future agenda. (Gov't Code § 54954.2)*

OTHER BUSINESS

18. Report of the Executive Officer/APCO

19. Chairperson's Report

20. Time and Place of Next Meeting:

Wednesday, September 16, 2020, at 9:30 a.m., via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom.

21. Adjournment

The Board meeting shall be adjourned by the Board Chair.

CONTACT:

MANAGER, EXECUTIVE OPERATIONS
375 BEALE STREET, SAN FRANCISCO, CA 94105
yjohnson@baaqmd.gov

(415) 749-4941
FAX: (415) 928-8560
BAAQMD homepage:
www.baaqmd.gov

- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the District's offices at 375 Beale Street, Suite 600, San Francisco, CA 94105, at the time such writing is made available to all, or a majority of all, members of that body.

Accessibility and Non-Discrimination Policy

The Bay Area Air Quality Management District (Air District) does not discriminate on the basis of race, national origin, ethnic group identification, ancestry, religion, age, sex, sexual orientation, gender identity, gender expression, color, genetic information, medical condition, or mental or physical disability, or any other attribute or belief protected by law.

It is the Air District's policy to provide fair and equal access to the benefits of a program or activity administered by Air District. The Air District will not tolerate discrimination against any person(s) seeking to participate in, or receive the benefits of, any program or activity offered or conducted by the Air District. Members of the public who believe they or others were unlawfully denied full and equal access to an Air District program or activity may file a discrimination complaint under this policy. This non-discrimination policy also applies to other people or entities affiliated with Air District, including contractors or grantees that the Air District utilizes to provide benefits and services to members of the public.

Auxiliary aids and services including, for example, qualified interpreters and/or listening devices, to individuals who are deaf or hard of hearing, and to other individuals as necessary to ensure effective communication or an equal opportunity to participate fully in the benefits, activities, programs and services will be provided by the Air District in a timely manner and in such a way as to protect the privacy and independence of the individual. Please contact the Non-Discrimination Coordinator identified below at least three days in advance of a meeting so that arrangements can be made accordingly.

If you believe discrimination has occurred with respect to an Air District program or activity, you may contact the Non-Discrimination Coordinator identified below or visit our website at www.baaqmd.gov/accessibility to learn how and where to file a complaint of discrimination.

Questions regarding this Policy should be directed to the Air District's Non-Discrimination Coordinator, Rex Sanders, at (415) 749-4951 or by email at rsanders@baaqmd.gov.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

375 BEALE STREET, SAN FRANCISCO, CA 94105

FOR QUESTIONS PLEASE CALL (415) 749-4941

EXECUTIVE OFFICE:

MONTHLY CALENDAR OF AIR DISTRICT MEETINGS

JULY 2020

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting	Wednesday	15	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Stationary Source Committee	Wednesday	29	9:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Board of Directors Executive Committee	Wednesday	29	11:30 a.m.	Webcast only pursuant to Executive Order N-29-20
Advisory Council Meeting	Friday	31	9:00 a.m.	Webcast only pursuant to Executive Order N-29-20

AUGUST 2020

NO MEETINGS SCHEDULED

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Minutes of the Board of Directors Special Meetings of June 3, 2020 and June 17, 2020

RECOMMENDED ACTION

Approve the attached draft minutes of the Board of Directors Special Meetings of June 3, 2020 and June 17, 2020.

DISCUSSION

Attached for your review and approval are the draft minutes of the Board of Directors Special Meetings of June 3, 2020 and June 17, 2020.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Marcy Hiratzka
Reviewed by: Vanessa Johnson

Attachment 2A: Draft Minutes of the Board of Directors Special Meeting of June 3, 2020
Attachment 2B: Draft Minutes of the Board of Directors Special Meeting of June 17, 2020
Attachment 2C: Resolution Condemning Racism and Injustice and Affirming Commitment to Diversity, Equity, Access and Inclusion from the Board of Directors Special Meeting of June 17, 2020

AGENDA 2A –ATTACHMENT

Draft Minutes - Board of Directors Special Meeting of June 3, 2020

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
(415) 749-5073

Board of Directors Special Meeting
Wednesday, June 3, 2020

DRAFT MINUTES

Note: Audio recordings of the meeting are available on the website of the Bay Area Air Quality Management District at www.baaqmd.gov/bodagendas

This meeting was conducted under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the committee participated by teleconference.

CALL TO ORDER

1. **Opening Comments:** Board of Directors (Board) Chairperson, Rod Sinks, called the meeting to order at 9:01 a.m.

Roll Call:

Present: Chairperson Rod Sinks; Vice Chairperson Cindy Chavez; Secretary Karen Mitchoff; and Directors Margaret Abe-Koga, Teresa Barrett, John Bauters, David Canepa, Pauline Russo Cutter, John Gioia, Carole Groom, Scott Haggerty, David Hudson, Davina Hurt, Tyrone Jue, Liz Kniss, Nate Miley, Katie Rice, Mark Ross, Jim Spring, Brad Wagenknecht, Shamann Walton, Lori Wilson, and Shirlee Zane.

Absent: None.

CLOSED SESSION (9:04 a.m.)

NOTED PRESENT: Director Miley was noted present at 9:06 a.m.

2. **CONFERENCE WITH LABOR NEGOTIATORS (Government Code § 54957.6(a))**

Agency Negotiators: *Jack P. Broadbent, Executive Officer/Air Pollution Control Officer (APCO)
Rex Sanders, Chief Administrative Officer*

Employee Organizations: *Bay Area Air Quality Management District Employees' Association, Management, and Confidential Employee Groups*

REPORTABLE ACTION: None.

OPEN SESSION (9:52 a.m.)

CONSENT CALENDAR (ITEMS 3 - 13)

3. Minutes of the Board of Directors Special Budget Hearing Meeting and Special Meeting of May 6, 2020
4. Board Communications Received from May 6, 2020 through June 2, 2020
5. Notices of Violations Issued and Settlements in Excess of \$10,000 in the month of April 2020
6. Authorization to Execute a Contract with Contra Costa County to Support the County’s Green and Healthy Homes Initiative
7. Authorization to Extend and Increase Funds for a Contract with Kearns and West for Implementation of the Bay Air Center
8. Authorization to Execute a Master Services Agreement Contract with West Oakland Environmental Indicators Project to Support Assembly Bill (AB) 617 Implementation
9. Authorization to Extend the Contract and Execute a Purchase Order with Direct Mail Center in Excess of \$100,000 for Public Notice Expenses
10. Authorization for a Funded Partnership Agreement with the Metropolitan Transportation Commission (MTC) on Database Development
11. Consider Approving the Proposed Memorandum of Understanding (MOU) between the Bay Area Air Quality Management District and the Bay Area Air Quality Management District Employees’ Association (EA) and to Approve Changes to the Salaries and Benefits of the Management and Confidential Units
12. Consider Approval of Employee Contract Amendments for the Executive Officer/APCO
13. Consider Approval of Employee Contract Amendments for the District Counsel

Public Comments

No requests received.

Board Comments

Brian Bunger, District Counsel, stated that the following typo was noted in the “Discussion” section of the memo pertaining to Item 11: “November 8, 2021” should be “November 8, 2020.”

Board Action

Director Kniss made a motion, seconded by Director Wilson, to **approve** the Consent Calendar Items 3 through 13, inclusive; and the motion **carried** by the following vote of the Board:

- AYES: Abe-Koga, Barrett, Bauters, Canepa, Chavez, Cutter, Gioia, Groom, Haggerty, Hudson, Hurt, Jue, Kniss, Miley, Mitchoff, Rice, Ross, Sinks, Spring, Wagenknecht, Walton, Wilson, Zane.
- NOES: None.
- ABSTAIN: None.
- ABSENT: None.

COMMITTEE REPORTS

14. Report of the Advisory Council Meeting of May 12, 2020

Chair Sinks waived reading aloud the report below:

The Council met on Tuesday, May 12, 2020, under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the Council participated by teleconference. The Council approved the minutes of December 9, 2019.

The Council then received the staff presentation Particulate Matter Symposium Overview. During this item, the Council reviewed answers to discussion questions that had been asked of the Health Effects Panel.

The Council then received the presentation Community Reflections from the February 27, 2020 Community Summit on Particulate Matter. This presentation was given by Jed Holtzman of 350 Bay Area, and LaDonna Williams of All Positives Possible.

Finally, the Council discussed the staff presentation Update on Air District Particulate Matter Potential Policy Strategies.

The next meeting of the Council will be at the Call of the Chair. This concludes the Chair Report of the Advisory Council.

Public Comments

No requests received.

Board Comments

None.

Board Action

None; receive and file.

15. Report of the Technology Implementation Office (TIO) Steering Committee Meeting of May 15, 2020

TIO Steering Committee Chair, Cindy Chavez, read the following Committee report:

The Committee met on Friday, May 15, 2020, under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the committee participated by teleconference. The Committee approved the minutes of October 4, 2019.

The Committee reviewed and discussed the staff presentation Update on Electric Vehicle Incentive Programs.

The Committee then reviewed and discussed the staff presentation Climate Tech Finance Program Update.

The next meeting of the Technology Implementation Office Steering Committee will be held at the call of the Chair. This concludes the Chair Report of the Technology Implementation Office Steering Committee.

Public Comments

No requests received.

Board Comments

None.

Board Action

None; receive and file.

16. Report of the Mobile Source Committee Meeting of May 20, 2020

Mobile Source Committee Chair, David Canepa, read the following Committee report:

The Committee met on Wednesday, May 20, 2020, under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the committee participated by teleconference. The Committee approved the minutes of April 22, 2020.

The Committee reviewed and discussed the staff presentation Projects and Contracts with Proposed Awards Over \$100,000. The Committee recommends the Board:

- 1. Approve recommended projects with proposed grant awards over \$100,000; and*
- 2. Authorize the Executive Officer/APCO to enter into all necessary agreements with applicants for the recommended projects.*

The Committee then reviewed and discussed the staff presentation Fiscal Year Ending (FYE) 2021 Transportation Fund for Clean Air Regional Fund Policies and Evaluation Criteria. The Committee recommends the Board:

- 1. Approve the proposed FYE 2021 Transportation Fund for Clean Air Regional Fund Policies and Evaluation Criteria.*

The next meeting of the Mobile Source Committee will be on Thursday, June 18, 2020, at 9:30 a.m., via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom. I move that the Board approve the Mobile Source Committee's recommendations. This concludes the Chair Report of the Mobile Source Committee.

Public Comments

No requests received.

Board Comments

None.

Board Action

Director Canepa made a motion, seconded by Director Hudson, to **approve** the recommendations of the Mobile Source Committee; and the motion **carried** by the following vote of the Board:

AYES: Abe-Koga, Barrett, Bauters, Canepa, Chavez, Cutter, Gioia, Groom, Haggerty, Hudson, Hurt, Jue, Kniss, Miley, Mitchoff, Rice, Ross, Sinks, Spring, Wagenknecht, Walton, Wilson, Zane.
NOES: None.
ABSTAIN: None.
ABSENT: None.

17. Report of the Budget and Finance Committee Meeting of May 20, 2020

Budget and Finance Committee Chair, Carole Groom, read the following Committee report:

The Committee met on Wednesday, May 20, 2020, under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the committee participated by teleconference. The Committee approved the minutes of April 29, 2020.

The Committee then reviewed and discussed the staff presentation Proposed Amendments to Regulation 3; Fees, which included three different fee options. The Committee approved Air District staff's recommendation with a friendly amendment regarding discretionary funding of retirement liabilities. The Committee recommends the Board:

- 1. Adopt a new fee for implementation of Assembly Bill 617 on Title V Facilities for FYE 2021;*
- 2. Revisit imposition of additional fees in October 2020, as the economic and facility activity level picture become clearer; and*
- 3. Make the annual \$5 million dollars of continued discretionary funding of retirement liabilities a designation within the Reserves, not yet to be invested into the 115 Trust, pending further Board direction.*

The next meeting of the Budget and Finance Committee will be held on Wednesday, July 22, 2020, at 9:30 a.m. via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom. I move that the Board approve the Budget and Finance Committee's recommendations. This concludes the Chair Report of the Budget and Finance Committee.

Public Comments

No requests received.

Board Comments

None.

Board Action

Director Groom made a motion, seconded by Director Bauters, to **adopt** a new fee for implementation of Assembly Bill (AB) 617 on Title V Facilities for FYE 2021 and **revisit** imposition of additional fees in October 2020, as the economic and facility activity level picture become clearer; and the motion **carried** by the following vote of the Board:

AYES: Abe-Koga, Barrett, Bauters, Canepa, Chavez, Cutter, Gioia, Groom, Haggerty, Hudson, Hurt, Jue, Kniss, Miley, Mitchoff, Rice, Ross, Sinks, Spring, Wagenknecht, Walton, Wilson, Zane.
NOES: None.
ABSTAIN: None.
ABSENT: None.

18. Report of the Community and Public Health Committee Meeting of May 20, 2020

In the interest of time, Community and Public Health Committee Chair, Shirlee Zane, waived reading aloud the report below:

The Community and Public Health Committee met on Wednesday, May 20, 2020, under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the Committee participated by teleconference. The Committee approved the minutes of March 5, 2020.

The Committee reviewed and discussed the staff presentation Recent Studies on COVID-19 and Particulate Matter.

The Committee then reviewed and discussed the staff presentation Air District Efforts to Encourage Teleworking.

Finally, the Committee reviewed and discussed the staff presentation Contra Costa County Green and Healthy Homes Initiative.

The next meeting of the Community and Public Health Committee will be held on Thursday, July 2, 2020, at 9:30 a.m. via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom. This concludes the Chair Report of the Community and Public Health Committee.

Draft Minutes - Board of Directors Special Meeting of June 3, 2020

Public Comments

No requests received.

Board Comments

The Board and staff discussed the importance of creating telecommuting and remote work policies.

Board Action

None; receive and file.

19. Report of the Personnel Committee Meeting of May 27, 2020

In the interest of time, Personnel Committee Chair, Jim Spering, waived reading aloud the report below:

The Committee met on Wednesday, May 27, 2020, under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the Committee participated by teleconference. The Committee approved the minutes of September 6, 2019 and April 15, 2020.

The Committee met in Closed Session to discuss labor negotiations with the Air District's Employees Association.

The next meeting of the Personnel Committee will be held at the call of the Chair. This concludes the Chair Report of the Personnel Committee.

Public Comments

No requests received.

Board Comments

None.

Board Action

None; receive and file.

20. Report of the Legislative Committee Meeting of May 27, 2020

In the interest of time, Legislative Committee Chair, Margaret Abe-Koga, waived reading aloud the report below:

The Committee met on Wednesday, May 27, 2020, under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the committee participated by teleconference. The Committee approved the minutes of April 22, 2020.

The Committee reviewed and discussed the staff presentation Sacramento Legislative/Budget Update, capturing various program allocations from the Governor's May revision to the FY 2020-2021 Budget, as of May 14, 2020 that are of interest to the Air District.

The Committee then reviewed and discussed the staff presentation Air District-Sponsored Bills, which provided updates on Assembly Bill 2882, which requires that private schools and charter schools meet the same siting requirements as public schools, and Assembly Bill 3211, which allows air districts to adopt local rules related to toxic air contaminants at indirect sources of air pollution, and also allows collection of data that will help air districts work with these sources and communities to reduce health impacts.

Finally, the Committee reviewed and discussed the staff presentation State Legislation Update, which discussed the merging of Senate Bills 802 and 1099, both regarding emergency backup generators.

The next meeting of the Legislative Committee will be on Thursday, June 25, 2020, at 9:30 a.m. via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom. This concludes the Chair's Report of the Legislative Committee.

Public Comments

No requests received.

Board Comments

None.

Board Action

None; receive and file

PUBLIC HEARINGS

21. Public Hearing to Consider Adoption of Proposed Amendments to Air District Regulation 3: Fees and Approval of the Filing of a Notice of Exemption from the California Environmental Quality Act

Jack P. Broadbent, Executive Officer/Air Pollution Control Officer, introduced Damian Breen, Deputy Air Pollution Control Officer of Technology, who gave the staff presentation *Proposed Amendments to regulation 3, Fees*, including: outline; cost recovery background; pre-pandemic fee proposal; Criteria Pollutant and Toxics Emissions Reporting Regulation fee; Budget and Finance Committee process; current fee proposal; comments received; rule development process; and recommendations.

Chair Sinks opened the second of two required Public Hearings to Receive Testimony on Proposed Amendments to Air District Regulation 3: Fees.

Public Comments

Public comments were given by Jed Holtzman, 350 Bay Area.

Chair Sinks closed the Public Hearing.

Board Comments

None.

Board Action

Revise Section 3-327, Permit to Operate, Renewal Fees as follows:
– A new community health impact fee would be charged during permit renewal to each permitted facility. This fee would help cover the Air District’s costs associated with CARB’s Assembly Bill (AB) 617 “Community Air Protection Program.”
– Staff is proposing a fee equal to 5.7% of the annual total permit renewal fees for each Title V facility owner with a maximum cap of \$100,000 per year.
– Add references to Schedule W (Petroleum Refining Emissions Tracking Fees) and Schedule X (Major Stationary Source Community Air Monitoring Fees) since fees assessed during permit renewal are typically listed in this section.
Change the Existing Fee Schedules as follows:
– Revise the language in Fee Schedule N (Toxic Inventory Fees) to clarify the methodology used by the Air District to calculate the facility’s weighted toxic inventory.
– Amend the language in Fee Schedule V (Open Burning) to reflect recent Regulation 5 amendments.

Chair Sinks made a motion, seconded by Vice Chair Chavez, to **adopt** the five (above) proposed amendments to Air District Regulation 3: Fees that would become effective on July 1, 2020, and approve the filing of a California Environmental Quality Act Notice of Exemption; and the motion **carried** by the following vote of the Board:

- AYES: Canepa, Chavez, Cutter, Gioia, Groom, Hudson, Jue, Kniss, Miley, Mitchoff, Ross, Sinks, Spring, Wagenknecht, Walton, Wilson, Zane.
- NOES: Barrett, Bauters, Hurt, Rice.
- ABSTAIN: None.
- ABSENT: Abe-Koga, Haggerty.

22. **Public Hearing to Consider Adoption of the Air District’s Proposed Budget for Fiscal Year Ending 2021**

Chair Sinks waived the staff presentation for this item, in the interest of time, and because this was the second Public Hearing the Board was holding to consider the Air District’s Proposed Budget for Fiscal Year Ending 2021.

Public Comments

Public comments were given by Jed Holtzman, 350 Bay Area.

Board Comments

The Board and staff discussed the request that staff addresses how the Air District plans to reinvest into disadvantaged communities when additional fee increases are revisited in October 2020.

Board Action

Director Spering made a motion, seconded by Secretary Mitchoff, to **adopt** a resolution to **approve** the Budget for the FYE 2021 and various budget related actions; and the motion **carried** by the following vote of the Board:

AYES:	Barrett, Bauters, Canepa, Chavez, Cutter, Gioia, Groom, Hudson, Hurt, Jue, Kniss, Miley, Mitchoff, Rice, Ross, Sinks, Spering, Wagenknecht, Walton, Wilson, Zane.
NOES:	None.
ABSTAIN:	None.
ABSENT:	Abe-Koga, Haggerty.

PRESENTATIONS

23. **Health & Zip Code: Environmental Health Inequities from Dr. Anthony Iton**

Chair Sinks introduced Dr. Anthony Iton, M.D., J.D., MPH, Senior Vice President for Healthy Communities at The California Endowment, and previous Alameda County Public Health Department Director and Health Officer, who gave the presentation *Policy of Violence: The Root Cause of Health Inequity*.

Public Comments

Public comments were given by Caryn; Dr. Raymond Tompkins; and Ladonna Williams.

Board Comments

The Board and staff discussed the request for presentations on this topic on a quarterly basis; the need to link regulation back to public health and the need to prioritize health risk prevention; whether those who advocate for communities that are impacted by inequities are residents of those communities; health disparities versus health inequities; importance of building the leadership pipeline (building capacity and effective advocacy); how to quantify savings regarding human health; the California Endowment's efforts to increase the presence of indigenous health care leaders; the correlation between a community's empowerment and its recovery; how a lack of solidarity and social networks keeps low-income communities separated from resources; how environmental stressors are internalized and affect the body; how people can address the fact that COVID-19 is impacting poor communities the most; and reputable sources/entities that can educate regarding racial injustice.

Board Action

None; receive and file.

24. Air District Print and Online Annual Report

Mr. Broadbent introduced Tina Landis, Public Information Officer, who gave the staff presentation *Air District Print and Online Annual Report*, including: *Coming Together* in print, interactive website, and video content; and social media promotion. Ms. Landis navigated through the 2019 interactive, online Annual Report, which highlights the accomplishments of the Air District over the past year.

Public Comments

No requests received.

Board Comments

None.

Board Action

None; receive and file.

25. Process for Appointment to the Air District's Advisory Council

Mr. Broadbent gave the staff presentation *Process for Appointment to the Air District's Advisory Council*, including: Air District Advisory Council Health and Safety Code; Advisory Council current status; and current members. Mr. Broadbent announced that Professor Severin Borenstein, one of the seven members of the Air District's Advisory Council, recently resigned and that the Air District will hold a public recruitment for the vacancy.

Public Comments

Public comments were given by Jed Holtzman, 350 Bay Area.

Board Comments

The Board and staff discussed the request that this item comes before the Ad Hoc Committee on Equity, Access, and Inclusion; the lack of applicants yielded from past Advisory Council members recruitments; the request that recruitment be opened for incumbents' positions; whether to expedite recruitment for the current vacancy on the Advisory Council, regardless of the term expirations of the other Advisory Council members; and the suggestion of proactively reaching out to potential applicants.

Board Action

None; receive and file.

PUBLIC COMMENT ON NON-AGENDA MATTERS

26. Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3

Public comments were given by David Page; and Greg Karras.

BOARD MEMBERS' COMMENTS

27. Board Members' Comments

None.

OTHER BUSINESS

28. Report of the Executive Officer/Air Pollution Control Officer

Mr. Broadbent announced the following:

- The Bay Area has not yet exceeded National Ambient Air Quality Standards, despite warmer temperatures and the summer smog season.
- Air District staff is trying to consider the fact that many Board members prefer not to have multiple meetings on the same day, as June meetings are being scheduled.
- Thank you to the Air District staff who helped facilitate the amendments to the Employees' Association MOU, Regulation 3: Fees, and Proposed Budget for Fiscal Year Ending (FYE) 2021.

29. Chairperson's Report

Chair Sinks announced the following:

- The Air & Waste Management Association's (AMWA) 113th Annual Conference in San Francisco, scheduled for June 29, 2020, will be virtual, due to the COVID-19 pandemic.

30. Time and Place of Next Meeting

The next meeting had originally been scheduled for Wednesday, July 15, 2020, at 9:30 a.m. via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom. After the meeting adjourned, the next meeting was scheduled for Wednesday, June 17, 2020, at 11:30 a.m., via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom.

31. **Adjournment**

The meeting adjourned at 1:10 p.m.

Marcy Hiratzka
Clerk of the Boards

AGENDA 2B –ATTACHMENT

Draft Minutes - Board of Directors Special Meeting of June 17, 2020

Bay Area Air Quality Management District
375 Beale Street, Suite 600
San Francisco, CA 94105
(415) 749-5073

Board of Directors Special Meeting
Wednesday, June 17, 2020

DRAFT MINUTES

Note: Audio recordings of the meeting are available on the website of the Bay Area Air Quality Management District at www.baaqmd.gov/bodagendas

This meeting was conducted under procedures authorized by executive order N-29-20 issued by Governor Gavin Newsom. Members of the committee participated by teleconference.

CALL TO ORDER

1. **Opening Comments:** Board of Directors (Board) Chairperson, Rod Sinks, called the meeting to order at 11:32 a.m.

Roll Call:

Present: Chairperson Rod Sinks; Vice Chairperson Cindy Chavez; Secretary Karen Mitchoff; and Directors Margaret Abe-Koga, Teresa Barrett, John Bauters, David Canepa, John Gioia, Carole Groom, Scott Haggerty, David Hudson, Davina Hurt, Tyrone Jue, Liz Kniss, Nate Miley, Katie Rice, Mark Ross, Jim Spering, Brad Wagenknecht, Lori Wilson, and Shirlee Zane.

Absent: Directors Pauline Russo Cutter and Shamann Walton.

PRESENTATIONS

2. **Acceptance of 2020 Greenhouse Gas Reduction Funds and other Monies from the California Air Resources Board**

NOTED PRESENT: Directors Kniss and Jue were noted present at 11:35 a.m.

Damian Breen, Deputy Air Pollution Control Officer of Technology, and Karen Schkolnick, Director of Strategic Incentives, thanked the Board for assembling to approve this item. Ms. Schkolnick gave the staff presentation *Acceptance of 2020 Greenhouse Gas Reduction Funds and Other Monies from the California Air Resources Board*, including: overview; background of the Community Air Protection (CAP) Grant program; CAP Year 3 (2020); results of CAP Years 1 and 2; projected grant revenues for Calendar Year 2020; and recommendations.

Public Comments

Public comments were given by Ladonna Williams.

Board Comments

The Board and staff discussed the types of trucks that are eligible for grants under the various funding sources; the amount of funding that is in the Funding Agricultural Replacement Measures for Emission Reductions (FARMER) program; and whether there is sufficient penetration of Air District programs within African American communities in the Bay Area.

Board Action

Director Bauters made a motion, seconded by Director Gioia, to **authorize** the Air District to accept, obligate, and expend new Community Air Protection grant program revenue from the Greenhouse Gas Reduction Fund and any additional funds from settlements, penalties or Greenhouse Gas Reduction Fund monies from the California Air Resources Board in State Fiscal Year Ending 2020; **approve** the corresponding authorizing resolution; and **authorize** the Executive Officer/APCO to execute the proposed Grant Agreements and amendments for projects with individual grant award amounts up to \$100,000; and the motion **carried** by the following vote of the Board:

- AYES: Abe-Koga, Barrett, Bauters, Canepa, Chavez, Gioia, Groom, Haggerty, Hurt, Kniss, Jue, Miley, Mitchoff, Rice, Ross, Sinks, Spring, Wagenknecht, Wilson, Zane.
- NOES: None.
- ABSTAIN: None.
- ABSENT: Cutter, Hudson, Walton.

3. **Resolution Condemning Racism and Injustice, and Affirming Commitment to Diversity, Equity, Access, and Inclusion**

Chair Sinks said that a resolution was written to formally recognize the Air District’s commitment to advance diversity, equity, and inclusion by incorporating those values into Air District policies, programs, and practices. He added that the resolution language was originated by Air District staff and revised by Chair Sinks and Director Hurt, who Chairs the Air District’s Ad Hoc Committee on Equity, Access, and Inclusion. Board members were invited to sign a supplemental signature page, emphasizing their support for the resolution, assuming it would be approved.

Public Comments

Public comments were given by Ladonna Williams; Jed Holtzman, 350 Bay Area; and Dr. Raymond Tompkins.

Board Comments

The Board and staff discussed the request to add the names “Ahmaud Arbery” and “Rayshard Books” to the first paragraph of the resolution; whether to include Asian Americans in this resolution that focuses solely on African Americans; the need to increase awareness about the correlation of racism and environmental justice; whether Air District staff members would like to address the Board at a future meeting regarding this topic; appreciation for Air District staff for prioritizing this issue, and the observation that the Air District has a responsibility to shed light on this issue; and whether the Board members’ electronic signatures may be used on the supplemental signature page.

Board Action

Director Hurt read aloud the original language of the proposed resolution and then made a motion, seconded by Director Bauters, to approve the amended resolution language by adding “Ahmaud Arbery” and “Rayshard Books” to the list of names in the first paragraph; and the motion **carried** by the following vote of the Board:

AYES: Abe-Koga, Barrett, Bauters, Canepa, Groom, Haggerty, Hudson, Hurt, Kniss, Jue, Miley, Mitchoff, Rice, Ross, Sinks, Spering, Wagenknecht, Wilson, Zane.
NOES: None.
ABSTAIN: None.
ABSENT: Chavez, Cutter, Gioia, Walton.

4. **Legislative Update**

Alan Abbs, Legislative Officer, gave the staff presentation, *Legislative Update*, capturing activities pertaining to, and the status of, the State’s Fiscal Year 2020-2021 Budget.

Public Comments

No requests received.

Board Comments

The Board and staff discussed how Assembly Bill 2621 (Mullins), regarding regional climate networks and adaptation action plans, would affect the Air District; and whether the Air District’s Legislative Committee will take a position on Assembly Constitutional Amendment 5 (Weber), which would repeal Proposition 209, a citizens’ initiative approved in 1996, regarding prohibition against discrimination.

Board Action

None; receive and file.

PUBLIC COMMENT ON NON-AGENDA MATTERS

5. Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3

No requests received.

BOARD MEMBERS' COMMENTS

6. Board Members' Comments

Director Kniss promoted the new COVID-19 testing sites in Palo Alto and encouraged all Bay Area residents to get tested.

OTHER BUSINESS

7. Report of the Executive Officer/Air Pollution Control Officer

Mr. Broadbent announced that Veronica Eady, Assistant Executive Officer for Environmental Justice at the California Air Resources Board, will be assuming the role of **Deputy Executive Officer for Policy and Equity** at the Air District, beginning in August. Ms. Eady introduced herself.

Director Bauters welcomed Ms. Eady and invited her to attend the next Ad Hoc Committee on Equity, Access, and Inclusion meeting on July 1, 2020.

8. Chairperson's Report

On behalf of Chair Sinks, Mr. Broadbent announced that Director Hudson was reappointed to serve another two-year term by the Contra Costa Mayors Conference.

9. Time and Place of Next Meeting

Wednesday, July 15, 2020, at 9:30 a.m., via webcast, pursuant to procedures authorized by Executive Order N-29-20 issued by Governor Gavin Newsom.

10. Adjournment

The meeting adjourned at 1:17 p.m.

Marcy Hiratzka
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT**RESOLUTION No. 2020 - 08****Resolution Condemning Racism and Injustice and Affirming Commitment to Diversity, Equity, Access and Inclusion**

WHEREAS, we are witnessing another time in history, where there is an awakening to racial injustice, police brutality, and the dehumanization of African Americans in the criminal legal system. Mass protests across the nation have been sparked, as people are grappling with their sorrow, anger and despair of the murder of Mr. George Floyd while in police custody. Mr. Floyd is joining a long list of Americans who have suffered similar fates; most recently, their names are Breonna Taylor, Rayshard Brooks, Ahmaud Arbery, Nia Wilson, Miles Hall, Philando Castile, Oscar Grant, Tamir Rice, Sandra Bland, and so many others. Yet, these protests, which have extended across the globe, are not simply about these deaths alone. The effects of racism are far more pervasive, resulting from long-standing and deeply embedded systems of racial discrimination and bias;

WHEREAS, studies have shown that racial discrimination takes a tremendous toll on the physical and mental health of Black people in the U.S. Racial discrimination is now recognized as a public health crisis. It's a chronic stressor, contributing to even higher COVID-19 mortality rates among Black people, a statistic most likely elevated by living in neighborhoods with higher exposure to fine particle air pollution. These higher death rates are not a random coincidence; but, instead, is the result of systemic racism and a consequential lack of social, economic and political opportunities;

WHEREAS, community proximity to sources of air pollution is one of these systemic issues. Many of the neighborhoods in the Bay Area with the poorest air quality are in communities historically populated by a largely Black population, due to racist redlining policies in housing and credit, and public and private disinvestment. These residents face many challenges; limited access to quality food, health services, and poverty create stressful conditions and poor health outcomes;

WHEREAS, in recent years, through groundbreaking programs like the Community Air Risk Evaluation Program, and now under the guidance of state Assembly Bill 617, the Air District has concentrated efforts on addressing the air quality challenges faced by these vulnerable communities, which are disproportionately affected by air pollution as well as the socioeconomic impacts of systemic racism;

WHEREAS, we remain committed to our mission of protecting public health and will continue to advance the cause of diversity, access, equity and inclusion in our policies, programs and practices;

NOW, THEREFORE BE IT PROCLAIMED, the Bay Area Air Quality Management District condemns racism, discrimination, and police brutality, in all its destructive manifestations. Racial discrimination is historically ingrained in American systems of government at every level, whether federal, state or local. Government must lead and call on every individual to assume the responsibility for actively addressing racial injustices, structural inequities, and economic disparities. We affirm our commitment to fighting for racial justice and changing the systems that continue to perpetuate racial disparities, especially as they contribute to disproportionate exposure to hazardous air pollution. We vow to use our voice and resources as an ally to the Black community to affect the meaningful and measurable changes that are so urgently needed in the Bay Area.


The foregoing resolution was duly and regularly introduced, passed and adopted at a special meeting of the Board of Directors of the Bay Area Air Quality Management District on the Motion of DIRECTOR HURT, seconded by DIRECTOR BAUTERS, on the 17th day of June, 2020, by the following vote of the Board:

AYES: MARGARET ABE-KOGA, TERESA BARRETT, JOHN BAUTERS, DAVID CANEPA, CAROLE GROOM, SCOTT HAGGERTY, DAVID HUDSON, DAVINA HURT, TYRONE JUE, LIZ KNISS, NATE MILEY, KAREN MITCHOFF, KATIE RICE, MARK ROSS, ROD SINKS, JIM SPERING, BRAD WAGENKNECHT, LORI WILSON, SHIRLEE ZANE.

NOES: NONE.

ABSENT: CINDY CHAVEZ, PAULINE RUSSO CUTTER, JOHN GIOIA, SHAMANN WALTON.

ABSTAIN: NONE.



Rod Sinks
Chairperson of the Board of Directors

ATTEST:

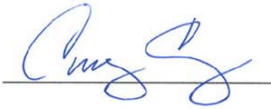


Karen Mitchoff
Secretary of the Board of Directors

**Bay Area Air Quality Management District
Board of Directors
Signatures Supporting RESOLUTION No. 2020-08
Condemning Racism and Injustice and Affirming Commitment to Diversity, Equity,
Access, and Inclusion
Dated June 17, 2020**



Rod Sinks
Chairperson



Cindy Chavez
Vice Chairperson



Karen Mitchoff
Secretary



Margaret Abe-Koga



Scott Haggerty



Mark Ross



Teresa Barrett



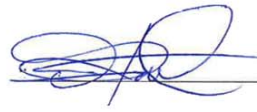
David Hudson



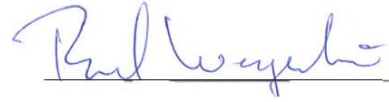
Jim Spering



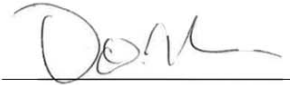
John Bauters



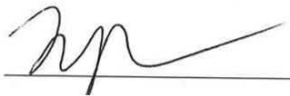
Davina Hurt



Brad Wagenknecht



David Canepa



Tyrone Jue



Shamann Walton



Pauline Russo Cutter



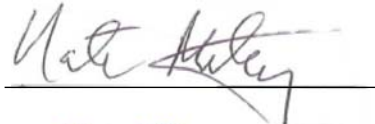
Liz Kniss



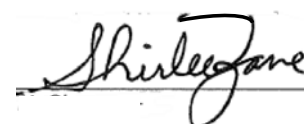
Lori Wilson



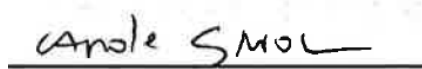
John Gioia



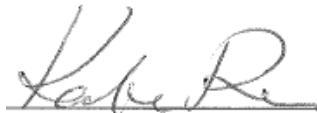
Nate Miley



Shirlee Zane



Carole Groom



Katie Rice

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Board Communications Received from June 3, 2020 through July 14, 2020

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

Copies of communications directed to the Board of Directors received by the Air District from June 3, 2020 through July 14, 2020, if any, will be distributed to the Board Members by way of email.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha de Guzman
Reviewed by: Vanessa Johnson

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Notices of Violations Issued and Settlements in Excess of \$10,000 in the month of May
2020

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

In accordance with Resolution No. 2012-08, attached to this memorandum is a listing of all Notices of Violations issued, and all settlements for amounts in excess of \$10,000 during the calendar months prior to this report.

BUDGET CONSIDERATION/FINANCIAL IMPACT

The amounts of civil penalties collected are included in the Air District's general fund budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Brian C. Bungler

Attachment 4A: Notices of Violations for the Month of May 2020

AGENDA 4A - ATTACHMENT

NOTICES OF VIOLATIONS ISSUED

The following Notice(s) of Violations were issued in May 2020:

San Francisco						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
19th Avenue Valero	Z7570	San Francisco	A59317A	5/21/2020	2-1-301	Modification of a Phase II system to a VR-204 Without an A/C & operating without P/O
19th Avenue Valero	Z7570	San Francisco	A59317B	5/21/2020	2-1-302	Modification of a Phase II system to a VR-204 Without an A/C & operating without P/O

San Mateo						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
Belmont Shell	Z5043	Belmont	A59318A	5/28/2020	2-1-307	Failure to submit passing source test w/in 30 days of last testing
Marsh Road Chevron	Z7568	Menlo Park	A59316A	5/7/2020	8-7-302.3	Failure to maintain Phase II sys. in proper operating condition per 3rd party Source Test
SFD	Z7561	Menlo Park	A59130A	5/28/2020	11-2-401.3	Late Notification

Santa Clara						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
County of Santa Clara - Hellyer Landfill	A1982	San Jose	A58090A	5/29/2020	2-1-307	PC# 4064.2 Failure to operate LGCS for minimum of 6 hrs. in every 3-week period
Recology Pacheco Pass	A6370	Gilroy	A57371A	5/7/2020	8-34-301.1	P.C. #09923 Flare minimum temperature, flare not operated continuously

Recology Pacheco Pass	A6370	Gilroy	A57371B	5/7/2020	2-1-307	P.C. #09923 Flare minimum temperature, flare not operated continuously
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Sonoma						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
Daniel O Davis Inc.	B5523	Santa Rosa	A55947A	5/7/2020	11-2-401.3	Demo Notification not submitted
Jim Doersken	Z7571	Santa Rosa	A59213A	5/21/2020	5-301	Illegal Burn
Lou Saare Body Shop	A6198	Santa Rosa	A59212A	5/6/2020	2-1-302	Permit Expired on 1/2020
Sierra Pipeline	Z7556	Santa Rosa	A59211A	5/5/2020	5-301	Crop replacement fire out of season

SETTLEMENTS FOR \$10,000 OR MORE REACHED

There was one settlement(s) for \$10,000 or more completed in April 2020.

- 1) On April 29, 2020, the Air District reached settlement with Eco Services Operations Corp. for \$20,000, regarding the allegations contained in the following one Notice of Violation:

NOV #	Issuance Date	Occurrence Date	Regulation	Comments from Enforcement
A57598A	8/16/2018	9/20/2017	2-6-307	PC# 17734 section 13a ST# OS-7046 NST-4661 H2S >0.09 lbs/hr & >0.0036 lbs/ long ton of sulfur loaded
A57598B	8/16/2018	9/20/2017	9-1-302	SO2 >300 ppm

There were two settlement(s) for \$10,000 or more completed in May 2020.

- 1) On May 4, 2020, the Air District reached settlement with Wholesome Harvest Baking for \$37,400, regarding the allegations contained in the following three Notices of Violation:

NOV #	Issuance Date	Occurrence Date	Regulation	Comments from Enforcement
A53873A	10/29/2015	9/17/2015	2-1-307	Source test number 16042, permit condition 21231
A56038A	4/2/2018	8/1/2017	2-1-307	Failed source test
A56040A	9/12/2018	6/12/2015	2-1-307	Multiple failed source tests.

- 2) On May 27, 2020, the Air District reached a settlement with San Francisco International Airport for \$10,000, regarding the allegations contained in the following two Notices of Violation:

NOV #	Issuance Date	Occurrence Date	Regulation	Comments from Enforcement
A58080A	7/17/2019	7/1/2011	2-1-301	No authority to construct. S370 was removed from PTO on 2011 but SFO continue to operate
A58080B	7/17/2019	7/1/2011	2-1-302	S370 was removed from PTO on 2011 but SFO continue to operate
A58080C	7/17/2019	7/1/2011	2-6-307	S370 was removed from PTO on 2011 but SFO continue to operate
A58081A	7/17/2019	12/1/2000	2-1-301	No authority to construct.
A58081B	7/17/2019	12/1/2000	2-1-302	Operating fire pump engine without District permit

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Air District Personnel on Out-of-State Business Travel

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

In accordance with Section 5.4 (b) of the District's Administrative Code, Fiscal Policies and Procedures Section, the Board is hereby notified of District personnel who have traveled on out-of-state business.

The report covers the out-of-state business travel for the months of May and June 2020. The monthly out-of-state business travel report is presented in the months following travel completion.

DISCUSSION

There were no out-of-state business travel activities that occurred in the months of May and June 2020.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Stephanie Osaze
Reviewed by: Jeff McKay

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Authorization to Amend a Contract with Bentley Systems, Inc., for Roadway
Elevations Data for Nine Counties in the Bay Area

RECOMMENDED ACTION

Recommend the Board of Directors authorize the Executive Officer/APCO to execute a contract amendment with Bentley Systems, Inc. (Bentley; formerly CitiLabs) in an amount not to exceed \$257,000.

BACKGROUND

The Bay Area Air Quality Management District's (Air District) Board of Directors (Board) approved a contract amendment to purchase 2019 roadway telematics for all nine Bay Area Counties from Bentley Systems, Inc. (Bentley) in May 2020. The 2019 roadway telematics data will support technical assessments in California State Assembly Bill (AB) 617 communities and updates to the Air District's health risk screening tools for evaluating projects under the California Environmental Quality Act (CEQA) with the most up-to-date information available.

Bentley recently processed data on roadway heights, or elevations, for all nine counties in the Bay Area. Using these elevation data with the roadway network and telematics data, which the Air District already obtained, will effectively improve modeling localized roadway impacts in AB 617 communities. The additional cost for the roadway elevations is \$30,000 and includes access to the data until 2025. The overall proposed contract amendment that includes the roadway elevation data is \$257,000.

AB 617 DISCUSSION

AB 617 requires local air districts to partner with community groups, environmental organizations, and other stakeholders to reduce exposures in communities most impacted by air pollution. To reliably characterize air quality impacts from on-road traffic, the Air District assessed data products from a group of vendors and based on that assessment, contracted with Bentley to obtain their superior roadway network and telematics data, which included important features developed from smart phone-based movements tracking and real-world traffic measurements. Previously purchased roadway telematics from Bentley for Alameda County were used to estimate on-road mobile source emissions and air quality impacts for the West Oakland Community Action Plan.

Under the existing contract, the Air District has acquired 2019 telematics data for all nine counties, including a detailed Bay Area roadway network, vehicle volumes by hour, average speed, and number of roadway lanes.

Roadway elevations are important inputs for estimating community impacts from on-road traffic using community-scale models. In West Oakland, the Air District estimated roadway elevations using lidar data. (Lidar works on the same principle of radar but uses light from a laser.) However, the lidar datasets were difficult and time-consuming to process. The Air District has the opportunity to purchase roadway elevations for the entire Bay Area roadway network as an extension to the existing contract with Bentley. Using elevation data provided by Bentley instead of the lidar datasets used for West Oakland will substantially reduce data processing time and produce a more accurate product. Air District staff have reviewed a sample of the roadway elevation data provided by Bentley for West Oakland and verified the completeness and accuracy of the dataset.

Bentley is offering the Air District a discounted price to use the roadway elevation data for five years, consistent with the terms for the roadway telematics data. Having access to these data for multiple years will ensure that Air District staff have sufficient time to conduct source apportionment studies for the remaining AB 617 communities.

BUDGET CONSIDERATION/FINANCIAL IMPACT:

Funding for this contract and its amendment has been included in the Air District's Community Air Risk Evaluation (CARE) program (# 609) budget for Fiscal Year ending 2021.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Virginia Lau
Reviewed by: Song Bai and Phil Martien

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Projects with Proposed Grant Awards over \$100,000

RECOMMENDED ACTION

Recommend the Board of Directors:

1. Approve projects with proposed grant awards over \$100,000; and
2. Authorize the Executive Officer/APCO to enter into all necessary agreements with applicants and partners for the recommended projects.

BACKGROUND

The Bay Area Air Quality Management District (Air District) has participated in the Carl Moyer Program (CMP), in cooperation with the California Air Resources Board (CARB), since the program began in fiscal year 1998-1999. The CMP provides grants to public and private entities to reduce emissions of nitrogen oxides (NO_x), reactive organic gases (ROG), and particulate matter (PM) from existing heavy-duty engines by either replacing or retrofitting them. Eligible heavy-duty diesel engine applications include on-road trucks and buses, off-road equipment, marine vessels, locomotives, and stationary agricultural pump engines.

Assembly Bill 923 (AB 923 - Firebaugh), enacted in 2004 (codified as Health and Safety Code (HSC) Section 44225), authorized local air districts to increase their motor vehicle registration surcharge up to an additional \$2 per vehicle. The revenues from the additional \$2 surcharge are deposited in the Air District's Mobile Source Incentive Fund (MSIF). AB 923 stipulates that air districts may use the revenues generated by the additional \$2 surcharge for projects eligible under the CMP. On February 6, 2019, the Board of Directors (Board) authorized Air District participation in Year 21 of the CMP, and authorized the Executive Officer/APCO to execute grant agreements and amendments for projects funded with CMP funds or MSIF revenues, with individual grant award amounts up to \$100,000.

In 2017, Assembly Bill (AB) 617 directed the CARB, in conjunction with local air districts to establish the Community Air Protection Program. AB 617 provides a new community-focused action framework to improve air quality and reduce exposure to criteria air pollutants and toxic air contaminants in communities most impacted by air pollution. In advance of the development of

the Community Air Protection Program, the Governor and legislature established an early action component to AB 617 to use existing incentive programs to get immediate emission reductions in the communities most affected by air pollution. The 2020-21 California State Budget, issued in January 2020, appropriated \$200 million in GGRF funds statewide to provide funding for a third cycle of Community Air Protection grant funding to reduce emissions including criteria pollutants, toxic air contaminants, and greenhouse gases in AB 617 communities. On June 17, 2020, the Board authorized the Air District to accept, obligate, and expend up to \$40 million in Community Air Protection Funds. A contract between the Air District and CARB to accept these funds was executed on June 22, 2020. These funds are distributed through the Air District's Community Health Protection Grant Program to implement projects under the CMP, on-road truck replacements under the Proposition 1B Goods Movement Emission Reduction Program, and eligible stationary source and community identified projects.

The 2020 California State Budget appropriated \$65 million in Fiscal Year 2019-20 Greenhouse Gas Reduction Funds to CARB for the continued reduction of criteria, toxic, and greenhouse gas emissions from the agricultural sector through the Funding Agricultural Reduction Measures for Emission Reductions (FARMER) Program.

In 1991, the California State Legislature authorized the Air District to impose a \$4 surcharge on motor vehicles registered within the nine-county Bay Area to fund projects that reduce on-road motor vehicle emissions within the Air District's jurisdiction. The statutory authority and requirements for the Transportation Fund for Clean Air (TFCA) are set forth in the HSC Sections 44241 and 44242. Sixty percent of TFCA funds are awarded by the Air District to eligible projects and programs implemented directly by the Air District (e.g., Spare the Air program) and to a program referred to as the Regional Fund. Each year, the Board allocates funding and adopts policies and evaluation criteria that govern the expenditure of TFCA monies. The remaining forty percent of TFCA funds are pass-through funds that are awarded to the designated County Program Manager in each of the nine counties within the Air District's jurisdiction.

On April 15, 2020, the Board authorized funding allocations for use of the sixty percent of the TFCA revenue in Fiscal Year Ending (FYE) 2021, cost-effectiveness limits for Air District-sponsored FYE 2021 programs, and the Executive Officer/APCO to execute grant agreements and amendments for projects with individual grant award amounts up to \$100,000. On June 3, 2020, the Board adopted policies and evaluation criteria for the FYE 2021 Regional Fund program.

For all the funding sources described above, projects with grant award amounts over \$100,000 are typically brought to the Mobile Source Committee for consideration at least on a quarterly basis. In the absence of a monthly Mobile Source Committee meeting project recommendations are occasionally brought to the full Board for consideration.

DISCUSSION

For the CMP Year 21 cycle, the Air District had more than \$52 million available from MSIF, Community Health Protection Grant Program, FARMER and CMP funds for eligible projects. The Air District started accepting project applications for the CMP Year 21 funding cycle on June 17, 2019. Applications are accepted and evaluated on a first-come, first-served basis. As of June 30, 2020, the Air District had received 224 project applications. Of the applications that have been evaluated between June 1, 2020 and June 30, 2020, ten eligible projects have proposed grant awards over \$100,000.

On June 8, 2020, the Air District opened a solicitation offering up to \$2 million in TFCA funding for the High Mileage Fleet Program. The High Mileage Fleets Program helps offset up to \$5,000 of the cost of purchasing or leasing new light and medium-duty zero-emissions vehicles (ZEV) in high-mileage service for fleets that operate within the Air District’s jurisdiction. Applications are being evaluated on a first-come, first-served basis. As of June 30, 2020, one application has been submitted and eligible for participation.

Staff recommends the Board approve the eleven projects shown in Table 1 with proposed grant awards over \$100,000 and authorize the Executive Officer/APCO to enter into all necessary agreements with applicants and partners for the recommended projects.

Table 1: Carl Moyer Program/ Mobile Source Incentive Fund, FARMER, and TFCA projects with grant awards greater than \$100k (Evaluated between 6/1/2020 and 6/30/2020)

Project #	Applicant name	Equipment category	Project description	Proposed contract award	Total project cost	Emission Reductions (Tons per year)			County
						NOx	ROG	PM	
21MOY156	Anne Rose (Vessel: Sea Bass)	Marine	Replacement of two diesel propulsion engines on the fishing vessel Sea Bass	\$166,000	\$257,318	2.753	0.053	0.099	Alameda
21MOY174	Shafer Vineyards	Ag/ off-road	Replacement of two diesel powered agricultural tractors	\$104,775	\$130,974	0.225	0.026	0.020	Napa
21MOY200	Larry Balestra	Ag/ off-road	Replacement of two diesel powered agricultural tractors	\$111,250	139,127	0.691	0.090	0.051	Solano
21MOY215	Dolcini Brothers (Cattle Ranch)	Ag/ off-road	Replacement of one diesel powered agricultural loader	\$217,000	\$271,306	1.224	0.112	0.070	Sonoma
21MOY184	M.C.E. Amos, Inc dba Amos Bros. Dairy	Ag/ off-road	Replacement of one diesel powered agricultural tractor	\$111,500	\$139,488	0.411	0.040	0.021	Sonoma

21MOY202	New Captain Pete, Inc. (Charter fishing)	Marine	Replacement of two diesel propulsion engines on the vessel New Captain Pete	\$180,000	\$267,984	0.338	0.009	0.016	San Mateo
21MOY187	Anoroc Vineyard Management LLC	Ag/ off-road	Replacement of 4 pieces of diesel-powered agricultural equipment	\$153,000	\$191,294	0.308	0.063	0.034	Napa
21MOY207	McClelland's Dairy	Ag/ off-road	Replacement of one diesel powered agricultural tractor	\$114,000	\$142,537	0.278	0.020	0.014	Sonoma
21MOY219	Paul Bianchi, Inc.	Ag/ off-road	Replacement of one diesel powered agricultural tractor	\$112,300	\$140,414	0.424	0.055	0.031	Sonoma
21MOY220	Cunningham Dairy	Ag/ off-road	Replacement of one diesel powered agricultural loader	\$182,700	\$228,405	0.371	0.025	0.019	Sonoma
21HMF01	Flexdrive Services, LLC	High Mileage Fleets Program	Purchase/ lease of 200, 2020 Kia Kona Light-duty EVs	\$1,000,000	\$6,597,100	0.241	0.132	0.297	Regional
11 Projects				\$2,452,525	\$8,505,947	7.264	0.625	0.672	

BUDGET CONSIDERATION / FINANCIAL IMPACT

None. The Air District distributes the CMP, MSIF, FARMER, Community Health Protection Grant Program, and TFCA funding to project sponsors on a reimbursement basis. Funding for administrative costs is provided by each funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Anthony Fournier
Reviewed by: Damian Breen and Karen Schkolnick

Attachment 7A: CMP/MSIF, FARMER and Community Health Protection Grant Program projects previously approved and pending approval

AGENDA 7A - ATTACHMENT

*CMP/MSIF, FARMER and Community Health Protection Grant Program projects
previously approved and pending approval (between 7/3/19 and 6/30/20)*

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY230	Ag/ off-road	Equipment replacement	1	\$ 16,965.00	Cornerstone Certified Vineyard	0.024	0.019	0.006	APCO	Sonoma
20MOY235	Ag/ off-road	Equipment replacement	1	\$ 46,690.00	Goldridge Pinot LLC dba Emeritus Vineyards	0.170	0.026	0.019	APCO	Sonoma
20MOY241	Ag/ off-road	Equipment replacement	3	\$ 129,500.00	Linda Pierce Wedemeyer Exemption Trust	0.217	0.039	0.021	10/2/2019	Solano
21MOY9	On-road	Equipment replacement	1	\$ 60,000.00	Prime Tank Lines LLC	0.802	0.060	0.005	APCO	Contra Costa
20MOY248	On-road	Equipment replacement	1	\$ 40,000.00	Amritpal Tindh (Truck owner/operator)	0.604	0.052	0.000	APCO	Alameda
21MOY1	On-road	Equipment replacement	1	\$ 40,000.00	Freight 99 Express Inc. (Truck owner/operator)	0.280	0.024	0.000	APCO	Alameda
20MOY86	On-road	Equipment replacement	1	\$ 25,000.00	Sears Keith (Truck owner/ operator)	0.195	0.016	0.000	APCO	Sacramento
20MOY150	On-road	Equipment replacement	1	\$ 40,000.00	Sukhjeet Singh Cheema (Truck owner/ operator)	0.667	0.057	0.000	APCO	San Joaquin
21SBP2	School bus	Equipment replacement	1	\$ 178,500.00	Campbell Union School District	0.064	0.005	0.000	10/2/2019	Santa Clara
20MOY227	On-road	Equipment replacement	1	\$ 30,000.00	JSK Trucking (Truck owner/ operator)	0.193	0.016	0.000	APCO	San Joaquin
20MOY239a	On-road	Equipment replacement	1	\$ 30,000.00	DNA Trucking, Inc.	0.252	0.021	0.000	APCO	Solano
20MOY239b	On-road	Equipment replacement	1	\$ 20,000.00	DNA Trucking, Inc.	0.203	0.017	0.000	APCO	Solano
20MOY245a	On-road	Equipment replacement	1	\$ 60,000.00	Jorge Quintero DBA QDS Transportation	1.271	0.097	0.008	APCO	Alameda
20MOY245b	On-road	Equipment replacement	1	\$ 60,000.00	QDS Transportation	0.817	0.061	0.005	APCO	Alameda
20MOY245c	On-road	Equipment replacement	1	\$ 60,000.00	Ignacio Quintero (Truck owner/ operator)	0.900	0.068	0.005	APCO	Alameda
20MOY82	On-road	Equipment replacement	1	\$ 35,000.00	Surinder Atwal (Truck owner/ operator)	0.258	0.022	0.000	APCO	Sacramento

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY232	On-road	Equipment replacement	1	\$ 40,000.00	Mahmoud Rastegar DBA: Prosper Dedicates Lines	0.452	0.039	0.000	APCO	Placer
20MOY218	On-road	Infrastructure	1	\$ 13,717.00	Penske Truck Leasing Co., L.P.	0.000	0.000	0.000	APCO	Alameda/ San Francisco
21MOY28	Ag/ off-road	Equipment replacement	1	\$ 63,850.00	Bains Farms LLC.	0.082	0.014	0.010	APCO	Solano
21MOY17	Ag/ off-road	Equipment replacement	1	\$ 43,350.00	Sweet Lane Nursery and Vineyards, Inc.	0.041	0.009	0.008	APCO	Sonoma
21MOY23	Ag/ off-road	Equipment replacement	2	\$ 86,100.00	Trefethen Farming LLC.	0.178	0.043	0.034	APCO	Napa
20MOY250	Marine	Engine replacement	4	\$ 1,288,000.00	Amnav Maritime Corporation (Vessel: Patricia Ann)	8.609	0.270	0.476	10/2/2019	Alameda
21MOY31	Ag/ off-road	Equipment replacement	1	\$ 185,400.00	Gerald & Kristy Spaletta (Dairy)	0.566	0.074	0.052	10/2/2019	Sonoma
21MOY25	On-road	Equipment replacement	1	\$ 49,500.00	J and A Trucking Inc.	1.350	0.202	0.010	APCO	Alameda
21MOY21	Ag/ off-road	Equipment replacement	4	\$ 249,600.00	Renteria Vineyard Management, LLC.	0.790	0.121	0.089	10/2/2019	Napa
21MOY41	Ag/ off-road	Equipment replacement	2	\$ 81,750.00	Geoffrey Allen (Nursery)	0.105	0.030	0.012	APCO	San Mateo
21MOY30	Ag/ off-road	Equipment replacement	2	\$ 67,100.00	Jaswant S. Bains (Farmer)	0.289	0.044	0.025	APCO	Solano
21MOY33	Off-road	Equipment replacement	2	\$ 355,500.00	S.E.G Trucking	1.044	0.074	0.052	10/2/2019	Contra Costa
21MO12	On-road	Equipment replacement	1	\$ 30,000.00	Oscar Transport/ Oscar Rivera (Truck owner/ operator)	0.401	0.034	0.000	APCO	Alameda
21MOY34	Ag/ off-road	Equipment replacement	2	\$ 456,200.00	Custom Tractor Service	2.260	0.211	0.115	10/2/2019	Sonoma
21MOY14	Ag/ off-road	Equipment replacement	5	\$ 198,850.00	Bayview Vineyards Corp.	0.826	0.164	0.090	10/2/2019	Napa
21MOY47	Ag/ off-road	Equipment replacement	1	\$ 151,000.00	DeBernardi Dairy, Inc.	0.438	0.040	0.022	10/2/2019	Sonoma
21MOY51	Marine	Engine replacement	4	\$ 2,916,000.00	Crowley Marine Services	43.259	4.409	1.420	10/2/2019	Alameda

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY36	Off-road	Equipment replacement	1	\$ 78,500.00	John Benward Co.	0.564	0.028	0.021	APCO	Sonoma
20MOY217	Off-road	Portable equipment replacement	1	\$ 863,500.00	Oakland Pallet Co., Inc.	2.577	0.215	0.076	10/2/2019	Alameda
20SBP246	School bus	Equipment replacement	2	\$ 179,020.00	Newark Unified School District	0.037	0.002	0.000	10/2/2019	Alameda
21MOY46	Off-road	Equipment replacement	6	\$ 772,500.00	Bigge Crane and Rigging Company	4.210	0.435	0.254	10/2/2019	Alameda
21MOY37	On-road	Equipment replacement	1	\$ 30,000.00	Joginder Singh (Truck owner/ operator)	0.392	0.033	0.000	APCO	Alameda
21MOY19	Ag/ off-road	Equipment replacement	3	\$ 127,400.00	Nissen Vineyard Services, Inc.	0.487	0.088	0.066	11/20/2019	Napa
21MOY56	Ag/ off-road	Equipment replacement	1	\$ 21,550.00	Groth Vineyards and Winery, LLC	0.047	0.038	0.010	APCO	Napa
21MOY54	Ag/ off-road	Equipment replacement	1	\$ 31,100.00	Siebert Vineyards	0.079	0.012	0.007	APCO	Sonoma
21MOY53	Ag/ off-road	Equipment replacement	1	\$ 63,150.00	St. Supery Inc.	0.159	0.025	0.019	APCO	Napa
21MOY59	Off-road	Equipment replacement	1	\$ 167,500.00	Concrush Inc.	0.696	0.065	0.037	11/20/2019	Solano
21MOY64	Ag/ off-road	Equipment replacement	1	\$ 170,250.00	Achadinha Cheese, Inc.	1.546	0.171	0.097	11/20/2019	Sonoma
21MOY50	On-road	Equipment replacement	1	\$ 25,000.00	Bal transport, Inc.	0.464	0.033	0.000	APCO	Alameda
21MOY73	Ag/ off-road	Equipment replacement	2	\$ 153,695.00	Robert Giacomini Dairy, Inc	0.276	0.040	0.023	11/20/2019	Marin
21MOY60	Marine	Engine replacement	2	\$ 276,000.00	Bass Tub Fishing	0.489	0.000	0.026	11/20/2019	Contra Costa
21MOY71	Marine	Engine replacement	2	\$ 3,814,000.00	Foss Maritime	15.352	1.518	0.504	11/20/2019	Contra Costa
21SBP77	School bus	Equipment replacement	16	\$ 3,478,697.00	Mt. Diablo Unified School District	1.040	0.075	0.005	11/20/2019	Contra Costa
20MOY103	Marine	Engine replacement	2	\$ 130,000.00	Westar Marine Services	0.221	-0.007	0.014	11/20/2019	San Francisco

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY61	Off-road	Equipment replacement	6	\$ 811,875.00	Amazon Recycling and Disposal, Inc.	3.679	0.584	0.369	11/20/2019	Alameda
20SBP23	School bus	Equipment replacement	2	\$ 373,861.00	Sonoma Valley Unified School District - Increase of ~\$12k from 3/6/19 approval.	0.131	0.009	0.001	11/20/2019	Sonoma
21MOY65	Ag/ off-road	Equipment replacement	2	\$ 140,440.00	Simoni & Massoni Farms, LLC	0.695	0.103	0.064	11/20/2019	Contra Costa
21MOY43	On-road	Equipment replacement	1	\$ 30,000.00	Narwal Trucking, Inc.	0.210	0.018	0.000	APCO	Sacramento
21MOY66	On-road	Equipment replacement	1	\$ 15,000.00	Kapil Kumar (Truck owner/ operator)	0.136	0.011	0.000	APCO	Sacramento
21MOY69	Ag/ off-road	Equipment replacement	1	\$ 51,580.00	Anselmo Farms, LLC.	0.121	0.024	0.014	APCO	Solano
21MOY67	On-road	Equipment replacement	1	\$ 40,000.00	Gurchetan Johal (Truck owner/ operator)	0.294	0.025	0.000	APCO	Sacramento
21MOY85	On-road	Equipment replacement	1	\$ 10,000.00	W&D Wholesale Foods, INC.	0.271	0.032	0.014	APCO	San Francisco
21MOY48a	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.827	0.072	0.006	APCO	Santa Clara
21MOY48b	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.874	0.076	0.006	APCO	Santa Clara
21MOY48c	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.666	0.057	0.005	APCO	Santa Clara
21MOY48d	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.763	0.066	0.005	APCO	Santa Clara
21MOY83	On-road	Equipment replacement	1	\$ 45,000.00	DJ Trucking Enterprise, Inc.	0.366	0.048	0.002	APCO	Monterey
21MOY82	Ag/ off-road	Equipment replacement	1	\$ 58,600.00	Andrews Vineyards	0.118	0.025	0.018	APCO	Solano
21SBP32	School bus	CNG Tank replacement	2	\$ 40,000.00	Newark Unified School District	0.000	0.000	0.000	APCO	Alameda
21MOY87	On-road	Equipment replacement	1	\$ 40,000.00	Gurjit S. Mann (Truck owner/ operator)	0.654	0.057	0.000	APCO	Alameda
21MOY8	Ag/ off-road	Equipment replacement	1	\$ 57,300.00	Garry Mahrt (Dairy and sheep farm)	0.093	0.009	0.005	APCO	Sonoma

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY27	Ag/ off-road	Equipment replacement	1	\$ 60,350.00	Four Seasons Vineyard Management	0.130	0.007	0.007	APCO	Sonoma
21MOY72	Ag/ off-road	Equipment replacement	2	\$ 93,380.00	Napa Second Generation Inc. (Vineyard management)	0.423	0.053	0.042	APCO	Sonoma
21MOY88	Ag/ off-road	Equipment replacement	1	\$ 118,940.00	Ghiggeri and Stonebarger LLC	0.708	0.086	0.056	1/29/2020	Contra Costa
20MOY238	Off-road	Equipment replacement	3	\$ 59,280.00	CLY Incorporated dba Point Pacific Drilling	1.263	0.177	0.113	APCO	Sonoma
21MOY94	On-road	Equipment replacement	1	\$ 30,000.00	Jaskaran Dhillon (Truck owner/ operator)	0.232	0.019	0.000	APCO	Sutter
21MOY93	On-road	Equipment replacement	1	\$ 40,000.00	Simon Andemichael (Truck owner/ operator)	0.303	0.026	0.000	APCO	Alameda
21MOY105	On-road	Equipment replacement	1	\$ 20,000.00	Brar Bros Trucking (Gurlal Singh)	0.935	0.123	0.040	APCO	Alameda
21MOY74	On-road	Equipment replacement	1	\$ 20,000.00	AT Produce (Abraham Torres)	0.424	0.061	0.025	APCO	Stockton
21MOY84	On-road	Equipment replacement	1	\$ 30,000.00	Lenaco Corporation	0.406	0.047	0.021	APCO	San Mateo
21MOY96	On-road	Equipment replacement	1	\$ 20,000.00	Ng's Group Transportation, Inc.	0.420	0.061	0.024	APCO	San Mateo
21MOY57	On-road	Equipment replacement	2	\$ 174,400.00	Summit Steel Works Corporation	0.071	0.004	0.000	3/4/2020	Santa Clara
21MOY108	On-road	Equipment replacement	1	\$ 26,750.00	Ontrack Moving, LLC	0.393	0.026	0.003	APCO	Alameda
21MOY107	Ag/ off-road	Equipment replacement	2	\$ 111,195.00	Olive Tree Farm	0.179	0.020	0.016	3/4/2020	Sonoma
21MOY115	Ag/ off-road	Equipment replacement	2	\$ 279,120.00	F.A. Maggiore & Sons, LLC	0.707	0.086	0.053	3/4/2020	Contra Costa
21MOY122	Ag/ off-road	Equipment replacement	1	\$ 38,625.00	TMR Wine Company, LLC	0.047	0.005	0.006	APCO	Napa
21MOY111	Ag/ off-road	Equipment replacement	1	\$ 52,624.00	Haire Management Co. LLC	0.164	0.111	0.018	APCO	Napa
21MOY112	Ag/ off-road	Equipment replacement	2	\$ 83,700.00	Walnut Grove Partnership	0.257	0.052	0.025	APCO	Solano

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY128	Ag/ off-road	Equipment replacement	1	\$ 56,510.00	Bob Balestra (Vineyard)	0.173	0.022	0.015	APCO	Solano
21MOY100	Marine	Engine replacement	2	\$ 354,000.00	Golden Gate Scenic Steamship Corp.	0.898	0.000	0.048	3/4/2020	San Francisco
21MOY110	On-road	Equipment replacement	1	\$ 40,000.00	Ahsan Trucking	0.662	0.056	0.000	APCO	Alameda
21MOY124	Ag/ off-road	Equipment replacement	1	\$ 60,545.00	Perry Kozlowski Ranch	0.047	0.012	0.009	APCO	Sonoma
21MOY144	On-road	Equipment replacement	1	\$ 35,000.00	FITSUM TEKLAY MENDER	0.665	0.057	0.000	APCO	Contra Costa
21MOY126	Ag/ off-road	Equipment replacement	2	\$ 77,250.00	T and M Agricultural Services, LLC	0.160	0.029	0.025	APCO	Napa
21MOY125	Marine	Engine replacement	4	\$ 3,056,000.00	Baydelta Navigation LTD	33.696	4.427	1.237	3/4/2020	San Francisco
21SBP98	School bus	Equipment replacement	2	\$ 323,778.00	Palo Alto Unified School District	0.094	0.006	0.005	3/4/2020	Santa Clara
21SBP114	School bus	Equipment replacement	4	\$ 1,672,500.00	Santa Clara Unified School District	0.440	0.041	0.004	3/4/2020	Santa Clara
21MOY79	Marine	Engine replacement	2	\$ 112,000.00	Westar Marine Services	0.259	0.001	0.014	3/4/2020	San Francisco
21SBP75	School bus	Equipment replacement	14	\$ 3,080,000.00	West County Transportation Agency	1.186	0.088	0.000	3/4/2020	Sonoma
21MOY130	On-road	Equipment replacement	1	\$ 50,000.00	HS_Trucking	0.758	0.056	0.005	APCO	Alameda
21MOY147	Marine	Engine replacement	2	\$ 182,000.00	Sophia Fisheries, Inc.	0.656	0.006	0.024	4/15/2020	San Mateo
20SBP186	School bus	Equipment replacement	7	\$ 1,504,235.00	Franklin-McKinley School District (Increase of \$152k from 5/1/19)	0.461	0.030	0.003	4/15/2020	Santa Clara
21MOY81	Off-road	Portable equipment replacement	4	\$ 177,526.00	Alaska Airlines	1.030	0.086	0.048	5/6/2020	Alameda, San Francisco, Santa Clara
21MOY150	Off-road	Infrastructure	42	\$ 2,545,297.00	City & County of San Francisco (SFO)	n/a	n/a	n/a	5/6/2020	San Francisco
21MOY132	Off-road	Infrastructure	5	\$ 298,886.00	SSA Terminals	n/a	n/a	n/a	5/6/2020	Alameda

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY155	Ag/ off-road	Equipment replacement	1	\$ 213,960.00	Andrew J. Poncia dba Poncia Fertilizer Spreading	1.135	0.107	0.059	5/6/2020	Sonoma
21MOY136	Off-road	Equipment replacement	4	\$ 162,725.00	Galante Brothers General Engineering	0.877	0.160	0.093	5/6/2020	Santa Clara
21MOY149	On-road	Equipment replacement	40	\$ 13,072,800.00	Alameda-Contra Costa Transit District	2.262	0.036	0.013	5/6/2020	Alameda
21MOY169	Marine	Engine replacement	2	\$ 164,000.00	Amnav Maritime, LLC	0.896	0.076	0.025	6/3/2020	Alameda
21MOY62	On-road	Equipment replacement	1	\$ 15,000.00	Port Container Drayage Logistics LLC	0.145	0.010	0.000	APCO	Alameda
21MOY168	Marine	Engine replacement	2	\$ 198,000.00	Blue Runner, Inc.	0.376	0.002	0.020	6/3/2020	Marin
20FD05	Ag/ off-road	FARMER Demonstration	3	\$ 480,000.00	Zimeno Inc. DBA Monarch Tractor	0.331	0.034	0.008	6/3/2020	Alameda/ Napa
20FD04	Ag/ off-road	FARMER Demonstration	4	\$ 514,688.00	Solectrac, Inc.	0.760	0.127	0.087	6/3/2020	San Mateo/ Napa/ Sonoma
21MOY158	Ag/ off-road	Equipment replacement	1	\$ 87,270.00	Boething Treeland Farms	0.195	0.020	0.027	APCO	San Mateo
21MOY142	On-road	Equipment replacement	1	\$ 40,000.00	RAJDEEP SINGH BRAR	0.558	0.048	0.000	APCO	Merced
21MOY177	On-road	Equipment replacement	1	\$ 20,000.00	ELPIINAL ELIS O REYES	0.207	0.017	0.000	APCO	San Joaquin
21MOY159	Ag/ off-road	Equipment replacement	1	\$ 159,830.00	Morrison Bros. Dairy	0.936	0.120	0.069	7/15/2020	Sonoma
21MOY180	Ag/ off-road	Equipment replacement	1	\$ 64,880.00	Fifth Crow Farm	0.344	0.045	0.031	APCO	San Mateo
21MOY176	Ag/ off-road	Equipment replacement	1	\$ 60,000.00	Cain Cellars, Inc.	0.043	0.011	0.009	APCO	Napa
21MOY161	Ag/ off-road	Equipment replacement	1	\$ 64,375.00	Barbour Vineyards Management LLC	0.148	0.008	0.008	APCO	Napa
21MOY188	Ag/ off-road	Equipment replacement	4	\$ 290,400.00	New Pina Vineyard Management , LLC.	0.732	0.104	0.068	7/15/2020	Napa
21MOY160	Ag/ off-road	Equipment replacement	1	\$ 70,600.00	Jaswant S. Bains	0.076	0.012	0.009	APCO	Solano
21MOY156	Marine	Engine replacement	2	\$ 166,000.00	Anne Rose (Vessel: Sea Bass)	2.753	0.053	0.099	tbd	Alameda

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY143	On-road	Equipment replacement	1	\$ 49,000.00	JB KIRTI TRUCKING	0.735	0.055	0.004	APCO	Alameda
21MOY174	Ag/ off-road	Equipment replacement	2	\$ 104,775.00	Shafer Vineyards	0.225	0.026	0.020	tbd	Napa
21MOY200	Ag/ off-road	Equipment replacement	2	\$ 111,250.00	Larry Balestra	0.691	0.090	0.051	tbd	Solano
21MOY165	On-road	Equipment replacement	1	\$ 25,000.00	Rick B Lawley Trucking	1.106	0.145	0.007	APCO	Napa
21MOY215	Ag/ off-road	Equipment replacement	1	\$ 217,000.00	Dolcini Brothers (Cattle Ranch)	1.224	0.112	0.070	tbd	Sonoma
21MOY184	Ag/ off-road	Equipment replacement	1	\$ 111,500.00	M.C.E. Amos, Inc dba Amos Bros. Dairy	0.411	0.040	0.021	tbd	Sonoma
21MOY202	Marine	Engine replacement	2	\$ 180,000.00	New Captain Pete, Inc. (Charter fishing)	0.338	0.009	0.016	tbd	San Mateo
21MOY187	Ag/ off-road	Equipment replacement	4	\$ 153,000.00	Anoroc Vineyard Management LLC	0.308	0.063	0.034	tbd	Napa
21MOY207	Ag/ off-road	Equipment replacement	1	\$ 114,000.00	McClelland's Dairy	0.278	0.020	0.014	tbd	Sonoma
21MOY219	Ag/ off-road	Equipment replacement	1	\$ 112,300.00	Paul Bianchi, Inc	0.424	0.055	0.031	tbd	Sonoma
21MOY220	Ag/ off-road	Equipment replacement	1	\$ 182,700.00	Cunningham Dairy	0.371	0.025	0.019	tbd	Sonoma
130 Projects			329	\$ 51,492,034.00		173.272	17.876	6.950		

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Report of the Stationary Source Committee Meeting of June 17, 2020

RECOMMENDED ACTION

The Stationary Source Committee (Committee) received only informational items and have no recommendations of approval by the Board of Directors (Board).

BACKGROUND

The Committee met on Wednesday, June 17, 2020, and received the following reports:

- A) Update on the Development of Draft Amendments to Regulation 6, Rule 5 (Rule 6-5): Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units;
- B) Update on the Implementation of Regulation 11, Rule 18 (Rule 11-18): Reduction of Risk from Air Toxic Emissions at Existing Facilities; and
- C) Update on the Odor Attribution Study in the South Bay.

Chairperson John Bauters will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

- A) None;
- B) None; and
- C) None. Funding for this contract has come from the General Fund Budget for Fiscal Year Ending 2020, which will be carried over to Fiscal Year Ending 2021.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha de Guzman
Reviewed by: Vanessa Johnson

Attachment 8A: 06/17/2020 – Stationary Source Committee Meeting Agenda #3
Attachment 8B: 06/17/2020 – Stationary Source Committee Meeting Agenda #4
Attachment 8C: 06/17/2020 – Stationary Source Committee Meeting Agenda #5

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson John Bauters and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 10, 2020

Re: Update on the Development of Draft Amendments to Regulation 6, Rule 5 (Rule 6-5):
Particulate Emissions from Petroleum Refinery Fluidized Catalytic Cracking Units

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

California Assembly Bill (AB) 617 directed local air districts to adopt an expedited schedule for implementation of Best Available Retrofit Control Technology (BARCT) at industrial Cap-and-Trade sources. The AB 617 Expedited BARCT Implementation Schedule was adopted by the Air District Board of Directors in December 2018, and identified several potential rule development efforts to further reduce emissions of criteria pollutants at these sources.

DISCUSSION

Air District staff is developing amendments to Rule 6-5 to address emissions of particulate matter, including condensable particulate matter, from petroleum refinery fluidized catalytic cracking units. Petroleum refinery fluidized catalytic cracking units are some of the largest individual sources of particulate matter emissions in the San Francisco Bay Area, and further reductions of these emissions are needed to ensure progress towards attainment of state and national ambient air quality standards and to achieve further clean air and public health benefits. The current amendment effort follows previous Air District work to address these sources and was identified as a potential area for further rule development in the Air District's 2017 Clean Air Plan and AB 617 Expedited BARCT Implementation Schedule.

Following the adoption of the AB 617 Expedited BARCT Implementation Schedule, Air District staff continued work on the development of amendments to Rule 6-5. An update on the implementation of currently adopted refinery rules and rule development efforts on amendments to Rule 6-5 was presented at a Board of Directors Stationary Source Committee meeting in April 2019. Air District staff conducted early stakeholder outreach on this rule development effort in meetings of the Refinery Rules Technical Working Group in 2019. Members of the technical working group, which include representatives from industry, community-based organizations,

and regulatory agencies, provided input on control technologies and testing/monitoring methods related to fluidized catalytic cracking units and particulate matter control.

Air District staff released draft amendments to Rule 6-5 and an Initial Staff Report in May 2020, for public review and comment. The draft amendments include new and modified limits on ammonia and sulfur dioxide, which can contribute to the formation of condensable and secondary particulate matter. The draft amendments also include a limit on total Particulate Matter₁₀ (PM₁₀), which includes both filterable and condensable particulate matter. The draft total PM₁₀ limit represents an achievable level of control that has been demonstrated to be feasible at multiple facilities through the use of various control technologies, including electrostatic precipitators and wet gas scrubbers. Staff estimates that the draft amendments could reduce total PM₁₀ emissions by approximately 250 tons per year.

Air District staff is soliciting comments on the draft amendment materials and will consider input received during the public comment period in the further development of these amendments. Staff anticipates presenting proposed amendments for the Board of Directors consideration in the fourth quarter of 2020.

BUDGET CONSIDERATIONS/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: David Joe
Reviewed by: Victor Douglas

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson John Bauters and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 10, 2020

Re: Update on Implementation of Regulation 11, Rule 18 (Rule 11-18): Reduction of Risk from Air Toxic Emissions at Existing Facilities

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Rule 11-18 established stringent risk action levels for existing facilities. Effective January 1, 2020, the final risk action levels for facility health impacts are:

- Cancer risk of 10 in a million;
- Chronic hazard index of 1.0; and
- Acute hazard index of 1.0.

Rule 11-18 requires that existing facilities either:

- (a) Reduce all health risks from stationary sources below the final Rule 11-18 risk action levels above; or
- (b) Install best available retrofit control technology for toxics (TBARCT) on all significant sources of health risks.

DISCUSSION

The Air District will provide an overview of the Rule 11-18 implementation process and describe the facilities affected by this rule. The implementation process includes (1) screening facilities, (2) collecting and validating Health Risk Assessment (HRA) input data, (3) conducting HRAs, (4) approving risk reduction plans, and (5) implementing risk reductions.

Facilities are screened on an annual basis using the facility's prioritization score. Any facility with a prioritization scores greater than 10 will require a comprehensive facility-wide health risk assessment. Phase I facilities have a prioritization score greater than 250, and Phase II facilities have a prioritization score greater than 10. Based on the most recent screening assessment, the Air District has 36 Phase I facilities and 288 Phase II facilities.

During the first year after Rule 11-18 was adopted, the Air District developed the infrastructure necessary to collect and store the HRA input data and began collecting data for each of the Phase I facilities. This data collection process is followed by a thorough engineering review and update of the toxic emission inventory, emission release parameters, and other HRA input data. The Air District developed draft guidance documents and procedures to assist with the review process. Initially, this data review process took longer than anticipated, but it is now taking about seven months for each facility.

During the second year after rule adoption, the Air District began conducting HRAs for Phase I facilities. Once the Air District completes an HRA, the preliminary HRA is provided to the facility for a 90-day comment period. After responding to facility comments, the draft HRA is posted for a 45-day public comment period. The Air District will respond to public comments before finalizing the HRA and determining the Rule 11-18 risk reduction requirements. This HRA preparation and review process takes about 11 months for each facility.

Phase I facilities include petroleum refineries, chemical companies, power plants, manufacturing operations, landfills, and a crematory. Currently, HRAs are underway for about one-third of the Phase I facilities. Staff just posted the Air District's first Rule 11-18 HRA for public comment and has shared preliminary HRAs with two additional facilities. By September 2020, staff expects to have HRAs under way for 12 more facilities including the Chevron refinery. By the end of 2020, staff plans to have preliminary HRAs complete for about two-thirds of the Phase I facilities. These HRAs will be posted for public comment in stages through mid-2021. Additionally, staff expects to post HRAs for the last third of the Phase I facilities by the end of 2021.

Meanwhile, the Air District will start the data collection process for Phase II facilities later this year. Data collection for the Phase II facilities will be phased in over several years starting in 2020 prioritizing those facilities indicated to have the highest risk (facilities that have a prioritization score greater than 100). These facilities include wastewater treatment plants, landfills, energy plants, manufacturing operations, hospitals, universities, airlines, and crematories.

In anticipation of the Rule 11-18 HRA and risk reduction requirements, facilities have been conducting source tests and other on-site measurements to improve their emissions inventories. In addition, several sites have requested authorities to construct for process changes or abatement devices that will reduce health impacts in their communities. As part of this agenda item staff will brief the Committee on the schedule and results of Rule 11-18 and on some of the changes being made at facilities based on the program.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Carol Allen

Reviewed by: Sanjeev Kamboj, Pamela Leong, and Damian Breen

STATIONARY SOURCE COMMITTEE
MEETING OF 06/17/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson John Bauters and Members
of the Stationary Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 10, 2020

Re: Update on the Odor Attribution Study in the South Bay

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Communities in and around Milpitas, near a cluster of waste handling facilities, have experienced air quality and odor issues for many years. These facilities include the Newby Island Landfill and associated composting facility, operated by Republic Services; the San Jose-Santa Clara Regional Wastewater Facility, operated by the City of San Jose; and a dry anaerobic food waste digestion facility, operated by ZeroWaste Energy Development Company. There have been improvements to air quality in Milpitas due to Air District actions with assistance from the community. However, odors continue to be a concern.

The South Bay Odor Stakeholder Group (SBOSG) was formed in 2015, to provide a transparent forum to address odors that affect the Milpitas community and discuss enforcement activities, permit and regulatory requirements, and odor mitigation and controls measures. Quarterly meetings are attended by community and industry stakeholders; Air District staff; staff representing the Cities of Fremont, Milpitas and San Jose; staff representing Assembly Member Kansen Chu, Congressman Ro Khanna and Senator Bob Wieckowski; and Rod Sinks, Stationary Source Committee Chair, representing Santa Clara County. Over recent years, the SBOSG has identified the need for an odor study to better understand the contribution of different odor sources on the Milpitas community.

DISCUSSION

In January 2019, the Air District committed to conduct an Odor Attribution Study to identify compounds from odor-producing facilities that are impacting Milpitas and nearby communities. The three facilities are located close together and have similar odor profiles. The proximity and similarity of the facilities has made it difficult to trace the odors experienced by community members to specific facilities, which is required for the Air District to be able to take regulatory or enforcement actions. The goal of the Odor Attribution Study is to determine the contribution and variability of odors from these facilities and measure how often and at what concentration these odors may be passing into the local community to inform future actions to reduce odors.

The Air District staff will present an update on the progress the Odor Attribution Study in the South Bay.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. Funding for this contract has come from the General Fund Budget for Fiscal Year Ending 2020, which will be carried over to Fiscal Year Ending 2021.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Jerry Bovee
Reviewed by: Wayne Kino

STATIONARY SOURCE COMMITTEE
MEETING OF 06/17/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Report of the Mobile Source Committee Meeting of June 18, 2020

RECOMMENDED ACTION

The Mobile Source Committee (Committee) recommends Board of Directors (Board) approval of the following items:

- A) Projects and Contracts with Proposed Grant Awards Over \$100,000;
 - 1) Approve recommended projects with proposed grant awards over \$100,000 as shown in Attachment 1; and
 - 2) Authorize the Executive Officer/APCO to enter into all necessary agreements with applicants for the recommended projects.
- B) Revise allocation of Fiscal Year Ending (FYE) 2021 Transportation Fund for Clean Air Funding.
 - 1) Approve the proposed increase to the allocation of Transportation Fund for Clean Air (TFCA) in FYE 2021, as shown in Table 2; and
 - 2) Authorize the proposed change to cost-effectiveness limits for the Air District-sponsored programs and projects shown in Table 3.

BACKGROUND

The Committee met on Thursday, June 18, 2020, and received the following reports:

- A) Projects and Contracts with Proposed Grant Awards Over \$100,000; and
- B) Revise allocation of Fiscal Year Ending (FYE) 2021 Transportation Fund for Clean Air Funding.

Chairperson David Canepa will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

- A) None. The Air District distributes the CMP, MSIF, Community Health Protection Grant Program, TFCA, and RFG funding to project sponsors on a reimbursement basis. Funding for administrative costs is provided by each funding source; and
- B) None. The Air District distributes “pass-through” funds to grantees on a reimbursement basis. Administrative costs for the TFCA program are provided by the funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha de Guzman
Reviewed by: Vanessa Johnson

Attachment 9A: 06/18/2020 – Mobile Source Committee Meeting Agenda #3
Attachment 9B: 06/18/2020 – Mobile Source Committee Meeting Agenda #4

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Canepa and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 10, 2020

Re: Projects and Contracts with Proposed Grant Awards Over \$100,000

RECOMMENDED ACTION

Recommend Board of Directors:

1. Approve recommended projects with proposed grant awards over \$100,000 as shown in Attachment 1; and
2. Authorize the Executive Officer/APCO to enter into all necessary agreements with applicants for the recommended projects.

BACKGROUND

The Bay Area Air Quality Management District (Air District) has participated in the Carl Moyer Program (CMP), in cooperation with the California Air Resources Board (CARB), since the program began in the State's fiscal year 1998-1999. The CMP provides grants to public and private entities to reduce emissions of nitrogen oxides (NO_x), reactive organic gases (ROG), and particulate matter (PM) from existing heavy-duty engines by either replacing or retrofitting them. Eligible heavy-duty diesel engine applications include on-road trucks and buses, off-road equipment, marine vessels, locomotives, and stationary agricultural pump engines.

Assembly Bill (AB) 923 (Firebaugh), enacted in 2004 (codified as Health and Safety Code (HSC) Section 44225), authorized local air districts to increase their motor vehicle registration surcharge up to an additional \$2 per vehicle. The revenues from the additional \$2 surcharge are deposited in the Air District's Mobile Source Incentive Fund (MSIF). AB 923 stipulates that air districts may use the revenues generated by the additional \$2 surcharge for projects eligible under the CMP. On February 6, 2019, the Board of Directors (Board) authorized Air District participation in Year 21 of the CMP, and authorized the Executive Officer/APCO to execute grant agreements and amendments for projects funded with CMP funds or MSIF revenues, with individual grant award amounts up to \$100,000.

In 2017, AB 617 directed the CARB, in conjunction with local air districts to establish the Community Air Protection Program. AB 617 provides a new community-focused action framework to improve air quality and reduce exposure to criteria air pollutants and toxic air

contaminants in communities most impacted by air pollution. In advance of the development of the Community Air Protection Program, the Governor and legislature established an early action component to AB 617 to use existing incentive programs to get immediate emission reductions in the communities most affected by air pollution. AB 134 (2017) appropriated \$50 million from the Greenhouse Gas Reduction Fund (GGRF) to reduce mobile source emissions including criteria pollutants, toxic air contaminants, and greenhouse gases in those communities within the Bay Area. Senate Bill (SB) 856 (2018) continued support for the Community Air Protection Program and appropriated \$245 million from the GGRF statewide, of which \$40 million was awarded to the Air District for emission reduction projects in the Bay Area. On April 3, 2019, the Board authorized the Air District to accept, obligate, and expend SB 856 grant funding. These funds are distributed through the Air District's Community Health Protection Grant Program to implement projects under the CMP and optionally on-road truck replacements under the Proposition 1B Goods Movement Emission Reduction Program.

CARB developed the Funding Agricultural Replacement Measures for Emission Reductions (FARMER) Program Guidelines in February 2018, which outlines requirements for incentive funding for eligible equipment (e.g., agricultural harvesting equipment, heavy-duty trucks, agricultural pump engines, tractors, and other equipment used in agricultural operations). The 2020 California State Budget appropriated \$65 million in Fiscal Year 2019-20 GGRF funds to the CARB for the continued reduction of criteria, toxic, and greenhouse gas emissions from the agricultural sector through the FARMER Program. On November 20, 2019, the Board authorized the Air District's participation in the current cycle of the FARMER program.

In 1991, the California State Legislature authorized the Air District to impose a \$4 surcharge on motor vehicles registered within the nine-county Bay Area to fund projects that reduce on-road motor vehicle emissions within the Air District's jurisdiction. The statutory authority and requirements for the Transportation Fund for Clean Air (TFCA) are set forth in the HSC Sections 44241 and 44242. Sixty percent of TFCA funds are awarded by the Air District to eligible projects and programs implemented directly by the Air District (e.g., Spare the Air program) and to a program referred to as the Regional Fund. Each year, the Board allocates funding and adopts policies and evaluation criteria that govern the expenditure of TFCA monies. The remaining forty percent of TFCA funds are pass-through funds that are awarded to the designated County Program Manager (CPM) in each of the nine counties within the Air District's jurisdiction.

On April 3, 2019, the Board authorized funding allocations for use of the sixty percent of the TFCA revenue in Fiscal Year Ending (FYE) 2020, cost-effectiveness limits for Air District-sponsored FYE 2020 programs, and the Executive Officer/APCO to execute grant agreements and amendments for projects with individual grant award amounts up to \$100,000. On June 5, 2019, the Board adopted policies and evaluation criteria for the FYE 2020 Regional Fund program.

The Bay Area Clean Air Foundation (Foundation) is a nonprofit support organization for the Air District. As part of its operation, the Foundation applies for and accepts grant funding from various sources to reduce emissions within the Air District's jurisdiction. Under the terms of an executed contract between the Air District and Foundation, Air District staff administer grant programs and revenues awarded to the Foundation. On December 5, 2017, the Foundation entered into a contract with the Reformulated Gas Settlement Fund (RFG) administrators for approximately \$1.3 million

to be used to incentivize the accelerated adoption of zero- and near-zero-emission equipment and vehicles operating in and around the West Oakland community.

Projects with grant award amounts over \$100,000 are brought to the Mobile Source Committee for consideration at least on a quarterly basis. Staff reviews and evaluates grant applications based upon the respective governing policies and guidelines established by the CARB, the Board, and other funding agencies.

DISCUSSION

Carl Moyer Program and Community Health Protection Grant Program:

For the CMP Year 21 cycle, the Air District had more than \$52 million available from MSIF, Community Health Protection Grant Program, FARMER and CMP funds for eligible projects. The Air District started accepting project applications for the CMP Year 21 funding cycle on June 17, 2019. Applications are accepted and evaluated on a first-come, first-served basis.

As of June 1, 2020, the Air District had received 197 project applications. Of the applications that have been evaluated between May 4, 2020 and June 1, 2020, two eligible projects have proposed grant awards over \$100,000. These projects will replace five pieces of mobile, diesel powered agricultural equipment. These projects will reduce over 2.02 tons of NO_x, ROG and PM per year. Staff recommends the allocation of \$450,230 for these projects from a combination of CMP, FARMER and Community Health Protection funds and MSIF revenues. Attachment 1, Table 1, provides additional information on these projects.

Attachment 2 lists all of the eligible projects that have been received by the Air District as of June 1, 2020, including information about equipment category, award amounts, estimated emissions reductions, and county location. Approximately 74% of the funds have been awarded to projects that reduce emissions in highly impacted Bay Area communities. Attachment 4, Figures 4 and 5 summarize the cumulative allocation of the CMP, FARMER, MSIF, and Community Air Protection Program funding since 2009 (more than \$321 million awarded to 1,296 projects).

Transportation Fund for Clean Air Program:

For the FYE 2020 funding cycle, the Air District has approximately \$32 million in TFCA monies available for eligible Vehicle Trip Reduction and Clean Air Vehicle projects and programs. The Air District began accepting applications for this funding cycle on August 9, 2019. Applications are accepted and evaluated on a first-come, first-served basis.

As of June 1, 2020, the Air District had received 25 project applications. Of the applications evaluated between May 4, 2020 and June 1, 2020, two eligible projects have a proposed TFCA grant award over \$100,000. These projects will install 12.6 miles of Class IV bikeway and 520 electronic bicycle locker spaces and are estimated to reduce over 0.566 tons of NO_x, ROG, and PM per year. Staff recommends an allocation of \$1,171,000 for these projects. Attachment 1, Table 2, provides additional information on these projects.

Attachment 3, Table 1, lists all eligible TFCA projects that have been evaluated and awarded between July 1, 2019 – June 1, 2020, including information about project category, award amount, estimated emissions reduction, and county location. Approximately 47% of TFCA funds have been awarded to projects that reduce emissions in highly impacted Bay Area communities.

Reformulated Gas Settlement Fund Program:

Under contract with the Foundation, the Air District has been administering the West Oakland Zero-Emission Grant Program and approximately \$1.17 million in RFG funding has been awarded to eligible projects that reduce petroleum usage and air pollution in West Oakland and nearby communities surrounding the Port of Oakland.

As of June 1, 2020, the Air District had received 25 project applications for RFG funds. Of the applications evaluated between May 4, 2020 and June 1, 2020, there were no projects with proposed RFG grant awards over \$100,000. Attachment 3, Table 2, lists all eligible RFG projects that were evaluated between July 1, 2018 and June 1, 2020, including information about the project equipment, award amounts, estimated emissions reductions, and project locations.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. The Air District distributes the CMP, MSIF, Community Health Protection Grant Program, TFCA, and RFG funding to project sponsors on a reimbursement basis. Funding for administrative costs is provided by each funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Anthony Fournier and Linda Hui
Reviewed by: Karen Schkolnick, Chengfeng Wang and Ken Mak

- Attachment 1: Projects with grant awards greater than \$100,000
- Attachment 2: CMP/MSIF, FARMER and Community Health Protection Grant Program approved projects
- Attachment 3: TFCA and RFG approved and eligible projects
- Attachment 4: Summary of funding awarded between 7/1/19 and 6/1/20

AGENDA 3 - ATTACHMENT 1

Table 1 - Carl Moyer Program/ Mobile Source Incentive Fund, FARMER, and Community Health Protection Grant Program projects with grant awards greater than \$100k (Evaluated between 5/4/20 and 6/1/20)

Project #	Applicant name	Project Category	Project Description	Proposed contract award	Total project cost	Emission Reductions (Tons per year)			County
						NO _x	ROG	PM	
21MOY159	Morrison Bros. Dairy	Ag/ off-road	Replacement of one piece of diesel powered, mobile agricultural equipment.	\$ 159,830	\$ 199,788	0.936	0.120	0.069	Sonoma
21MOY188	New Pina Vineyard Management, LLC.	Ag/ off-road	Replacement of four pieces of diesel powered, mobile agricultural equipment.	\$ 290,400	\$ 363,147	0.732	0.104	0.068	Napa
2 Projects				\$ 450,230	\$ 562,935	1.668	0.224	0.138	

Table 2 - Transportation Fund for Clean Air projects with grant awards greater than \$100k (Evaluated between 5/4/20 and 6/1/20)

Project #	Applicant name	Project Category	Project Description	Proposed contract award	Total project cost	Emission Reductions (Tons per year)			County
						NO _x	ROG	PM	
20R30	City of Fremont	Bicycle Facilities	Upgrade 12.6 miles of Class II to Class IV bikeways in Fremont	\$ 130,000	\$ 393,380	0.005	0.006	0.014	Alameda
20R31	Peninsula Corridor Joint Powers Board	Bicycle Facilities	Install and maintain 520 electronic bicycle locker spaces at 22 Caltrain stations in San Francisco, San Mateo and Santa Clara counties	\$ 1,041,000	\$ 2,240,000	0.097	0.139	0.306	Multi-County
2 Projects				\$ 1,171,000	\$ 2,633,380	0.102	0.145	0.319	

AGENDA 3 - ATTACHMENT 2

*CMP/MSIF, FARMER and Community Health Protection Grant Program approved projects
(between 7/3/19 and 6/1/20)*

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY230	Ag/ off-road	Equipment replacement	1	\$ 16,965.00	Cornerstone Certified Vineyard	0.024	0.019	0.006	APCO	Sonoma
20MOY235	Ag/ off-road	Equipment replacement	1	\$ 46,690.00	Goldridge Pinot LLC dba Emeritus Vineyards	0.170	0.026	0.019	APCO	Sonoma
20MOY241	Ag/ off-road	Equipment replacement	3	\$ 129,500.00	Linda Pierce Wedemeyer Exemption Trust	0.217	0.039	0.021	10/2/2019	Solano
21MOY9	On-road	Equipment replacement	1	\$ 60,000.00	Prime Tank Lines LLC	0.302	0.060	0.005	APCO	Contra Costa
20MOY248	On-road	Equipment replacement	1	\$ 40,000.00	Amritpal T Singh (Truck owner/operator)	0.601	0.052	0.000	APCO	Alameda
21MOY1	On-road	Equipment replacement	1	\$ 40,000.00	Freight 99 Express Inc (Truck owner/operator)	0.280	0.024	0.000	APCO	Alameda
20MOY86	On-road	Equipment replacement	1	\$ 25,000.00	Sears Keith (Truck owner/ operator)	0.195	0.016	0.000	APCO	Sacramento
20MOY150	On-road	Equipment replacement	1	\$ 40,000.00	Sulhjee Singh Cheema (Truck owner/ operator)	0.667	0.057	0.000	APCO	San Joaquin
21SBP2	School bus	Equipment replacement	1	\$ 178,500.00	Campbell Union School District	0.064	0.005	0.000	10/2/2019	Santa Clara
20MOY227	On-road	Equipment replacement	1	\$ 30,000.00	JSK Trucking (Truck owner/ operator)	0.193	0.016	0.000	APCO	San Joaquin
20MOY239a	On-road	Equipment replacement	1	\$ 30,000.00	DNA Trucking, Inc.	0.252	0.021	0.000	APCO	Solano
20MOY239b	On-road	Equipment replacement	1	\$ 20,000.00	DNA Trucking, Inc.	0.203	0.017	0.000	APCO	Solano
20MOY245a	On-road	Equipment replacement	1	\$ 60,000.00	Jorge Quintero DBA QDS Transportation	1.271	0.097	0.008	APCO	Alameda
20MOY245b	On-road	Equipment replacement	1	\$ 60,000.00	QDS Transportation	0.817	0.061	0.005	APCO	Alameda
20MOY245c	On-road	Equipment replacement	1	\$ 60,000.00	Ignacio Quintero (Truck owner/ operator)	0.900	0.068	0.005	APCO	Alameda
20MOY82	On-road	Equipment replacement	1	\$ 35,000.00	Surinder Atwal (Truck owner/ operator)	0.258	0.022	0.000	APCO	Sacramento

AGENDA 3 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
20MOY232	On-road	Equipment replacement	1	\$ 40,000.00	Mahmoud Rastegar DBA: Prosper Dedicates Lines	0.452	0.039	0.000	APCO	Placer
20MOY218	On-road	Infrastructure	1	\$ 13,717.00	Penske Truck Leasing Co., L.P.	0.000	0.000	0.000	APCO	Alameda/ San Francisco
21MOY28	Ag/ off-road	Equipment replacement	1	\$ 63,850.00	Bains Farms LLC.	0.082	0.014	0.010	APCO	Solano
21MOY17	Ag/ off-road	Equipment replacement	1	\$ 43,350.00	Sweet Lane Nursery and Vineyards, Inc.	0.041	0.009	0.008	APCO	Sonoma
21MOY23	Ag/ off-road	Equipment replacement	2	\$ 86,100.00	Trefethen Farming LLC.	0.178	0.043	0.034	APCO	Napa
20MOY250	Marine	Engine replacement	4	\$ 1,288,000.00	Amnav Maritime Corporation (Vessel: Patricia Ann)	8.609	0.270	0.476	10/2/2019	Alameda
21MOY31	Ag/ off-road	Equipment replacement	1	\$ 185,400.00	Gerald & Kristy Spaletta (Dairy)	0.516	0.074	0.052	10/2/2019	Sonoma
21MOY25	On-road	Equipment replacement	1	\$ 49,500.00	J and A Trucking Inc.	1.350	0.202	0.010	APCO	Alameda
21MOY21	Ag/ off-road	Equipment replacement	4	\$ 249,600.00	Bentaria Vineyard Management, LLC.	0.790	0.121	0.089	10/2/2019	Napa
21MOY41	Ag/ off-road	Equipment replacement	2	\$ 81,750.00	Geoffrey Allen (Nursery)	0.105	0.030	0.012	APCO	San Mateo
21MOY30	Ag/ off-road	Equipment replacement	2	\$ 67,100.00	Jaswant S. Bains (Farmer)	0.289	0.044	0.025	APCO	Solano
21MOY33	Off-road	Equipment replacement	2	\$ 355,500.00	S.E.G Trucking	1.044	0.074	0.052	10/2/2019	Contra Costa
21MO12	On-road	Equipment replacement	1	\$ 30,000.00	Oscar Transport/ Oscar Rivera (Truck owner/ operator)	0.401	0.034	0.000	APCO	Alameda
21MOY34	Ag/ off-road	Equipment replacement	2	\$ 456,200.00	Custom Tractor Service	2.260	0.211	0.115	10/2/2019	Sonoma
21MOY14	Ag/ off-road	Equipment replacement	5	\$ 198,850.00	Bayview Vineyards Corp.	0.826	0.164	0.090	10/2/2019	Napa
21MOY47	Ag/ off-road	Equipment replacement	1	\$ 151,000.00	DeBernardi Dairy, Inc.	0.438	0.040	0.022	10/2/2019	Sonoma
21MOY51	Marine	Engine replacement	4	\$ 2,916,000.00	Crowley Marine Services	43.259	4.409	1.420	10/2/2019	Alameda

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Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY36	Off-road	Equipment replacement	1	\$ 78,500.00	John Benward Co.	0.564	0.028	0.021	APCO	Sonoma
20MOY217	Off-road	Portable equipment replacement	1	\$ 863,500.00	Oakland Pallet Co., Inc.	2.577	0.215	0.076	10/2/2019	Alameda
20SBP246	School bus	Equipment replacement	2	\$ 179,020.00	Newark Unified School District	0.037	0.002	0.000	10/2/2019	Alameda
21MOY46	Off-road	Equipment replacement	6	\$ 772,500.00	Bigge Crane and Rigging Company	4.210	0.435	0.254	10/2/2019	Alameda
21MOY37	On-road	Equipment replacement	1	\$ 30,000.00	Joginder Singh (Truck owner/ operator)	0.392	0.033	0.000	APCO	Alameda
21MOY19	Ag/ off-road	Equipment replacement	3	\$ 127,400.00	Nissen Vineyard Services, Inc.	0.487	0.088	0.066	11/20/2019	Napa
21MOY56	Ag/ off-road	Equipment replacement	1	\$ 21,550.00	Groth Vineyards and Winery, LLC	0.047	0.038	0.010	APCO	Napa
21MOY54	Ag/ off-road	Equipment replacement	1	\$ 31,000.00	Siebert Vineyards	0.079	0.012	0.007	APCO	Sonoma
21MOY53	Ag/ off-road	Equipment replacement	1	\$ 63,150.00	St. Supery Inc.	0.159	0.025	0.019	APCO	Napa
21MOY59	Off-road	Equipment replacement	1	\$ 167,500.00	Concrush Inc.	0.696	0.065	0.037	11/20/2019	Solano
21MOY64	Ag/ off-road	Equipment replacement	1	\$ 170,250.00	Achadinha Cheese, Inc.	1.546	0.171	0.097	11/20/2019	Sonoma
21MOY50	On-road	Equipment replacement	1	\$ 25,000.00	Bal transport, Inc.	0.464	0.033	0.000	APCO	Alameda
21MOY73	Ag/ off-road	Equipment replacement	2	\$ 153,695.00	Robert Giacomini Dairy, Inc	0.276	0.040	0.023	11/20/2019	Marin
21MOY60	Marine	Engine replacement	2	\$ 276,000.00	Bass Tub Fishing	0.489	0.000	0.026	11/20/2019	Contra Costa
21MOY71	Marine	Engine replacement	2	\$ 3,814,000.00	Foss Maritime	15.352	1.518	0.504	11/20/2019	Contra Costa
21SBP77	School bus	Equipment replacement	16	\$ 3,478,697.00	Mt. Diablo Unified School District	1.040	0.075	0.005	11/20/2019	Contra Costa
20MOY103	Marine	Engine replacement	2	\$ 130,000.00	Westar Marine Services	0.221	-0.007	0.014	11/20/2019	San Francisco

AGENDA 3 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY61	Off-road	Equipment replacement	6	\$ 811,875.00	Amazon Recycling and Disposal, Inc.	3.679	0.584	0.369	11/20/2019	Alameda
20SBP23	School bus	Equipment replacement	2	\$ 373,861.00	Sonoma Valley Unified School District - Increase of ~\$12k from 3/6/19 approval.	0.131	0.009	0.001	11/20/2019	Sonoma
21MOY65	Ag/ off-road	Equipment replacement	2	\$ 140,440.00	Simoni & Massoni Farms, LLC	0.695	0.103	0.064	11/20/2019	Contra Costa
21MOY43	On-road	Equipment replacement	1	\$ 30,000.00	Narwal Trucking, Inc.	0.210	0.018	0.000	APCO	Sacramento
21MOY66	On-road	Equipment replacement	1	\$ 15,000.00	Kapil Kumar (Truck owner/ operator)	0.136	0.011	0.000	APCO	Sacramento
21MOY69	Ag/ off-road	Equipment replacement	1	\$ 51,580.00	Anselmo Farms, LLC	0.121	0.024	0.014	APCO	Solano
21MOY67	On-road	Equipment replacement	1	\$ 40,000.00	Gurchean Johal (Truck owner/ operator)	0.294	0.025	0.000	APCO	Sacramento
21MOY85	On-road	Equipment replacement	1	\$ 10,000.00	W&D Wholesale Foods, INC.	0.271	0.032	0.014	APCO	San Francisco
21MOY48a	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.827	0.072	0.006	APCO	Santa Clara
21MOY48b	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.874	0.076	0.006	APCO	Santa Clara
21MOY48c	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.666	0.057	0.005	APCO	Santa Clara
21MOY48d	On-road	Equipment replacement	1	\$ 40,000.00	Gonzalez Pallets Inc.	0.763	0.066	0.005	APCO	Santa Clara
21MOY83	On-road	Equipment replacement	1	\$ 45,000.00	DJ Trucking Enterprise, Inc.	0.366	0.048	0.002	APCO	Monterey
21MOY82	Ag/ off-road	Equipment replacement	1	\$ 58,600.00	Andrews Vineyards	0.118	0.025	0.018	APCO	Solano
21SBP32	School bus	CNG Tank replacement	2	\$ 40,000.00	Newark Unified School District	0.000	0.000	0.000	APCO	Alameda
21MOY87	On-road	Equipment replacement	1	\$ 40,000.00	Gurjit S. Mann (Truck owner/ operator)	0.654	0.057	0.000	APCO	Alameda
21MOY8	Ag/ off-road	Equipment replacement	1	\$ 57,300.00	Garry Mahrt (Dairy and sheep farm)	0.093	0.009	0.005	APCO	Sonoma

AGENDA 3 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY27	Ag/ off-road	Equipment replacement	1	\$ 60,350.00	Four Seasons Vineyard Management	0.130	0.007	0.007	APCO	Sonoma
21MOY72	Ag/ off-road	Equipment replacement	2	\$ 93,380.00	Napa Second Generation Inc. (Vineyard management)	0.423	0.053	0.042	APCO	Sonoma
21MOY88	Ag/ off-road	Equipment replacement	1	\$ 118,940.00	Ghiggeri and Stonebarger LLC	0.708	0.086	0.056	1/29/2020	Contra Costa
20MOY238	Off-road	Equipment replacement	3	\$ 59,280.00	CLY Incorporated dba Point Pacific Drilling	1.265	0.177	0.113	APCO	Sonoma
21MOY94	On-road	Equipment replacement	1	\$ 30,000.00	Jaskaran Dhillon (Truck owner/ operator)	0.232	0.019	0.000	APCO	Sutter
21MOY93	On-road	Equipment replacement	1	\$ 40,000.00	Simon Andemichael (Truck owner/ operator)	0.303	0.026	0.000	APCO	Alameda
21MOY105	On-road	Equipment replacement	1	\$ 20,000.00	Bras Bros Trucking (Gurlal Singh)	0.935	0.123	0.040	APCO	Alameda
21MOY74	On-road	Equipment replacement	1	\$ 20,000.00	AT Produce (Abraham Torres)	0.424	0.061	0.025	APCO	Stockton
21MOY84	On-road	Equipment replacement	1	\$ 30,000.00	Lenaco Corporation	0.406	0.047	0.021	APCO	San Mateo
21MOY96	On-road	Equipment replacement	1	\$ 20,000.00	Ng's Group Transportation, Inc.	0.420	0.061	0.024	APCO	San Mateo
21MOY57	On-road	Equipment replacement	2	\$ 174,400.00	Summit Steel Works Corporation	0.071	0.004	0.000	3/4/2020	Santa Clara
21MOY108	On-road	Equipment replacement	1	\$ 26,750.00	Ontrack Moving, LLC	0.393	0.026	0.003	APCO	Alameda
21MOY107	Ag/ off-road	Equipment replacement	2	\$ 111,195.00	Olive Tree Farm	0.179	0.020	0.016	3/4/2020	Sonoma
21MOY115	Ag/ off-road	Equipment replacement	2	\$ 279,120.00	F.A. Maggiore & Sons, LLC	0.707	0.086	0.053	3/4/2020	Contra Costa
21MOY122	Ag/ off-road	Equipment replacement	1	\$ 38,625.00	TMR Wine Company, LLC	0.047	0.005	0.006	APCO	Napa
21MOY111	Ag/ off-road	Equipment replacement	1	\$ 52,624.00	Haire Management Co. LLC	0.164	0.111	0.018	APCO	Napa
21MOY112	Ag/ off-road	Equipment replacement	2	\$ 83,700.00	Walnut Grove Partnership	0.257	0.052	0.025	APCO	Solano

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Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY128	Ag/ off-road	Equipment replacement	1	\$ 56,510.00	Bob Balestra (Vineyard)	0.173	0.022	0.015	APCO	Solano
21MOY100	Marine	Engine replacement	2	\$ 354,000.00	Golden Gate Scenic Steamship Corp.	0.898	0.000	0.048	3/4/2020	San Francisco
21MOY110	On-road	Equipment replacement	1	\$ 40,000.00	Ahsan Trucking	0.662	0.056	0.000	APCO	Alameda
21MOY124	Ag/ off-road	Equipment replacement	1	\$ 60,545.00	Perry Kozlowski Ranch	0.047	0.012	0.009	APCO	Sonoma
21MOY144	On-road	Equipment replacement	1	\$ 35,000.00	FITSUM TEKLA MENDER	0.665	0.057	0.000	APCO	Contra Costa
21MOY126	Ag/ off-road	Equipment replacement	2	\$ 77,250.00	T and M Agricultural Services, LLC	0.160	0.029	0.025	APCO	Napa
21MOY125	Marine	Engine replacement	4	\$ 3,056,000.00	Baydelta Navigation LTD	33.696	4.427	1.237	3/4/2020	San Francisco
21SBP98	School bus	Equipment replacement	2	\$ 323,778.00	Palo Alto Unified School District	0.094	0.006	0.005	3/4/2020	Santa Clara
21SBP114	School bus	Equipment replacement	4	\$ 1,672,500.00	Santa Clara Unified School District	0.440	0.041	0.004	3/4/2020	Santa Clara
21MOY79	Marine	Engine replacement	2	\$ 112,000.00	Westar Marine Services	0.259	0.001	0.014	3/4/2020	San Francisco
21SBP75	School bus	Equipment replacement	14	\$ 3,080,000.00	West County Transportation Agency	1.186	0.088	0.000	3/4/2020	Sonoma
21MOY130	On-road	Equipment replacement	1	\$ 50,000.00	HS_Trucking	0.758	0.056	0.005	APCO	Alameda
21MOY147	Marine	Engine replacement	2	\$ 182,000.00	Sophia Fisheries, Inc.	0.656	0.006	0.024	4/15/2020	San Mateo
20SBP186	School bus	Equipment replacement	7	\$ 1,504,235.00	Franklin-McKinley School District (Increase of \$152k from 5/1/19)	0.461	0.030	0.003	4/15/2020	Santa Clara
21MOY81	Off-road	Portable equipment replacement	4	\$ 177,526.00	Alaska Airlines	1.030	0.086	0.048	5/6/2020	Alameda, San Francisco, Santa Clara
21MOY150	Off-road	Infrastructure	42	\$ 2,545,297.00	City & County of San Francisco (SFO)	n/a	n/a	n/a	5/6/2020	San Francisco
21MOY132	Off-road	Infrastructure	5	\$ 298,886.00	SSA Terminals	n/a	n/a	n/a	5/6/2020	Alameda

AGENDA 3 - ATTACHMENT 2

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
21MOY155	Ag/ off-road	Equipment replacement	1	\$ 213,960.00	Andrew J. Poncia dba Poncia Fertilizer Spreading	1.135	0.107	0.059	5/6/2020	Sonoma
21MOY136	Off-road	Equipment replacement	4	\$ 162,725.00	Galante Brothers General Engineering	0.877	0.160	0.093	5/6/2020	Santa Clara
21MOY149	On-road	Equipment replacement	40	\$ 13,072,800.00	Alameda-Contra Costa Transit District	2.262	0.036	0.013	5/6/2020	Alameda
21MOY169	Marine	Engine replacement	2	\$ 164,000.00	Amnav Maritime, LLC	0.896	0.076	0.025	6/3/2020	Alameda
21MOY62	On-road	Equipment replacement	1	\$ 15,000.00	Port Container Drayage Logistics LLC	0.145	0.010	0.000	APCO	Alameda
21MOY168	Marine	Engine replacement	2	\$ 198,000.00	Blue Runner, Inc.	0.376	0.002	0.020	6/3/2020	Marin
20FD05	Ag/ off-road	FARMER Demonstration	3	\$ 480,000.00	Zimero Inc. DBA Monarch Tractor	0.331	0.034	0.008	6/3/2020	Alameda/ Napa
20FD04	Ag/ off-road	FARMER Demonstration	4	\$ 514,688.00	Solectrac, Inc.	0.760	0.127	0.087	6/3/2020	San Mateo/ Napa/ Sonoma
21MOY158	Ag/ off-road	Equipment replacement	1	\$ 81,270.00	Boething Treeland Farms	0.195	0.020	0.027	APCO	San Mateo
21MOY142	On-road	Equipment replacement	1	\$ 40,000.00	RAJDEEP SINGH BRAR	0.558	0.048	0.000	APCO	Merced
21MOY177	On-road	Equipment replacement	1	\$ 20,000.00	ELPIINAL ELIS O REYES	0.207	0.017	0.000	APCO	San Joaquin
21MOY159	Ag/ off-road	Equipment replacement	1	\$ 159,830.00	Morrison Bros. Dairy	0.936	0.120	0.069	tbd	Sonoma
21MOY180	Ag/ off-road	Equipment replacement	1	\$ 64,880.00	Fifth Crow Farm	0.344	0.045	0.031	APCO	San Mateo
21MOY176	Ag/ off-road	Equipment replacement	1	\$ 60,000.00	Cain Cellars, Inc.	0.043	0.011	0.009	APCO	Napa
21MOY161	Ag/ off-road	Equipment replacement	1	\$ 64,375.00	Barbour Vineyards Management LLC	0.148	0.008	0.008	APCO	Napa
21MOY188	Ag/ off-road	Equipment replacement	4	\$ 290,400.00	New Pina Vineyard Management , LLC.	0.732	0.104	0.068	tbd	Napa
21MOY160	Ag/ off-road	Equipment replacement	1	\$ 70,600.00	Jaswant S. Bains	0.076	0.012	0.009	APCO	Solano
118 Projects			310	\$ 49,965,509.00		164.407	17.183	6.564		

AGENDA 3 - ATTACHMENT 3

Table 1 - Summary of all TFCA approved and eligible projects (evaluated between 7/1/19 and 6/1/20)

Project #	Project Category	Project Description	Award Amount	Applicant Name	Emission Reductions (Tons per year)			Board/ APCO Approval Date	CARE Area	County
					NO _x	ROG	PM			
19EV006	LD Infrastructure	Install and operate 20 DC fast charging stations at 7 transportation corridor facilities in San Francisco, Novato, Emeryville, and Santa Clara	\$500,000	EVgo Services LLC	0.268	0.103	0.021	7/3/19	Yes	Multi-County
19EV015	LD Infrastructure	Install and operate 5 dual-port level 2 (low) and 3 single-port level 2 (high) charging stations at 3 public transit parking facilities in Albany and Oakland	\$21,500	Metropolitan Transportation Commission	0.010	0.015	0.000	12/20/19	Yes	Alameda
19EV016	LD Infrastructure	Install and operate 7 dual-port level 2 (low) charging stations at a workplace facility in Napa	\$17,500	County of Napa	0.008	0.012	0.000	10/2/19	No	Napa
19EV017	LD Infrastructure	Install and operate 2 single-port level 2 (high) charging stations with a 17.28 kW solar array at a destination facility in Richmond	\$12,000	AHAH LLC	0.003	0.004	0.000	7/2/19	Yes	Contra Costa
19EV020	LD Infrastructure	Install and operate 16 single-port level 2 (high) charging stations at a multi-dwelling unit facility in San Francisco	\$37,648	One Rincon Hill Association	0.015	0.022	0.000	10/30/19	Yes	San Francisco
19EV021	LD Infrastructure	Install and operate 14 single-port level 2 (high) and 1 single-port level 2 (low) charging stations at 4 workplace, 2 multi-dwelling unit, and 1 transit parking facilities in Richmond	\$55,500	City of Richmond	0.020	0.030	0.001	11/15/19	Yes	Contra Costa
19EV022	LD Infrastructure	Install and operate 2 single-port level 2 (high) charging stations at 1 multi-dwelling unit facility in Palo Alto	\$14,000	W-K Arastradero, LLC	0.003	0.004	0.000	8/28/19	No	Santa Clara
19EV023	LD Infrastructure	Install and operate 3 dual-port level 2 (high) charging stations at a multi-dwelling unit facility in San Mateo	\$24,000	Mode Residences, LLC	0.006	0.008	0.000	7/31/19	No	San Mateo
19EV025	LD Infrastructure	Install and operate 2 dual-port level 2 (high) charging stations at a multi-dwelling unit facility in Campbell	\$16,000	Revere Residences LLC	0.004	0.006	0.000	9/3/19	Yes	Santa Clara
19EV033	LD Infrastructure	Install and operate 5 dual-port level 2 (high) charging stations at a workplace facility in Napa	\$20,000	City of Napa	0.009	0.014	0.003	8/14/19	No	Napa
19EV034	LD Infrastructure	Install and operate 2 single-port level 2 (high) and 24 dual-port level 2 (high) charging stations at 1 workplace facility in Milpitas	\$78,000	View, Inc.	0.036	0.053	0.001	8/20/19	No	Santa Clara
19EV035	LD Infrastructure	Install and operate 3 single-port level 2 (high) charging stations at 1 multi-dwelling unit facility in Hayward	\$10,313	Edward D. Kellar dba Windsor Arms	0.006	0.009	0.000	10/30/19	Yes	Alameda
19EV038	LD Infrastructure	Install and operate 4 dual port and 3 single-port level 2 (high) charging stations at 1 destination facility in Santa Clara	\$25,000	City of Santa Clara	0.012	0.017	0.000	10/9/19	Yes	Santa Clara
19EV042	LD Infrastructure	Install and operate 12 dual-port level 2 (high) charging stations at 6 workplace and 1 multi-dwelling unit facilities in Corte Madera, Sunnyvale, Fairfield, Pleasanton, and San Ramon	\$57,000	Cool Earth Solar Development	0.022	0.033	0.001	10/22/19	Yes	Multi-County
19EV046	LD Infrastructure	Install and operate 18 single-port level 2 (high) charging stations at 2 destination facilities in San Francisco	\$36,594	Imperial Parking (U.S.), LLC dba Impark	0.019	0.028	0.001	10/29/19	Yes	San Francisco
19EV048	LD Infrastructure	Install and operate 7 dual-port level 2 (high) and 2 DC fast charging stations at a workplace facility in Santa Clara	\$64,000	Roche Molecular Systems, Inc	0.030	0.044	0.001	9/30/19	Yes	Santa Clara
19EV050	LD Infrastructure	Install and operate 5 dual-port level 2 (high) charging stations at 4 multi-dwelling unit facilities in Rohnert Park and Santa Rosa	\$40,000	Warm Springs Realty Holdings, LLC	0.009	0.014	0.003	9/6/19	No	Sonoma
19EV052	LD Infrastructure	Install and operate 2 dual-port level 2 (low) and 1 single-port level 2 (high) charging stations at 1 multi-dwelling unit facility in San Ramon	\$17,200	Bollinger Crest Apartment Investors, LP	0.004	0.006	0.000	11/19/19	No	Contra Costa
19EV056	LD Infrastructure	Install and operate 4 single-port level 2 (high) charging stations at 1 multi-dwelling unit facility in Oakland	\$10,000	Uptown Place Homeowner's Association	0.002	0.003	0.000	9/24/19	Yes	Alameda
19EV057	LD Infrastructure	Install and operate 3 single-port and 28 dual-port level 2 (high) charging stations at 3 workplace facilities in Atherton and Redwood City	\$99,000	Redwood City School District	0.046	0.068	0.001	9/3/19	No	San Mateo
19EV062	LD Infrastructure	Install and operate 9 single-port level 2 (high) charging stations at 1 multi-dwelling unit facility in Cupertino	\$23,752	19608 Pruneridge Ave (Cupertino), LLC	0.014	0.021	0.000	12/5/19	No	Santa Clara
19EV063	LD Infrastructure	Install and operate 8 dual-port level 2 (high) charging stations at 2 workplace facilities in Milpitas	\$32,000	City of Milpitas	0.015	0.022	0.004	9/10/19	No	Santa Clara
19EV064	LD Infrastructure	Install and operate 10 single-port level 2 (high) charging stations at 5 workplace facilities in Pleasanton, Walnut Creek, San Jose, and Fremont	\$30,000	JKL Corporation	0.014	0.020	0.000	10/18/19	Yes	Multi-County
19EV065	LD Infrastructure	Install and operate 606 single-port level 2 (high) and 6 DC fast charging stations at 18 multi-dwelling unit and workplace facilities in San Francisco, San Jose, Walnut Creek, Palo Alto, Sunnyvale, Belmont, Oakland and Livermore	\$2,500,000	PowerFlex Systems, LLC	0.881	1.309	0.026	10/2/19	Yes	Multi-County
19EV068	LD Infrastructure	Install and operate 3 dual-port level 2 (high) charging stations at 1 workplace facility in Burlingame	\$12,000	Aperia Technologies Inc.	0.006	0.008	0.000	10/29/19	No	San Mateo
19EV070	LD Infrastructure	Install and operate 4 single-port level 2 (high) charging stations at a destination facility in San Francisco	\$12,000	Hornblower Cruises and Events	0.006	0.008	0.000	11/3/19	Yes	San Francisco
19EV072	LD Infrastructure	Install and operate 4 single-port level 2 (high) charging stations with a 16.7 kW solar array at a workplace facility in Sonoma	\$16,000	Sweazey Property Investments, LLC	0.006	0.008	0.000	10/18/19	No	Sonoma
19EV076	LD Infrastructure	Install and operate 15 single-port Level 2 (high) and 1 DC fast charging stations at 1 multi-dwelling unit facility in Milpitas	\$123,000	Milpitas - District 1 Associates, LLC	0.029	0.043	0.001	11/19/19	No	Santa Clara

Project #	Project Category	Project Description	Award Amount	Applicant Name	Emission Reductions (Tons per year)			Board/ APCO Approval Date	CARE Area	County
					NO _x	ROG	PM			
19EV077	LD Infrastructure	Install and operate 40 DC fast charging stations at 8 transportation corridor facilities in San Ramon, San Mateo, Newark, San Francisco, Millbrae, Cupertino, Castro Valley, and Emeryville	\$1,000,000	EVgo Services, LLC	0.336	0.499	0.010	10/2/19	Yes	Multi-County
19EV079	LD Infrastructure	Install and operate 3 single-port level 2 (high) charging stations at a multi-dwelling unit facility in Campbell	\$21,000	Brentwood Campbell, LLC dba Brentwood Apartments	0.005	0.007	0.000	11/19/19	Yes	Santa Clara
19EV080	LD Infrastructure	Install and operate 3 single-port level 2 (high) charging stations at a multi-dwelling unit facility in Campbell	\$21,000	Lyon NC Portfolio Investors, LLC dba Lyon Pebble Creek Apartments, LLC	0.005	0.007	0.000	12/5/19	No	Santa Clara
19EV081	LD Infrastructure	Install and operate 3 single-port level 2 (high) charging stations at a multi-dwelling unit facility in Campbell	\$21,000	Pruneyard West, LLC dba Pruneyard West Apartments	0.005	0.007	0.000	11/19/19	Yes	Santa Clara
19EV082	LD Infrastructure	Install and operate 3 single port level 2 (high) charging stations at a multi-dwelling unit facility in Campbell	\$21,000	Lyon NC Portfolio Investors, LLC dba Lyon Shadow Creek Apartments, LLC	0.005	0.007	0.000	12/5/19	Yes	Santa Clara
19EV083	LD Infrastructure	Install and operate 3 single-port level 2 (high) charging stations at a multi-dwelling unit facility in Mountain View	\$21,000	Lyon NC Portfolio Investors, LLC dba Lyon Maplewood Apartments, LLC	0.005	0.007	0.000	12/5/19	No	Santa Clara
19RFG23 ^s	LD Vehicles	Scrap and replace 7 light-duty vehicles with zero-emission vehicles, scrap and replace 1 heavy-duty shuttle with an electric shuttle, purchase 8 light-duty electric vehicles to add to the fleet, and install 14 dual-port level 2 charging stations	\$33,700	City of Berkeley	0.005	0.003	0.000	6/3/20	Yes	Alameda
19RFG24**	LD Vehicles	Purchase 4 new electric light duty vehicles	\$9,200	Alameda County	0.001	0.001	0.000	APCO	Yes	Alameda
20R02	LD Vehicles	Vehicle Buy Back Program	\$150,000	BAAQMD	N/A	N/A	N/A	NA	No	Regional
20R09	Bicycle Facilities	Install 0.2 miles of Class I bikeway in San Ramon	\$390,000	City of San Ramon	0.012	0.018	0.041	11/20/19	Yes	Contra Costa
20R11	Bicycle Facilities	Install 1.58 miles of Class IV bikeway in Los Gatos	\$293,900	Town of Los Gatos	0.010	0.015	0.029	1/29/20	No	Santa Clara
20R12	Bicycle Facilities	Install and maintain 20 electronic bicycle lockers at San Francisco General Hospital	\$34,000	San Francisco Department of Public Health	0.004	0.005	0.009	11/21/19	Yes	San Francisco
20R15	Bicycle Facilities	Install 0.26 miles of Class IV bikeway in San Leandro	\$220,000	City of San Leandro	0.005	0.009	0.024	1/29/20	Yes	Alameda
20R17	Bicycle Facilities	Install and maintain 80 electronic bicycle lockers in Belmont, Redwood City, Mountain View, Sunnyvale, and San Jose	\$200,000	Peninsula Corridor Joint Powers Board	0.043	0.048	0.130	11/20/19	Yes	Multi-County
20R19	Bicycle Facilities	Install and maintain a bike station with 270 new secure bike parking spaces in Oakland	\$675,000	San Francisco Bay Area Rapid Transit District	0.072	0.095	0.237	11/20/19	Yes	Alameda
20R21	Bicycle Facilities	Install 518 bike rack parking spaces in 8 schools in Palo Alto	\$38,300	Palo Alto Unified School District	0.028	0.061	0.041	11/21/19	No	Santa Clara
20R22	Bicycle Facilities	Install and maintain 20 electronic bicycle lockers at the Berkeley Marina Mall	\$50,000	City of Berkeley	0.006	0.008	0.018	11/20/19	Yes	Alameda
20R23	Bicycle Facilities	Install and maintain 44 electronic bicycle lockers at the El Cerrito and San Leandro BART Stations	\$110,000	San Francisco Bay Area Rapid Transit District	0.015	0.018	0.044	1/29/20	Yes	Multi-County
20R27	Bicycle Facilities	Install and maintain 36 electronic bicycle lockers at the Seaplane Lagoon Ferry Terminal, Harbor Ferry Terminal, and Alameda City Hall	\$88,000	City of Alameda	0.013	0.017	0.042	3/4/20	Yes	Alameda
20R29	Bicycle Facilities	Install 1.8 miles of Class I bikeway in Morgan Hill	\$70,500	City of Morgan Hill	0.002	0.004	0.007	5/1/20	No	Santa Clara
20R30	Bicycle Facilities	Upgrade 12.6 miles of Class III to Class IV bikeways in Fremont	\$130,000	City of Fremont	0.005	0.006	0.014	Pending	No	Alameda
20R31	Bicycle Facilities	Install and maintain 620 electronic bicycle locker spaces at 22 Caltrain stations in San Francisco, San Mateo and Santa Clara counties	\$1,041,000	Peninsula Corridor Joint Powers Board	0.097	0.139	0.306	Pending	No	Multi-County
19RFG18 ^h	Off-road (non-ag)	Purchase and operate 5 electric vehicles	\$6,360	Another Corporate ISP LLP DBA Monkeybrains	0.000	0.000	0.000	10/30/19	Yes	Alameda
19RFG20*	On-road Trucks & Buses	Purchase and operate two electric terminal tractors	\$29,780	CASS, Inc.	0.174	0.001	0.001	3/4/20	Yes	Alameda
20R26	On-road Trucks & Buses	Purchase and operate one battery-electric shuttle	\$13,500	California State University - Maritime Academy	0.005	0.003	0.001	10/2/19	Yes	Solano
20R28	On-road Trucks & Buses	Demonstrate 3 zero-emission Class 8 eCascadia trucks on Bay Area routes for Sysco and FedEx	\$322,500	Daimler Trucks North America	0.097	0.139	0.306	6/3/20	Yes	Multi-County
20R01	Trip Reduction	Enhanced Mobile Source & Commuter Benefits Enforcement	\$80,230	BAAQMD	N/A	N/A	N/A	NA	No	Regional
20R03	Trip Reduction	Spare The Air/Intermittent Control Programs	\$2,185,138	BAAQMD	N/A	N/A	N/A	NA	No	Regional
20R06	Trip Reduction	PresidiGo Downtown Shuttle	\$120,000	Presidio Trust	0.129	0.206	0.429	11/20/19	Yes	San Francisco
20R08	Trip Reduction	Pleasanton Connector Shuttles	\$80,000	San Joaquin Regional Rail Commission	0.202	0.285	0.772	11/20/19	Yes	Alameda
20R10	Trip Reduction	Caltrain Shuttle Program	\$485,000	Peninsula Corridor Joint Powers Board	1.893	2.280	5.292	11/20/19	No	Multi-County
20R13	Trip Reduction	Cupertino On-Demand Shuttle Pilot Program	\$192,900	Santa Clara Valley Transportation Authority (VTA)	0.055	0.063	0.140	11/20/19	No	Santa Clara
20R18	Trip Reduction	SJSU Ridesharing & Trip Reduction	\$111,000	Associated Students, San Jose State University	0.154	0.162	0.372	1/29/20	Yes	Multi-County
20R20	Trip Reduction	Rideshare to Transit in San Mateo County	\$300,000	City/County Association of Governments of San Mateo County	0.126	0.123	0.313	3/4/20	No	San Mateo

Project #	Project Category	Project Description	Award Amount	Applicant Name	Emission Reductions (Tons per year)			Board/ APCO Approval Date	CARE Area	County
					NO _x	ROG	PM			
20R25	Trip Reduction	ACE Shuttle Bus Program	\$949,000	Santa Clara Valley Transportation Authority	1.254	1.276	3.450	3/4/20	No	Santa Clara
19RFG21 [†]	School Bus	Purchase and operate 15 battery-electric school buses	\$276,200	Zūm Services, Inc.	0.111	0.006	0.029	3/4/20	Yes	Alameda
20RSB01 [‡]	School Bus	Match funding for Project #21SBP98 and #21SBP114 for the replacement of 6 diesel/CNG school buses with battery electric school buses	\$681,052	BAAQMD	N/A	N/A	N/A	3/4/20	No	Santa Clara
Total		65 Projects	\$14,375,767		6.378	7.453	12.125			

§ The award amount is in addition to \$67,214 in RFG funds.

** The award amount is in addition to \$25,286 in RFG funds.

‡ The award amount is in addition to \$14,940 in RFG funds.

* The award amount is in addition to \$102,390 in RFG funds.

† The award amount is in addition to \$173,800 in RFG funds.

‡ In addition to \$1,996,278 in state funds, this TFCA award amount includes \$513,500 to Project #21SBP98 and \$167,552 to Project #21SBP114.

Table 2 - Summary of all RFG approved and eligible projects (evaluated between 7/1/18 and 6/1/20)

Project #	Project Category	Project Description	Award Amount	Applicant Name	Emission Reductions (Tons per year)			Board/ APCO Approval Date	CARE Area	County
					NO _x	ROG	PM			
19RFG04*	Off-road (non-ag)	Purchase and operate 3 electric forklifts and one electric terminal truck	\$40,200	Wyse Logistics	0.007	0.013	0.006	10/17/18	Yes	Alameda
19RFG06 [†]	LD Infrastructure	Install and operate 43 dual-port level 2 EV charging stations	\$94,000	Hayward Unified School District	0.054	0.071	0.001	10/17/18	Yes	Alameda
19RFG13	LD Infrastructure	Install and operate 10 50kW DC fast charging stations	\$389,400	EVgo Service, LLC	0.040	0.060	0.001	6/5/19	Yes	Alameda
19RFG14	Off-road (non-ag)	Purchase and operate one electric terminal tractor	\$39,400	Oakland Maritime Support Services, Inc.	0.066	0.011	0.007	5/23/19	Yes	Alameda
19RFG16	Off-road (non-ag)	Purchase and operate one electric terminal tractor	\$80,000	GSC Logistics, Inc.	0.051	0.002	0.003	8/29/19	Yes	Alameda
19RFG18 [‡]	Off-road (non-ag)	Purchase and operate 5 electric vehicles	\$14,940	Another Corporate ISP LLP DBA Monkeybrains	0.000	0.000	0.001	10/30/19	Yes	Alameda
19RFG19	Off-road (non-ag)	Purchase and operate one electric terminal tractor	\$80,000	Oakland Pallet Co.	0.097	0.001	0.003	10/30/19	Yes	Alameda
19RFG20 [§]	On-road Trucks & Buses	Purchase and operate 2 electric terminal tractors	\$102,390	CAS, Inc.	0.597	0.005	0.005	3/4/20	Yes	Alameda
19RFG21**	School Bus	Purchase and operate 15 battery-electric school buses	\$173,800	Zūm Services, Inc.	0.070	0.004	0.018	3/4/20	Yes	Alameda
19RFG23 [‡]	LD Vehicles	Scrap and replace 7 light duty vehicles with zero emission vehicles, scrap and replace 1 heavy duty shuttle with an electric shuttle, purchase 8 light duty vehicles to add to the fleet, and install 14 dual port level 2 charging stations	\$67,214	City of Berkeley	0.011	0.006	0.000	6/3/20	Yes	Alameda
19RFG24**	LD Vehicles	Purchase and operate 4 new light-duty electric vehicles	\$25,286	Alameda County	0.000	0.000	0.000	APCO	Yes	Alameda
Total		11 Projects	\$1,106,630		1.083	0.172	0.046			

* The award amount is in addition to \$80,000 in TFCA funds.

† The award amount is in addition to \$172,000 in TFCA funds.

‡ The award amount is in addition to \$6,360 in TFCA funds.

§ The award amount is in addition to \$29,780 in TFCA funds.

** The award amount is in addition to \$276,200 in TFCA funds.

‡ The award amount is in addition to \$33,700 in TFCA funds.

** The award amount is in addition to \$9,200 in TFCA funds.

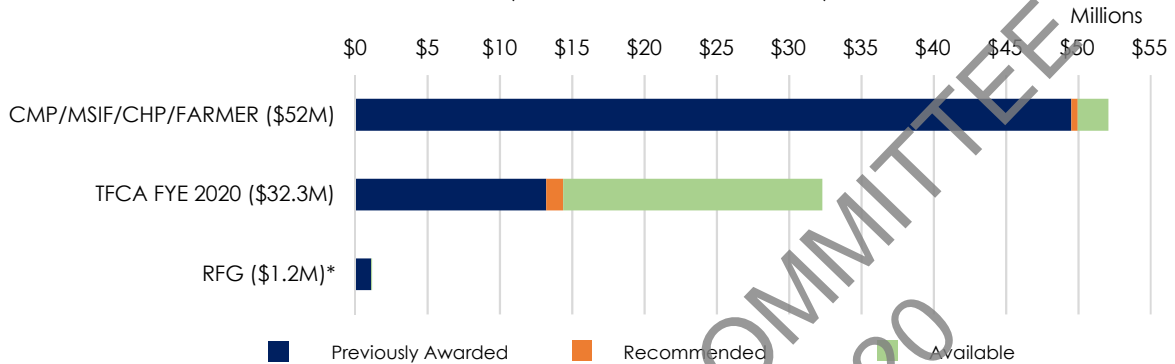
AGENDA 3 - ATTACHMENT 4

Figures 1-3 summarize funding awarded from the following revenue sources:

- Carl Moyer Program (CMP)
- Mobile Source Incentive Fund (MSIF)
- Community Health Protection Program (CHP)
- Transportation Fund for Clean Air (TFCA)
- Funding Agricultural Replacement Measures for Emission Reductions (FARMER)
- Reformulated Gasoline Settlement Fund (RFG)

Figure 1. Status of FYE 2020 funding by source

includes funds awarded, recommended for award, and available



* Includes funding awarded in FYE 2019 for RFG projects

Figure 2. Funding awarded in FYE 2020 by county:

includes funds awarded & recommended for award

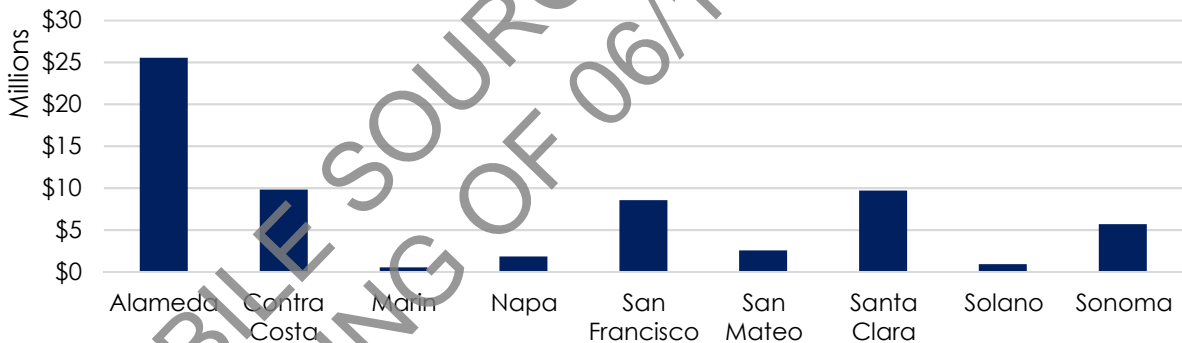
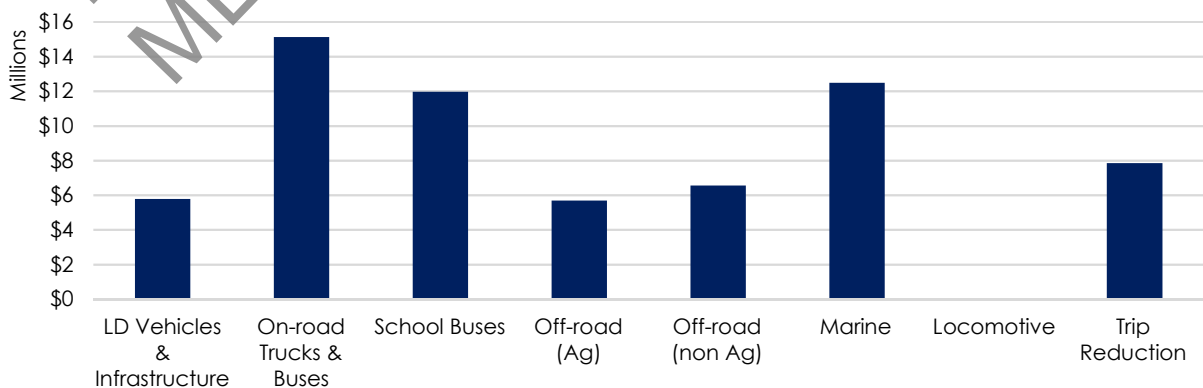


Figure 3. Funding awarded in FYE 2020 by project category

includes funds awarded & recommended for award



AGENDA 3 - ATTACHMENT 4

Figure 4. CMP/MSIF/CHP/FARMER funding awarded since 2009 by county

Figure 4: CMP, MSIF, CHP funding since 2009 by county

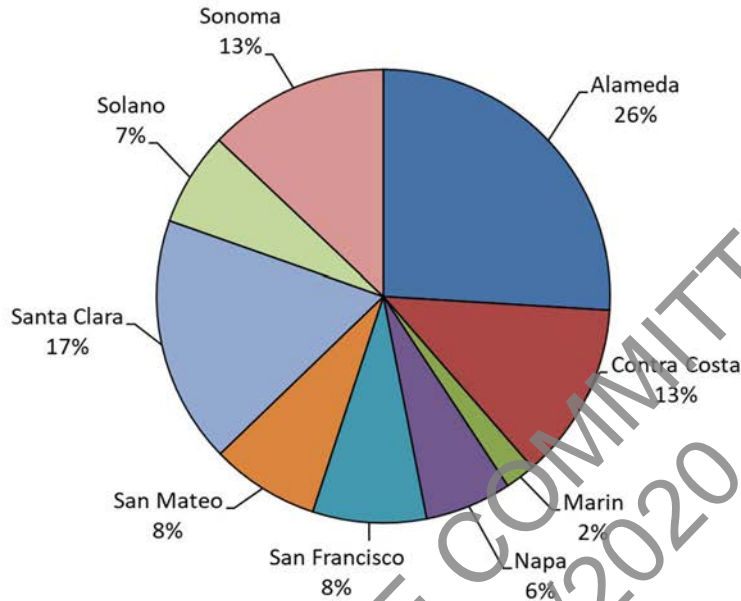
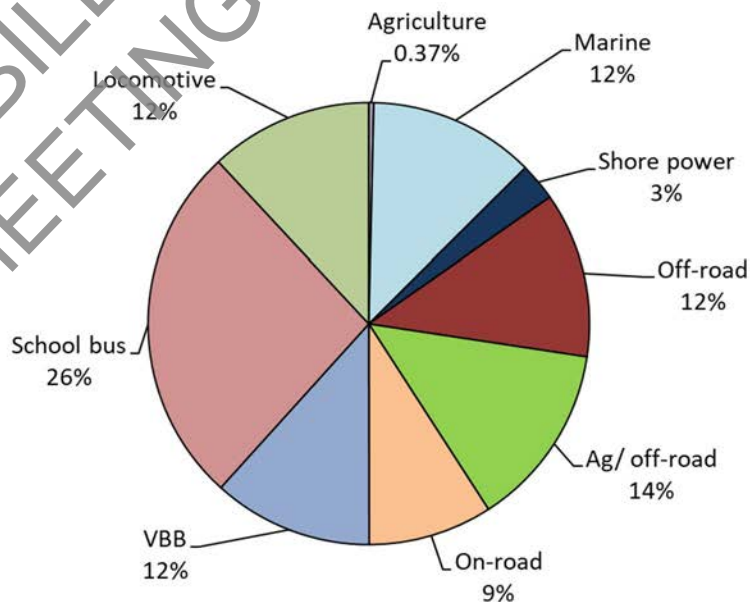


Figure 5. CMP/MSIF/CHP/FARMER funding awarded since 2009 by category

Figure 5: CMP, MSIF, CHP funding since 2009 by equipment category



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Canepa and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 10, 2020

Re: Revise Allocation of Fiscal Year Ending (FYE) 2021 Transportation Fund for Clean
Air Funding

RECOMMENDED ACTION

Recommend Board of Directors:

1. Approve the proposed increase to the allocation of Transportation Fund for Clean Air (TFCA) in FYE 2021, as shown in Table 2; and
2. Authorize the proposed change to cost-effectiveness limits for the Air District-sponsored programs and projects shown in Table 3

BACKGROUND

In 1991, the California State Legislature authorized the Bay Area Air Quality Management District (Air District) to impose a \$4 surcharge on each motor vehicle registered within the nine-county Bay Area to fund projects that reduce on-road motor vehicle emissions within its jurisdiction. The Air District allocates this revenue through its TFCA program; the statutory authority and requirements of which are set forth in the California Health and Safety Code Sections 44241 and 44242.

TFCA provides financial incentives to Bay Area public agencies, private entities, and residents to help offset a portion of the cost to implement eligible projects that reduce emissions from on-road motor vehicles. Sixty percent of TFCA funds are awarded by the Air District to eligible projects and programs that are implemented directly by the Air District referred to as Air District-sponsored Programs (e.g., Spare the Air) and to a program referred to as the Regional Fund. The remaining forty percent of TFCA funds are passed through to the County Program Manager Fund based on each county's proportionate share of vehicle registration fees paid and is awarded by the nine designated agencies within the Air District's jurisdiction.

The Air District’s Board of Directors (Board) annually considers the allocation of TFCA revenue and cost-effectiveness criteria that govern its expenditure to maximize emissions reductions and public health benefits. On April 15, 2020, the Board approved the allocation of both new TFCA monies that are anticipated to accrue and unobligated prior-year funds for reprogramming and distribution by the Air District in FYE 2021, by program category (shown in Table 1). At the same meeting, the Board also approved updates to the cost-effectiveness limits for Air District-sponsored programs and projects.

Table 1 – Board-Approved TFCA Allocation for FYE 2021 (in Millions)

Program Categories	Approved Funds by Category in FYE 2021*
Trip Reduction	\$8.00
Clean Air Vehicles	\$15.00
Spare the Air	\$2.29
Enhanced Mobile Source & Commuter Benefits	\$0.15
Vehicle Buy Back	\$0.30
Sub-Total Funding for Projects and Programs	\$25.74
Admin & Audit [†]	\$1.80
Total	\$27.53

[†] HSC Section 44233 authorized up to 6.25% of projected revenues can be used for administrative costs.

* If a program category is undersubscribed, the Executive Officer/APCO may reallocate up to 20% of each program category’s allocation to other categories based on demand, cost-effectiveness, and technology availability.

Since the Board’s approval in mid-April 2020, with the emergence of the COVID-19 pandemic, the Air District has received requests to increase its leadership on regional telecommuting policies and learned about potential uncertainty with regard to incentive revenue from the state for Air District programs. In response, staff is recommending the reprogramming of unspent funds from the current-year to increase the allocation of TFCA funds for FYE 2021, to support two existing Air District-sponsored Programs, *Clean Cars for All* and *Commuter Benefits*.

DISCUSSION

Proposed Change

Staff is recommending that an additional \$5.7 million in unobligated TFCA monies be reprogrammed for use in FYE 2021, as shown in in Table 2, thereby increasing the total amount of funds available for distribution in FYE 2021 up to \$33.23 million.

Table 2 – Proposed Increase to TFCA Funding Allocation for FYE 2021 (in Millions)

Program Categories	Proposed Increase
Clean Air Vehicles (Clean Cars for All)	\$5.00
Enhanced Mobile Source Inspections & Commuter Benefits	\$0.70
Total Proposed Funding Increase	\$5.70

Additional information on the two program categories discussed in this report is provided below:

- **Clean Air Vehicles:** The *Clean Cars For All* program provides incentives to qualifying low income households (up to 400% of the Federal Poverty Level) to retire older, high-polluting vehicles and replace them with a newer, cleaner vehicle and supporting charging infrastructure or with alternative transportation options (e.g. Clipper card). This program reduces criteria pollutants and greenhouse gas emissions and supports the goal of equitable access to clean transportation alternatives, including electric vehicles.

The *Clean Cars for All* program is currently funded through the state's California Climate Investments (CCI) initiative and Volkswagen Mitigation settlement fund. If the state reduces its funding commitment or if demand exceeds the available funding, staff is proposing the allocation of up to \$5 million in TFCA funding be used to continue support in our region. This funding would also replace funding previously available from a VW settlement that is running out to ensure that all low-income residents as well as those living in CalEnviroScreen disadvantaged communities continue to be eligible to participate in this program. The TFCA funds would be used to fund the same program that is currently funded by the revenue from the CCI, except that conventional hybrid vehicle purchases will not be eligible.

Up to 15% of this allocation will be used for program implementation costs, which is consistent with California Air Resources Board (CARB) guidelines for this program.

- **Enhanced Mobile Source Inspections & Commuter Benefits:** In response to the shelter-in-place, there has been increased attention on telecommuting and requests for the Air District to take a leadership role on best practices to facilitate more remote-working opportunities. Staff is proposing to increase funding for the Air District's implementation of the Commuter Benefits Program, including education, outreach, monitoring, and tracking of Bay Area employers subject to the program. In addition, the new funds will be used to conduct compliance assistance and outreach to local companies and government agencies. TFCA funding in this category is also used to support the enhanced inspection patrols for reporting smoking vehicles and enforcement of the state's drayage truck regulation and related truck/mobile source regulations conducted at and adjacent to the Port of Oakland.

Proposed Changes to TFCA Cost-Effectiveness

The authorizing legislation for the TFCA requires the Air District's Board to annually adopt cost-effectiveness criteria to maximize emissions reductions and public health benefits. For programs sponsored directly by the Air District in FYE 2021, staff recommends a cost-effectiveness¹ (C/E) limit of \$500,000 for both the Clean Air Vehicles' Clean Cars for All program and the Enhanced Mobile Source Inspections & Commuter Benefits program, as shown in Table 3. These proposed

¹ C/E is calculated by dividing TFCA funds awarded by the sum of surplus emissions reduced of reactive organic gases (ROG), nitrogen oxides (NOx), and weighted particulate matter (PM10) over the project operational period (POP).

limits are consistent limits adopted for other light-duty vehicle programs and trip-reduction services.

Table 3 – Proposed Cost-Effectiveness Limits and Project Operational Period

Program Categories	Max. C/E	Project Operational Period
	(per ton of emissions reduced)	(in Years)
Clean Cars for All	\$500,000	3
Enhanced Mobile Source Inspections & Commuter Benefits	\$500,000	1

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. The Air District distributes “pass-through” funds to grantees on a reimbursement basis. Administrative costs for the TFCA program are provided by the funding source.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Linda Hui and Chengfeng Wang
Reviewed by: Karen Schkolnick and Anthony Fournier

MOBILE SOURCE COMMITTEE
MEETING OF 06/18/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Report of the Climate Protection Committee Meeting of June 18, 2020

RECOMMENDED ACTION

The Climate Protection Committee (Committee) received only informational items and have no recommendations of approval by the Board of Directors (Board).

BACKGROUND

The Committee met on Thursday, June 18, 2020, and received the following reports:

- A) Update on Heat Pump Water Heater Grants.

Chairperson Teresa Barrett will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

- A) None. Resources to implement the Climate Protection Grant Program were included in the Fiscal Year Ending 2020 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha de Guzman
Reviewed by: Vanessa Johnson

Attachment 10A: 06/18/2020 – Climate Protection Committee Meeting Agenda #3

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Teresa Barrett and Members
of the Climate Protection Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 11, 2020

Re: Update on Heat Pump Water Heater Grants

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

On June 6, 2018, the Air District Board of Directors approved \$4.5 million in Climate Protection Grants to public agencies in the Bay Area. These grants are funding activities to design and implement innovative strategies to reduce greenhouse gas (GHG) emissions, with a focus on addressing energy use in buildings. In the Bay Area, natural gas use in residential and commercial buildings represents approximately 11 percent of the region's GHG inventory. Switching this natural gas use to low-carbon electricity is a critical component of the Air District's climate protection strategy. Reducing natural gas combustion in buildings also provides indoor and outdoor air quality co-benefits.

Ninety percent of Bay Area homes have water heaters that use natural gas. Unlike the demand for space heating, which varies across different climate zones, demand for water heating is fairly consistent across the Bay Area. This allows for common, replicable approaches to be developed that can be effectively implemented in a variety of communities. Through the Climate Protection Grant Program, the Air District has funded several programs that support coordination among public agencies to accelerate the transition to heat pump water heaters.

DISCUSSION

Heat pump water heaters use electricity to move heat from one place to another instead of generating heat directly through fossil fuel combustion. In addition to reducing GHG emissions by eliminating combustion, they are also more energy efficient than conventional gas-powered water heaters. Through the Climate Protection Grant Program, the Air District has funded several projects designed to advance the installation of heat pump water heaters in the Bay Area. These grantees, including the City of San Jose, Silicon Valley Clean Energy, and the Bay Area Regional Energy Network (BayREN, a program of the Association of Bay Area Governments), are coordinating their incentive and outreach programs to maximize the impact and replicability of their efforts.

Staff and guest speakers representing these three grant projects will provide the Committee with an update on implementation of the Climate Protection Grant Program's heat pump water heater grant activities. The update will include overviews of the grant projects, results to date of the incentive portions of the projects, and how the projects have aligned and coordinated activities.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. Resources to implement the Climate Protection Grant Program were included in the Fiscal Year Ending 2020 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Abby Young
Reviewed by: Henry Hilken

CLIMATE PROTECTION COMMITTEE
MEETING OF 06/18/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Report of the Legislative Committee Meeting of June 25, 2020

RECOMMENDED ACTION

The Legislative Committee (Committee) recommends Board of Directors (Board) approval of the following items:

- A) Sacramento Legislative Budget Update;
 - 1) None; receive and file;
- B) Air District Sponsored Bill; and
 - 1) None; receive and file; and
- C) State Legislation Update.
 - 1) The Legislative Committee (Committee) will discuss and review bills and take positions where appropriate.

At the direction of the Board of Directors, the Committee will review and consider taking a position on Assembly Constitutional Amendment (ACA) 5 (Weber).

BACKGROUND

The Committee met on Thursday, June 25, 2020, and received the following reports:

- A) Sacramento Legislative Budget Update;
- B) Air District Sponsored Bill; and
- C) State Legislation Update.

Chairperson Margaret Abe-Koga will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

- A) None;
- B) None; and
- C) None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha de Guzman
Reviewed by: Vanessa Johnson

Attachment 11A: 06/25/2020 – Legislative Committee Meeting Agenda #3
Attachment 11B: 06/25/2020 – Legislative Committee Meeting Agenda #4
Attachment 11C: 06/25/2020 – Legislative Committee Meeting Agenda #5

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Margaret Abe-Koga and Members of the Legislative Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 18, 2020

Re: Sacramento Legislative Budget Update

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

On May 14, 2020, Governor Newsom released his May Revision to the Fiscal Year (FY) 2020/2021 Budget, and on June 11, 2020 the Assembly and Senate released their proposal in the form of Senate Bill (SB) 74 (Mitchell). Of note is that SB 74 includes \$50 million in funding to air districts to implement the Assembly Bill (AB) 617 Program, which is the same amount of funding statewide that air districts received in the previous two budgets. Assuming a similar amount of funding is passed through to the Air District, this would likely fund most of the Air District’s program through early 2022. SB 74 also proposes to push off a budget for the Greenhouse Gas Reduction Fund until later in the summer.

Program	FY 20/21 (Jan)	FY 20/21 (May)	SB 74
AB 617 - Implementation	\$25M	\$0 *	\$50M
AB 617 - Incentives	\$200M	\$200M	Later
AB 617 - Technical Assistance	\$10M	\$0 *	Later
Clean Vehicle Rebate	\$125M	\$0 *	Later
Clean Truck and Bus	\$150M	\$0 *	Later
Ag Diesel Engine Replacement	\$50M	\$50M	Later
Clean Cars for All/School Bus	\$75M	\$0 *	Later
Woodstove Replacement	\$0	\$0	\$0
AB 836 (Wicks) Clean Air Centers	\$5.5M	\$0	\$5M

*\$0 * indicates \$0 in funding unless Cap and Trade Auction revenues for FY 20/21 exceed roughly \$2.5B in combined proceeds.*

On June 15, 2020, both the Assembly and Senate voted on and passed SB 74 to meet the state’s constitutional deadline. It is also unknown at this time whether the Governor will sign SB 74 as written.

Staff will provide an update to the Legislative Committee on activities related to the budget, as well as an update about the future Greenhouse Gas Reduction Fund Budget.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Alan Abbs
Reviewed by: Jack P. Broadbent

Attachment 3A: Air District Budget Letter to Governor – Dated June 8, 2020

LEGISLATIVE COMMITTEE
MEETING OF 06/25/2020



**BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT**

June 8, 2020

The Honorable Gavin Newsom
Governor, State of California
State Capitol, First Floor
Sacramento, CA 95814

The Honorable Toni Atkins
President Pro Tempore of the California State Senate
State Capitol, Room 205
Sacramento, CA 95814

The Honorable Anthony Rendon
Speaker of the California State Assembly
State Capitol, Room 219
Sacramento, CA 95814

ALAMEDA COUNTY
John J. Bauters
Pauline Russo Cutter
Scott Haggerty
Nate Miley

CONTRA COSTA COUNTY
John Gioia
David Hudson
Karen Mitchoff
(Secretary)
Mark Ross

MARIN COUNTY
Katie Rice

NAPA COUNTY
Brad Wagenknecht

SAN FRANCISCO COUNTY
VACANT
Shamann Walton
Tyrone Jue
(SF Mayor's Appointee)

SAN MATEO COUNTY
David J. Canepa
Carole Groom
Davina Hurt

SANTA CLARA COUNTY
Margaret Abe-Koga
Cindy Chavez
(Vice Chair)
Liz Kniss
Rod G. Sinks
(Chair)

SOLANO COUNTY
James Spering
Lori Wilson

SONOMA COUNTY
Teresa Barrett
Shirlee Zane

Jack P. Broadbent
EXECUTIVE OFFICER/APCO

Re: 2020-2021 State Budget – Legislative Budget Package – \$50 Million for Air District AB 617 Implementation Funding – Support

Dear Governor Newsom, President Pro Tempore Atkins, and Speaker Rendon:

On behalf of the Bay Area Air Quality Management District (Bay Area AQMD), I am writing to express our strong support for the inclusion of \$50 million in air district implementation funding for the AB 617 Community Air Protection (CAP) Program in the Legislative Budget Package. This funding will provide important air pollution reductions and public health benefits statewide, especially in disproportionately impacted disadvantaged communities.

As you know, local air districts play a pivotal role in ensuring the state's air quality goals are met. These goals include attaining the health-protective national and state ambient air quality standards, reducing air toxics, working closely with the California Air Resources Board to implement the state's climate change programs, and ensuring community health is protected from the effects of air pollution. This includes responsibility for implementation of the AB 617 CAP Program, including expanded air quality monitoring and analysis, extensive community interaction and support, and developing and implementing local air protection plans. Communities that have been identified as AB 617 communities rely on local air districts to work with them to realize the climate, air quality, and health benefits that have been promised by the state's Cap and Trade program. AB 617 Implementation funding has been vital in this by funding dedicated community staff, support for community organizations, monitoring equipment, and hyper-local air quality planning work.

Recent studies show that long-term exposure to high levels of air pollution leads to higher mortality from COVID-19.¹ The same communities that are disproportionately impacted by air pollution are also disproportionately impacted by COVID-19, and AB 617 is an important, state-mandated, community-led effort to reduce air pollution exposure and improve public health and resiliency in these most impacted communities.

¹ "Exposure to air pollution and COVID-19 mortality in the United States: A nationwide cross-sectional study," Wu et al, (2020), doi: <https://doi.org/10.1101/2020.04.05.20054502>

Connect with the
Bay Area Air District:



June 8, 2020

Page 2

The enacted FY 19/20 budget included \$50 million (\$20 million from the Greenhouse Gas Reduction Fund (GGRF) and \$30 million from the Air Pollution Control Fund (APCF)) for implementation of AB 617. The May Revision to the FY 20/21 budget proposes a priority list of programs to be funded from the GGRF, with an arguably slim potential for all other programs to be funded proportionally if excess revenues are realized during the quarterly auctions. While we are grateful that AB 617 Incentive funding is considered a priority up to \$200 million under this approach, we were very disappointed that actual implementation of AB 617 was not considered a priority in the May Revision and created an unfunded mandate and a worrisome repeat of the pattern of government inconsistency and disinvestment in these vulnerable communities.

The Bay Area AQMD has played a central role in implementing AB 617 and has been working aggressively to make the program a success in two communities, West Oakland and Richmond/San Pablo. We are also working on early actions in East Oakland, Vallejo, San Jose, and eastern San Francisco, but the prospect of no funding for implementation of AB 617 will mean that much of our work will have to be scaled back or discontinued. Therefore, we urge the adoption of the proposal in the Legislative Budget Package to provide \$50 million in funding from the APCF for air district implementation of the AB 617 CAP Program. It is important to note that \$50 million for implementation is significantly less than actual expenditures by air districts, but this level of funding will at least help ensure that work continues and air quality improvements are realized in our communities. If communities and air districts are to be successful, state funding for support at the community level must be adequate and ongoing.

The Bay Area AQMD also has concerns about the underwhelming results of the most recent cap-and-trade auction, due to overall economic conditions and a substantial bank of unused allowances that has built up in the cap-and-trade program. The AB 617 CAP Program was created as a backstop to ensure that cap-and-trade provided overburdened communities the benefits of declining pollution exposure at the same or greater rate than the rest of the state's population. While the COVID-19 public health crisis has resulted in a temporary dip in pollution from some mobile and stationary sources, it is worrisome that pollution levels will soon return to normal but that the cap-and-trade program and GGRF may not be able to support programs to make long term reductions in greenhouse gases and other pollutants. We encourage the Legislature and Administration to closely monitor upcoming auctions and be open to adjusting the program as necessary.

The Bay Area AQMD appreciates the opportunity to provide our input on this important matter. We are committed to reducing air pollution in California and ensuring that every one of the region's 7.5 million residents can breathe clean, healthful air. We are also committed to ensuring that the State's most disproportionately affected populations realize emissions reductions as expeditiously as possible. If you should have any questions, please do not hesitate to contact me at (415) 749-5052, or our Legislative Officer, Mr. Alan Abbs at (916) 769-7769.

Sincerely,



Jack P. Broadbent
Executive Officer/Air Pollution Control Officer

AA/JPB

Cc: The Honorable Holly Mitchell, Chair, Senate Committee on Budget & Fiscal Review
The Honorable Phil Ting, Chair, Assembly Committee on the Budget
The Honorable Bob Wieckowski, Chair, Senate Budget Subcommittee 2 on Resources, Environmental Protection, Energy and Transportation
The Honorable Richard Bloom, Chair, Assembly Budget Subcommittee 3 on Resources and Transportation
Members of Senate Budget Subcommittee 2
Members of Assembly Budget Subcommittee 3
Jared Blumenfeld, Secretary for Environmental Protection
Christine Hironaka, Deputy Cabinet Secretary, Office of Governor Newsom
Rachel Machi Wagoner, Deputy Legislative Secretary, Office of Governor Newsom
Keely Bosler, Director, Department of Finance
Kate Gordon, Director, Office of Planning and Research and Climate Advisor to Governor Newsom
Mary Nichols, Chair, California Air Resources Board
Members of Bay Area Caucus

LEGISLATIVE COMMITTEE
MEETING OF 06/25/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Margaret Abe-Koga and Members
of the Legislative Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 18, 2020

Re: Air District Sponsored Bill

RECOMMENDED ACTION

None; receive and file.

DISCUSSION**Assembly Bill (AB) 2882 Hazardous emissions and substances. schoolsites: private and charter schools**

AB 2882 is the Air District's bill in response to the Stratford School issue, and is joint authored by Assemblymembers Chu and C. Garcia, with coauthors Assemblymembers Kalra, Quirk, and Wicks, and Senators Hill and Wieckowski. Prior to constructing a new public school, a school district must go through a California Environmental Quality Act (CEQA) process that requires (in the Ed Code and Resources Code) dialog with their local air district, identification of sources of air pollution nearby, and a thoughtful determination that the nearby sources of pollution do not pose a threat to the future students or employees. While private schools perform CEQA, they are not required to make a similar declaration prior to construction of a school. As we see more infill development in California, including development of old industrial sites, it will be important to ensure that our children have an opportunity to attend schools with a healthy learning environment. We are happy to be working with Assemblymember Chu on this important measure.

AB 2882 was referred to the Assembly Appropriations Committee on May 14, 2020 and made it off of the Suspense File with a unanimous vote. On June 10, 2020, Assemblymember Chu presented AB 2882 on the Assembly Floor and it passed with a vote of 65 in favor and 4 against. The bill will now go to the Senate.

Prior to the bill hearing, we received a new support letter from the California State PTA, which is attached.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Alan Abbs
Reviewed by: Jack P. Broadbent

Attachment 4A: California State PTA – AB 2882 – Support Letter

LEGISLATIVE COMMITTEE
MEETING OF 06/25/2020

June 9, 2020

The Honorable Kansen Chu
California State Assembly
State Capitol, Room 3126
Sacramento, CA 95814

RE: AB 2882 Chu
CAPTA Position: *Support*

Dear Assemblymember Chu:

California State PTA has taken a support position on **AB 2882** which would require charter schools and private schools to follow the same requirements as public schools for evaluating a school site for potential hazardous substances, hazardous emissions or hazardous waste.

One of the planks to our legislative platform states that we will support legislation to prevent, control or eliminate hazards to the health, safety and well-being of all children and youth. We believe this bill certainly addresses the health and well-being of children.

Currently public schools have to meet stringent safety requirements to ensure there are no hazardous materials on school sites. Charter and private schools have no such requirements. All schools should be required to meet the same safety requirements to ensure all children are safe from hazardous materials.

California State PTA would like to thank you for the work on this important issue.

Sincerely,



Shayne Silva
Legislative Advocate for Health
California State PTA
916-440-1985 X311
e-mail: ssilva@capta.org
she/her/hers

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Margaret Abe-Koga and Members
of the Legislative Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 18, 2020

Re: State Legislation Update

RECOMMENDED ACTION

The Legislative Committee (Committee) will discuss and review bills and take positions where appropriate.

At the direction of the Board of Directors, the Committee will review and consider taking a position on Assembly Constitutional Amendment (ACA) 5 (Weber).

DISCUSSION

Staff will provide the Committee a brief summary and status of bills on the attached list.

Staff will review other bills that may be of interest to the Committee.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Alan Abbs
Reviewed by: Jack P. Broadbent

Attachment 5A: ACA 5 – Bill Language
Attachment 5B: Current Bills of Interest Matrix

AMENDED IN ASSEMBLY MAY 4, 2020

AMENDED IN ASSEMBLY MARCH 9, 2020

CALIFORNIA LEGISLATURE—2019–20 REGULAR SESSION

Assembly Constitutional Amendment

No. 5

Introduced by Assembly Members ~~Weber and Gipson~~ *Weber, Gipson, Santiago, and Gonzalez*
(Coauthors: Assembly Members ~~Gonzalez, Burke, Cooper, Holden, Jones-Sawyer, and Kamlager~~ *Kamlager, McCarty, and Mark Stone*)

(Coauthor: Senator Mitchell)

(Coauthors: Senators Bradford, Mitchell and Hueso)

January 18, 2019

Assembly Constitutional Amendment No. 5—A resolution to propose to the people of the State of California an amendment to the Constitution of the State, by repealing Section 31 of Article I thereof, relating to government preferences.

LEGISLATIVE COUNSEL'S DIGEST

ACA 5, as amended, Weber. Government preferences.

The California Constitution, pursuant to provisions enacted by the initiative Proposition 209 in 1996, prohibits the state from discriminating against, or granting preferential treatment to, any individual or group on the basis of race, sex, color, ethnicity, or national origin in the operation of public employment, public education, or public contracting. The California Constitution defines the state for these purposes to include the state, any city, county, public university system, community college district, school district, special district, or any other political subdivision or governmental instrumentality of, or within, the state.

This measure would repeal these provisions. The measure would also make a statement of legislative findings in this regard.

Vote: $\frac{2}{3}$. Appropriation: no. Fiscal committee: yes.
State-mandated local program: no.

1 WHEREAS, Equal opportunity is deeply rooted in the American
2 ideals of fairness, justice, and equality. Programs to meet the goals
3 of equal opportunity seek to realize these basic values. Equal
4 opportunity not only helps individuals, but also helps communities
5 in need and benefits our larger society. California's equal
6 opportunity program was upended by the passage of Proposition
7 209 in 1996; and

8 WHEREAS, Proposition 209, entitled the California Civil Rights
9 Initiative, amended Article I of the California Constitution to
10 prohibit race- and gender-conscious remedies to rectify the
11 underutilization of women and people of color in public
12 employment, as well as public contracting and education; and

13 WHEREAS, Proposition 209 invalidated a series of laws that
14 had been enacted by the California Legislature over the 20 years
15 prior to it that required state agencies to eliminate traditional
16 patterns of segregation and exclusion in the workforce, to increase
17 the representation of women and minorities in the state service by
18 identifying jobs for which their employment was underrepresented
19 due to discrimination, and to develop action plans to remedy such
20 underrepresentation without effectuating quota systems; and

21 WHEREAS, Proposition 209 also overshadowed other landmark
22 civil rights and antidiscrimination laws. In 1959, after a 37-year
23 campaign by labor and civil rights groups, the Unruh Civil Rights
24 Act was passed, which was the forerunner of the Civil Rights Act
25 of 1964; and

26 WHEREAS, As a result of the passage of Proposition 209,
27 women and people of color continue to face discrimination and
28 disparity in opportunities to participate in numerous forms of
29 association and work that are crucial to the development of talents
30 and capabilities that enable people to contribute meaningfully to,
31 and benefit from, the collective possibilities of national life; and

32 WHEREAS, The State of California has provided employment
33 opportunities for people of color and women of all races. However,
34 lingering, and even increasing, disparity still exists, particularly
35 for *Asian Americans, Pacific Islanders, Black Americans, Latino*

1 Americans, *Native Americans*, and women, and should be rectified;
2 and

3 WHEREAS, Proposition 209 has impeded California's
4 continuing interest in supporting the equal participation of women
5 in the workforce and in public works projects, in addressing the
6 historical and present manifestations of gender bias, and in
7 promulgating policies to enforce antidiscrimination in the
8 workplace and on public projects; and

9 WHEREAS, In the wake of Proposition 209, California saw
10 stark workforce diversity reductions for people of color and women
11 in public contracting and in public education. Studies show that
12 more diverse workforces perform better financially and are
13 significantly more productive and focused; and

14 WHEREAS, Since the passage of Proposition 209, the state's
15 minority-owned and women-owned business enterprise programs
16 have been decimated. A 2016 study conservatively estimates that
17 the implementation of Proposition 209 cost women and people of
18 color over \$1,000,000,000 annually in lost contract awards. Most
19 procurement and subcontracting processes remain effectively
20 closed to these groups due to the changes brought on by Proposition
21 209; and

22 WHEREAS, Women are vastly underrepresented among firms
23 receiving public contracts and the dollars awarded to certified
24 women-owned business enterprises fell by roughly 40 percent,
25 compared to levels before Proposition 209. In addition, only
26 one-third of certified minority business enterprises in California's
27 transportation construction industry are still in operation today,
28 compared to 20 years ago; and

29 WHEREAS, Women, particularly women of color, continue to
30 face unequal pay for equal work. White women are paid 80 cents
31 to every dollar paid to white men doing the same work. Black
32 women are paid 60 cents for every dollar paid to white men doing
33 the same work and would theoretically have to work an extra seven
34 months every year to overcome that differential. This persistent
35 gender wage gap continues to harm women, their families, and
36 communities; and

37 WHEREAS, Despite a booming economy with almost full
38 employment, a persistent racial wealth gap remains rooted in
39 income inequality. Improving minority access to educational and

1 labor market opportunity reduces the wealth gap and strengthens
2 the economy; and

3 WHEREAS, Proposition 209 has had a devastating impact on
4 minority equal opportunity and access to California’s publicly
5 funded institutions of higher education. This violates the spirit of
6 the California Master Plan for Higher Education by making it more
7 difficult for many students to obtain an affordable and accessible
8 high quality public education. While federal law allows schools
9 to use race as a factor when making admissions decisions,
10 California universities are prohibited by Proposition 209 from
11 engaging in targeted outreach and extra efforts to matriculate
12 high-performing minority students. This reduces the graduation
13 rates of students of color and, in turn, contributes to the diminution
14 of the “pipeline” of candidates of color for faculty positions; and

15 WHEREAS, Since the passage of Proposition 209, diversity
16 within public educational institutions has been stymied. Proposition
17 209 instigated a dramatic change in admissions policy at the
18 University of California, with underrepresented group enrollment
19 at the Berkeley and Los Angeles campuses of the University of
20 California immediately falling by more than 60 percent and
21 systemwide underrepresented group enrollment falling by at least
22 12 percent. Underrepresented group high school graduates faced
23 substantial long-term declines in educational and employment
24 outcomes as a result of these changes; and

25 WHEREAS, Among California high school graduates who apply
26 to the University of California, passage of Proposition 209 has led
27 to a decreased likelihood of earning a college degree within six
28 years, a decreased likelihood of ever earning a graduate degree,
29 and long-run declines in average wages and the likelihood of
30 earning high wages measured by California standards. The
31 University of California has never recovered the same level of
32 diversity that it had before the loss of affirmative action nearly 20
33 years ago, a level that, at the time, was widely considered to be
34 inadequate to meet the needs of the state and its young people
35 because it did not achieve parity with the state’s ethnic
36 demographics; and

37 WHEREAS, The importance of diversity in educational settings
38 cannot be overstated. The Supreme Court of the United States
39 outlined the benefits that arise from diversity, as follows, “the
40 destruction of stereotypes, the promotion of cross-racial

1 understanding, the preparation of a student body for an increasingly
2 diverse workforce and society, and the cultivation of a set of leaders
3 with legitimacy in the eyes of the citizenry”; and

4 WHEREAS, Federal courts continue to reaffirm the value of
5 diversity in favor of race conscious admissions, as exemplified by
6 United States District Judge Allison D. Burroughs who stated,
7 “race conscious admissions programs that survive strict scrutiny
8 have an important place in society and help ensure that colleges
9 and universities can offer a diverse atmosphere that fosters learning,
10 improves scholarship, and encourages mutual respect and
11 understanding. Further, Judge Burroughs recognized that there are
12 no race-neutral alternatives that would allow a university to achieve
13 an adequately diverse student body while still perpetuating its
14 standards for academic and other forms of excellence; and

15 WHEREAS, It is the intent of the Legislature that California
16 remedy discrimination against, and underrepresentation of, certain
17 disadvantaged groups in a manner consistent with the United States
18 Constitution and allow gender, racial, and ethnic diversity to be
19 considered among the factors used to decide college admissions
20 and hiring and contracting by government institutions; and

21 WHEREAS, It is further the intent of the Legislature that
22 California transcend a legacy of unequal treatment of marginalized
23 groups and promote fairness and equal citizenship by affording
24 the members of marginalized groups a fair and full opportunity to
25 be integrated into state public institutions that advance upward
26 mobility, pay equity, and racial wealth gap reduction, now,
27 therefore, be it

28 *Resolved by the Assembly, the Senate concurring,* That the
29 Legislature of the State of California at its 2019–20 Regular
30 Session commencing on the third day of December 2018,
31 two-thirds of the membership of each house concurring, hereby
32 proposes to the people of the State of California, that the
33 Constitution of the State be amended as follows:

1 That Section 31 of Article I thereof is repealed.

2

3

4 **REVISIONS:**

5 **Heading—Lines 2 and 3.**

6

LEGISLATIVE COMMITTEE
MEETING OF 06/25/2020

o

AGENDA 5B - ATTACHMENT

BILL #	AUTHOR	SUBJECT	Location	Last Status - As of 6/15/2020	Notes	Position	PSPS Related	Priority (Low/Medium/High)
AB 126	Cooper	Air Quality Improvement Program: Clean Vehicle Rebate Project.	Senate - Transportation	7/10/2019-Failed Deadline pursuant to Rule 61(a)(10). (Last location was TRANS. on 6/24/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
AB 291	Chu	Local Emergency Preparedness and Hazard Mitigation Fund.	Senate - Rules	1/30/2020-Read third time. Passed. Ordered to the Senate. In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 345	Muratsuchi	Natural resources: environmental justice: oil and gas: regulation of operations.	Senate - Rules	1/28/2020 - In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 352	Garcia, Eduardo	Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2020.	Senate - Environmental Quality	8/14/2019 - From committee chair, with author's amendments: Amend, and re-refer to committee. Read second time, amended, and re-referred to Com. on EQ.	No action since last year. Likely, will not move forward.			MEDIUM
AB 409	Limón	Climate change: agriculture: Agricultural Climate Adaptation Tools Program: grants.	Senate - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/19/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
AB 464	C. Garcia	California Global Warming Solutions Act of 2006.	Senate - Rules	1/28/2020 - In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 839	Mullin	Climate adaptation strategy: strategic resiliency framework: Resiliency through Adaptation, Economic Vitality, and Equity Account.	Senate - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/12/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
AB 1002	Quirk-Silva	California Global Warming Solutions Act of 2006: Low-Carbon Fuel Standard regulations: Greenhouse Gas Reduction Fund.	Senate - Rules	1/27/2020 - From committee chair, with author's amendments: Amend, and re-refer to committee. Read second time, amended, and re-referred to Com. on RLS.				LOW
AB 1071	Limón	Climate change: agriculture: Agricultural Climate Adaptation Tools Program: grants.	Senate - Rules	1/28/2020 - In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 1112	Friedman	Shared mobility devices: local regulation.	Senate - Transportation	7/12/2019-Failed Deadline pursuant to Rule 61(a)(11). (Last location was TRANS. on 5/29/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
AB 1142	Friedman	Regional transportation plans: transportation network companies.	Senate - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/19/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
AB 1276	Bonta	Local redistricting.	Senate - Rules	1/23/2020-Read third time. Passed. Ordered to the Senate. In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 1350	Gonzalez	Free youth transit passes: eligibility for state funding.	Senate - Rules	1/28/2020 - In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 1406	O'Donnell	Alternative and Renewable Fuel and Vehicle Technology Program.	Senate - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/12/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
AB 1424	Berman	Electric Vehicle Charging Stations Open Access Act.	Senate - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/19/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
AB 1441	Levine	Oil and gas: development.	Senate - Rules	1/28/2020 - In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 1567	Aguiar-Curry	Organic waste: scoping plan.	Senate - Rules	1/28/2020 - In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 1714	Aguiar-Curry	Emissions limitations: wine fermentation.	Senate - Environmental Quality	5/18/2020-From committee chair, with author's amendments: Amend, and re-refer to committee. Read second time, amended, and re-referred to Com. on EQ.		Oppose		HIGH
AB 1917	Ting	Budget Act of 2020.	Assembly - Budget	1/17/2020 - Referred to Com. on BUDGET.				HIGH
AB 1991	Friedman	Transit and Intercity Rail Capital Program: passenger tramways.	Assembly - Transportation	1/17/2020 - In committee: Hearing postponed by committee.				LOW
AB 2168	McCarty	Planning and zoning: electric vehicle charging stations: permit application: approval.	Assembly - Local Government	5/8/2020 - Re-referred to Com. on L. GOV.				LOW
AB 2178	Levine	Emergency services.	Senate - Rules	6/9/2020-In Senate. Read first time. To Com. on RLS. for assignment.			PSPS Related	LOW
AB 2371	Friedman	Climate change: adaptation: Climate change: Strategic Growth Council: science advisory team: climate adaptation and hazard mitigation.	Senate - Rules	6/9/2020-In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 2421	Quirk	Land use: permitting: wireless communications. Land use: permitting: wireless communications: emergency standby generators.	Senate - Rules	6/11/2020-In Senate. Read first time. To Com. on RLS. for assignment.			PSPS Related	LOW
AB 2587	McCarty	Local planning: Capitol Corridor rail line: capital improvements: appropriation.	Assembly - Transportation	5/5/2020 - Re-referred to Com. on TRANS.				LOW
AB 2612	Maienschein	Greenhouse Gas Reduction Fund: recycling: appropriation.	Assembly - Natural Resources	3/2/2020 - Referred to Com. on NAT. RES.				LOW
AB 2621	Mullin	Climate resiliency. Strategic Growth Council: regional climate networks: climate adaptation action plans. Office of Planning and Research: regional climate networks: climate adaptation action plans.	Senate - Rules	6/11/2020-Read third time. Passed. Ordered to the Senate. (Ayes 63. Noes 12.) In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 2831	Flora	Greenhouse gas reduction: carbon sequestration: Carbon offset credits: whole orchard recycling: healthy soils.	Assembly - Natural Resources	5/5/2020 - Re-referred to Com. on NAT. RES.				LOW
AB 2882	Chu C. Garcia	Hazardous emissions and substances: schoolsites: private and charter schools.	Senate - Rules	6/11/2020-In Senate. Read first time. To Com. on RLS. for assignment.		Support Sponsor		HIGH
AB 2954	Rivas, Robert	California Global Warming Solutions Act of 2006: climate goal: natural and working lands.	Senate - Rules	6/9/2020-In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 3163	Salas	Biogas: Energy: biomethane: procurement.	Senate - Rules	6/9/2020-In Senate. Read first time. To Com. on RLS. for assignment.				LOW
AB 3256	Garcia, Eduardo	Climate risks: bond measure. Wildfire Prevention, Safe Drinking Water, Climate Resiliency, Drought Preparation, and Flood Protection Bond Act of 2020. Economic Recovery, Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2020.	Assembly - Rules	6/8/2020-Re-referred to Com. on RLS.				MEDIUM
ACA 5	Weber	Government preferences.	Senate - Labor, Public Employment, and Retirement	6/15/2020-Referred to Com. on L., P.E. & R.				MEDIUM
ACR 143	Quirk	Climate crisis.	Assembly - Natural Resources	3/16/2020 - In committee: Hearing postponed by committee.				LOW
SB 43	Allen	Carbon intensity and pricing: retail products.	Assembly - Revenue and Taxation	7/10/2019-Failed Deadline pursuant to Rule 61(a)(10). (Last location was REV. & TAX on 6/24/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 45	Allen	Wildfire Prevention, Safe Drinking Water, Drought Preparation, and Flood Protection Bond Act of 2020.	Assembly - Desk	1/30/2020-In Assembly. Read first time. Held at Desk.		Support		MEDIUM

BILL #	AUTHOR	SUBJECT	Location	Last Status - As of 6/15/2020	Notes	Position	PSPS Related	Priority (Low/Medium/High)
SB 59	Allen	California Transportation Commission: advisory committee: autonomous vehicle technology.	Assembly - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/14/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 69	Wiener	Ocean Resiliency Act of 2019.	Assembly - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/21/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 74	Mitchell	Budget Act of 2020.	Senate - Enrollment	Status: 6/15/2020-Assembly Rule 96 suspended. Withdrawn from committee. Ordered to third reading. Read third time. Passed. Ordered to the Senate. In Senate. Concurrence in Assembly amendments pending. Consent granted to take up without reference to file. (Ayes 29. Noes 11.) Assembly amendments concurred in. (Ayes 29. Noes 11.) Ordered to engrossing and enrolling. Enrolled and presented to the Governor at 5:30 p.m.				HIGH
SB 168	Wieckowski	Climate change: Chief Climate Resilience Officer.	Assembly - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/21/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 369	Hertzberg	Vehicle repair assistance program: safe parking program participants.	Assembly - Transportation	7/10/2019-Failed Deadline pursuant to Rule 61(a)(10). (Last location was TRANS. on 6/10/2019)(May be acted upon Jan 2020)				LOW
SB 378	Wiener	Electrical corporations: deenergization events: procedures: allocation of costs: reports.	Assembly - Desk	1/27/2020-Read third time. Passed. (Ayes 25. Noes 2.) Ordered to the Assembly. In Assembly. Read first time. Held at Desk.				LOW
SB 431	McGuire	Mobile telephony service base transceiver station towers: communications infrastructure: performance reliability standards.	Assembly - Communications and Conveyance	2/10/2020 - From committee with author's amendments. Read second time and amended. Re-referred to Com. on C. & C.			PSPS Related	LOW
SB 498	Hurtado	Trade Corridors Improvement Fund: grant program: short-line railroads.	Assembly - Transportation	7/10/2019-Failed Deadline pursuant to Rule 61(a)(10). (Last location was TRANS. on 6/6/2019) (May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 515	Caballero	Public Utilities Commission: high hazard zone fuel: report.	Assembly - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/21/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 535	Moorlach	Greenhouse gases: wildfires and forest fires: air emissions.	Assembly - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/14/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 613	Stem	State agency greenhouse gas emission reduction report cards.	Assembly - Appropriations	8/30/2019-Failed Deadline pursuant to Rule 61(a)(12). (Last location was APPR. SUSPENSE FILE on 8/14/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 629	McGuire	Air districts: hearing boards: notice requirements.	Assembly - Natural Resources	7/12/2019-Failed Deadline pursuant to Rule 61(a)(11). (Last location was N.T. RES. On 5/30/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 662	Archuleta	Green electrolytic hydrogen.	Assembly - Utilities and Energy	7/10/2019-Failed Deadline pursuant to Rule 61(a)(10). (Last location was U. & E. on 6/13/2019)(May be acted upon Jan 2020)	No action since last year. Likely, will not move forward.			LOW
SB 702	Hill	California Renewables Portfolio Standard Program: procurement.	Assembly - Desk	1/23/2020-Read third time. Passed. (Ayes 37. Noes 0.) Ordered to the Assembly. In Assembly. Read first time. Held at Desk.				LOW
SB 795	Beall	Economic development: housing: workforce development: climate change infrastructure.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.				LOW
SB 801	Glazer McGuire	Electrical corporations: wildfire mitigation plans: deenergization: public safety protocol.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.			PSPS Related	MEDIUM
SB 808	Mitchell	Budget Act of 2020.	Senate - Budget & Fiscal Review	6/10/2020-June 12 set for first hearing, canceled at the request of author. From committee with author's amendments. Read second time and amended. Re-referred to Com. on B. & F.R. (Amended 10/2020)				HIGH
SB 862	Dodd	Planned power outage: public safety.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.			PSPS Related	LOW
SB 895	Archuleta	Energy: zero-emission fuel, infrastructure, and transportation technologies.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.	Spot Bill			LOW
SB 964	Skinner	Chemicals: outdoor application: residential areas.	Senate - Rules	3/26/2020 - From committee with author's amendments. Read second time and amended. Re-referred to Com. on RLS.				LOW
SB 995	Atkins	Environmental quality: Jobs and Economic Improvement Through Environmental Leadership Act of 2011. Environmental quality: Jobs and Economic Improvement Through Environmental Leadership Act of 2011: housing projects.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.				LOW
SB 1020	Dahle	Income taxes: credits: generators.	Senate - Governance and Finance	2/27/2020 - Referred to Com. on GOV. & F.			PSPS Related	LOW
SB 1070	Leyva	Land use: general plans.	Senate - Rules	3/25/2020 - From committee with author's amendments. Read second time and amended. Re-referred to Com. on RLS.				LOW
SB 1099	Dodd	Emergency backup generators: critical facilities: exemption. Emergency backup generators: critical facilities: order for abatement: stipulations	Senate - Third Reading	6/9/2020-Read second time. Ordered to third reading.		Oppose	PSPS Related	HIGH
SB 1113	Gonzalez, Lena	State Air Resources Board: report.	Senate - Rules	2/27/2020 - Referred to Com. on RLS.	Spot Bill			LOW
SB 1164	Grove	Petroleum refineries: air monitoring systems.	Senate - Rules	3/5/2020 - Referred to Com. on RLS.	Spot Bill			LOW
SB 1185	Moorlach	Natural gas powered generators: operation during deenergization events. Emergency backup generators: emergency variance: operation during deenergization events.	Senate - Third Reading	6/9/2020-Read second time. Ordered to third reading.		Oppose	PSPS Related	HIGH
SB 1195	Gonzalez, Lena	Vehicular air pollution: State Air Resources Board: regulations.	Senate - Rules	3/5/2020 - Referred to Com. on RLS.	Spot Bill			LOW
SB 1207	Jackson	Skilled nursing facilities: backup power system.	Senate - Third Reading	6/3/2020-Read second time. Ordered to third reading.			PSPS Related	LOW
SB 1215	Stern	Electricity: microgrids: grant program. Electricity: microgrids.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.			PSPS Related	LOW
SB 1258	Stern	California Climate Technology and Infrastructure Financing Act.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.				HIGH
SB 1320	Stern	Climate change: California Climate Change Assessment.	Senate - Appropriations Suspense	6/11/2020-Set for hearing June 18.				LOW
SB 1330	Umberg	Sales and Use Tax Law: zero emissions vehicle exemption.	Senate - Rules	3/26/2020 - From committee with author's amendments. Read second time and amended. Re-referred to Com. on RLS.				LOW
SB 1332	Allen	Solid waste: recycling and composting infrastructure.	Senate - Rules	3/26/2020 - From committee with author's amendments. Read second time and amended. Re-referred to Com. on RLS.				LOW
SB 1415	Borgeas	Income taxes: credits: backup electricity generators.	Senate - Governance and Finance	3/12/2020 - Referred to Com. on GOV. & F.			PSPS Related	LOW

BILL #	AUTHOR	SUBJECT	Location	Last Status - As of 6/15/2020	Notes	Position	PSPS Related	Priority (Low/Medium/High)
AB-1839	Bonta	Climate change: California Green New Deal Economic, environmental, and social recovery; California COVID-19 Recovery Deal.	Assembly—Natural Resources	DEAD—5/29/2020	Will not move, per staff.			LOW
AB-1915	Chiu	Electrical corporations: deenergization events.	Assembly—Utilities and Energy	DEAD—5/29/2020			PSPS Related	LOW
AB-1920	Boerner-Horvath	Climate change: California Climate Adaptation Center and Regional Support Network.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-1922	Rivas-Luz	Pupil instruction: science requirements: climate change.	Assembly—Education	DEAD—5/29/2020				LOW
AB-1942	Gallagher	Forestry and fire protection: reduction of emissions of greenhouse gases.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-1972	Voepel	Vehicle air pollution.	Assembly—Transportation	DEAD—5/29/2020	Bill Pulled 4/14/2020	Propose-Oppose		HIGH
AB-1992	Friedman	Transportation: transportation infrastructure: climate change.	Assembly—Transportation	DEAD—5/29/2020	Intent Bill			LOW
AB-2031	Rivas-Luz	School Pavement to Parks Grant Program.	Assembly—Education	DEAD—5/29/2020				LOW
AB-2057	Chiu	San Francisco Bay area: public transportation.	Assembly—Transportation	DEAD—5/29/2020				LOW
AB-2089	Rivas-Luz	Resilient Economies and Community Health Pilot Program.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-2145	Ting	Transportation electrification: vehicle charging stations: Transportation electrification: electric vehicle charging ports.	Assembly—Utilities and Energy	DEAD—5/29/2020				MEDIUM
AB-2148	Quirk	Climate change: adaptation: regional climate adaptation planning groups: regional climate adaptation plans.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-2162	O'Donnell	School facilities: indoor air quality.	Assembly—Education	DEAD—5/29/2020	Bill Pulled 4/6/2020			MEDIUM
AB-2182	Rubio-Blanco	Emergency backup generators: water and wastewater facilities: exemption.	Assembly—Utilities and Energy	3/16/2020—In committee: Hearing postponed by committee.	ACWA Bill Bill Pulled—5/1/2020	Oppose	PSPS Related	HIGH
AB-2188	Calderon	Charge Ahead California Initiative: Air Quality Improvement Program: Clean Vehicle Rebate Project.	Assembly—Transportation	DEAD—5/29/2020				LOW
AB-2215	Chau	Service stations: definition: electric vehicle charging stations.	Assembly—Transportation	DEAD—5/29/2020				LOW
AB-2225	Grayson	Smog check: exemption: historic vehicles.	Assembly—Transportation	DEAD—5/29/2020	Bill Pulled 4/14/2020	Propose-Oppose		HIGH
AB-2241	Calderon	State Air Resources Board: report.	Assembly—Print	DEAD—6/5/2020	Spot Bill			LOW
AB-2255	Eggman	Long duration energy storage systems.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-2260	Fong	Vehicles: registration fraud.	Assembly—Transportation	DEAD—5/29/2020				MEDIUM
AB-2262	Berman	Regional transportation plans: sustainable communities strategies: zero emission vehicle readiness plan.	Assembly—Transportation	DEAD—5/29/2020				LOW
AB-2331	Muratsuchi	Greenhouse gases: aviation sector: reporting.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-2441	Rivas-Luz	Climate change: Safeguarding California Plan: Climate change: Safeguarding California Plan: Extreme Heat and Community Resilience Program.	Assembly—Natural Resources	DEAD—5/29/2020				MEDIUM
AB-2446	Bonta	Cement plants.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-2455	Medina	Natural gas and electric battery vehicles: weight limits.	Assembly—Transportation	DEAD—5/29/2020				LOW
AB-2475	Flora	Electrical corporations: electrical grid monitoring equipment pilot program.	Assembly—Utilities and Energy	DEAD—5/29/2020			PSPS Related	LOW
AB-2498	Chiu	Interscholastic athletics: California Interscholastic Federation: air quality advisory recommendations.	Assembly—Education	2/27/2020—Referred to Coms. on ED. and A, E, S, T., & L.M.	Bill Pulled 4/15/2020	Support		HIGH
AB-2539	Bigelow	Electrical corporations: deenergization events: elections.	Assembly—Utilities and Energy	DEAD—5/29/2020			PSPS Related	LOW
AB-2566	Garcia, C.	Consumption-based greenhouse gas inventory.	Assembly—Natural Resources	DEAD—5/29/2020				LOW
AB-2577	Chiu	Environmental protection: vulnerable population: identification.	Assembly—Natural Resources	DEAD—5/29/2020				MEDIUM
AB-2585	Chau	California-China Climate Institute.	Assembly—Higher Education	DEAD—5/29/2020				LOW
AB-2653	Kalra	Smart climate agriculture.	Assembly—Print	DEAD—6/5/2020				LOW
AB-2667	Boerner-Horvath	Air Quality Improvement Program: Clean Vehicle Rebate Project: electric bicycles.	Assembly—Print	DEAD—6/5/2020	Intent Bill			LOW
AB-2689	Kalra	Electrical and gas corporations: reporting.	Assembly—Utilities and Energy	DEAD—5/29/2020				LOW
AB-2698	Gray	High-Speed Rail Authority: trains powered by fossil fuel combustion engines.	Assembly—Transportation	DEAD—5/29/2020				LOW
AB-2737	Garcia, C.	Community emissions reduction programs.	Assembly—Natural Resources	DEAD—5/29/2020	Bill Pulled 5/2/2020			HIGH
AB-2766	Gray	Vehicles: retirement and replacement.	Assembly—Transportation	DEAD—5/29/2020				MEDIUM
AB-2772	Reyes	Alternative and Renewable Fuel and Vehicle Technology Program.	Assembly—Transportation	DEAD—5/29/2020	CalStart Bill			MEDIUM

BILL #	AUTHOR	SUBJECT	Location	Last Status - As of 6/15/2020	Notes	Position	PSPS Related	Priority (Low/Medium/High)	
AB-2789	Kamlager	State Energy Resources Conservation and Development Commission: distributed energy resources: study.	Assembly—Utilities and Energy	DEAD—5/29/2020			PSPS-Related	LOW	
AB-2792	Quirk	Mobile fueling on demand tank vehicles.	Assembly—Transportation Assembly—Natural Resources	DEAD—5/29/2020	Bill Pulled 5/4/2020	Oppose		HIGH	
AB-2824	Bonta	San Francisco-Palmdale Bay Bridge: public transit: greenhouse gases: Bay Bridge Fast Forward Program.	Assembly—Transportation	DEAD—5/29/2020				MEDIUM	
AB-2832	Garcia, C.	Greenhouse gases: carbon neutrality.	Assembly—Natural Resources	DEAD—5/29/2020				LOW	
AB-2860	O'Donnell	California Clean Truck, Bus, and Off-Road Vehicle and Equipment Technology Program.	Assembly—Transportation	DEAD—5/29/2020				MEDIUM	
AB-2866	Garcia, Eduardo	Vehicular air pollution: Clean Fleet Program.	Assembly—Transportation	DEAD—5/29/2020				MEDIUM	
AB-2940	Quirk	Energy: hydrogen.	Assembly—Utilities and Energy	DEAD—5/29/2020				LOW	
AB-3021	Ting	School facilities: energy resilient schools: grant program.	Assembly—Education	DEAD—5/29/2020				LOW	
AB-3027	O'Donnell	California Global Warming Solutions Act of 2006: Low Carbon Fuel Standard regulations.	Assembly—Natural Resources	DEAD—5/29/2020				LOW	
AB-3046	Mathis	The Energy, Environment, and Economy Council.	Assembly—Natural Resources	DEAD—5/29/2020				LOW	
AB-3100	Garcia, Eduardo	Self-generation incentive program. State Energy Resources Conservation and Development Commission: Blue Ribbon	Assembly—Natural Resources	DEAD—5/29/2020			PSPS-Related	LOW	
AB-3109	Ting	State Air Resources Board: report.	Assembly—Natural Resources	DEAD—5/29/2020	Building Decarbonization			MEDIUM	
AB-3111	Gipson	Carl Moyer Memorial Air Quality Standards Attainment Program.	Assembly—Transportation	DEAD—5/29/2020	Spot Bill CNGVC			MEDIUM	
AB-3128	Burke	Electricity: decarbonization events: fuel cells.	Assembly—Print	DEAD—6/5/2020	Intent Bill		PSPS-Related	LOW	
AB-3211	Bauer-Kahan Bonta	Toxic air contaminants.	Assembly—Natural Resources	DEAD—6/5/2020		Support Sponsor		HIGH	
AB-3217	Gloria	Greenhouse gases: crude oil emissions.	Assembly—Natural Resources	DEAD—5/29/2020	Bill Pulled 4/16/2020	Support		HIGH	
AB-3251	Bauer-Kahan	Electricity: resource adequacy requirements.	Assembly—Utilities and Energy	DEAD—5/29/2020				LOW	
SB-278	Beull	Metropolitan Transportation Commission.	Assembly—Desk	4/27/2020 Ordered to special committee calendar. Read third time. Passed. (Ayes 20, No 0.) Ordered to the Assembly. In Assembly. Read first time. Held at	FASTER Will not move, per staff.			MEDIUM	
SB-802	Glazer	Emergency backup generators: health facilities: permit operating condition exclusion.	Senate—Environmental Quality	DEAD—5/29/2020		Oppose Unless Amended	PSPS-Related	HIGH	
SB-858	Beull	Thermal powerplants: exemption: emergency backup and standby generators: data centers.	Senate—Energy, Utilities and Communications	DEAD—5/29/2020		Author Requested Support		MEDIUM	
SB-917	Wiener	California Consumer Energy and Conservation Financing Authority: eminent domain: Northern California Energy Utility District: Northern California Energy Utility Services.	Senate Governance & Finance	DEAD—5/29/2020				LOW	
SB-925	Glazer	Mobile telephony service base transceiver station towers: performance reliability standards.	Senate—Energy, Utilities and Communications	DEAD—5/29/2020			PSPS-Related	LOW	
SB-986	Allen	Coastal resources: new development: greenhouse gas emissions.	Senate—Natural Resources and Water	DEAD—5/29/2020				LOW	
SB-1122	Skinner	Green electrolytic hydrogen.	Senate—Energy, Utilities and Communications	DEAD—5/29/2020	Bill Pulled 4/14/2020	Author Requested Support		LOW	
SB-1183	Hertzberg	Electric vehicle charging master plan.	Senate—Energy, Utilities and Communications	DEAD—5/29/2020				MEDIUM	
SB-1314	Dodd	Community Energy Resilience Act of 2020.	Senate—Natural Resources and Water	DEAD—5/29/2020	CCA		PSPS-Related	LOW	
SB-1321	Bradford	Transportation electrification: electric vehicles: grid integration.	Senate—Energy, Utilities and Communications	DEAD—5/29/2020				LOW	
SB-1323	Skinner	Carbon sequestration: state goals: natural and working lands: registries of projects.	Senate—Environmental Quality	DEAD—5/29/2020				LOW	
SB-1363	Allen	Regional transportation plans: sustainable communities strategies: greenhouse gas emissions and vehicle miles traveled reduction targets.	Senate—Transportation	DEAD—5/29/2020				LOW	
Total Active Bills							71	Low: Medium: High:	58 5 8

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Report of the Ad Hoc Committee on Equity, Access, and Inclusion Committee Meeting
of July 1, 2020

RECOMMENDED ACTION

The Ad Hoc Committee on Equity, Access, and Inclusion (Committee) recommends Board of Directors (Board) approval of the following items:

- A) Report Back from Committee Chair Davina Hurt's Meeting with Bay Area Environmental Justice Leaders;
 - 1) None; receive and file.
- B) Consideration of Revised Ad Hoc Committee on Equity, Access, and Inclusion Charter;
 - 1) The Ad Hoc Committee will consider recommending the Board of Directors Approve the revised charter based on Committee comments at its March 25, 2020 meeting.
- C) Discussion of Key Deliverables of the Ad Hoc Committee on Equity, Access, and Inclusion;
 - 1) None; receive and file.
- D) California Air Resources Board's Environmental Justice Work; and
 - 1) None; receive and file.
- E) Update on Office of Diversity, Equity, & Inclusion | Internal Efforts to Advance Racial Equity.
 - 1) None; receive and file.

BACKGROUND

The Committee met on Wednesday, July 1, 2020, and received the following reports:

- A) Report Back from Committee Chair Davina Hurt's Meeting with Bay Area Environmental Justice Leaders;
- B) Consideration of Revised Ad Hoc Committee on Equity, Access, and Inclusion Charter;
- C) Discussion of Key Deliverables of the Ad Hoc Committee on Equity, Access, and Inclusion;
- D) California Air Resources Board's Environmental Justice Work; and
- E) Update on Office of Diversity, Equity, & Inclusion | Internal Efforts to Advance Racial Equity.

Chairperson Davina Hurt will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

- A) None;
- B) None;
- C) None;
- D) None; and
- E) None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha de Guzman
Reviewed by: Vanessa Johnson

- Attachment 12A: 07/01/2020 - Ad Hoc Committee on Equity, Access, and Inclusion Meeting
Agenda #3
- Attachment 12B: 07/01/2020 - Ad Hoc Committee on Equity, Access, and Inclusion Meeting
Agenda #4
- Attachment 12C: 07/01/2020 - Ad Hoc Committee on Equity, Access, and Inclusion Meeting
Agenda #5
- Attachment 12D: 07/01/2020 - Ad Hoc Committee on Equity, Access, and Inclusion Meeting
Agenda #6
- Attachment 12E: 07/01/2020 - Ad Hoc Committee on Equity, Access, and Inclusion Meeting
Agenda #7

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Davina Hurt and Members
of the Ad Hoc Committee on Equity, Access, and Inclusion

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 25, 2020

Re: Report Back from Committee Chair Davina Hurt's Meeting with Bay Area
Environmental Justice Leaders

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

In recognition of the critical role community voices will play in the development of the Ad Hoc Committee on Equity, Access, and Inclusion, Air District staff arranged a meeting between Committee Chair Hurt and Bay Area environmental justice leadership on May 26, 2020. In preparation, staff consulted with leadership from four organizations that currently work on executed contracts and/or grants from the Air District. Representatives from organizations and groups from Vallejo Bayview/Hunters Point, Richmond, and East and West Oakland provided comments on the Committee Charter and shaped an agenda for the meeting with Chair Hurt. In addition to providing a space for formal introductions, the meeting also served as a forum for community leaders to provide a fundamental environmental justice orientation and advise on future Committee work plan priorities.

DISCUSSION

Environmental justice leaders from all Assembly Bill 617 priority areas were invited to attend the discussion with Chair Hurt. Those present represented organizations and groups from Vallejo, Bayview/Hunters Point, Richmond, and East and West Oakland. The groups shared past and present air quality concerns and provided their opinions on future partnership with the Ad Hoc Committee. Discussion topics of note include, decades-long air quality related systemic wrongs and health disparities, the need for more robust enforcement efforts, and the development of methodologically sound air monitoring strategies. Community leaders expressed the need to coordinate comprehensive solutions to their concerns, incorporating the ideas of planning, permitting, public health, vulnerability, and exposure.

All in attendance recognized and acknowledged respect for the unique sophistication and experience of community leaders. To that end, Air District staff are committed to establishing equitable and inclusive strategies that ensure community voices are fully and clearly heard during formal Board and Committee meetings. To bring us closer to our goal of equity, community voices must be welcomed and valued and trusting relationships between the Air District and the communities we serve must continue to be fostered with intention.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Joshua Abraham and Kristen Law
Reviewed by: Elizabeth Yura

AD HOC COMMITTEE ON EQUITY,
ACCESS, AND INCLUSION
MEETING OF 07/01/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Davina Hurt and Members
of the Ad Hoc Committee on Equity, Access, and Inclusion

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 25, 2020

Re: Consideration of Revised Ad Hoc Committee on Equity, Access, and Inclusion Charter

RECOMMENDED ACTION

The Ad Hoc Committee will consider recommending the Board of Directors approve the revised charter based on Committee comments at its March 25, 2020 meeting.

DISCUSSION

The Ad Hoc Committee will discuss its revised charter statement in advising the Board of Directors, regarding the equitable and inclusive actions the Air District takes to create a healthy breathing environment for all people in the Bay Area, regardless of race, ethnicity, age, gender identity, national origin or sexual orientation.

Attached is the revised draft charter, outlining its oversight in ensuring the Air District applies an equity lens relative to internal and external operations, regarding programs, policies, practices, and procedures. Charter oversight subsequently will address disparities for traditionally marginalized populations.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Tim Williams
Reviewed by: Mary Ann Okpalauugo

Attachment 4A: Ad Hoc Committee on Equity, Access, and Inclusion Draft Charter

AGENDA: 4A - ATTACHMENT

Ad Hoc Committee on Equity, Access, and Inclusion

Draft Charter

The Ad Hoc Committee on Equity, Access, and Inclusion will advise the Board of Directors regarding equitable and inclusive actions the Air District takes to create a healthy breathing environment for all people in the Bay Area, regardless of race, ethnicity, age, gender identity, national origin or sexual orientation. The Ad Hoc Committee on Equity, Access, and Inclusion will oversee staff efforts in developing policies for both internal and external operations, which impact the Bay Area.

Internal operations include applying an equity lens to programs, policies, practices, and procedures related to staffing, recruitment, promotions, inclusive practices in the workplace, contracting for capital projects and services, and continuous racial equity training. External operations include addressing disparities by applying an equity lens to Air District programs, policies, practices, and procedures. The Committee will prioritize traditionally marginalized and disinvested communities for investment opportunities to ensure communities highly impacted by air pollution receive program and policy prioritization.

AD HOC COMMITTEE ON EQUITY,
ACCESS, AND INCLUSION
MEETING OF 07/01/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Davina Hurt and Members
of the Ad Hoc Committee on Equity, Access, and Inclusion

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 25, 2020

Re: Discussion of Key Deliverables of the Ad Hoc Committee on Equity, Access, and
Inclusion

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

At the March 25, 2020 meeting, the Ad Hoc Committee considered a staff proposal on key equity, access, and inclusion deliverables relative to internal and external programs. The Ad Hoc Committee received many comments from the community on these deliverables at this meeting, and in subsequent conversations when Ad Hoc Committee Chair Hurt met with Bay Area environmental justice leadership. The comments received focused on a variety of themes, including, but not limited to planning permits, exposure, proximity, land use, enforcement, public health, disparities, impact, and vulnerability.

Staff is proposing to use these themes to build a workplan at the direction of the Ad Hoc Committee which would be recommended for adoption by the Board of Directors. The workplan would define key equity, access, and inclusion deliverables for the Air District moving forward. In order to prepare the workplan, staff has proposed a few key deliverables for the Ad Hoc Committee and the public to consider:

- Form a Community Advisory Committee: Staff would like to work with community leaders to create a Community Advisory Committee (or similar type community body) to advise the Ad Hoc Committee on policy or program recommendations to the Board of Directors on issues that impact communities.
- Design a Community Benefits Program: Develop a Community Benefits Program, which would redirect penalty funds to programs within affected communities.
- Change Permitting Practices: Propose changes to the Air District's permitting program to be more health protective in communities inequitably burdened by air pollution.

- Review the Advisory Council Recruitment Process: Review the process used to fill vacant positions on the Air District’s Advisory Council.

Staff anticipates that the Ad Hoc Committee and the public may have other items to consider in the workplan and will discuss additional deliverable options and the timeline for workplan development as part of this agenda item.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Elizabeth Yura
Reviewed by: Greg Nudd

AD HOC COMMITTEE ON EQUITY,
ACCESS, AND INCLUSION
MEETING OF 07/01/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Davina Hurt and Members
of the Ad Hoc Committee on Equity, Access, and Inclusion

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 25, 2020

Re: California Air Resources Board's Environmental Justice Work

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

Veronica Eady, Assistant Executive Officer of the California Air Resources Board (CARB), will provide a presentation on the State Board's environmental justice work.

Ms. Eady serves as the primary internal and external contact for CARB on environmental justice matters and concerns. She is responsible for providing policy consultation and recommendations to CARB staff and has been instrumental in the development and implementation of all major CARB programs, ensuring that environmental justice and tribal concerns are considered in the agency's work.

Ms. Eady will join the Air District on August 3, 2020, as the new Deputy Executive Officer for Policy and Equity.

BUDGET CONSIDERATION/ FINANCIAL IMPACT

None

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Elizabeth Yura
Reviewed by: Greg Nudd

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Davina Hurt and Members
of the Ad Hoc Committee on Equity, Access, and Inclusion

From: Jack P. Broadbent
Executive Officer/APCO

Date: June 25, 2020

Re: Update on Office of Diversity, Equity & Inclusion | Internal Efforts to Advance Racial
Equity

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

The Diversity, Equity & Inclusion Office works with staff to strengthen internal programs, processes, and practices in support of diversity, equity, and inclusion initiatives and accomplishing agency wide goals and objectives to further the Air District's mission.

The Office of Diversity, Equity & Inclusion will provide the Ad Hoc Committee with updates on racial equity efforts currently underway, including Board of Directors and Ad Hoc Committee on Equity, Access, and Inclusion planning relative to equity presentations and agenda items, Employee Engagement Program planning, increased presence in Assembly Bill 617 community efforts, and work with the Community Engagement team to develop an internal and external training outline, cultural awareness activities and communication messaging.

Additionally, the Office of Diversity, Equity & Inclusion will share a five-year staff demographic trend analysis report based upon gender and race/ethnicity.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Tim Williams
Reviewed by: Mary Ann Okpalaugo

AD HOC COMMITTEE ON EQUITY,
ACCESS, AND INCLUSION
MEETING OF 07/01/2020

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Report of the Advisory Council Meeting of May 12, 2020

RECOMMENDED ACTION

The Advisory Council received only informational items and have no recommendations of approval by the Board of Directors (Board).

BACKGROUND

The Committee met on Tuesday, May 12, 2020, and received the following reports:

- A) Particulate Matter (PM) Symposium Overview;
- B) Community Particulate Matter (PM) Discussion Overview; and
- C) Update on Air District Particulate Matter (PM) Potential Policy Strategies.

Chairperson Stan Hayes will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

- A) None;
- B) None; and
- C) None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha de Guzman
Reviewed by: Vanessa Johnson

Attachment 13A: 05/12/2020 – Advisory Council Meeting Agenda #3
Attachment 13B: 05/12/2020 – Advisory Council Meeting Agenda #4
Attachment 13C: 05/12/2020 – Advisory Council Meeting Agenda #5

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Stan Hayes and Members
of the Advisory Council

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 6, 2020

Re: Particulate Matter (PM) Symposium Overview

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

Increasing evidence shows health impacts from particulate matter (PM) can occur well below the current national ambient air quality standards. Therefore, it is important that we reassess the health effects of PM in our communities.

Last year, the Air District's Advisory Council began convening a conference series on PM. This series will facilitate discussion among nationally recognized scientists, stakeholders, and the Air District, identifying the most effective measures to further protect public health. The symposia will shine a spotlight on this public health challenge and share information and tools to inform future policy decisions.

The first symposium took place on October 28, 2019, from 9:00 a.m. to 4:30 p.m., at the Bay Area Metro Center, 375 Beale Street, San Francisco, California. Topics for discussion included PM health effects and PM exposure and risk.

At the December 9, 2019, meeting of the Advisory Council, Councilmembers discussed the October 28, 2019, Particulate Matter (PM) Symposium Summary. Based on feedback from Councilmembers, staff made updates to the summary report and posted it to the web for community input. Comments received from the community have been incorporated. In addition, attached is a summary of the December 9, 2019, meeting for the Council's review.

On February 27, 2020, the Air District met with community members at the Bobby Bowens Center in Richmond, California to discuss PM impacts, monitoring, and regulatory efforts.

On March 24, 2020, at the second PM symposium, Councilmembers were to receive presentations from community members and input on PM control next steps. Due to the COVID-19 global pandemic, the second symposium has been postponed.

Air District staff are continuing to coordinate with community members and Councilmembers to receive input on PM control strategies and determine next steps in the symposium series.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Sonam Shah-Paul
Reviewed by: Jeff McKay

- Attachment 3A: October 28, 2019 Advisory Council PM Symposium Summary: Health Effects and Exposures and Risk
- Attachment 3B: Public Comments – October 28, 2019 Advisory Council PM Symposium Summary: Health Effects and Exposures and Risk
- Attachment 3C: December 9, 2019 Advisory Council Meeting Summary: BAAQMD Update on Current and Emerging Efforts on Particulate Matter

ADVISORY COUNCIL
MEETING OF 05/12/2020



Particulate Matter: Spotlight on Health Protection

Symposium Summary: Health Effects and Exposures and Risk

ADVISORY COUNCIL
MEETING OF 05/12/2020

October 28, 2019



BAY AREA AIR QUALITY
MANAGEMENT DISTRICT

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Executive Summary

On October 28, 2019, the Bay Area Air Quality Management District (Air District) convened a symposium, at the request of its Advisory Council, to obtain input from leading experts on the best available science concerning impacts of particulate matter (PM). The morning panel focused on PM health effects; the afternoon panel focused on PM exposure and risk. After hearing from national and state air quality experts on the panels and from community members during public comment periods, the Advisory Council drafted the following Sense of the Advisory Council statement:

The current PM standards are not adequately health protective. Further reductions in particulate matter will realize additional health benefits. We ask the Air District staff to bring forward with urgency options within the legal authority of the Air District that would further limit PM exposure, especially in high-risk communities.

This consensus was reached upon consideration of information presented by the panelists and public commenters demonstrating: adverse health effects of PM, including mortality, at concentrations below the current standard; disproportionate burden of PM exposure and risk on disadvantaged communities, including those within the Air District; and emerging evidence of the health impact of ultrafine particles (UFP) and wildfires, both of which are understudied.

PM Health Effects

Draft PM ISA. Jason Sacks, Project Lead on the Particulate Matter Integrated Science Assessment (PM ISA) and Senior Epidemiologist at the Environmental Protection Agency's (EPA) National Center for Environmental Assessment, reviewed the structure and findings of the Draft PM ISA (<https://www.epa.gov/isa/integrated-science-assessment-isa-particulate-matter>). His presentation demonstrated that PM causes more health problems than previously known, at lower concentrations than previously known, and disproportionately affects vulnerable populations. In particular, the Draft PM ISA found new causal or likely-to-be causal associations between nervous system effects and long-term exposure to PM_{2.5} and, independently, to the portion of PM_{2.5} considered to be ultrafine particles (UFP), and between cancer and long-term exposure to PM_{2.5}. Children and non-white populations are at increased risk of adverse health effects of PM, and there is no evidence of a concentration threshold below which effects are not observed.

Mechanisms of PM impact. Advisory Council Vice Chair Michael Kleinman, Professor of Environmental Toxicology at UC Irvine and Co-Director of the Air Pollution Health Effects Laboratory, focused on the formation, composition, and mechanistic health effects of PM and new insights from his research concerning the toxicity of PM. He discussed how the connection between PM and health effects can be traced mechanistically, with oxidative stress from biological reactions to PM leading to inflammation, cell death, and cardiovascular events. He

also discussed how the toxicity of PM may be attributable to its coating rather than its core, although metals in the core can also produce health effects.

PM burdens and wildfire impacts. Dr. John Balmes, Professor of Medicine at UC San Francisco, Professor of Environmental Health Sciences at UC Berkeley, and Director of the Northern California Center for Occupational and Environmental Health, covered numerous topics associated with particulate matter including sources, effects, challenges with UFP, disproportionate burdens of exposure, and wildfire impacts. His presentation demonstrated that PM exposure leads to a wide range of health problems and disproportionately affects low-income communities and people of color, who suffer cumulative impacts from multiple exposures and disadvantages. In California, exposure to wildfire smoke is associated with increases in health care utilization for both respiratory and cardiovascular problems.

Independent PM Review Panel. Christopher Frey, Chair of the Independent Particulate Matter Review Panel and Glenn E. Futrell Distinguished Professor of Environmental Engineering at North Carolina State University, explained how recent changes to the review process for the federal National Ambient Air Quality Standards (NAAQS) led to the formation of the Independent Particulate Matter Review Panel. He summarized the conclusions of that panel:

- The scientific evidence for PM_{2.5} health effects is robust.
- The current PM_{2.5} standards are not adequately protective of public health.
- The annual standard should be lowered to 10 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) to 8 $\mu\text{g}/\text{m}^3$ (versus the current 12 $\mu\text{g}/\text{m}^3$ standard).
- The 24-hour standard should be lowered to 30 $\mu\text{g}/\text{m}^3$ to 25 $\mu\text{g}/\text{m}^3$ (versus current 35 $\mu\text{g}/\text{m}^3$ standard).
- These changes would save thousands of lives.
- The PM₁₀ standard should be adjusted downward consistent with these changes.
- There appears to be no threshold; lower levels would produce still greater benefits.
- For African Americans, the relative risk of health impacts from PM is three times higher than for the U.S. as a whole.

PM Exposures and Risks

OEHHA research. Lauren Zeise, Director of the California Office of Environmental Health Hazard Assessment (OEHHA) and Leading Developer of CalEnviroScreen, described some of OEHHA's current research efforts to understand the relationships between specific PM sources and community health outcomes. After explaining that there is great variability in the relationship between PM concentration and health risk, she discussed how OEHHA is conducting biomonitoring studies to track whether biomarkers indicate reductions in risk following reduced air pollution concentrations. These data, along with indoor air samples, questionnaires, activity diaries, and information from GPS trackers, will be combined with source pollution mapping data to determine how exposures are occurring. Dr. Zeise also demonstrated that wildfires are causing PM standards to be exceeded for both 24-hour and annual averages. OEHHA is presently investigating relationships between the 2017 Northern California Wildfires and

numerous health outcomes in the area including respiratory, cardiovascular, and neurological problems.

Silver buckshot, not silver bullet. Julian Marshall, Kiely Endowed Professor of Civil & Environmental Engineering and Adjunct Professor of Global Health at the University of Washington, described an approach to reducing health risks from PM involving combined analysis of sources of emissions, concentrations at geographical locations, levels of exposure to different sources of emissions, and racial and income disparities affecting environmental justice. Because PM comes from many sources, he concluded that reducing PM exposure requires many strategies, describing this approach as “silver buckshot, not a silver bullet.” With respect to health risks from PM, he demonstrated that income matters, and race matters, but race matters more than income. To get the most “bang for the buck” on health impacts, he argued that interventions should focus on areas where high impact from PM meets high inequity in terms of environmental justice.

Draft PM Policy Assessment. Scott Jenkins, Project Lead on the EPA’s review of National Ambient Air Quality Standards for PM and Senior Environmental Health Scientist in EPA’s Office of Air Quality Planning and Standards, presented an overview of the approach and conclusions of the EPA’s Draft PM Policy Assessment completed in response to the Draft PM ISA. The PM Policy Assessment featured a risk assessment indicating that thousands of lives per year in the U.S. could be saved if annual average PM_{2.5} concentrations are reduced. The assessment included an argument for revising the annual PM_{2.5} standard downward based on the science, as well as a discussion of how retaining the current standard could be justified by placing very little weight on the epidemiological evidence and risk assessment and greater weight on the uncertainties and limitations of the data.

West Oakland Community Action Plan. Phil Martien, Director of Assessment, Inventory, & Modeling for the Air District, described the analysis conducted for the recently completed West Oakland Community Action Plan, the first in a series of community emissions reduction programs that the Air District is developing in response to California’s Assembly Bill 617 legislation (AB 617). Per the community’s requests, the study took a hyperlocal approach, modeling block-by-block exposures. Disparate exposure levels were seen within West Oakland: the cleanest blocks are experiencing on average 3 µg/m³ lower PM concentrations than the most polluted blocks. Sources of PM also differed, with some areas experiencing PM_{2.5} emissions primarily from street traffic and others experiencing the greatest proportion of PM_{2.5} emissions from highways or permitted sources. The West Oakland Community Action Plan demonstrates how hyperlocal modeling can be accomplished, but also highlights the need for other agencies to act, such as California Air Resources Board (CARB), the City of Oakland, and the Port of Oakland, in order to reach community emissions reduction targets.

Public comment

Public comment was taken during two designated periods during the event. The general sentiment expressed by many commenters was, “We need action, not more discussion.”

Several people spoke about their personal experiences with toxic emissions in their neighborhoods. The disproportionate impact of air pollution on disadvantaged communities was a central point of focus.

Discussion and Deliberation

The discussion between the Advisory Council and the morning panel focused on cost considerations and the appropriateness of a “no safe level” stance, and broached the topic of recommending Air District priorities, which led to further discussion regarding the monitoring of ultrafine particles. The discussion between the Advisory Council and the afternoon panel was brief and comprised of one question concerning margin of safety considerations in the Draft Policy Assessment (which Dr. Jenkins clarified was the exclusive domain of the EPA Administrator).

The Advisory Council’s deliberation followed, resulting in the Sense of the Advisory Council statement presented above. Advisory Council members also expressed interest in further exploring the potential for:

- Treating PM as a toxic;
- Monitoring ultrafine particles;
- Encouraging the State of California to adopt stricter PM standards;
- Ensuring local permits are consistent with the PM standard supported by the science;
- Disaggregating solutions with climate co-benefits, solutions unrelated to climate strategies, and emergencies;
- Identifying strategies to maximize impact or “bang for the buck”; and
- Creating an Air District Implementation Plan.

Next Steps

The Advisory Council will reconvene on December 9, 2019. During that meeting, in response to the Advisory Council’s requests, the Air District will present on its current activities to reduce PM exposures, including monitoring of ultrafine particles. It will also discuss additional “options within the legal authority of the Air District that would limit PM exposure, especially in high-risk communities,” in accordance with the Sense of the Advisory Council, in order to inform the Advisory Council’s advice to the Air District’s Board of Directors. The Advisory Council is expected to receive and comment on this symposium summary document during the December 9 meeting.

Planning continues for a second PM symposium focused on community and other stakeholder input and engagement; the event will take place in Spring 2020.

Background

On October 28, 2019, the Bay Area Air Quality Management District (Air District) convened a symposium, at the request of its Advisory Council (Council), in order to obtain input from leading experts on the best available science concerning health effects of particulate matter (PM). Serving as an official meeting of the Advisory Council, which advises and consults with the Air District's Board of Directors and Executive Officer on technical and policy matters, the symposium sought to discuss:

PM Health Effects

- what health effects are observed from PM exposure, including exceptionally high acute PM exposures (e.g., wildfire smoke);
- what biological systems are affected and by what mechanisms;
- what population groups are most at risk; and
- what uncertainties are most relevant.

PM Exposure and Risk

- what the emission sources are that contribute to PM;
- what exposures to airborne PM occur and to whom;
- what health risks are posed by those PM exposures, and
- what subset of sources contribute most to PM risk, particularly in the most highly impacted communities.

The symposium followed several relevant policy developments at the state and federal levels. In California, Assembly Bill 617 passed in 2017 directing the California Air Resources Board and all local air districts to protect communities disproportionately impacted by air pollution. Implementation in the Bay Area Air Quality Management District to date includes the development of a community-led plan for air quality improvement in West Oakland (adopted by the Air District's Board of Directors in October 2019) and an air quality monitoring program for the Richmond area (underway).

At the federal level, staff of the Environmental Protection Agency (EPA) released a Draft Integrated Science Assessment (ISA) for Particulate Matter (PM) in October 2018, followed by a Draft PM Policy Assessment regarding the standard-setting implications of the PM ISA in September 2019. These drafts were submitted for review to the Clean Air Scientific Advisory Committee (CASAC), which provides advice to the EPA Administrator on the setting of national ambient air quality standards. Additionally, a separate, independent response to both EPA draft documents was released in October 2019 by the Independent Particulate Matter Review Panel, whose members served previously on the CASAC PM Review Panel until their dismissal in October 2018 by EPA Administrator Andrew Wheeler.

The timing of the symposium also coincided with the outbreak of the Kincade Fire in Sonoma County and associated evacuations. Additionally, widespread power outages within the Air

District's jurisdiction were intentionally executed by Pacific Gas & Electric (PG&E) as wildfire prevention measures given the dry conditions and high winds. This crisis formed a backdrop to the proceedings.

Particulate matter experts presenting at the event included the lead authors of the EPA PM ISA (Jason Sacks), the EPA PM Policy Assessment (Dr. Scott Jenkins), the Independent Review Panel document (Professor Christopher Frey), and the West Oakland Community Action Plan (Dr. Phil Martien). They were joined by Independent Particulate Matter Review Panel Members Professor Michael Kleinman and Dr. John Balmes, Director of the California Office of Environment Health Hazard Assessment Dr. Lauren Zeise, and University of Washington Professor Julian Marshall. These speakers were organized into a morning panel focused on PM health effects and an afternoon panel focused on PM exposure and risks.

The event, which was open to the public, included two public comment periods. The midday lunch break featured a keynote address by former EPA Administrator Gina McCarthy, who also answered questions from community attendees.

The morning and afternoon panels were each followed by joint discussions between the Advisory Council members and panelists. The event concluded with a brief Advisory Council deliberation.

The event was shared live via webcast, the video archive of which can be viewed at http://baha.granicus.com/MediaPlayer.php?clip_id=6194.

ADVISORY COUNCIL
MEETING OF 05/12/2020

Morning Panel: PM Health Effects

Current State of Particulate Matter Science: Particulate Matter Integrated Science Assessment (Working Draft Conclusions)

Jason Sacks

Project Lead, Particulate Matter Integrated Science Assessment (PM ISA)
Senior Epidemiologist, National Center for Environmental Assessment, EPA

<i>Main takeaway</i>	PM causes more health problems than previously known, at lower concentrations than previously known, and disproportionately affects vulnerable populations.
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Presentation Summary

Mr. Sacks reviewed the structure and findings of the initial draft of the EPA's recent Particulate Matter Integrated Science Assessment (PM ISA), which aims to provide an updated review of the science in order to assist federal rulemaking. The Draft PM ISA addresses the question:

"Is there an independent effect of PM on health and welfare at relevant ambient concentrations?"

The PM ISA drafters reviewed the body of new research since 2009 including epidemiological studies, animal toxicological studies, and controlled human exposure studies at PM levels analogous to ambient concentrations in U.S. communities.

The Draft PM ISA can be found at <https://www.epa.gov/isa/integrated-science-assessment-isa-particulate-matter>.

Health effects. The Draft PM ISA found new causal or likely-to-be causal associations between:

- Nervous system effects and long-term exposure to PM_{2.5} and, independently, to the portion of PM_{2.5} considered to be ultrafine particles (UFP)
- Cancer and long-term exposure to PM_{2.5}

The science also confirmed and strengthened the evidence of previously known causal or likely-to-be-causal associations between respiratory, cardiovascular, and mortality effects of both short- and long-term exposure to PM_{2.5}. Additional PM exposure associations with metabolic and reproductive effects suggested causality but did not meet the strict criteria for "causal" or "likely-to-be-causal," often due to a limited quantity of data.

At-risk populations. Children and non-white populations are at increased risk of adverse health effects of PM. Further evidence regarded as “suggestive” points to increased health risk for people with low socioeconomic status, overweight and obese populations, people with pre-existing cardiovascular and respiratory disease, and people with certain genetic variants.

Chemical components of PM. The evidence does not indicate that any one specific chemical component of PM is a disproportionate concern over others.

Advisory Council Q&A with Panelist

No threshold. Council Member Rudolph inquired whether any evidence supported a threshold concentration value below which health effects from PM_{2.5} could not be observed. The panelist responded that there does not appear to be any such threshold.

Changes to health effect determinations. Chair Hayes requested further clarification on the new findings from the ISA since 2009, which are outlined above and in Slide 15 of the presentations.

Relevance of animal studies concerning UFP. Council Member Solomon asked if there was any reason to question whether results seen in animal studies concerning UFP would be consistent with human health effects. The panelist replied that the inconsistency was in the size of the particles considered to be UFP. There has not been a consistent metric or definition for UFP, which has limited the ability to draw conclusions.

Publication bias. Council Member Borenstein inquired whether studies with null results were being published; if not, there may be a concern that the presentation represented only the fraction of research that observed positive associations with health effects. The panelist clarified that this concern drove the decision to focus on multi-city studies in order to ensure that null results would be incorporated.

Wildfires and sub-daily exposures. Given the Kincade Fire that was burning at the time of the event, Chair Hayes inquired about the influence of sub-daily exposures to high levels of PM. The panelist responded that there are some controlled human exposure studies that would be equivalent to a person walking along a busy road, during which some changes in cardiac and lung function have been observed, but sub-daily studies are scarce and he was not aware of research that would be directly relevant to wildfire exposures.

Particulate Matter: A Complex Mixture that Affects Health

Michael Kleinman

Professor of Environmental Toxicology, University of California, Irvine
Co-Director, Air Pollution Health Effects Laboratory

Professor Kleinman is also Vice Chair of the Air District's Advisory Council.

<i>Main takeaways</i>	PM can be mechanistically and causally linked to cardiovascular health effects. The toxicity of PM may be more attributable to its coating than its core, although metals in the core can also produce health effects.
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Presentation Summary

Professor Kleinman's presentation focused on the formation, composition, and mechanistic health effects of PM and new insights from his research concerning the toxicity of PM.

Basic PM process. A key source of PM is the combustion of fossil fuels. After these fuels break down during combustion, they cool, become radicalized, and agglomerate. Additional chemicals adhere to these particles and can form highly toxic compounds that may include contaminants such as chlorine, bromine, and metals. When these particles are inhaled and enter the respiratory tract, they can react with proteins and fluids in the lungs and release highly reactive free radicals, causing chemical imbalances throughout the body. If these free radicals overwhelm the body's antioxidant self-protection capabilities, the process can result in inflammation, cell death, and organ failure. Because oxidative stress can oxidize lipids in the blood, it can also lead to the development of atherosclerotic plaque and coagulation factors that can contribute to cardiovascular events such as stroke and heart attack.

"The icing, not the cake." Professor Kleinman's laboratory experimented with removing the organic coating from ambient air particles to which animals were exposed to determine whether, in the words of Chair Hayes, the problem was "the icing or the cake." They found that stripping the particles of their organic coating appeared to mitigate their toxicity.

Additional key points:

- Data limitations concerning chemical components. PM_{2.5} total mass is regarded as a more relevant concern than specific components within it, but this may be due to the much smaller database available for chemical components than for PM_{2.5} as a category.
- Measurement challenges. Ultrafine particles are difficult to measure and monitor because they have almost no mass.
- Risks for California. Sunlight, which is plentiful in California, is involved in the formation of pollutants. In addition to PM, health is also affected by air pollutants such as ozone, which is a strong oxidant. The combined effects of PM and ozone, which can be

experienced in the same day, may cause high levels of oxidative stress. Additionally, Professor Kleinman's research indicates that particles formed on warmer days result in worse health effects than those formed on cooler days, which portends additional problems in an era of climate change.

Advisory Council Q&A with Panelist

Incomplete combustion and control technology. Council Member Long inquired whether UFP resulted from incomplete combustion and whether newer technologies were effective in controlling their formation. The panelist responded that to his knowledge all combustion resulted in the formation of ultrafine particles (along with other particles). He noted that although modern diesel engine afterburner controls denuded particles in a manner similar to his animal toxicology experiments, they also produced high amounts of UFP.

Greenhouse gas impacts. Council Member Rudolph asked whether the process of stripping components from PM would change the release of carbon dioxide from combustion, emphasizing that "climate change is the greatest existential threat to human health right now." She questioned whether targeting the toxicity of the results of combustion should be a goal rather than trying to reduce combustion itself in order to reduce greenhouse gas emissions. The panelist shared his view that in the short-term "we can improve public health by mitigating what we're making right now," while in the long-term pursuing strategies to reduce reliance on fossil fuels.

ADVISORY COUNCIL
MEETING OF 05/12/2020

Particulate Matter Health Effects: What Do We Know and What Do We Still Need to Know?

John Balmes, M.D.

Professor of Medicine, UC San Francisco

Professor of Environmental Health Sciences, UC Berkeley

Director, Northern California Center for Occupational and Environmental Health

<i>Main takeaways</i>	PM exposure leads to a wide range of health problems and disproportionately affects low-income communities and people of color, who suffer cumulative impacts from multiple exposures and disadvantages. In California, exposure to wildfire smoke is associated with increases in health care utilization for both respiratory and cardiovascular problems.
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Presentation Summary

Dr. Balmes covered numerous topics associated with particulate matter (PM) including sources, effects, challenges with UFP, disproportionate burdens of exposure, and wildfire impacts.

Sources of PM. PM derives not only from combustion particles, but also from crustal and biological sources; for example, road dust is a significant source of PM. Dust particles may carry biological components that can cause health effects.

Health effects. In addition to re-emphasizing the health effects covered in Mr. Sacks' and Professor Kleinman's presentations, Dr. Balmes further noted:

- the smaller the particle, the farther it travels into the body, with some PM particles small enough to enter the bloodstream and even cross the blood-brain barrier;
- PM_{2.5} is associated with increased risk of metabolic effects, including diabetes;
- fetal PM_{2.5} exposures can result in low birth weight, pre-term birth, and changes in gene expression; and
- brain inflammation from PM can affect both ends of the life spectrum - neurodevelopment and neurodegeneration.

Challenges with UFP. As mentioned by previous presenters, because UFP is not regulated independently from other PM_{2.5}, there is limited monitoring, which presents challenges for epidemiological research, although toxicological studies suggest UFP is a high-risk hazard. Further, innovations designed to reduce climate change impacts, such as gasoline direct injection, can result in higher UFP emissions.

Disproportionate burdens and cumulative impacts. People of color and people with low socioeconomic status are more likely to be exposed to PM, and the risk from these exposures is compounded by the lack of health-promoting resources in these communities such as health

care, fresh produce, and green spaces. Dr. Balmes shared the example of Richmond, CA, which is within the Air District's jurisdiction. People living in the Liberty/Atchison Villages in Richmond are next to the railyard, near the freeway, next to the General Chemical Corporation (which recently had a serious accident), and downwind from the Chevron Refinery. Stating, "This cumulative risk concept is something that we need to be including in our thinking about air quality management," Dr. Balmes also noted that the Air District is a leader in this regard.

Wildfires. While acknowledging that "we need to know more than we currently do," Dr. Balmes asserted that there is a well-known association between wildfires and increased health care utilization for people with respiratory conditions such as asthma and chronic obstructive pulmonary disease. Additionally, a recent California study associates wildfire smoke with cardiovascular events including heart attack, stroke, and heart failure.

Advisory Council Q&A with Panelist

Wildfire contribution to cumulative impact. Council Member Rudolph asked whether wildfires should be understood as an additional layer of cumulative impact. The panelist responded that although he hadn't considered that framing, it was accurate, as people with lower socioeconomic status are those most likely to be without the means to relocate during wildfires. Rural agricultural workers are one example of a community that may be working outdoors despite poor air quality from wildfires. Council Member Rudolph asked whether it was accurate to say, "It's even more important to reduce our baseline exposures because we know these acute exposures are going to be happening more frequently" due to climate change, or if the two issues of baseline and acute exposures should not be viewed as interrelated. The panelist asserted that Council Member Rudolph's statement was accurate.

Bay Area studies? Referring to slide 76, which mapped Los Angeles county data comparing the distribution of non-white people and people living in poverty alongside the distribution of cumulative air quality hazard, Council Member Solomon asked whether the same analysis could be performed for the Bay Area. The panelist replied that although he was not aware of such an analysis having been performed, it should be possible. He indicated that he would speak with an expert he believed to be capable of executing the task.

Recent Developments in the Scientific Review of the National Ambient Air Quality Standards for Particulate Matter

Christopher Frey

Chair, Independent Particulate Matter Review Panel

Glenn E. Futrell Distinguished Professor of Environmental Engineering, North Carolina State University

<i>Main takeaways</i>	The federal administration truncated the National Ambient Air Quality Standard science review process and purged the Clean Air Scientific Advisory Committee (CASAC) and the supporting CASAC PM Review Panel of critical scientific expertise. The scientists who were dismissed from the CASAC PM Review Panel continued their review work independently and found that the current PM standards are insufficient to protect public health
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Presentation Summary

Professor Frey explained how recent changes to the review process for the federal National Ambient Air Quality Standards led to the formation of the Independent Particulate Matter Review Panel. He then summarized the conclusions of that panel, which he leads.

Federal PM Review

Process: The scientific review process that for four decades involved an iterative sequence of assessments flowing from science to policy has been severely abridged. Notably, the EPA's PM Policy Assessment (PA) must now be finalized without reviewing the EPA's final PM Integrated Science Assessment (ISA). Additionally, members of the Clean Air Scientific Advisory Committee (CASAC) PM Review Panel were dismissed, leaving the current CASAC without, by its own admission, the necessary expertise to respond to the documents. Acknowledging the good work accomplished by EPA staff in completing the Draft PM ISA and Draft PM PA in difficult circumstances, Professor Frey emphasized the need for the Air District "to look elsewhere than the EPA's Chartered Clean Air Scientific Advisory Committee" for guidance on PM science review.

Findings: As of October 25, 2019, the remaining six CASAC members were split 4-2 on their national ambient air quality standards (NAAQS) recommendations, with the majority supporting retaining all current standards.

Independent Particulate Matter (PM) Review Panel

Process: Led by Professor Frey, the scientists that were dismissed from the CASAC PM Review Panel continued to meet, without compensation, to complete the public service to which they had committed as CASAC PM Review Panel members. With logistical support from the Union of

Concerned Scientists, the Independent PM Review Panel met for two days in October 2019 and developed a consensus report that was sent to the EPA Administrator. The report and the video-recorded proceedings can be accessed at <https://ucsusa.org/meeting-independent-particulate-matter-review-panel>.

Findings: The scientific evidence for PM_{2.5} health effects is robust. The current PM_{2.5} standards “are not protective of public health, not even close.”

- The annual standard should be lowered to 10 µg/m³ to 8 µg/m³ (versus the current 12 µg/m³ standard)
- The 24-hour standard should be lowered to 30 µg/m³ to 25 µg/m³ (versus the current 35 µg/m³ standard)
- These changes would save thousands of lives
- The PM₁₀ standard should be adjusted downward consistent with these changes
- There appears to be no threshold; lower levels would produce still greater benefits
- For African Americans, the relative risk of health impacts from PM is three times higher than for the U.S. population as a whole

See Slides 102 and 103 for Professor Frey’s rapid-fire answers to questions posed by the Air District.

Advisory Council Q&A with Panelist

Response to Independent PM Review Panel. Council Member Long asked whether the Independent PM Review Panel received a response from the EPA Administrator or had been mentioned in the press. The panelist replied that the Administrator had not responded, but may not yet have received the report. However, the Independent PM Review Panel also submitted their report as public comment to CASAC, and several CASAC members referred to the report during their deliberations on October 25, 2019. There has been some press coverage of the Independent PM Review Panel, for example in the *Guardian* and *Rolling Stone*.

Safety at 8 µg. Council Member Solomon expressed the concern that, if there is no threshold below which health effects cannot be observed, 8 µg/m³ cannot be regarded as safe, particularly for vulnerable individuals. The panelist replied that the recommendation is given within the policy context of national ambient air quality standards (NAAQS) and is intended to support a standard that could withstand judicial review. The number is based on the available science, which focuses on ambient air pollution levels observed in epidemiological studies. The Clean Air Act requires that the standards protect public health “allowing an adequate margin of safety,” which should protect the general population and at-risk groups, but will not necessarily protect every individual.

The post-presentation Q&A segued into the general discussion between the Advisory Council and the PM Health Effects panel. This discussion is described in the following section.

PM Health Effects: Discussion Summary

The discussion between the Advisory Council and the morning panel focused on cost considerations and the appropriateness of a “no safe level” stance and broached the topic of recommending Air District priorities, which led to further discussion regarding UFP.

Cost considerations and appropriateness of “no safe level” language. Council Member Borenstein expressed discomfort with the language of “no safe level” of PM, emphasizing the need to assess the costs, including health costs, of implementing more stringent standards and using the analogy of motor vehicles to demonstrate that all areas of safety concern must accept some risks. Professor Frey responded that the U.S. Supreme Court’s interpretation of the Clean Air Act expressly forbids cost considerations in setting National Ambient Air Quality Standards and stated that voluntary activities such as driving should not be equated to the involuntary act of breathing. He also clarified that the conclusion “there is no evidence of a threshold” is not in itself an argument for banning all particulate emissions. Dr. Balmes addressed the topic from his perspective as a physician member of the California Air Resources Board (CARB). He clarified that whereas CARB does consider economic impacts, the independent PM Review Panel, following the procedures that had until recently governed CASAC, was restricted from mingling health and economic concerns. He also emphasized that while the most precautionary stance would consider levels below $8 \mu\text{g}/\text{m}^3$, the lack of data on lower levels of exposure makes it appropriate to recommend $8 \mu\text{g}/\text{m}^3$ for a present limit. In response to a question from Council Member Solomon, Professor Frey clarified that this $8 \mu\text{g}/\text{m}^3$ recommendation did take into consideration the increased sensitivity to pollution impacts of African American populations.

Recommending Air District priorities. Chair Hayes asked for guidance in identifying the most important areas of focus for the Air District, given the science and the particular challenges for the area, including wildfires. Dr. Balmes emphasized the need for community-level monitoring in accordance with AB 617 to identify air pollution “hot spots” and hypothesized that black carbon, a form of PM, may be a vital concern for these communities. He also expressed support for monitoring ultrafine particles (UFP) and collecting epidemiological data concerning wildfires. Council Member Long emphasized the need for a strategic plan.

Ultrafine particles. The discussion of UFP continued with Mr. Sacks underscoring that while animal toxicological studies show effects of UFP, little is known about UFP’s effects on the human population. One challenge for such research is that particles emitted as UFP may not stay in that size range. He further noted that UFP are contained within $\text{PM}_{2.5}$ and efforts to control $\text{PM}_{2.5}$ therefore may also bring down UFP concentrations. In response to Chair Hayes’ requests for guidance regarding UFP, Professor Frey suggested establishing monitoring stations in carefully selected locations as a long-term strategy and public education/consumer ratings regarding automobile ventilation and filtration systems as more immediate tactics. Professor Kleinman noted that there may be an opportunity for regulation to stimulate innovation with respect to decreasing UFP emissions and that the European Union already requires vehicles to share “particle numbers” regarding in-cabin air quality.

Afternoon Panel: PM Exposure and Risk

Exposure and Risk Panel Particulate Matter: Spotlight on Health

Lauren Zeise

Director, California Office of Environmental Health Hazard Assessment
Leading Developer, CalEnviroScreen

<i>Main takeaways</i>	There is a high degree of variability among individuals in the relationship between PM exposure concentration and health risk. OEHHA is pursuing research to determine the most important sources of air pollution with respect to health effects. Wildfires are causing PM standards to be exceeded for both 24-hour and annual averages.
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Presentation Summary

After explaining how health risks from PM can vary, OEHHA Director Zeise described some of OEHHA's current research to understand the relationships between specific PM sources and community health outcomes. She also shared some initial data on PM levels from wildfire.

Variability. There is a high degree of variability in concentration-response relationships relating PM exposure concentration to resulting health risks, due to multiple factors including:

- variable individual vulnerability (e.g., health status, genetic factors, demographic factors)
- variable doses at a given concentration (e.g., breathing rates, other physiological factors)
- variable concentrations within a location (e.g., in West Oakland, can be five times higher)

Given this variability, one way to get the most "bang for the buck" is to focus on improving air quality in communities with the highest exposures and highest vulnerabilities.

Current research at OEHHA. Several relevant studies are underway in alignment with AB 617 that will provide valuable input to PM risk management efforts. A key feature of these studies is biomonitoring to determine whether biomarkers indicate reductions in health risk following reduced air pollution concentrations. For example, the East Bay Diesel Exposure Project is a pilot study measuring exposure to diesel exhaust among community residents. This project collects urine samples in addition to indoor air samples, questionnaires, activity diaries, and information from GPS trackers. These data collected from residents will be combined with source pollution mapping data to determine how exposures are occurring.

Wildfires. PM concentrations during the 2017 Napa Wildfire reached 24-hour averages close to 200 $\mu\text{g}/\text{m}^3$ and one-hour averages above 300 $\mu\text{g}/\text{m}^3$ in some areas. In West Oakland, wildfire

impacts on PM have driven annual averages above the national standard, to 12.9 $\mu\text{g}/\text{m}^3$ in 2017 and 14.4 $\mu\text{g}/\text{m}^3$ in 2018. OEHHA is presently investigating relationships between the Napa Wildfire and numerous health outcomes in the area including respiratory, cardiovascular, and neurological problems.

Advisory Council Q&A with Panelist

Wildfire research outcomes. Chair Hayes asked if any preliminary health outcome results could be shared from the Napa Fire study, to which the panelist replied that she could not yet share results but expected to do so in the near future. Chair Hayes also asked if OEHHA would be including other years in the study. The panelist replied that while the Napa Fire study is a stand-alone project, the OEHHA epidemiology team has also been involved in a study of primates (macaques) in captivity that tracks outcomes to exposure to wildfires that occurred in 2008. This natural experiment of mother-infant pairs indicates that the exposure resulted in impacts on lung function and immunological markers. Chair Hayes remarked that such findings were consistent with studies in Southern California indicating issues with lung function in children.

Communicating importance of sub-daily exposures. Council Member Borenstein introduced the topic of communicating with the public about risks and precautions, citing the example of a group of teenage girls, presumably a high school track team, who were running, outdoors, while a nearby wildfire caused the air quality index (AQI) to be over 150. The panelist agreed that there is a need for more effective communication strategies and highlighted the misconception that filtration masks allow the wearers to safely exercise outdoors. She referenced a forthcoming meeting in Sacramento in April that will bring together representatives from OEHHA, EPA, Center for Disease Control (CDC), National Institute of Health (NIH), and other agencies to specifically discuss how to advise the public with respect to filtration.

Approaching PM as a non-threshold contaminant. Council Member Solomon inquired about the process for quantifying risk if PM is approached as a non-threshold contaminant. The panelist replied that while it was a difficult task that would involve creating estimates of risk that would differ across communities, it can be done and she anticipates that “working together we can come up with approaches to implement pretty soon.”

Location- and source-specific strategies: Consider impact, marginal impact, and environmental justice

Julian Marshall

Kiely Endowed Professor, Civil & Environmental Engineering, University of Washington
Adjunct Professor, Global Health, University of Washington

<i>Main takeaways</i>	Reducing PM requires many strategies: “silver buckshot, not a silver bullet.” With respect to risks, income matters and race matters, but race matters more than income. To get the most “bang for the buck” on health impacts, focus on areas where high impact meets high inequity.
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Presentation Summary

Professor Marshall described an approach to reducing health risks from PM involving combined analysis of sources of emissions, concentrations at locations, levels of exposure to different sources of emissions, and racial and income disparities affecting environmental justice.

Many sources of PM. PM_{2.5} comes from many sources, and not only from primary emissions but also through formation of PM_{2.5} in the atmosphere from other compounds. No one single source is dominant. At the national level, several sources make up a substantial fraction of emissions, including fuel combustion, agriculture, road dust, and residential wood burning. However, there are many other meaningful contributors and therefore tackling PM_{2.5} will require multiple strategies.

Intake fraction in California. When the levels of emissions from different sources are combined with the percentage of those emissions that are inhaled, relative contributions to exposure can more clearly be seen. In California, industrial emissions and on-road mobile sources are particularly high contributors to PM_{2.5} exposure. Importantly, this conceptualization makes clear that emissions reductions are not all equal in impact. For example, reducing one ton of emissions from on-road mobile sources will have greater impact than reducing one ton of emissions from industrial sources because the former category has a higher intake fraction.

Race and income disparities. In California, white people and wealthier people are least exposed to pollution, and the racial difference is more predictive than the income difference. Looking at patterns of consumption, it is also evident that white people are the greatest consumers of the products of polluting activities despite being the least exposed to the resulting pollution.

Mobile measurements and low-emission zones. Dr. Marshall described mobile PM measurement technology as “really promising” for identifying local pollution hotspots and pointed to Google and Aclima as innovators. He also described the policy tool of “low-emission zones” that have been used around the world, although not yet in the U.S., to reduce risks for

vulnerable populations subjected to high PM concentrations. Even if some polluting activity relocates outside the zone, positive health outcomes can still be achieved with this strategy.

Advisory Council Q&A with Panelist

How much pollution comes from local sources? Council Member Long inquired how much of the contaminant load in West Oakland (depicted in the panelist's slide showing the results of mobile measurement) could be attributed to local versus regional sources. The panelist replied that the study did not investigate sources and deferred to Phil Martien, the final presenting panelist, to address the question of local versus regional contamination affecting West Oakland. (Dr. Martien's presentation revealed that the majority of PM_{2.5} in West Oakland comes from regional sources; see Slide 198.)

Air District authority. In response to the panelist's question about the Air District's powers, Council Member Borenstein clarified that the Air District regulates stationary but not mobile sources and does not have the power to impose prices or taxes. Although the Air District does impose fines on a limited basis, these can only recover the costs of doing business, and emitters are not required to assume the costs of pollution below the standard. He went on to advocate for the Air District to "lobby Sacramento" for the authority to impose prices to help overcome a situation he described as "trying to make policy with one arm tied behind our back."

Other beneficiaries of polluting activities. Referring to the panelist's analysis of the drivers of pollution, which focused on consumption, Council Member Borenstein commented that additional beneficiaries of polluting activities should be considered: shareholders and workers.

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Review of the National Ambient Air Quality Standards for Particulate Matter: Overview of the Draft Policy Assessment

Scott Jenkins

Project Lead, EPA review of National Ambient Air Quality Standards for PM
Senior Environmental Health Scientist, Office of Air Quality Planning and Standards, EPA

<i>Main takeaways</i>	New studies available since the previous NAAQS review strengthen evidence of serious PM_{2.5} health effects, including premature death, and add additional health concerns. Available scientific information calls into question the adequacy of the public health protection afforded by current standards. Risk assessment results show that reducing PM to alternative standard levels below the current standards would achieve significant additional health benefits, including thousands of lives spared per year in the U.S. Alternatively, retaining the current standards would require placing "little weight" on that information.
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Presentation Summary

Dr. Jenkins presented an overview of the approach and conclusions of the EPA's [Draft PM Policy Assessment](#) completed in response to the agency's Draft PM Integrated Science Assessment. He explained that the PM Policy Assessment is intended to serve as a bridge between science and rulemaking, which is expected to take place by the end of 2020. The assessment included an argument for revising the annual PM_{2.5} standard downward based on the science, as well as a discussion of how retaining the current standard could be justified by placing little weight on the epidemiological evidence and risk assessment and greater weight on the uncertainties and limitations of the data.

Focus on "typical" exposures. The NAAQS review process focuses on exposures that represent the middle of the U.S. air quality distribution curve, rather than its extremes. In most U.S. locations, the annual standard is the controlling standard. Epidemiological data is not very informative with respect to the impact of 24-hour exposures on the upper end of the concentration distribution curve, and sub-daily (2-hour) controlled human exposure studies correspond to concentrations considered to be outside the typical distribution curve. The implication of this focus is that the review does not inform analysis of conditions analogous to those occurring during California wildfires.

Pseudo-design values and hybrid modeling. The review examined health effects seen in areas for which PM monitoring data could be used to calculate whether the area's air quality would have met the current standards. This "pseudo-design value" approach approximated the design value statistics used to describe air quality relative to the NAAQS. The review also examined

hybrid modeling studies that incorporated not only air quality monitoring but also a range of other data including satellite imagery and land use and transportation information.

Risk Assessment. The risk assessment considered likely mortality outcomes if national air quality was to “just meet” the current $12 \mu\text{g}/\text{m}^3$ standard in comparison to “just meeting” 11, 10, and $9 \mu\text{g}/\text{m}^3$. Although estimates differed according to the study being used and whether a primary or secondary PM-based modeling approach was employed, the overall implication was that thousands of lives would be spared at lower concentrations.

Conclusions. The Draft PM Policy Assessment states that “The available scientific information can reasonably be viewed as calling into question the adequacy of the public health protection afforded by the current annual and 24-hour primary $\text{PM}_{2.5}$ standards.” This conclusion relies on the long-standing body of health evidence, strengthened in the latest review, and risk assessments indicating that current standards allow for thousands of $\text{PM}_{2.5}$ -associated deaths per year at concentrations above $10 \mu\text{g}/\text{m}^3$. However, the assessment also states that a conclusion that current standards are sufficient could be reached if very little weight is placed on the large body of epidemiological evidence, particularly the newly available studies regarding lower concentrations, and more weight is placed on uncertainties in the literature.

Advisory Council Q&A with Panelist

Wildfires excluding Bay Area from risk assessment. Chair Hayes asked for clarification on why the Bay Area was not included in the risk assessment. The panelist responded that the assessment aimed to simulate impact from anthropogenic sources, so the focus was on areas for which that adjustment could reliably be done using available data. The implication appeared to be that it was difficult to disentangle wildfire effects from anthropogenic effects.

Lessons for areas controlled by 24-hour standard? Given that the focus of the Draft PM Policy Assessment was on areas in which the annual standard is controlling, Chair Hayes asked what the Air District, which experiences 24-hour concentrations well above the standard during wildfires, should take away from the analysis. The panelist acknowledged that the epidemiology driving the assessment is focused on the middle of the air quality distribution and does not offer many insights for areas experiencing very high 24-hour and sub-daily concentrations.

Deaths from air pollution. Referring to Slide 155, Chair Hayes asked how the review process determines acceptable risk in terms of $\text{PM}_{2.5}$ -associated deaths. The panelist responded that the estimates of $\text{PM}_{2.5}$ -related deaths are not meant to be read as absolute numbers but rather used as a basis for comparison between outcomes at different concentration levels to indicate the magnitude of public health impact. He further noted that risk assessments have not historically been the drivers of decisions regarding NAAQS. Council Member Solomon asked if lower concentrations had also been considered in the risk assessment. The panelist replied that they had, and that estimated deaths are reduced by 10-15% for each $1 \mu\text{g}/\text{m}^3$ reduction.

PM thresholds? Council Member Borenstein asked if the panelist had seen any evidence of a PM threshold. The panelist replied that he had not. However, he explained that there may be thresholds for individuals that cannot be seen in population-level studies.

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Targeting Particulate Matter: West Oakland Community Emissions Reduction Program

Phil Martien

Director, Assessment, Inventory, & Modeling, Bay Area Air Quality Management District
Project Lead, Technical Assessment of AB 617 West Oakland Community Action Plan

<i>Main takeaways</i>	In response to California’s AB 617 and in collaboration with communities, the Bay Area Air Quality Management District is implementing community-specific emissions reductions programs. The West Oakland plan demonstrates how hyperlocal modeling can be accomplished, but other agencies will also need to act in order to reach emissions reduction targets.
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Presentation Summary

Dr. Martien described the analysis conducted for the recently completed [West Oakland Community Action Plan](#), the first in a series of community emissions reduction programs that the Air District is developing in response to California’s AB 617 legislation.

Response to AB 617. California’s Assembly Bill 617 mandates a statewide program to address long-standing air pollution concerns in disadvantaged communities. The Air District has committed to work collaboratively with disadvantaged communities experiencing disproportionately high levels of air pollution. The first year of implementation focused on Richmond and West Oakland; Richmond requires more measurements to be collected, but West Oakland had a large amount of data and was able to launch directly into planning an emissions reduction program. Beginning in year two, Air District efforts will expand to six more communities: Vallejo, the Pittsburg-Bay Point Area, Eastern San Francisco, the East Oakland-San Leandro Area, Tri-Valley, and San Jose.

Approach to West Oakland. West Oakland was chosen as the first implementation site both because its population experiences high socioeconomic burdens alongside low air quality and because West Oakland has a well-established and experienced community group, the West Oakland Environmental Indicators Project, that was able to guide the process in collaboration with the Air District. The study employed a hybrid modeling approach that first accounted for pollution originating outside the area in order to then zero in on local sources. In response to community requests, the study took a hyperlocal approach, modeling block-by-block exposures. Seven local impact zones were identified using data from specially equipped Google Street View vehicles. Sources modeled comprised the Port of Oakland, railyards and trains, vehicles on freeways and streets, truck-related businesses, and permitted stationary sources.

Results. Although the Port of Oakland was the primary contributor to diesel PM emissions, PM_{2.5} showed a more distributed source allocation, with highway, street, port, and permitted sources all contributing significantly to PM_{2.5} levels. However, approximately 34% of PM_{2.5} came

from sources not included in the model, such as construction, restaurants, and residential wood burning. For each zone, the proportional contributions of the different sources were calculated, with different allocations evident for each zone. For example, 60% of modeled PM_{2.5} could be attributed to street traffic in Zone 3, whereas street traffic made up only 28% of PM_{2.5} emissions in Zones 1 and 2. Disparate exposure levels were seen within the studied West Oakland zones: the cleanest blocks are experiencing on average 3 µg/m³ lower PM concentrations than the most polluted blocks.

Action priorities. The West Oakland Community Action Plan established the goal of bringing all zones to average levels for the area by 2025 and to the level of today's cleanest residential West Oakland neighborhood by 2030. However, it is important to note that most of the pollution experienced in West Oakland comes from regional sources outside the West Oakland local area, and most of the local pollution sources are outside the Air District's jurisdiction. That said, priorities for decreasing exposures from local sources center on addressing sources with higher shares of modeled impact, which include heavy-duty trucks and harbor craft for diesel PM and road dust and passenger vehicles for PM_{2.5}.

Advisory Council Q&A with Panelist

West Oakland levels in comparison to other District areas. Council Member Rudolph asked how the "average" and "cleanest" levels in West Oakland that were set as targets compare to air pollution levels elsewhere in the Air District. The panelist responded that he does not have that information because other areas have not yet been assessed. However, he asserted that differences in pollution levels between West Oakland and other parts of the Air District are likely to be driven by local impacts, so addressing disparities within the Air District can be accomplished by considering local pollution sources.

Electric vehicles and road dust. Council Member Rudolph pointed out that if road dust is a significant concern in terms of PM_{2.5} exposure, then solutions like electric vehicles will not address that problem. The panelist agreed.

Capturing unrecorded emissions. Council Member Rudolph asked whether further analysis would be conducted to better understand the PM_{2.5} contributors that were not accounted for in the study. The panelist indicated that expanding the list of modeled sources was among the "homework activities" for the Air District team developing further AB 617 action plans.

Translating findings into action. Council Member Long asked for clarification on how the information presented would be translated into concrete actions to improve air quality in West Oakland. The panelist acknowledged the challenge of the Air District's limited jurisdiction and asserted that the West Oakland community had a "realistic perspective" on what can be done. He described the West Oakland Community Action Plan (which calls for the implementation of strategies by the City of Oakland, Port of Oakland, Caltrans, CARB, PG&E, and others in addition to the Air District) as "a starting point."

PM Exposure and Risks: Discussion Summary

Because the event was running long and Advisory Council members had addressed their questions to the individual panelists, the discussion between the Advisory Council and the afternoon panel was brief.

Margin of safety. Vice Chair Kleinman asked for clarification on whether the risk assessment within the Draft PM Policy Assessment considered margin of safety for particulate matter. Dr. Jenkins responded that the risk assessment does not address margin of safety because the concept of safety rests solely within the judgement of the EPA Administrator.

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Public Comment

Public comment was taken during two designated periods during the event. A list of the commenters during those periods follows the summary. Questions were also addressed to the lunchtime keynote speaker, former EPA Administrator Gina McCarthy.

Comment Summary

The general sentiment expressed by many commenters was, “We need action, not more discussion.” Several people spoke about their personal experiences with toxic emissions in their neighborhoods. The disproportionate impact of air pollution on disadvantaged communities is a central point of focus.

Additional themes that emerged in public comment:

Physicians. A group of physicians expressed their position that they are not able to protect the health of their patients due to air pollution, particularly children with asthma. They emphasized the return on investment from improving air quality.

African American communities. Two attendees who addressed Gina McCarthy during her keynote speech focused on the challenges of African American communities in the Air District relative to cumulative impacts of air pollution problems and the need for education, training, and investment in environmental health.

Refineries. Several speakers expressed concerns about refineries in the Air District, both with respect to air pollution and the need to reduce or eliminate reliance on fossil fuels.

Mobile-source increases from stationary permits. A speaker from East Oakland highlighted air quality challenges from a local crematorium, not only from its direct emissions but also from diesel trucks making frequent deliveries.

Climate change. Concerns about climate change aspects of air pollution were emphasized in addition to the need to address immediate health issues.

Community representation. The suggestion was made to form a community advisory board for the Air District “with teeth,” i.e., with the power to make and enact decisions.

List of commenters

PUBLIC COMMENT ON AGENDA MATTERS (ITEM 3)

Dr. Ashley McClure, California Climate Health Now

Sarah Schear, California Climate Health Now

PUBLIC COMMENT ON NON-AGENDA MATTERS (ITEM 7)

Katherine Funes, Rose Foundation for the Communities and the Environment

Jed Holtzman, 350 Bay Area

Jan Warren, Interfaith Climate Action Network of Contra Costa County

Dr. Amanda Millstein, California Climate Health Now

Dr. Cynthia Mahoney, California Climate Health Now

Sarah Schear, California Climate Health Now

Maureen Brennan, Rodeo citizen

Charles Davidson, Sunflower Alliance

Ken Szutu, Citizen's Air Monitoring Network

Margie Lewis, Communities for a Better Environment

Steve Nadel, Sunflower Alliance

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Advisory Council Deliberation

The symposium concluded with the Advisory Council's deliberation regarding the implications of the information presented. The Advisory Council arrived at the following Sense of the Advisory Council statement:

The current standard is not adequately health protective. Further reductions in particulate matter will realize additional health benefits. We ask the Air District staff to bring forward with urgency options within the legal authority of the Air District that would limit PM exposure, especially in high-risk communities.

Council Member Borenstein reflected the sentiment of the Advisory Council in stating, "We need more science, and we should act."

Additionally, Advisory Council members expressed interest in further exploring the potential for:

Treating PM as a toxic. Council Member Solomon stated that the lack of evidence for a threshold for PM health effects argues for treatment of PM as a linear, non-threshold toxic in the same manner as other toxic air contaminants and carcinogens.

Monitoring ultrafine particles. Council Member Solomon indicated support for continuing monitoring of ultrafine particles in the Bay Area or increasing monitoring if the costs are not unreasonable. The Air District's Deputy Air Pollution Control Officer Greg Nudd proposed that the Air District present to the Advisory Council regarding the UFP monitoring that is already occurring in order to better inform the Advisory Council's recommendations.

Encouraging the State of California to adopt stricter PM standards. Acknowledging that the District does not have the authority to set ambient air standards, Vice Chair Kleinman suggested that those present in the room should encourage the State to adopt stricter PM standards.

Ensuring local permits are consistent with PM standards supported by the science. Vice Chair Kleinman stated that because local permits and emission requirements for stationary sources are the specific purview of the Air District, the Advisory Council should focus on advising the Board on how the Air District could make those determinations consistent with improved ambient air standards.

Disaggregating solutions with climate co-benefits, solutions unrelated to climate strategies, and emergencies. Council Member Long argued for separately approaching three different categories of strategies for addressing PM: 1) strategies that reduce particulate matter as a co-benefit of addressing climate change, such as making engines more efficient and decarbonizing electricity; 2) strategies regarding issues such as road dust that are independent of climate

action (given that more efficient or electric cars still produce brake, tire, and road dust); and 3) emergencies including wildfires and explosions at permitted sites.

Bang for the buck. Council Member Long stressed the need to identify strategies with the greatest potential for impact and to track the outcomes of the strategies that are implemented.

Air District Implementation Plan. Vice Chair Kleinman stated the need for an Air District Implementation Plan in accordance with cleaner air standards. Chair Hayes expressed interest in the idea of an Air District Implementation Plan but stated that he was not yet ready to endorse the strategy and needed to gain a better understanding of what it would entail.

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Next Steps

Three primary action items emerged from the first PM symposium:

1. **Air District delivery of presentations** to the Advisory Council on the Air District's current activities and capabilities to monitor ultrafine particles and to address PM exposures;
2. **Advisory Council discussion and deliberation** on these current and potential activities in light of the information presented at the October 28 symposium and summarized in this document; and
3. **Planning for a second symposium** for Spring 2020 to focus on community and other stakeholder input and engagement concerning PM exposures and health risks.

The Advisory Council will reconvene on **December 9, 2019**.

During that meeting, in response to the Advisory Council's requests, the Air District will present on its current activities to reduce PM exposures, including monitoring of ultrafine particles. It will also discuss additional "options within the legal authority of the Air District that would limit PM exposure, especially in high-risk communities," in accordance with the Sense of the Advisory Council, in order to inform the Advisory Council's advice to the Board.

The Advisory Council is expected to receive and comment on this symposium summary document during the December 9 meeting.

Planning for the Spring 2020 event continues with input from community representatives and other stakeholders.

ADVISORY COUNCIL
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Public Comments - October 28 PM Symposium Summary: Health Effects and Exposures and Risk

Commenter	Organization/ Location	Comment
Bob Bernstein		See: McDonald F, Horwell CJ, Wecker R, Dominelli L, Loh M, Kamanyire R & Ugarte C (2020) Facemask use for community protection from air pollution disasters: An ethical overview and framework to guide agency decision making. International Journal of Disaster Risk Reduction, 43, Art. No.: 101376. https://doi.org/10.1016/j.ijdrr.2019.101376
H. Christopher Frey	North Carolina State University	"air pollution standards" should be changed to "National Ambient Air Quality Standards." The prohibition on considering costs is specifically with respect to the NAAQS, not with respect to other federal air pollution standards. (submitted by H. Christopher Frey, 12/19/19)
Samuel L. Altshuler	Chair AWMA Critical Review Committee	I found the information presented at the subject symposium very interesting and well done. However, one point that was overlooked is that when considering exposure to air pollutants in epidemiological studies, we must begin to include exposures of individuals within their homes and workplaces. As outdoor, ambient pollutants are dropped to lower and lower levels, exposure indoors to various air pollutants, particularly UFPM and NO2, can become relatively significant depending on the various indoor sources (cooking appliances, fireplaces, candles, cleaning materials, etc.)

Public Comment Period: December 19, 2019 to March 6, 2020

ADVISORY COUNCIL
MEETING OF 05/12/2020



Particulate Matter: Spotlight on Health Protection

**Advisory Council Meeting Summary:
BAAQMD Update on Current and
Emerging Efforts on Particulate Matter**

ADVISORY COUNCIL
MEETING OF 05/12/2020

December 9, 2019



**BAY AREA AIR QUALITY
MANAGEMENT DISTRICT**

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ADVISORY COUNCIL
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Executive Summary

The December 9, 2019 meeting of the Advisory Council (Council) of the Bay Area Air Quality Management District (Air District) focused on the Air District's current and emerging work to understand, monitor, reduce, and control regional and localized particulate matter (PM) concentrations.

As the timeline below illustrates, this Advisory Council meeting followed the October PM Symposium, which focused on the state of the science, and preceded the upcoming March PM Symposium. The March PM Symposium will focus on local community work, needs, and priorities. The PM Symposium Series as a whole will inform recommendations from the Advisory Council to the Air District's Board concerning further action the Air District can take to protect the health of Bay Area residents, particularly those who are disproportionately impacted by PM exposure.



The December meeting featured presentations regarding local, regional, and state PM reduction initiatives from Air District staff members and a representative from the California Air Resources Board (CARB). Additional agenda items included Advisory Council discussion of a written report on the October PM Symposium; development of a new document by the Advisory Council, which will provide responses to the questions originally posed by the Advisory Council and the Air District to the October PM Symposium panelists; and public comment.

Presentations

Source Apportionment. Phil Martien, Director of Assessment, Inventory, and Modeling, presented the Air District's current knowledge and information gaps regarding the sources of fine particulate matter (PM) in the Bay Area (excluding wildfires). New priorities require the Air District and its partners (CARB, Caltrans) to evaluate and update source apportionment procedures and corresponding regulatory frameworks. As PM emissions from previously

dominant sources (such as vehicle emissions) are reduced, additional sources emerge as priorities for controlling PM, yet less information is available about these newly emergent top sources. In particular, models for brake and tire wear and road dust have not been updated since the 1980s. Equally, the Air District's new focus on local-scale exposures requires new approaches to data collection, analysis, and rulemaking regarding stationary-source emissions. Point sources that are not significant at the regional level have not historically been prioritized for monitoring and control. These sources may be significant contributors of PM_{2.5} at the local level.

Monitoring. Ranyee Chiang, Director of Meteorology and Measurements, along with assistant managers Ila Perkins and Katherine Hoag, presented regarding the Air District's monitoring network. They discussed both region-wide monitoring — largely designed to track progress against national ambient air quality standards — and more recently deployed monitoring approaches that are designed to address the Air District's emerging focus on community-scale concentrations or impacts from specific sources of emissions. In response to the Advisory Council's requests, additional information was shared regarding ultrafine particles and wildfires. Ultrafine particle monitoring has been in place for several years but is limited in scope by costs and scientific limitations of the instrument. Wildfires have caused dramatic increases to PM_{2.5} concentration levels in the Bay Area, reversing a decade-long downward trend. The Air District is currently conducting an Integrated PM Network Assessment to evaluate its PM measurement network and recommend improvements.

Grants and Incentives. Karen Schkolnick, Director of Strategic Incentives, presented a summary of the Air District's grant revenue sources, current grants and incentive programs, and recent program results. Because these grant programs generally require emission reductions that go beyond regulatory requirements, the majority of the Air District's grant funding is targeted at reducing PM_{2.5}, other criteria pollutants, air toxics, and greenhouse gases from mobile sources and complementing the Air District's regulatory PM reduction strategies targeting stationary sources. She highlighted several key initiatives focused on reducing mobile-source emissions through adoption of the cleanest commercially available technology (such as Diesel Free by '33 and Port of Oakland partnerships) and discussed how these programs connect to other Air District priorities including health risk reduction in communities disproportionately impacted by air pollution. Since 1991, more than \$1.2 billion has been invested through the Air District's grants and incentives programs, resulting in significant emissions reductions and accelerated adoption of cleaner and zero-emission technology. However, each program is constrained by the requirements of its funding source — for example, only one of the Air District's sources of funding can be used to target vehicle miles traveled (VMT) reduction.

CARB PM Research and Rules. Alvaro Alvarado, Manager of Health & Ecosystems Assessment for CARB, described the PM research currently being conducted at CARB and the emerging regulations designed to further decrease PM emissions. In line with the Advisory Council's requests, he focused on research concerning wildfires, brake and tire wear, and ultrafine particles. Wildfire research includes study of a monkey colony at UC Davis, mobile platforms to monitor in-home exposures, and collaboration with NASA to track wildfires using aircraft. Brake

and tire wear research includes laboratory studies to quantify emissions as well as exposure studies with UC Riverside and health effects studies with UCLA. Studies of ultrafine particles include modeling annual average concentrations and speciation throughout the state and associating mortality with long-term exposures using the California Teachers Study cohort. With respect to rulemaking, several regulations are underway or forthcoming to reduce emissions from trucks, cars, and trains.

Air District PM Rules and Regulatory Development. Victor Douglas, Manager of Rule Development, presented a brief overview of the history, current efforts, and emerging directions for rule development in the Air District, which continues to update its rules and regulations to further limit PM exposures. As its focus shifts from an exclusively regional perspective to reducing risks for disproportionately impacted local communities, the Air District is exploring further regulation regarding restaurants, wood smoke, and indirect or magnet sources (e.g. warehouses), as well as the possibility of treating PM as a toxic air contaminant. Although the State of California does not presently recognize undifferentiated PM as an air toxic, it may be possible for the Air District to do so independently.

Discussion of Draft October PM Symposium Report

The Advisory Council discussed the draft report on the October PM Symposium prepared by consulting technical writer Elisabeth Andrews on behalf of the Air District, available online at <https://www.baaqmd.gov/news-and-events/conferences/pm-conference>. Three clarifying edits were made to the section on “Advisory Council Deliberation,” and consensus was reached on releasing the draft report for public comment.

Advisory Council Q&A Document

Advisory Council Chair Stan Hayes introduced a document he initiated that provides responses to the questions originally posed by the Advisory Council and the Air District to the October PM Symposium panelists concerning PM health effects, exposures, and risks. His aim was to distill the information shared by the panelists into concise answers to each of the questions. Council Member Gina Solomon volunteered to assist Chair Hayes in further developing the question-and-answer document.

Public Comment

Commenters focused on the urgency of decreasing PM exposures and articulated a need to phase out fossil fuels and transition to a zero-carbon economy. Specific suggestions for the Air District included setting PM threshold levels based on sensitive subgroups rather than population averages, utilizing data from low-cost sensors and the California Household Exposure Study, and developing messaging campaigns focused on demonstrating the connection between specific sources of air pollution and health outcomes.

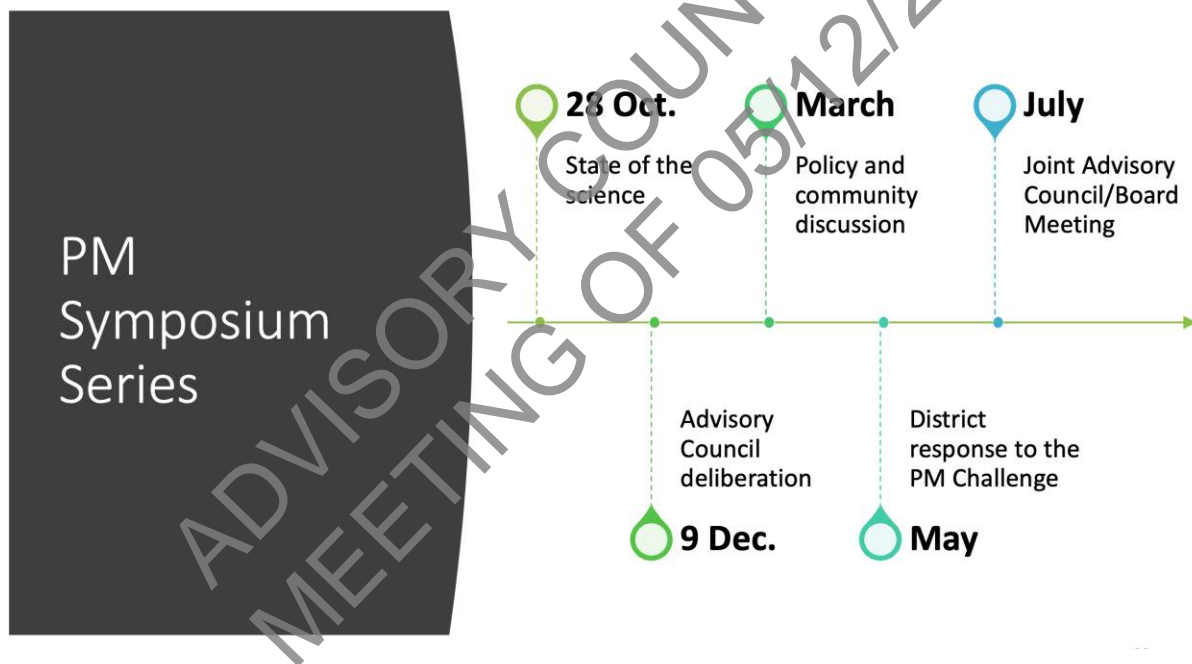
Next Steps

The next PM symposium will take place on March 24, 2020 in Oakland and is focused on presentations from community organizations and leaders. The May event is expected to focus on formulating potential Air District plans to further reduce Bay Area health risks from PM. The final event in the series brings together the Advisory Council and the Air District's Board of Directors to discuss the information and suggestions shared throughout the PM Symposium Series. During the July meeting, the Advisory Council is expected to present its findings to the Air District's Board of Directors regarding particulate matter and health in the Bay Area.

ADVISORY COUNCIL
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Background and Timeline

The December 9, 2019 meeting of the Advisory Council (Council) of the Bay Area Air Quality Management District (Air District) followed the October PM Symposium with updates on the Air District's current work on particulate matter (PM). Recognizing that PM is the overwhelming driver of health risks from Bay Area air quality, the Advisory Council requested that the Air District convene the PM Symposium Series in order to clarify the state of the science (October 28, 2019), describe current and forthcoming Air District work (December 9, 2019); learn about local community efforts, needs, and priorities (March 24, 2020); and present potential policy strategies (May 2020). As the timeline below illustrates, the series will culminate in recommendations from the Advisory Council to the Air District's Board of Directors concerning further action the Air District can take to protect the health of Bay Area residents, particularly those who are disproportionately impacted by PM exposure. An additional goal of the Air District and Advisory Council is to provide national leadership on improving air quality at a time when the federal government is retreating from this mission.



The first symposium took place on October 28, 2019, convening national, state, and local experts to discuss the state of the science on PM health effects, exposures, and impacts. Details on the presenters and the information they shared can be found in the Draft October PM Symposium Report available at <https://www.baaqmd.gov/news-and-events/conferences/pm-conference>. Following that event, Chair Hayes presented to the Air District Executive Committee of the Board of Directors on November 6, 2019 and to its full Board of Directors on November 20, 2019 concerning the Advisory Council's takeaways from the October PM Symposium.

Chair Hayes summarized those presentations at the December meeting. He highlighted several key topics discussed at the October PM Symposium: new evidence of causal relationships between PM and adverse health outcomes including premature death, evidence that the health of children and non-white people are disproportionately harmed by PM, strategies for understanding the sources and distribution of PM, and associations between wildfires and both respiratory and cardiovascular illness. He shared the Sense of the Advisory Council statement that emerged from deliberation at the close of the October PM Symposium:

The current standards are not adequately health protective.
Further reductions in PM will realize significant additional health benefits.
We need more science, *and* we should act now.

Chair Hayes also listed the topics the Advisory Council sought to explore further: approaching PM as an air toxic, expanding monitoring of ultrafine particles, examining health effects of acute PM exposures (e.g. wildfire smoke), identifying PM species that are particularly dangerous, assisting the Air District in identifying strategies with the “highest bang for the buck” in terms of health protection, and pursuing strategies that have climate and other co-benefits.

These priorities set the agenda for the December meeting, which focused on the Air District’s current and emerging work to understand, monitor, reduce, and control regional and localized PM concentrations. A representative from the California Air Resources Board (CARB) also presented on state-level PM research and regulations. Additional agenda items included Advisory Council discussion of a written report on the October PM Symposium as well as public comment.

The meeting was shared live via webcast, the video archive of which can be viewed at http://baha.granicus.com/MediaPlayer.php?clip_id=6369.

Update on Particulate Matter (PM) Air District Work: Regional- and Local-Scale PM_{2.5} Source Apportionment

Phil Martien

Director, Assessment, Inventory, & Modeling, Bay Area Air Quality Management District
Project Lead, Technical Assessment of AB 617 West Oakland Community Action Plan

<i>Main takeaway</i>	New priorities require the Air District and its partners (CARB, Caltrans) to evaluate and update source apportionment procedures and corresponding regulatory frameworks. As PM emissions from previously dominant sources are reduced, additional sources emerge as priorities for controlling PM, yet less information is available about these newly emergent top sources. This is particularly true for brake and tire wear and re-entrained road dust. Equally, the Air District's new focus on local-scale exposures requires new approaches to data collection, analysis, and rulemaking regarding stationary-source emissions.
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Dr. Martien presented the Air District's current knowledge and information gaps regarding the sources of fine particulate matter in the Bay Area (excluding wildfires). He first described how sources contribute to PM_{2.5} concentration levels at the regional level and then turned to the Air District's community-scale analysis of local sources of PM_{2.5} for West Oakland. The report provided here reflects both the presentation from Dr. Martien and the additional comments and clarifications from other Air District staff members during the presentation.

Current Air District Work

Proportion of regional vs local contributions. Regional sources are the main driver of Bay Area PM_{2.5} concentrations: in West Oakland, local sources appear to contribute about 20% of the overall PM_{2.5} burden in the community. However, time constraints on the West Oakland analysis precluded modeling approximately 30% of local PM_{2.5} sources including construction, residential wood burning, and commercial cooking; these sources may constitute an additional proportion of local contribution to PM_{2.5} concentration levels. Moreover, local sources may have highly significant impacts for people living or working in the immediate vicinity of those sources.

Regional Scale Apportionment

Based on newly updated modeling, peak levels of PM_{2.5} in the Bay Area are on the order of 10 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), with the highest values seen in the Central Valley. It now appears that **secondary PM formation contributes almost half of PM_{2.5}**, which is higher than earlier estimates.

Sources of PRIMARY PM_{2.5} in the Bay Area:

- **Permitted sources (23%)** - Within this category, refineries produce more than 40% of emissions from permitted sources. The top five emitters contribute approximately half of all PM_{2.5} from permitted facilities.
- **On-road mobile sources (27%)** - Within this category, vehicle exhaust now contributes less than 20% of on-road mobile emissions. Brake and tire wear and road dust are far more significant contributors.
- **Non-road mobile sources (16%)** - Within this category, construction activity and commercial marine vessels each account for approximately one third of emissions from non-road mobile sources.
- **Area sources (34%)** - These sources tend to be individually small emitters that collectively make up a large portion of PM_{2.5} emissions, including residential wood combustion and commercial cooking (largely char-broilers).

Sources of SECONDARY PM_{2.5} in the Bay Area:

- **Diesel trucks and off-road equipment** contribute **NO_x**
- **Stationary sources** (including refineries and manufacturing plants) contribute **SO₂**
- **Agricultural activity** contributes **NH₃**

Community Scale Apportionment

Hyperlocal analysis of local-source primary PM_{2.5} emissions was conducted for West Oakland, as described in the report on the October PM Symposium (<https://www.baagmd.gov/news-and-events/conferences/pm-conference>) and the [West Oakland Community Action Plan](#). Annual averages of PM_{2.5} concentrations exclusively from local sources were calculated for each census block. PM_{2.5} concentration levels were observed to vary seasonally, across the week, and even hour-by-hour with local activity.

Roadways and permitted facilities. Roadways and permitted facilities emerged as predominant local sources of primary PM_{2.5} in West Oakland (acknowledging again that time constraints precluded modeling construction, residential wood burning, and commercial cooking).

Hyperlocal variation in source apportionment. Predominant sources of local-source PM_{2.5} vary within West Oakland: in its southwest corner, the contributions of port and rail to local-source PM_{2.5} are as high as 25%; roadway contributions in some locations are more than 75%; in other locations stationary sources contribute on the order of 40% of local-source PM_{2.5}.

Unequal impacts. Certain census blocks in West Oakland are exposed to much higher levels of local-source PM_{2.5} than others.

Forthcoming Air District Work

The Air District faces challenges in overcoming information gaps concerning newly dominant sources of PM_{2.5}. As PM emissions from top sources are reduced, additional sources emerge as priorities, yet less information is available about these other sources. As a result of this lag between re-prioritization and updated scientific literature, there is considerable uncertainty in the estimates of source apportionment, and this uncertainty cannot yet be quantified.

Road dust. As emissions from vehicle exhaust are reduced, the proportion of PM_{2.5} attributed to re-entrained road dust increases. However, calculations for re-entrained road dust were last updated in the late 1980s. These methods are being currently evaluated and updated by CARB and Caltrans.

More analysis of permitted sources. Point sources that are likely significant contributors of PM_{2.5} at the local level may not be significant at the regional level. Because the Air District's focus has historically been at the regional level, direct measurements have not been collected for most of these sources. For example, because West Oakland permitted facilities account for only about 0.5% of emissions in the Bay Area, they have not historically been prioritized for monitoring and control. The Air District's new focus on localized impacts demands greater attention to these sources. For other Bay Area locations, particularly those in which the top five stationary-source emitters are located, the Air District is also in the process of determining local-scale impacts for residents. It is not yet clear how much exposure people experience from these emissions, particularly where emissions are distributed through tall stacks.

Post-Presentation Discussion

Brake and Tire Wear and Road Dust

- Council Member Linda Rudolph inquired about the **climate impacts** of newly emerging PM_{2.5} priorities such as brake and tire wear and road dust. Dr. Martien responded that different PM_{2.5} species can have different climate effects: soot tends to be warming, whereas secondary aerosol can be cooling. Air District Deputy Air Pollution Control Officer Greg Nudd added that road dust tends to be a localized issue as concentrations drop off quickly in spatial terms. However, brake and tire wear have emerged as water quality issues: microplastics in the San Francisco Bay have been shown to originate from tire wear.
- Council Member Severin Borenstein inquired about **technologies to reduce these effects**; Mr. Nudd and Air District Deputy Air Pollution Control Officer Damien Breen responded that reduction in vehicle miles traveled (VMT) is the primary control strategy as few technologies have emerged apart from vacuuming highways and some new European experiments in under-vehicle misting technologies. He later remarked that successful strategies for reducing road dust involve reducing the load on the road; while sweeping can have some positive effect, reducing track-out from construction and limiting roadside contributions through landscaping or paving tend to be more successful.

- Chair Hayes confirmed with Dr. Martien that brake and tire wear and road dust contribute significantly to both local and regional PM_{2.5} exposures and remarked that addressing this issue will be an **important issue for the Air District**.
- Council Member Borenstein inquired about the **relationship between speed, congestion, and PM_{2.5}**. Mr. Breen explained that less speed generally means higher exhaust emissions; Dr. Martien stated that dynamometer testing is currently investigating the relationship between speed and brake wear for light- and heavy-duty vehicles.

Air toxics approach. Council Member Michael Kleinman suggested that the greatest benefit to public health may be gained through focusing on the most toxic components of PM_{2.5}. He provided the example of lead-contaminated particles from the cement plant in Cupertino posing more of a public health threat than ammonium sulfate aerosols (from secondary PM_{2.5} formation) and stated that many of the secondary aerosols in PM_{2.5} are less toxic than the primary aerosols.

Challenges with commercial cooking and residential wood burning. Council Member Solomon inquired about the Air District's authority with respect to commercial cooking, noting that the categories of regionally significant sources of PM_{2.5} that are within the Air District's jurisdiction appear to make up 43% of the total regional apportionment. Mr. Nudd, with confirmation from Air District Legal Counsel Brian Bunger, explained that the Air District's regulatory authority for commercial cooking is clear. The Air District has an existing rule for large charbroilers. However, available post-combustion controls for restaurant cooking are too large to fit on a restaurant roof and too expensive to preserve profit margins. With respect to reducing residential wood burning, the challenge lies in overcoming cultural barriers.

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Update on Particulate Matter (PM) Air District Work: Monitoring

Ranyee Chiang

Director, Meteorology & Measurements, Bay Area Air Quality Management District

Ila Perkins

Assistant Manager, Meteorology & Measurements, Bay Area Air Quality Management District

Katherine Hoag

Assistant Manager, Meteorology & Measurements, Bay Area Air Quality Management District

<i>Main takeaway</i>	The Air District's new focus on community-scale monitoring complements its ongoing region-wide monitoring efforts. UFP monitoring has been in place for several years but remains limited in scope by costs and scientific limitations of the instruments. Wildfires have caused dramatic increases to PM_{2.5} concentration levels in the Bay Area, reversing a decade-long downward trend.
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Dr. Chiang presented along with two assistant managers in Meteorology & Measurements, Ms. Perkins and Dr. Hoag, on the Air District's current monitoring network. They discussed both region-wide monitoring — largely designed to track progress against national ambient air quality standards — and more recently deployed monitoring approaches that are designed to address the Air District's emerging focus on community-scale concentrations or impacts from specific sources of emissions. In response to the Advisory Council's requests, additional information was shared regarding ultrafine particles and wildfires.

Current Air District Work

Regional/Regulatory Network

The Air District currently has 35 fixed air monitoring stations (as well as 20 meteorology stations) that provide timely air quality data to the public, compare PM concentration levels with national and state standards, inform air quality forecasts for the Spare the Air program, and support research studies. Most sites are selected based on the distribution of the population (2010 Census) and the concentration of pollutants, with some additional sites placed downwind of major pollution sources, to describe regional transport of pollutants, or in areas representing general background PM levels.

The measurement instrumentation used for Air District PM monitoring is described in Table 1. Mass measurements support compliance with California and national PM₁₀ and PM_{2.5} health-based standards and designate which areas are in attainment or nonattainment; chemically

resolved or speciated data measurements support emission reduction strategies; and particle counts of smaller particle sizes support science on emissions, air quality impacts, and health effects of types of PM for which there is currently no health-based standard.

Table 1 - Air District PM Instrumentation

Measurement Type	Mass		Chemically resolved or speciated		Particle count
Measurement application	Compliance with standards; Designate areas as attainment or nonattainment		Support emission reduction strategies		Assess air quality impacts and exposures
Analytical Target	PM ₁₀ mass	PM _{2.5} mass	Black carbon	PM _{2.5} speciation	Ultrafine particles (PM _{0.1})
Analytical Methods	Gravimetric	Gravimetric or Filter-based beta attenuation	Filter-based light attenuation	Chemical extraction	Laser-based
Number of Active Monitors	7	20	7	4	6

Ultrafine Particle Monitoring

Strengths. The Air District has conducted ultrafine particle monitoring for more than seven years in a range of sites, producing data that can be used to understand diurnal and seasonal patterns and trends as well as differences between background, near-road, and typical urban settings.

Limitations. Ultrafine particle instrumentation is costly (\$60,000-\$100,000 per unit), requires frequent maintenance in PM-burdened areas, and cannot presently support identification of sources and sinks or robust links to specific health impacts.

Results. Air District ultrafine particle monitors installed in a variety of locations reveal that UFP concentrations reflect fresh, primary particulate emissions from both combustion and secondary formation. Higher levels of ultrafine particles are seen in near-road environments, with peaks at high-commute hours and the middle of the day, indicating a photochemical signature.

Wildfires

Prior to 2017, occasional impacts from wildfires did not have a significant influence on year-to-year trends, yet recent wildfires have dramatically affected Bay Area PM_{2.5} concentration levels. Figure 1 shows the overwhelming effect of wildfires in 2017 and 2018. With wildfire days

removed, there has been a downward trend in PM_{2.5} concentration levels for the past decade, yet wildfires have caused a sharp reversal of that trend, resulting in the Bay Area substantially exceeding the 24-hour federal standard for 2016 – 2018.

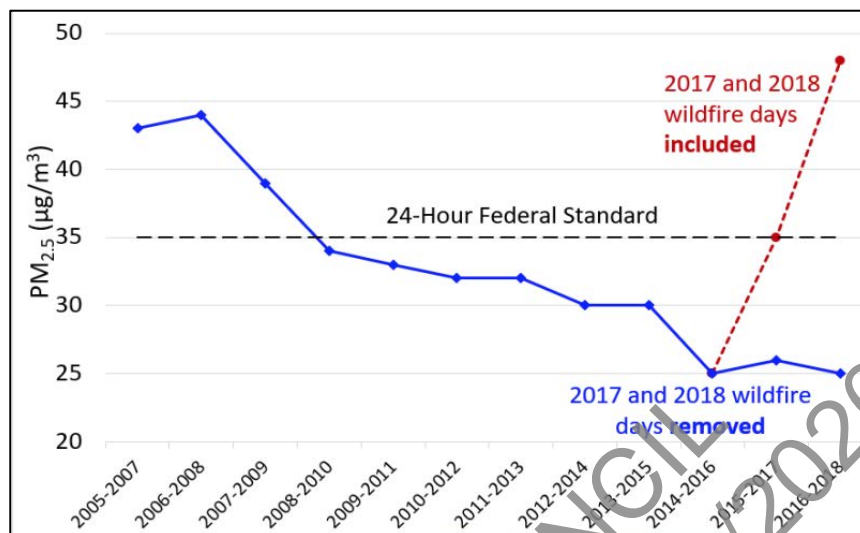


Figure 1 - Wildfire impact on 24-hour PM_{2.5} concentration levels

Air District initiatives to minimize exposure to wildfire PM include:

- Communicating with the public about reducing personal exposure
- Collaborating with public health officers and other agencies to ensure consistent messaging
- Funding Clean Air Centers in which vulnerable people can seek refuge
- Offering grants and incentives for recovery assistance
- Providing guidance for local organizations, particularly schools

Forthcoming Air District Work

Community-Scale Monitoring

Several new developments support the Air District’s new focus on community-scale monitoring:

Hyperlocal monitoring

In partnership with [Aclima](#), the Air District is conducting street-by-street monitoring using vehicle-mounted sensor-based instrumentation measuring NO_x, CO, O₃, and PM_{2.5}, similar to previous studies Aclima performed in West Oakland and other areas. Measurements for a short-term study in the AB 617 Richmond-San Pablo study area will soon be available, and the Air District aims to use this technology to map average baseline hyperlocal air quality for the entire Bay Area within two years.

Mobile Laboratories

The Air District is also developing a van with mobile monitoring capabilities that can perform high-accuracy, detailed mobile or short-term measurements of PM and many specific gaseous air toxics, including the amount of PM of different sizes. Potential uses of this new monitoring van include supporting localized source apportionment and prioritization, confirming and improving the understanding of air quality issues identified by the AB 617 Steering Committees, and identifying locations for further fixed-site or portable monitoring.

Portable platforms

Highly portable, suitcase-sized monitoring systems will also be developed for battery-powered, continuous, real-time PM measurements. Although these technologies are expensive, they could enable measurements during power outages, which is important for supplying real-time air quality data during wildfires and periods of heightened wildfire hazard. These instruments can also be used to verify data from lower-cost sensor networks (such as [PurpleAir](#)).

Combining Monitoring Strategies

Whereas the regional fixed site network is primarily focused on large-scale assessments and long-term trends, the special projects and sensor networks described in Table 2 enable more community-specific assessment. The Air District's engagement in sensor networks involves working closely with community organizations and companies to provide technical capacity building and advice regarding the advantages, limitations, and uncertainties of different technologies.

Table 2 – Air District PM Monitoring Strategies and Objectives

Network	Measurements	Objectives	Limitations
Regional Network	PM _{2.5} and PM ₁₀ mass	-Comparison with standards -Public information -Track long-term trends -Assess out-of-area transport	-High cost -Information gaps at community scale
Special projects: -fixed site -mobile laboratory -portable platforms	-PM size distribution -PM speciation -Ultrafine particles -Black carbon	-Source identification -Assessment of specific emission sources -Characterization of near-road environments	-High cost
Sensor networks: -fixed site -mobile/portable	-PM mass -Particle count	-Public education -Personal exposure monitoring -Identification of hot spots -Comparative assessment of local air quality -Tracking high-PM episodes	-Higher level of uncertainty

To strengthen these approaches, the Air District will complete an **Integrated PM Network Assessment by July 2020** to evaluate its PM measurement network and recommend

improvements. The assessment aims to determine how available resources and multiple monitoring approaches can best be deployed not only to continue addressing federal and state requirements but also to support and expand community-scale air monitoring activities and other Air District programs.

Post-Presentation Discussion

Ultrafine Particles

- **Monitoring costs.** Council Member Solomon inquired whether ultrafine particles monitoring equipment costs are expected to drop in the foreseeable future. Ms. Perkins replied that the Air District relies on one primary manufacturer and does not anticipate near-term cost reductions. Council Member Solomon introduced the idea of a challenge to technology developers to accelerate innovation in the direction of affordability. Dr. Chiang responded that she would contact representatives from the Environmental Protection Agency and CARB to investigate the possibility of pooling resources to propose such an initiative.
- **Data application.** Council Member Rudolph asked how the Air District's ultrafine particle data is being used to improve public health. Dr. Hoag responded that the data adds to the imperative to reduce roadway emissions. Mr. Nudd added that the Air District is implementing project grants to install filtration in near-roadway schools and is advising the Plan Bay Area initiative on limiting near-roadway exposures.
- **"We need more science, and we should act."** Chair Hayes reiterated the message from the first PM Symposium that while it is clear that more science is needed on UFP — including a federal reference method standardizing ultrafine particle measurement and epidemiological studies linking exposures to health effects — the Air District should also take immediate action.
- **Near-road health effects.** Following clarifications from Air District staff that the high levels of monitored UFP were due to roadway proximity, Council Member Kleinman pointed out that the documented health effects of near-road environments include low birth weight and cardiovascular problems. While there are many challenges for ultrafine particle research, including the difficulty of assessing dosage due to the extraordinarily low mass of UFP, studying the health effects of near-road environments may be an effective approach to understanding UFP exposures. He added that ultrafine particle concentrations drop precipitously as the distance from the roadway increases, with particle counts dropping by 80% at a 100-meter distance from the center of the road (and an additional 80% at a further 100 meters). Therefore, zoning regulations, berms, and buffers can make a significant difference in limiting exposures.
- **Combustion as source of UFP.** Dr. Hoag clarified in response to Council Member Borenstein's question about brake and tire wear and road dust that the source of UFP is combustion, not vehicle wear or road dust. She further clarified in response to Council Member Tim Lipman's question about ultrafine particle precursors that the sources of UFP appear to be anthropogenic.

- **Stationary sources and UFP.** Council Member Solomon asked whether the Air District has investigated UFP emissions from stationary sources. Dr. Hoag responded that such analysis has not been conducted, in part because UFP concentrations are unlikely to remain high outside the perimeter of the facilities due to the distance-based decreases in particle counts described above. However, she stated that this type of measurement could be a possible application for the new mobile and portable monitoring technologies.
- **UFP gradient studies in the Bay Area.** Council Member Solomon asked whether the Air District is conducting studies to assess the persistence of UFP concentrations at increasing distances from Bay Area roadways. Dr. Hoag replied that this analysis had not been undertaken as part of UFP monitoring in the Bay Area but that many previous studies had established the patterns of near-roadway UFP distribution, including the influence of meteorology, topography, and roadway design.

Data sharing. Council Member Rudolph also asked for clarification on how data is being shared with the public. Mr. Breen stated that regional network monitoring data is available on the Air District website (<http://www.baaqmd.gov/about-air-quality/current-air-quality>). Dr. Hoag added that the community-scale data being collected by Acima will also be publicly available once it has undergone quality assurance.

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Update on Particulate Matter (PM) Air District Work: Grants and Incentives

Karen Schkolnick

Director, Strategic Incentives, Bay Area Air Quality Management District

<i>Main takeaway</i>	Since 1991, more than \$1.2 billion has been invested through the Air District's grants and incentives programs, resulting in significant emissions reductions and accelerated adoption of cleaner and zero-emission technology. Because these initiatives are not subject to regulatory constraints, the Air District is able to use the great majority of funds to target mobile sources. However, programs are constrained by the requirements of the funder — for example, there is only one source of funding that can be used for VMT reduction.
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Ms. Schkolnick presented a summary of the Air District's grant revenue sources, current grants and incentive programs, and recent program results. She highlighted several key initiatives that incentivize the accelerated adoption of the cleanest commercially available technology and discussed how these programs connect to other Air District priorities including health risk reduction in communities disproportionately impacted by air pollution.

Current Air District Work

Prioritization Process

Because grants and incentive programs are not tied to regulatory constraints, the Air District is able focus almost all of its funding through these programs (90 to 95%) on reducing mobile-source emissions. Most of this funding goes toward accelerating the adoption of the cleanest commercially available technology. An additional priority is expediting emissions reductions in disproportionately impacted communities.

The cost effectiveness (CE) of nearly all programs is evaluated using the following formula (or a variant) from the Carl Moyer Program, established by the State of California and CARB:

$$CE = \frac{\text{Funds Awarded}}{\text{Tons of } NOx + ROG + (PM_{10} \times 20) \text{ reduced}}$$

Notably, this formula has changed over 20 years by incrementally increasing the weighting of PM from 1 to 20, reflecting the State's interest in health protection.

Current Funding Allocation

\$97 million from grants and incentives in 2018 were allocated to:

- **On-road emissions reduction — \$32 million (one third)**, supporting both deployment and infrastructure for lower- or zero-emission light-, medium-, and heavy-duty vehicles (cars, trucks, and buses). Notably, pass-through programs also support this category, so the total amount of support is higher than this number.
- **Off-road mobile source emissions — \$44.4 million (almost half)**, from sources such as cargo handling equipment, agricultural equipment, marine and locomotive vehicles, and airport ground support. These are primarily diesel emissions and the cleanest commercially available technology in most cases is cleaner diesel, transitioning from Tier 0 or 1 to Tier 4 engines, although some electrification is now occurring such as Caltrain and lighter cargo handling and air ground-support equipment.
- **Vehicle Miles Traveled (VMT) reduction — \$6.2 million (plus nearly \$9 million in pass-through)**, including shuttle and ride-share services connecting to mass transit, pilot services such as Bay Area Bike Share (now sponsored by Lyft), and expansion of bikeways and bike parking. The Spare the Air program is also funded in this category. For the Spare the Air program, funding is also supplied through pass-through programs, so the total amount of support is higher.
- **Household technology and local climate action — \$5.1 million**, including lawn and garden equipment replacement, wood smoke reduction (now focused on reducing combustion through transition to heat pumps), and capacity-building for schools and local government.
- **Pass-through to county transportation agencies — \$9.5 million**, primarily to implement trip reduction and on-road vehicle emissions reduction.

Notable Initiatives

Diesel Free by '33

This program focuses on introducing zero-emission technology in each category of vehicles and equipment as soon as it becomes commercially available. While the present focus is on the light-duty sector, the program is designed to incorporate categories such as marine, locomotive, and construction vehicles and equipment as technology evolves.

The **light-duty sector** demonstrates the expected pattern: While hybrid and natural gas vehicles were the best available technology 10 years ago, zero-emission vehicles have since emerged and become a focus for Air District grants and incentives funding. Currently:

- More than \$15 million has been invested by the Air District, plus additional investments from the federal and state government and the private sector to help accelerate the adoption of light-duty zero-emissions vehicles
- Almost 8,000 electric vehicle charging ports are in place

- Renewables are included in 25% of Air District-supported charging ports
- Low-income residents are a focus for vehicle electrification programs
- 3% of Bay Area vehicles are electric
- 25% of all electric vehicles in the U.S. are in the Bay Area
- Goal: Five million vehicles by 2050
 - Presently ahead of schedule
 - Limitation is availability of vehicles

R&D advanced technology demonstration programs

The Air District also participates in advanced demonstration programs, which provide proof-of-concept for the deployment of improved technologies that are not yet commercially available. The Air District has recently been serving as the lead administrator for a \$2.9 million project in partnership with Goodwill Industries, BYD (a manufacturer of heavy-duty battery electric vehicles and equipment) and CARB. This project will test and deploy 10 electric delivery trucks and one refuse hauler. Another \$3 million project in partnership with Golden Gate Zero Emissions Marine and CARB will build, test, and deploy the first hydrogen-powered ferry for passenger service in mid-2020. Both of these projects are funded primarily through the California Climate Investments program from CARB's Low Carbon Transportation program.

Port of Oakland

Over the course of ten years, Air District grants have invested approximately \$120 million in retrofitting and replacing vehicle technology and infrastructure at the Port of Oakland, including replacing approximately 2,000 drayage trucks and more than 1,000 on-road trucks, installing shore power at 14 berths, and updating harbor craft and cargo handling equipment.

Recent (since 2015) Results and Highlights

Significant reductions in regionwide emissions

- CO₂: nearly 600k tons
- NO_x: more than 3K tons
- Reactive organic gas: more than 1K tons
- PM₁₀: nearly 400 tons

Infrastructure and equipment implemented

- More than 1,000 electric vehicle charging stations
- Approximately 40 miles of bikeways
- More than 1,200 woodstoves and fireplaces replaced
- More than 100 zero-emissions transit and school buses

Supporting disproportionately impacted communities

Approximately 53% of funds went to programs in Community Air Risk Evaluation (CARE) areas.

More than \$1.2 billion in total investments

Through 2020, clean air investments from Air District grants and incentives total over \$1.2 billion. This figure represents significant growth since these programs were initiated in 1991 with approximately \$5 million.

Forthcoming Air District Work

For 2020, an estimated \$108 million will be invested through the Air District's Strategic Incentives programs. In addition to the continuation of the initiatives described above, including the expansion of eligible vehicles and equipment for Diesel Free by '33, the Air District will promote:

- expansion of **lawn and garden** equipment replacement programs,
- reducing **motorcycle** usage,
- funding **air filtration systems** and **clean air shelters**,
- funding **climate resilience** programs, and
- securing **new sources of funding** to expand eligibility of existing programs (such as VMT reduction) and initiate new efforts.

Post-Presentation Discussion

Successes. Chair Hayes and Council Member Rudolph commended the Air District's successes through its grants and incentives programs, particularly with regard to the Port of Oakland and other initiatives targeting diesel particulate matter.

VMT reduction. Council Member Rudolph asked why more funding had not been allocated to VMT reduction and inquired whether the Carl Moyer formula disincentivized VMT as a focus. Ms. Schkolnick explained that while VMT reduction is a priority for the Air District, efforts are limited by available funding sources. The only funding stream that allows for VMT reduction is the Transportation Fund for Clean Air. Annually, of that fund's approximately \$25 million, \$9 million is allocated as a pass-through to county transportation agencies and used primarily for VMT reduction. The Air District's remaining amount from that fund is split between light-duty emission reduction programs and reducing VMT. Additionally, the Air District partners with the Metropolitan Transportation Commission on regional efforts such as the [Bay Area Carpool Program](#) through 511.org and Spare the Air. Mr. Breen added that the new focus on VMT and reducing brake and tire wear and road dust comes as a result of the Air District's successes in reducing emissions from diesel particulate matter, which was previously the predominant source of PM and remains a significant health concern in disproportionately impacted communities. He noted that the science has not yet caught up to the change in priorities, and that the Air District can advocate for changes in legislation once that science is clear.

Retirement of diesel equipment. Council Member Lipman inquired whether the Diesel Free by '33 initiative is retiring diesel vehicles and equipment or only adding additional lower- and zero-emissions technologies to fleets. Ms. Schkolnick clarified that nearly all Diesel Free by '33 programs are replacement programs.

Evaluation formula. Chair Hayes asked for clarification on the use of the Carl Moyer guidelines for evaluating cost effectiveness. In response to Chair Hayes' question concerning the designation of PM₁₀ as the focus of emissions reduction, Ms. Schkolnick affirmed that the formula does specify PM₁₀ rather than PM_{2.5}. She added that there has been some discussion about converting the formula to PM_{2.5}, but it is not clear how the formula would need to be altered to result in an equivalent evaluation. She also clarified in response to Chair Hayes' question about sidebar calculations that the Air District does use additional and more complex calculations to further evaluate some programs, such as co-benefits, PM_{2.5}, brake and tire wear and road dust, and proximity to disproportionately impacted communities. Council Member Kleinman commented that the risk of specifying PM₁₀ is that coarser particles are easiest to remove and, due to their greater mass, will reflect a greater apparent reduction of emissions while potentially leaving in place all the PM_{2.5}. He noted that to ensure health protection it would be beneficial to apply an alternative formula that balances that risk. Mr. Breen clarified that while the Carl Moyer Program requires the application of the specified formula, the tools that the Air District uses (such as calculating Significant Emissions Rates and using diesel particulate matter filters) do capture PM_{2.5}. He acknowledged that the more difficult correlation to establish is the degree to which applying the Carl Moyer guidelines using Air District approaches succeeds in reducing ultrafine PM.

Renewable charging stations. Council Member Kleinman asked how many of the approximately 8,000 electrical vehicle charging stations use renewable energy. Ms. Schkolnick replied that while she did not have information about all of the charging stations in the area, approximately 25% of the stations that the Air District has funded use renewable energy (primary solar).

ADVISORY COUNCIL
MEETING 05/12/2020

Update on Particulate Matter (PM) Work: CARB PM Research and Rules

Alvaro Alvarado

Manager, Health & Ecosystems Assessment, California Air Resources Board (CARB)

<i>Main takeaway</i>	CARB is currently conducting research to better understand the air quality impact of wildfires, brake and tire wear, and ultrafine particles. New and forthcoming regulations will soon be implemented to further reduce emissions from mobile sources.
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Dr. Alvarado described the PM research currently being conducted at the California Air Resources Board and the emerging regulations designed to further decrease PM emissions. In line with the Advisory Council's requests, he focused on research concerning wildfires, brake and tire wear, and ultrafine particles. Several regulations are underway or forthcoming regarding trucks, cars, and trains.

Current CARB Research

Why PM? Dr. Alvarado began his presentation by highlighting the health impacts of PM including approximately 7,200 premature deaths each year in California. Although CARB regulations specifically track hospitalizations and emergency room visits as health outcomes of PM, CARB is also aware of and concerned with outcomes such as asthma attacks and other respiratory symptoms, adverse brain effects, and work loss days. He noted that regulations implemented over the past 25 years, particularly with respect to trucks, have contributed to substantial decreases in average PM_{2.5} concentrations.

Wildfires

Millions of Californians — by some estimates, the entire State population — were exposed to wildfire smoke in 2018, and wildfires are expected to become more frequent and widespread as a result of climate change. Although the current assumption is that all PM is equally toxic, this may not be the case; as wildfires cause more extensive damage there will be more combustion of structures and vehicles that could cause more toxic smoke. Effects could be particularly pronounced for children and older adults. Current CARB research includes:

- **Monkey study at UC Davis.** As Office of Environmental Health Hazard (OEHHA) Director Lauren Zeise described during the first Air District PM symposium, UC Davis researchers are investigating the effects of the 2008 wildfires on an outdoor captive monkey colony. When compared to monkeys in the population born in 2009, monkeys that were infants in 2008 experienced impaired immune function, changes in lung structure, and reduced

lung function, which persisted into adulthood. Moreover, immune effects were passed on to the next generation.

- **Wildfire emissions research.** Researchers at UC Berkeley and UC Riverside are using mobile monitoring platforms to investigate in-home exposures to wildfire smoke, and CARB is partnering with NASA to use aircraft to collect wildfire data.

Brake and Tire Wear

As previously noted by other presenters, as tailpipe emissions are reduced, brake and tire wear become more predominant sources of mobile-source PM. These emissions are more localized; whereas tailpipe emissions are associated with secondary PM and downwind exposures, brake and tire wear primarily affect people living near roadways. Health effects from brake and tire wear may be distinct from tailpipe emissions due to the presence of metals and plastics in wear-based PM emissions. Current CARB research includes:

- **Laboratory studies** quantifying brake and tire wear emissions using dynamometers,
- **Community exposure** studies with UC Riverside, and
- **Health effects** studies with UCLA.

Ultrafine Particles

Dr. Alvarado reiterated that ultrafine particles are difficult to measure and study, that it travels from the lungs to other organs including the brain, and that concentrations vary by space and time with peaks near roadways and during traffic that taper off at a distance and at night. He noted that prior research, primarily in Europe, has limited utility as it tends to focus on short-term exposures (one to four days) measured at only one location and using the extreme outcomes of hospitalizations and premature death. If ultrafine particles are similar to PM_{2.5}, long-term exposures can be expected to be far more significant than short-term exposures and indexed to population proximity and vulnerability.

To begin closing these research gaps, current CARB research is 1) **modeling ultrafine particles** annual average concentrations and speciation throughout the state and 2) **associating mortality** with long-term exposures using the California Teachers Study cohort. Preliminary results suggest an increased risk of premature death with high exposure to ultrafine particles. Additionally, to better understand health effects of short-term exposures to UFP, CARB is working with Council Member Kleinman to identify gaps in available research and develop a research plan.

Forthcoming CARB Regulations

A number of regulations will soon be implemented to further reduce mobile source emissions.

Heavy-Duty Trucks

- Advanced Clean Truck Regulation will transition heavy-duty trucks to zero emissions starting in 2024.
- Heavy-duty vehicle inspection and maintenance will require trucks to pass an inspection similar to a smog check in order to register with the California Department of Motor Vehicles.
- Innovative Clean Transit will transition public transit buses to zero emissions.
- Airport shuttles will also be transitioned to zero-emission vehicles by 2035.
- The Heavy-Duty Low NO_x omnibus rule will reduce NO_x as well as PM from diesel trucks, thereby addressing both primary and secondary PM.

Warehouses

- CARB is developing a Freight Handbook outlining best practices for warehouses to reduce their contributions to emission levels.
- New regulations are being developed for:
 - Transport refrigeration units,
 - Drayage trucks, and
 - Cargo handling equipment.

Passenger Cars

- Advanced Clean Cars 2 will increase the number of zero-emission vehicles on the road and reduce tailpipe emission through 2026.
- Catalytic converter theft reduction is being implemented to ensure that converters are stamped by manufacturers and registered with cars.

Trains

CARB is currently working with railyards in southern California to reduce idling. Lessons from this effort will be applied statewide, potentially through regulation, to reduce emissions from trains.

Post-Presentation Discussion

Next steps? Chair Hayes asked for the presenter's opinion on the next steps to improve public health. Dr. Alvarado, who clarified that he was speaking on behalf of himself and not CARB, replied that his priority would be to utilize low-cost in-home monitors to better understand how short-term localized exposures are affecting people in disadvantaged communities. This information could be used to direct regulations and resources toward improving health among the most vulnerable Californians, in line with AB 617.

Addressing brake and tire wear and road dust. Noting that Dr. Martien's presentation revealed that the great majority of PM emissions experienced in West Oakland are from regional sources, Chair Hayes inquired whether brake and tire wear and road dust contribute to these regional-source exposures and whether these issues are under CARB's regulatory authority. Dr. Alvarado replied that he could not speak to CARB's authority on these matters, but that brake and tire wear and road dust are more localized issues. Council Member Kleinman commented that regenerative braking technology appears to reduce brake wear and could be a useful target for incentive structures. Council Member Lipman clarified that such technology can only be used with hybrid vehicles, but that it could be promising as an innovation that benefits both fuel efficiency and PM reduction.

Relative health impact of wildfires. Chair Hayes asked the presenter to characterize the relative contribution of wildfires to public health risk in comparison to day-to-day PM emissions from other sources. Dr. Alvarado responded that while there was not sufficient research to quantify the impact of wildfires at their newly intensified levels, it does appear that wildfire smoke has health effects similar to those of other types of PM exposure.

Defining premature death. Council Member Lipman asked for clarification on how premature death is defined in CARB's calculations. Dr. Alvarado, along with Council Members Kleinman and Rudolph, clarified that the calculation is a statistical analysis of population-level loss of life relative to life expectancy.

New technologies increasing UFP? Council Member Solomon recalled that when natural gas and diesel reduction technologies were first being developed for transportation, there was some concern that they could increase ultrafine particle emissions. She asked whether that prediction had been accurate. Dr. Alvarado responded that while he would need to check to be certain, he believed that an initial increase in ultrafine particles was seen in early natural gas vehicles, but the problem had since been addressed through controls.

Update on Particulate Matter (PM) Air District Work: PM Rules and Regulatory Development

Victor Douglas

Manager, Rule Development, Bay Area Air Quality Management District

<i>Main takeaway</i>	The Air District continues to update its rules and regulations to further limit PM exposures. As its focus shifts from an exclusively regional perspective to reducing risks for disproportionately impacted local communities, the Air District is exploring the possibility of treating PM as a toxic air contaminant. Although the State of California does not presently recognize undifferentiated PM as an air toxic, it may be possible for the Air District to do so independently.
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Mr. Douglas presented a brief overview of the history, current efforts, and emerging directions for rule development in the Air District. He described how the Air District's emerging focus on health risks for local communities is prompting further consideration of rulemaking regarding stationary source emissions and potential treatment of undifferentiated PM as an air toxic.

Current Air District Work

Approaches

The Air District has approached PM regulation in three distinct ways:

1. As a **nuisance**, which was the initial approach in the first Air District regulations adopted in 1979 and 1980 regarding open burning and dust and aerosols.
2. As a **criteria pollutant**, which is the current, regional approach to undifferentiated PM governing attainment of ambient air quality standards. These regulations apply to both primary PM (filterable and condensable) and precursors of secondary PM (oxides of nitrogen and sulfur dioxide). With this approach, the Air District selects the most cost-effective strategies to achieve regional standards.
3. As an **air toxic**, which is the approach taken specifically to diesel PM to limit localized exposures. The air toxic approach can be either risk-based (utilizing modeling) or technology-based (limiting emissions from specific sources, such as dry-cleaning facilities or backup generators).

Mr. Douglas mentioned that a forth potential approach would be to consider climate impacts.

Regulations and Rules

There are 57 Air District rules that directly or indirectly address PM, housed within a range of regulations including those governing permits, open burning, inorganic gaseous pollutants,

hazardous pollutants, and miscellaneous standards of performance. Several PM regulations and rules have been updated since 2012, including a new Regulation 6 on Particulate Matter established in 2018.

Mr. Douglas specifically highlighted **Air District Rule 11-18: Reduction of risk from air toxic emissions at existing facilities**. Recent revisions to this rule reduced the threshold limit on toxic air contaminants by an order of magnitude (from 100 ppm to 10 ppm), requiring approximately 80 existing permitted facilities to develop plans to reduce their emissions or install best available control technologies. This rule is one example of the Air District's emerging focus on localized, community-specific exposures and health risk. Another example he mentioned is **Rule 6-5: Particulate emissions from refinery fluidized catalytic cracking units**, which was recently revised to further reduce localized PM emissions from refineries.

Forthcoming Air District Work

Localized Sources

As the Air District turns increasing attention to localized health impacts of PM for disproportionately impacted communities, it is exploring further regulation regarding:

- **Restaurants,**
- **Wood smoke,** and
- **Indirect or magnet sources** (e.g. warehouses, which do not directly emit PM, but attract PM-producing traffic such as diesel trucks).

PM as an Air Toxic

The Air District is also engaged in exploring the possibility of approaching undifferentiated PM as an air toxic. The present constraint is that the Air District has relied on the State of California's list of toxic air contaminants, which does not include undifferentiated PM. Air District rulemaking that treats PM as a toxic could potentially be developed, independent of state-level air toxics regulations, if the Air District is able to identify appropriate methodology to perform health risk assessments.

Post-Presentation Discussion

Shifting focus to greenhouse gas emissions and global warming? Council Member Rudolph asked how a hypothetical emphasis on climate impacts would shift the Air District's approach to PM regulation. Mr. Douglas responded that reducing climate impacts is a co-benefit of the other three approaches to PM (as a nuisance, criteria pollutant, and air toxic). Mr. Nudd added that an emphasis on climate impacts could shift the Air District's focus more heavily toward black carbon, but that he was uncertain of the effect such a shift would have on health risks.

Council Member Rudolph commented that climate change presents the greatest health risk to the population.

Toxics framework. Chair Hayes asked for clarification on the process by which undifferentiated PM could be introduced into the regulatory framework as a toxic air contaminant. Mr. Bunger explained that the first option was for OEHHA to add undifferentiated PM to its list of air toxics, which would immediately trigger its inclusion in several existing Air District rules including 11-18 (existing facilities) and 2-5 (new source review). The Air District has requested this action from OEHHA, and analysis is underway at the state level, but the Air District does not have the power to compel such action by the State. However, in theory, the Air District does have the ability to independently classify undifferentiated PM as a toxic air contaminant and treat it accordingly. To do so, the Air District would need to identify appropriate methodology to use for health risk assessment. Chair Hayes noted that the Air District already concerns itself with controlling source-specific PM emissions in its modeling regarding attainment of ambient air quality standards. Mr. Bunger clarified that such analysis does not presently apply to every source of PM emissions, as it would if PM were classified as an air toxic. Board Member Sinks asked whether OEHHA has committed to a schedule for evaluating undifferentiated PM for potential inclusion on its air toxics list. Mr. Nudd responded that he does not observe a willingness on the part of OEHHA to enact statewide recognition of undifferentiated PM as an air toxic in the near term, likely due to present challenges in some parts of the state with meeting existing federal air quality standards. However, he explained that OEHHA is assisting the Air District with its PM analyses, and does appear willing to support the Air District (at least through peer review) if it moves toward independently recognizing undifferentiated PM as a toxic. Mr. Bunger noted that the Air District is also exploring other distinct PM species (besides diesel PM) as air toxics.

ADVISORY COUNCIL
MEETING OF 03/12/2020

Discussion of Draft October PM Symposium Report and Advisory Council Q&A Document

The Advisory Council discussed the draft report on the October PM Symposium prepared by consulting technical writer Elisabeth Andrews on behalf of the Air District, available online at <https://www.baaqmd.gov/news-and-events/conferences/pm-conference>.

The Advisory Council briefly considered potential updates such as revising the “topics for further exploration” identified in the draft report into Advisory Council findings and creating further content for the “Next Steps” section. Chair Hayes also introduced the prospect of incorporating an additional document into the report. That document, which he initiated, provides responses to the questions originally posed by the Advisory Council and the Air District to the October PM Symposium panelists (see Appendix for the list of questions). His aim was to distill the information shared by the panelists into concise answers to each of the questions. Ultimately, the Advisory Council determined that because the purpose of the October PM Symposium report was to serve as a record of the October PM Symposium, it was appropriate to limit that report’s contents to what had been shared during that event.

Edits to Draft October PM Symposium Report. Three clarifying edits were made to the October PM Symposium report draft, all within the section on “Advisory Council Deliberation.” The Advisory Council agreed to release the draft report for public comment following these edits.

Progress of Q&A document. Council Member Solomon volunteered to assist Chair Hayes in further developing the question-and-answer document. Several Advisory Council members made suggestions regarding the draft Q&A:

- Council Members Solomon and Kleinman supported recommending the treatment of PM as a non-threshold toxic. Council Member Kleinman noted that the dose-response relationship appears to be curvilinear rather than linear.
- Council Member Solomon argued for incorporating information from the forthcoming March PM Symposium (focused on community organizations) into the Q&A.
- Council Member Rudolph stated the need to emphasize new evidence for likely causal relationships between PM and specific health effects and the greater sensitivity of vulnerable populations. She also noted the importance of reducing ambient PM levels as much as possible in the presence of events such as wildfires that cannot be placed into a regulatory framework.

Public Comment

Three opportunities were provided for public comment: prior to presentations from Air District staff, following presentations from Air District staff, and toward the close of the meeting following Advisory Council deliberation on the October PM Symposium Summary draft report. A list of the commenters follows; their comments are categorized by topic and summarized below.

List of Commenters

Dr. Ashley McClure, primary care physician, Oakland
Jed Holtzman, 350 Bay Area
Greg Karas, Communities for a Better Environment
Richard Grey, 350 Bay Area

Comments

Structure of public comment. Dr. McClure suggested that comment on agenda items should take place after the agenda items had been discussed by presenters and the Advisory Council. Mr. Holtzman requested that the Advisory Council determine and publicize the timing of public comment periods in advance of Advisory Council meetings. Council Member Borenstein concurred with Mr. Holtzman's suggestion, and Chair Hayes indicated that the Advisory Council would implement this suggestion by formally determining public comment periods in advance so that people who wish to comment can plan when to be present at Advisory Council meetings.

Urgency. Dr. McClure stated that the October PM Symposium left little ambiguity regarding the health impacts of PM, and asked why further symposia were necessary prior to rulemaking. Mr. Holtzman also questioned the pace of progress and the duration of time between meetings. Council Member Borenstein stated that while the Advisory Council was interested in recommending the Air District move toward stricter PM controls, it was not yet clear precisely what the targets should be. He emphasized the importance of measured and deliberative action, as rulemaking is likely to be challenged in court.

Strong statements. Addressing the need to establish a public record to support rulemaking, Mr. Holtzman urged Advisory Council members to "be very fierce in your statements" regarding the implications of the science.

Zero-carbon economy. All four commenters spoke of a need to phase out fossil fuel combustion and transition to a zero-carbon economy. Tying fossil fuel combustion to the climate conditions that have led to increased wildfires, commenters emphasized that reducing

risks from wildfires can only be achieved by reducing the greenhouse gas emissions that ultimately contribute to their frequency.

Air District actions. Commenters recommended specific actions for the Air District:

- Set PM threshold levels based on sensitive populations (Holtzman)
- Focus separately on top local and regional sources of PM (Holtzman)
- Update modeling approaches for brake and tire wear and road dust (Holtzman)
- Address agriculture as a source of NH₃ emissions (Holtzman)
- Use fees on PM emitters to support increased instrumentation for speciation (Holtzman)
- Increase attention to black carbon, which has both health and climate impacts (Holtzman)
- Verify low-cost sensors and utilize their data once verified (Holtzman)
- Tighten controls on ultrafine particles, exposure to which is an environmental justice issue as risks are closely associated with proximity to sources (Karas)
- Utilize findings from the California Household Exposure Study, which measured indoor and outdoor PM_{2.5} concentration levels and found both to be higher near refineries (Karas)
- Focus attention on refineries and the oil industry, particularly fluid cracking units (Grey)
- Develop messaging campaigns to help the public recognize the connection between sources of air pollution and health outcomes (McClure)
- Emphasize, possibly at the March PM Symposium, the meaning and values driving the pursuit of tighter air quality controls; “Give us all something to believe in” (McClure)

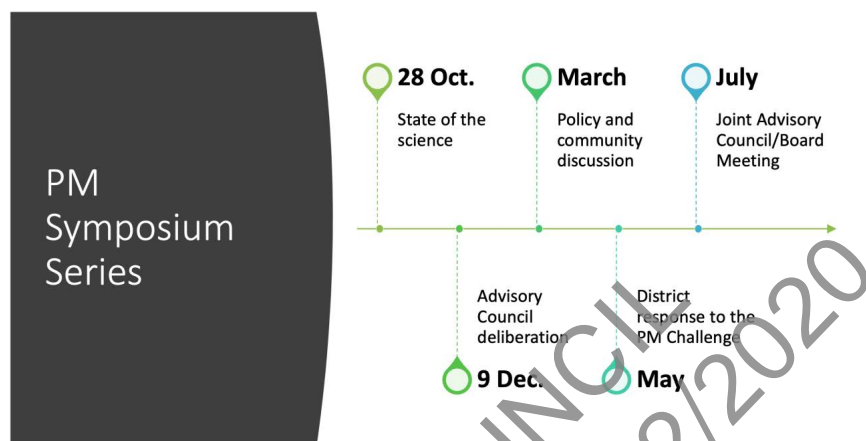
Partner actions. Commenters also recommended actions that are outside Air District jurisdiction:

- Pursue a tighter state standard for PM (Holtzman)
- Offer free public transit, either on Spare the Air days or at all times (McClure)

ADVISORY COUNCIL
MEETING OF 08/21/2020

Next Steps

The PM Symposium Series continues as depicted in the timeline below. The next symposium will take place on March 24, 2020, in Oakland, focused on presentations from community organizations and leaders. Planning is currently underway.



Following the March symposium, the May event is expected to focus on formulating potential Air District plans to further reduce Bay Area health risks from PM, particularly for disproportionately impacted communities.

The July event brings together the Advisory Council and the Board of Directors to discuss the information and suggestions shared throughout the PM Symposium Series. During this final meeting in the series, the Advisory Council is expected to present its findings to the Board of Directors regarding particulate matter and health in the Bay Area.

Appendix — Questions from the Advisory Council and Air District sent to October PM Symposium Panelists

GENERAL

- What is bullseye in clean air target? How clean is clean enough?
- How will we know when we get to target? What metrics should we use to track progress?
- How do we combine criteria pollutants and toxics? Cancer and non-cancer health endpoints? Short- and long-term effects?
- How can we make sure everyone is treated fairly?
- How can we ensure that everyone breathes clean air?
- What are most important actions that can be taken now? And, in future?

HEALTH EFFECTS PANEL

- Are current PM standards sufficiently health protective?
- Are some species of PM more dangerous than others?
- What is role of ultrafine particles (UFPs)?
- Should form of target expand to account for more than just mass?
- How should we include draft PM ISA's new "likely-causal" health endpoints (nervous system effects, cancer) and new more sensitive populations (children, lower socio-economic status)?
- What are health impacts of high-concentration acute events (e.g., wildfires)? How should we compare them to day-to-day PM impacts?

EXPOSURE AND RISK PANEL

- What are major sources of PM in the Bay Area?
- What PM levels exist in Bay Area? What health risks do they pose?
- How much additional health benefit can be achieved?
- How should we account for spatial scale of effects (i.e., regional versus local-scale impacts, including proximity to major sources)?
- How should we determine which measures would most move public health needle?

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Stan Hayes and Members
of the Advisory Council

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 6, 2020

Re: Community Particulate Matter (PM) Discussion Overview

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

On February 27, 2020, approximately 30 community members from a variety of local organizations met together with Air District staff at the Bobby Bowens Center in Richmond, California. At this meeting, community members received presentations from Air District staff on particulate matter sources, emissions, and policy approaches to reducing particulate matter in the Bay Area. Community members asked questions, shared their concerns regarding particulate matter and its health effects, and discussed policy strategies.

A summary of the discussion is included for the Advisory Council's review.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Elinor Mattern
Reviewed by: Gregory Nudd

Attachment 4A: Community Particulate Matter Discussion Summary

SUMMARY: Community Particulate Matter Discussion February 27, 2020

NOTE: A full transcript of the event is available from the stenographer. This summary aims to capture key themes in advance of the submission date for background materials for the next PM Symposium.

Overview

Community members, grassroots organization leaders, and Air District staff members met at the Bobby Bowens Center in Richmond on the evening of February 27, 2020 to gather community input on particulate matter (PM) impacts, monitoring, and regulatory efforts. The event was organized by a Design Team of community leaders with assistance from Elinor Mattern of the Air District's Community Engagement Section. Approximately 30 people attended to express their concerns regarding PM, its sources, and its health effects.

Input from community members centered on the following issues:

Localized PM data availability

- Desire for data beyond West Oakland
- Desire for real-time, continuous, publicly accessible localized monitoring
- Consolidating/sharing community-collected data (e.g. PurpleAir)

Toxicity of different PM species

- Concerns regarding severity of problems from refineries and other permitted sources (e.g. cement plant, concrete crushers, metal processing facilities)
- Skepticism regarding wood burning as a major driver of health impacts

Lack of observable results from prior rulemaking

- 2017 Clean Air Plan
- Crude slate inventory
- General enforceability issues

Potential for problems to worsen

- Issuance of new permits
- Emerging indoor air concerns (e.g. vapor intrusion) beyond the scope of the Air District
- Climate impacts
- Lengthy time horizon prior to implementation (e.g. diesel PM rules took 10 years)

This summary provides a brief background on the event. Additional details regarding these community concerns and the Air District's clarifications in reply are noted in the transcript.

Background

The February Community Discussion in Richmond was part of a series of Bay Area events focused on health effects of PM. This series began in October of 2019 and will culminate in a set of findings from the Air District's Advisory Council to be delivered to the Air District Board. The Community Discussion preceded a planned symposium that was to be held in Oakland, originally scheduled for March 24th, 2020, but postponed due to COVID-19, at which representatives from local community organizations would present to the Advisory Council regarding local PM efforts, needs, and priorities. The purpose of the Community Discussion was to gather additional community input and engagement prior to that next Symposium.

The following community leaders worked together to organize the event with assistance from Elinor Mattern of the Air District's Community Engagement Section:

- Katherine Funes - New Voices Are Rising
- Richard Gray - 350 Marin
- Jed Holtzman - 350 Bay Area
- Ashley McClure - California Climate Health Now
- Steve Nadel - Sunflower Alliance
- Ken Szutu - Vallejo Citizen Air Monitoring Network
- LaDonna Williams - All Positives Possible

A list of community members who attended the event is provided in the attached Appendix, along with information on the missions of the organizations with which they are affiliated.

Structure

The gathering began at 5pm with informal sharing of a meal, followed by introductions from discussion facilitators Azibuile Akaba (Senior Public Information Officer, Air District) and Laura Neish (Executive Director, 350 Bay Area). Jed Holtzman (350 Bay Area) also offered welcoming remarks. Brief presentations by Air District staff preceded the discussion portion of the event:

- Goals of the PM Symposium Series (Greg Nudd)
- Major Sources of Fine Particulate Matter (Phil Martien)
- Current & Potential Rules to Reduce PM (Jacob Finkle)
- Policy Approaches for Particulate Matter (Victor Douglas)

Attendees asked questions and contributed comments following each presentation in addition to participating in the discussion portion of the gathering. Facilitators concluded the event at 8pm. The content of these exchanges is summarized thematically in the following section. Details on Air District presentations are omitted as this information is also being shared in the PM Symposia and details are recorded in the transcript of the Community Discussion.

Key Concerns Expressed by Community Members and Air District Replies

Localized PM data availability

"I think the public needs to have more access to what is going on."

Desire for data beyond West Oakland. Several community members expressed frustration with the repeated presentation of West Oakland information, as such information has not been provided for other areas. For some community members, this emphasis on West Oakland felt "disrespectful" to other communities.

Air District reply: The localized analysis piloted in West Oakland is a very new approach, so it requires cautious expansion. Vehicle-mounted monitors are in the process of collecting data for the entire Bay Area. Richmond data is now available. Information for other communities will be rolled out over the next couple of years.

Desire for real-time, continuous, publicly accessible localized monitoring. Community members seek the capability to access "readouts" in real time to determine local air quality, particularly in the presence of unusual odors or flares. Concerns were expressed regarding current monitoring accuracy, with the example given of normal readings following permitted-facility accidents. An additional concern was the perception that polluters are not required to pay for monitoring: "Currently all this cost falls onto the community and we don't have the money. And if we don't have the money we don't have the monitoring and the business pollutes freely."

Air District reply: Monitoring is continuous and publicly accessible but not in real time. The Air District hopes to move toward real-time monitoring, but presently both sample analysis and data analysis create lags. Permitted facilities are required to conduct and pay for their own monitoring, and the Air District performs tests to confirm the accuracy of that monitoring.

Consolidating/sharing community-collected data (e.g. PurpleAir). As organizations and community members have begun collecting air monitoring data themselves using technology such as PurpleAir, they are seeking a means of consolidating and sharing those data. Steve Nadel of the Sunflower Alliance asked whether the Air District is working on that effort.

Air District reply: There is a new third-party "Bay Air Center" (independent of the Air District) that will provide technical support for monitor selection and siting. The California Air Resources Board has agreed to centralize air quality sensor data through their grant program. This process is likely to be challenging.

Toxicity of different PM species

"Just presenting the percentages [from different sources] doesn't give the full picture of toxicity. Not all particulate matter is created equal."

Concerns regarding higher severity of PM health effects from permitted sources. Depiction of PM contributions from different sources as percentages of a total raised concerns for attendees who stated that some types of PM are more toxic than others. Many comments in the meeting focused on permitted sources, including oil refineries, metal processing facilities, and concrete crushers. Community representatives want to understand where the “fault lines” lie in terms of permitted facility PM fallout — for example, a community may be downwind of a refinery yet not be considered a “refinery community” depending on where boundaries are drawn.

Air District reply: Compounds that are known to be toxic (e.g. toxic metals) are independently tracked. However, there is insufficient information regarding the toxicity of undifferentiated PM, which is why the Air District takes a precautionary approach assuming all PM to be highly hazardous. Regarding impacts from permitted facilities, studies are currently being conducted by the Air District to better understand PM emissions from refineries and to track exposures from local sources of PM in disproportionately burdened communities. Additionally, new rules regarding fluidized catalytic cracking units are in the final stages of development. With respect to the East Oakland AB&I metal foundry, the Air District is involved in resolving issues with Rules 11-18 and 12-13 regarding air toxics and PM.

Skepticism regarding wood burning as a major driver of health impacts. A significant amount of skepticism was expressed by community members regarding wood burning as a leading PM health issue. Air District measurement and monitoring methods were questioned. There was apparent frustration with the implied equating of wood smoke to refinery smoke.

Note: A community member who was not able to be present at the gathering, Richard Gray of 350 Bay Area, stated upon reading the transcript that in the San Geronimo area where he lives residential wood burning does have a substantial negative impact on air quality. He expressed that certain weather patterns can cause this wood smoke to remain in the immediate area rather than dissipate, and that problems associated with that smoke exposure have prompted numerous residents to relocate.

Air District reply: Data collection on wood burning involves not only surveys and modeling but also filter analysis to reveal the components of localized PM: “We can tell what is on those filters and what fraction is from wood burning.” However, it is expected that wood burning is more prevalent in some areas than others, which will be clarified in the forthcoming community-level studies. Current science indicates that wood smoke is highly toxic.

Lack of observable results from prior rulemaking

“It seems like implementation is a problem.”

2017 Clean Air Plan. Jed Holtzman of 350 Bay Area stated that many of the solutions that the Air District is currently presenting were already in the 2017 Clean Air Plan and asked what institutional constraints are preventing implementation. He also described an existing rule

requiring facilities to conduct health impact assessments and stated that two and a half years after the rule had been developed this is still not happening.

Air District reply: New approaches are being implemented to speed up the process. This PM Symposium Series is designed to ensure that the full impact of PM — as reflected in the science and the community — is clear to decision makers. In addition to the health costs, the economic costs of PM are being calculated in order to further incentivize action. Additionally, the Air District is pursuing innovative means of clarifying jurisdiction for local sources of PM, such as “magnet sources” like warehouses that attract truck traffic.

Crude slate inventory. Rule 12-15, requiring accurate crude inventories, was brought up by Shoshana Wechsler of 350 Bay Area/Sunflower Alliance, who asked for the status of this data.

Air District reply: There have been some reporting difficulties because legal constraints prevented the Air District from specifying formats for data collection. A means of requiring standardized reporting has now been identified and this information will soon be available.

General enforceability issues. Several issues with enforceability were raised, such as lack of moisture content measurement at construction sites to limit dust, and citations of violations being limited to “visibility” issues following fires at permitted facilities. Ken Szutu of the Vallejo Citizen Air Monitoring Network suggested that perhaps rather than arranging community meetings with the Air District’s rulemaking teams, these meetings should be centered on the departments responsible for enforcement.

Air District reply: The Air District does not have “police powers.” The enforcement process is carried out by the District Attorney. The Air District strives to work collaboratively with permitted facilities to ensure compliance.

Potential for problems to worsen

“You can’t stop the cold air coming in if you close a window on one end and then open a different one on the other.”

New permits continue to be issued. Much attendee support was expressed for a comment from LaDonna Williams of All Positives Possible that, despite all the discussion about reducing emissions, the Air District continues to issue permits to new sources.

Air District reply: The Air District is statutorily obligated to issue permits. However, the aim is to put the brakes on emissions in areas that are already overburdened. The Air District is developing an approach intended to consider existing PM exposures in the community in order to ensure that burden is not increased.

Emerging indoor air concerns. Residents are experiencing problems with toxic vapor intrusion of polychlorinated biphenyl (PCB) and trichlorobenzene (TCB) compounds in their water delivery systems. They asked how the Air District can help.

Air District reply: Although household indoor air is not within its authority, the Air District is seeking to collaborate with the Water Control Board and will be involved in a multi-agency workshop to try to speed resolution of this problem.

Climate impacts. A community member inquired about the connection between the health impacts under discussion and the public health threat of the climate crisis.

Air District reply: The 2017 Clean Air Plan demonstrates the linkages, with one of its three pillars focusing on health.

Lengthy time horizon prior to changes being implemented. Citing the example of diesel PM rulemaking taking 10 years, concern was expressed that the present process may be many years away from producing meaningful change: “How do we compress that?”

Air District reply: With the Board’s buy-in, we can start working on elements of our strategy without having to wait years. We are working to compress that timeline.

ADVISORY COUNCIL
MEETING OF 05/12/2020

APPENDIX - Attendee List for Community Particulate Matter Discussion – 2/27/2020

Organization	Representative(s) Attending (+ Organizational Role)	Website	Notes on Organization Mission (based on websites)
350 Bay Area	Jed Holtzman (Senior Policy Analyst)	https://350bayarea.org/	Bay Area organization supporting policies that promote clean energy, eliminate fossil fuels, and facilitate just and socially equitable solutions to ensure a livable planet for future generations.
350 Contra Costa	Jackie García	https://350bayarea.org/350contracosta	Contra Costa team of 350 Bay Area (see above)
All Positives Possible	LaDonna Williams (Programs Director), Pat Dodson and Janniece Murray	https://www.guidestar.org/profile/61-1588146	East Bay nonprofit supporting efforts of low-income communities of color to confront crises of environmental health and injustice.
Bayview Hunters Point Resident	Raymond Thompkins	N/A	N/A
California Climate Health Now	Ashley McClure, Cynthia Carmichael	https://www.climatehealthnow.org/	California physicians and health professionals “who recognize climate change as the public health and equity emergency of our lifetimes.”
Communities for a Better Environment	Andrés Soto	http://www.cbecal.org/	California environmental justice organization focused on global climate issues and local transformation toward sustainable communities. Provides organizing skills, leadership training, and scientific and legal assistance.
Groundwork Richmond	Jen Fong	http://www.groundworkrichmond.org/	Richmond environmental organization helping youth develop leadership potential through science, technology, engineering, arts, and math.
Higher Ground Neighborhood Development Corp.	Khariyyah Shabazz (Assistant Programmatic Director) and Reggie Archie	http://www.highergroundndc.com/	Oakland-based neighborhood development corporation focused on youth.
Interfaith Climate Action Network of Contra Costa County	Will McGarvey,	http://www.ican-cc.org/	Contra Costa County organization educating faith and non-faith communities about mitigating climate change and providing advocacy on their behalf to ensure oppressed community voices are heard by policymakers, industries, and other organizations.

New Voices Are Rising/Rose Foundation	Katherine Funes (Youth Engagement Co-Director) & 3 youth	https://rosefdn.org/new-voices	Oakland-based project seeking to increase civic participation within underrepresented communities, increase young people's commitment to environmental justice, and reduce air and water pollution in the SF Bay Area. Part of the Rose Foundation for Communities and the Environment.
No Coal in Oakland	Misao Brown	https://nocoalinoakland.info/	Oakland-based organization campaigning to stop the threat of coal being transported by rail into Oakland for export overseas.
No Coal in Richmond	Jaime Perez	https://ncir.weebly.com/	Richmond-based organization supporting phase-out of coal and pet coke operations to protect health
Physicians for Social Responsibility	Robert Gould (President), Jeff Ritterman (Vice President of Board of Directors)	http://sfbaypsr.org/	Bay Area chapter of organization seeking to promote public policies that protect human health from climate change and environmental degradation as well as nuclear war and other weapons of mass destruction, gun violence, and other social injustices.
Rodeo Citizens Association	Janet Pygeorge, Charles Davidsen	https://rodeocitizensassociation.org/	Non-profit organization devoted to issues concerning the unincorporated community of Rodeo, California. Their primary purpose is to address local concerns to health, safety and the environment.
Sierra Club Bay Chapter	Dave McCoard (Co-Chair of Energy Committee)	https://www.sierraclub.org/san-francisco-bay	SF Bay Area chapter of national grassroots environmental organization. Chapter has nearly 40,000 members. Issues include energy and climate, sustainable communities, parks and open space, environmental justice, water, and wilderness and wildlife.
Sunflower Alliance	Steve Nadel and Shoshana Wechsler	https://www.sunflower-alliance.org/	Bay Area citizen group focused on halting fossil fuel production and transport, particularly in the East Bay.
Vallejo Citizen Air Monitoring Network	Ken Szutu (Chair)	http://citizenairmonitoringnetwork.org/vallejo/	Vallejo citizen group collecting and publicizing local air quality data to enable rapid response to air quality problems.
Youth vs Apocalypse	2 youth	http://youthvsapocalypse.org/	Bay Area group of diverse young climate justice activists (ages 10-18) working to lift the voices of youth, in particular youth of color, and fight for a livable climate and an equitable, sustainable, and just world through policy advocacy. Supported by 350 Bay Area.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Stan Hayes and Members
of the Advisory Council

From: Jack P. Broadbent
Executive Officer/APCO

Date: May 6, 2020

Re: Update on Air District Particulate Matter (PM) Potential Policy Strategies

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

Staff will provide presentations on existing and future work regarding particulate matter (PM).
Topics to be discussed will include:

- Emissions Inventory
- Control measures identified in the West Oakland Community Action Plan
- Rule development
- Potential approaches to regulating fine particulate matter moving forward

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Sonam Shah-Paul

Reviewed by: Gregory Nudd

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: Spare the Air Advertising Campaign Video and Update

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Since 1991, the Spare the Air campaign has encouraged the public to adopt long-term behaviors to reduce air pollution and protect air quality. This year's Spare the Air campaign will feature all new advertising and a new remote work focus.

Remote work is the focus of this season's campaign due to the COVID-19 pandemic and recent Bay Area wide shelter-in-place orders. The orders required a major shift in how Bay Area employers do business. Many quickly made the adjustment to remote work and the Spare the Air campaign sees extensive room for growth, continued success and feasibility region-wide.

DISCUSSION

Staff will present the new Spare the Air commercial and provide program updates.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. Funding for the annual report was included in the Fiscal Year Ending (FYE) 2021 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Kristina Chu
Reviewed by: Kristine Roselius

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Rod Sinks and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: July 9, 2020

Re: COVID-19 Shelter-in-Place and Changes in Particulate Matter_{2.5} (PM_{2.5})
Concentrations in the Bay Area

RECOMMENDED ACTION

None; receive and file

BACKGROUND

On March 16, 2020, shelter-in-place orders due to the COVID-19 pandemic defined changes in human activity including commuting patterns, work-at-home policies, travel restrictions, and the shutdown of non-essential businesses. Air District staff estimate that these changes resulted in an estimated 50-80% reduction of mobile source emissions, which translates to a 15-25% estimated reduction in total PM_{2.5} emissions. These reductions are not uniform throughout the Bay Area and, therefore, have had varying impacts on PM_{2.5} concentrations throughout the region.

DISCUSSION

Air District staff analyzed fixed-site air monitoring data to understand changes in PM_{2.5} concentrations during the mandated shelter-in-place. These preliminary analyses focus on *how* PM_{2.5} concentrations changed both throughout the region and at individual sites but does not attempt to quantify the differences in concentrations or link the observed differences to a specific cause or change in emissions. Quantification of reduction in PM_{2.5} concentrations specifically due to shelter-in-place activities require a more robust analysis and consider all contributing factors including seasonality, meteorology, annual variability, and expected reductions from existing air quality management programs. The following discussion summarizes the general preliminary observations.

Generally, 24-hour PM_{2.5} concentrations across the Bay Area in 2020 were low both before and after shelter-in-place, which is consistent with previous years, since the springtime months of March to May usually have the lowest PM_{2.5} throughout the year. At some sites, average concentrations during shelter-in-place are lower than average springs during previous years for some sites, but very similar at others. Previous years also have had similar ‘clean days’ throughout the area, but all locations experienced lower maximum daily concentrations, suggesting a consistent decrease in peak values. These changes in patterns vary from site to site.

As Air District staff continue to assess Bay Area air quality, they can provide analysis for episodic events of interest including wildfires, shelter-in-place, and additional annual variability as part of existing efforts.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Michael Flagg and Kate Hoag
Reviewed by: Ila Perkins