



BOARD OF DIRECTORS
STATIONARY SOURCE AND CLIMATE IMPACTS COMMITTEE

BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

COMMITTEE MEMBERS

LYNDA HOPKINS – CHAIR
KEN CARLSON
JOHN GIOIA
OTTO LEE
MARK ROSS

DAVID HAUBERT – VICE CHAIR
NOELIA CORZO
TYRONE JUE
MYRNA MELGAR
VICKI VEENKER

**MEETING LOCATION(S) FOR IN-PERSON ATTENDANCE BY
COMMITTEE MEMBERS AND MEMBERS OF THE PUBLIC**

**Bay Area Metro Center
1st Floor Yerba Buena Room
375 Beale Street
San Francisco, CA 94105**

**City of Palo Alto City Hall
250 Hamilton Ave.
Palo Alto, CA 94301**

**Office of Santa Clara County
Supervisor Otto Lee
70 W Hedding St
East Wing, 10th Floor
San Jose, CA 95110**

**Office of Contra Costa County
Supervisor John Gioia
Conference Room
11780 San Pablo Ave., Suite D
El Cerrito, CA 94530**

**Office of Alameda County Supervisor
David Haubert
4501 Pleasanton Avenue
Pleasanton, CA 94566**

THE FOLLOWING STREAMING OPTIONS WILL ALSO BE PROVIDED

These streaming options are provided for convenience only. In the event that streaming connections malfunction for any reason, the Stationary Source and Climate Impacts Committee reserves the right to conduct the meeting without remote webcast and/or Zoom access.

The public may observe this meeting through the webcast by clicking the link available on the air district's agenda webpage at www.baaqmd.gov/bodagendas.

Members of the public may participate remotely via Zoom at <https://bayareametro.zoom.us/j/86269960523>, or may join Zoom by phone by dialing (669) 900-6833 or (408) 638-0968. The Webinar ID for this meeting is: 862 6996 0523

Public Comment on Agenda Items: The public may comment on each item on the agenda as the item is taken up. Members of the public who wish to speak on a matter on the agenda will have two minutes each to address the Committee on that agenda item, unless a different time limit is established by the Chair. No speaker who has already spoken on an item will be entitled to speak to that item again.

The Committee welcomes comments, including criticism, about the policies, procedures, programs, or services of the District, or of the acts or omissions of the Committee. Speakers shall not use threatening, profane, or abusive language which disrupts, disturbs, or otherwise impedes the orderly conduct of a Committee meeting. The District is committed to maintaining a workplace free of unlawful harassment and is mindful that District staff regularly attend Committee meetings. Discriminatory statements or conduct that would potentially violate the Fair Employment and Housing Act – i.e., statements or conduct that is hostile, intimidating, oppressive, or abusive – is *per se* disruptive to a meeting and will not be tolerated.

STATIONARY SOURCE AND CLIMATE IMPACTS COMMITTEE MEETING AGENDA

WEDNESDAY, NOVEMBER 8, 2023

10:00 AM

1. **Call to Order - Roll Call**

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

2. **Pledge of Allegiance**

CONSENT CALENDAR (Item 3)

3. Approval of the Draft Minutes of the Stationary Source and Climate Impacts Committee Meeting of October 11, 2023

The Committee will consider approving the Draft Minutes of the Stationary Source and Climate Impacts Committee meeting of October 11, 2023.

INFORMATIONAL ITEM(S)

4. Assessment and Mitigation of Woodsmoke Impacts

This is an informational item to provide the Committee with an overview of approaches for assessing and mitigating air quality and health impacts from residential wood combustion emissions. This item will be presented by Stephen Reid, Senior Advanced Projects Advisor in the Assessment, Inventory, and Modeling Division.

OTHER BUSINESS

5. Public Comment on Non-Agenda Matters

Pursuant to Government Code Section 54954.3, members of the public who wish to speak on matters not on the agenda will be given an opportunity to address the Committee. Members of the public will have two minutes each to address the Committee, unless a different time limit is established by the Chair. The Committee welcomes comments, including criticism, about the policies, procedures, programs, or services of the District, or of the acts or omissions of the Committee. Speakers shall not use threatening, profane, or abusive language which disrupts, disturbs, or otherwise impedes the orderly conduct of a Committee meeting. The District is committed to maintaining a workplace free of unlawful harassment and is mindful that District staff

regularly attend Committee meetings. Discriminatory statements or conduct that would potentially violate the Fair Employment and Housing Act – i.e., statements or conduct that is hostile, intimidating, oppressive, or abusive – is per se disruptive to a meeting and will not be tolerated.

6. Committee Member Comments

Any member of the Committee, 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)

7. Time and Place of Next Meeting

Wednesday, December 13, 2023, at 10:00 a.m. at 375 Beale Street, San Francisco, CA 94105. The meeting will be in-person for the Stationary Source and Climate Impacts Committee members and members of the public will be able to either join in-person or via webcast.

8. Adjournment

The Committee meeting shall be adjourned by the Chair.

CONTACT:

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375 BEALE STREET, SAN FRANCISCO, CA 94105
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BAAQMD homepage:
www.baaqmd.gov

- Any writing relating to an open session item on this Agenda that is distributed to all, or a majority of all, members of the body to which this Agenda relates shall be made available at the Air 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, Suma Peesapati, at (415) 749-4967 or by email at speesapati@baaqmd.gov.

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Lynda Hopkins and Members
of the Stationary Source and Climate Impacts Committee

From: Philip M. Fine
Executive Officer/APCO

Date: November 8, 2023

Re: Approval of the Draft Minutes of the Stationary Source and Climate Impacts
Committee Meeting of October 11, 2023

RECOMMENDED ACTION

Approve the Draft Minutes of the Stationary Source and Climate Impacts Committee meeting of October 11, 2023.

BACKGROUND

None.

DISCUSSION

Attached for your review and approval are the Draft Minutes of the Stationary Source and Climate Impacts Committee meeting of October 11, 2023.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine
Executive Officer/APCO

Prepared by: Marcy Hiratzka
Reviewed by: Vanessa Johnson

ATTACHMENTS:

1. Draft Minutes of Stationary Source and Climate Impacts Committee Meeting of October 11, 2023

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

Stationary Source & Climate Impacts Committee
Wednesday, October 11, 2023

DRAFT MINUTES

This meeting was webcast, and a video recording is available on the website of the Bay Area Air Quality Management District at www.baaqmd.gov/bodagendas

CALL TO ORDER

1. **Opening Comments:** Stationary Source and Climate Impacts Committee (Committee) Chairperson, Lynda Hopkins, called the meeting to order at 10:00 a.m.

Roll Call:

Present, In-Person (Bay Area Metro Center, 375 Beale Street, Yerba Buena Room, San Francisco, California, 94105): Committee Chairperson Lynda Hopkins; and Director Myrna Melgar.

Present, In-Person Satellite Location (Office of Contra Costa County Supervisor, John Gioia, Conference Room, 11780 San Pablo Ave., Suite D, El Cerrito, CA 94530): Directors Ken Carlson, John Gioia, and Mark Ross.

Present, In-Person Satellite Location (Palo Alto City Hall, 250 Hamilton Ave., 7th Floor, Palo Alto, California, 94301): Director Vicki Veenker.

Present, In-Person Satellite Location (Office of Santa Clara County Supervisor Otto Lee, 70 W Hedding St., East Wing, 10th Floor, San Jose, California, 95110): Director Otto Lee.

Present, In-Person Satellite Location (Office of Alameda County Supervisor David Haubert, 4501 Pleasanton Ave., Pleasanton, California, 94566): Vice Chairperson David Haubert.

Absent: Board Chairperson John J. Bauters; and Directors Noelia Corzo and Tyrone Jue.

2. **PLEDGE OF ALLEGIANCE**

CONSENT CALENDAR

3. APPROVAL OF THE DRAFT MINUTES OF THE STATIONARY SOURCE AND CLIMATE IMPACTS COMMITTEE MEETING OF SEPTEMBER 13, 2023

Public Comments

No requests received.

Committee Comments

None.

Committee Action

Director Lee made a motion, seconded by Vice Chair Haubert, to **approve** the Draft Minutes of the Stationary Source and Climate Impacts Committee Meeting of September 13, 2023; and the motion **carried** by the following vote of the Committee:

AYES: Carlson, Gioia, Haubert, Hopkins, Lee, Melgar, Ross, Veenker.

NOES: None.

ABSTAIN: None.

ABSENT: Bauters, Corzo, Jue.

INFORMATIONAL ITEM

4. AMENDMENTS TO REGULATION 8: ORGANIC COMPOUNDS, RULE 18: EQUIPMENT LEAKS

Alex Sohn, Senior Air Quality Engineer, gave the staff presentation *Amendments to Regulation 8: Organic Compounds, Rule 18: Equipment Leaks*, including: outcome; outline; requested action; background (rule purpose, previous rulemaking); heavy liquids study; 2023 draft amendments; and next steps.

Public Comments

Public comments were given by Jan Warren, Interfaith Climate Action Network of Contra Costa County.

Committee Comments

The Committee and staff discussed emissions reductions and health benefits that are anticipated to result from this rulemaking; the anticipated level of compliance from industry regarding this rule; whether the Air District anticipates litigation in response to the adoption of this rule; whether this rule is one of the Air District's expedited Best Available Retrofit Control Technology (BARCT) requirements of Assembly Bill (AB) 617 (Community Air Protection Program); whether this rulemaking is currently on schedule; whether the Air District has adequate Compliance & Enforcement resources during and after implementation, should this rule be adopted; whether the Air District has

been engaging with laborers who work at petroleum refineries, chemical plants, bulk terminals/plants, and other facilities that store, transport, and use organic liquids to tell them of their exposure to Total Organic Compounds (TOC); and advances in technology that make it easier to monitor TOC emissions.

Committee Action

None; receive and file.

OTHER BUSINESS

5. PUBLIC COMMENT ON NON-AGENDA MATTERS

Public comments were given by David Morrell, Sonoma Ecology Center; and Jan Warren, Interfaith Climate Action Network of Contra Costa County.

6. COMMITTEE MEMBER COMMENTS

Chair Hopkins announced that Russian River Pride will take place in person for the first time in several years in Guerneville, with various events from October 13 to October 15.

7. TIME AND PLACE OF NEXT MEETING

Wednesday, November 8, 2023, at 10:00 a.m. at 375 Beale Street, San Francisco, CA 94105. The meeting will be in-person for the Stationary Source and Climate Impacts Committee members and members of the public will be able to either join in-person or via webcast.

8. ADJOURNMENT

The meeting was adjourned at 10:33 a.m.

Marcy Hiratzka
Clerk of the Boards

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Memorandum

To: Chairperson Lynda Hopkins and Members
of the Stationary Source and Climate Impacts Committee

From: Philip M. Fine
Executive Officer/APCO

Date: November 8, 2023

Re: Assessment and Mitigation of Woodsmoke Impacts

RECOMMENDED ACTION

None; receive and file.

BACKGROUND

Residential wood combustion is a significant source of fine particulate matter (PM_{2.5}) emissions in the Bay Area, especially during winter months. Woodsmoke also contains gaseous air toxics, including benzene. Air District staff are working to understand the air quality health impacts of woodsmoke with efforts that include emissions inventory improvements, analysis of ambient measurement data, and air quality modeling. Staff are also exploring options for mitigating woodsmoke impacts, including incentive programs and regulatory approaches. Preliminary findings from recent technical analyses are presented, along with information on incentive programs and rule-making efforts.

DISCUSSION

Residential wood combustion accounts for about 16% of annual PM_{2.5} emissions in the Bay Area, and about one-third of direct PM_{2.5} emissions on an average winter day. Because woodsmoke also contains gaseous air toxics such as benzene, understanding and mitigating the impacts of this source sector is important from a human health perspective and for complying with ambient air quality standards for PM_{2.5}. Assessing these impacts presents unique challenges due to the variety of devices used to burn wood, the seasonal nature of woodburning activities, the difficulty in characterizing the spatial distribution of woodsmoke emissions, and other factors.

The Air District has recently contracted with Baseline Environmental to update our regional emissions inventory for residential wood combustion. Baseline analyzed results from winter Spare the Air (STA) surveys conducted by the Air District from 2004-2020, with a focus on survey questions pertaining to woodburning device ownership and usage. Key parameters for estimating emissions include county-level device populations, wood consumption rates, emission

factors, and the impact of control programs like STA. The final 2019 emissions inventory for residential wood combustion showed that this source sector emits about 5.7 tons per day of PM_{2.5} on an annual average basis and about 16.5 tons per day of PM_{2.5} during peak winter months (Dec-Jan). Compared with a 2011 inventory developed by District staff, woodsmoke emissions have decreased by about 25%, mostly due to decreases in fireplace populations and usage.

Analysis of ambient monitoring data can be used to assess the impact of woodsmoke emissions and to investigate spatial and temporal patterns in woodburning activity. For example, analysis of black carbon (BC) data from the Forest Knolls monitoring site in western Marin County shows peak BC levels that are similar to those measured near a busy roadway. These peak levels happen during evening hours when woodburning activity is most likely occurring. Analysis of other types of monitoring data, such as speciated PM_{2.5} measurements, can also be used to assess potential patterns in woodsmoke emissions.

Air District staff are also conducting air quality modeling analyses to assess the air quality and health impacts of PM_{2.5} emissions from residential wood combustion. Using techniques previously applied to evaluate impacts from refinery fluidized catalytic cracking units for amendments to Rule 6-5 and from natural gas-fueled appliances for amendments to Rules 9-4 and 9-6, preliminary modeling was conducted for a number of scenarios with different PM_{2.5} emissions levels and spatial distributions of emissions. Preliminary results from applications of U.S. EPA's health benefits model (BenMAP) showed that PM_{2.5} emissions from residential wood combustion in the Bay Area could be responsible for 160 or more premature deaths annually. For comparison, modeled benefits of eliminating primary and secondary PM_{2.5} generated by natural gas-fired combustion from the building appliances targeted by proposed amendments to Rules 9-4 and 9-6 included avoiding 37 to 85 premature deaths annually.

To mitigate the impact of woodsmoke emissions, the Air District has historically relied on a variety of approaches, including regulatory efforts such as the Spare the Air Program and incentive programs that fund the replacement of woodburning devices with natural gas-fueled options or EPA certified woodstoves and pellet stoves. This presentation will summarize past incentive programs and introduce the Clean Heating Efficiently with Electric Technology, Program (Clean HEET), which will offer \$2 million to homeowners to replace operating and heating wood stoves and wood-burning fireplace inserts with electric heat pumps. Mitigation information will also include a review of Rule 6-3 on woodburning devices and plans for exploring amendments to this rule and other policy options.

This rule development process will include the drafting of a white paper that documents current knowledge about this source type and provides decision-making context and recommendations on potential policy responses. This white paper will be informed by ongoing technical assessments, including additional analyses of ambient monitoring data, revised spatial distributions of woodsmoke emissions, and updated air quality modeling simulations.

To conclude this agenda item, staff will engage Committee members in a discussion of potential impacts of woodsmoke emissions and policy options for mitigating those impacts.

BUDGET CONSIDERATION/FINANCIAL IMPACT

None.

Respectfully submitted,

Philip M. Fine
Executive Officer/APCO

Prepared by: Stephen Reid
Reviewed by: Song Bai and Greg Nudd

ATTACHMENTS:

1. Assessment and Mitigation of Woodsmoke Impacts Presentation