

**APPROVED MINUTES¹
OPEN SESSION
437TH MEETING
NATIONAL SCIENCE BOARD**

National Science Foundation
Arlington, Virginia
August 13-14, 2014

Members Present:

Dan E. Arvizu, Chairman
Kelvin K. Droegemeier, Vice Chairman
John L. Anderson
Deborah L. Ball
Bonnie L. Bassler**
Roger N. Beachy
Arthur Bienenstock
Vicki L. Chandler
Ruth David
Inez Fung
Robert M. Groves
James S. Jackson
G. Peter Lepage
W. Carl Lineberger
Stephen Mayo**
Sethuraman Panchanathan
G.P. “Bud” Peterson*,**
Geraldine Richmond
Anneila I. Sargent
Diane L. Souvaine*
Maria Zuber

France A. Córdoba, *ex officio*

Members Absent:

Vinton G. Cerf
Alan I. Leshner
Robert J. Zimmer

¹ The minutes of the 437th meeting were approved by the Board at the November 2014 meeting.

*Consultant

**Absent from reconvened Plenary Open Session held on August 14, 2014 at 1:30 p.m.

The National Science Board (Board, NSB) convened in Open Session on Wednesday, August 13, 2014 at 11:00 a.m. with Dr. Dan Arvizu, Chairman, presiding (Agenda NSB-14-37, Board Book page 307). In accordance with the Government in the Sunshine Act, this portion of the meeting was open to the public.

AGENDA ITEM 1: Presentation by Waterman Award Recipient

Dr. Feng Zhang, recipient of the 2014 Alan T. Waterman Award, gave a presentation to the Board, entitled, “Development and Application of Crispr-cas9 for Genome Editing” (Board Book Addendum). Dr. Zhang is a W. M. Keck Career Development Professor of Biomedical Engineering at the Massachusetts Institute of Technology (MIT), Core Member at the Broad Institute of MIT and Harvard University, and Investigator at the McGovern Institute for Brain Research at MIT (Board Book page 309).

Dr. Arvizu adjourned this portion of the Open Session at 11:28 a.m.

The Board reconvened in Open Session on Thursday, August 14, 2014 at 1:30 p.m. with Dr. Arvizu, Chairman, presiding (Agenda NSB-14-37, Board Book page 307). In accordance with the Government in the Sunshine Act, this portion of the meeting was open to the public.

AGENDA ITEM 8: Approval of Open Session Minutes, May 2014

The Board unanimously APPROVED the Open Session minutes of the May 2014 Board meeting (NSB-14-31, Board Book page 333).

AGENDA ITEM 9: Chairman’s Report

In the Chairman’s Introduction and during the Chairman’s Report, Dr. Arvizu announced and reported on several items.

a. New Board Members

Dr. Arvizu welcomed six Board Members of the Class of 2020, and administered the oath of office to:

- Dr. John L. Anderson, President, Illinois Institute of Technology, Chicago.
- Dr. Roger N. Beachy, Founding Director, The World Food Center, University of California, Davis.
- Dr. Vicki L. Chandler, Chief Program Officer, Gordon and Betty Moore Foundation’s Science Program, Palo Alto, California.

- Dr. Robert M. Groves, Provost and Gerald Campbell SJ Professor, Department of Mathematics and Statistics, Georgetown University, Washington, DC.
- Dr. James S. Jackson, Professor and Director, Institute for Social Research, University of Michigan, Ann Arbor.
- Dr. Sethuraman Panchanathan, Senior Vice President, Office of Knowledge Enterprise Development, Arizona State University, Tempe.

Dr. Arvizu stated that the new Board Members could be proud to be selected to this unique and important body, whose Members are appointed by law “solely on the basis of established records of distinguished service.”

He stated that the Board was created in 1950 and comprises, together with the NSF Director, the National Science Foundation. The Board has responsibilities to (1) establish the policies for NSF, and (2) advise Congress and the President on policy matters related to science and engineering. The Board focuses on the policies guiding NSF in achieving its mission: nurturing science and engineering talent, and promoting the advancement of knowledge through research across all frontiers of science and engineering.

b. NSF Workforce Transition / Future of NSF

For the topic of workforce retention strategies, Dr. Arvizu called upon Dr. France Córdova, NSF Director, for information on the plans to retain permanent NSF staff, along with strategies to replace the rotator population and anticipated retirees, as the agency moves forward with its relocation to Alexandria, Virginia. Dr. Córdova introduced Dr. Judith Sunley, Director, Division of Human Resource Management (HRM), Office of Information and Resource Management (OIRM), to give an overview on this subject (Presentation Book page 46).

Dr. Sunley discussed the increase in retirement eligibility among permanent NSF staff, of which 26 percent (437) are projected for FY 2016. She also presented information on the location of the new site, which would involve a significantly longer commute for the concentration of NSF staff that currently live within 3-5 miles from NSF.

She also addressed the topic of mitigating risks with the following actions to date: raising attention through the use of data in workforce planning, and discussing possible strategies with senior management groups. Strategies for the future include: collecting and disseminating information, professional development, retention strategies to include flexibilities in appointment types and the work environment, and hiring-based strategies for recruiting permanent and rotational staff.

For the near-term, next steps include using pulse surveys, focus groups, union involvement, and other mechanisms to understand what will be required to retain about 75 percent of NSF’s current permanent staff through the transition to the new location. Additionally, NSF will strive to create explicit strategies to replace both the rotator population and retirements anticipated in the next 2-3 years. NSF will also continue discussion to identify strategies and priorities for implementation.

c. Board Meeting Calendar for 2015

Dr. Arvizu presented the proposed 2015 calendar of Board meeting dates. In developing the meeting dates, the Board Office considered a variety of constraints during the year, including statutory requirements, and compiled a list of dates to enable maximum attendance by Board Members. The 2015 calendar includes dates for meetings of the full Board during February, May, August, September, and November.

The Board unanimously APPROVED the Board meeting calendar for 2015 (NSB-14- 41, Board Book page 370) (Appendix A).

d. Congressional Update

On June 12, 2014, Dr. Arthur Bienenstock, chairman of the Task Force on Administrative Burden (AB), testified before the Subcommittee on Oversight and the Subcommittee on Research and Technology of the House Committee on Science, Space, and Technology. (Board Book page 57 and 61.)

e. Committee Announcements

The Chairman established the *ad hoc* Discussion Group on Congressional Engagement to be led by Dr. Maria Zuber. Additional members to the Discussion Group will be appointed. This group will provide a forum for informing Board Members, coordinating with the NSF Office of Legislative and Public Affairs (OLPA), identifying opportunities for NSF, and discussing emerging issues. The group is expected to regularly update the full Board.

Dr. Arvizu also established the *ad hoc* Committee on Honorary Awards (AWD) with Dr. Vinton Cerf as chairman. Dr. Bassler will join Dr. Cerf on this committee, and additional members will be appointed in the future.

f. Board Office Staff Introduction

Dr. Arvizu welcomed Mr. Christopher Blair to the Board Office as the new Executive Assistant to the Board Office Director. Mr. Blair joined the Board Office on June 16, 2014. He retired from the U.S. Navy as a Chief Petty Officer after 21 years of service. Prior to joining the Board Office staff, Mr. Blair was the Executive Assistant to the President of a Washington, DC defense contract company.

g. Webcast of Board Meeting

The August 2014 Board meeting was Webcast and simultaneously available to viewers through the Internet. The Webcast included the Plenary Open Session of the full Board as well as the Open Sessions of its committees. [Available from the NSB and NSF Web sites: [http://www.tvworldwide.com/events/nsf/140813/.](http://www.tvworldwide.com/events/nsf/140813/)]

AGENDA ITEM 10: Director's Report

Dr. France Córdoba, NSF Director, reported on several topics.

a. NSF Staff Announcements

The Director announced the following NSF leadership changes:

- Dr. Cora Marrett, Deputy Director and Chief Operating Officer, would retire on August 24, 2014. The Director stated that NSF owes Dr. Marrett a debt of gratitude for her exceptional leadership, and that of all her many fine qualities, her thoughtful counsel will be missed most. Dr. Córdoba wished her a happy and fulfilling retirement. The Director announced that Dr. John Holdren, the President's Science Advisor, would be joining NSF at a farewell reception for Dr. Marrett later that day.
- Dr. Richard Buckius joined NSF on June 1, 2014 as Senior Science Advisor, Office of the Director (OD). Dr. Buckius came to NSF from Purdue University where he was Professor of Mechanical Engineering and served as Vice President of Research. With Dr. Marrett's departure, Dr. Buckius will serve as Acting Chief Operating Officer until a new Deputy Director is appointed by the Administration.
- Dr. Fay Cook will join NSF in September 2014 as Assistant Director (AD), Directorate for Social, Behavioral, and Economic Sciences (SBE). Dr. Cook would come from the Institute for Policy Research at Northwestern University.
- Dr. Farnam Jahanian, AD, Computer and Information Science and Engineering (CISE), left NSF on July 31, 2014 to join Carnegie Mellon University as Vice President for Research.
- Dr. Suzanne Iacono was appointed Acting AD/CISE, while NSF completes the nationwide search for the next AD/CISE. Since joining NSF in 1998, Dr. Iacono has held numerous managerial and executive positions and currently serves as the Deputy AD/CISE.
- Dr. Deborah Bronk was appointed Division Director, Division Ocean Sciences (OCE), Directorate for Geosciences (GEO) on July 14, 2014. Dr. Bronk came to NSF in August 2012 as the Head of the OCE Ocean Section.

Additionally, the Director reported on NSB Executive Secretary changes:

- The Director thanked the following outgoing NSB Executive Secretaries: Mr. Darren Dutterer, Directorate for Engineering (ENG), who served the Committee on Strategy and Budget (CSB) since 2008; Dr. Saul Gonzalez, Directorate for Mathematical and Physical Sciences (MPS), who served the CSB Subcommittee on Facilities (SCF), during 2014 and would go on assignment to the Office of Science and Technology Policy (OSTP); and Dr. Robert Robinson, GEO, who, since 2011, also served SCF.

- The Director welcomed the following new Executive Secretaries: Ms. Graciela Narcho, ENG, to serve CSB; Dr. Gregory Anderson, GEO, to serve SCF; and Dr. Kathleen McCloud, MPS, to also serve SCF.

b. Human Frontier Science Program (HFSP)

As in previous years, at the request of OSTP, NSF anticipates making an award to HFSP. HFSP is a multinational, nonprofit organization that promotes interdisciplinary research and cooperation on the complex mechanisms of living systems through peer-reviewed fellowships and research grants. It is supported by annual funding from 13 countries and the European Union. U.S. support is provided by the National Institutes of Health (NIH) and NSF.

c. Transparency and Accountability

NSF had been challenged by Congress to look at the way it handles grants and awards. NSF created a public Web site that highlights its activities and changes. Dr. Peter Arzberger, OD Senior Science Advisor, has led the Transparency and Accountability Program for the agency with working groups under his leadership. Dr. Arzberger also serves as the Liaison for OD and the Board Office. He is working with a group across the agency to clarify and identify the roles and responsibilities of the division directors in the merit review process, ensure the integrity of that process, and align the portfolio with the NSF mission. NSF will continue to make changes and share practices at subsequent meetings.

d. Congressional Update

Since the May 2014 meeting of the Board, the FY 2015 budget process has slowed down. Appropriations for FY 2015 were off to a promising start, with the House passing many of the individual appropriations bills in a flurry of activity in May and June 2014. The House Commerce, Justice, and Science bill provided \$7.4 billion for NSF, an increase of \$222 million or 3 percent over the current operating levels, and \$139 million or almost 2 percent above the President's request. The momentum did not continue in the Senate, where progress on annual appropriations bills ended when compromise was not reached to take the Senate bill to the Senate floor.

The Senate Appropriations Committee approved legislation which would have provided a boost to NSF at \$7.255 billion or a 1.1 percent increase over current funding. The lack of further action on annual appropriations bills means that Congress will need to act during September 2014 to pass a funding measure to keep the Federal Government running before the end of the fiscal year. A continuing resolution, which would extend at least through the November 2014 election, was anticipated.

On the authorizing side, the House Committee on Science, Space, and Technology completed its mark-up of the Frontiers in Innovation, Research, Science, and Technology or FIRST Act (H.R. 4186) on May 28, 2014. It passed out of committee on a party-line vote after many amendments were considered. Instead of considering the entire bill on the House floor, several segments of the legislation were considered separately in mid-July 2014.

Before the start of the August 2014 congressional recess, the Senate Committee on Commerce, Science, and Transportation held a hearing on the U.S. Research and Development (R&D) enterprise, which heavily featured NSF, and included Board Member, Dr. Vinton Cerf, at the witness table. Shortly thereafter Committee Chairman Jay Rockefeller (D-WV) introduced a new version of the America COMPETES Act.

The House also passed a measure reauthorizing the National Windstorm Impact Reduction Program Act (NWIRP).

In July 2014, the House Committee on Science, Space, and Technology held a hearing on the National Earthquake Hazards Reduction Program (NEHRP) at which Dr. Pramod Khargonekar, AD/ENG, provided testimony.

The House Transportation and Infrastructure Committee held a subcommittee hearing on icebreakers at which Dr. Kelley Falkner, Director, GEO Division of Polar Programs (PLR), testified.

The Director had productive one-on-one meetings with six Members of Congress since May 2014, and was pleased with their frank discussions. Dr. Córdova thanked the congressional staff involved for their help and collaboration and communication with NSF. The Director had several additional meetings scheduled for September 2014, and will continue to make these one-on-one meetings a priority.

AGENDA ITEM 11: Open Committee Reports

[Note: The Executive Committee (EC) and the Committee on Education and Human Resources (CEH) did not meet in August 2014.]

Dr. Arvizu noted that since the May 2014 meeting, he appointed new chairmen to the standing committees: Dr. Ruth David, Committee on Audit and Oversight (A&O); Dr. Deborah Ball, Committee on Education and Human Resources (CEH); Dr. Kelvin Droegemeier, Committee on Science and Engineering Indicators (SEI); Dr. Anneila Sargent, Committee on Programs and Plans (CPP); and Dr. Alan Leshner, Committee on Strategy and Budget (CSB). He stated that he will be assigning the new Board Members to committees since they have had opportunities to see the committees at work.

He indicated that most of the Board Members attended and participated in all the committee meetings, and that there were no concurrent sessions. In light of this, he asked each committee chairman to submit a summary of their committee meeting for the record to be included as an attachment to the Plenary Open Minutes - a practice started in May 2014.

Although CEH did not meet in August 2014, Dr. Deborah Ball, CEH chairman, stated that the committee looked forward to holding a meeting at the next Board meeting in November 2014.

a. Committee on Audit and Oversight (A&O)

Dr. Ruth David, A&O chairman, stated that the committee meeting centered around the transition to the new financial system. The committee heard reports from the Chief Financial Officer (CFO) on the status of that transition and from the Office of the Inspector General (OIG) regarding oversight. Dr. David submitted a report summary for the record (Appendix B).

b. Committee on Science and Engineering Indicators (SEI)

Dr. Kelvin Droegemeier, SEI chairman, stated that the committee discussed chapter-by-chapter plans for the draft *Science and Engineering Indicators 2016 (Indicators)*. He noted that all Board Members were encouraged to provide additional comments through September 1, 2014. The committee will have two follow-up conference calls – one on the digital *Indicators* and the other on the Companion report. He further noted that *Indicators* is transitioning to a fully digital publication with a broader scope of analysis. The congressional mandate for *Indicators* is to provide a comprehensive state of the science and engineering enterprise globally every 2 years. Dr. Droegemeier then submitted a report summary for the record (Appendix C).

c. Committee on Programs and Plans (CPP)

Dr. Anneila Sargent, CPP chairman, thanked Dr. Joanne Tornow, Acting AD/SBE, for her excellent presentation in the Program Portfolio Planning discussion on social, behavioral, and economic science. She noted that the Board has long recognized the importance of NSF's investments in social, behavioral, and economic sciences, which is important on its own merits as well as in collaboration with other disciplines. Dr. Sargent submitted a report summary for the record (Appendix D).

d. Committee on Strategy and Budget (CSB)

Dr. Carl Lineberger reported on behalf of Alan Leshner, CSB chairman. He submitted a report summary for the record (Appendix E).

CSB Subcommittee on Facilities (SCF)

Dr. Carl Lineberger, SCF chairman, highlighted the subcommittee's discussion on the 2013 Annual Portfolio Review recommendation that pertained to the development of facility templates. He submitted a report summary for the record (Appendix F).

e. Task Force on Administrative Burdens (AB)

Dr. Arthur Bienenstock, AB chairman, reported that the task force discussed future directions for the Board relating to the NSB report, *Reducing Investigators' Administrative Workload for Federally Funded Research (NSB-14-18)*, released on May 1, 2014. He thanked Mr. Jeremy Leffler, AB Executive Secretary, and Drs. Jacqueline Meszaros, Lisa Nichols, and John Veysey, Board Office Liaisons, for their support. Dr. Bienenstock then submitted a report summary for the record (Appendix G).

f. Additional Committee Announcements

The Chairman discharged the Task Force on Administrative Burdens (AB), with thanks to Dr. Bienenstock, chairman, and Drs. Bassler, Droegemeier, Leshner, Lineberger, and Souvaine, members. He also thanked the Executive Secretary and Board Office Liaisons to the task force.

He then established the *ad hoc* Working Group on Administrative Burdens (ABWG), to be led by Dr. Bienenstock, with Drs. Bassler, Droegemeier, and Leshner as members. He stated that the NSB report entitled, *Reducing Investigators' Administrative Workload for Federally Funded Research* (NSB-14-18), already had a positive impact. Dr. Arvizu said that he expects that the working group will continue to promote its findings and will engage stakeholders from NSF, academia, and other parts of the Government to explore implementation of the report's recommendations.

AGENDA ITEM 12: Chairman's Remarks

In closing, Dr. Arvizu again acknowledged Dr. Marrett's many years of service and dedication to the Nation. On behalf of the Board, he wished her a happy retirement.

As there were no further comments or business of the Board, the Chairman adjourned the Plenary Open Session at 2:15 p.m.

[signed]

Ann A. Ferrante
Executive Secretary
National Science Board

Appendixes:

- A: Board Meeting Calendar for 2015 (NSB-14-41)
- B: A&O Report Submitted for the Record
- C: SEI Report Submitted for the Record
- D: CPP Report Submitted for the Record
- E: CSB Report Submitted for the Record
- F: SCF Report Submitted for the Record
- G: Task Force on Administrative Burdens

NATIONAL SCIENCE BOARD
CALENDAR OF MEETINGS
2015

February 3 - 4
(Tuesday - Wednesday)

May 5 - 6
(Tuesday - Wednesday)
[Annual Meeting and Awards Dinner]

August 12 - 13
(Wednesday - Thursday)

September 16 - 17
(Wednesday - Thursday)
[Annual Retreat and Visit]

November 18 - 19
(Wednesday - Thursday)

**Committee on Audit and Oversight (A&O)
Meeting Summary Submitted for the Record
Dr. Ruth David, Chairman**

Ms. Allison Lerner, NSF Inspector General (IG), discussed a letter to Congress that she signed along with 46 other Inspectors General in support of the principle that an IG must have complete, unfiltered access to information related to their oversight activities. Ms. Lerner added that in the case of NSF, she has been satisfied with the information provided in the past and that there is a “strong tradition of support for our office.”

Ms. Lerner then introduced Mr. Sal Ercolano of Clifton Larson Allen, partner-in-charge of NSF’s financial statement audit, who briefed the Board on the status of the FY 2014 audit. Mr. Ercolano spoke about the issues surrounding the accrual for grant expenses, which may result in a need to restate the FY 2013 financial results.

Ms. Martha Rubenstein, NSF Chief Financial Officer (CFO), updated the Board on the status of the last stages of the implementation of NSF’s long-awaited new financial system (Board Book page 230). NSF staff did a terrific job preparing for an early end of fiscal year for FY 2014, allowing for an orderly cutover to the new system. System integration testing results have been encouraging, but have been extended by 2 weeks. This extension is within the planned contingency period and is not expected to affect the scheduled “go live” date.

The Office of Management and Budget (OMB) and the Department of Treasury were supportive of the CFO and IG joint request for extra time to complete the financial statement audit, allowing NSF staff to concentrate on the transition to iTRAK and still address the auditors’ data and analysis needs.

Ms. Rubenstein, who is also the NSF Performance Improvement Officer, noted the NSF successful work in designing and implementing a new Strategic Review Process designed to meet the requirement of the Government Performance and Results Act Modernization (Board Book page 238).

**Committee on Science and Engineering Indicators (SEI)
Meeting Summary Submitted for the Record
Dr. Kelvin Droegemeier, Chairman**

SEI received a briefing on the process steps involved in the development of *Science and Engineering Indicators 2016 (Indicators)* (Board Book page 266). Emphasis was placed on early Board involvement and the role of the committee members and other Board Members in ensuring that *Indicators* meets its customary high standard of quality.

Chapter authors presented the content and plans for each of the chapters and state indicators within the state data tool (Board book pages 267, 268). Prior to the meeting, Board Members volunteered to review specific chapters and offered their comments after the chapter authors made their presentations.

The committee was generally pleased with the chapter plans and with evidence that new or better data were being incorporated into the report. The authors also described new analyses planned for *Indicators 2016*. The summary presentations generated discussion among the Board Members, who made suggestions to highlight significant topics that warrant treatment, if suitable data are available. Additional comments focused on presenting existing data in a different way or to incorporate new data. Members urged the authors to make the data as timely as possible, and to make the data's limitations as well as the graphics more accessible to users.

Board Members can provide comments on the chapters through Labor Day (September 1, 2014). Based on Board comments, staff will circulate revised narrative outlines to the committee in advance of the November 2014 meeting, at which time the committee will vote to approve the plans for the chapters.

Two follow-up teleconferences will be held in the upcoming weeks to discuss the "Digital Indicators" project and the Board's upcoming Companion report to *Indicators 2014* on the workforce.

**Committee on Programs and Plans (CPP)
Meeting Summary Submitted for the Record
Dr. Anneila Sargent, Chairman**

Chairman's Remarks

Dr. Anneila Sargent began the meeting by welcoming Dr. Geri Richmond as CPP co-chair and acknowledged the service of Dr. Diane Souvaine as previous chairman. For the benefit of the new Board Members, she gave a brief background on CPP's roles and responsibilities.

She then drew attention to the updated CY 2014 Schedule of Action and Information Items for NSB Review (Board Book page 9). She noted that the information item on Mid-Scale Activities was removed because CPP already heard from the Division of Astronomy within the Directorate for Mathematical and Physical Sciences (MPS) on its mid-scale facility program that no awards exceeded the threshold set for Board approval. However, Dr. Sargent noted that the committee is interested in the mid-scale facility programs across NSF, and looks forward to an update in the future.

CPP Program Portfolio Discussion: Social and Behavioral Science at NSF
(Board Book page 15 and 20; Board Book Addendum)

CPP continued the ongoing series of Program Portfolio Planning discussions, with Dr. Joanne Tornow, Acting Assistant Director (AD), Directorate for Social, Behavioral, and Economic Sciences (SBE), taking the lead for this discussion. Dr. Tornow's presentation on "Social, Behavioral, and Economic Sciences at NSF" familiarized NSB with the SBE sciences and methods. Her presentation focused on three significant questions that the SBE sciences are exploring, highlighting both the fundamental research and practical applications of that research. Before ending her presentation, Dr. Tornow also showcased SBE's engagement with several NSF-wide priorities including cognitive neuroscience, secure and trustworthy cyberspace, and big data.

Drs. Kelvin Droegemeier, Bonnie Bassler, and Deborah Ball took the lead discussant roles. The SBE division directors came to the table for a robust discussion. Several Board Members commented on the importance, breadth, and richness of the SBE portfolio. All the Board Members agreed that it was an impressive and well-constructed presentation. Dr. Alan Leshner emphasized that the question, "How does the human brain produce cognition and behavior?" is the big challenge for neuroscience, and pointed out that NSF is uniquely positioned to contribute to this effort.

Comments from Drs. Maria Zuber, Kelvin Droegemeier, Geraldine Richmond, and Deborah Ball applauded SBE on its collaborative work with other disciplines, and asked how NSF can further forge these deep interdisciplinary connections and help other scientists recognize the

SBE dimensions of their work. Dr. Sethuraman Panchanathan stated that computer scientists are identifying and solving different problems thanks to SBE influence, and Dr. Droegemeier noted that meteorologists realize that the SBE sciences are crucial to managing the impacts of severe weather; tornado warnings are ineffective if people cannot be persuaded to respond to the warnings appropriately.

Drs. Dan Arvizu and Alan Leshner drew attention, respectively, to the need to elevate SBE within NSF's portfolio and the opportunity, via the NSF Office of Legislative and Public Affairs (OLPA), to present SBE's story to the scientific community and the public. Dr. Tornow noted that newsworthy stories on SBE sciences are released all the time, but their origins in SBE may not immediately stand out. Dr. Sargent closed the discussion by reiterating how helpful the Program Portfolio discussions could be for informing and educating the Board about the NSF programs, and suggested that the Board Retreat in September 2014 might be a good time to discuss future planning.

**Committee on Strategy and Budget (CSB)
Meeting Summary Submitted for the Record
Dr. Alan Leshner, Chairman**

Dr. France Córdova, NSF Director, provided a summary of the FY 2015 Appropriations Congressional Marks (Board Book Addendum). The current House Mark of \$7.394 billion is 3 percent above FY 2014, while the current Senate Committee Mark of \$7.255 billion is 1 percent above FY 2014. By account, the biggest increase was in Research and Related Activities (R&RA) for both the House and Senate Mark while Agency Operations and Award Management (AOAM) decreased significantly in both Marks. The Senate Mark for AOAM is \$31 million below the FY 2015 request with the Committee encouraging NSF to save on operating expenses and the new building.

Both the House and Senate bills align with NSF's funding priorities. The House report focused on Cognitive Science and Neuroscience, including the Brain Research through Advancing Innovative Neurotechnologies (BRAIN) Initiative, while the Senate report specifically addressed facilities and instrumentation, cybersecurity research, and Science, Engineering, and Education for Sustainability (SEES). Both bills encouraged high performance computing, broadening participation, and funding for Hispanic Serving Institutions.

Congress returns on September 8, 2014 with only 10 legislative days remaining in the fiscal year and thus, a continuing resolution is anticipated through November 2014.

**CSB Subcommittee on Facilities (SCF)
Meeting Summary Submitted for the Record
Dr. Carl Lineberger, Chairman**

SCF held a discussion of the “facility templates” (Board Book Addendum). SCF members stated that they found the templates informative and expressed their appreciation for NSF’s hard work to develop this product. Dr. Maria Zuber noted that information on operations and the contributions of other agencies was extremely helpful and responsive to NSB interest.

Dr. Zuber also noted that the maintenance and investment information was helpful. Dr. Arthur Bienenstock suggested a wording change so that the “upgrades under discussion” also include upgrades currently underway. Dr. Ruth David asked for more information about user demand / trends for each facility, and noting that graphical presentation could be helpful. She also suggested that it would be good to learn from the Assistant Directors regarding their experience developing these drafts.

Drs. Stephen Mayo and Carl Lineberger stated that the treatment of facility lifecycle was uneven and needs to be harmonized across templates. It was agreed that additional comments should be sent to Dr. Van Woert, NSB Executive Officer, for forwarding to the appropriate individuals at NSF. It was also agreed that a teleconference will be held in the coming weeks with an eye toward providing NSF with additional feedback on the templates.

Dr. France Córdova, NSF Director, concurred that she found the templates helpful. She also mentioned a potential Major Research Equipment and Facilities Construction (MREFC) project to refurbish McMurdo and Palmer Stations. She indicated that it would be entering the Conceptual Design Phase. Drs. Carl Lineberger and Anneila Sargent greeted news of this project enthusiastically, and Dr. Lineberger suggested that a deeper look might be appropriate in the 2014 Annual Performance Review (APR).

**Task Force on Administrative Burdens (AB)
Meeting Summary Submitted for the Record
Dr. Arthur Bienenstock, Chairman**

Dr. Bienenstock updated the Board on the work of the task force that led to the release of the Board's report in May 2014 entitled, *Reducing Investigators' Administrative Workload for Federally Funded Research (NSB-14-18)*, and the subsequent activity that followed its publication. The Board heard that several task force members met with Members of Congress and their staff on Capitol Hill and that there are ongoing meetings with NSF colleagues to discuss NSF activities related to the report recommendations, including options for piloting just-in-time submission for some proposal components.

The House Committee on Science, Space, and Technology; Subcommittee on Research and Technology and Subcommittee on Oversight held a hearing on the topic of Reducing the Administrative workload for Federally Funded Research on June 12, 2014 following the release of the report. Dr. Bienenstock testified (Board Book pages 57, 61, 72, 76). At that hearing Ms. Allison Lerner, NSF Inspector General (IG), indicated a willingness to facilitate a dialog between the IG and grantee communities on perceptions about audits and requirements. Board Members were pleased with this development and the task force recommends that the Board support the IG in this endeavor.

Dr. Bienenstock reported that one of the report's key recommendations - the creation of an inter-agency, inter-sector Office of Science and Technology Policy (OSTP)-led working committee to set priorities for reducing burden and ensuring consistency of rules and regulations across Government agencies - was incorporated into current legislation. The Board discussed how an anticipated National Research Council (NRC) study will likely provide support to the proposed OSTP-led committee by performing a detailed analysis of research-related burdens and setting priorities for harmonization or modification to reduce the administrative burden.

With regard to future activities Dr. Bienenstock reported that Dr. Arvizu planned to dissolve the task force at this time and create, instead, a working group to engage stakeholders and promote the report's finding, building on the important work that the task force started a year and a half ago. Dr. Bienenstock supported this plan.

Four areas that the working group might discuss for future engagement include: (1) how NSB might engage with the NRC study committee described above; (2) ways in which NSB can support the NSF IG's willingness to facilitate conversations with the community on audit and oversight, especially as it relates to institutions' perceptions of audit ambiguity; (3) possible activities that align with the report's recommendation that universities improve their oversight practices and cultures; and (4) that NSB investigate how state regulations affect enforcement of research practices.

Board Members made a number of suggestions for the working group, including close coordination with the soon to be formed NRC committee, participation in forums on the report's recommendations, coordination with research administrators and, in particular, with the Office of Budget, Finance, and Award Management (BFA) Advisory Committee for Business and Operations.