

MEMORANDUM TO MEMBERS OF THE NATIONAL SCIENCE BOARD

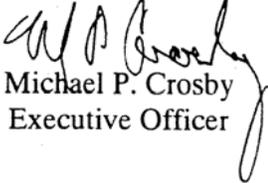
SUBJECT: Major Actions and Approvals at the March 30, 2006 Meeting

This memorandum will be made publicly available for any interested parties to review. A more detailed summary of the meeting will be posted on the National Science Board (the Board) public Web site within 10 business days. A comprehensive set of Board-approved Open Session meeting minutes will be posted on the Board's public Web site following its May 2006 meeting.

Major actions and approvals at the 391st meeting of the Board included the following (not in priority order):

1. The Board approved the minutes of the Plenary Open Session (NSB-06-20) for the February 2006 meeting (http://www.nsf.gov/nsb/meetings/0329/open_minutes.pdf). Minutes for the Plenary Executive Closed and Closed Sessions for the February 2006 meeting of the Board were also approved.
2. The Board approved recipients for the 2006 Alan T. Waterman Award, Vannevar Bush Award, and the NSB Public Service Awards. Awardees will be announced after the Board Chairman and NSF Director have notified the awardees of their selection.
3. The Board approved a resolution to close portions of the upcoming May 9-10, 2006 Board meeting dealing with staff appointments; elections of Chair, Vice Chair, and Executive Committee Membership; future budgets; grants and contracts; specific Office of the Inspector General investigations and enforcement actions; and National Science Foundation participation in a civil or administrative action, proceeding, or arbitration (NSB-06-36) (<http://www.nsf.gov/nsb/meetings/2006/0509/closing.pdf>).
4. The Board authorized the NSF Director, at his discretion, to extend the existing cooperative agreement with the California Institute of Technology for the operation of the LIGO laboratory and for a program of research and development.
5. The Board elected Drs. Jane Lubchenco, Daniel Simberloff, John White, and Mark Wrighton to the *ad hoc* Committee on Nominating for NSB Elections. The committee is charged with creating a slate of candidates for the election of Board officers in May.
6. The Board Chairman announced the establishment of the *ad hoc* Committee on Board Nominations for the Class of 2008 – 2012. The committee is charged with developing a slate of candidates to fill the eight Board Member vacancies that will occur on May 10, 2008 to transmit to the President in early 2007. Members will be appointed to the committee at the May Board meeting.

7. The Board Chairman discharged the *ad hoc* Task Group on Vision for NSF, and thanked Dr. Kathryn Sullivan, chairman, and Drs. Barry Barish, Nina Fedoroff, and Douglas Randall for their efforts on producing the publication *National Science Board 2020 Vision for the National Science Foundation* (NSB-05-142).
8. The Board unanimously approved the establishment of a Board Commission on 21st Century Education in Science, Technology, Engineering and Mathematics Education and approved the charge to the Commission (NSB-06-39) (Attachment).



Michael P. Crosby
Executive Officer

Attachment: NSB-06-39

CHARGE TO THE NATIONAL SCIENCE BOARD COMMISSION ON 21ST CENTURY EDUCATION IN SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS

BACKGROUND

Over the last two decades, numerous reports and statements from eminent bodies representing the broad range of national interests in science and technology literacy in U.S. society and skills in the U.S. workforce have sounded alarms concerning the condition of pre-K-16 education in science and technology areas. Nevertheless, our Nation's education competitiveness continues to slip further behind the rest of the world. A number of spokespersons for the science and engineering education communities have urged the National Science Board (the Board) to undertake an effort similar to the 1982-1983 Board Commission on Pre-college Education in Mathematics, Science, and Technology. Congressional Appropriations Committee report language for FY 2006 stated that they strongly endorse the Board taking steps to "establish a commission to make recommendations for the National Science Foundation (NSF) and Federal Government action to achieve measurable improvements in the Nation's science education at all levels," and expects the Board to "report the commission's findings and recommendations to the Committee at the conclusion of the commission's work." Subsequently, the Board held three public hearings to explore the merit of establishing a special Commission on Education for the 21st Century. By approving this charge, the Board has decided to establish such a Commission to develop a national action plan addressing issues that have inhibited effective reform of U.S. science, technology, engineering, and mathematics (STEM) education.

STATUTORY BASIS UNDER THE NSF ACT

Under 42 U.S.C. § 1862 (d): "The Board and Director shall recommend and encourage the pursuit of national policies for the promotion of...education in science and engineering." 42 U.S.C. § 1863(h) authorizes the National Science Board "to establish such special commissions as it may from time to time deem necessary for the purposes of this chapter." The Board Commission on 21st Century Education in Science, Technology, Engineering, and Mathematics (the Commission) will conduct its activities according to the Federal Advisory Committee Act (FACA) and other authorities, including applicable conflict-of-interest laws and regulations.

OBJECTIVES

The Commission will make recommendations to the Nation through the Board for a bold new action plan to address the Nation's needs, with recommendations for specific mechanisms to implement an effective, realistic, affordable, and politically acceptable long-term approach to the well-known problems and opportunities of U.S. pre-K-16 STEM education. The objective of a national action plan is to effectively employ Federal resources cooperatively with those of stakeholders from all sectors including but not limited to: Federal, State and local government agencies; parents, teachers and students; colleges—including community colleges; universities, museums and other agents of formal and informal education outside the K-16 systems; industry; and professional, labor and public interest organizations to encourage and sustain reform of the national pre-K-16 STEM education system to achieve world class performance by U.S. students, prepare the U.S. workforce for 21st century skill needs, and ensure national literacy in science and mathematics for all U.S. citizens.

In developing a national action plan, the Commission will address the following issues and identify the specific role of NSF in each:

- Improving the quality of pre-K-16 education related to both general and pre-professional training in mathematics, engineering and the sciences, including, but not limited to: the availability of competent teachers; the adequacy and currency of curricula, materials, and facilities; standards and trends in performance, as well as promotion, graduation and higher-education entrance requirements; and comparison with performance and procedures of other countries.
- Identifying critical aspects in the entry, selection, education and exploitation of the full range of potential talents, with special attention to transition points during the educational career where loss of student interest is greatest; and recommend means to assure the most effective education for all U.S. students as well as future scientists, engineers and other technical personnel.

- Improving mathematics and science programs, curricula, and pedagogy to capitalize on the Nation's investment in educational research and development and appropriate models of exemplary education programs in other countries.
- Promulgating a set of principles, options and education strategies that can be employed by all concerned, nationwide, to improve the quality of secondary school mathematics and science education in the 21st century, as an agenda for promoting American economic strength, national security, employment opportunities, and social progress that will support U.S. pre-eminence in discovery and innovation.

MEMBERSHIP AND STRUCTURE

The Board Commission will consist of up to fifteen (15) members appointed by the Chairman of the Board, in consultation with the full Board, the Executive Branch, Congress and other stakeholders. The Board Chairman will designate a Commission chairperson and vice chairperson from among the members. No more than three Commission members will be appointed from current Board membership. Commission members will be persons whose wisdom, knowledge, experience, vision or national stature can promote an objective examination of mathematics, science and technology education in the pre-K-16 system and develop a bold new national action plan for the 21st century.

A quorum of the Commission will be a majority of its members. Terms of service of members will end with the termination of the Commission. The Commission may establish such working groups, as it deems appropriate. At least one member of each working group shall be a member of the Commission. A Commission member will chair each working group, which will present to the Commission findings and recommendations for consideration by the Commission. Timely notification of the establishment of a working group and any change therein, including its charge, membership and frequency of meetings will be made in writing to the Executive Secretary or his/her designee. Management (including Executive Secretary and Designated Federal Official (DFO)) and staff services will be provided by the Board Office under the direct supervision of the Board's Executive Officer. Commission working groups will act under policies established by the Commission, in accordance with FACA and other applicable statutes and regulations.

MEETINGS

The Commission will meet as requested by the chairperson. Working groups will report to the full Commission and will meet as required at the call of their chairperson with the concurrence of the Commission chair. Meetings will be conducted, and records of proceedings will be kept, in accordance with applicable laws and regulations.

EXPENSES

Per diem and travel expenses will be paid in accordance to Federal Travel Regulations.

REPORTING

The future action plan will especially focus on the appropriate role of NSF in collaboration and cooperation with other Federal agencies, State government, local school districts, gatekeepers, business and industry, informal STEM educational organizations, professional associations, scientific organizations, and parents and other citizens interested in improving education in mathematics, science and technology for our Nation's children. In addition to its final report, which is expected 12 months from the initial meeting, the Commission will submit to the Board periodic progress reports at least every 4 months. The Commission will develop an action plan that includes a plan for public dissemination and outreach for Commission activities, recommendations, and reports.



Warren M. Washington
Chairman