

HYDROGRAPHIC SERVICES REVIEW PANEL

A federal advisory committee, advising the NOAA Administrator

The NOAA Hydrographic Survey Fleet: A Critical National Asset

The single most pressing need for recapitalization of the NOAA fleet is replacement of two of the oldest vessels, the hydrographic survey ships *Rainier* and *Fairweather*. **The Hydrographic Services Review Panel recommends that NOAA prioritize hydrographic survey fleet needs and accelerate plans to acquire and modify or construct an Arctic-capable hydrographic survey vessel that carries multiple launches.**

ISSUES AND STATUS

Dedicated ships carrying multiple launches are one of the most efficient and cost effective ways to conduct hydrographic surveys. The NOAA ships *Rainier* and *Fairweather* were built in 1968 with an original design life of 30 years and each carries five survey launches. Although well past their original design life, both vessels still conduct annual surveys in challenging Alaskan and Arctic waters. Retirement of one or both of these vessels before a replacement is available would severely limit NOAA's ability to perform Arctic surveys and decrease the long-standing survey backlog.

The NOAA hydrographic fleet provides hydrographic information that is essential for safe navigation and keeping our ports open and commerce flowing, as mandated by numerous federal statutes¹ and treaty obligations². This information is not only the foundation for up-to-date nautical charts, but also plays a key role in storm readiness, disaster recovery, coastal resilience and on-time delivery of goods and services to the nation. Whether by conducting critical hydrographic surveys or by providing emergency surveys after storms or tsunamis, the ships and launches are an important part of our national infrastructure. The ships and launches of NOAA's hydrographic fleet also play vital roles in research and maintenance of expertise.

- NOAA uses private/government partnerships to develop innovative survey equipment and techniques, which are evaluated and placed in service on these vessels.
- Almost 50 percent of NOAA junior officers are trained in hydrography and sonar technologies aboard the hydrographic ships and launches, in addition to qualifying as officers of the deck.
- NOAA contracts with commercial vendors for approximately half of its hydrographic surveys. Although contracting for a portion of surveys is an important element of Coast Survey's portfolio, *NOAA must also maintain in-house survey capability and expertise to effectively manage hydrographic surveys and ensure navigation safety.* In offshore or remote areas such as the Arctic, Alaska, and the Pacific, it is impossible to perform critical surveys without dedicated ships.



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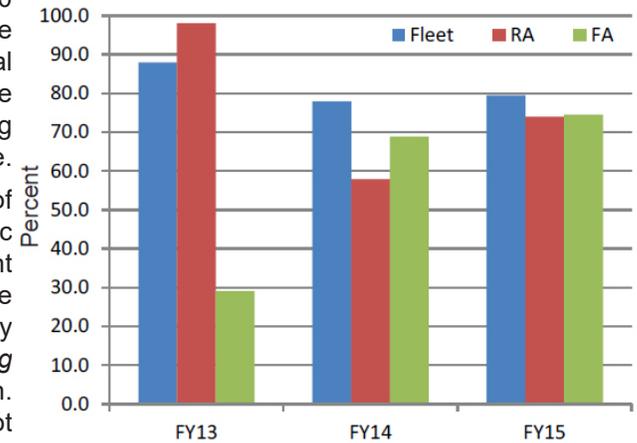
CHALLENGES

The only two NOAA ships assigned to Alaska are now over 50 years old, well past their service life of 30 years, and there are significant management challenges for maintenance, environmental compliance, staffing, habitability, and ability to operate in the severe Arctic environment. These problems have led to steadily declining productivity and, in some cases, loss of an entire year's survey time.

The HSRP has repeatedly advised the NOAA administrator of the need to prioritize hydrographic surveys and the hydrographic fleet. In 2016 and 2017 \$150M was appropriated for replacement of NOAA vessels. The first vessel is planned as a multi-purpose Pacific oceanographic / fisheries research vessel, partly because existing plans for the AGOR vessels *Neil Armstrong* and *Sally Ride* can be used as a starting point for the design. Even with an existing plan, completion of this vessel is not expected until 2022. Under the current NOAA plan for a new hydrographic vessel, it would not be completed for perhaps 10 years. It is increasingly unrealistic to expect the current aging vessels can operate for another 10 years. If one or both go out of service, there are few viable options, and the survey backlog will only increase.

There are a number of commercial, academic, and government vessels that might be available for acquisition and conversion to a hydrographic survey vessel that can carry multiple launches. In late 2017 NOS released a request for information about the availability of academic, government, or commercial vessels for lease or purchase. Acquisition and modification of an existing vessel would almost certainly be less costly than design/build of a new vessel and could be accomplished in a much shorter time.

NOAA should consider all options in order to replace at least one of the Arctic survey vessels as expeditiously as possible to reduce the current backlog and keep up with future survey needs.



Percent "days at sea" of the overall NOAA hydrographic survey fleet, NOAA Ship Rainier (RA) and Fairweather (FA).

REFERENCES: ¹ Coast and Geodetic Survey Act of 1947; Hydrographic Service Improvement Acts of 1998/2002/2008; Ocean and Coastal Mapping Integration Act (2009); ² International Convention for the Safety of Life at Sea, Chapter V.

RECOMMENDATIONS FOR NOAA ACTION

- Prioritize hydrographic survey fleet needs and accelerate plans to acquire and modify or construct an Arctic-capable hydrographic survey vessel that carries multiple launches, autonomous vessels, and/or remotely operated vehicles.
- Continue to request annual funding for fleet replacement and allocate a portion of annual funds to replacement of the hydrographic fleet.
- Continue to coordinate with other federal agencies, academic organizations, state and local interests, and private and commercial entities to develop an integrated approach to the challenge of aging oceanographic fleets.

In October 2003, Secretary of Commerce Don Evans established the Hydrographic Services Review Panel as directed by the Hydrographic Services Improvement Act of 2002, Public Law 107-372. Panel members, appointed by the NOAA Administrator, include a diverse field of experts.

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