



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D.C. 20460

OFFICE OF THE ADMINISTRATOR

September 21, 2022

MEMORANDUM

SUBJECT Formation of the BenMAP and Benefits Methods Panel

FROM: Holly Stallworth, Ph.D. *Holly Stallworth*
Designated Federal Officer

THRU: Wanda Bright *Wanda Bright*
Ethics Officer

TO: Thomas H. Brennan
Director and Deputy Ethics Official

The Science Advisory Board Staff Office is forming the SAB BenMAP and Benefits Methods Panel to conduct the review of EPA's BenMAP tool, an open-source computer program that calculates the number and economic value of air pollution-related deaths and illnesses due to Particulate Matter (PM) and Ozone pollution. In addition, the SAB BenMAP and Benefits Methods Panel will review EPA's technical support document *Estimating PM2.5-and Ozone-Attributable Health Benefits* as requested by the EPA's Office of Air and Radiation. Collectively, the SAB BenMAP and Benefits Methods Panel will review both EPA's approach for selecting and applying the evidence used to quantify and monetize air pollution-related effects and how the BenMAP tool performs these calculations.

This memorandum addresses the set of determinations that were used in forming the SAB BenMAP and Benefits Methods Panel, including:

1. The type of review body that will be used to conduct the review, and the nature of the review
2. The types of expertise needed to address the general charge
3. Financial conflict of interest considerations, including identification of parties who are potentially interested in or may be affected by the topic to be reviewed
4. How regulations concerning "appearance of a loss of impartiality" pursuant to 5 C.F.R. § 2635.502 apply to members of the augmented committee
5. Other considerations that might affect the objectivity of members of the augmented committee, and
6. How individuals were selected for the augmented committee.

DETERMINATIONS:

1. The type of review body that will be used to conduct the review, and the nature of the review.
As an ad hoc panel of the SAB, the BenMAP and Benefits Methods Panel will provide independent advice through the chartered SAB on EPA's BenMAP model and Technical Support Document *Estimating PM2.5 and Ozone-Attributable Health Benefits*.
2. The types of expertise needed to address the general charge.
On June 13, 2022, the EPA SAB Staff Office announced in a Federal Register Notice (87 FR 35771-35772) that it was expanding its request for nominations previously announced on April 5, 2022. The EPA SAB Staff Office previously requested nominations of scientific experts to form a panel to review EPA's new cloud-based Environmental Benefits and Mapping (BenMAP) tool, an opensource computer program that calculates estimated air pollution-related deaths and illnesses and their associated economic values. Because the two panels would require substantially similar expertise, the SAB Staff Office determined that it is appropriate to combine them into a single panel with a more comprehensive charge. The Science Advisory Board Staff Office sought additional candidates to complement those nominated for the review of BenMAP. air pollution epidemiology; biostatistics; risk assessment; demographics; public health data science; uncertainty analysis; and environmental economics, particularly, the valuation of benefits from pollution reductions.
3. Financial conflict of interest considerations, including identification of parties who are potentially interested in or may be affected by the topic to be reviewed.
 - a. Identification of parties (or class of parties) whose financial interests may be affected by the matter to be reviewed: The principal interested and affected parties for this topic are various industry sectors interested in, or affected by, the current or any revised regulations for ozone or PM.
 - b. Conflict of interest considerations: For Financial Conflict of Interest (COI) issues, the basic 18 U.S.C. § 208 provision states that: "An employee is prohibited from participating *personally or substantially* in an official capacity in any *particular matter* in which he, to his knowledge, or any person whose interests are imputed to him under this statute has a *financial interest*, if the particular matter will have a *direct and predictable effect* on that interest [emphasis added]." For a conflict of interest to be present, all elements in the above provision must be present. If an element is missing the issue does not involve a financial conflict of interest; however, the general provisions in the appearance of impartiality guidelines still apply and need to be considered.
 - i. Does the general charge to the panel involve a particular matter? A "particular matter" refers to matters that "...will involve deliberation, decision, or action that is focused upon the interest of specific people, or a discrete and identifiable class of people." It does not refer to "...consideration or adoption of broad policy options directed to the interests of a large and diverse group of people." [5 C.F.R. § 2640.103(a)(1)]. A particular matter of specific party means a particular matter that is focused on the interests of a specific party [5 C.F.R. § 2640.102(m)].
The activity of this SAB Panel will qualify as a *particular matter of general applicability* because the resulting advice will be part of a deliberation, and under

certain circumstances, the advice could involve the interests of a discrete and identifiable class of people but does not involve specific parties. That group of people constitutes those who are involved with organizations facing regulatory decisions related to the release of or exposure to PM and ozone.

ii. Will there be personal and substantial participation on the part of the panel members? Participating personally means direct participation in this review. Participating substantially refers to involvement that is of significance to the matter under consideration. [5 C.F.R. §2640.103(a)(2)]. For this review, *the SAB Panel members will be participating personally in the matter*. Panel members will be providing the Agency with advice and recommendations on the Agency’s technical analysis on PM and ozone, and such advice is expected to directly influence the Agency’s guidance on risk assessment and risk management decisions involving PM and ozone. *Therefore, participation in this review will also be substantial.*

iii. Will there be a direct and predictable effect on panel members’ financial interests? A direct effect on a participant’s financial interest exists if “... a close causal link exists between any decision or action to be taken in the matter on the financial interest. A particular matter does not have a direct effect ... if the chain of causation is attenuated or is contingent upon the occurrence of events that are speculative or that are independent of, and unrelated to, the matter. A particular matter that has an effect on a financial interest only as a consequence of its effects on the general economy is not considered to have a direct effect.” [5 C.F.R. § 2640.103(a)(ii)]. The ethics regulations include an exemption allowing special government employees (SGEs) serving on federal advisory committees to participate in any particular matter of general applicability where the disqualifying financial interest arises from their non-Federal employment or non-Federal prospective employment, provided that the matter will not have a special or distinct effect on the employee or employer other than as part of a class [5 C.F.R. § 2640.203(g)]. (This exemption does not include the interests of an SGE arising from the ownership of stock in his employer or prospective employer.) Prospective SAB Panel members were asked to submit Form 3110-48, a Confidential Financial Disclosure for Special Government Employees, so that the SAB Staff Office could make this determination. *The SAB Staff Office has determined that there will be no direct and predictable effect on the financial interests of the SAB Panel members.*

4. How regulations concerning “appearance of a loss of impartiality” pursuant to 5 C.F.R. § 2635.502 apply to members of the panel.

The Code of Federal Regulations at 5 C.F.R. § 2635.502(a) states that: “Where an employee knows that a *particular matter involving specific parties* is likely to have a **direct and predictable** effect on the financial interest of a member of his household, or knows that a person with whom he has a covered relationship is or represents a party to such matter, and where the person determines that the circumstances would cause a **reasonable person** with knowledge of the relevant facts to question his impartiality in the matter, the employee should not participate in the matter unless he has informed the agency designee of the appearance problem and has received authorization from the agency designee.” Further, § 2635.502(a)(2) states that, “An employee who is concerned

that circumstances other than those specifically described in this section would raise a question regarding his impartiality should use the process described in this section to determine whether he should or should not participate in a particular matter.”

The SAB Staff Office has determined that the matter to be considered by the panel is not a particular matter involving specific parties; i.e. this matter does not involve “any judicial or other proceeding, application, request for a ruling or other determination, contract, claim, controversy, investigation, charge, accusation, arrest or other particular matter involving a specific party or parties in which the United States is a party or has a direct and substantial interest” [5 C.F.R. 2637.102(a)(7)].

5. Other considerations that might affect the objectivity of members of the panel.

Members of SAB panels must be scientific and technical experts who are objective and open-minded, able to engage in deliberative discussions with scientists who may have disparate perspectives. To evaluate candidates, the SAB Staff Office considers information provided by candidates (including on the EPA Form 3110-48), and information independently gathered by SAB staff.

As part of a determination that committee members are objective and open-minded on the topic of the review, and consistent with the agency’s Peer Review Policy, the SAB Staff Office considers previous involvement in the matter before the augmented committee. This evaluation includes responses provided by candidates to the following supplemental questions:

- (a) Do you know of any reason that you might be unable to provide impartial advice on the matter to come before the panel/committee/subcommittee or any reason that your impartiality in the matter might be questioned?
- (b) Have you had any current or previous involvement with the review document(s) under consideration including authorship, collaboration with the authors, or previous peer review functions? If so, please identify and describe that involvement.
- (c) Have you served on previous advisory panels, committees or subcommittees that have addressed the topic under consideration? If so, please identify those activities.
- (d) Have you made any public statements (written or oral) on the issue that would indicate to an observer that you have taken a position on the issue under consideration? If so, please identify those statements.

The SAB Staff Office has determined that there is no reason to believe that members selected for the BenMAP and Benefits Methods Panel would not be objective and open-minded and able to engage in deliberative discussions with scientists who may have disparate points of view on the matter before the panel.

6. How individuals were selected for the panel.

On July 21, 2022, the SAB Staff Office posted a list of 32 candidates for the Panel, identified based on their expertise and willingness to be considered for the panel. This list was accompanied by a notice inviting public comments on a list of candidates to be submitted by August 9, 2022. The SAB Staff Office received 3 comments from the public on this list of candidates.

The SAB Staff Office Director makes the final decision about who serves on the Panel based on all of the relevant information, including a review of candidates' confidential financial disclosures (EPA Form 3110-48), the responses to the questions above, public comments and information independently gathered by SAB staff.

For the SAB Staff Office, a balanced committee or panel is characterized by candidates who possess the necessary domains of scientific knowledge, relevant perspectives (which, among other factors, can be influenced by work history and affiliation), and the collective breadth of experience to adequately address the general charge. Specific criteria to be used in evaluating an individual panel member include: (a) scientific and/or technical expertise, knowledge, and experience; (b) availability and willingness to serve; (c) absence of financial conflicts of interest; (d) absence of an appearance of a lack of impartiality; (e) skills working on advisory committees and panels (including objectivity and open-mindedness); and (f) for the committee as a whole, diversity of scientific expertise and viewpoints.

On the basis of the above-specified criteria, the members are as follows:

BenMAP and Benefits Methods Panel Members

Dr. Drew Shindell, Duke University, Chair
Dr. Peter Adams, Carnegie Mellon University
Dr. Joseph Aldy, Harvard University
Mr. David Bael, Minnesota Pollution Control Agency
Dr. Jonathan Buonocore, Harvard University
Dr. Mark Dickie, University of Central Florida
Dr. Daven Henze, University of Colorado, Boulder
Dr. Ling Jin, Lawrence Berkeley National Laboratory
Dr. Michael Kleeman, University of California, Davis
Dr. Nicolai Kuminoff, Arizona State University
Dr. Rob McConnell, University of Southern California
Dr. Matthew Neidell, Columbia University
Dr. Enid Neptune, Johns Hopkins University
Dr. Stephen Newbold, University of Wyoming
Dr. Jonathan Patz, University of Wisconsin
Dr. Kristi Pullen-Fedinick, Natural Resources Defense Council
Ms. Lisa Robinson, Harvard University
Dr. Armistead (Ted) Russell, Georgia Institute of Technology
Dr. Scott Spak, University of Iowa
Dr. Christopher Tessum, University of Illinois

Concurred,

Thomas H. Brennan
Director and Deputy Ethics Official
EPA Science Advisory Board Staff Office

Panel Roster

On the basis of the above-specified criteria, the members of the [insert panel name] are as follows:

Concurred,

Thomas H. Brennan
Director and Deputy Ethics Official
EPA Science Advisory Board Staff Office (1400R)

Date