

OPP Advisory Committee Ad Hoc Subcommittee on the U.S. Antarctic Program's Research Vessel Procurement

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Subcommittee initiated March 2018; report (written) sought September 2018, with presentations to the Advisory Committee in April and September.

The committee carries out weekly telecons at a standard day and time. These are short in duration and focused on limited topics.

NSF Context

(A description from the perspective of J. Swift; **not** official NSF views.)

- There are two NSF polar research and support ships (*L.M. Gould* and *N.B. Palmer*). The *Palmer* is nearing end of contract and is being considered for replacement (or SLEP?). Antarctic Peninsula research support issues are also at hand. There are many uncertainties. NSF is not yet in a position to make decisions on the path ahead.
- NSF/OPP is faced with many of the same future ship issues facing the UNOLS academic fleet, such as increasing ship construction and operating costs in an era of flat federal science and infrastructure support budgets.
- The NSF Advisory Committee structure/process is one of several options available to the agency to obtain community guidance.
- The NSF/OPP Advisory Committee formed the subcommittee to examine, update as needed, and prioritize science mission requirements for US polar marine science ships, and to also consider issues attending to some operational options (and possible future hard choices).

Side note: There is useful overlap with the present FIC exercise to examine Science Mission Requirements for future US Global-class research ships.

NSF:

"... a new vessel procurement solicitation needs to be developed that ensures the Antarctic scientific community is continued to be supported with state of the art sea-going facilities designed to operate in these [Antarctic] harsh environments."

Subcommittee directive:

"review and assesses the science mission requirements and operational capabilities of replacement Antarctic research vessels."

The report should "specifically state whether or not the Subcommittee feels the vessel specifications as outlined will adequately support sea-going science in the Southern Ocean and along the Antarctic Peninsula" ... and "may include recommendations to NSF for further improvement of the specifications."

Specific tasks assigned to the subcommittee

1. "Review and verify the continued validity of the University-National Oceanographic Laboratory System (UNOLS) 2012 Polar Research Vessel Science Mission Requirements, the 2016 NSF/OPP Antarctic Vessels Request for Information, and the 2018 ASC-provided Vessel Studies Reports."
2. "Prioritize each proposed vessel's capabilities and operational requirements."
3. "Consider the two-ship operational model of the US Antarctic Program, and evaluate the advantages and disadvantages of moving to a one-ship operating model."
4. "Engage the broader scientific community to ensure vessel capabilities and characteristics are able to meet a majority of anticipated needs for the duration of the 10-year charter, and possibly for the lives of the vessels (~ 30 years). Elements of the recommended prioritized vessel capabilities should be provided in sufficient detail to enable NSF to make subsequent appropriate adjustments in response to available funding."
5. "Include a summary of the outreach efforts and input received from the science community in the final, submitted report."

Community engagement

Community engagement is important. Hence the subcommittee has prepared a survey to obtain community input on future Antarctic polar marine science and the ship resources required.

The subcommittee has assembled lists of names and email addresses to reach. For example, all participants-at-sea on Gould and Palmer cruises.

The subcommittee has worked out the questions to ask the community and recently has NSF approval to proceed with the survey.

Examples of information to be obtained:

Are there key science drivers coming into prominence – or anticipated to come into prominence – that should be taken into account in future ship support for US Antarctic marine science?

Based on experience on USAP and other ships, with what realistic differences in design and outfitting could the Palmer and Gould have better supported US Antarctic marine science?