

DRAFT BACKGROUND PAPER for Working Group on Integrity and Balance in Research of the Advisory Committee on Acoustic Impacts on Marine Mammals

PRESERVING INTEGRITY IN RELATIONSHIPS BETWEEN FUNDING SOURCES AND RESEARCHERS

Introduction

The Advisory Committee on Acoustic Impacts on Marine Mammals has begun a discussion of whether concerns about potential influence from funders on marine mammal research constitutes a barrier to moving forward with the study of acoustic impacts on marine mammals. As part of the Advisory Committee's examination of the issues, this background paper was commissioned to begin to identify the concerns, summarize what guidelines may exist to address the concerns, and identify potential solutions.

Overview of Parties and Research Processes Involved (With Examples of Existing Guidelines at each Research Stage)

The research process may be described by five different stages: (1) identifying research questions and formulating hypotheses; (2) identifying the work that needs to be done to test the hypotheses and developing a proposal; (3) seeking funding to support the proposed work; (4) conducting the work; and (5) communicating the results and conclusions. Researchers and sometimes, funders, are involved in identifying research questions; researchers formulate hypotheses, identify the work that needs to be done, develop a proposal and seek funding; researchers and their institutions and sometimes, funders, are involved in carrying out the research; and researchers, the professional community, and sometimes, funders, play a role in communicating the results and conclusions. This overview will describe the various parties involved in preserving scientific integrity and relevant examples of existing guidelines for each research stage.

[The five stages do not correspond exactly with the next three sections. The next draft will improve the consistency of the following sections with the introductory paragraph.]

Identifying Questions and Hypotheses for Research

Funder involvement at this stage in the research process is varied, ranging from no involvement, to identification of the research questions in a Request for Proposals, to helping applicants prepare proposals. For basic research, the funder role in development of the research areas is often minimal, setting broad parameters for the proposals to be considered. Mission-based organizations may play a more active role in the development of the research questions, as their funds will be used to answer questions vital to the organizations' operations and mandates. In either case, hypothesis development is in the hands of the researcher.

Mission-based entities include public agencies, private industries, and non-governmental environmental organizations that publicly take advocacy positions. For these entities, the

results of the research they fund are often essential to technology development and environmental regulatory processes.

Existing guidelines for preserving research integrity at this stage of research are often found in guidelines for proposal preparation and selection. Several organizations have standards and guidelines designed to avoid actual or perceived bias in selection of proposals. The National Science Foundation (NSF) and Office of Naval Research (ONR) guidelines for review of proposals constitute two examples (Appendix A). Some organizations, including NSF, also undergo a formal external review of their proposal selection processes to assess consistency in treatment, bias, and other factors.

In addition to internal proposal and selection guidelines, some funders seek input from external groups into funding decisions in an effort to increase the credibility of priority setting for research. In some cases there is external stakeholder participation in reviews of research programs and priorities.

Conduct of Research

When conducting research, researchers may go through several steps: 1) designing the study; 2) collecting data; 3) analyzing data; and 4) developing conclusions. Throughout this process, funders have varying levels of influence that may affect the views of the public regarding the research results.

Many researchers, academic research institutions, and funders have developed standards that address issues of integrity in the conduct of the scientific process. For example, the federal government has a broad policy providing “clear guidance to the research community about government requirements needed to sustain public trust.”¹ Such guidelines and standards may include safeguards against “scientific misconduct,” rules prohibiting funder involvement in the development of research conclusions, or other mechanisms to prevent bias at any stage in the conduct of research.

Influence of funders on the processes of collecting and analyzing data may depend on, among other things, the funding mechanism used to provide the research support. For example, federal funding sources can provide support through grants, and contracts. The federal government defines a grant as “an assistance instrument used when little Federal Government involvement is anticipated in the performance by the recipient;” whereas a contract is “a mutually binding legal relationship obligating the contractor to furnish the supplies or services, and an agency to pay for them.”²

The effective management of contracts often requires ensuring that specified work is proceeding according to plan, that needed information to answer key questions is being obtained, and that timing constraints are being met. This requires some funder involvement in the conduct of research. In addition, a funding organization may have specific information that will provide technical insight critical to the research conduct and interpretation. Such information might include relevant activities underway at the time of the research (*e.g.*, when certain sound sources were on or off), relevant data collected for another purpose, known characteristics of the sound source, and any factors that may

require activities tailored to specific circumstances. This also requires some level of funder involvement with the conduct of research.

External Peer Review and Communicating Results

The research community and the general public rely heavily on formal peer review processes conducted prior to publication to help promote integrity of research. A typical process for publishing in a peer-reviewed journal involves review by the editor (or associate editor) and two to three scientists with knowledge of the specific field covered in the paper. Reviewers are asked to comment on, among other things, the validity of the conclusions based on the results and the “completeness of the reporting of results, reproducibility of results, and the significance of the contribution.” to the field³ In addition, journals may require signed statements that there is no conflict of interest and some, such as the journal *Nature*, require authors to list any conflicts of interest in funding within their articles; however, the definition of conflict of interest is not specified in many cases. The peer review process by itself does not necessarily eliminate bias in research; but repeated reviews of data or replications of studies that are also published in peer-reviewed journals might identify it. Also, some important research is not published in peer review journals.

Professional societies can play a role in helping to address integrity issues. In 2000 the American Association for the Advancement of Science held a conference in conjunction with the U.S. Office of Research Integrity entitled “The Role and Activities of Scientific Societies in Promoting Research Integrity.”⁴ The workshop resulted in several recommendations, covering topics such as the need for codes of ethics for all scientific disciplines, good communication of those standards, and evaluation of the effectiveness of codes of ethics. Of specific interest is the following recommendation: “In planning a research project, a clear delineation of roles, working relationships, credit allocation, and intellectual property policies is desirable. The design of methods of dispute resolution may help to promote responsible research practices and support adopting partnering agreements, conflict resolution mechanisms, and mentoring strategies in support of scientists and students.”

In addition, the workshop report discussed the importance of having a public presence in society ethics initiatives:

Growing interest in public participation in the oversight of research and scientific inquiry counters long held traditions of homogenous group responsibility. The societies and others charged with promoting ethical conduct and reviewing allegations of misconduct have subscribed to the idea that only members of their professions are competent to make judgments about it, that outsiders may have biases or are uninterested, and that it is cumbersome to involve persons without the pertinent expertise. But self-regulation by professional peers too often means that persons with similar backgrounds, training, and values as well as vested interests can, despite the best of intentions, fail in representing the public interest.

A view expressed at the conference holds that the person trained to perform a particular function is least capable of seeing negative consequences and harms that could be caused by the act. Similarly, the person who is most capable of seeing negative consequences or harms that could be caused by certain actions is the person most likely to be so harmed.

Token outsiders, at worst, would have no impact and serve primarily a public relations function. Further, inclusion of laypersons in oversight or review roles might preempt government imposition of such “watchdogs” and, indeed, they would serve as surrogates for public interest. If protocols and research findings are defensible to reasonable people, the public interest is served; the concept of objectivity known as the “view from nowhere” is advanced.

[Can we provide example of professional society guidelines, e.g. those in the works for the Society for Conservation Biology?]

Expert Panels and Other Processes

Expert panels or committees are often used to assess the risk of a particular activity, to analyze data from important research or events, and to report on questions that arise in a particular field. In some cases, panels are organized through the National Academy of Sciences; in others, they are organized by a mission agency.

The rules set forth in the Federal Advisory Committee Act (FACA), which applies to many of the committees, task forces, and expert panels that provide advice to the federal government, attempt to achieve these goals.⁵ The Act establishes standards for panel selection (a fair balance of perspectives), independence of judgment (no inappropriate influence by the appointing committee or other interests), and transparency of process (public meetings and records). However, chartering FACA Committees is sometimes perceived to be a burdensome task by agencies, and disclosure requirements are sometimes circumvented, so operating under FACA may not **support credibility and balance** in all cases.⁶ Panels convened through the National Academy of Sciences (NAS) have their own rules of procedure and their own standards for panel appointments, disclosure, and transparency, which an NAS committee reviewed in 2004.⁷ For example, NAS must ensure that no person appointed to a committee has a conflict of interest, unless such conflict is promptly and publicly disclosed and the Academy determines that the conflict is “unavoidable;” and that membership is “fairly balanced” in a way that is “appropriate for the functions to be performed.”⁸ The application of these last requirements has been criticized in recent instances, however, by some public interest groups and members of Congress.⁹

[NOTE: An NAS panel is looking into the question of advisory committee appointments with regard to disclosure requirements, and is said to be releasing its report in November. Assuming the timing is right, this section may need be updated in light of that report.]

Design of a Basic Research Program to Assess Acoustic Impacts on Marine Mammals

The Working Group was asked by the Advisory Committee to develop an outline of the components of a credible and balanced research program for research on acoustic impacts on marine mammals. The following outline provides a draft for consideration. (Additional text will be developed in a subsequent draft to provide language that addresses the components for mission-based and other research that is not basic research.)

1. Research program scope should be determined through a transparent process, led by respected leaders of relevant stakeholder groups.
2. Research funds must be awarded through a competitive, open, and transparent process that ensures excellence and a commitment to quality.
3. Criteria for funding should be well defined in advance, and include intellectual merit and consideration of the broader impacts of the proposed activity.
4. Safeguards that are in place, including permit procedures and ethics committee reviews, must be followed to ensure honest and ethical conduct of scientific studies.
5. Diversity of funding sources is needed and the number of funding entities should be increased to ensure support for a comprehensive program and to allow pooling of funds from a variety of sources when needed to achieve program goals.
6. Total available funding must be adequate to promote stability for long-term studies, needed infrastructure investments (e.g. laboratory resources and research facilities) and the training of new scientists.
7. Open, peer-reviewed publication of research results that does not require prior sponsor or stakeholder review is essential to maintain the integrity, objectivity and independence of research.
8. The program, projects and activities should foster integration of research and education to provide a diversity of learning perspectives and improve public outreach.

Solutions for Consideration by the Advisory Committee on Acoustics and Marine Mammals

The existing guidelines and practices outlined in this document can serve as a starting point for preserving integrity in research. Additional mechanisms could be developed to increase the effectiveness of existing programs. Some are outlined below.

Funding Diversification

Of the components noted above, funding diversification is one that has been, and will be, the subject of ongoing discussion and innovation. Suggestions were made in the past by various panels and organizations to increase the diversity of funding sources for marine mammal research. The most recent example is from the Report of the U.S. Commission on Ocean Policy, which noted that: [insert quote re: diversification of funding].

Diversification can produce more comprehensive programs, improve opportunities for researchers, reduce reliance on single funders, and reduce the perception that bias may occur.

Outlined below are four proposed strategies and proposals for addressing concerns about funding diversification.

1. *National Ocean Partnership Program (NOPP)¹⁰ and Expanded National Ocean Partners Program*

This research funding program, established by Congress in 1997 and managed by CORE, is designed to enable multiple federal agencies and private funders to jointly support research on issues of shared interest. Selection of research projects and funding is done through a competitive selection process, originating in a Broad Agency Announcement (BAA). Most BAAs have come out of the Office of Naval Research because the original legislation gave ONR a leadership role. However, any participating agency can be the lead on a BAA, and NOAA recently originated one. A peer review process is used to select awardees, and this process can include qualified participants from conservation organizations. The evaluation criteria are specified in the BAA, and always include a partnership component. The results of research funded by the NOPP process are submitted for peer reviewed publication. There is no requirement for funder review prior to publication. Over the past two years, several agencies and groups have invested \$9.3 million through the NOPP process to fund eight projects related to marine mammals, including acoustics and related topics.

The Ocean Research Coordination and Advancement Act (S. 2648,) was introduced by Senators Hollings, Inouye and Stevens on July 13, 2004. One provision of the bill builds on the existing NOPP to establish and authorize funding (up to \$25 million annually for NOAA, NSF, Navy and NASA) for a National Ocean Partners Program that selects topics for peer-reviewed, competitively awarded research projects. Some of this funding is expected to be available for research on marine mammals and anthropogenic sound. The bill also implements several recommendations for the U.S. Commission on Ocean Policy for improving and increasing leadership on ocean science and education.

2. Targeted Research Fund to be managed by National Fish and Wildlife Foundation as proposed in the National Ocean Noise Pollution Research Fund Act of 2005

Legislation will be introduced in late 2004 to authorize the National Fish and Wildlife Foundation (NFWF) to establish a fund for research into the effects of undersea sound on marine mammals and other species, and into the mitigation and management of these effects. The legislation would establish an independent research fund to provide grants for research on acoustic impacts on marine mammals, including smaller whales and pinnipeds. The program could be modeled after the National Whale Conservation Fund, which is also administered by NFWF. If created, such a fund would authorize a \$5 million annual appropriation through 2010 to NOAA for transfer into the fund. Private funds could also be deposited into the fund. Research proposals would be sought and grants for research and education would be disbursed through a competitive program. The grant process would be administered in cooperation with a council of advisors that would include representatives of the Dept. of Commerce, the Marine Mammal Commission, non-governmental conservation or wildlife protection organizations, and the scientific community.

3. Co-sponsored Research Funding Efforts Among Mission Agencies and Entities

Entities that conduct research can collaboratively fund that research on an ad hoc basis. Co-sponsored research among diverse interest groups may reduce the perception of bias. Co-sponsored research may include technology development or generation of data for multiple ocean users. In general, such work is coordinated through some process that is mutually agreeable among the funding groups, with a consensus on issues and specific questions that should be addressed in the proposal. In cases where joint ventures are involved, contracting parties will be kept informed regarding work progress and may collectively decide whether to release data of a proprietary nature.

4. *Expanding the funding available to regulatory and mission agencies*

Some have the view that if federal agencies, in addition to the Navy, were funded to conduct extensive research on marine mammals and noise, the Navy's dominance in the field would not be as significant a factor. NOAA Fisheries and the U.S. Fish and Wildlife Service are among the entities that could develop significant research programs.

Advisory Boards

Advisory Boards are another potential mechanism to address increasing transparency of funding for marine mammal research. Frequently in current practice, science review boards are created by mission-based entities to provide a vetting mechanism and perform formal peer reviews of scientific results. In some cases, external stakeholders are involved in review of proposals and review of project results. For example, the Office of Naval Research has conducted meetings open to all interest groups to discuss programmatic priorities in the past, and could increase those efforts in order to address transparency in the future. Oil and gas companies have established scientific review boards and other advisory groups who consult with the executive group overseeing large research projects they conduct. NOPP has an interagency advisory group that has at times included non-governmental conservation groups, and it could increase the role of interest groups in review and setting of research priorities. Another example is the Scientific Advisory Board (SAB) of the Strategic Environmental Research and Development Program (SERDP).¹¹ The SAB reviews all SERDP proposals requesting in excess of \$900K, as well as all new start projects (more information can be found on the web at <http://www.serdp.org/>).

Expert Panels

Over the past decade, a number of expert panels have been convened through the National Academy of Sciences and other agencies to review existing literature on ocean sound and make research or policy recommendations. It is reasonable to expect, as this issue continues to evolve, that others will be convened in the future. Panels that are not organized by the Academy could either be chartered under the Federal Advisory Committee Act (FACA) or operate under other rigorous integrity standards, in order to provide for a fair balance in appointments, disclosure of potential conflicts of interest, and transparency of process. Another mechanism for independent scientific review of

marine mammal research may be the Committee of Scientific Advisors of the Marine Mammal Commission.

Recommendations [to be developed]

Attachments:

- A. List of Guidelines Reviewed
- B. Proposal Selection Processes

Attachment A

Guidelines Reviewed for This Paper

American Association for the Advancement of Science and U.S. Office of Research Integrity. 2000. The Role and Activities of Scientific Societies in Promoting Research Integrity: A Report of a Conference. Available at www.aaas.org/spp/sfrr/projects/report.pdf .

Federal Register. 2000. Federal Policy on Research Misconduct. Office of Technology and Policy; Executive Office of the President. CFR 65(235): 76260-76264.

International Committee of Medical Journal Editors. 2003. Uniform Requirements for Manuscripts Submitted to Biomedical Journals: Writing and Editing for Biomedical Publication. Published on <http://www.icmje.org>

Journal of Acoustical Society of America. 2004. Information for Contributors. Journal of Acoustical Society of America 116(1): x-xxvi.

Web sites

Colorado State University; Principal Investigator's Manual
<http://www.research.colostate.edu/policy/PIManual/TOC.htm>

Duke University; Office of Research Support
<http://www.ors.duke.edu/ors/about.html>

University of California, San Diego; Research Ethics Program
<http://ethics.ucsd.edu/resources/resources-topics.html>

University of Las Vegas, Nevada
Office of Research and Graduate Studies
http://www.unlv.edu/Research/ecoDev_ICOI.html
* They are hosting a conference on “Developing Policy on Institutional Conflict of Interest: Maintaining Public Confidence” on Dec. 2-3, 2004.

University of Oklahoma; Faculty Handbook
<http://www.ou.edu/provost/pronew/content/fhbmenu.html>

Virginia Polytechnic Institute and State University; Ethics In Science (Chemistry Department)
<http://www.chem.vt.edu/chem-ed/ethics/>
Note: this web site is quite extensive and has a “Science Ethics Bibliography” that was not reviewed in detail

American Association for the Advancement of Science (AAAS); Integrity in Scientific Research

<http://www.aaas.org/spp/video/>

Note: They have a “resource guide” with over 100 citations.

Responsible Conduct of Research Education Consortium (RCREC)

<http://rcrec.org/index.html>

U.S. Department of Health and Human Services; Office of Research Integrity

<http://ori.dhhs.gov/>

Additional Information Sources Available for Further Research

American Society of Epidemiology

<http://acepidemiology.org/data.html>

American Statistical Association

<http://www.amstat.org/profession/ethicalstatistics.html>

Association for Practical and Professional Ethics

<http://www.indiana.edu/~appe/>

Case Western Reserve University; Online Ethics Center

<http://www.onlineethics.org/index.html>

Duke University; Center for Academic Integrity

<http://www.academicintegrity.org>

General Accounting Office (GAO). 2001. EPA’s Science and Advisory Board Panels: Improved policies and procedures needed to ensure independence and balance. GAO-01-056. 48pp.

National Academy of Sciences, National Academy of Engineering, Institute of Medicine (1995): On Being A Scientist: Responsible Conduct in Research

<http://www.nap.edu/readingroom/books/obas/contents/misconduct.html>

Society for Neuroscience

<http://www.sfn.org/guidelines>

Attachment B

NSF¹ Proposal Review Guidelines

[NOTE from M Jasny: It would be useful to include here any NSF guidelines specific to conflict of interest.

Merit Review Criteria for the Selection of Research and Education Projects

NSF Proposal Review Process

Reviews of proposals submitted to NSF are solicited from peers with expertise in the substantive area of the proposed research or education project. These reviewers are selected by program officers charged with the oversight of the review process. NSF invites the proposer to suggest at the time of submission, the names of appropriate or inappropriate reviewers. Care is taken to ensure that reviewers have no conflicts with the proposer. Special efforts are made to recruit reviewers from non-academic institutions, minority-serving institutions, or adjacent disciplines to what is principally addressed in the proposal.

The National Science Board approved revised criteria for evaluating proposals at its meeting on March 28, 1997 (see [NSB 97-72](#)). All NSF proposals are evaluated using the two merit review criteria. However, in some instances NSF will employ additional criteria--as necessary--to highlight the specific objectives of certain programs and activities.

On July 8, 2002, the NSF Director issued [Important Notice 127](#), "Implementation of new GPG Requirements Related to the Broader Impacts Criterion." This Important Notice reinforces the importance of addressing both criteria in the preparation and review of all proposals submitted to NSF. The Foundation continues to strengthen its internal processes to ensure that both of the merit review criteria are addressed when making funding decisions.

In an effort to increase compliance with these requirements, the January 2002 issuance of the *GPG* incorporated revised proposal preparation guidelines relating to the development of the Project Summary and Project Description. Chapter II of the *GPG* specifies that principal investigators (PIs) must address both merit review criteria in separate statements within the one-page Project Summary. This chapter also reiterates that broader impacts resulting from the proposed project must be addressed in the Project Description and described as an integral part of the narrative.

Effective October 1, 2002, NSF will return without review, proposals that do not separately address both merit review criteria within the Project Summary. It is believed that these changes to NSF proposal preparation and processing guidelines will more clearly articulate the importance of broader impacts to NSF-funded projects.

¹ National Science Foundation. 2004. FY 2004 Guide to Programs. Available at <http://www.nsf.gov/od/lpa/news/publicat/nsf04009/intro/start.htm>

The two NSB-approved merit review criteria are listed below (see the *GPG*, Chapter III. A for further information). The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which he/she is qualified to make judgments.

What is the intellectual merit of the proposed activity?

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

What are the broader impacts of the proposed activity?

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

NSF staff will give careful consideration to the following in making funding decisions:

Integration of Research and Education

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

Integrating Diversity into NSF Programs, Projects, and Activities

Broadening opportunities and enabling the participation of all citizens--women and men, underrepresented minorities, and persons with disabilities--is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

ONR proposal guidelines

Applying for Research Support

This page provides general procedures, schedules and points-of-contact information. Investigators responding to a particular Broad Agency Announcement (BAA) should follow the directions provided in that solicitation.

Procedures for Submitting Preproposals

The first step in applying for funding is the submission of a brief Preproposal that allows ONR Program Officers to evaluate the programmatic relevance and scientific significance of the idea prior to submitting a Research Proposal. Investigators are encouraged to discuss the idea with a member of the scientific staff before submitting a Preproposal. Point-of-contact information is found at the bottom of each web page.

The Preproposal, limited to three or fewer pages of text (not counting references), should contain an explanation of your idea, its novelty and scientific importance, the proposed approach, and an estimated budget as outlined in the Preproposal Format Guidelines. In addition, a CV for each principal investigator (abbreviated form is allowed) must be included and supporting material such as reprints or preprints may be appended. Preproposals should be submitted by 1 February for research efforts starting on 1 October, the beginning date of our fiscal year. You will be informed of receipt of the Preproposal and the name of the Program Officer assigned to your application.

Procedures for Submitting Formal Research Proposals

Submission of the Research Proposal should always be preceded by submission of a Preproposal and a discussion of that Preproposal with the assigned Program Officer. If encouraged by the assigned ONR Program Officer, a formal Research Proposal may be submitted to the attention of that Program Officer. Format instructions for the formal Research Proposal are provided in the Research Proposal Format Instructions; there are no forms. Submission procedures are provided under "How to Submit". The submission deadline will be determined at the time that the research proposal is encouraged. As the DoD animal use review process can take up to two months, proposal processing may require four months total.

Research Proposals will be evaluated using the following criteria:

- Overall scientific or technical merit
- Potential contribution of the effort to ONR's mission
- Qualifications, capabilities, and experience of the Principal Investigator(s) and key personnel who are critical to achieving the proposed objectives
- Realism of the proposed cost and availability of funds

Procedures for Submitting Renewal Proposals

Renewal applications should follow the Research Proposal Format Instructions, with a succinct Progress Report that includes a list of publications sponsored by the original grant(s) in Section H.3. These proposals should be submitted at least six months prior to the end date of the grant or contract.

Support for Conferences and Workshops

Proposals for support of conferences and workshops on topics that are programmatically relevant will be considered for funding. Investigators should contact the appropriate Program Officer to inquire about the possibility of support prior to submission of a Conference Proposal. While there is no specific format for meeting and workshop proposals, the following information must be provided: 1) purpose of meeting; 2) schedule of presentations (topics/titles and speakers); 3) meeting format; 4) meeting location and dates; 5) budget; 6) contact information for the fiscally responsible individual. ONR support for a meeting is usually not greater than \$7,500 and typically is used for travel and per diem of speakers and/or young investigators. Submit three copies of the Conference Proposal at least four months in advance of the conference to the attention of the Program Officer at the address given below under the heading "How to Submit".

When to Submit

New grants or contracts are typically started near the beginning of the fiscal year (1 October). New proposals for the next fiscal year should be submitted no later than 1 June unless otherwise directed by the BAA. Competitive renewals should be submitted no later than six months prior to the award termination date after contacting the Program Officer. Conference proposals should be submitted at least four months prior to the conference.

¹ policy published in Dec. 6, 2000 *Federal Register* notice, as reported at http://www.onr.navy.mil/02/scientific_misconduct.asp

² need citation/reference

³ *Journal of the Acoustical Society of America* (2004)

⁴ AAAS and ORI 2000

⁵ Federal Advisory Committee Act, 5 U.S.C. App. § 1 *et seq.*

⁶ E. Marris, "Ethics review slams government panels over conflict of interest," *Nature* 431 (2004): 3; M. Glynn, Acting Director, U.S. Office of Government Ethics, Memorandum on SGEs and Representatives on Federal Advisory Committees (July 19, 2004) (DO-04-022).

⁷ 5 U.S.C. App. § 15.

⁸ 5 U.S.C. App. § 15(b)(1)(A), (B).

⁹ See, e.g., Letter from Sen. Barbara Boxer and Sen. Dianne Feinstein to Bruce Alberts, President, National Academy of Sciences (May 14, 2004) (composition of perchlorate committee); letter from Sen. Maria Cantwell and Sen. Patty Murray to Bruce Alberts, President, National Academy of Sciences (Mar. 8, 2004) (EPA Superfund clean-up plan for Spokane River-Lake Coeur d'Alene Basin).

¹⁰ It was noted in the working group discussions that NOPP may have had the effect in the past of increasing the amount of funding for marine mammal research that flowed through ONR, already a majority funder of such research, because the cooperating agencies provided their portions of funding to ONR for distribution. This effect can be eliminated if other agencies take the lead in the distribution.

¹¹ SERDP is a research partnership between the U.S. Department of Defense, the U.S. Department of Energy, and the U.S. Environmental Protection Agency.