



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

BOARD OF DIRECTORS REGULAR MEETING

October 17, 2018

A meeting of the Bay Area Air Quality Management District Board of Directors will be held at 9:30 a.m. in the 1st Floor Board Room at the Air District Headquarters, 375 Beale Street, San Francisco, California 94105.

Questions About an Agenda Item

The name, telephone number and e-mail of the appropriate staff Person to contact for additional information or to resolve concerns is listed for each agenda item.

Meeting Procedures

The public meeting of the Air District Board of Directors begins at 9:30 a.m. The Board of Directors generally will consider items in the order listed on the agenda. However, any item may be considered in any order.

After action on any agenda item not requiring a public hearing, the Board may reconsider or amend the item at any time during the meeting.

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.

Public Comment Procedures

Persons wishing to make public comment must fill out a Public Comment Card indicating their name and the number of the agenda item on which they wish to speak, or that they intend to address the Board on matters not on the Agenda for the meeting.

Public Comment on Non-Agenda Matters, Pursuant to Government Code Section 54954.3 Speakers wishing to address the Board on non-agenda matters will be heard at the end of the agenda, and each will be allowed up to three minutes to address the Board at that time.

Members of the Board may engage only in very brief dialogue regarding non-agenda matters, and may refer issues raised to District staff for handling. In addition, the Chairperson may refer issues raised to appropriate Board Committees to be placed on a future agenda for discussion.

Public Comment on Agenda Items The public may comment on each item on the agenda as the item is taken up. Public Comment Cards for items on the agenda must be submitted in person to the Clerk of the Boards at the location of the meeting and prior to the Board taking up the particular item. Where an item was moved from the Consent Calendar to an Action item, no speaker who has already spoken on that item will be entitled to speak to that item again.

Speakers may speak for up to three minutes on each item on the Agenda. However, the Chairperson or other Board Member presiding at the meeting may limit the public comment for all speakers to fewer than three minutes per speaker, or make other rules to ensure that all speakers have an equal opportunity to be heard. The Chairperson or other Board Member presiding at the meeting may, with the consent of persons representing both sides of an issue, allocate a block of time (not to exceed six minutes) to each side to present their issue.

BOARD OF DIRECTORS REGULAR MEETING AGENDA

WEDNESDAY
OCTOBER 17, 2018
9:30 A.M.

BOARD ROOM
1ST FLOOR

CALL TO ORDER

Chairperson, David Hudson

1. **Opening Comments**
Roll Call
Pledge of Allegiance

The Chair shall call the meeting to order and make opening comments. The Clerk of the Boards shall take roll of the Board members. The Chair shall lead the Pledge of Allegiance.

PUBLIC COMMENT ON NON-AGENDA MATTERS

2. **Public Comment on Non-Agenda Items, Pursuant to Government Code Section 54954.3**
For the first round of public comment on non-agenda matters at the beginning of the agenda, ten persons selected by a drawing by the Clerk of the Boards from among the Public Comment Cards indicating they wish to speak on matters not on the agenda for the meeting will have two minutes each to address the Board on matters not on the agenda. For this first round of public comments on non-agenda matters, all Public Comment Cards must be submitted in person to the Clerk of the Board at the location of the meeting and prior to commencement of the meeting.

CONSENT CALENDAR (ITEMS 3-7)

Staff/Phone (415) 749-

3. Minutes of the Regular Board of Directors Meeting of September 19, 2018
Clerk of the Boards/5073

The Board of Directors will consider approving the draft minutes of the Board of Directors Meeting of September 19, 2018.

4. Board Communications Received from September 19, 2018 through October 16, 2018
J. Broadbent/5052
jbroadbent@baaqmd.gov

A copy of communications directed to the Board of Directors received by the Air District from September 19, 2018 through October 16, 2018, if any, will be at each Board Member's place.

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

In accordance with Section 5.4 (b) of the Air District's 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 month.

6. Notices of Violations Issued and Settlements in Excess of \$10,000 in the month of September 2018 **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 September.

7. Authorization to Increase the Contract Agreement with Van Dermyden Maddux Law Corporation **J. Broadbent/5052**
jbroadbent@baaqmd.gov

The Board of Directors will consider authorizing the Executive Officer/APCO to increase the contract agreement with Van Dermyden Maddux Law Corporation, in an amount not to exceed \$140,000.

COMMITTEE REPORTS

8. Report of the **Climate Protection Committee** Meeting of September 20, 2018
CHAIR: T. Barrett **J. Broadbent/5052**
jbroadbent@baaqmd.gov

The Committee received the following reports:

A) Update on Development of Rule 13-1: Significant Methane Releases

1) None; receive and file.

B) Organics Recovery Strategy

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 September 27, 2018

CHAIR: S. Haggerty

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 \$100,00 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) Update on Status of Heavy-Duty Zero-Emission Mobile Source Technologies

- 1) *None; receive and file.*

C) Update on Air District Grant Program Funding For Fiscal Year Ending (FYE) 2019

- 1) *None; receive and file.*

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

www.baaqmd.gov/bodagendas

PRESENTATIONS

10. **2018 Summer Spare the Air Season Summary and Winter Spare the Air Season Overview**

J. Broadbent/5052
jbroadbent@baaqmd.gov

Staff will present the Board of Directors with the 2018 Summer Spare the Air Season Summary and Winter Spare the Air Season Overview.

11. **Climate Technology Review and Outreach**

J. Broadbent/5052
jbroadbent@baaqmd.gov

Staff will present the Board of Directors with the outreach strategy for sharing components of the technology assessment in a targeted way with stationary facilities, technology developers, and financing partners.

12. **Air Sensors International Conference Update**

J. Broadbent/5052
jbroadbent@baaqmd.gov

The Board of Directors will receive an update on the Air Sensors International Conference.

PUBLIC COMMENT ON NON-AGENDA MATTERS

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

Speakers who did not have the opportunity to address the Board in the first round of comments on non-agenda matters will be allowed two minutes each to address the Board on non-agenda matters.

BOARD MEMBERS' COMMENTS

14. *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

15. Report of the Executive Officer/APCO

16. Chairperson's Report

17. Time and Place of Next Meeting:

Monday, November 19, 2018, at 375 Beale Street, San Francisco, CA 94105 at 9:30 a.m.

18. Adjournment

The Board meeting shall be adjourned by the Board Chair.

CONTACT:

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

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

- To submit written comments on an agenda item in advance of the meeting. Please note that all correspondence must be addressed to the “Members of the Board of Directors” and received at least 24 hours prior, excluding weekends and holidays, in order to be presented at that Board meeting. Any correspondence received after that time will be presented to the Board at the following meeting.
- To request, in advance of the meeting, to be placed on the list to testify on an agenda item.
- 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, CALIFORNIA 94105
FOR QUESTIONS PLEASE CALL (415) 749-4941**

**EXECUTIVE OFFICE:
MONTHLY CALENDAR OF AIR DISTRICT MEETINGS**

OCTOBER 2018

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i>	Wednesday	17	9:30 a.m.	1 st Floor Board Room
Board of Directors Public Engagement Committee <i>(At the Call of the Chair)</i>	Friday	19	9:30 a.m.	1 st Floor Board Room
Board of Directors TIO Steering Committee <i>(At the Call of the Chair)</i>	Monday	22	9:30 a.m.	1 st Floor Board Room
Board of Directors Budget & Finance Committee <i>(Meets on the 4th Wednesday of each Month)</i> - CANCELLED	Wednesday	24	9:30 a.m.	1 st Floor, Yerba Buena Room #109
Board of Directors Mobile Source Committee <i>(Meets on the 4th Thursday of each Month)</i>	Thursday	25	9:30 a.m.	1 st Floor Board Room
Advisory Council Mtg. <i>(At the Call of the Chair)</i>	Monday	29	10:00 a.m.	1 st Floor Board Room

NOVEMBER 2018

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Executive Committee <i>(At the Call of the Chair)</i>	Friday	2	9:30 a.m.	1 st Floor Board Room
Board of Directors Nominating Committee <i>(At the Call of the Chair)</i> - CANCELLED AND RESCHEDULED TO MONDAY, NOVEMBER 19, 2018	Wednesday	7	9:00 a.m.	1 st Floor Board Room
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i> - CANCELLED AND RESCHEDULED TO MONDAY, NOVEMBER 19, 2018	Wednesday	7	9:30 a.m.	1 st Floor Board Room
Board of Directors Climate Protection Committee <i>(Meets on the 3rd Thursday of every other Month)</i> - CANCELLED	Thursday	15	9:30 a.m.	1 st Floor Board Room
Board of Directors Stationary Source Committee <i>(Meets on the 3rd Monday of every other Month)</i> - CANCELLED	Monday	19	9:30 a.m.	1 st Floor Board Room
Board of Directors Nominating Committee <i>(At the Call of the Chair)</i>	Monday	19	9:00 a.m.	1 st Floor Board Room
Board of Directors Special Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i>	Monday	19	9:30 a.m.	1 st Floor Board Room

NOVEMBER 2018

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i> - CANCELLED	Wednesday	21	9:30 a.m.	1 st Floor Board Room
Board of Directors Mobile Source Committee <i>(Meets on the 4th Thursday of each Month)</i> - CANCELLED	Thursday	22	9:30 a.m.	1 st Floor Board Room
Board of Directors Budget & Finance Committee <i>(Meets on the 4th Wednesday of each Month)</i>	Wednesday	28	9:30 a.m.	1 st Floor, Yerba Buena Room #109

DECEMBER 2018

<u>TYPE OF MEETING</u>	<u>DAY</u>	<u>DATE</u>	<u>TIME</u>	<u>ROOM</u>
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i>	Wednesday	5	9:30 a.m.	1 st Floor Board Room
Board of Directors Regular Meeting <i>(Meets on the 1st & 3rd Wednesday of each Month)</i>	Wednesday	19	9:30 a.m.	1 st Floor Board Room
Board of Directors Budget & Finance Committee <i>(Meets on the 4th Wednesday of each Month)</i>	Wednesday	26	9:30 a.m.	1 st Floor, Yerba Buena Room #109
Board of Directors Mobile Source Committee <i>(Meets on the 4th Thursday of each Month)</i>	Thursday	27	9:30 a.m.	1 st Floor Board Room

HL – 10/5/18 – 8:15 a.m.

G/Board/Executive Office/Moncal

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 5, 2018

Re: Minutes of the Board of Directors Regular Meeting of September 19, 2018

RECOMMENDED ACTION

Approve the attached draft minutes of the Board of Directors Regular Meeting of September 19, 2018.

DISCUSSION

Attached for your review and approval are the draft minutes of the Board of Directors Regular Meeting of September 19, 2018.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Marcy Hiratzka
Reviewed by: Vanessa Johnson

Attachment 3A: Draft Minutes of the Board of Directors Regular Meeting of September 19, 2018

AGENDA 3A – ATTACHMENT

Draft Minutes - Board of Directors Regular Meeting of September 19, 2018

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

Board of Directors Regular Meeting
Wednesday, September 19, 2018

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

CALL TO ORDER

1. **Opening Comments:** Board of Directors (Board) Chairperson, David Hudson, called the meeting to order at 9:57 a.m.

Roll Call:

Present: Chairperson David Hudson; Vice Chair Katie Rice; Secretary Rod Sinks; and Directors Margaret Abe-Koga, Teresa Barrett, David Canepa, Cindy Chavez, Pauline Russo Cutter, John Gioia, Scott Haggerty, Doug Kim, Liz Kniss, Nate Miley, Karen Mitchoff, Hillary Ronen, Mark Ross, Brad Wagenknecht, and Shirlee Zane.

Absent: Directors John J. Bauters, Carole Groom, Tyrone Jue, Pete Sanchez, and Jim Spering.

COMMENDATIONS/PROCLAMATIONS/AWARDS (OUT OF ORDER, ITEM 3)

2. The Board of Directors recognized Assemblyman Timothy S. Grayson for his exceptional leadership and dedication to protecting air quality in the Bay Area, and specifically for helping secure funds for Assembly Bill (AB) 617. Assemblymember Grayson thanked the Air District (District) for its efforts to protect public health.

NOTED PRESENT: Director Cutter was noted present at 9:59 a.m.

OTHER BUSINESS

3. **Chairperson's Report (ITEM 17)**

Chair Hudson announced the following:

- He will be attending the 31st International Electric Vehicle Symposium and Exhibition in Japan in October.
- He suggested a trial run of including the committee reports as part of the Consent Calendar, and having the Executive Committee discuss it at its next meeting.

— The Board meeting scheduled for October 3, 2018 has been canceled; the next Board meeting is scheduled for October 17, 2018.

PUBLIC COMMENT ON NON-AGENDA MATTERS (Item 2)

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

No requests received.

CONSENT CALENDAR (ITEMS 4 – 9)

5. Minutes of the Regular Board of Directors Meeting of September 5, 2018
6. Board Communications Received from September 5, 2018 through September 18, 2018
7. Air District Personnel on Out-of-State Business Travel
8. Consider Adopting Amendments to the Administrative Code, Division 1, Operating Policies and Procedures, Section 1, Board of Directors Meetings, Division I: New Section 1.6, Adoption of Resolutions
9. Consider Authorization to Execute Contract Amendments for Spare the Air Website Redesign
10. Notices of Violations Issued and Settlements in Excess of \$10,000 in the month of August 2018

Public Comments

No requests received.

Board Comments

None.

Board Action

Director Wagenknecht made a motion, seconded by Director Gioia, to **approve** the Consent Calendar Items 4 through 9, inclusive; and the motion **carried** by the following vote of the Board:

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

COMMITTEE REPORTS

11. Report of the **Stationary Source Committee** Meeting of September 17, 2018 (**ITEM 10**)

Stationary Source Committee Chair, Director John Gioia, read the following Committee report:

The Committee met on Monday, September 17, 2018, and approved the minutes of July 30, 2018.

The Committee reviewed and discussed the staff presentation Update on Odor Control Actions at South Bay Waste Operations.

The Committee then reviewed and discussed the staff presentation Update on Rule Development Efforts for Regulation 13, Rule 2: Organic Material Handling and Regulation 3, Rule 3: Composting Operations.

Finally, the Committee reviewed and discussed the staff presentation Update on Development of Regulation 13, Rule 1: Significant Methane Releases.

The next meeting of the Committee will be held on Monday, November 19, 2018, at the Bay Area Air Quality Management District Office, 375 Beale Street, San Francisco, CA 94105, at 9:30 a.m. This concludes the Chair report of the Stationary Source Committee.

Public Comments

No requests received.

Board Comments

The Board and staff discussed the need for the City of San Jose's participation in the South Bay Odor Stakeholder's Group and whether the District can help bridge the communication gap; how the District shares its data with local enforcement agencies (LEA), and the request for a staff presentation indicating when the District has regulatory authority regarding odor complaints versus LEAs; the fact that air pollution agencies in California do not have jurisdiction over public nuisance complaints that stem from composting operations, and the suggestion that District staff entertains the overriding of that law as potential legislation; the request that District staff apprise the Mayor of Fremont of the regional odor study that the City of San Jose has requested be conducted, as the Cities of Fremont and Milpitas are being considered as potential lead agencies of the study; and methane-recycling efforts in San Leandro.

Board Action

None; receive and file.

12. Report of the **Ad Hoc Building Oversight Committee** Meeting of September 19, 2018 (**ITEM 11**)

Ad Hoc Building Oversight Committee Chair, Director Mark Ross, read the following Committee report:

The Ad Hoc Building Oversight Committee met on Wednesday, September 19, 2018, and approved the minutes of August 1, 2018.

The Committee then met in Closed Session to receive an update on the Richmond Property, but there is no reportable action.

Finally, the Committee received and discussed the staff presentation Contract with Swinerton Builders for Renovation of Portions of the Eighth Floor at 375 Beale Street. The Committee recommends the Board:

1. *Authorize the Executive Officer/Air Pollution Control Officer to negotiate and execute a contract, not to exceed \$900,000, with Swinerton Builders for general contracting services for renovation of portions of the eighth floor at 375 Beale Street, and transfer the funds for this contract from reserves into the general fund budget.*

The next meeting of the Ad Hoc Building Oversight Committee will be at the call of the Chair. I move that the Board approve the Ad Hoc Building Oversight Committee's recommendation. This concludes the Chair report of the Ad Hoc Building Oversight Committee.

Public Comments

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

Board Comments

None.

Board Action

Director Ross made a motion, seconded by Director Kniss, to **approve** the recommendations of the Ad Hoc Building Oversight Committee; and the motion **carried** by the following vote of the Board:

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

PRESENTATIONS

13. **DIESEL PARTICULATE MATTER (DPM): HEALTH BURDEN, CLIMATE IMPACTS, AND REGIONAL AND LOCAL ASSESSMENTS (ITEM 12)**

Jack Broadbent, Executive Officer/Air Pollution Control Officer, introduced Dr. Judy Cutino, Health Officer, and Dr. Phil Martien, Acting Director of Assessment, Inventory, and Modeling, who gave the staff presentation *Diesel Particulate Matter: Health Burden, Climate Impacts, & Regional and Local Assessments*, including: overview; DPM; health effects of DPM, studies of PM; DPM as identified as carcinogen; who is affected; DPM contributes to PM_{2.5} and most of the cancer risk from ambient air pollution; cancer risk from air pollution down, but higher risks in some communities; DPM as a factor in identifying the Bay Area's most impacted communities; most of the toxic air contaminants emitted are from mobile sources; concentrations of DPM can be much higher near diesel sources; DPM is a source of black carbon and warms the climate; diesel exhaust contributes about 25% of the black carbon in the Bay Area; DPM contributes to Fine PM, black carbon, and cancer risk; current controls are not fully mitigating adverse effects of DPM on human health and the environment; key findings; and diesel emissions reduction actions.

Public Comments

No requests received.

Board Comments

The Board and staff discussed how health effects of DPM vary, based on gender: contributing factors to decreases in DPM emissions along diesel corridors over the years, and whether it would be premature to anticipate continued reductions; the fact that the maps on slide ten, which show changes in cancer risk from air pollution over time, do not indicate the high exposure in areas that would be seen at a higher magnification of a given area on the map; the request that the District provides the Board with levels of cancer risk by city (local scale), and corresponding socioeconomic demographics of those populations; the District's obligation to publish its findings on health impacts (concentrations and levels of pollution); the District's efforts, in conjunction with Oakland International Airport, to decrease the amount of DPM emissions generated at the airport; the request for a joint public health campaign, as a collaborative effort of multiple air districts in California; the comparison of levels of DPM emissions between West Oakland and the Ports of Los Angeles/Long Beach; the suggestion that staff develops voluntary and regulatory measures to reduce DPM emissions from ports, warehouses, airports, rail yards, etc., and advocate for the District's authority over indirect sources; the health cost of DPM per ton; tradeoffs of transit-oriented development, the exposure that residents in affordable housing may experience if that housing is built adjacent to transit centers, and the need for improved implementation and understanding of the California Environmental Quality Act by jurisdictions that have land use authority; the California Air Resources Board's Truck and Bus Regulation that requires nearly all trucks and buses to have 2010 model year engines or equivalent by January 2023; the need to replace backup diesel generators with non-diesel, battery-operated generators; and the report that rebuilt homes in Sonoma County that burned in 2017 from wildfires were built with natural gas fireplaces.

NOTED PRESENT: Director Miley was noted present at 10:29 a.m.

Board Action

None; receive and file.

14. UPDATE ON GOVERNOR'S GLOBAL CLIMATE ACTION SUMMIT AFFILIATED EVENTS (ITEM 13)

Mr. Broadbent introduced Lisa Fasano, Communications Officer, and Ranyee Chiang, Technology Implementation Officer, who gave the staff report *Diesel Free by '33*, including: statistics; signatories; feedback; Climate Tech Marketplace event – over 275 attendees; over 30 technology companies; broad goals achieved; and staff acknowledgements.

Public Comments

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

Board Comments

The Board and staff discussed the typo on slide 3, which states ‘San Ramon’ instead of ‘Sonoma’, which was intended; the Board’s feedback and appreciation for the event; the request for resolution language that local jurisdictions have used when adopting the Diesel Free by ’33 pledge; the demographics and diversity of vendors at the Climate Tech Marketplace event held on September 13, and the request to know how many business pairings resulted by the end of that event; the request for a synopsis or list of vendors that were present and the most popular products that were showcased at the Climate Tech Marketplace; the request that the Board members receive a list of local resources that were identified from the District’s Global Action Climate Summit affiliate events, and the suggestion of a workshop for Public Works Directors regarding emerging sustainable technologies; the possibility of cultivating a climate change champion from the National Basketball Association; the request that more remote locations be available in the Bay Area so that Board members may participate in District meetings via teleconference, and the need for a provision in the District’s Administrative Code that addresses Board members voting remotely; and initiatives and progression to eliminate diesel emissions in Sonoma County.

Board Action

None; receive and file.

PUBLIC COMMENT ON NON-AGENDA MATTERS (ITEM 14)

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

No requests received.

BOARD MEMBER COMMENTS (ITEM 15)

16. Board Member Comments

- Director Gioia discussed the upcoming locations of the EVS31 Electric Vehicle Symposium and Exhibition.
- Director Mitchoff offered to bring the portrait that the District bestowed upon Assemblymember Grayson to Assemblymember Grayson’s office, as her office is next door to his.
- Director Ronen announced that the San Francisco County Board of Supervisors appointed Supervisor Rafael Mandelman (District 8) to the District’s Board on September 18, 2018. Director Mitchoff inquired after the status of Director Jue’s appointment to the Board.
- Director Wagnenknecht gave a report on his trip to the Athabasca tar sands in Alberta, Canada that he took with several other Board members in August.
- Director Kniss gave a status update of the City of Palo Alto’s recent adoption of an ordinance that regulates unnecessary idling of vehicles, an issue that was first brought to the City Council in August of 2017.
- Director Gioia announced a panel discussion on oil pipelines connecting resistance on September 20, 2018 at 7:00 pm at the Native American Health Center in Oakland.

OTHER BUSINESS

17. Report of the Executive Officer/Air Pollution Control Officer (ITEM 16)

Mr. Broadbent announced the following:

- The District anticipates inviting Canadian delegates and representatives from First Nations to report out to the Board on November 7 about the tour of the Athabasca tar sands that several Board members attended in August.
- A history of the District has been officially displayed on the 6th floor at 375 Beale Street, near the elevators.
- Eric Stevenson, Director of Meteorology and Measurements, will brief the Board at a future meeting on the Air Sensors International Conference that he attended as a panelist in mid-September.

18. Time and Place of Next Meeting

Wednesday, October 17, 2018, at 375 Beale Street, San Francisco, CA 94105 at 9:45 a.m.

19. Adjournment

The meeting adjourned at 12:01 p.m.

Marcy Hiratzka
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 5, 2018

Re: Board Communications Received from September 19, 2018 through October 16,
2018

RECOMMENDED ACTION

None; receive and file.

DISCUSSION

Copies of communications directed to the Board of Directors received by the Air District from September 19, 2018, through October 16, 2018, if any, will be at each Board Member's place at the October 17, 2018, Board meeting.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Kristine Garcia
Reviewed by: Vanessa Johnson

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 5, 2018

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 Air 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-sate business travel for the month of September 2018. The monthly out-of-state business travel report is presented in the month following travel completion.

DISCUSSION

The following out-of-state business travel activities occurred in the month of September 2018:

- Maricela Martinez, Director of Executive and Administrative Resources Division, attended IPMA-HR International Training Conference & Expo, Phoenix, Arizona, September 21, 2018 to September 26, 2018.
- Jeff McKay, Chief Financial officer, attended Bay Area Council City Trip 2018, Portland, Oregon, September 27, 2018 to September 28, 2018.
- 31st International Electric Vehicle Symposium & Exhibition (EVS 31), Kobe, Japan, September 30, 2018 to October 3, 2018, attendees:
 - David Hudson, Board of Directors (Chair)
 - Damian Breen, Deputy Air Pollution Control Officer
 - Karen Schkolnick, Director of Strategic Incentives Division

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

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 David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 5, 2018

Re: Notices of Violations Issued and Settlements in excess of \$10,000 in the month of
September 2018

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. Bunger

Attachments 6A: Notices of Violations for the Month of September 2018

AGENDA 6A - ATTACHMENT

NOTICES OF VIOLATION ISSUED

The following Notice(s) of Violations were issued in September 2018:

Alameda						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
California Engineering/Silverado	W1121	Pleasanton	A58416A	9/17/18	11-2-401.5	Failure to revise
East Bay Municipal Utility District	A0591	Oakland	A56070A	9/17/18	2-1-307	Blend tank #2 not abated by A-9, A-10, A-11
Foothill Chevron	Z4944	Hayward	A58429A	9/13/18	2-1-307	No air quality test results submitted since 2014.
Monument Gas	Z4945	San Leandro	A58430A	9/13/18	8-7-302.5	Out of tolerance TP2013: static pressure performance test
R&B Equipment	Z4338	Hayward	A55664A	9/13/18	11-2-401.3	Failure to notify for a demolition
SFD	Z4899	Hayward	A58415A	9/6/18	11-2-401.3	Failure to notify.
Silverado Contractors	J1257	Emeryville	A58487A	9/4/18	11-2-401.3	Inaccurate start date.
Tri-City Rock, Inc	A6378	Fremont	A57012A	9/7/18	2-1-307	P/O limit exceeded (PC #12891-1)

Contra Costa						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
Alhambra Shell	Z4910	Martinez	A58376A	9/7/18	8-7-301.2	A non-EVR PV valve is connected to the vapor recovery sys. Ex order VR-102B

Chevron Products Company	A0010	Richmond	A58136A	9/25/18	9-1-307	SO2 from SRU #37 >250 ppm, Dev 5138 RCA 07G87
Chevron Products Company	A0010	Richmond	A58137A	9/25/18	8-8-313	Dev 4531 17 wastewater components were not inspected semi-annually. R8-8-313.2
Chevron Products Company	A0010	Richmond	A58138A	9/10/18	2-1-302	7-3222 temp not at least 36F below flashpoint
Concord Ready Mix Inc	E3796	Antioch	A58253A	9/4/18	2-1-307	Violation of P/C #26538, Subpart 2, 3 & 4 (no water spray/pressure device).
DWH Creative Contracting, Inc.	W3665	Richmond	A58074A	9/24/18	11-2-401.3	Paid incorrect renovation fee - should be commercial.
Eisen Environmental & Construction	Q7448	Concord	A58073A	9/13/18	11-2-303.6	No viewport.
Eisen Environmental & Construction	Q7448	Concord	A58075A	9/25/18	11-2-401.5	Inaccurate start date.
Henkel US Operations Corporation	B2855	Bay Point	A57643A	9/13/18	2-1-307	P/C #13754.21. Exceeded 2.3 kg/day POC limit
Henkel US Operations Corporation	B2855	Bay Point	A57644A	9/13/18	2-1-307	P/C #13754.71 Failure to perform annual source test
KB Homes	X9406	San Ramon	A55714A	9/4/18	93105	Missing 2 exit track outs. Failed Drop Test.
KT Builders	Z4872	Brentwood	A58076A	9/26/18	11-2-401.5	Job started prior to start date.
MECS INC	A0014	Martinez	A58302A	9/21/18	2-1-307	Failed source test.
Moraga Valero Gas	Y7923	Moraga	A58431A	9/24/18	2-1-307	Failure to conduct vapor recovery performance tests
Shell Martinez Refinery	A0011	Martinez	A57600A	9/20/18	8-5-401.1	Dev#5233 Invalid Inspection

Shell Martinez Refinery	A0011	Martinez	A57600B	9/20/18	8-5-404	Dev#5233 Late Reporting
Shell Martinez Refinery	A0011	Martinez	A57602A	9/20/18	6-1-302	E07H48 Opacity >20% >3 min/hr
Tesoro Refining & Marketing Company LLC	B2758	Martinez	A58296A	9/12/18	9-2-301	H2S excess at PS GLM. RCA 07C03
Tesoro Refining & Marketing Company LLC	B2758	Martinez	A58297A	9/12/18	9-2-301	H2S excess at PS GLM. RCA 07C04
Tesoro Refining & Marketing Company LLC	B2758	Martinez	A58298A	9/12/18	9-2-301	H2S excess at PS GLM. RCA 07C05
Tesoro Refining & Marketing Company LLC	B2758	Martinez	A58299A	9/12/18	9-2-301	H2S excess at PS GLM. RCA 07C07
Tesoro Refining & Marketing Company LLC	B2758	Martinez	A58300A	9/12/18	9-2-301	H2S excess at PS GLM. RCA 07C56
Tesoro Refining & Marketing Company LLC	B2758	Martinez	A58301A	9/18/18	6-1-301	Excess visible emissions observed at South Steam Flare.
Tri Pointe Homes	V7120	San Ramon	A57359A	9/19/18	93105	Performing earth work activity without operating all monitors.
West County Wastewater District	A1271	Point Richmond	A56500A	9/17/18	2-1-301	No A/C and No P/O
West County Wastewater District	A1271	Point Richmond	A56500B	9/17/18	2-1-302	No A/C and No P/O
Wholesome Harvest Baking	B5755	Richmond	A56040A	9/12/18	2-1-307	Multiple failed source tests.

Marin						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
Golden Gate Bridge & Transit District	A1793	San Rafael	A58251A	9/27/18	2-1-307	Failed to conduct and pass source tests - 2017: static pressure, VP operability/emissions, pressure

Napa						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
Shell	Z5005	Napa	A58377A	9/25/18	8-7-302.2	Facility passed 9/24/18 deadline to install low-permeation hoses.

San Francisco						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
Downtown Center Garage	Z5022	San Francisco	A58252A	9/27/18	2-1-302	Permit expired since 9/1/2017
Ideal Restoration	Y6314	San Francisco	A58489A	9/21/18	11-2-303.6	No viewports

San Mateo						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
MFD	Z4986	San Mateo	A58488A	9/6/18	11-2-303.7	RACM Clean work site requirement.
MFD	Z4986	San Mateo	A58488B	9/6/18	11-2-303.9	No on-site representative

MFD	Z4986	San Mateo	A58488A	9/6/18	11-2-304.3	Improper waste disposal
MFD	Z4986	San Mateo	A58488B	9/6/18	11-2-304.6	Improper waste disposal

Santa Clara						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
Buccaneer Demolition	G9875	San Jose	A58490A	9/27/18	11-2-401.5	Inaccurate start date.
Channing House	A0425	Palo Alto	A58019A	9/6/18	2-1-302	Expired permit; includes S4 emergency generator.
El Camino Hospital	A4272	Mountain View	A58211A	9/26/18	2-1-302	Expired permit to operate.
NASA-AMES Research Center	A0550	Moffett Field	A56543A	9/13/18	9-7-307.1	Boiler failed emissions compliance source test on 3/2/2018.
Noah Concrete	Z0464	Gilroy	A55715A	9/10/18	2-1-301	NO A/C & P/O for concrete crushing equipment & operation.
Noah Concrete	Z0464	Gilroy	A55715B	9/10/18	2-1-302	NO A/C & P/O for concrete crushing equipment & operation.
Pan Cal Investment Co.	G8618	San Jose	A58051A	9/26/18	11-2-401.5	Inaccurate start date.

Solano						
Site Name	Site #	City	NOV #	Issuance Date	Regulation	Comments
A & A Gas	Z0380	Vallejo	A58553A	9/27/18	8-7-302.2	GDF did not install all hoses to low-perm hoses by 9/24/18

Holitna Construction	Z4900	Suisun City	A58050A	9/4/18	11-2-401.5	Inaccurate start date.
Valero Refining Company - California	B2626	Benicia	A57346A	9/12/18	8-18-309	4 open ended lines (OELs) discovered by Valero LDAR.

SETTLEMENTS FOR \$10,000 OR MORE REACHED

There were no settlement(s) for \$10,000 or more completed in September 2018.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 11, 2018

Re: Authorization to Increase the Contract Agreement with Van Dermeyden Maddux Law Corporation

RECOMMENDED ACTION

Recommend the Board of Directors authorize the Executive Officer/APCO to increase the contract agreement with Van Dermeyden Maddux Law Corporation, in an amount not to exceed \$140,000.

DISCUSSION

The original contract with Van Dermeyden Maddux Law Corporation was signed on October 6, 2016 in the amount of \$30,000. The contract was subsequently amended on April 14, 2017 and February 9, 2018, to increase the amount to \$90,000 under the Executive Officer/APCO's signing authority. The firm provides assistance on human resources investigations and provides legal analysis and advice on legal matters.

Therefore, staff is recommending increasing the contract in an amount not to exceed \$140,000. This will allow the firm to continue providing services to existing matters and future matters that arise.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. The costs for this contract will be included in fiscal year ending (FYE) 2019 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Rex Sanders
Reviewed by: Judy Yu

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 5, 2018

Re: Report of the Climate Protection Committee Meeting of September 20, 2018

RECOMMENDED ACTION

The Climate Protection Committee (Committee) recommends Board of Directors' approval of the following items:

A) Update on Development of Rule 13-1: Significant Methane Releases

1) None; receive and file.

B) Organics Recovery Strategy

1) None; receive and file.

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

BACKGROUND

The Committee met on Thursday, September 20, 2018, and received the following reports:

A) Update on Development of Rule 13-1: Significant Methane Releases; and

B) Organics Recovery Strategy.

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

BUDGET CONSIDERATION/FINANCIAL IMPACT

A) None; and

B) None; Resources to develop the Organics Recovery Strategy are included in the Fiscal Year Ending (FYE) 2019 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Kristine Garcia
Reviewed by: Vanessa Johnson

Attachment 8A: 09/20/18 – Climate Protection Committee Meeting Agenda #4
Attachment 8B: 09/20/18 – Climate Protection Committee Meeting Agenda #5

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: September 11, 2018

Re: Update on Development of Rule 13-1: Significant Methane Releases

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

The Air District has a policy goal of reducing Bay Area greenhouse gas (GHG) emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. Methane (CH₄) is a potent and short-lived GHG; pound per pound, its global warming potential is 86 times stronger than that of carbon dioxide (CO₂), when compared on a 20-year time horizon. Methane represents the second largest emissions of GHGs in the region, after CO₂. In 2015, all methane sources located within the Air District boundaries emitted an estimated 10 million metric tons of CO₂ equivalent (MMT CO₂e) about 10 percent of the Bay Area's GHG inventory. These sources include stationary sources such as landfills; wastewater treatment; petroleum refineries; the natural gas production and distribution systems; mobile sources, such as cars and trucks; and natural sources such as wetlands. Given the importance of controlling methane, the Air District has developed a comprehensive Basin-wide Methane Strategy as part of its 2017 Clean Air Plan.

The Methane Strategy is an agency-wide effort to better quantify and reduce the region's methane emissions. Regulation 13: Climate Pollutants, Rule 1: Significant Methane Releases (Rule 13-1) would be the first rule developed as part of this Strategy. The purpose of the Rule is to limit significant methane releases throughout the Bay Area and, if adopted, it would be the first Air District rule to focus on climate protection by regulating methane emissions. Subsequent source-specific methane rules will be adopted to address emissions from various specific operations.

DISCUSSION

In this presentation, staff will provide the Stationary Source Committee with information on:

- Background greenhouse gas emission reduction goals;
- Purpose of this rule;
- Most likely affected industries;
- Summary of rule development efforts; and
- Next steps in the process.

BUDGET CONSIDERATIONS/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: William Thomas Saltz
Reviewed by: Victor Douglas

CLIMATE PROTECTION COMMITTEE
MEETING OF 09/20/2018

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: September 5, 2018

Re: Organics Recovery Strategy

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

The California Air Resources Board (CARB) adopted the Short-Lived Climate Pollutant (SLCP) Reduction Strategy for the state of California in March 2017. The Strategy addresses emissions of methane (and other SLCPs) that may not be reduced by CARB's Cap-and-Trade Program. The SLCP Strategy was developed to help the State achieve its goal of reducing methane emissions 40 percent by the year 2030. As part of key actions to reduce waste sector emissions, the Short-Lived Climate Pollutant Act of 2016 (SB 1383) requires the State to divert organic materials from landfills on a relatively rapid schedule: 50% by 2020 and 75% by 2025. Currently, landfills account for over half of all methane emissions in the Bay Area, predominantly from organic material decomposition. Diverting organics from landfills can play a critical role in reducing these emissions – and potentially result in recovered resources and energy – provided these materials are processed using best practices.

To meet the goals of SB 1383, preliminary calculations suggest that the Bay Area region needs the equivalent of 10 – 20 new facilities processing on the order of 50,000 – 100,000 tons per year of organic materials. In addition, new separation, storage, and hauling infrastructure will be needed to meet these goals. The Bay Area Air Quality Management District (Air District) will likely experience an increase in the number of permit applications for new and existing facilities needed to handle the rising volumes of organic materials expected. These facilities may include transfer stations, composting and anaerobic digestion facilities. In the absence of Air District rules for these facilities, air quality permitting in this sector has relied largely on a case-by-case approach when reviewing applications.

Thus far, air emissions from organics recovery activities have not been well characterized, partly due to limited study of the operations and factors affecting emissions. This knowledge gap has made it difficult to estimate the magnitude and characteristics of emissions from collection, separation, transport, storage, processing, and application of recovered organics. Emissions differences among processing technologies and the effects of changing environmental and

operational conditions are even less well known. As a result, existing emission factors are relatively coarse, which presents a key challenge in permitting and crafting regulations for this sector.

DISCUSSION

Over the past several months, staff has been working on the development of a comprehensive organics recovery strategy to address the air quality challenges associated with diverting organic materials from landfills while also supporting the State's organics diversion goals. This effort is a key component of the Air District's Methane Strategy, particularly since landfills are responsible for over half of all the methane emitted in the Bay Area. Over the next few years, the Air District expects to develop a suite of rules, permitting requirements, enforcement practices and guidance on best management practices that will focus on preventing greenhouse gas, criteria and toxic pollutant emissions and odors from the organics recovery sector. Staff will also collaborate with industry, academia, and other regulatory agencies to improve the understanding of emissions from this sector. Work on the first of the rules, Draft Rule 13-2: Organic Material Handling and Rule 13-3: Composting Operations, has already commenced. The Air District seeks to ensure that as more organic materials are diverted from landfills, these measures will protect public health and help reduce greenhouse gas emissions consistent with the Air District's 2017 Clean Air Plan.

On June 25, 2018, the Air District invited stakeholders to a Regional Convening to provide input on what a comprehensive organics recovery strategy might include and to discuss local or regional issues that should be considered in developing this strategy. These considerations include state planning requirements on local governments, land use compatibility, environmental review, existing regulations, permitting, enforcement, incentives and how the Air District can best provide guidance to local governments and other stakeholders on these issues.

Staff will report on the progress of developing the Air District's Organics Recovery Strategy, including highlights from the Regional Convening and an update on the first organic sector rules being developed.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None. Resources to develop the Organics Recovery Strategy are included in the Fiscal Year Ending (FYE) 2019 budget.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Idania Zamora
Reviewed by: Henry Hilken

CLIMATE PROTECTION COMMITTEE
MEETING OF 09/20/2018

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 5, 2018

Re: Report of the Mobile Source Committee Meeting of September 27, 2018

RECOMMENDED ACTION

The Mobile Source Committee (Committee) recommends Board of Directors' 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) Update on Status of Heavy-Duty Zero-Emission Mobile Source Technologies

- 1) None; receive and file.

C) Update on Air District Grant Program Funding for Fiscal Year Ending (FYE) 2019

- 1) None; receive and file.

BACKGROUND

The Committee met on Thursday, September 27, 2018, and received the following reports:

- A) Projects and Contracts with Proposed Grant Awards over \$100,000;
- B) Update on Status of Heavy-Duty Zero-Emission Mobile Source Technologies; and
- C) Update on Air District Grant Program Funding for Fiscal Year Ending (FYE) 2019.

Chairperson Scott Haggerty will provide an oral report of the Committee meeting.

BUDGET CONSIDERATION/FINANCIAL IMPACT

A) None. The Air District distributes CMP, MSIF, Community Health Protection Grant Program, TFCA, and RFG funding to public agencies and private entities on a reimbursement basis. Funding for administrative costs is provided by each funding source;

B) None; and

C) None,

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Aloha Galimba
Reviewed by: Vanessa Johnson

Attachment 9A: 09/27/18 – Mobile Source Committee Meeting Agenda #4
Attachment 9B: 09/27/18 – Mobile Source Committee Meeting Agenda #5
Attachment 9C: 09/27/18 – Mobile Source Committee Meeting Agenda #6

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Scott Haggerty and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 17, 2018

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 fiscal year 1998-1999. The CMP provides grants to public and private entities to reduce emissions of oxides of nitrogen (NOx), 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.

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. AB 134 (2017) appropriated \$250 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. The Bay Area has been allocated \$50 million of these funds for emission reduction projects. These funds will be used to implement projects under the CMP, and optionally under the Proposition 1B Goods Movement Emission Reduction Program.

On February 21, 2018, the Board of Directors (Board) authorized Air District participation in Year 20 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 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 for the Transportation Fund for Clean Air (TFCA) and requirements of the program 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, electric vehicle charging station program) and to a program referred to as the TFCA Regional Fund. Each year, the Board allocates funding and adopts policies and evaluation criteria that govern the expenditure of TFCA funding.

On May 2, 2018, the Board authorized funding allocations for Fiscal Year Ending (FYE) 2019, cost-effectiveness limits for Air District-sponsored FYE 2019 programs and authorized the Executive Officer/APCO to execute Grant Agreements and amendments for TFCA-revenue funded projects with individual grant award amounts up to \$100,000. On June 6, 2018, the Board adopted policies and evaluation criteria for the FYE 2019 TFCA 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 grant funding from various sources and also accepts funding to reduce and offset air emissions within the boundaries of the Air District. To administer the grant programs associated with this funding, the Foundation has a contract with the Air District which allows for staff to be used to complete work to expend these monies. In late 2017, the Foundation was notified that it has been awarded approximately \$1.3 million in Reformulated Gas (RFG) funding to help accelerate the adoption of zero- and near-zero-emission equipment and vehicles.

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 and the Board.

DISCUSSION

Carl Moyer Program and Community Health Protection Grant Program:

For the CMP Year 20 cycle, the Air District had more than \$11 million available for eligible CMP and school bus projects from a combination of MSIF and CMP funds. The Air District started accepting project applications for the CMP Year 20 funding cycle on June 25, 2018 and applications are accepted and evaluated on a first-come, first-served basis. On December 20, 2017 the Board authorized the Air District to accept, obligate and expend \$50 million in AB 134 funds through the Community Health Protection Grant Program.

As of September 6, 2018, the Air District had received 69 project applications. Of the applications that have been evaluated between July 6, 2018 and September 6, 2018, eight eligible projects have proposed individual grant awards over \$100,000. These projects will replace six pieces of agricultural equipment, 32 school buses, two pieces of off-road equipment, and one marine engine, and will reduce over 6.7 tons of NO_x, ROG and PM per year. Staff recommends the allocation of \$8,477,366 for these projects from a combination of CMP funds, MSIF revenues and Community Health Protection Grant Program funds. 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 September 6, 2018, including information about the equipment category, award amounts, estimated emissions reductions, and county location. Approximately 37% 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 CMP, MSIF, and Community Health Protection Grant Program funding since 2009 (more than \$232 million awarded to 1,067 projects).

Transportation Fund for Clean Air Program and Reformulated Gas Settlement (RFG):

In FYE 2019, the Air District will be awarding \$20.44 million of TFCA monies to eligible projects. This includes \$13.36 million in new TFCA monies and \$7.08 million in carryover funds from previous cycles. As of September 11, 2018, the Air District had received 12 project applications.

Of the applications that have been evaluated between July 1, 2018 and September 11, 2018, three eligible projects have proposed individual grant awards over \$100,000. These projects will deploy 1 electric heavy-duty truck, 5 electric forklifts, 1 electric bulk material conveyor (vacuum), 48 EVs in a carsharing service, and install 45 level 2 EV chargers. These projects are expected to reduce 0.182 tons of NO_x, ROG, and PM₁₀ per year. Staff recommends the allocation of \$939,000 for these projects from a combination of TFCA and RFG funds. Attachment 1, Table 2, provides additional information on these projects.

In addition to evaluating emissions reductions, projects that receive RFG funding are also evaluated on the amount of petroleum reduced; the three projects receiving RFG funding are expected to reduce petroleum (diesel and gasoline) consumption by approximately 37,000 gallons per year.

Attachment 3 lists all eligible TFCA and RFG projects that were evaluated as of September 11, 2018 and three Air District-sponsored projects previously approved by the Board, including information about the equipment category, award amounts, estimated emissions reductions, and county location. Approximately 21% of the funds have been awarded to projects that reduce emissions in highly impacted Bay Area communities.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None. The Air District distributes CMP, MSIF, Community Health Protection Grant Program, TFCA, and RFG funding to public agencies and private entities 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 Ken Mak
Reviewed by: Karen Schkolnick, Anthony Fournier and Chengfeng Wang

- Attachment 1: Projects with grant awards greater than \$100,000
- Attachment 2: CMP/MSIF and Community Health Protection Grant Program approved projects
- Attachment 3: TFCA approved and eligible projects (evaluated 7/1/18-9/11/18)
- Attachment 4: Summary of funding awarded between 7/1/18 and 9/11/18

AGENDA 4 - ATTACHMENT 1

Table 1 - Carl Moyer Program/ Mobile Source Incentive Fund, and Community Health Protection Grant Program projects with grant awards greater than \$100k (Evaluated between 7/6/18 and 9/11/18)

Project #	Applicant name	Equipment Category	Project Description	Proposed contract award	Total project cost	Emission Reductions (Tons per year)			County
						NOx	ROG	PM	
19MOY163	Bettencourt and Son (Commercial fishing)	Marine	Replacement of 1 diesel propulsion engine	\$ 180,000.00	\$ 226,261.00	0.647	0.009	0.021	San Mateo
19MOY158	Ocean Breeze Dairy	Ag/ off-road	Replacement of 1 diesel tractor	\$ 117,000.00	\$ 147,160.30	0.310	0.020	0.015	Sonoma
19SBP12	Moreland School District	School bus	Replacement of 4 diesel school buses	\$ 512,170.00	\$ 559,677.00	0.237	0.016	0.000	Santa Clara
19MOY148	The Lumber Baron, Inc.	Off-road	Replacement of 1 diesel forklift and 1 propane forklift	\$ 197,278.00	\$ 276,542.16	0.178	0.044	0.008	Alameda
19SBP97	Vallejo City Unified School District	School bus	Replacement of 8 diesel school buses with CNG buses	\$ 1,635,693.00	\$ 1,635,693.00	0.826	0.065	0.000	Solano
20MOY51	Johnson and Neles Dairy	Ag/ off-road	Replacement of 3 diesel tractors and 2 diesel loaders	\$ 467,856.00	\$ 584,822.92	1.985	0.208	0.124	Sonoma
19SBP140	Fremont Unified School District	School bus	Replacement of 18 CNG buses with 10 electric, 8 CNG buses + infrastructure	\$ 4,076,369.00	\$ 6,341,046.75	1.717	0.139	0.034	Alameda
20SBP45	Campbell Union School District	School bus	Replacement of 2 CNG buses + infrastructure	\$ 1,291,000.00	\$ 1,438,530.00	0.104	0.006	0.000	Santa Clara
8 Projects				\$ 8,477,366	\$ 11,209,733	6.003	0.508	0.201	

**Table 2 - Summary of Transportation Fund for Clean Air projects
with grant awards greater than \$100k (Evaluated between 7/1/18 and 9/11/18)**

Project #	Applicant name	Equipment Category	Project Description	Proposed contract award	Total project cost	Emission Reductions (Tons per year)			County
						NOx	ROG	PM	
19RFG04*	Wyse Logistics	Off-road (non-ag)	Purchase 5 electric forklifts, 1 electric vacuum unit, and 1 electric terminal truck (\$80,000 TFCA)	\$ 221,000	\$ 562,460	0.107	0.015	0.008	Alameda
19RFG06*	Hayward Unified School District	LD Infrastructure	Install 45 dual port level 2 EV charging stations (\$180,000 TFCA)	\$ 279,000	\$ 1,072,245	0.014	0.003	0.001	Alameda
19RFG09*	Envoy Technologies	LD Vehicles	Deploy 48 EVs in carsharing service (\$48,000 TFCA)	\$ 439,000	\$ 1,950,068	0.027	0.005	0.002	Alameda / Contra Costa
3 Projects				\$ 939,000	\$ 3,584,773	0.148	0.023	0.011	

* Awards for these projects includes a total of \$631,000 of RFG funding

MOBILE SOURCE COMMITTEE
MEETING OF 09/27/2018

AGENDA 4 - ATTACHMENT 2

*CMP/MSIF and Community Health Protection Grant Program approved projects
(between 7/6/18 and 9/6/18)*

Project #	Equipment category	Project type	# of engines	Proposed contract award	Applicant name	Emission Reductions (Tons per year)			Board approval date	County
						NOx	ROG	PM		
19MOY166	On-road	Equipment replacement	1	\$ 45,000.00	Deol Trans / Piara Singh	0.668	0.050	0.004	APCO	Contra Costa
19MOY168	Ag/ off-road	Equipment replacement	1	\$ 33,000.00	Rancho Las Juntas Vineyard	0.028	0.006	0.004	APCO	Contra Costa
19MOY163	Marine	Engine replacement	1	\$ 180,000.00	Bettencourt and Son (Commercial fishing)	0.647	0.009	0.021	TBD	San Mateo
19MOY182	On-road	Equipment replacement	1	\$ 45,000.00	Thy Trucking	0.677	0.050	0.004	APCO	Alameda
19MOY185	On-road	Equipment replacement	1	\$ 60,000.00	Puerta Trucking	0.717	0.097	0.032	APCO	Merced
19MOY158	Ag/ off-road	Equipment replacement	1	\$ 117,000.00	Ocean Breeze Dairy	0.310	0.020	0.015	TBD	Sonoma
19MOY159	Ag/ off-road	Equipment replacement	1	\$ 40,480.00	Trefethen Farming LLC	0.173	0.030	0.021	APCO	Napa
19MOY176	Ag/ off-road	Equipment replacement	1	\$ 60,930.00	Bazan Vineyard Management	0.198	0.033	0.025	APCO	Napa
19SBP12	School bus	Equipment replacement	4	\$ 512,170.00	Moreland School District	0.237	0.016	0.000	TBD	Santa Clara
19MOY148	Off-road	Equipment replacement	2	\$ 197,278.00	The Lumber Baron, Inc.	0.178	0.044	0.008	TBD	Alameda
19SBP97	School bus	Equipment replacement	8	\$ 1,635,693.00	Vallejo City Unified School District	0.826	0.065	0.000	TBD	Solano
19MOY175	Off-road	Equipment replacement	1	\$ 75,680.00	Mt. Diablo Landscape Centers, LLC	0.189	0.031	0.023	APCO	Contra Costa
20MOY51	Ag/ off-road	Equipment replacement	5	\$ 467,856.00	Johnson and Neles Dairy	1.985	0.208	0.124	TBD	Sonoma
20MOY52	On-road	Equipment replacement	1	\$ 60,000.00	James Marlowe Carson	0.904	0.068	0.005	APCO	Napa
19MOY181	Ag/ off-road	Equipment replacement	1	\$ 50,300.00	Jensen Ranch	0.122	0.019	0.011	APCO	Marin

AGENDA 4 - 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		
19SBP140	School bus	Equipment replacement	18	\$ 4,076,369.00	Fremont Unified School District	1.717	0.139	0.034	TBD	Alameda
20SBP45	School bus	Equipment replacement	2	\$ 1,291,000.00	Campbell Union School District	0.104	0.006	0.000	TBD	Santa Clara
17 Projects			50	\$ 8,947,756.00		9.679	0.892	0.331		

MOBILE SOURCE COMMITTEE
 MEETING OF 09/27/2018

AGENDA 4 - ATTACHMENT 3

Summary of all TFCFA approved and eligible projects (evaluated between 7/1/18 and 9/11/18)

Project #	Project Category	Project Description	Award Amount	Applicant Name	Emission Reductions (Tons per year)			Board Approval Date	CARE Area	County
					NO _x	ROG	PM			
18EV049	LD Infrastructure	Install and operate 12 single-port Level 2 (high) charging stations at 6 destination facilities in San Mateo, Burlingame, San Bruno, and Millbrae	\$36,000	San Mateo Union High School District	0.020	0.025	0.000	7/5/18	No	San Mateo
18EV056	LD Infrastructure	Install and operate 3 dual-port Level 2 (high) charging stations at 3 destination facilities in Richmond and El Cerrito	\$12,000	West Contra Costa Unified School District	0.007	0.009	0.000	7/5/18	Yes	Contra Costa
18EV047	LD Infrastructure	Install and operate 4 single port Level 2 (high) charging stations at 1 destination facility in San Mateo	\$12,000	Nazareth Plaza Owners' Association	0.007	0.009	0.000	7/30/18	No	San Mateo
18EV035	LD Infrastructure	Install and operate 4 single-port Level 2 (high) charging stations at 1 destination facility in Greenbrae	\$12,000	Marin Rowing Association	0.007	0.009	0.000	7/31/18	No	Marin
18R18	Bicycle Facilities	Install 0.09 miles of Class I and 0.28 miles of Class IV bikeways in Los Gatos	\$242,000	Town of Los Gatos	0.029	0.056	0.039	8/1/18	No	Santa Clara
18R21	Bicycle Facilities	Install 40 electronic bicycle lockers in Danville	\$96,000	Town of Danville	0.014	0.018	0.026	8/3/18	No	Contra Costa
18R22	Bicycle Facilities	Install 16 electronic bicycle lockers in San Francisco	\$32,000	San Francisco Community College District	0.004	0.006	0.007	8/3/18	No	San Francisco
18R14	Bicycle Facilities	Install + maintain 3.62 miles of Class III bikeways in Petaluma	\$48,500	City of Petaluma	0.007	0.009	0.014	8/6/18	No	Sonoma
18R20	Bicycle Facilities	Install and maintain 1.57 miles of Class II bikeways and 23 bike racks (2 bikes per rack)	\$38,000	City of Gilroy	0.008	0.010	0.013	8/22/18	No	Santa Clara
19R01	Trip Reduction	Enhanced Mobile Source & Commuter Benefits Enforcement	\$554,842	BAAQMD	NA	NA	NA	NA	No	Regional
19R02	LD Vehicles	Vehicle Buy Back Program	\$150,000	BAAQMD	NA	NA	NA	NA	No	Regional
19R03	Trip Reduction	Spare The Air/Intermittent Control Programs	\$2,305,927	BAAQMD	NA	NA	NA	NA	No	Regional
19RFG04*	Off-road (non-ag)	Purchase 5 electric forklifts, 1 electric vacuum unit, and 1 electric terminal truck	\$221,000	Wyse Logistics	0.107	0.015	0.008	Pending	Yes	Alameda
19RFG06*	LD Infrastructure	Install 45 dual port level 2 EV charging stations	\$279,000	Hayward Unified School District	0.014	0.003	0.001	Pending	Yes	Alameda
19RFG09*	LD Vehicles	Deploy 48 EVs in carsharing service	\$439,000	Envoy Technologies	0.027	0.005	0.002	Pending	Yes	Alameda / Contra Costa

15 Projects*

\$4,478,269

0.249 0.173 0.111

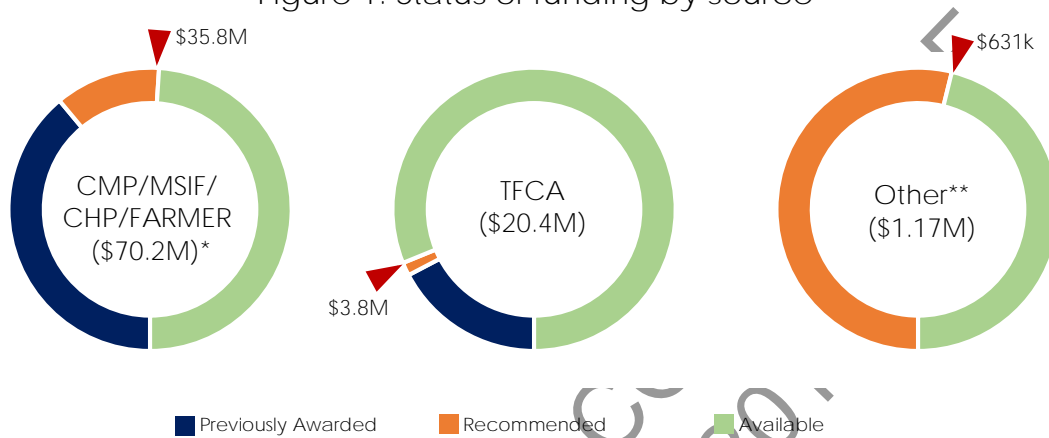
* The award amounts for these projects include a total of \$631,000 of RFG funds

AGENDA 4 - ATTACHMENT 4

Summary of funding awarded between 7/1/18 and 9/11/18

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

Figure 1. Status of funding by source



* Includes awards from FYE 2018
 ** Other includes RFG

Figure 2. Funding awarded by county

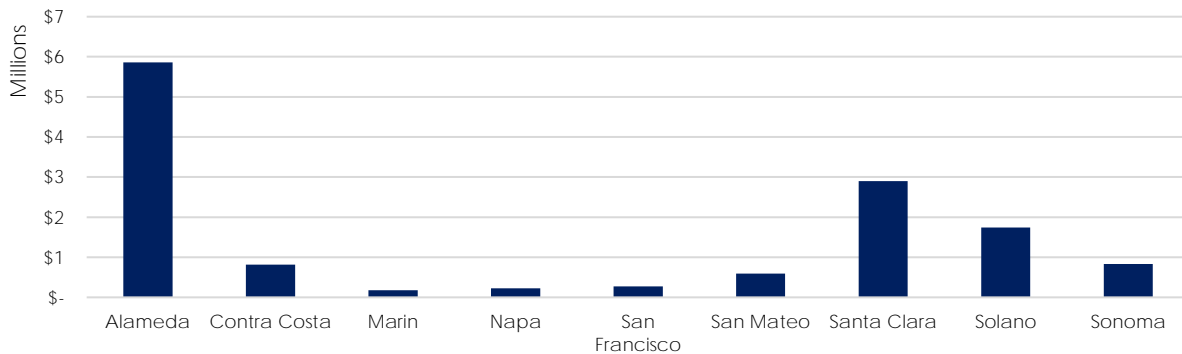
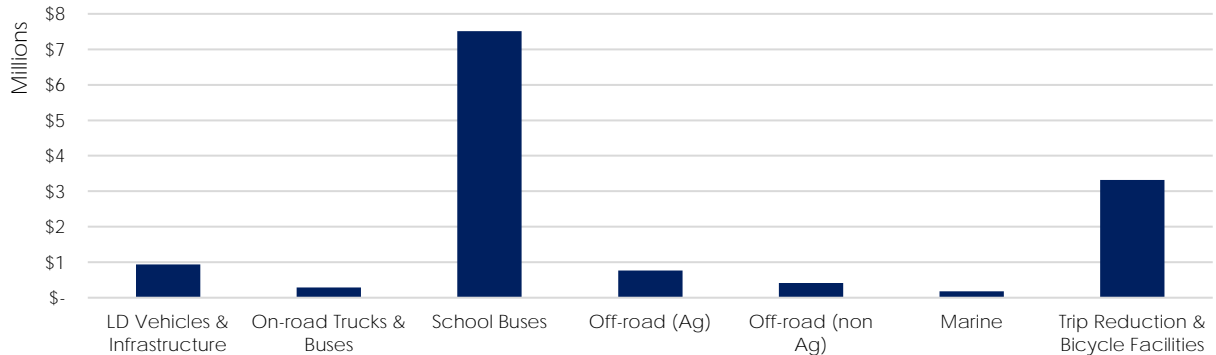


Figure 3. Funding awarded by project category



AGENDA 4 - ATTACHMENT 4

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

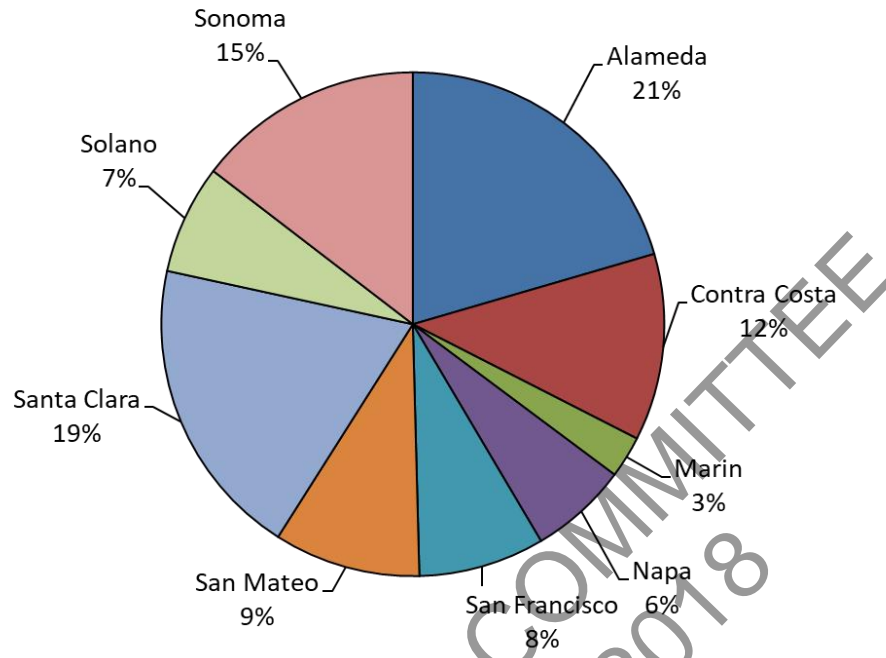
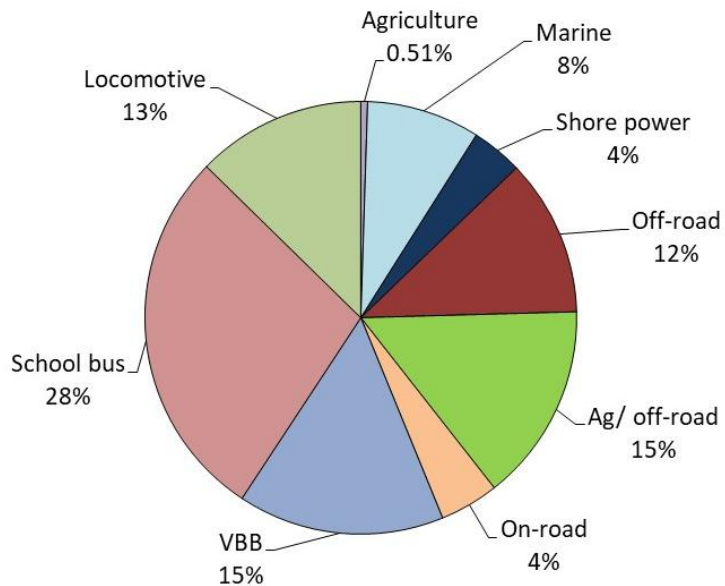


Figure 5. CMP/MSIF/CHP/FARMER funding awarded since 2009 by category



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Scott Haggerty and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 17, 2018

Re: Update on Status of Heavy-Duty Zero-Emission Mobile Source Technologies

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Emissions from mobile sources in the San Francisco Bay Area account for about half of certain criteria air pollutants, including nitrogen oxides, reactive organic gases, and particulate matter, and about 41% of the Greenhouse Gases (GHG) generated in the region¹. Reducing emissions from the mobile source sector is essential to helping the Bay Area attain State and Federal ambient air quality standards and meeting State and local GHG reduction goals. For this reason, the Bay Area Air Quality Management District (Air District) has invested significant resources to incentivize and achieve voluntary emissions reductions from mobile sources.

Accelerated wide-scale adoption of zero emission technologies is essential to reducing emissions from heavy-duty vehicles and equipment in the Bay Area and is one of the key strategies to help the Bay Area achieve local, State, and Federal emission reduction targets and its clear air and climate protection goals.

This report provides a summary of the status of these technologies based on a literature review and Air District staff's knowledge.

DISCUSSION

The Air District recently assessed options for replacing heavy-duty diesel combustion vehicles and equipment with zero-emission technologies to help the region achieve the goal of "Diesel Free by '33." Technology assessment reports from the California Air Resources Board (CARB) were the

¹ BAAQMD 2017 Clean Air Plan, Emissions Inventory for year 2015. Mobile Sources include: Passenger Cars, Light-, Medium-, Light-Heavy-, Medium-Heavy-, Heavy-Heavy-Duty Trucks, School/Urban Buses, Motor-Homes, Motorcycles, Lawn & Garden Equipment, Transportation Refrigeration Units, Agricultural Equipment, Construction and Mining Equipment, Industrial Equipment, Light Duty Commercial Equipment, Trains, Off-Road Recreational Vehicles, Ships, Commercial Harbor craft, Recreational Boats, and Airport Ground Support Equipment.

primary source of literature review used in the development of this assessment². As part of its assessment, Air District staff assigned one of the following four readiness levels to each of the project categories that were reviewed:

- **Commercially Available** - technologies that are readily available for purchase and have comparable costs to conventional technologies with or without incentives
- **Early Commercialization** - technologies that are commercially available but have higher capital costs than similar conventional technologies due to low sales volumes
- **Demonstration** - technologies that as of 2018 are being tested in very small quantities and that may reach early or full commercialization level by 2033
- **Not Yet Available** - categories of equipment and vehicles that have not yet been demonstrated as zero-emissions and the timeline for when these technologies will be commercialized is currently unknown.

Table 1 summarizes the results of the assessment of readiness levels of zero-emission technologies for heavy-duty vehicles and equipment and Attachment 1 provides more information about the availability of these technologies.

Table 1: Status of zero-emission technologies by vehicle/equipment category, as of 2018

Technology Readiness Level	Vehicle / Equipment Category
Commercially Available	Buses
	Cargo handling equipment
	Locomotives - switchers/yard goats
	Ocean going vessels (at berth)
	Transportation refrigeration units
	Medium-duty trucks
Early Commercialization	Small construction equipment
Demonstration	Heavy-duty trucks
	Commercial harbor craft
	Cargo handling equipment (container top/side picks)
Not Yet Available	Large construction equipment
	Locomotive - line haul
	Ocean going vessels (at sea)

² California Air Resources Board, Technology and Fuels Assessments, <https://www.arb.ca.gov/msprog/tech/tech.htm>, Accessed in June 2018.

Since the Air District does not have regulatory authority over mobile sources of air pollution in the Bay Area, the Air District relies on education, outreach, and financial incentives to encourage heavy-duty vehicle and equipment owners and operators to reduce emissions beyond what is required by the state and federal regulations and other legal or contractual obligations. This fiscal year, the Air District is projected to have more than \$132 million in funding to distribute to eligible projects, with most of this funding being available for zero-emissions heavy duty projects.

At the Mobile Source Committee meeting, staff will provide an overview of the Bay Area's heavy-duty vehicle and equipment fleet and air emissions, a summary of the heavy-duty vehicle and equipment zero-emission technologies needed to help the Bay Area achieve its clean air and climate protection goals, and the timeline for when viable zero-emissions technology options are anticipated to become commercially available for each of the equipment types.

Staff will also provide an overview of all the available funding sources administered by the Air District that can help owners and operators in their transition to zero-emissions as part of separate agenda item.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Chengfeng Wang
Reviewed by: Karen Schkolnick

Attachment 1: Technology Assessment of Medium- and Heavy-Duty Mobile Source Zero-Emission Technologies

AGENDA 5 - ATTACHMENT 1

Technology Assessment of Mobile Source Zero-Emission Technologies

Buses

Buses are typically 35 to 45 ft. in length (or longer) and are primarily used to transport passengers. Buses can range in size from small shuttles with seating for 10 to 20 passengers, to school and transit buses that can seat 40 to 80 passengers, to articulated and double-decker buses that can carry over 200 passengers. In the Bay Area, most buses are propelled by an internal combustion engine (ICE) that burns diesel or compressed natural gas, or as a hybrid that operates on a combination of diesel fuel and batteries.



Battery electric buses are commercially available for use as transit, school, and shuttle buses. Recent advancements in battery and wireless inductive charging technologies are also making wide adoption of battery electric buses more feasible and cost-effective. Other zero-emission bus technologies, including hydrogen fuel cells, are actively being tested and demonstrated in the Bay Area. Many Bay Area transit agencies have started to test or deploy zero-emission buses, such as the San Francisco Municipal Transportation Agency and San Mateo County Transit District, or SamTrans, who have committed to fully electrify bus fleets by 2035 and 2033, respectively.

Medium- and Heavy-Duty Trucks

Medium- and heavy-duty trucks are large motor vehicles that are primarily used to transport goods and equipment. Medium-duty trucks range in Gross Vehicle Weight Rating (GVWR) from 10,001 to 26,000 pounds (lbs.) and heavy-duty trucks have a GVWR of 26,001 lbs. and above. Medium- and heavy-duty trucks have historically been powered by diesel or natural gas internal combustion engines.



Today, medium-duty battery electric delivery trucks are commercially available. These trucks are well-suited for local applications as their typical 100-mile range allows the vehicle to return-to-base for refueling. Zero-emission technologies for other medium-duty applications and heavy-duty trucks are being developed and demonstrated with a limited number of models. In California, specifically the Bay Area, several early tests and demonstrations of zero-emission medium- and heavy-duty trucks are being conducted, including battery electric delivery trucks operating in urban areas and battery electric heavy-duty trucks operating in and around the Port of Oakland. Many vehicle manufacturers, both those long established in the industry and new start-up companies, are developing zero-emission medium- and heavy-duty vehicles, and some are already producing vehicles at low volume. Among the larger automotive companies, Daimler has announced that it expects to begin production on a fully electric heavy-duty truck in 2020.

Transport Refrigeration Units

A transport refrigeration unit (TRU) is defined as a refrigeration system powered by a diesel integral (inside housing) internal combustion engine designed to control the environment of temperature sensitive products that are transported in trucks and refrigerated trailers. TRUs may be capable of both cooling and heating.



Zero-emission technologies (battery electric, plug-in electric, fuel cell, cryogenic, etc.) for TRU are commercially available; however, these options have specific infrastructure and operational requirements that need to be considered by fleet operators.

Mobile Cargo Handling Equipment

Mobile cargo handling equipment (CHE) is any mobile equipment used at ports, rail yards, and warehouse distribution centers to either handle freight or to perform other on-site activities, such as maintenance. Types of CHEs include yard trucks, top handlers, side handlers, reach stackers, forklifts, and gantry cranes, dozers, excavators, and loaders. In 2018, most CHEs, especially the larger vehicles, are powered by diesel internal combustion engines.



Today, several options for deploying zero-emission technologies for cargo handling equipment, such as automated electric equipment, electric rubber tired or rail mounted gantry (RTG or RMG) at container terminals, fuel cell and battery electric fork lifts, yard trucks at distribution centers, electric aircraft ground support equipment, battery electric belt loader, electric baggage tug, are commercially available. Zero-emission technologies for container top/side picks currently are not commercially available although two electric container top picks are currently being demonstrated at the Port of Los Angeles.



Construction & Earthmoving Equipment

Construction and earthmoving equipment refers to heavy-duty vehicles, specially designed to move, compact, haul, hoist, earth and other loose or bulk materials; and other types of construction equipment, such as bulldozers, graders, excavators, scrapers, loaders, trenchers, and backhoes. In 2018, most of these vehicles and equipment are powered by diesel internal combustion engines.



Zero-emission technologies are in the early commercialization stage for smaller construction equipment. The technology for providing full battery electric heavy-duty machinery will require further technological improvements as it has yet to meet parity with conventional powertrains.

Locomotives

A locomotive is a self-propelled vehicle used to push or pull trains, and the combination of locomotive(s) pulling freight or passenger railcars forms a train. Most of the freight and passenger locomotives in the Bay Area are powered by a diesel-electric system whereby an internal combustion engine that is fueled by diesel drives an electrical generator or alternator, which in turn powers electric motor(s) that drive the wheels.



While electric train and rail technology is commercially available, it would currently be cost prohibitive to widely deploy this technology for long haul freight and passenger use. Therefore, in the near-term, the most technologically feasible and cost-effective advanced technology available to reduce toxic and criteria pollutant emissions is the installation of a compact aftertreatment system (e.g., combination of Selective Catalytic Reduction and Diesel Oxidation Catalysts) onto new and remanufactured diesel-electric freight interstate line haul locomotives. Emissions in communities that are disproportionately impacted by diesel emissions can be further

reduced by augmenting this control equipment with a combination of on-board batteries and geofencing technologies.

Zero-emission technologies are commercially available for switch (yard) operations (e.g., a railway electrification system that provides power through overhead or third line powerline). Battery electric technologies are also being tested for switch (yard) locomotives in other parts of the United States.

Ocean-Going Vessels

Ocean-going vessels (OGV) are large vessels designed for deep water navigation. Types of OGVs include large cargo vessels such as container vessels, tankers, bulk carriers, and car carriers, as well as passenger cruise vessels. These vessels transport containerized cargo, bulk items such as vehicles, cement, and coke, liquids such as oil and petrochemicals, and passengers. OGV propulsion (main) engines are primarily fueled by residual fuel oil and auxiliary engines that are mainly powered by diesel fuel. The majority of vessels that visit California ports are foreign-flagged vessels.



As of 2018, technologies (e.g., shore-side power, fuel cells, and emissions capture and control systems) are commercially available that enable vessels at dockside to achieve zero and near-zero emissions. Other than nuclear power, no other zero-emissions technology has been developed for vessels at sea; however, an all-electric autonomous container ship is being planned in Norway.

Commercial Harbor Craft

Commercial harbor craft means any private, commercial, government, or military marine vessel including, but not limited to, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push-boats, crew and supply vessels, pilot vessels, fishing vessels, research vessels, U.S. Coast Guard vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of ocean-going or recreational vessels. Nearly all commercial harbor craft vessels are powered by diesel fuel.



While no zero-emission technologies are commercially available for harbor craft, dedicated battery electric systems are being developed for larger ships but have not yet been adopted for commercial harbor craft. Also, several demonstration and early commercialization projects are underway including a zero-emission hydrogen fuel cell ferry project funded by the ARB with funding from the “California Climate Investments” (CCI) program that is being administered by the Air District in partnership with Golden Gate Zero Emission Marine Inc. Another demonstration project funded by US Environmental Protection Agency (USEPA) will convert an existing ferry to full electric in Alabama. Proton Exchange Membrane or Polymer Electrolyte Membrane (PEMFC) systems have been used in harbor craft demonstrations in New York, electric ferries are being built and operated in Norway, and a hybrid tugboat has been demonstrated at the Ports of Los Angeles and Long Beach.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Scott Haggerty and Members
of the Mobile Source Committee

From: Jack P. Broadbent
Executive Officer/APCO

Date: September 11, 2018

Re: Update on Air District Grant Program Funding for Fiscal Year Ending (FYE) 2019

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Emissions from mobile sources in the San Francisco Bay Area account for about half of certain criteria air pollutants, including nitrogen oxides, reactive organic gases, and particulate matter, and about 41% of the Greenhouse Gases (GHG) generated in the region¹. Reducing emissions from the mobile source sector is essential to helping the Bay Area attain State and Federal ambient air quality standards and meeting State and local GHG reduction goals. As part of our efforts to reduce emissions from mobile sources, the Bay Area Air Quality Management District (Air District) administers grant and incentive programs that offer funding to public agencies, private companies, and local residents to help offset a portion of the cost to implement eligible emissions reduction projects.

Most of the Air District's grant funding revenue comes from motor vehicle registration surcharges, smog abatement and tire fees, and bond sales that are distributed to the Air District. The Air District also applies and receives funding from state and federal agencies, and settlement funds.

DISCUSSION

In a staff report presented to the Mobile Source Committee (Committee) on February 22, 2018, the estimated funding for FYE 2019 was \$96 million, based on information received through early 2018. More recently, the funding estimate projected for FYE 2019 has been revised up to \$132 million, as staff learned of the availability of the Volkswagen (VW) Environmental Mitigation Trust and other new state funding revenues.

¹ BAAQMD 2017 Clean Air Plan, Emissions Inventory for year 2015. Mobile Sources include: Passenger Cars, Light-, Medium-, Light-Heavy-, Medium-Heavy-, Heavy-Heavy-Duty Trucks, School/Urban Buses, Motor-Homes, Motorcycles, Lawn & Garden Equipment, Transportation Refrigeration Units, Agricultural Equipment, Construction and Mining Equipment, Industrial Equipment, Light Duty Commercial Equipment, Trains, Off-Road Recreational Vehicles, Ships, Commercial Harbor craft, Recreational Boats, and Airport Ground Support Equipment.

At the Committee meeting, staff will provide an update on the total incentive funds that are projected to be available for award this fiscal year from the various funding sources, review the types of projects and categories of equipment that are eligible for funding, and provide a summary of the air quality benefits that are estimated from the implementation of these incentive programs.

BUDGET CONSIDERATION / FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

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

MOBILE SOURCE COMMITTEE
MEETING OF 09/27/2018

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 12, 2018

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

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. Past Spare the Air campaigns have targeted the general population, household decision-makers, young adults and solo drivers.

Winter Spare the Air began in 2008 which restricts household fireplace burning November through February. Forecasting, messaging and enforcement programs continue to work together to alert the public about unhealthy winter days, advertise this important public health enforcement program remind the public that enforcement officers will be out patrolling neighborhoods.

DISCUSSION

The 2018 Spare the Air campaign again highlighted the benefits of carpooling with co-workers. The campaign was recycled from last season and targeted commuter's region-wide, including non-English speakers. Through social media and media relations the campaign also promoted casual carpooling and other transportation alternatives, such as taking Capitol Corridor, BART, biking, etc. This season was marked by the number of air quality alerts called due to smoke impacts in addition to Spare the Air Alerts for smog.

Winter Spare the Air campaign imagery and messaging will be recycled from last season with an emphasis on air impacts inside the home. Enforcement enhancements adopted in 2015 will be in effect this season. An overview of the fireplace replacement program will be provided.

BUDGET CONSIDERATION/FINANCIAL IMPACT

Funding for the campaign was included in the Fiscal Year Ending (FYE) 2018 and FYE 2019 budgets. The Spare the Air campaign is funded primarily through the Congestion Mitigation Air Quality program, supplemented by the Transportation Fund for Clean Air. The Winter Spare the Air program is included in the FYE 2019 budget through general fund revenue.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Kristine Roselius
Reviewed by: Lisa Fasano

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
Of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 12, 2018

Re: Climate Technology Review and Outreach

RECOMMENDATION

None; receive and file.

BACKGROUND

The Technology Implementation Office (TIO) mission is to accelerate climate action by cultivating partnerships between technology developers and customers and offering grants and loans for emerging low-carbon technologies for stationary sources in the Bay Area. On August 1, 2018, the Air District Board of Directors authorized the Air Pollution Control Officer (APCO) to execute an agreement to establish a loan partnership with the California Infrastructure and Economic Development Bank (IBank). Once executed, the Air District-IBank collaboration will create a revolving loan fund so that as project implementers pay back their loans, funding can be reinvested in additional greenhouse gas technology projects.

DISCUSSION

In partnership with other Air District staff and Energetics, a technology consulting firm, the TIO conducted an evaluation of 188 technology options for reducing greenhouse gas emissions in the industrial and commercial sectors. The evaluation criteria include technology readiness, costs, technical and market barriers, and potential for regional and global emissions reductions. Information on these technologies has been organized in a MS Excel matrix that the Air District is using to prioritize the technologies supported through the financing and partnerships program. Attachment 1 summarizes the highest priority technology opportunities identified in the climate technology review. For each of the recommended technologies, the TIO worked with other Air District Divisions to determine the best recommended course of action for the Air District. Strategies available to the Air District include (1) regulate: develop rules to require the adoption of the technology; (2) incentivize: encourage technology implementation through grants and loans; and (3) educate: conduct outreach on promising technologies to relevant stakeholders who can either regulate, incentivize, or are the key decisionmakers for new technology projects.

Staff will also present the outreach strategy for sharing components of the technology assessment in a targeted way with stationary facilities, technology developers, and financing partners. Staff will also continue to update and add new technologies to the climate technology review, as the technology landscape continues to evolve.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,


































Jack P. Broadbent
Executive Officer/APCO

Prepared by: Derrick Tang
Reviewed by: Ranyee Chiang




Attachment 1: Summary of Technology Assessment Results

Attachment 1 Summary of Technology Assessment Results

The figure below lists the top three mitigation measures and technologies for each industrial sector. The Proposed Action icon represents the recommended action to accelerate adoption of this technology and reduce GHGs in this sector. The full technology assessment report has more detail on the scoring system, methodology, and how technologies were prioritized.

Sector	Mitigation Technology	Proposed Action
Agriculture	Soil Testing	
	Biochar Use	
	Dietary Design	
Buildings Commercial HVAC	Heat recovery ventilation system	
	Variable frequency drive for chillers	
	High-volume, low-speed ceiling fans	
Buildings Commercial non-HVAC	Building Energy Management Systems	
	Solar water heater	
	Low-emissivity window coatings/tints/films	
Buildings Residential	Mini-split Air-source heat pumps	
	Air-source heat pumps for HVAC	
	Tankless water heater	
Cement	Supplemental Cementitious Materials	
	Belite-Rich Cement	
	Fuel Switching	
CHP and Power Generation	Second-life batteries	
	Allam Cycle Turbines (Power plants)	
	Hydrogen Fuel Cells and Electrolyzers	
Iron and Steel	Walking beam furnace	
	Electrolytic pickling line insulation	
	Combustion air fan control/optimization	
Petroleum	Steam system maintenance	
	Boiler - Maintenance	
	Motor & pump optimization	
Semiconductors	Leak detection and elimination	
	NF3 plasma cleanout of CVD chamber	
	Process Optimization	
Waste Composting/ POTWs	Shortcut nitrogen removal (anammox)	
	Adjustments to reduce GHGs in sludge path	
Waste Landfills/ Other	Aerated static piles	
	Landfill gas energy systems	
	Active LFG recovery systems	
	Biochar from agricultural and forest waste	

Key:

-  Regulate
-  Incentivize
-  Educate

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson David Hudson and Members
of the Board of Directors

From: Jack P. Broadbent
Executive Officer/APCO

Date: October 5, 2018

Re: Air Sensor International Conference Update

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

The Air District sponsored the Air Sensor International Conference hosted by the University of California at Davis that occurred on September 12, 2018 to September 14, 2018 in Oakland.

DISCUSSION

This conference gathered sensor and air quality experts from government, academia, industry advocacy groups and the general public where presentations and discussions ranged from the potential uses and further development of sensors to aid in the identification and quantification of air quality impacts, exposure and health, citizen science and data sharing and communication.

Staff will present a summary of this event, attendance, and outcomes.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Jack P. Broadbent
Executive Officer/APCO

Prepared by: Eric Stevenson
Reviewed by: Wayne Kino