

Preliminary Report of the May 6,7, 1999 Meeting

NSB-99-90

May 7, 1999

MEMORANDUM TO: National Science Board Members and Consultants

SUBJECT: Preliminary Report of the May 6,7, 1999 Meeting

The major actions of the Board at its 353rd meeting on May 6,7, 1999, are summarized for the information of those members and consultants absent and as a reminder to those present.

1. Board Actions

- a. Five Board members were sworn in to terms ending in 2004: Dr. George Langford, Dr. Joseph Miller, Dr. Robert Richardson, Dr. Maxine Savitz, Dr. Luis Sequeira.
- b. The Board elected Dr. Claudia Mitchell-Kernan and Dr. Warren Washington to the Executive Committee.
- c. The Board approved a statement on cost-sharing principles (NSB 99-80) as revised (Attachment).
- d. Subject to additional information on the issue, the Board authorized the Executive Committee to approve a Board Statement in opposition to Senate Bill 887, a proposal to establish a moratorium on foreign visitors to the Department of Energy Nuclear laboratories.
- e. The Board adopted a recommendation allowing the NSF Director to seek Congressional approval to present more than one Alan T. Waterman Award each year.
- f. The Chair of the Executive Committee, NSF Director Rita R. Colwell, presented the annual report of the Executive Committee to the Board.
- g. The Board agreed to approve the calendar for meetings in 2000 after a final review at the July NSB meeting. Members were urged to review their calendars and notify the NSB Office of dates in 2000 with conflicts.
- h. The Board approved the Closed and Open Session minutes of the February 17,18, 1999 meeting and the March 25,26, 1999 meeting.

Awards

The Board approved the following awards: Amount not to exceed

Mathematical and Physical Sciences

Division of Mathematical Sciences
Operation of the Mathematical Sciences Research Institute (MSRI) \$17,000,000 for 60 months
Berkeley, California
NSB-99-72)

Division of Astronomical Sciences
Operation of the National Astronomical and
Ionosphere Center (NAIC) \$58,926,000 for 60 months
Cornell University
(NSB 99-77)

Social, Behavioral and Economic Sciences

Division of International Programs The U.S. \$10,000,000 for five years; not to exceed \$2,500,000 in any one
Civilian Research and Development Foundation year. Any NSF-appropriated funds transferred to CRDF should be
for the Independent States of the Former Soviet directed so that there is clear traceability to the specific research
Union (CRDF) supported.

1. NSB Committees

(Materials for committee summaries are provided by executive secretaries.)

The Chairman established a new committee, the Committee on Communication and Outreach, chaired by Dr. Greenwood, with members Drs. Langford, Menger, Savitz, Suzuki and Tien, with Ms. Mary Hanson of the Office of Legislative and Public Affairs as Executive Secretary. The Committee is asked to report a plan of action to the Board at its November 17, 18 1999 meeting.

Committee Reports

a. Executive Committee

The Executive Committee discussed items related to the May meeting agenda, approved the committee's annual report, as required by law, and discussed changes proposed by the Director to the Alan T. Waterman Award. The committee discussed the NSF FY 2001 budget preparations and reviewed plans for Executive Committee approval of the FY 2001 budget during the July-August timeframe.

b. Audit & Oversight (A&O)

i. Supervisory

The committee discussed the Inspector General's Semiannual Report for the period ending March 31, 1999, with the Chairman and committee members. The committee took no exception to the IG's report and agreed on the contents of the NSB Management Letter, which will transmit the report to the Congress on or before June 1, 1999. Mr. Sunshine gave an overview of the Inspector General Act and described OIG's Mission, Vision, and Goals for the benefit of new Committee members.

Regular

Ms. Linda Massaro provided a Y2K Update: NSF systems are on track and compliant. Dr. Bordogna reviewed the background for the NSF Cost Sharing Policy Action Item. The A & O committee recommended NSB approval. (Item approved by full NSB with minor change.)

Mr. Kull provided copies of the recently issued 1998 NSF Accountability Report. It is akin to a "Shareholders' Report" to the Congress, OMB and the public, including both performance and accounting information. He also noted that NSF's financial statements received a clean accounting opinion from the independent auditors and praise from Congress. Mr. Herer, Dr. Hopkins and Mr. Sunshine provided a detailed briefing on NSF's GPRA efforts. The first

official GPRA Performance Report is due in March, 2000. The committee wants to assure that the NSB has adequate time to review the draft report. NSF staff will make material available for review as soon as feasible.

c. Education and Human Resources (EHR)

After discussion, the committee unanimously recommended approval of the EHR Hearings Summary Report and recommended a wide distribution. A briefing on funding and review profiles was presented to the Committee and the NSF cost sharing policy was outlined. Dr. Williams discussed unmet needs and opportunities with the committee in a presentation that focused on the "21st Century Workforce."

The committee discussed a draft framework for NSB/EHR committee priorities and workplan as part of its consideration of the EHR Strategic Plan. The policy area: K-16 Education Strategies was given top priority. The committee charged NSF staff with the task of preparing a concept paper that could lead to a symposium on the topic. In executive session, the committee was briefed on student achievement data set analyses from EHR's Division of Educational System Reform and on changes in the organization of the EHR Directorate.

d. Programs and Plans (CPP)

The committee discussed the draft findings and recommendations of the Task Force on the Environment. CPP discussed eleven keystone recommendations ranging across research, education, scientific assessment, physical infrastructure, technological infrastructure, and information infrastructure. The task force is also refining recommendations on partnerships and on international aspects. CPP accepted the summary of findings and recommendations, with minor edits, and recommended that they be shared with the NSB along with the full report of the task force, for comment, as soon as available.

The committee reviewed and approved two action items for consideration by the NSB: Operation of the National Astronomy and Ionospheric Center (NAIC) (NSB-99-77), and the Mathematical Sciences Research Institute (NSB-99-72). CPP also reviewed and approved the action item for the U.S. Civilian Research and Development Foundation for the Independent States of the Former Soviet Union (CRDF), with a revised NSB resolution to provide that any NSF-appropriated funds transferred to CRDF should be directed so that there is clear traceability to the specific research supported.

The committee received a presentation on the NSF cost sharing policy statement, which had been discussed in the Audit and Oversight Committee. The committee agreed that it would be good to review the effect of the policy after it has been implemented, perhaps in three years.

CPP continued its discussion of infrastructure planning, which has been a topic at recent Committee meetings. Presentations included brief descriptions of ongoing projects in the Major Research Equipment (MRE) account, projects proposed for MRE funding in FY 2001, and potential future projects. There was also a presentation and discussion on proposed changes in the definition of infrastructure.

The committee's final item of business was a presentation on planning for the initiative on Information Technology for the Twenty-first Century (IT2).

e. Task Force on the Environment (TFE)

Dr. Jane Lubchenco said that the report of the Task Force on the Environment is nearing completion, and members will be receiving a copy for comment. The task force intends to bring a final report to the Board at the July NSB meeting for approval.

g. Science and Engineering Indicators (SEI)

Ms. Jennifer Bond led a discussion of external peer review for S & E Indicators-2000. Dr. William Blanpied briefed the committee on the draft of Chapter 1-Science and Technology in Times of Transition: the 1940's and 1990's,

including comments received from external reviewers. The subcommittee recommended that more information be provided on Science in the National Interest and the Ehlers Report. Also discussed were possible ways to incorporate into Chapter 1 more of the actual progress in selected areas of basic scientific research. SRS staff is investigating possibilities, which could include coverage of Nobel Prize winning areas of research.

The report Women, Minorities, and Persons with Disabilities in Science and Engineering: 1998 (NSF 99-338) (released on May 6) was provided to Board members. The report documents both short- and long-term trends in the participation of women, minorities, and persons with disabilities in science and engineering education and employment.

h. International S&E Issues (ISE)

The Task Force on International Science and engineering Issues approved a work plan that will make it possible to present a draft report to the NSB at its May 2000 meeting. An initial information gathering phase will be followed by hearings. The first hearing will be scheduled for July 30, coinciding with the next NSB meeting, on the theme, "modes of interaction". Due to the absence of several task force members, no decision was made on specific dates for future hearings.

The task force reviewed other studies relating to international S&E and discussed what the Task Force report should address. The task force decided to focus first on what should be done, and then on the context for implementation. Hearings with other U.S. Government agencies will pay special attention to how other agencies integrate international concerns with other programs. Hearings will be organized thematically, and the selection of speakers will represent a wide diversity of perspectives, including, for example, academia, industry, science counselors from foreign embassies and representatives of multilateral organizations.

i. Ad Hoc Committee on Strategic S&E Policy Issues (SPI)

The committee heard a presentation from Dr. Bruce Don, Director of the Science and Technology Policy Institute at RAND, on the RaDiUS database as it might be employed for budget coordination and priority setting.

Donna Fossum and David Trinkle from STPI provided a short demonstration of the RaDiUS database. They discussed with committee members the potential for using RaDiUS to measure the status and outputs of Federal research funding. The committee next discussed the scope of the study and agreed to a draft framework for the report on the first phase of the committee's work. A proposed timetable was discussed and accepted.

Members agreed to review the draft workplan distributed at the meeting and to submit their comments to the committee's Executive Secretary.

j. NSB 50th Anniversary Task Force

Dr. Warren Washington reported in the absence of Vera Rubin, Chair, that the Task Force held a April 29, 1999 conference call at which the Task Force approved (1) the statement of work for a commemorative report on the 50th anniversary of the NSB. The commemorative will be written by a science journalist and will include a celebration of the Board's accomplishments and showcase the returns on the Nation's investment in research. The commemorative will be completed and distributed by December 2000; (2) the idea that a historian of science write the NSB historical monograph, which will take 2-3 years to complete. The project will be initiated in FY 2000; (3) received an update on the naming of an asteroid to commemorate the NSF/NSB 50th anniversary. Vera Rubin is working with Carolyn Shoemaker to obtain approval of a proposed name. In the absence of that approval, there will be a NSF-wide contest to name the asteroid; and (4) approved the location of the December 2000 50th anniversary celebration (at the Carnegie Institution of Washington) and the general concept of the event.

Other Business

The Director announced that on May 6 the Senate confirmed Dr. Chang-Lin Tien as a member of the National Science

Board, and Dr. Joseph Bordogna as Deputy Director of the National Science Foundation.

Marta Cehelsky
Executive Officer

Attachment: NSB-99-92

NSB-99-92
Attachment to NSB-99-90

NATIONAL SCIENCE FOUNDATION POLICY STATEMENT on COST SHARING

DEFINITION

Cost sharing is defined in OMB Circular A-110. For NSF purposes, and consistent with A-110, it also includes and is synonymous with the term "matching." For NSF, cost sharing should be used with reference only to quantifiable and auditable contributions from non-NSF (and non-Federal) sources to NSF-supported activities. In the case of in-kind contributions, a quantifiable and auditable value must be established.

NSF has a variety of informal ways in which it partners and leverages resources from other sources. While necessary and important in many programs, these do not constitute "cost sharing" as NSF defines the term.

POLICY

In accordance with Congressional requirements, NSF requires that each grantee share in the cost of NSF research projects resulting from unsolicited proposals. These requirements may be met by the recipient through cost sharing a minimum of one percent on the project or by cost sharing a minimum of one percent on the aggregate costs of all NSF-supported projects subject to the statutory requirements. The Grant Proposal Guide (GPG)(Sec. II.D.7.1) and the Grant Policy Manual (Sec. 330) provide additional information as to these requirements.

In addition to the statutory requirements, NSF can require cost sharing when we believe there is tangible benefit to the award recipient(s) (normally beyond the immediate term or scope of the NSF-supported activity). Benefit is defined in terms of capacity building, potential dollar revenues, time frames, or third party users. NSF-funded activities that are characterized by such benefits are awards for infrastructure-building purposes (instrumentation/equipment/centers/facilities) or for awards where there is clear potential to make profit or generate income (e.g. curriculum development).

PRINCIPLES

NSF-Required (Non-Statutory) Cost Sharing

-NSF cost sharing requirements beyond the statutory requirement will be clearly stated in the program announcement, solicitation or other mechanism which generates proposals to the program. NSF-required cost sharing is considered an eligibility rather than review criterion. Language will be specific so that eligible institutions will understand the

parameters within which cost sharing is expected.

- Requirements for cost sharing may take into account the type of institution, institution size, level of other research support, population served, etc.

- Any negotiation with proposers as to the level or amount of NSF required cost sharing will occur either prior to the review process to establish the project's eligibility for consideration or after merit review has been completed to adjust cost sharing to the agreed-upon amount of the award. These negotiations will occur only within parameters stated in the covering program announcement or solicitation and in accordance with GPG "bottom line" guidance.

Unsolicited Proposals

-For unsolicited research and education projects, only statutory cost sharing will be required. This includes all proposals submitted solely in response to the GPG. (Note: some programs have special "flyers," for equipment/instrumentation proposals for example, which reference GPG requirements but have special provisions on cost sharing. For these purposes, such proposals are not submitted "solely" in response to the GPG.)

Budget Negotiations

-In GPG proposals and all others not covered by special cost sharing requirements, NSF program officers must follow the current GPG guidance (III.C.) which states that they may discuss with principal investigators the "bottom line" award amount, but may not [re]negotiate or impose cost sharing or other institutional commitments. "Bottom line" funding amounts should be commensurate with the effort supported.

-In "bottom line" budget determinations, only those resources specifically included either as direct or facilities/administrative costs in the budget or formally proposed as cost sharing are assumed to be available for the project. They must be adequate to support the project.

-In budget negotiations, any reduction of 10% or more from the amount proposed should be accompanied by a corresponding reduction in the scope of the project, unless the program officer, principal investigator, and institution clearly agree that the project as proposed can be carried out at a lesser level of support from NSF with no expectation of any uncompensated institutional contribution beyond that formally reflected as cost sharing.

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