

# Committee on Resources

---

## Witness Testimony

---

Testimony of

**REAR ADMIRAL CHRISTIAN ANDREASEN, NOAA ret.**

President

International Hydrographic Bureau Directing Committee, International Hydrographic Organization

Before the Subcommittee on Fisheries

Wildlife, and Oceans

27 March 1996

### TESTIMONY OF REAR ADMIRAL CHRISTIAN ANDREASEN

It is my pleasure to provide my views on the future of the Commissioned Officer Corps of the National Oceanic and Atmospheric Administration (NOAA) and the future of the NOAA Fleet. I understand that the Administration is proposing to convert NOAA Corps positions to civilian positions, eliminating a Uniformed Service for the first time in history, and consideration is being given to greater use of contracting and the UNOLS fleet to meet NOAA's ship needs.

These two issues are complex in that they require great in-depth study and a thorough knowledge of NOAA operations for one to attain a proper understanding of the basic issues. As you are already aware there have been several studies conducted. They have reached varied conclusions and there have been few results. I have been involved with some of the studies and am knowledgeable about others.

In preparing for this hearing, I decided to take a different approach from the studies and look at the better practices throughout the rest of the world as would relate to the subjects under consideration, i.e., NOAA Corps and in-house fleet operations. In reviewing the functioning of the IHO Member States in conducting oceanographic research and survey operations, while some make good use of commercial support for their operations, all are maintaining an in-house capability and a great majority are doing so through the use of a Uniformed Service personnel system.

I support the basic conclusion that there should be a mix of NOAA operated and contracted vessels, but not a politically motivated degradation of NOAA's operational support, i.e., NOAA Corps or NOAA ships. There are many considerations to taken into account before concluding any such decisions. I would like first to address issues related to the NOAA Corps.

### NOAA COMMISSIONED CORPS

Commissioned Officer support to the operational activities of the U.S. Government related to scientific and technical matters has a long and proud history. President Thomas Jefferson formed the Coast Survey in 1807. This organization had need for support in its mobile survey operations, both for its topographic/geodetic surveys along the nation's coast and for hydrographic surveys from ships at sea. To do this, officers of the Army and Navy were rotated to the organization. Army and Navy officers continued in this role until World War I at which time the Department of Defense withdrew its officers to support the war effort. With their surveying and mapping skills and scientific/technical backgrounds, they were no doubt valuable for the war effort. However, this left the Coast Survey without means to continue conducting surveys essential to the U.S. coastal areas in support of shipping. During World War I, many of the lives to the then U.S. Coast and Geodetic Survey, the Congress authorized, in 1917, the formation of the Commissioned Corps of the Coast and Geodetic Survey. I joined this organization in early 1963 and experienced its transition from the C&GS into the Environmental Science Services Administration (1965) and into NOAA (1970). As ship, aircraft and mobile requirements have changed over the years, the Commissioned Corps has similarly changed to provide necessary support for the operational programs of the "organization". What is it that the Corps has provided that has led to the organization's use of the Corps over these many years and why, when the commissioned officer support was once lost, did it become necessary for the Corps to be formed?

1. The Commissioned Corps personnel system is special in that it has provided the organization with professionals to conduct its operational activities. The NOAA Corps is the only Uniformed Service that requires every officer to have a college degree in science or engineering prior to being commissioned. The Corps has no "academy" and selects from the strength of United States colleges and universities nationwide. This in effect is the "Internet" of personnel systems, reaching out to the ideas of scientific and technical institutions throughout the United States to provide support to NOAA as a scientific and technical organization. NOAA line managers typically are very supportive of the Corps because they quickly gain an appreciation for the influx of technical talent provided by the Corps.

2. Why is the nationwide recruitment of Corps officers any different for NOAA than its civilian recruitment? An answer is that there is a continual turnover of the younger officers in that not all are willing to spend their entire careers being subjected to family separation, travel whenever the organization needs it, sea and/or flight duty and hazardous duty. This results in new ideas being brought into the organization and provides the influx of bright young officers needed to staff junior positions throughout the organization.

3. The personnel system of the NOAA Corps is designed to meet the operational needs of NOAA (ships, aircraft and mobile duty) and respond quickly to agency needs. Officers are hired with the expectation that they will be separated from their families for long periods of time and will have to move their families often as a part of the Corps assignment rotation system. This continual rotation of officers provides for transfer of ideas throughout NOAA components, which is a good thing. I think Congress must agree in that it took a similar step when it formed the Senior Executive Service. In the case of commissioned officers, billets are managed centrally and the Director of the NOAA Corps has the capability to direct transfers as need be to meet emergencies. In doing so, the need to backfill some positions causes a domino effect within the Corps. To do this under the civilian personnel system would be expensive and likely would not respond on a timely basis. That is, NOAA would lose an important capability to respond quickly.

4. The Corps system of recruiting scientists and engineers provides a base for a talented cadre within NOAA who are competent technically and are familiar with the operational needs of the organization. Many officers pursue advanced degrees, some attaining the Doctorate level. Advancement academically is one of the factors in the Corps "up or out" promotion system, i.e., as the percentage of officers becomes fewer at each senior grade only the more talented advance, providing NOAA quality support.

5. The NOAA Corps provides NOAA with personnel dedicated to NOAA as a whole, not personnel aligned to a specific line component. Corps officers typically must serve within multiple line components as this is a part of their promotion/assignment system, much like the DOD joint service commands which provide for DOD officers to become knowledgeable about one another to better function as a unit during crises. The Corps is very dedicated to NOAA and its programs.

6. NOAA Corps officers provide "instant government recognition" and provide an excellent interface to their fellow Uniformed Services. The Commissioned Corps has a code of dress/appearance, readily gain trust and respect, and provide NOAA with a needed "service" to "service" interface. The NOAA Corps officers are subject to transfer to the military services on 24-hours notice. Corps officers and some ships were transferred to the military services during World War II and served with distinction. The C&GS PATHFINDER was targeted by "Tokyo Rose" due to its work in surveying beaches in advance of allied landings as the war progressed across the Pacific. After the War, Corps officers continued to teach at military facilities, e.g., Little Creek, VA amphibious landing school, Ft Sill, OK artillery school. For the recent Gulf war, the NOAA Ship MT MITCHELL became part of the follow-up. In recent times, the NOAA Corps has served in interface assignments with the Coast Guard, Defense Mapping Agency, Oceanographer of the Navy, Naval Meteorology and Oceanography Command and occasionally with foreign offices.

7. Emergency response is an important asset the NOAA Corps and NOAA Fleet provide to NOAA and is not only limited to military related responses. When the EXXON VALDEZ oil spill occurred, NOAA Corps officers were heavily involved in NOAA's response, including working with the Coast Guard and the military Services.

In my opinion, NOAA would be lose an extremely valuable asset if the Commissioned Officer Personnel System were eliminated. The proposed civilianization of the NOAA Corps seems only to be adoption of "A Corps without the Uniform", losing the advantages of a Uniformed Service personnel system and exposing NOAA to numerous new

problems the most important of which will be significantly increased costs.

## CIVILIANIZATION OF THE NOAA CORPS

As I worked for many years with the personnel offices of NOAA, including with the Labor Relations office, I would like to express some comments about the proposed civilianization of the NOAA Corps.

1. My first comment would be to ask a question to illustrate a fundamental difference between the Corps and the Civilian personnel systems, i.e., "Have you ever seen a Government civilian employee fired?" This happens but it is not easy. In the NOAA Corps, one can be separated at any time during the first 3-years of service. Separation is a routine part of a Commissioned Corps personnel system. Civilianization of the Corps as proposed will result in a stagnated system, particularly during times of high national unemployment when too many of the proposed "GS/WM" (General Schedule/Wage Marine) employees decide to not voluntarily turn over. Stagnation of the GS/WM system will end the influx of new talent and NOAA will find itself with a large "block" of aging personnel unable to move up into the few senior management positions available. One option would be to absorb the excess personnel into the GS, but there would have to be some financial incentive for those remaining in the GS/WM system facing hardships or there will be great dissatisfaction within the operational GS/WM personnel. To opt to retain everyone in a stagnated GS/WM system would be unsafe, risking lives and property. A proper seagoing personnel system cannot be formed from personnel that seldom go to sea; to be good at any job requires experience.

2. I agree with the Arthur Andersen Study conclusion that there likely will be difficulty in attracting civilians with appropriate science and engineering backgrounds to fulfill NOAA Corps functions. The NOAA Corps system has the advantage of being able to recruit scientists and engineers first and then teach them sea going skills. Teaching an engineer to operate a radar is relatively simple when he or she has already been exposed to vector analysis. Teaching mariners to become engineers is not a feasible approach. Like all other Uniformed Services, the Corps Officers are not required to hold licences to go to sea. NOAA Corps' management is very conscious of its responsibility to train its officers and operates a training course upon appointment, has a policy to assign all incoming officers to sea to give them immediate experience, and operates a refresher course for officers returning to sea. Transition of the Corps to a civilian system would first require that the U.S. Coast Guard agree to waive licensing for officers converted to the GS/WM system. I do not believe the Coast Guard will agree to an indefinite waiver for NOAA to operate such a system. Thus, eventually, NOAA would be in a position of having to recruit persons with marine licences that also have science and engineering degrees. This is not workable in that such personnel are not generally available. Both mates and mission support personnel will then be needed, increasing NOAA's costs.

3. The cost of a civilian GS/WM system will be higher. The more comprehensive studies, e.g., the Arthur Andersen Study, to compare the salary costs of the NOAA Corps to those of a GS or GS/WM salary system have shown that there is little difference in terms of overall cost (the study actually concludes that the Corps system is lower in cost than GS). If salary costs favor the Corps system, then a rotation system of civilians will be even more expensive and become a substantial increased cost item for NOAA. Civilians have benefits such as household hunting trips, reimbursement for financial loss on their houses, etc. that commissioned officers of all Uniformed Services personally must bear as a burden of their chosen careers. The Arthur Andersen study concludes that civilians are paid triple (300%) of the amount of travel reimbursement paid to officers. Also, civilians are paid night differential, penalty pay, and overtime. Officers work long hours at sea and respond to emergencies without any overtime payment. If NOAA converts the NOAA Corps to civilian status, the Corps would receive overtime, which for NOAA's current Wage Marine employees typically equates to 60% of their base salary. I think this figure will likely be even higher with ships officers, deck and engineering. I recall reviewing cases where WM employees in the senior grades routinely doubled their base wages through overtime. Wage Marine employees are typically graded below GS employees and this will possibly cause pay at sea to only be comparable with the shoreside GS salary. This raises the questions of whether or not GS/WM employees will accept going to sea with family separation without added financial compensation and whether the government's civilian personnel system is capable of operating a dual system wherein a person would be graded differently, receive time in grade step increases and promotions under a dual system, etc. There would be pressure for higher compensation levels within the proposed GS/WM system. Another factor to consider is the one time transition cost of converting officers to GS/WM, which I would estimate will fall in the \$10-20 million range.

4. If the NOAA Corps is transitioned to civilian status, they will become unionized. NOAA has a strength of about 10% of the Military Sealift Command civilian WM workforce, all of whom are unionized; NOAA personnel for the most part are represented by these same unions. Representation of the significant group of people employed by NOAA will occur and result in rules and restrictions that complicate NOAA operations. The Government will lose the option for assured transfers to work with the military during emergencies and have to rely on volunteering GS/WM civilians who must be paid civilian combat zone pay.

5. When the GS/WM personnel become unionized, will they be represented by the same union ashore in their GS billet as represents them in their seagoing WM billet? This could become a serious complication within NOAA's personnel system which has some GS segments of employment totally unionized and others with no unionization.

6. Transition of the NOAA Corps to GS/WM status would mean that the operational personnel would have to serve 30 years and NOAA's operational workforce would become older. I am not against old age now that I am there, but I recognize that I am not as agile as I once was. NOAA operations are challenging and involve harsh conditions, exposure to significant hazards, i.e., flying into hurricanes, sailing into winter icing conditions to study fish stocks and charting in unsurveyed or poorly surveyed areas exposed to severe weather conditions, difficult beach landings, etc.

7. It is noteworthy that of the sea-going Uniformed Services the NOAA Corps demonstrated to Congress some years ago that NOAA officers experience the highest percentage of sea time. I think this has not changed. This could impact GS/WM recruitment in that civilian officers on represented private vessels receive a day off with pay for each day at sea. U.S. Government employees have limited salaries and poor leave conditions, i.e., they only receive the normal Government employee annual leave and 2 @ days off for each month at sea, this latter provision being set in law and seldom changed by Congress.

8. A last point about transition is that it is essential for the transition to be fair. Civilian positions and associated funding must be made available for every Corps position. The retirement system for retired Commissioned Officers will have to be transferred to one of the other Uniformed Services. It would be extremely unfair for the transition of active duty officers to result in a forced reduction which put Uniformed Officers onto the unemployment roles particularly those having served nearly 14 years of service and having no vested retirement. Dedicated employees deserve better treatment. Such treatment would be viewed with alarm by other Uniformed Services and damage faith in Service employment.

Since present costs for the NOAA Corps are roughly equivalent to the GS system costs and conversion would result in higher costs by several million dollars annually (perhaps \$5 million annually) for the proposed GS/WM system, my opinion is that it would be not only wrong but a serious mistake to adopt a less flexible-less responsive personnel system at higher cost in a time when the Federal deficit is supposed to be reduced. NOAA should retain the NOAA Corps as a Uniformed Service providing inhouse program support NOT civilianize or eliminate it.

## USE OF UNIVERSITY OPERATED LABORATORY SYSTEM (UNOLS) SHIPS

The UNOLS Fleet is a fleet of capable oceanographic ships and NOAA can make good use of some UNOLS ships. Doing this is not without some problems and I would like to comment on these to insure that expectations are not unnecessarily high.

1. A university will logically give first priority to its own research projects. This makes the available times of usage those that are less desirable and less efficient for conducting operations. This will work counter to NOAA efficiency, i.e., overall productivity will drop if NOAA must utilize the less productive times and never take advantage of the more productive times. While this may prove better than incurring the cost of a new ship, it must be recognized as a reality and NOAA should be allocated funds for increased UNOLS days to account for this. It also is difficult to aggregate the "pieces" of available ship time into the cruise times needed for some NOAA projects.

2. Every university would like to have its ship(s) fully employed on its own projects, which places NOAA at risk for possible loss of access. NOAA participates in the UNOLS Council meetings and there are good communications between NOAA and UNOLS, which will help to identify any such problem in advance, but the end result will be a NOAA program support problem.

3. The UNOLS Fleet is not configured to support marine the fisheries or nautical charting program needs of NOAA and these represent a majority of NOAA Fleet operational requirements. Thus, UNOLS is an option for only a fraction of NOAA's ship support needs.

4. UNOLS ships are operated from various universities not linked together regionally, which results in their being supported individually rather than centrally, usually by a port captain and perhaps a small port staff. This in my opinion is not as good as having a nucleus of fleet support personnel, including engineers, as exists in NOAA. The NOAA ships are well cared for and the NOAA Corps has a perfect safety record in never having lost a ship. This is an amazing record considering the conditions NOAA operates under. NMFS did once lose a contract fisheries vessel, but this was prior to centralized NOAA Fleet operation. Some years ago, a friend of mine died when the university ship HOLA HOLA tragically went down off Hawaii. UNOLS has since adopted a fleet safety inspection system similar to that of the NOAA Fleet.

Overall, UNOLS does present an option for economies in selected areas of NOAA Fleet support and should be encouraged as a supplement to NOAA Fleet operations. The Congress should not consider that this can simply be done by partial diversion of funds from an existing NOAA ship. The permanent civilian crew is the major cost factor in the operation of a ship and reducing Days at Sea or temporarily inactivating a NOAA Ship only saves consumables, i.e., cost of fuel and food, making it impossible to opt for use of UNOLS. In my opinion, the only way for this to work is for a block of funding fully supportive of ship-time acquisition to be made available. There are no "free lunches" in the ship operations business.

#### NOAA USE OF PRIVATE CONTRACTORS

This has been the subject of many studies over the years and I personally put credibility in a number of the conclusions of the 1989 NOAA Fleet Mix Study, which was conducted by a private ship contracting firm familiar with Government ship operations. Subsequent mandates for NOAA and others to study this issue have been hindered in that ship contractors are busy people and do not waste time (which is money) in the "what if" games of the Government. This results in essential cost comparison data not being available. However, I have been asking questions to determine what NOAA's recent experience has been with chartering and find the U.S. response disappointing and progress rather dismal no matter what NOAA program has attempted charter.

I find that recent experiences show inhouse NOAA fleet operation as proving to be cost competitive, e.g., NOAA's ship DELAWARE has a per sea day cost of about \$10K per day while a bid to replace her operationally (one of two foreign bids) cost \$15K per day. NOAA's RUDE, named for the C&GS commissioned officer who invented the star finder virtually all navigators have used when taking celestial observations and a ship I used to command, would have cost about a \$1 million for the hydrographic project off New York, but the contract award was roughly \$1.25 million after which the contractor stated its costs ran about 50% higher than the bid. Most recently NOAA's Surveyor a wonderful riding ship NOAA had working off Antarctica, was deactivated only to be replaced by another foreign ship costing more than SURVEYOR but providing NOAA less project support time for NOAA's important studies in support of marine life in the Southern Ocean and the endangered whales of our planet. As such operations, involving the carriage of NOAA scientists are awarded to others, particularly foreign countries with different standards from the U.S., the quality of onboard equipment and possible lack of adequate laboratory facilities to support NOAA's more sophisticated needs and the safety and reasonableness of accommodations for U.S. scientists and technicians comes into question. NOAA scientists are already facing such problems in that proposals have already suggested the quartering of scientists in fish holds that have been changed into accommodations. This is not an acceptable solution for long-term support and is a difficult item to control when contracting because travelling to visit proposed vessels is another expensive item.

One problem with charters is the volatility of bids within the ship charter market, making it difficult to simply compare pricing at different times and places. A smart way to account for this is to retain an inhouse capability for use when charter prices are high. NOAA should not be placed in a position where it must meet long-term mission requirements by paying the higher going rates. At the same time, NOAA should be in a position to take advantage of low prices in the charter market. Certain fundamentals are at work in relating to charter and I would like to comment on them.

1. The Fleet Mix Study recommended that NOAA obtain multiyear contract authority. At the time of the study, Navy had such authority, but it has been periodically granted and withdrawn in that there is an aversion, generally within Congress, for agencies to have authority to make outyear commitments against the Federal budget, i.e., it is difficult to control spending once outyear commitments have been made. Even though termination clauses can be used, these can be expensive. In the case of NOAA, the scientific mission demands that ships be configured to support NOAA mission requirements. This often requires a special configuration not typically available in industry (supported by a recent conclusion of Jensen Marine, Gilbert Associates, and Resources Consultants, Inc). For example, a commercial fisheries vessel will be configured for maximum fish-hold capacity whereas a NOAA fisheries research vessel will require maximum berthing for scientists. To obtain the required configuration from industry requires a change which is costly and must be amortized over time. If NOAA were to terminate the contract prior to amortization, the contractor must recover the unrecovered costs of conversion to and from the NOAA configuration. The Fleet Mix Study concluded that to obtain the special configurations required for NOAA missions, multiyear contracting authority was essential. For many years this was not an available option and with it there is still a need to make sufficient funds available. This is a factor in driving up the cost of contract support for a NOAA mission.

2. Several of the studies (Fleet Mix Study, NOAA's Fleet Replacement and Modernization Plan, the Marine Boards Strategies for Obtaining Ship Services) have all recommended that the NOAA ship support should include a mix of NOAA owned and chartered ships. The Fleet Mix Study recommended that NOAA maintain a core of fleet operations such that it would maintain expertise in fleet operations related to its mission. It is essential for NOAA to retain a capability to understand what is being requested of the contractors (also supported by the Marine Board study) and account must be made for changing mission requirements which are characteristic of some aspects of scientific and technical work. Where long-term missions exist, as are many of NOAA's missions, it is more efficient to have an inhouse operation. The Fleet Mix Study did recommended that NOAA should not build a ship unless it has long-term requirements that would fully utilize the ship and that in such cases the ship should be contracted. While NOAA has had short-term requirements, these have generally been met by diversion of an existing NOAA ship from long-term requirements due to lack of available funding for meeting short-term or emergency needs, e.g., OCSEAP project, Valdez oil spill response, etc., rather than through charter. The contract process itself slows down the response capability. The principle of using contract support to support certain short term missions should be used where it will provide cost effective response. This might be attained by creating a limited use emergency response fund for use by NOAA.

3. Nautical charting, fisheries data collection, and ocean monitoring are all long-term missions, but I think each of them has some aspect that could be met by contract support. However, I feel that this aspect must be handled with great care and certain core missions should be retained as an inhouse NOAA capability. Long-term data collection of statistical information to determine oceanographic data trends or availability of fish stocks require a uniformity of methodology in order to be valid/credible. The changes of contract and UNOLS ships will disrupt this continuity and complicates the scientific analyses opening up questions which are damaging to NOAA programs. An inhouse capability serves to obviate this problem by providing baseline studies for comparison. With regard to charting, some routine surveys might be contracted, but the Government should not expose itself to unnecessary liability (charting is an area where the government is exposed to product liability). You may recall that the Marine Board study opposed the contracting of charting for this reason. However, I think a contractor may conduct surveys in deep water beyond the risks of critical navigation depths and might conduct the basic sounding investigation of a coastal area, but the Government should retain the capability and responsibility for investigation of hazards to critical to navigation. This is an essential element of hydrographic surveying support to navigation safety and should not be exposed to an operation where profit motive is in opposition to conducting a thorough survey to determine critical depths. Inhouse hydrographers have incentive to conduct an accurate and thorough survey and have no financial gain from running fewer sounding lines than are absolutely necessary to define an obstacle. This principal should not be lost.

4. I have noted that Mr Connelly in a 1995 article stated that NOAA had drafted contract standards that were too rigid to follow and that future contracting could get the same quality at lower cost. I do not know how one attains the "same" quality when lowering the standard, but it should be pointed out that NOAA generally follows the international standards of the IHO. How else would mariners around the world know what to expect when navigating using different national charts? Mr Connelly is correct that lowering the standard would result in a cheaper survey, but to do so the United States would have to consider adoption of added safety measures, e.g., Finland's requirement for an underkeel

clearance of one meter. Lowering the standards can have cost implications for commercial shipping and no doubt commercial operators would like input to any decision by the US to lower surveying standards. About 90% of US international trade is through marine transport, 50% of it hazardous.

5. Contracting and also some UNOLS support usage is complicated by the fact that NOAA has many mission requirements which are time critical, i.e., one must study Brown Shrimp in specific locations and at certain times related to their development, repeat oceanographic observations can be time critical, some seafloor instrumentation needs to be recovered at within specific times, and hydrographic survey work must progress each summer in Alaska where the "window" of feasible operations is short and stretches survey accomplishment over many years for this large important area. It is not reasonable to contract out hydrographic surveys in the lower 48 and ignore the poorly surveyed areas of Alaska, Hawaii or other overseas areas under U.S. responsibility. The temporal nature of NOAA's requirements must be taken into account. With about 3 1/2 million square miles of EEZ and 95,000 miles of shoreline spread from harsh climate areas to tropical areas, support must be mobile and move to accomplish the requirements off New England or Alaska as well as those in the Gulf of Mexico port areas.

6. Certain fundamental differences between contracting and inhouse operations affect the respective costs. Contracting done on a short-term basis entails start-up costs. Contractors pay insurance costs, must make a profit, must pay taxes on the profit, and provide for significantly greater crew leave than allowed by the Government. Medical liability is another area which can be costly. The contractor operation may incur an employee injury while on contract to the Government, and not have the incident reported or recorded properly only to later become litigation for which the Government is poorly equipped to respond after the contract has ended and contractors have changed. On the other hand, the Government is faced with higher ship construction costs due to regulation/paperwork/inspection requirements under Government contract procurements. However, a point in favor of Government constructions is that ships are built with an intent to operate for a long time period to gain maximum use of the investment, rather than the 20-25 years typical of industry; just look at the ages of the NOAA ships and consider this a benefit in terms of cost. Also, NOAA has managed its ships well over the years avoiding expensive mid-life conversions or rehabilitations such as those of the UNOLS ships KNORR and MELVILLE, which cost something like \$26 million each. NOAA has an excellent record of meeting its Days at Sea requirements in support of NOAA programs, usually within a percent or so of 100%. A significant factor, mentioned earlier, is the cost variation of contracting due to supply and demand. NOAA must be structured to be a good "shopper" and take advantage of the bargains. This can be done with a combination of inhouse and contracted ship support, but cannot be done with either one alone.

In summary, the NOAA Corps should neither be abolished nor civilianized. The NOAA Fleet and aircraft "core" operations provided by the NOAA Corps should continue to be supported as an inhouse operation. While cost might appear substantial in the Fleet Replacement and Modernization Plan, this will be necessary for the U.S. to maintain a core capability. The Government has gone for too many years without building any ships to support NOAA's programs rather than adopting a stance of progressively responding to the need. The result is "sticker shock". In my opinion there has been far too much concern about structure or the personnel system and not enough about the potential loss of mission capability and degradation of NOAA products.

In moving ahead, NOAA should continue the use of commissioned officers in support of its mission requirements as this will be more cost effective and beneficial for NOAA and its programs. Supplementing this should be use of UNOLS and contracting where it can benefit NOAA and the Nation. Congress should get on with providing the essential support outlined by NOAA in its Fleet Modernization Plans and not risk ending operational support to NOAA through indecision.

###