April 22, 2022

EPA-SAB-22-002

The Honorable Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Subject:    Science Advisory Board (SAB) Consideration of EPA's Rule to
Revise Existing National Greenhouse Gas Emissions Standards for
Passenger Cars and Light Trucks through Model Year 2026 and
EPA's Revised Definition of "Waters of the United States"

Dear Administrator Regan,

As part of its statutory duties, the Environmental Protection Agency's (EPA) Science Advisory
Board (SAB) met on March 2 and March 7, 2022, and discussed whether to review the adequacy
of the scientific and technical basis of (1) EPA's rule to Revise Existing National Greenhouse
Gas Emissions Standards for Passenger Cars and Light Trucks Through Model Year 2026 (RIN
2060–AV13) and (2) EPA's Revised Definition of Waters of the United States (RIN 2040-
AG19). The SAB finds that the science supporting the rule to revise existing national greenhouse
gas emissions standards for passenger cars and light trucks through model year 2026 does not
involve new approaches that require peer review by the SAB. However, the SAB concludes that
there is a need to develop and apply improved analytical tools to support future rulemakings on
this topic. The SAB finds the proposed revised definition of Waters of the United States involves
emerging environmental issues and that the EPA could benefit from SAB review of the science
supporting the proposed rule.

**Initiating the Screening Review**

The Environmental Research, Development, and Demonstration Authorization Act (ERDDAA)
requires the EPA to make available to the SAB proposed criteria documents, standards,
limitations, and technical information on which the proposed action is based. The SAB may then
make available to the Administrator, within the time specified by the Administrator, its advice
and comments on the adequacy of the scientific and technical basis of the proposed action. On
November 24, 2021, EPA's Office Air and Radiation sent a letter to the SAB Staff Office
indicating that the Agency had proposed revised greenhouse gas standards for light-duty
vehicles. The Agency indicated that entire proposal and supporting modeling information was

available to the SAB for review.[1,2] Subsequently, EPA's Office of Water informed the SAB Staff Office that the EPA and the Department of the Army had proposed a revised definition of Waters of the United States.[3]

In response to the Agency's November 24, 2021, letter, the SAB Work Group for the Review of Science Supporting EPA Decisions met on December 13, 2021, to receive a briefing from EPA's Office of Air and Radiation on the proposed rule to revise existing national greenhouse gas emissions standards for passenger cars and light trucks through model year 2026 and discuss whether the science supporting the proposed rule merited review by the full Chartered SAB. The SAB Work Group also met on January 28, 2022, to receive a briefing from EPA's Office of Water and the Department of the Army on the proposed *Revised Definition of "Waters of the United States"* and discuss whether the science supporting that proposed rule merited a review by the full Chartered SAB.

The Work Group provided the SAB with a memorandum[4] documenting the discussion and Work Group findings. The Work Group found that EPA's revised greenhouse gas emissions standards rule (RIN 2060-AV13) does not involve new approaches that require peer review by the SAB but there is a need to develop and apply improved analytical tools in future rulemakings. The Work Group memorandum noted that in 2020 the SAB had reviewed the science supporting EPA's previous rulemaking to establish greenhouse gas standards and had provided recommendations.[5] In addition, the Work Group found that there are important emerging environmental issues that should be considered in developing the revised definition of Waters of the United States. Therefore, the Work Group recommended that the Chartered SAB review the science supporting the proposed revised definition of Waters of the United States.

**EPA's Revised Greenhouse Gas Emissions Standard Rule (RIN 2060-AV13) Does Not Merit SAB Review**

During the Chartered SAB meeting on March 2 and 7, 2022, the SAB agreed with the Work Group findings that (1) EPA's proposed rule does not involve new approaches that require peer

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[1] EPA's letter stated that the entire proposal, as well as the supporting and other information was available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/proposed-rule-revise-existing-national-ghg-emissions and EPA Docket ID No. EPA-HQ-OAR-2021

[2] EPA's final rule, Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards, was published on December 30, 2021, and is available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-revise-existing-national-ghg-emissions

[3] The proposed revised definition of Waters of the United States as well as supporting information is available at https://www.regulations.gov/docket/EPA-HQ-OW-2021-0602/document

[4] Recommendations of the SAB Work Group for Review of Science Supporting EPA Decisions Regarding Two Planned EPA Regulatory Actions [Memorandum], February 7, 2022. Available at: https://sab.epa.gov/ords/sab/f?p=114:19:23368386242130:::RP,19:P19_ID:967

[5] U.S. EPA Science Advisory Board. 2020. Science Advisory Board (SAB) Consideration of the Scientific and Technical Basis of the EPA's Proposed Rule titled The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks. EPA-SAB-20-003. Available at: https://sab.epa.gov/ords/sab/apex_util.get_blob?s=4123930032726&a=100&c=5659057547770743&p=12&k1=1076&k2=&ck=BNcOfz5NtozS4mna7ELcYYY0YQtLugQd7ZVJrfQcsW6vZxFseIhTIWLK1fxGyx9azt8jn-5pZToDhtWJCxp2wA&rt=IR

review by the SAB, and (2) there is a need to develop and apply improved analytical tools to support future rulemakings on this topic. The SAB provides the following specific comments and recommendations to strengthen future rulemakings.

- The SAB notes that in developing the Revised Greenhouse Gas Emissions Standards Rule for Passenger Cars and Light Trucks through Model Year 2026, the EPA examined the health benefits broadly and based upon the available literature, concluded that the emission reductions would benefit vulnerable populations. However, the SAB recommends that for future rulemakings the EPA develop a more detailed analysis of the effects on and benefits to communities with environmental justice concerns.

- The SAB encourages the Agency to conduct comprehensive geo-specific analyses and modeling in future rulemakings. These analyses should be based on the latest science to account for the potential impacts of the proposed rules on communities of color, as well as low-income and overburdened sub-populations. The SAB stands ready to provide advice to the Agency on such methodologies and analyses.

- The SAB notes that a recent report of the National Academy of Sciences (NAS), titled Assessment of Technologies for Improving Light-Duty Vehicle Fuel Economy—2025-2035, provides a technical evaluation of the potential for changes in powertrain technologies, and connected and automated vehicle technologies to contribute to fuel efficiency in 2025 through 2035. The report provides an assessment of technologies and regulatory regimes and includes recommendations related to the development of improved analytical tools. The SAB recommends that in future rulemakings the EPA consider explaining how the goals and recommendations articulated in this and similar reports, particularly those related to the development of improved analytical tools, have been addressed.

- The SAB recommends that, in future rulemakings, the EPA conduct additional analyses to better understand the extent to which changing vehicle markets and new evidence from economic research on vehicle markets will affect the future benefits and costs of vehicle greenhouse gas emissions standards.

- The SAB recommends that, in future rulemakings, the EPA clearly indicate how it has addressed, or plans to address, specific comments and recommendations previously received from the SAB on this topic (e.g., comments and recommendations provided in the February 2020 SAB report on the SAFE Vehicles Rule) and from other reviewers.

**EPA's Proposed Revised Definition of Waters of the United States (RIN 2040-AG13) Does Merit SAB Review**

During the Chartered SAB meeting on March 2 and March 7, 2022, the SAB agreed with the Work Group findings that (1) there are important emerging environmental issues that should be considered in developing the revised definition of Waters of the United States, and (2) the SAB should review the science supporting the proposed revised definition of Waters of the United

States. In particular, the SAB finds that it is important to provide comments and recommendations regarding the following issues.

- The SAB should review the economic analysis to determine whether EPA appropriately accounted for costs and benefits at the national level as well as those accruing across sub-populations and regions of the United States.

- The SAB should consider whether EPA's continued exclusion of sub-surface waters from Waters of the United States is supported by sound science given advances in understanding regarding the connectivity of surface and sub-surface waters.

- The SAB should review the technical support document for the proposed rule and provide recommendations to address emerging issues such as the effects of climate change (e.g., increased precipitation/pluvial events or urban flooding); the scope and inclusivity of "other waters"; and the "relatively permanent standard" and "significant nexus standard" with consideration of changing hydrological patterns.

- The SAB should review the technical support document for the proposed rule and provide recommendations regarding new approaches to account for the impacts of the proposed rule on people of color and low income and overburdened communities (e.g., geo-specific analyses).

On behalf of the SAB, I thank you for the opportunity to support the EPA through consideration of the science supporting EPA's regulatory actions.

Sincerely,

/s/

Alison C. Cullen, Sc.D.
Chair
Science Advisory Board


Enclosure:
Roster of SAB Members

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