Polar Research Vessel Update
General Update

- NSF/PLR released an RFI in early December for two ships to commence operations as each vessel contract expires.
  - The RFI closed at the end of January and the responses were quite favorable.
  - The RFI's included historic and projected operational budget, which constrained responses to vessels/operations NSF/PLR could reasonably predict to afford.
  - RFI was released early enough so that potential bidders could suggest design/build/operate options.
- In the coming year NSF/PLR will be working with its prime Antarctic contractor (ASC) to begin establishing a project office to initiate development of an RFP.

Polar Research Vessel Update
NB PALMER

- NBP SLEP:
  - The SLEP report on the NBP was submitted to NSF and reviewed.
  - In general, the vessel is in good condition and, with some continued maintenance, should be able to operate well beyond its nominal 30-year service life.
- The NBP will undergo its second biennial NSF vessel inspection the first week of May 2016 in Punta Arenas, Chile. The inspection reports have helped NSF and ASC identify and correct issues with the ship's science labs, decks, winches and other critical areas.
- For 2016, the NBP is scheduled to operate 263 sea days. Cruises will support USAP, UNOLS, and NOAA operations.

Polar Research Vessel Update
NB PALMER

- Unmanned Aerial Systems (UAS)
  - UAS operations continue to grow in the Antarctic, particularly from ships.
  - NSF/PLR has developed an Airworthiness Flight Safety Review Board (AFSRB) to review UAS requests and provide guidance in the development of UAS Concepts of Operation.
  - In 2016 one cruise will conduct UAS operations. In 2017 we are looking at a minimum of three UAS's to be deployed from the NBP.

Polar Research Vessel Update

LM GOULD

- The LMG completed its first NSF vessel inspection in September 2015. As it did for the NBP, the vessel report has helped identify and correct areas of concern.
- For 2016, the LMG is scheduled to operate 268 sea days in support of Palmer Station and USAP science.
- The LM GOULD 10-year contract expires in 2020, when the vessel will be 22 years old. The NB PALMER 10-year contract expires in 2022, when it will reach the end of its nominal 30-year service life.

Polar Research Vessel Update
POLAR ICEBREAKERS

- **POLAR STAR:**
  - The STAR recently completed the 2016 Operation Deep Freeze, the annual break-in to McMurdo Sound.
  - The vessel conducted all operations on time, though the STAR continues to experience rather serious engine and maintenance issues. The USCG continues to work hard to overcome these challenges.
  - Science systems on the STAR (and SEA) remain in a much-decayed state, and the CG's intention is to begin removing them if no agency steps forward with funding to revive them.
  - NSF is not able to provide the necessary funding
- **POLAR SEA:** The Coast Guard recently completed an analysis on the SEA to determine its material condition. The report, which has yet to be released, will apparently help determine whether the SEA is suitable for overhaul and reactivation as a stop-gap measure until new polar icebreakers come online.

Polar Research Vessel Update
POLAR ICEBREAKERS

New POLAR ICEBREAKERS (PIB):

- The Coast Guard held an "industry day" in March that presented the basic operational requirements of the new PIB(s) to the US shipbuilding industry. (public version of that document is provided).
- Note that there are some substantial scientific capabilities included in the requirements document that NSF/PLR does not support.
- Congress has made clear their intention that agency-specific requirements in the new PIBs need to be funded by the requesting agencies. NSF's current and projected budget is not able to support these additional capabilities and feels that science operations should be conducted by research vessels.
- On as as-needed basis, a research vessel can be paired with a heavy icebreaker to operate in heavier ice conditions. The science capabilities included in the requirements document were, in large part, placed there by NOAA.