

OPP Advisory Committee Report to ARVOC, June 2006
submitted by James Swift

The Office of Polar Programs Advisory Committee last met 18-19 May 2006 at NSF. All members were able to attend, and the two-day agenda was packed.

Advisory Committee 2006 membership (including end-of-term and research specialization):

James Swift (Chair)	2006	Physical Oceanography
Brian Bershad	2006	Computer Science
Edward Brook	2008	Paleoclimatology, Geochemistry
Sarah Church	2008	Physics, Astrophysics
Hajo Eicken	2008	Sea Ice, Geophysics
Kelly Falkner	2007	Chemical Oceanography
Beverly K. Hartline	2006	Geophysics
James T. Hollibaugh	2006	Marine Sciences, Microbial Ecology
Deanna Paniataaq Kingston	2006	Anthropology
Andrea Lloyd	2008	Biology, Plant Ecology
Donal Manahan	2008	Marine Biology
Thomas H. McGovern	2006	Archaeology
Marilyn N. Raphael	2006	Geography
Paul B. Shepson	2006	Atmospheric Chemistry
Terry Wilson	2008	Geology

The May meeting agenda included presentations and discussions on the topics listed at the end of this report.

The OPP budget outlook is more favorable than it was a year ago. NSF has experienced a shift from a gradually decreasing budget (when inflation is factored in) to a somewhat increasing one. This is partly due the American Competitiveness Initiative, which in parallel to the "Gathering Above the Rising Storm" report have the interest of the Executive Branch and Congress. One should be careful, however, when interpreting the raw OPP budget numbers (showing considerable increases) because some of this reflects the transfer to NSF of the US Coast Guard polar icebreaker support budget.

Still, the International Polar Year is receiving budgetary attention and the President's FY2007 request includes significant new funds for IPY. The disposition of this request awaits Congressional action. NSF is the lead Federal agency for IPY planning and is moving forward on a variety of fronts, including internal OPP planning, interdivisional planning within NSF, interagency planning, international cooperation, development of appropriate IPY science initiatives, requests for proposals, and so forth.

ARVOC may be interested to note that partly based on the success of the Arctic System Science program in OPP, a similar thrust within the Antarctic section is being discussed.

The Advisory Committee was updated on the status of the National Academy of Science Polar Research Board and Transportation Board joint study, "Assessment of U.S. Coast Guard Polar Icebreaker Roles & Future Needs". Just as with ARVOC and many other groups, there is substantial Advisory Committee interest in the work of the NAS committee. A separate report will be provided to ARVOC.

As ARVOC is aware, due partly to aging and incompletely maintained mechanical systems on the US Coast Guard Polar-class icebreakers, NSF faces challenges regarding icebreaker support for break-in to McMurdo Station. This break-in is presently required annually, without fail, to maintain the US Antarctic Program. Various reports over the years accurately described the need to address the icebreaker problem and the appropriate timing, but that these were not acted upon is ice under the bridge. The Polar-class icebreaker situation is compounded for NSF by the unsought redirection of the Coast Guard polar icebreaker budget to NSF, for example because unfunded maintenance represents a huge potential liability. NSF responded to the funding crunch by laying up one Polar-class icebreaker and reducing crew to caretaker level, directing funds into repairs to one (USCGC Polar Sea) and chartering a Russian icebreaker the last two years. But during the 2005-2006 break-in, the Russian icebreaker suffered a mechanical casualty, increasing costs yet again. At the shipyard basic repairs to the Polar Sea are going OK. Still, these repairs do not address core problems with worn, aging systems, and NSF has been told to expect only a few years of service. Meanwhile ice conditions the last stretch into McMurdo may be fierce this year, so there are a lot of unknowns ahead. Moreover, even with success, unless ice conditions improve, there is doubt that a Polar-class icebreaker can be maintained at a suitable level long enough for a new US icebreaker of suitable capability to be funded and built. This is in some ways the most severe problem now facing OPP.

Partly to explore options and attendant costs, NSF recently circulated an RFI for McMurdo break-in icebreaking services. Based upon the response to that, they are now circulating (or are soon to) for a systems approach to McMurdo resupply, where, for example, an icebreaker, tanker, and a cargo ship designed to work together might be proposed.

Finally, the Advisory Committee is watching with interest developments regarding an Alaska Regional Research Vessel (ARRV). This ship is a nominal replacement for the R/V Alpha Helix. It has been in scientific and design planning for years, and is now in an advanced state of design. Funding for construction is in the President's FY2007 budget request, and so now the community awaits Congressional action. The ship will be operated within the UNOLS fleet, but will definitely be used by OPP investigators. The Advisory Committee is eyeing plans for scientific oversight. For example, will the AICC be part of the process? ARVOC may wish to examine some of the planning documents, which offer well-considered advice on science outfitting and requirements which pertain to a ship operating in ice-covered waters.

A list of agenda topics, with presenters, from the May 2006 meeting is provided to ARVOC in order to better judge the scope of recent AC discussions.

List of Agenda Topics and Presenters - OPP Advisory Committee Meeting, 18-19 May 2006

OPP Director's Report (Karl Erb, NSF)
Present planning "landscape"
 cyberinfrastructure initiatives
 impact of the NAS/NRS "Gathering Storm" report
 impact of the American Competitiveness Initiative
 influence of IPY on planning
Budget overview (FY06/FY07)
OPP personnel changes
Antarctic Treaty actions

NAS/NRC Study on Arctic Observing Network (Paul Cutler, NAS/PRB)

A Circum-Arctic Observing Network (Simon Stephenson, NSF)

Gathering Storm/ACI (Anthony Gibson, NSF/OLPA)

Cyberinfrastructure and Polar Research (Stephen Meacham, NSF Geosciences and Office of Cyberinfrastructure)

New Draft NSF Strategic Plan (Craig Robinson, NSF Office of Budget, Finance, and Award Management), including discussion with NSF Deputy Director, Dr. Kathie Olsen

NSF ERE Advisory Committee (Thomas McGovern)

IPY FY 2006
Update on OPP/EHR Solicitation (Marie Bundy)
Antarctic Science — Future Directions
 Antarctic System Science (Scott Borg, NSF)
Agency-wide Planning

IPY FY2007
Developing the FY 2007 Solicitation (Marie Bundy, Valentine Kass; NSF)
International Discussions (Karl Erb, NSF)

GEO plans for IPY (Margaret Leinen, NSF Geosciences)

Polar Icebreaking/Research Platforms
Update by NAS on icebreaking committee (Maria Uhle, NAS/PRB)
Update on Healy (Simon Stephenson, NSF)
Update on Polar Sea (Erick Chiang, NSF)

Infrastructure Developments
South Pole Station (Erick Chiang, NSF)
Arctic (Barrow) (Simon Stephenson, NSF)

Arctic Data (Neil Swanberg, NSF)

Report from the Environment, Safety & Health Section (ES&H)
Health and Safety Challenges (Michael Montopoli, NSF)
Non-indigenous species in Antarctica (Polly Penhale, NSF)
Environmental assessments in the Arctic (Polly Penhale, NSF)

Committee of Visitors Planning (Karl Erb, NSF)

IPY web page overview and HDTV video (Peter West, NSF/OLPA)

Education and Outreach & the Center for Remote Sensing of Ice Sheets (CRESIS) (David Braaten, University of Kansas)

Milestones for Diversifying the USAP Supply System (Erick Chiang)
Extra Fuel Storage
Traverse and Direct Air Transport to Pole
Icebreaker RFI