Bay Area Air Quality Management District
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Advisory Council Meeting
Monday, June 12, 2023

**APPROVED 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:** Advisory Council (Council) Co-Chairperson, Dr. Gina Solomon, called the meeting to order at 8:34 a.m.

   **Roll Call:**

   Present: Co-Chairperson Dr. Gina Solomon; and Vice Chairperson Professor Michael Kleinman.

   Absent: Co-Chairperson Dr. Linda Rudolph; and Members Dr. Danny Cullenward, Dr. Adrienne Hollis, Dr. Pallavi Phartiyal, Garima Raheja; and Board Liaison David Haubert.

2. **APPROVAL OF THE ADVISORY COUNCIL MEETING MINUTES OF JANUARY 30, 2023**

Public Comments

No requests received.

Due to a lack of quorum, this item was continued until the next meeting.

## INFORMATIONAL ITEMS

3. **COMMENTS ON THE PROPOSED METHODOLOGY FOR MODELING HEALTH RISKS FROM LOCAL SOURCES OF FINE PARTICULATE MATTER ($PM_{2.5}$)**

Greg Nudd, Deputy Executive Officer of Science and Policy, introduced staff from the California Office of Environmental Health Hazard Assessment (OEHHA), who gave the presentation *Comments on "Modeling Local Sources of Fine Particulate Matter ($PM_{2.5}$) for Risk Management"*.

Dr. Lauren Zeise, the Executive Director of OEHHA, opened the presentation by remarking that OEHHA fully supports the proposed overall approach to assess health risks from local levels of $PM_{2.5}$, finding the approach scientifically rigorous; that OEHHA agrees with the underlying assumption that the health outcomes are linear and without a threshold within the range of current exposure; that OEHHA has carefully considered the model and the underlying assumptions; and that OEHHA has a number of recommendations for fine-tuning the proposed approach.

Dr. Zeise elaborated that there are background exposures producing health effects in the population; that incremental changes in the exposure either increase or decrease linearly within the range of observations; and that this is supported by a number of epidemiological observations, most recently captured by US EPA in its Integrated Science Assessment (ISA) Supplement as well as its previous ISA. Dr. Zeise further remarked that the understanding of linearity with dose for PM has been accepted for some time, and pointed to a 2009 National Academy of Sciences report, *Science and Decisions*, that reflects that basic assumption.

Dr. Zeise then stated that there are three key features for consideration: first, that the proposed approach is different from the classic RfD [reference dose] approach, such as under the Hot Spots program, where the concern is the difference between some reference level and the level in the population, which is very different from the reference level, outside of a linear area, where variability might be driving thresholds; second, there is a good deal of epidemiological information to inform the assessment; and third, that there is a most-susceptible population as a target, therefore adjustments are being made to address the risk to that population, so one would not use the approach to obtain an estimate for the complete population around the facility—what this is focused on is looking at the most exposed susceptible group.

Dr. Zeise introduced Dr. Keita Ebisu, who stated that OEHHA agrees with the model selection and structure represented by the key equation in the proposed methodology. Next, Dr. Ebisu reviewed the five combinations of receptor type and health outcome proposed in the methodology, and stated that OEHHA agrees with the model application to these health outcomes.

Dr. Rupa Basu then reviewed evidence that the proposed methodology relies on to establish effect sizes for premature mortality and pediatric asthma onset, which are based on epidemiological studies. Dr. Basu stated that OEHHA agrees with BAAQMD's selection of values for effect sizes ("betas"). Dr. Basu introduced a recent study (Alexeeff 2023) that examined $PM_{2.5}$ exposures in a Northern California cohort, inclusive of the Bay Area, noting that while it focused specifically on cardiovascular mortality, much of the total $PM_{2.5}$-attributable total mortality is cardiovascular. Dr. Basu remarked that it could also be a source of information about sensitive subgroups by, for example, socioeconomic status across all age groups, and recommended considering the study for those reasons. Finally, Dr. Basu stated that OEHHA's recommendation was that receptors be characterized as maximally exposed susceptible groups, rather than maximally exposed individuals.

Dr. Vincent Cogliano then spoke about the approach to adjusting $\Delta x$, which is the term in the key equation used to represent a change in $PM_{2.5}$, and recommended that changes in breathing rate be addressed via an inter-individual variability factor. Dr. Cogliano stated that OEHHA agreed that unsheltered populations do not receive protections from things like air conditioning and filtration, that lower the levels of particulates indoors, and that an adjustment factor of 1.5 would be reasonable to account for this. Dr. Cogliano explained that OEHHA agrees with the method for adjusting for overlap between the schedules of the source and the receptor, and recommends 100% FAH ("fraction of time

at home") for children at a daycare, school, or residence. Dr. Cogliano then remarked that in the white paper, there is an adjustment applied in the key equation, a factor of 3 for groups with no empirical basis; that this is acceptable and in accordance with standard practices, and the assumption that there is some variability in physiology among humans, and how they may respond to a particular pollutant; that a default at OEHHA is generally 30, with some agents going higher; that here a factor of three may be acceptable; and that there is still variability among a population like Medicare recipients.

Dr. Cogliano stated that OEHHA recommended a single adjustment factor of three or more to account for inter-individual variability in sensitive populations to address factors including age, socioeconomic status, race/ethnicity, comorbidities, breathing rate variability, and other susceptibilities in seniors, children, off-site workers, and unsheltered populations (apart from having increased exposure relative to a sheltered population, the unsheltered population will tend to have higher rates or degrees of other risk factors, such as comorbidities that render them more vulnerable, or inadequate healthcare). Dr. Cogliano urged that the factor should be over and above what was in the epidemiological studies, and that it should be at least three or possibly more; if this is done, then a data deficiency factor is not necessary.

Dr. Cogliano presented OEHHA's proposal to change the key equation to include a new factor *F*, a multiplicative factor applied to the product of the $PM_{2.5}$ increment ($\Delta x$) and effect size (beta); this *F* would be a composite factor, comprising both adjustments for exposure and adjustments for inter-individual variability.

Dr. Cogliano closed by remarking that OEHHA finds the overall approach for assessing health risks from localized $PM_{2.5}$ to be warranted and scientifically sound; that OEHHA's input and recommendations are to improve the proposed approach by fine-tuning; that OEHHA suggests looking at the recent study by Alexeeff et al (2023) to inform estimates of the sensitivities of various segments of the population; and that an inter-individual factor of 3 or more could be applied to protect sensitive populations.

<u>Clarifying Questions from Council Members</u>

Regarding the unsheltered population, Vice Chair Michael Kleinman remarked that worker environments are often dusty, and their exposures greater than what one would calculate from regional levels; Dr. Kleinman asked whether this fact is adequately included, such that a data deficiency factor is unnecessary. Dr. Cogliano responded that it might be good to think about how a very dusty environment for off-site workers compares to available epidemiology studies; that the focus would be on the increase relative to a dusty baseline; that different subgroups can be assessed; that he would not consider it part of a data deficiency factor; and that if it could be covered in the exposure part of the model, that would be best. Dr. Kleinman clarified that it was not a critique, and that the proposal as it stood was solid.

Co-Chair Gina Solomon remarked that she appreciated the recommendation to eliminate any data deficiency factor; and that in previous discussions, other endpoints had come up, such as neurodevelopmental, neurodegenerative, and reproductive endpoints, that were not included. Dr. Solomon inquired whether OEHHA could explain their thinking on those, and whether it could be seen as a data deficiency, or in some other category. Dr. Cogliano responded that he would apply a data-based deficiency factor when there are no studies of endpoints for which one has a reasonable expectation would be outcomes of the exposure: if there are no studies of neurodevelopmental effects,

that would be an example, or if asthma exacerbations had not been studied; it is appropriate when there are hypotheses and mechanisms by which PM can affect a health endpoint of concern, but there are as of yet no actual studies of it. In follow-up, Dr. Solomon stated that the methodology includes effect sizes for asthma onset and mortality, but not for the other endpoints being discussed, and asked whether there is a recommendation to develop effect sizes for additional endpoints individually, or whether those could be adequately protected against via the effect size for all-cause mortality: that is, if we protect against all-cause mortality, will we be sufficiently protecting against, for example, neurodegenerative disease or reproductive outcomes. Dr. Cogliano agreed that it was a difficult question, to compare mortality to other diseases that are not necessarily fatal, such as when the [increased] incidence of some non-fatal disease might be higher than the [increased] incidence of mortality, and stated that there is likely no simple answer. Dr. Kleinman added that his feeling was that while we always focus on mortality, we do not value morbidity as much, because we put a very high dollar value, in cost-benefit analyses, on a human life; and that our ability to put a dollar value on morbidity is much more limited; but that a closer look might reveal that non-mortality endpoints might in the aggregate equal or exceed the cost to society of premature mortality, with cascading effects throughout society; and that improved methods to express this are needed. Dr. Basu responded that mortality indeed does not capture all endpoints, and that her understanding was that this methodology could be used for other endpoints, such as adverse birth outcomes, with studies of those endpoints specifically used for their effect sizes, rather than extrapolating from mortality studies to other endpoints.

Public Comments

Christine Wolfe from the California Council for Environmental and Economic Balance (CCEEB) expressed appreciation for the opportunity to present in January. Ms. Wolfe inquired whether the same formula is to be used in more than one situation, with one set of parameters, or whether the thought is to adjust one or more parameters in other situations depending on the application—where the facility is located, for example, and the receptors around the facility.

Comments were also provided by Ken Szutu, of the Vallejo Citizen Air Monitoring Network (CAMN) and the Air District's Community Advisory Council. Mr. Szutu expressed that he would like to hear OEHHA's position on the speciation of PM, if local health impacts are the subject. Mr. Szutu also asked about indoor and outdoor exposure, and stated that when indoor monitoring has been conducted in his community, after a short while the indoor will match up with the outdoor; moreover, that they have found that indoor air can sometimes be more polluted than outdoor air; he asked for OEHHA's position on this.

Council Comments

Co-Chair Solomon asked whether OEHHA could first address the questions from the commenter about speciation and indoor air. Dr. Ebisu replied that, in regard to speciation, the starting point for this whitepaper is undifferentiated or total $PM_{2.5}$; although a next step could be to estimate species, a species-specific effect size (beta) is not generally available, although in the next few years some may become available; that exposure to wildfire smoke is currently a very active area of epidemiological research; and that activity patterns during wildfires, such as whether windows are open or not, could be very different.

Council Action

None; receive and file.

## 4. UPDATE ON THE PROPOSED METHODOLOGY FOR MODELING HEALTH RISKS FROM LOCAL SOURCES OF FINE PARTICULATE MATTER ($PM_{2.5}$)

Mr. Nudd introduced Dr. David Holstius, Senior Advanced Projects Advisor, who gave the staff presentation *Update on Modeling Health Risks from Local Sources of $PM_{2.5}$*. Dr. Holstius opened with a slide presented at the last Advisory Council meeting, which grouped prior feedback into three main sets of topics: one about the methodology proper; a second about policy and implementation—those being more of a matter for the next phase of the project; and third, some requests for clarification or technical details, some of which will be obviated by revisions, but which the Air District will still respond to in writing. Dr. Holstius then remarked on the comments about the methodology proper: that as far as the strength of the science goes, this was thoroughly addressed by the Council at its last meeting, as well as by its recent Symposium, and the report that emerged from that Symposium, as well as by the US EPA's CASAC [Clean Air Scientific Advisory Committee], and finally by OEHHA in the presentation that was just heard.

As far as completeness goes, Dr. Holstius acknowledged that it is known that we cannot model everything, for example that there are important indoor exposures from indoor sources, whereas this methodology is about the contributions from sources that are generally outdoors, that are regulated by the Air District; likewise, that wildfires are happening and are consequential, with exposure intensities sometimes orders of magnitude larger, although shorter in duration, compared to the evidence base that this methodology is drawing from in terms of mortality and asthma. Dr. Holstius stated that it is also known that $PM_{2.5}$ has very broad effects, and that the evidence base is still growing; from a regulatory perspective, premature adult mortality and childhood asthma onset provide at least some risk score for all segments of the population, for a wide range of receptor types and from the very young to the very old. Dr. Holstius gave assurances that the Discussion would be revised to feature more prominently some of the endpoints for which scores are not currently being calculated, which may address some of the concerns about data deficiencies; and that staff would work to keep this issue front of mind for participants during the next phases, during discussions of policymaking, along with other considerations that come up during risk management that will not be directly addressed here, in the risk assessment methodology development phase. Dr. Holstius pointed out that right now there are two scores—mortality and asthma—and deciding what to do about that is a policy matter; the Hot Spots framework may offer a pattern to follow, where there already are three scores being considered: chronic hazard, acute hazard, and cancer risk, each with a corresponding threshold for policy or action; and that there is as yet no prescribed threshold for risk of mortality or asthma onset, so that does offer a degree of freedom that will determine protectiveness in practice, making it not simply about the selection of endpoints, and that is a matter for the Board to consider. Dr. Holstius suggested that it might be best to resolve this with two endpoints before adding more.

As far as the risk magnitude and adjustments for vulnerable groups go, Dr. Holstius remarked, at the last meeting the Council heard arguments, on the one hand, from Dr. Julie Goodman about the values being too small to be real or significant, while on the other hand, concerns were raised by CCEEB about unrealistic assumptions and values perhaps being alarmingly large. Dr. Holstius stated that it is neither of those; it is meant to be protective of those who are more susceptible based on our scientific understanding. Dr. Holstius recalled Dr. Kleinman's remark that we should remain mindful that what

results in a small effect for one person may result in a larger effect for someone else, with for example a smaller airway, or other respiratory impairments, and the approach we take should protect this diverse group of people. Dr. Holstius stated that a good communication plan is needed, with supporting materials that may involve case studies and other kinds of contextualization suggested and supported by the Co-Chairs at the last meeting. In terms of the magnitudes of adjustments for vulnerable groups, Dr. Holstius stated that the Air District continues to be advised by OEHHA on what is supportable by the science, and warranted; OEHHA feedback and the Air District's revisions will make some technical misunderstandings obsolete, and that will resolve remaining technical issues.

Dr. Holstius indicated that the feedback just provided by OEHHA was overall supportive of the draft methodology, and of its scientific foundations; specific recommendations for improvements would be incorporated into a version 2.0 of the white paper. Next steps, Dr. Holstius stated, include that update to version 2.0, along with responses being posted to written comments; then there will be a transition to more policy-oriented issues and applications, likely leaning on case studies to illustrate some of the finer points and demonstrate correctness without getting lost in details.

Public Comments

No requests received.

Council Comments

Co-Chair Gina Solomon remarked that the paper by Alexeeff et al (2023) was notable for three reasons: first, that Director Haubert had at the last meeting [January] asked staff if there were any studies that had been done in the Bay Area that were relevant to the present purpose, and that this study is a high quality and very relevant example of that, with nearly 3.8 million people and substantial geographic overlap with the 9-county Bay Area. Dr. Solomon noted that the outcomes are somewhat different—ischemic heart disease mortality and cardiovascular mortality, and acute myocardial infection not resulting in death—but the magnitude of the effect was quite similar, which gives confidence. Dr. Solomon remarked that another issue raised by commenters at the last meeting was that some of the referenced studies were on the older side, whereas the Alexeeff et al (2023) study is quite recent. Dr. Solomon clarified that it may not be necessary to change the effect size or basis for the analysis, but that it is important to take a careful look at the study and incorporate it, as this study used high-quality and precise information on individual-level residential addresses and confounders, with the potential caveat that the members of the Alexeeff cohort (Kaiser insurance) tend to be healthier than the general population. Dr. Holstius responded that yes, it would be considered carefully and taken as strong support.

Dr. Solomon then turned to the topic of other endpoints, stating that if she resided next to a significant emitter of $PM_{2.5}$, she might worry about dying, but she would worry about dementia, and also be concerned about reproductive outcomes, neurodevelopmental outcomes. Dr. Solomon stated that these are important and need to be acknowledged, and that there are data on these outcomes, so they can't be ignored. The reason for including a data-deficiency factor was, Dr. Solomon said, to simplify and not have to develop an effect-size parameter for every potential outcome, but it is a little problematic not knowing how they all relate to one another; on the other hand, asking staff to go back and develop models and effect sizes for every outcome for which that could be done, could result in significant delays, and in the end just with one, whichever is the most relevant to the population at hand that is the most protective. Dr. Solomon stated that we need to make sure that we are thinking about the science,

and what is strongly supported, and how to move forward with something that's workable, and not a lot of different slope factors to have to deal with in any individual decision process; that she understood OEHHA to be recommending a factor of at least, but not necessarily just, three-fold; that this would include age, socio-economic status, co-morbidities (very important), variability across the population, and the vulnerability of the unhoused—that this seemed like more than 3-fold, when justice will not really be done to the risk of neurological or reproductive outcomes at this phase in the process. Dr. Solomon then strongly encouraged staff to consider a factor of 10-fold, that would span and clearly itemize all issues that are not fully addressed in the current equation, and stated that in her opinion, a factor of 10-fold would be entirely reasonable at this point.

Dr. Kleinman agreed that an additional level of protection is needed, because even at the proposed new levels for the [national] standards, it is very hard to argue that there is an adequate margin of safety; we are seeing effects at levels considerably below the annual $PM_{2.5}$ standard in epidemiological studies, and there are strong corroborations with many endpoints where the evidence may not yet be sufficient to call them "causally related" but much of that is due to deficiencies in the number of studies; therefore, we need to think about what we are going to incorporate into the notion of "data deficiency"; many of these endpoints will have cascading effects that last through decades; therefore our assessment should take into account that there is very strong evidence that other endpoints are related to $PM_{2.5}$ exposure, but lack of funding and other resources mean that, in his opinion, these remain "known unknowns."

Dr. Zeise stated that, listening to the discussion, there was clearly a concern that not all endpoints are being fully captured, and that making sure that the most sensitive are considered, as well as a number of effects—OEHHA would need to think more about the factor, but one of the considerations is that data deficiency factors are typically used when working in the RfD [reference dose] framework; that said, there is a large body of data pointing to other endpoints, and that it might be possible to develop a narrative, as well as to consider the effect sizes estimated by studies of other endpoints, to develop an understanding of the extent to which risks may not be adequately covered by considering estimates for susceptible populations for mortality and asthma; the question is also to the Air District to the extent to which there has to be a full accounting, quantitatively, of all endpoints, in making a decision, or can there be a narrative that also enables weighing of those other outcomes as they move toward making a decision on a permit or similar.

Mr. Nudd responded that right now, the way that the Air District's permitting regulations are set up, it does not consider the localized impacts of PM at all; therefore, considering mortality would be a huge improvement; therefore, while recognizing that other endpoints could be discovered to be driving the principal risk concern, what he would advocate is that we move forward with something that addresses mortality in the policy contexts currently being considered.

Mr. Nudd stated that one potential policy context would be CEQA (California Environmental Quality Act) thresholds and local land-use decision-making, where the Air District provides guidance to local decision-makers on how to conduct air quality analyses, including significance thresholds; currently the significance thresholds for PM are based on an old methodology driven more by compliance with the NAAQS (National Ambient Air Quality Standards), which has a number of problems; for that, the intent would be to take an approach similar to air toxics, and take a look at those localized impacts; this would involve "what is truly significant?" and would have to look at the body of decisions that local land-use decision makers are making, because having everything count as significant would be undesirable, insofar as people would no longer pay attention.

Mr. Nudd stated that a second policy context could be pre-construction permits; in that case, the Board of Directors (Board) would set a general policy; currently the Board has set a 10 per million threshold for cancer risk across the Bay Area, but a 6 per million threshold for overburdened communities, defined as communities in the 75$^{th}$ percentile in CalEnviroScreen; a permit would be denied if the modeling shower a higher cancer risk score; that was based on a consideration, again, of the body of the decisions that the Board is making with respect to permitting, and what the impacts are of drawing a particular line.

Mr. Nudd stated that a third policy option could be to set facility-level risk limits for PM, and create a structure that allows staff to go to the Board and have them set limits for overall risk from PM exposure from individual facilities, and the facilities would have to find ways to get below those thresholds; in that case, the Board would be considering the cost implications, as well as the health implications.

Mr. Nudd explained that while this methodology may not provide a number for every known endpoint, that other policy considerations will probably drive the selection of a threshold, more than the exact number that comes out of a methodology like the one proposed; therefore, whether a factor is 3 or 10 may not make a large difference in the policy outcome; therefore, he would advocate moving forward with a mortality-based analysis across these policy use cases, while continuing to evaluate other endpoints.

Mr. Nudd stated that as work moves forward with the Advisory Council, the focus will likely broaden to look at cumulative impacts, especially in permitting, that go beyond looking at CalEnviroScreen and look at multiple chemical exposures and similar questions; therefore, for present purposes we should not let the perfect be the enemy of the good, and move forward with assessments of mortality risks while making the process more robust and inclusive, including of endpoints associated with exposures to other chemicals, and within the context of the socioeconomic vulnerability to be most protective in those communities that are most vulnerable and, to Dr. Kleinman's point, least able to afford the health impacts of the insults.

Co-Chair Solomon thanked Mr. Nudd for the helpful context, including longer-term ideas about incorporating CalEnviroScreen and cumulative impacts, which could go a long way toward addressing issues and concerns raised by community members in this forum.

Co-Chair Solomon offered a recap of the developments so far in the process, remarking that she was quite happy with where the white paper currently stands: looking at $PM_{2.5}$ at a local level is relatively new approach but the proposed approach is methodologically sound; this has been discussed since the 2019 meeting, by two iterations of the Advisory Council; it has now been reviewed by OEHHA and found to be scientifically appropriate and sound, which is important; looking at $PM_{2.5}$ using a linear, non-threshold model has been an extremely important topic of discussion for several years, and is also now supported by a scientific consensus, that there is no discernable threshold in the population, especially when looking at mortality, as we are here; therefore we are on good scientific ground; we have a model that makes sense and is time-tested; we have an appropriate focus on the highly exposed group in a local area; and we have had a lot of discussion about the fact that this is somewhat different than a cancer-risk assessment, including the issue of data deficiencies for other endpoints, being that here there are multiple endpoints, resulting in potentially an array of linear dose-response relationships, which is challenging.

Co-Chair Solomon remarked that it is appropriate to consider exposures and adjustment factors in particular for unhoused populations, or people who may have very leaky homes, which is especially pertinent to the Bay Area, and reinforced by her experience with field studies in the Bay Area, where a significant number of homes are for example cooled by swamp coolers, resulting in no filtration and pulling in large quantities of outdoor air, including $PM_{2.5}$ from outdoors; therefore the adjustment factor for the unhoused and for other populations that may essentially have no barrier or protection from housing is appropriate. Dr. Solomon remarked that the issue of adjustment factors has involved a good deal of discussion, and is always challenging; she stated that she would feel more comfortable with an adjustment factor greater than 3, and more comfortable with a factor of 10, for the reasons that she stated previously, but that the most important thing at this point is to make progress on the issue, and actually apply the methodology. Dr. Solomon wondered if it might help to look at effect sizes for other endpoints, especially neurological and reproductive outcomes, to have a sense of whether the all-cause mortality and asthma analyses would be reasonably protective against those other outcomes. Dr. Solomon concluded by remarking that there has been a great deal of progress, and that the work is being handed back to staff to incorporate everything discussed.

Vice Chair Kleinman offered a final remark on the topic of wildfires, which was that going forward we are likely to see this trend continuing, possibly worsening over the years; this is outside the control of the Air District, but asked whether there should be re-evaluations built into the model or policy, possibly on a periodic basis, to take account of worsening baseline conditions, and possibly lead to increased protections during times when $PM_{2.5}$ levels are higher, akin to Spare the Air Days. Mr. Nudd responded that rather than building that into this risk-assessment methodology, that might be better incorporated into policy implementation; staff are aware of some approaches in other jurisdictions that, for example, require cessation of dust-generating activities during high PM days; those kinds of examples can be addressed as staff go through the process of identifying and modifying regulatory requirements for PM sources, based on this methodology; that is something to consider insofar as it is practical; for some large facilities this may not be a practical approach, so it would likely require looking at individual source types and how they might actually mitigate their emissions temporarily during high-PM events.

Co-Chair Solomon concluded by expressing interest on behalf of herself, Co-Chair Rudolph (absent), and Dr. Kleinman, in continuing to help in any way with any aspect of this report, mindful of Brown Act limitations.

Council Action

None; receive and file.

## OTHER BUSINESS

### 5. REPORT OF THE EXECUTIVE OFFICER/AIR POLLUTION CONTROL OFFICER (APCO)

On behalf of Dr. Philip M. Fine, Executive Officer/APCO, Mr. Nudd reported that because the current Councilmembers' terms expire in July 2023, recruitment will open soon. Air District staff hopes to have one final meeting of the current group of Councilmembers and have them take formal action to approve Version 2.0 of the Air District's Proposed Methodology for Modeling Health Risks from Local Sources of $PM_{2.5}$. The Air District hopes to implement policy changes based on endorsement of the Council and OEHHA as soon as possible. The Air District also hopes to work with the Council to shape the Air

District's policy response regarding PM endpoints and cumulative impacts of air pollution on overburdened communities.

## 6. PUBLIC COMMENT ON NON-AGENDA MATTERS

No requests received.

## 7. BOARD MEMBER COMMENTS

None.

## 8. TIME AND PLACE OF NEXT MEETING

At the end of the meeting, the next Advisory Council meeting was to be held at the Call of the Chair. After the meeting adjourned, the next meeting was scheduled for Monday, September 11, 2023, at 9:30 a.m., at 375 Beale Street, San Francisco, California, 94105. The meeting will be in-person for members of the public will be able to either join in person or via webcast.

## 9. ADJOURNMENT

The meeting adjourned at 10:12 a.m.

/s/ Marcy Hiratzka & David Holstius
Marcy Hiratzka & Dr. David Holstius