

## 2022 Current Fiscal Year Report: NOAA Science Advisory Board

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|  |   |                                  |                              |
|--|---|----------------------------------|------------------------------|
| <b>1. Department or Agency</b>                       | <b>2. Fiscal Year</b>   |                                  |                              |
| Department of Commerce                               | 2022  |                                  |                              |
| <b>3. Committee or Subcommittee</b>                  | <b>3b. GSA Committee No.</b>  |                                  |                              |
| NOAA Science Advisory Board                          | 2203  |                                  |                              |
| <b>4. Is this New During Fiscal Year?</b>            | <b>5. Current Charter</b>   | <b>6. Expected Renewal Date</b>  | <b>7. Expected Term Date</b> |
| No   | 06/26/2021  | 06/26/2023                       |                              |
| <b>8a. Was Terminated During Fiscal Year?</b>        | <b>8b. Specific Termination Authority</b>   |                                  | <b>8c. Actual Term Date</b>  |
| No   |   |                                  |                              |
| <b>9. Agency Recommendation for Next Fiscal Year</b> | <b>10a. Legislation Req to Terminate?</b>   | <b>10b. Legislation Pending?</b> |                              |
| Continue   | No  | Not Applicable                   |                              |
| <b>11. Establishment Authority</b>                   | Agency Authority  |                                  |                              |
| <b>12. Specific Establishment Authority</b>          | <b>13. Effective Date</b>   | <b>14. Committee Type</b>        | <b>14c. Presidential?</b>    |
| Secretary's Decision Memorandum                      | 08/15/1997  | Continuing                       | No                           |
| <b>15. Description of Committee</b>                  | Scientific Technical Program Advisory Board   |                                  |                              |
| <b>16a. Total Number of Reports</b>                  | 9   |                                  |                              |
| <b>16b. Report Date</b>                              | <b>Report Title</b>   |                                  |                              |
| 12/17/2021   | Fourth SAB EISWG Report to Congress   |                                  |                              |
| 01/06/2022   | A Report on Priorities for Weather Research   |                                  |                              |
| 01/06/2022   | Report and Recommendations Concerning Tsunami Science and Technology Issues for the United States |                                  |                              |

SAB Tsunami Science and  
 05/12/2022 Technology Advisory Panel (TSTAP)  
 Post-Tsunami Review Report

06/14/2022 Fifth Annual SAB EISWG Report to  
 Congress

06/16/2022 SAB Leadership in Coastal  
 Resilience Report

08/30/2022 REPORT CONCERNING THE  
 NOAA REPORT TO CONGRESS:  
 SUBSEASONAL AND SEASONAL  
 (S2S) FORECASTING  
 INNOVATION: PLANS FOR THE  
 TWENTY-FIRST CENTURY  
 NOAA Tsunami Science and

08/31/2022 Technology Advisory Panel Strategic  
 Plan

09/02/2022 Report of the External Review for  
 the Cooperative Institute for Modeling  
 the Earth System

**Number of Committee Reports Listed: 9**

**17a. 3 17b. Closed 0 17c. Partially Closed 0 Other Activities 0 17d. Total 3**  
**Open**

**Meetings and Dates**

| Purpose  | Start      | End        |
|--|------------|------------|
| This is one of three regularly-scheduled meetings held per year. Topics discussed include: 1) NOAA Update; 2) NOAA Science Update; 3) NOAA Response to the SAB Environmental Information Services Working Group: Statement Concerning the Ongoing NWS Data Dissemination Challenges; 4) Priorities of Weather Research (PWR) Final Report; 5) Tsunami Science & Technology Advisory Panel Final Report; 6) NOAA Response to SAB Environmental Information Services Working Group Report: Recommendations to the NOAA Concerning the Hurricane Forecast Improvement Program; 7) Review of the Draft 2021 Report to the United States Congress from the Environmental Information Services Working Group (EISWG); 8) NOAA Response to SAB Climate Working Group Report(CWG): Precipitation Prediction Grand Challenge Strategic Plan Review. | 12/07/2021 | 12/08/2021 |

This is one of three regularly-scheduled meetings held every year. Topics discussed included: (1) NOAA Update, (2) NOAA Science Update (3) Leadership in Coastal Resilience (4) NOAA Response to SAB Ecosystem Science and Management Working Group Report: Decision Making Under Deep Uncertainty, (5) Presentation and Discussion of SAB 2022 Work Plan Topics (6) NOAA Response to SAB Data Archiving and Access Requirements Working Group Report: Recommendations Concerning the NOAA Cloud Strategic Plan Actions and the NOAA Data Strategic Plan Actions (7) NOAA Response to SAB Climate Working Group Report: Advancing Earth System Prediction (8) NOAA Response to SAB Climate Working Group Report: Opportunity for COVID-19-related Earth System monitoring and prediction efforts as a result of worldwide shelter in place/stay at home policies (9) Review of the Draft 2022 Report to the United States Congress from the Environmental Information Services Working Group.

04/27/2022 - 04/28/2022

This was one of three regularly-scheduled meeting held each year. Topics discussed included: 1) NOAA Update; (2) NOAA Science Update; (3) Review of the Cooperative Institute for Modelling the Earth System (CIMES); (4) NOAA Response to SAB Climate Working Group Report: Advancing Earth System Prediction; (5) Tsunami Science & Technology Advisory Panel Strategic Plan; (6) NOAA Response to SAB Climate Working Group Review of the Climate and Fisheries Initiative Implementation Approach; (7) Updates from SAB 2022 Work Plan Topics; (8) Environmental Information Services Working Group Report Review of the NOAA Subseasonal to Seasonal (S2S) Report to Congress; (9) NOAA Response to SAB Climate Working Group Review of the Coastal Inundation at Climate Timescales White Paper.

08/30/2022 - 08/31/2022

**Number of Committee Meetings Listed: 3**

|                                    | <b>Current FY</b> | <b>Next FY</b> |
|------------------------------------|-------------------|----------------|
| <b>18a(1). Personnel</b>           |                   |                |
| <b>Pmts to Non-Federal Members</b> | \$0.00            | \$0.00         |

|   |              |              |
|---|--------------|--------------|
| <b>18a(2). Personnel</b>  |              |              |
| <b>Pmts to Federal Members</b>  | \$0.00       | \$0.00       |
| <b>18a(3). Personnel</b>  |              |              |
| <b>Pmts to Federal Staff</b>  | \$211,500.00 | \$219,000.00 |
| <b>18a(4). Personnel</b>  |              |              |
| <b>Pmts to Non-Member Consultants</b>                                 | \$0.00       | \$0.00       |
| <b>18b(1). Travel and Per Diem to Non-Federal Members</b>             | \$42,138.00  | \$95,000.00  |
| <b>18b(2). Travel and Per Diem to Federal Members</b>                 | \$0.00       | \$0.00       |
| <b>18b(3). Travel and Per Diem to Federal Staff</b>                   | \$0.00       | \$5,000.00   |
| <b>18b(4). Travel and Per Diem to Non-member Consultants</b>          | \$0.00       | \$0.00       |
| <b>18c. Other(rents,user charges, graphics, printing, mail, etc.)</b> | \$214,238.00 | \$156,000.00 |
| <b>18d. Total</b>   | \$467,876.00 | \$475,000.00 |
| <b>19. Federal Staff Support Years (FTE)</b>                          | 1.00         | 1.00         |

**20a. How does the Committee accomplish its purpose?**

NOAA's Science Advisory Board (SAB) assists the agency in maintaining a complete and accurate understanding of scientific issues critical to the agency's missions, from forecasting weather to stewardship of the Nation's fisheries. The SAB is the only Federal Advisory Committee with responsibility to advise the Under Secretary of Commerce for Oceans and Atmosphere (aka the NOAA Administrator) on strategies for research, education, and application of science to operations and information services, to

understand and predict changes in Earth's environment and conserve and manage coastal and marine resources to meet the Nation's economic, social, and environmental needs. This purpose, as expressed in the SAB's charter, reflects the missions of the Agency and so better aligns the SAB with NOAA's needs. SAB activities and advice provide necessary input to ensure that NOAA's science programs are of the highest quality and provide optimal support to resource management and environmental assessment and prediction. The SAB provides specific advice and recommendations on all aspects of NOAA's science programs and activities in areas the Board deems necessary or in response to specific requests by NOAA. The SAB makes these recommendations in the form of oral guidance, written reports, and communication to the Under Secretary of Commerce for Oceans and Atmosphere. The SAB also conducts its business through the use of standing working groups. There are currently four standing working groups - Environmental Information Services (EISWG); Ecosystem Sciences and Management (ESMWG); Data Archiving and Access Requirements (DAARWG); and Climate (CWG). The Tsunami Science and Technology Advisory Panel (TSTAP) sits under the EISWG

**20b. How does the Committee balance its membership?**

Consisting of eminent scientists, engineers, resource managers and educators, the diverse membership of the group assures expertise reflecting the full breadth of NOAA's responsibilities. Members are appointed by the Under Secretary of Commerce for Oceans and Atmosphere (aka the NOAA Administrator) to serve three year terms, with the possibility of

renewing once. Members may serve until their replacements are appointed but do not have to do so. If a member remains on the Board past his/her completion date, language in the latest Charter indicates that this may only be done with approval of the NOAA Administrator and for a period of time not to exceed one year beyond the current appointment's completion date. This ensures that members have a clear time frame for rotating off the SAB. The term limits ensure that experts are moved on and off the Board in consistent fashion to ensure a diversity of opinions over time. The membership in FY2022 was diverse, including: twelve academic researchers and science administrators, one consultant on international and national science matters; one member from non-academic, non-profit organizations; five from industry; and one from state government (this reflects the total membership of 20, including those who resigned or rotated off during the year). The Board membership was composed of nine females and eleven males. Maintaining the diversity and professional balance of the Board membership continues to be a priority and a challenge in NOAA's evaluation and selection of new appointees.

**20c. How frequent and relevant are the Committee Meetings?**

The NOAA SAB has approximately three in-person meetings per year, budget permitting, and teleconferences in between those. At all meetings, the Board considers topics that are current and relevant to the science and technology issues that are being addressed by researchers, educators, and agencies in conducting advanced atmospheric and oceanic research and in advancing NOAA forecasting and stewardship missions. Three meetings were held in FY2022,

one virtual due to the ongoing COVID19 pandemic and two in person. The topics for the meetings are solicited from the leadership of NOAA and from the Board members through a formal process. Meeting topics are selected based on needs expressed by either NOAA or by Board members based on their understanding of critical issues. When meetings are held outside of the Washington DC area, a focus is placed on regionally-important issues. In addition to topical issues, important elements of SAB meetings are updates from SAB working groups and the consideration and approval/ disapproval of their reports. This year, the SAB meetings focused on priority topics developed in FY2022, on working group products and on a request from Congress for the SAB to review weather research priorities.

**20d. Why can't the advice or information this committee provides be obtained elsewhere?**

NOAA's ability to carry out and continually improve its forecasting and stewardship missions depends on scientific and technological expertise that resides both within and outside the agency. NOAA must have access to the most advanced atmospheric and oceanic research and tap the best ideas for applying scientific breakthroughs to its mission. It must also be forward-looking, able to anticipate needs in coming years, and ensure that the agency is performing and funding research and education that will answer those future requirements. In managing NOAA's research, NOAA leadership must be able to base its decisions on the most recent developments in the broad areas of rapidly changing science and technology that underlie the agency's work. The SAB plays a critical role in affecting NOAA's strategic goals for long- and short-term improvement in environmental forecasting and

stewardship by advising NOAA on ever-changing management, stewardship, and regulatory needs and on emerging science and technology. For that reason, the SAB in FY2022 focused on topics developed the previous year and also approved by the Administration and NOAA leadership.

**20e. Why is it necessary to close and/or partially closed committee meetings?**

N/A - No closed or partially closed SAB meetings were held in this fiscal year.

**21. Remarks**

Subcommittee meeting costs are included as part of the overall committee costs.

**Designated Federal Officer**

Cynthia J Decker Executive Director, NOAA  
Science Advisory Board

| <b>Committee Members</b> | <b>Start</b> | <b>End</b> | <b>Occupation</b>   | <b>Member Designation</b>                |
|--------------------------|--------------|------------|---|--|
| Allen, Jon               | 06/04/2021   | 06/03/2024 | Sr Advisor, Sr Academic & Res Program Officer School for Environment and Sustainability, University of Michigan | Special Government Employee (SGE) Member |
| Ausubel, Jesse           | 06/09/2021   | 06/08/2024 | Director of the Program for the Human Environment and Senior Research Associate, Rockefeller University         | Special Government Employee (SGE) Member |
| Carpenter, Ilene         | 06/08/2021   | 06/07/2024 | Earth Sciences Segment Manager, Hewlett Packard Enterprise  | Special Government Employee (SGE) Member |
| Gentemann, Chelle        | 06/08/2021   | 06/07/2024 | Senior Scientist, Farallon Institute  | Special Government Employee (SGE) Member |



|                  |            |            |  |  |
|------------------|------------|------------|--|--|
| Grimes, Ronald   | 06/16/2021 | 06/15/2024 | President and CEO, Grimes Consulting, LLC  | Special Government Employee (SGE) Member |
| Grossman, Robert | 12/06/2020 | 12/05/2023 | Frederick H. Rawson Professor Jim and Karen Frank Director of the Center for Data Intensive Science University of Chicago      | Special Government Employee (SGE) Member |
| Hickey, Jason    | 06/08/2021 | 08/01/2022 | Technical Staff, Google Research   | Special Government Employee (SGE) Member |
| Joseph, Everette | 03/13/2016 | 03/13/2022 | University Consortium for Atmospheric Research   | Special Government Employee (SGE) Member |
| Kalnay, Eugenia  | 03/13/2016 | 03/13/2022 | University of Maryland   | Special Government Employee (SGE) Member |
| Kreider, John    | 10/30/2019 | 10/29/2022 | Kreider Consulting LLC   | Special Government Employee (SGE) Member |
| Lenhardt, W.     | 11/20/2020 | 11/19/2023 | Domain Scientist, Earth Data Science RENC  | Special Government Employee (SGE) Member |
| Lui, Brooke      | 06/10/2021 | 06/09/2024 | Professor of Communication and Associate Dean for Academic Standards and Policies, The Graduate School, University of Maryland | Special Government Employee (SGE) Member |
| Merritt, Bonnie  | 06/10/2021 | 06/09/2024 | Professor (ret.), Rutgers University   | Special Government Employee (SGE) Member |

|                        |            |            |   |  |
|------------------------|------------|------------|---|--|
| Perry, Ruth            | 11/10/2019 | 11/09/2022 | Shell Exploration and Production Company  | Special Government Employee (SGE) Member |
| Pu, Zhaoxia            | 06/07/2021 | 06/08/2024 | Professor, Department of Atmospheric Sciences, University of Utah   | Special Government Employee (SGE) Member |
| Reed, Denise           | 03/15/2016 | 03/14/2023 | University of New Orleans   | Special Government Employee (SGE) Member |
| Storksdieck, Martin    | 11/26/2020 | 11/25/2023 | Director, STEM Research Center Professor College of Education and School of Public Policy Oregon State University | Special Government Employee (SGE) Member |
| Weatherhead, Elizabeth | 11/04/2019 | 11/03/2022 | Jupiter Intelligence  | Special Government Employee (SGE) Member |
| Weisberg, Steve        | 06/08/2021 | 06/07/2024 | Executive Director, Southern California Coastal Water Resources Project   | Special Government Employee (SGE) Member |
| Wu, Anthony            | 06/09/2021 | 06/08/2024 | Executive Director, AeroMarine LLC  | Special Government Employee (SGE) Member |
| Wuebbles, Donald       | 06/08/2021 | 06/07/2024 | The Harry E. Preble Professor of Atmospheric Sciences, University of Illinois                                     | Special Government Employee (SGE) Member |

## Number of Committee Members Listed: 21

### Narrative Description

As the Science Advisory Board advises on all aspects with respect to science at NOAA, by its nature the SAB supports the agency's mission. To strengthen this connection, the SAB charter reflects the Agency's mission statement. The charter states that the first objective of the SAB is to: advise the Under Secretary of

Commerce for Oceans and Atmosphere on strategies for research, education, and application of science to operations and information services, so as to better understand and predict changes in Earth's environment and conserve and manage coastal and marine resources to meet the Nation's economic, social, and environmental needs. As NOAA has adjusted its strategic plan to reflect a One NOAA perspective through better cross-Line Office communication, the SAB charter aligns the advisory board to follow this cross-disciplinary perspective.

**What are the most significant program outcomes associated with this committee?**

Checked if Applies

- Improvements to health or safety
- Trust in government
- Major policy changes
- Advance in scientific research
- Effective grant making
- Improved service delivery
- Increased customer satisfaction
- Implementation of laws or regulatory requirements
- Other

**Outcome Comments**

NA

**What are the cost savings associated with this committee?**

Checked if Applies

- None
- Unable to Determine
- Under \$100,000
- \$100,000 - \$500,000
- \$500,001 - \$1,000,000
- \$1,000,001 - \$5,000,000
- \$5,000,001 - \$10,000,000
- Over \$10,000,000

Cost Savings Other



### **Cost Savings Comments**

NA

**What is the approximate Number of recommendations produced by this committee for the life of the committee?**

927

### **Number of Recommendations Comments**

The SAB produced reports this year through its working groups or review teams. A total of 63 recommendations were received in these reports.

**What is the approximate Percentage of these recommendations that have been or will be Fully implemented by the agency?**

32%

### **% of Recommendations Fully Implemented Comments**

Recommendations made by the Science Advisory Board prior to July 2002 continue to be collated and assessed to determine how many have been implemented.

Recommendations by the SAB since July 2002 are being tracked by the SAB staff office to ensure that the Agency has provided a response. Many of the recommendations are of the nature that will take several years and thousands of dollars to implement. The agency is not always able to implement these fully but has made an effort to at least address these partially and provide explanations for why they are or are not yet fully implemented.

**What is the approximate Percentage of these recommendations that have been or will be Partially implemented by the agency?**

24%

### **% of Recommendations Partially Implemented Comments**

As per the previous explanation, full implementation of many of the recommendations would require significant changes to the agency programs and budget. This is not always feasible and so a number of the recommendations are only able to be partially implemented.

**Does the agency provide the committee with feedback regarding actions taken to implement recommendations or advice offered?**

Yes  No  Not Applicable

### Agency Feedback Comments

The agency works with the SAB Office to prepare formal responses to any and all recommendations made by the SAB. The agency has one year to provide a response back to the SAB after recommendations are provided to the agency. This response takes the form of a presentation at a public meeting of the SAB and a written report that is posted on the SAB website. In FY 2011, the SAB discussed the timeframe for NOAA responses. Some responses have taken up to three years to be received. The SAB was very concerned that this is too long. Further, the SAB discussed working with NOAA to revise the response requirement to one year or sooner if appropriate. The specific request for a quicker response will be made when recommendations are delivered to the NOAA Administrator. In FY2022, there were ten responses received by the SAB from NOAA.

### What other actions has the agency taken as a result of the committee's advice or recommendation?

Checked if Applies

- |                                   |                                     |
|-----------------------------------|-------------------------------------|
| Reorganized Priorities            | <input checked="" type="checkbox"/> |
| Reallocated resources             | <input checked="" type="checkbox"/> |
| Issued new regulation             | <input type="checkbox"/>            |
| Proposed legislation              | <input type="checkbox"/>            |
| Approved grants or other payments | <input type="checkbox"/>            |
| Other                             | <input type="checkbox"/>            |

### Action Comments

Although NOAA has adjusted its science and technology priorities, including internal allocation of resources, the SAB recommendations do not typically address issues that require regulatory or legislative changes. The SAB does not provide advice on specific grant or contract allocations.

### Is the Committee engaged in the review of applications for grants?

No

### Grant Review Comments

NA

### How is access provided to the information for the Committee's documentation?

Checked if Applies

- |                        |                                     |
|------------------------|-------------------------------------|
| Contact DFO            | <input checked="" type="checkbox"/> |
| Online Agency Web Site | <input type="checkbox"/>            |

Online Committee Web Site



Online GSA FACA Web Site



Publications



Other



**Access Comments**

Federal Register notices.