

Date: 20 August 2012
From: UNOLS Council Non-operator Committee (Deborah Steinberg, Chair; Wilford Gardner, Robin Muench, and Vernon Asper)
To: NSF and ONR (hereafter ‘the Agencies’)
Subj: Response to document “2013 U.S. Academic Research Fleet Operations Support Findings and Recommendations”
Ref: The above document (submitted to Dr. Bruce Corliss-UNOLS Chair, 01 June 2012)

The following comments are intended to help further inform the Agencies’ decisions regarding the significant challenges facing our research fleet, as reflected in the “2013 U.S. Academic Research Fleet Operations Support Findings and Recommendations”. In formulating our response, the UNOLS Council Non-operator Committee has considered input from operators/ institutions of the R/V’s *Cape Hatteras* and *Pt. Sur*, as well as from members of the UNOLS community (both Council and non-Council) that provided comments in response to the “2013 U.S. Academic Research Fleet Operations Support Findings and Recommendations” document. The UNOLS Council was also given an opportunity to review this response. While we acknowledge that the Agencies have analyzed the ship use and budget carefully, we have in addition obtained data from UNOLS to better inform our response.

We focus our comments on two of the “Agency Decisions and Recommendations” that we decided most required our input:

- (A) “NSF plans to retire R/V *Cape Hatteras* and R/V *Barnes* in 2013, and R/V *Point Sur* will be considered for retirement in 2014. NSF recognizes the potential impacts an accelerated retirement of R/V *Cape Hatteras* and R/V *Point Sur* would have on the science community and the operators. Retirement of R/V *Barnes* supports the UNOLS recommended End of Service date, which is based on age and capability, and is likely planned for the end of 2013. NSF is open to further dialog with the Fleet Improvement Committee, the UNOLS Council and the ship operators on these important decisions.”
- (B) “NSF and ONR recommend the operators of all ships find ways to reduce costs and seek appropriate opportunities to support research and education programs by other funding sources, including institutional funds. “

First, we address (A) plans to retire R/V *Cape Hatteras* in 2013, and that R/V *Point Sur* will be considered for retirement in 2014:

1. The case for retirement in 2013 of the *Cape Hatteras* is based upon a weak funded schedule for 2011 and 2012 and a still weaker projected schedule for 2013. Given the

availability of other regional vessels (the *Smith* and the *Sharp*) that appear capable of taking over the work likely to have been scheduled for the *Cape Hatteras*, it seems difficult to fault this decision based solely on the schedule. We feel however that additional factors deserve consideration, and these are discussed below in points 3 and 4.

2. The case for retirement in 2014 of the *Point Sur* is based, similarly to the *Cape Hatteras*, on a weak posted schedule. The statement of justification for retirement notes, however, that the future schedule for *Point Sur* depends in part on the potential for future work in the Antarctic. It also notes that the 2013 Letters Of Intent for *Point Sur* have not yet been posted. Removing this vessel from use without having fully evaluated the potential impact on research in the region of the Antarctic most strongly impacted by climate change seems premature. Input from the NSF Office of Polar Programs concerning the matter would be appropriate, and suggestions for alternatives would be welcome. We therefore urge that no decision be made on the *Point Sur* retirement until it has been to the Antarctic and it is known if there will be more work for it there (or elsewhere) in the future. The *Sproul* seems capable of taking over some of the regional projects currently being handled by *Point Sur* during periods of absence of the latter from the U.S. west coast.

3. Retirement of either or both of these two relatively small vessels will presumably offset only a small portion of the projected fleet-wide cost overruns. We have attempted to estimate the cost savings gained by early retirement of the *Cape Hatteras* and *Point Sur*, using data available through UNOLS. The average funding over the last 5 years for the *Cape Hatteras* was \$1.85M/yr (\$57k/yr from institution/state funding) and for the *Point Sur*, \$1.70M/yr (\$129k/yr from institution/state funding). The assumption made by the Agencies is that this work now scheduled (or projected for scheduling) for these two ships, would be done on other ships having similar capabilities, decreasing their day rates with a corresponding cost savings. Since the \$186k/yr in institutional funds on the two ships was primarily for student training cruises, this money and associated critical educational opportunities would be lost from the community along with the loss of the ships. We note also that any such educational activities would be significantly more (and likely prohibitively) expensive on larger vessels.

Central to this discussion is the observation that larger vessels, with considerably higher day rates, have been posting weaker schedules for the past few years and are doing increasingly so for the foreseeable future. It is reasonable to ask whether, if considerable cost savings are the goal, larger vessels should be considered for removal from the fleet.

If the reasons for early retirement of two ships are not purely budgetary, but are also intended to further a perception of overall cost cutting, then the numbers can be made to look convincing. Retire 2 of 23 ships and we cut the inventory by 8.7%. If we look at dollars saved and include all money that goes to those ships from agencies, there is a savings of about 3.8%. If all of that money went to other ships to carry out the work at the same cost, the savings would be 0.2% - the amount lost from the institution/state contributions of the 2 ships laid up. This ignores all retirement costs for the ships and personnel, which need to be addressed.

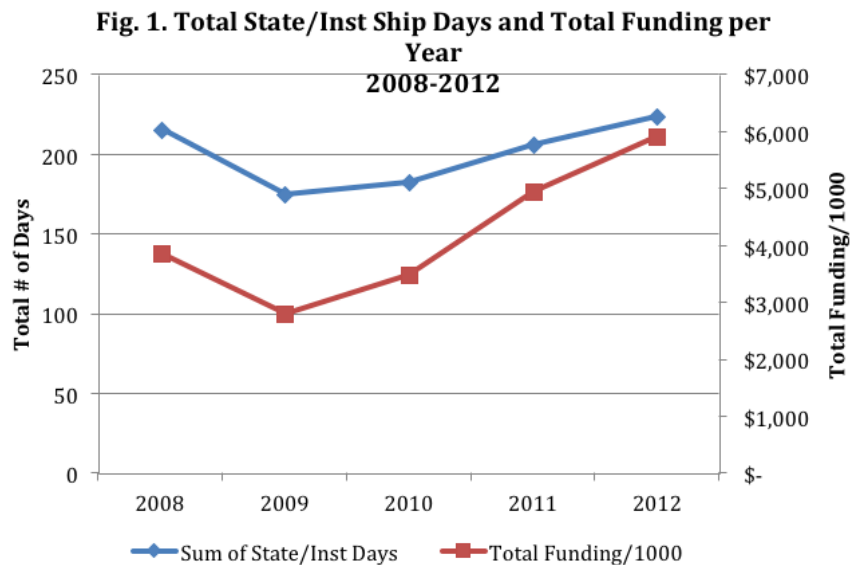
4. Responses from the institutions directly impacted by retirement of the *Cape Hatteras* and the *Point Sur* suggest, absent obvious evidence to the contrary, that these

decisions were made in the absence of in-depth discussions between agency and impacted institutional parties. Both institutions have recently invested in the vessels (e.g., outfitting *Pt. Sur* for Antarctic work) or in new facilities to support the vessel (e.g., the Duke/UNC Consortium’s new marine operations facilities), and may not have if they had anticipated losing the vessels. We suggest that both institutions could benefit from a “grace period” in which they can attempt to deal with operational and layup costs and mount additional efforts to create or expand consortia. Additional pathways need to be explored through which these vessels might be marketed to commercial users in order to keep day rates down.

Next we address (B), which relates to putting the onus on operators to reduce costs and seek other funding sources:

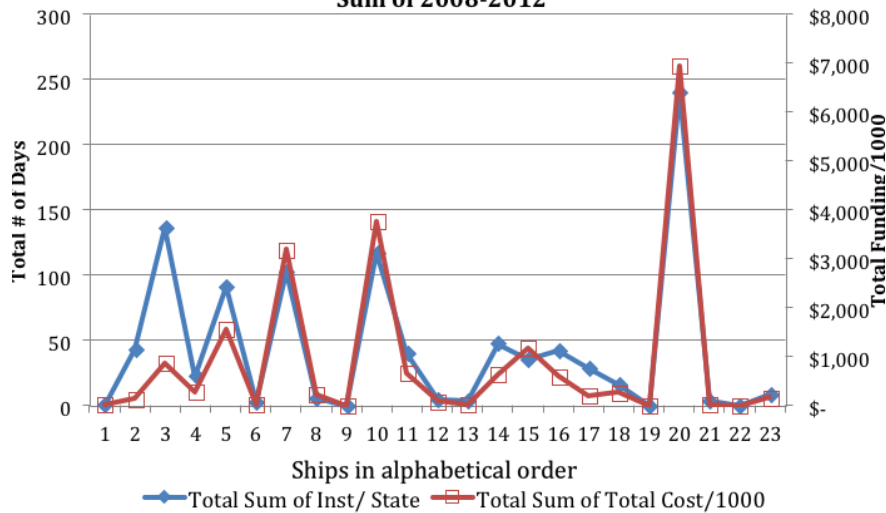
1. Institutions/ states have actually been increasing their contributions to ship operations over the past several years, but it is unrealistic to expect this trend to continue as state and institutional budgets tighten. As we know, UNOLS tracks the amount of funding/ship days provided from the operating institution or their state (INST/State). However, those data are combined rather than tracked separately, making it difficult to know the institutional contribution for most operators. Additional costs, often significant costs, are incurred by INST/States for upgrading and maintaining port facilities that service the ship and don’t appear in the ship’s day rate. We don’t have data on those contributions, but they could in fact constitute substantial institutional support that is not being recognized as such.

We have examined the related data from 2008-2012 (Fig. 1) and find a large drop in ship days and dollars coming from INST/State between 2008 and 2009, followed by a steady increase thereafter, that has more than doubled INST/State funding between 2009 and 2012 (\$2.8M to \$5.9M). Much of “ongoing” INST/State funding is based on historical precedent. The present is a difficult time to expect “new” money from states. Still, we all need to educate legislators about the importance of understanding our coasts for sustainable management of resources and training of new students.



2. Using the philosophy of looking at the “bright spots” to see what is working and trying to emulate those tactics at other institutions, it would be worthwhile if ship operators could learn from each other how to better leverage money from their institution/state. When we look at data for individual ships (Fig. 2) we see a wide range of contributions (in both ship days and total dollars) to different ships. Interannual variability is also substantial, with some ships receiving consistent amounts of time/dollars from their INST/state primarily for student training, and others receiving none to sporadic funding. Operators without local support could use these data to solicit support from their INST/state. The average institution/state investment for all ships for the 5-yr period was ~5% (\$21M out of \$440M).

**Fig. 2. State/Inst Days per Ship
Sum of 2008-2012**



3. Realizing that it will be hard to depend on institutional/state support in the future, how else can operators expand the revenue source? For the IODP *Joides Resolution* and the *Langseth*, NSF has encouraged operators to seek industrial clients to use the ships. It appears that NSF’s comment in the letter to UNOLS Council hints toward that option for other UNOLS ships, but we know there are constraints imposed by the Coast Guard, NSF, and individual institutional regulations. Last year UNOLS formed an ad hoc committee to explore alternative funding avenues for UNOLS vessels. The results were reported by Nancy Rabalais at the UNOLS Council meeting in October, 2011 (<http://www.unols.org/meetings/2011/201110cnc/201110cncap07.pdf>). This information needs to be shared again with all ship operators. We would also like to dialogue further with the Agencies on how to facilitate the recommendations of the report.

Finally, we recognize that, if research vessel demand continues to decrease at the present rate, then current and projected budgets will dictate additional downsizing of the fleet. We strongly recommend additional emphasis, through discussion and facilitation, on commercial use of research vessels. We also want to strongly emphasize the need for continued close interaction and communication among ship operators and the agencies responsible for providing and funding these vessels.