

**Summary Minutes of the United States Environmental Protection Agency (U.S. EPA)
Science Advisory Board (SAB) Teleconference
February 24, 2010**

Chartered SAB Members: See Roster provided in Attachment A.

Date and Time: February 24, 2010, 12:30 - 3:30 p.m. Eastern Time

Location: By Teleconference

Purpose: To discuss a draft report providing comments on the FY 2011 President's Budget Request for the Office of Research and Development.

SAB Participants:

Dr. Deborah Swackhamer, Chair	Dr. Kai Lee
Dr. Timothy Buckley	Dr. Cecil Lue-Hing
Dr. Deborah Cory-Slechta	Dr. Floyd Malveaux
Dr. Terry Daniel	Dr. Judith Meyer
Dr. George Daston	Dr. Duncan Patten
Dr. Costel Denson	Dr. Stephen Roberts
Dr. Otto Doering	Dr. Amanda Rodewald
Dr. David Dzonbak	Dr. James Sanders
Dr. Jeffrey Griffiths	Dr. Kathleen Segerson
Dr. James Hammitt	Dr. Paige Tolbert
Dr. Rogene Henderson	
Dr. Bernd Kahn	

SAB Staff Office Participants

Dr. Angela Nugent, Designated Federal Officer (DFO)
Dr. Vanessa Vu, Director
Dr. Anthony Maciorowski, Deputy Director

EPA Participants

Dr. Kevin Teichman, Office of Research and Development

Meeting Summary:

The teleconference discussion at the meeting followed the issues and timing as presented in the agenda (Attachment B). The teleconference adjourned at 2:00 p.m.

1. Convene Teleconference

Dr. Angela Nugent, SAB DFO, convened the teleconference and welcomed the group. She noted that no member of the public provided written information for SAB consideration and no time was requested to make a public statement. She noted that representatives of the Agency not listed on the agenda and members of the public participating in the call would be listed identified in the minutes of the meeting (Attachment D).

2. Purpose and Review of the Agenda

Dr. Deborah Swackhamer, the SAB Chair, reviewed the agenda. She noted that she had worked with the DFO to develop the draft report dated February 22, 2010 (Attachment E) reflecting SAB members' discussions at the February 19, 2010 teleconference. The goal of the letter was to assess how well the President's requested FY 2011 budget positions EPA to make progress towards its strategic research vision.

She asked members to provide their impressions of the letter and identify corrections to the letter's content and tone. The goal of the teleconference is to finalize the content of the letter

3. Discussion of the draft report

Members supported the general tone and content of the letter. Members made the following suggestions for change:

- Numbering or bulleting the specific recommendations
- Adding language to page 2, line 21: "In addition, substantial funding will be required to develop the new multi-pollutant approach toward air quality management as recommended by both the SAB and the National Academy of Sciences."
- Adding language to p. 2, line 25: Suggested language:
The SAB has commended the Agency "for developing a research program that has the potential to be transformative for environmental decision making," but noted that "the considerable potential of the program is unlikely to be achieved with its current level of funding and staff"
- Add language to the third full paragraph on page 2 about the ecosystem services research program and the "collateral damage" to ORD's sustainability research and social science research
- Letter might include language describing difficulty of one-time funding for major priorities, such as the Children's Centers. When funding is not sustained, research suffers
- Correct the funding showed for reductions in cumulative risk (page. 2, line 37) to reflect forthcoming information from ORD (see item 2 below). Consider commenting on flat funding for cumulative risk and reduction in research funding for susceptible populations. Consider commenting on the difficulty of understanding EPA's research investment in environmental justice because of the structure of the budget
- Consider strengthening language in the paragraph introducing the Ecological Services Research program (or possibly the items for additional funding generally) to contain language of this time "The level of our concern is so serious that we think the funding level should be reconsidered." (Note: Dr. Teichman clarified that the Administrator will

not further change the President's budget as presented to Congress, as the EPA is part of the Executive branch. She could be asked to reconsider these investments as the Agency deliberates on the FY2012 budget.)

- Strengthen the tone of the letter to compliment EPA for making aggressive and thoughtful investments and disinvestments in difficult economic times
- Link this discussion of investments and disinvestments in difficult times to EPA mission to protect the most vulnerable populations and ecosystems
- Link the discussion of research in social, behavioral, and decision sciences to the other priority areas that merit additional investment, because they have links to environmental justice, global change, and ecosystem services research.

Dr. Kevin Teichman provided the following clarifications:

1. ORD has investments in environmental justice that cut across its research programs in environmental justice (e.g., children's health, community-based research, near-roadway research, design of ORD sustainability and green chemistry research for use by communities). It would be valuable for ORD to communicate these efforts more effectively.
2. The resource table provided to the SAB for "Research Human Health and Ecosystem Program/Project by Research Area" for the February 19, 2010 teleconference incorrectly identified several items related to the reduction in human health research funding. The table should have indicated a reduction of \$ 0.7 M in funding for susceptible populations and a reduction of \$ 2.4 M in funding for cumulative risk. ORD will provide the DFO with corrected information to provide the SAB.
3. The SAB letter on the FY 2011 President's requested budget may be informative to: a) Congress as it deliberates on EPA's budget; b) EPA as it develops its operating plan after the budget is enacted; and c) EPA as it develops its FY 2012 budget request
4. Page 1, line 40, the investment in hydraulic fracturing research should be \$4.4 M (an increase of +\$2.5 M), which represents more than a doubling of the budget for this work.
5. Page 1 line 44 to Page 2 line 2. ORD's research on green infrastructure practices does include some agricultural work.

Dr. Vanessa Vu noted that the SAB Staff will brief Staff for the House Science and Technology committee on Friday, February 26, 2010 and will convey SAB concerns.

The SAB chair concluded the discussion of the draft letter by asking members to focus narrowly on the President's requested FY 2011 budget and not on wider research issues. She noted that the SAB will have an opportunity to comment on broader issues within the context of the ORD Research Vision activity, which will be the focus of the April 5-6, 2010 meeting and the SAB's ongoing activity related to Science Integration for Decision Making. She expressed thanks for members' comments and optimism that the SAB's advisory letter will have a significant impact. The SAB's past focus on investment in the STAR program and ecological research, in her view, may have strengthened decisions to reinvest or prevent further erosion in those programs.

The meeting ended with a brief discussion of plans for the SAB's April 5-6, 2010 meeting, which will focus on strategic issues related to ORD research, complementing the SAB's budget review. Members made the following points:

- Priorities issues identified in the review of the President's FY 2011 budget for ORD may be appropriate points for discussion with EPA for shaping the FY 2012 budget
- Budget reviews usually address incremental change; strategic advice to be developed at the April meeting can explore the possibility of more radical, "discontinuous change"
- It would be useful to EPA for the SAB to identify areas of disinvestment, as well as investment
- SAB members would benefit from hearing about S&T investments at EPA outside ORD as well as how and how much ORD leverages research outside EPA
- The Science Integration interviews suggest that regions see ORD's role differently from how ORD sees its role. How will the Agency reconcile those differences?

6. Action Items

1. The DFO will work with the SAB chair to provide a revised draft report for members' concurrence by March 3rd with the goal of receiving member comments by March 12th and transmitting the report to the Administrator by mid March.

Adjourn the Teleconference

The Designated Federal Officer adjourned the teleconference.

Respectfully Submitted:

Certified as True:

_____/Signed_____
Dr. Angela Nugent
SAB DFO

_____/Signed_____
Dr. Deborah L. Swackhamer
SAB Chair

ATTACHMENTS

- Attachment A: Board Roster
- Attachment B: Agenda
- Attachment C: FR Notice
- Attachment D: Members of the Public and EPA Representatives who requested call-in information or asked to be identified as participating in the teleconference.
- Attachment E: Draft report dated February 22, 2010

**Attachment A
SAB Roster**

**U.S. Environmental Protection Agency
Science Advisory Board**

CHAIR

Dr. Deborah L. Swackhamer, Professor and Charles M. Denny, Jr., Chair in Science, Technology and Public Policy and Co-Director of the Water Resources Center, Hubert H. Humphrey Institute of Public Affairs, University of Minnesota, St. Paul, MN

SAB MEMBERS

Dr. David T. Allen, Professor, Department of Chemical Engineering, University of Texas, Austin, TX

Dr. Claudia Benitez-Nelson, Associate Professor, Department of Earth and Ocean Sciences and Marine Science Program, University of South Carolina, Columbia, SC

Dr. Timothy Buckley, Associate Professor and Chair, Division of Environmental Health Sciences, College of Public Health, The Ohio State University, Columbus, OH

Dr. Thomas Burke, Professor, Department of Health Policy and Management, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, Baltimore, MD

Dr. Deborah Cory-Slechta, Professor, Department of Environmental Medicine, School of Medicine and Dentistry, University of Rochester, Rochester, NY

Dr. Terry Daniel, Professor of Psychology and Natural Resources, Department of Psychology, School of Natural Resources, University of Arizona, Tucson, AZ

Dr. George Daston, Victor Mills Society Research Fellow, Product Safety and Regulatory Affairs, Procter & Gamble, Cincinnati, OH

Dr. Costel Denson, Managing Member, Costech Technologies, LLC, Newark, DE

Dr. Otto C. Doering III, Professor, Department of Agricultural Economics, Purdue University, W. Lafayette, IN

Dr. David A. Dzombak, Walter J. Blenko Sr. Professor, Department of Civil and Environmental Engineering, College of Engineering, Carnegie Mellon University, Pittsburgh, PA

Dr. T. Taylor Eighmy, Vice President for Research, Office of the Vice President for Research, Texas Tech University, Lubbock, TX

Dr. Elaine Faustman, Professor, Department of Environmental and Occupational Health Sciences, School of Public Health and Community Medicine, University of Washington, Seattle, WA

Dr. John P. Giesy, Professor and Canada Research Chair, Veterinary Biomedical Sciences and Toxicology Centre, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

Dr. Jeffrey Griffiths, Associate Professor, Department of Public Health and Community Medicine, School of Medicine, Tufts University, Boston, MA

Dr. James K. Hammitt, Professor, Center for Risk Analysis, Harvard University, Boston, MA
Also Member: COUNCIL

Dr. Rogene Henderson, Senior Scientist Emeritus, Lovelace Respiratory Research Institute, Albuquerque, NM

Dr. Bernd Kahn, Professor Emeritus and Associate Director, Environmental Radiation Center, School of Mechanical Engineering, Georgia Institute of Technology, Atlanta, GA

Dr. Agnes Kane, Professor and Chair, Department of Pathology and Laboratory Medicine, Brown University, Providence, RI

Dr. Nancy K. Kim, Senior Executive, New York State Department of Health, Troy, NY

Dr. Catherine Kling, Professor, Department of Economics, Iowa State University, Ames, IA

Dr. Kai Lee, Program Officer, Conservation and Science Program, David & Lucile Packard Foundation, Los Altos, CA

Dr. Cecil Lue-Hing, President, Cecil Lue-Hing & Assoc. Inc., Burr Ridge, IL

Dr. Floyd Malveaux, Executive Director, Merck Childhood Asthma Network, Inc., Washington, DC

Dr. Lee D. McMullen, Water Resources Practice Leader, Snyder & Associates, Inc., Ankeny, IA

Dr. Judith L. Meyer, Distinguished Research Professor Emeritus, Odum School of Ecology, University of Georgia, Lopez Island, WA

Dr. Jana Milford, Professor, Department of Mechanical Engineering, University of Colorado, Boulder, CO

Dr. Christine Moe, Eugene J. Gangarosa Professor, Hubert Department of Global Health, Rollins School of Public Health, Emory University, Atlanta, GA

Dr. Eileen Murphy, Manager, Division of Water Supply, New Jersey Department of Environmental Protection, Trenton, NJ

Dr. Duncan Patten, Research Professor , Department of Land Resources and Environmental Sciences, Montana State University, Bozeman, MT

Dr. Stephen Polasky, Fesler-Lampert Professor of Ecological/Environmental Economics, Department of Applied Economics, University of Minnesota, St. Paul, MN

Dr. Stephen M. Roberts, Professor, Department of Physiological Sciences, Director, Center for Environmental and Human Toxicology, University of Florida, Gainesville, FL

Dr. Amanda Rodewald, Associate Professor, School of Environment and Natural Resources, The Ohio State University, Columbus, OH

Dr. Joan B. Rose, Professor and Homer Nowlin Chair for Water Research, Department of Fisheries and Wildlife, Michigan State University, East Lansing, MI

Dr. Jonathan M. Samet, Professor and Flora L. Thornton Chair, Department of Preventive Medicine, University of Southern California, Los Angeles, CA
Also Member: CASAC

Dr. James Sanders, Director and Professor, Skidaway Institute of Oceanography, Savannah, GA

Dr. Jerald Schnoor, Allen S. Henry Chair Professor, Department of Civil and Environmental Engineering, Co-Director, Center for Global and Regional Environmental Research, University of Iowa, Iowa City, IA

Dr. Kathleen Segerson, Professor, Department of Economics, University of Connecticut, Storrs, CT

Dr. V. Kerry Smith, W.P. Carey Professor of Economics , Department of Economics , W.P Carey School of Business , Arizona State University, Tempe, AZ

Dr. Herman Taylor, Professor, School of Medicine, University of Mississippi Medical Center, Jackson, MS

Dr. Barton H. (Buzz) Thompson, Jr., Robert E. Paradise Professor of Natural Resources Law at the Stanford Law School and Perry L. McCarty Director, Woods Institute for the Environment, Stanford University, Stanford, CA

Dr. Paige Tolbert, Professor and Chair, Department of Environmental Health, Rollins School of Public Health, Emory University, Atlanta, GA

Dr. Thomas S. Wallsten, Professor and Chair, Department of Psychology, University of

Maryland, College Park, MD

Dr. Robert Watts, Professor of Mechanical Engineering Emeritus, Tulane University,
Annapolis, MD

SCIENCE ADVISORY BOARD STAFF

Dr. Angela Nugent, Designated Federal Officer, 1200 Pennsylvania Avenue, NW
1400F, Washington, DC, Phone: 202-343-9981, Fax: 202-233-0643, (nugent.angela@epa.gov)

**Attachment B
Meeting Agenda**

**U.S. Environmental Protection Agency
Science Advisory Board (SAB)
Teleconference
Agenda
February 24, 2010, 12:30 p.m. to 3:30 p.m. Eastern Time**

Purpose: The Board will meet to discuss a draft report providing comments on the FY 2011 President's Budget Request for the Office of Research and Development.

12:30 p.m.	Convene the Teleconference	Dr. Angela Nugent <i>Designated Federal Officer EPA SAB</i>
12:35 p.m.	Purpose and Review of the Agenda	Dr. Deborah L. Swackhamer <i>Chair EPA SAB</i>
12:45 p.m.	Discussion of the draft report	Dr. Deborah L. Swackhamer The Board
3:00 p.m.	Next Steps	Dr. Deborah L. Swackhamer The Board
3:30 p.m.	Adjourn the Teleconference	The DFO

Attachment C
FR Announcement

[Federal Register: January 29, 2010 (Volume 75, Number 19)]
[Notices]
[Page 4816-4817]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr29ja10-55]

ENVIRONMENTAL PROTECTION AGENCY

[FRL-9108-2]

Science Advisory Board Staff Office; Notification of Two Public
Teleconferences of the Chartered Science Advisory Board

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice.

SUMMARY: The EPA Science Advisory Board (SAB) Staff Office announces
two public teleconferences of the Chartered Science Advisory Board to
discuss EPA's requested research budget for Fiscal Year 2011.

DATES: The teleconference dates are February 19, 2010 from 1 p.m. to 4
p.m. (Eastern Time) and February 24, 2010 from 12:30 p.m. to 3:30 p.m.
(Eastern Time).

ADDRESSES: The teleconferences will be conducted by telephone only.

FOR FURTHER INFORMATION CONTACT: Any member of the public wishing to
obtain general information concerning this public teleconference should
contact Dr. Angela Nugent, Designated Federal Officer (DFO), EPA
Science Advisory Board (1400F), 1200 Pennsylvania Ave., NW.,
Washington, DC 20460; via telephone/voice mail: (202) 343-9981; fax:
(202) 233-0643; or e-mail at nugent.angela@epa.gov. General information
concerning the EPA Science Advisory Board can be found on the SAB Web
site at <http://www.epa.gov/sab>.

SUPPLEMENTARY INFORMATION: The SAB was established by 42 U.S.C. 4365 to
provide independent scientific and technical advice to the
Administrator on the technical basis for Agency positions and
regulations. The SAB is a Federal advisory committee chartered under
the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., App 2.
The SAB will comply with the provisions of FACA and all appropriate SAB
Staff Office procedural policies. Pursuant to the Federal Advisory
Committee Act, Public Law 92-463, notice is hereby given that the
chartered SAB will hold two public teleconferences to discuss the
President's requested Fiscal Year 2011 Budget to support EPA research

needs.

Background: The chartered SAB conducts a review of the EPA research budget annually and provides written comments to the EPA Administrator and to Congress, if requested, on the adequacy of EPA's requested research budget. At the teleconferences, the chartered SAB will receive briefings on the requested research budget for Fiscal Year 2011 and develop major comments on the budget, in light of EPA's research needs. Previous SAB budget advisories are on the SAB Web site at <http://www.epa.gov/sab>.

Availability of Meeting Materials: The agendas and other materials in support of the teleconferences will be placed on the SAB Web site at <http://www.epa.gov/sab> in advance.

Procedures for Providing Public Input: Interested members of the public may submit relevant written or oral information for the SAB to consider on the topics included in this advisory activity. Oral Statements: In general, individuals or groups requesting an oral presentation at a public teleconference will be limited to three minutes per speaker, with no more than a total of one-half hour for all speakers. Interested parties should contact Dr. Nugent, DFO, in writing (preferably via e-mail) at the contact information noted above for the February 19, 2010 teleconference by February 16, 2010 to be placed on a list of public speakers for the teleconference. Interested parties should

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contact Dr. Nugent, for the February 24, 2010 teleconference by February 23, 2010 to be placed on the list of public speakers for the February 24, 2010 teleconference. Written Statements: Written statements for the February 19, 2010 teleconference should be received in the SAB Staff Office by February 16, 2010 and written statements for the February 24, 2010 teleconference should be received in the SAB Staff Office by February 23, 2010 so that the information may be made available to the chartered SAB members for their consideration and placed on the SAB Web site for public information. Written statements should be supplied to the DFO in the following formats: one hard copy with original signature, and one electronic copy via e-mail (acceptable file format: Adobe Acrobat PDF, WordPerfect, MS Word, MS PowerPoint, or Rich Text files in IBM-PC/Windows 98/2000/XP format). Submitters are asked to provide versions of each document submitted with and without signatures, because the SAB Staff Office does not publish documents with signatures on its Web sites.

Accessibility: For information on access or services for individuals with disabilities, please contact Dr. Angela Nugent at (202) 343-9981, or nugent.angela@epa.gov. To request accommodation of a disability, please contact Dr. Nugent, preferably at least 10 days prior to the meeting, to give EPA as much time as possible to process your request.

Dated: January 25, 2010.
Anthony Maciorowski,
Deputy Director, EPA Science Advisory Board Staff Office.
[FR Doc. 2010-1942 Filed 1-28-10; 8:45 am]
BILLING CODE 6560-50-P

Attachment D: Members of the Public and EPA Representatives who requested call-information
or asked to be identified as participating in the teleconference.

Anne M. Cooper, Ph.D.
U.S. House of Representatives
Committee on Science and Technology

Aaron Lovell
Associate editor
Risk Policy Report

Rachel Poor
Science Policy Intern
American Society of Agronomy
Crop Science Society of America
Soil Science Society of America

Pat Rizzuto
Chemicals, Science Policy Reporter
BNA, Inc.
Daily Environment Report

Steve Via
Regulatory Affairs Manager
American Water Works Association

Shimere Williams.
U.S. House of Representatives
Committee on Science and Technology
Subcommittee on Energy and Environment

Jane Williams
U.S. House of Representatives
Committee on Science and Technology
Subcommittee on Energy and Environment

Joanne Stone Wyman, Ph.D.|Principal,
Environmental Policy and Regulatory Affairs
Dynamac Corporation

U.S. EPA Participants

Paul Anastas
Stan Barone
Amy Battaglia

Gul Beg
Dan Costa
Sally Darney
Chris Dockins
Alvin Edwards
Peter Fargo
Lynn Flowers
Elaine Francis
Gary Foley
Mary Greene
Kevin Garrahan
Iris Goodman
Alan Hecht
Phillip Juengst
Michael Loughran
Lek Kadeli
Brian Kleinman
Audrey Levine
Rick Linthurst
Al McGartland
Bruce Mintz
Jeff Morris
Charles Noss
Gregory Sayles
Joel Scheraga
Laurel Schultz
Brett Snyder
Kevin Teichman
Randy Wentsel
Pai-Yei Whung

Attachment E Draft report dated February 22, 2010

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The Honorable Lisa P. Jackson
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Subject: Science Advisory Board Comments on the President's Requested FY 2011
Research Budget

Dear Administrator Jackson:

In recent years, the Science Advisory Board has conducted two parallel sets of discussions on research with the Office of Research and Development (ORD): ongoing discussion of strategic research directions and reviews of the President's research budget requests for upcoming fiscal years. The SAB has now reviewed the President's FY 2011 research budget request within the context of these ongoing interactions with ORD on strategic research directions and assessed how well the requested budget will permit EPA to advance the goals set in its strategic research planning. Progress toward these goals will provide the science underpinnings for meeting your environmental protection priorities. The SAB plans to continue its discussions of strategic issues with ORD at an advisory meeting planned for April 2010, and we will provide you with an advisory letter on strategic research directions after that meeting.

The SAB is pleased to note that the President's budget request shows a modest increase in nominal dollars and a slight increase in constant dollars for ORD for FY 2011, as compared with ORD's FY 2010 enacted budget. We believe that the budget request overall, with just a few exceptions, reflects appropriate choices about investments and disinvestments in research. Given budget constraints across the federal government, we commend EPA for a budget request that supports science as the foundation for EPA decision-making and research as a resource addressing likely future environmental needs and issues.

Among the research investment choices, the SAB highlights as appropriate the planned increase for STAR grants and fellowships (+\$25.8 M). The STAR fellowships invest in the next generation of environmental scientists and STAR grants facilitate EPA's interaction with the wider scientific community and leverage expertise on key emerging issues. The SAB highlights increases in air quality research as a "down payment" to develop and maintain a next generation monitoring network for ambient air pollutants (+\$3.4 M), an important and appropriate early step in research towards a multi-pollutant approach to air quality management. The investment in hydraulic fracturing research (\$3.5 M) is urgently needed to study the impact of these technologies on the sustainability of some clean energy options and on ground water quality protection. It is encouraging that while the actual increase is small, it represents a doubling of the budget. The SAB recommends that EPA pursue additional resources in the next budget cycle to ensure that this program becomes as robust as it needs to be. The investment in green water infrastructure research (+\$6.0 M) is needed to address green infrastructure practices relating to storm water management, water quality, and water quantity issues at multiple scales, including

1 large watershed scales, although the SAB would like the program expanded to give attention to
2 agricultural, as well as urban, water quality issues. Finally, we view the planned investments in
3 endocrine disruptors (+\$6.0 M) and computational toxicology (+\$1.8 M) as important for
4 strengthening human health and ecological risk assessment. Along with these highlighted
5 investments, the budget request overall generally reflects appropriate choices about sustaining
6 programs and disinvesting in others (such as the mercury research program), where research
7 projects have reached a natural decision or ending point.
8

9 The SAB had four areas of concern in reviewing the FY 2011 research budget request in
10 light of the Agency's strategic research needs. We draw your attention to the following issues
11 that deserve special notice:
12

13 The SAB believes that the relatively modest increase for ORD proposed for the clean air
14 (+\$3.4 M) and global change (+\$1.2 M) research programs is not sufficient even though the
15 President's budget request provides Science and Technology (S&T) Funds for EPA's Office of
16 Air and Radiation to address climate change science and research,. While the U.S. Global
17 Change Research Program has historically complemented and leveraged EPA's past limited
18 research investments in climate change, EPA will have a substantial need for new knowledge to
19 support regulatory strategies, as a result of the Agency's Endangerment Finding on greenhouse
20 gases. The types and number of scientific activities will increase to support EPA's central,
21 critical role.
22

23 The requested budget for the Ecological Services Research Program shows a significant
24 reduction in FTE (-13.9 FTE) as well as a reduction in funding (-\$1.5 M). The SAB has
25 consistently noted that "The considerable potential of the program is unlikely to be achieved with
26 its current level of funding and staff" (see SAB Report, *Consultation on EPA's Implementation*
27 *of the Ecosystem Services Research Program*, EPA-SAB-09-019). The success of the Ecological
28 Services Research Program depends on sustaining the work of EPA's highly trained scientists.
29 The planned FY 2011 FTE cuts for a research area modestly funded at the outset are so
30 significant as to threaten the future of the entire program. This program is critical for
31 understanding the ways in which policy and management choices affect the type, quality, and
32 magnitude of the goods and services ecosystems provide to sustain human well-being.
33

34 Although environmental justice is identified as a priority, the SAB notes that ORD's
35 requested budget does not provide a broad capability for developing the science to support
36 environmental justice programs and policies and, in addition, indicates a planned reduction in
37 funding for cumulative risk research (-\$5.4 M) as a separate line item, as well as reductions as
38 well in cumulative risk research related to endocrine disruptors (-\$0.3 M) and characterizing
39 drinking water risk (-5.4 FTEs). Although the budget shows a planned increase in funding for
40 the child health stressor study and ORD staff can point to planned activities involving cumulative
41 risk, the budget does not demonstrate an investment in this important area consistent with your
42 emphasis on environmental justice and the call for increased attention to multi-chemical analysis
43 by the National Research Council (*Science and Decisions*, 2009).
44

45 The SAB has repeatedly noted the serious lack of Agency research activity and staff
46 expertise in the area of social, behavioral, and decision sciences. The President's FY 2011

1 budget again this year does not include investment in these areas. The SAB believes that EPA
2 must invest in research in these areas to help fashion solutions to environmental problems.
3 Effective design and implementation of policies and programs and effective communication of
4 them require an understanding of human perceptions, values, and behavior. ORD requires a
5 sufficient intramural cadre of behavioral, social, and decision scientists to provide this
6 understanding, to conduct relevant social science research, and to guide the Agency in forming
7 appropriate partnerships and collaborations in this area. The SAB welcomes additional dialogue
8 with the Agency on this issue.
9

10 The SAB is pleased to have again reviewed the EPA research budget and looks forward
11 to working with you to strengthen the Agency's vital research base. We look forward to your
12 response to this review and to continuing our interactions with EPA to develop future advice on
13 the Agency's science program.
14

15 Sincerely,
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17
18 Dr. Deborah L. Swackhamer
19 Chair
20 Science Advisory Board
21