Main Fleet Improvement Plan (FIP) Recommendations

- Maintain and improve the existing capabilities of critical UNOLS global class vessels by completion of mid-life refits/service life extension programs for the R/Vs *Thomas G. Thompson*, *Roger Revelle* and *Atlantis*. These investments that should extend the useful operability of these vessels to 40-45 years should be made over the next 5 years and planned sequentially so to minimize scheduling impacts.

FIP Recommendations cont.

- Assure full US investment in the construction, outfitting and management of two next generation RCRVs for general-purpose oceanographic studies to support current and future scientific demand primarily on the East and West coasts and the Gulf of Mexico. The operations and maintenance costs of two new RCRVs are projected to be affordable under current budget scenarios, and acquisition of a third RCRV remains of high priority if overall national funding of ocean science increases significantly above 2014 levels.

FIP Recommendations cont.

- Assess alternate funding models for the R/V *Marcus G. Langseth,* the fleet's global vessel that is specialized for 2D and 3D seismic surveys and Ocean Bottom Seismometer installations and capable of many general oceanographic operations. *Langseth* needs to operate under a stable multi-year and multi-source funding model that is tied to community science planning for seismic exploration and general-purpose oceanography as appropriate.

FIP Recommendations cont.

- Determine a course for building future federally-owned global research vessels.
  - FIC is starting with a detailed restructuring and redefinition of global class Science Mission Requirements (SMRs).

FIP Recommendations cont.

- Maintain the capability of coastal/local class vessels as mission-ready components of the UNOLS Fleet. Efforts to raise state and private funds are critical to replace the capabilities of these vessels, but more proactive support and guidance provided by the federal agencies to local institutions regarding this process is also needed. New coastal/local vessels need to be designed with advanced sensor systems appropriate for the nearshore coastal ocean. Coastal/local vessels are also practical platforms for green-vessel designs such as the use of hybrid propulsion systems.

FIP Recommendations cont.

- Support the acquisition of new ice breaking capabilities for science community access to the high latitudes. UNOLS should assist efforts led largely by the Coast Guard for a new icebreaker class that is equipped with modern capabilities for scientific research.