HYDROGRAPHIC SERVICES REVIEW PANEL

A federal advisory committee, advising the NOAA Administrator

The NOAA Hydrographic Survey Fleet: A Critical National Asset

ISSUE AND STATUS

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 the $80 million appropriated in 2016 for NOAA fleet recapitalization be applied to the acquisition or construction of an Arctic-capable hydrographic survey vessel that carries multiple launches.

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 statutes. (See references at end). 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.

Unscheduled maintenance days for NOAA ships *Rainier* and *Fairweather* greatly affect the amount of surveying that can be accomplished.

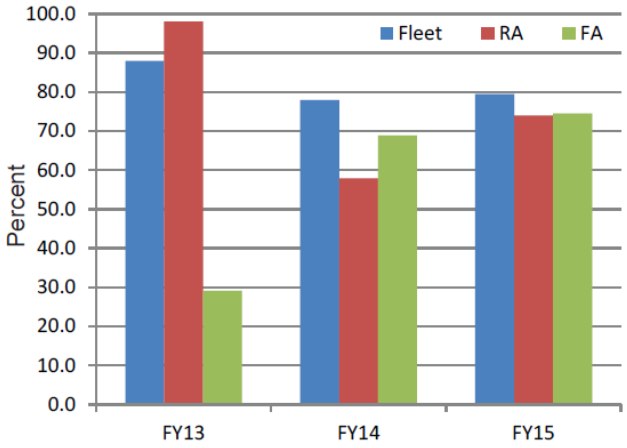
NOAA ships Rainier *and* Fairweather *were built in 1968 with an original design life of 30 years. Each ship carries five survey launches. Dedicated ships carrying multiple survey launches are one of the most efficient and cost-effective ways to conduct hydrographic surveys. Both vessels still conduct annual surveys in challenging Alaskan and Arctic waters.*

CHALLENGES

Important elements of the NOAA hydrographic survey fleet are operating past their operational life span. The only two NOAA ships assigned to Alaska are now over 48 years old, well past their service life of 30 years. Due to the age and design of these ships, there are significant management challenges with respect to 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.

Without reliable survey ships, the brief three-month survey window in Alaska makes accomplishing NOAA's critical survey mandates in the Arctic and other remote areas difficult, if not impossible at times.

The hydrographic survey backlog is approximately 10,000 square nautical miles. (The current goal for Arctic surveys is 500 snm/year). NOAA needs its own ships and commercial capabilities 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).*

In 2014 and 2015, the Hydrographic Services Review Panel advised the NOAA administrator of the need to increase the amount of survey time in Alaskan waters and the need to be forward-looking in acquisition of new hydrographic survey ships, in increasing the number of shore-deployed launches or navigation response teams, and in increasing use of autonomous vehicles.

The national omnibus budget for 2016 has appropriated $80,050,000 for new vessel construction for NOAA's fleet. NOAA's original $170 million budget request was for a general-purpose oceanographic ship, rather than a dedicated hydrographic survey vessel. The enacted legislation states "such funds shall target replacing one of NOAA's oldest vessels currently in operation, per the request." NOAA should use the available funds for replacement of *Rainier* and/or *Fairweather*.

REFERENCES: *Coast and Geodetic Survey Act of 1947; Hydrographic Service Improvement Acts of 1998/2002/2008; Ocean and Coastal Mapping Integration Act (2009)*

RECOMMENDATIONS FOR NOAA ACTION

- The $80 million appropriated in 2016 for NOAA fleet recapitalization should be applied to the acquisition or construction of an Arctic-capable hydrographic survey vessel that carries multiple launches.
- Request continued funding for hydrographic vessel outfitting and sensor development in 2017.
- Develop and disseminate a long-term actionable NOAA fleet recapitalization plan for continued upgrades and replacement of NOAA's fleet, with replacement of the aging hydrographic survey fleet as the highest priority.
- Continue to coordinate with other federal agencies, academic organizations, state and local interests, and private and commercial entities to develop a whole government approach to the problem 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.