# Committee on Resources

## Witness Testimony

Testimony of
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Before the Subcommittee on Fisheries
Wildlife, and Oceans
27 March 1996

INTRODUCTION:

Summary of Basic Position and Recommendations - The OAMAC Fleet Modernization Subcommittee reached the basic conclusion that the NOAA modernization plan it evaluated in 1991 -1992 was seriously defective in several major respects. Apart from a $1.4-billion budget poorly supported by factual data, it called for construction of more, more elaborate and larger new ships than made any sense in the context of NOAA's operational requirements. It was clear that the NOAA Corps had not examined the methods of commercial research ship operators to learn how they could get technically sound ships at lower cost and how to operate them more efficiently. The NOAA Corps adamantly resisted OAMAC suggestions and recommendations on ship crewing and outsourcing that would, if followed, have lead to the need for fewer NOAA officers. OAMAC found that the supposedly professional NOAA Corps was not even aware that, under the plan it created, few, if any, of its serving officers would be legally qualified to operate new NOAA ships.

The NOAA Corps claims for safe aircraft operations are strongly rebutted by people who have flown as crew members in the hurricane reconnaissance planes. The costs of running the NOAA Aircraft Operations Center at MacDill Air Force Base in Tampa, Florida, have become so high that hurricane hunting flight time has been reduced from about 800 to about 200 hours per year.

I wrote an article, "It's Time to Beach The NOAA Corps", which was published in the February 1993 issue of Proceedings of the U.S. Naval Institute. In it I addressed in detail the underlying reasons for the title recommendation. I charged that the NOAA Corps had become an elitist, expensive and anachronistic organization of no special technical merit.

I adhere to that view today, and it has been reinforced by the continuing evidence, recently and notably in its transition plan, that the NOAA Corps serves no interest but its own. My first comment is that the demise of the NOAA Corps is wise and my first recommendation is that the demise of the NOAA Corps be final and absolute.

My opposition to the NOAA Corps does not apply to NOAA itself. On the contrary, NOAA is a genuinely worthwhile component of our government. My second recommendation is that NOAA should be given both new life as an independent executive agency and full support for the hugely important programs it conducts and administers, such as those relating to world wide climate prediction, fisheries, mapping and charting and care for out coastal waters and shorelines.

WHAT CONGRESS SHOULD NOT FUND, AND WHY

NOAA Corps Issues:

The NOAA Corps has prepared a plan relating to its elimination. A draft of this plan was submitted to Dr. Baker on February 29th. I have read the plan. The Congress may not be aware that the NOAA Corps has for some time been displacing civilians in management and other actual or potential high level positions with its officers, and I have received comment on the plan from both people who have already been displaced and those who are threatened by what is proposed.

NOAA Corps to Survive in Mufti- Several conclusions can be drawn from analysis of the Transition Plan, the most basic of which is that while the NOAA Corps may be eliminated in name, it will not be in fact. Excepting an unknown, but probably small number who will retire, Corps officers will get out of uniform and into civvies as part of a new, preferentially-structured and protected civil service pool in which will reside essentially every job filled by a NOAA Corps officer today. Ship captains will become masters and those filling other deck officer berths will become Mates or Pursers or Radio Officers, all in a civil service "Wage Marine" grades. Aviation officers and those in shore billets will assume civil service titles and grades.

No Savings on Personnel -The Plan indicates that a maximum of 350 positions - the present strength of the Corps - will be made available. There are presumptions here that should be very carefully weighed in approving NOAA's budget: first, that NOAA will continue to own and operate ships and aircraft; second that they will be run by former NOAA Corps officers; and third, that the same numbers of people who fill such billets now are necessary.

To the first question, the alternatives to the high costs of maintaining NOAA's archaic fleet and heavy capital investment in building government-owned replacements include redirection of requirements to the University National Laboratory System (UNOLS) fleet, charter and/or lease arrangements, and turnkey contracting for data product. If the NOAA is to continue to own ships, the alternative to operating them with government employees is to follow the lead of the Navy and other federal research ship operators and contract out the operation. To the third issue, the NOAA Corps seriously overstaffed NOAA ships with overranked officers, and these practices can and should be stopped cold if the government operates the ships. The problem is that whether as officers or reborn civil servants, the former NOAA Corps people who would make decisions on crewing either lack the knowledge or experience to make sound judgements on crew composition. Inappropriate crewing will be stopped cold by competition-induced efficiency if the vessels are contractor operated.

Employment Guarantee Unjustified - The transition plan as drafted accords the privilege of guaranteed new employment for terminated officers. With respect to the shore positions, this arrangement works unfairly and to the disadvantage of present NOAA civilian employees who will be bumped from promotion opportunities and who will be placed under the supervision of people whose credentials are inferior. The guarantee is unwarranted, especially in the context of industrial downsizing in the private sector.

Unearned Benefits, Status - The transition plan also provides that the former officers will have unusual entitlements and benefits that the Corps claims for itself because it arrogates to its officers the status of military personnel. The NOAA Corps, like the Public Health Service, is a uniformed service; but neither NOAA officers (nor the recent Surgeons General of the United States who don uniforms) bear arms or go in harm's way. Neither have NOAA Corps officers ever been subject to the Uniform Code of Military Justice or the Code of Conduct. The ribbons and medals they wear attest not to valor or bravery, but to achievements for which civilian peers doing the same things go undecorated. The transition plan suggests that terminated Corps officers should assume the mantle of separated Naval officers, which is plainly inappropriate and should not be funded.

The government should absolutely honor its prior commitments to officers when effecting their termination, but should not provide or fund rewards that are neither earned or for which the government is without legal obligation. It must be remembered that the demise of the NOAA Corps has come about because of its own mismanagement, persistent commitment to self service at the expense of national interest, and abuse of the privilege associated with the duties of uniformed service.

Fleet Modernization and Aircraft Issues:

Ships:

The ships of the NOAA fleet obsolescent or obsolete and near the ends of their economically useful lives. As noted above, the plan that the NOAA Corps crafted for replacement of this fleet proved, upon examination by experts from industry and academia, to be seriously flawed. In the very simplest form, what NOAA needs are ships of a few convenient sizes that are large enough to be seaworthy in the areas where they operate while doing mission work, and which have enough living space to accommodate scientists and enough deck space to allow modular laboratories and equipment to be easily bolted on and changed for different missions.

The question is: should the government buy and own these ships? There are valid arguments for and against, but the immediate answer is no. Before NOAA builds any ships for itself, NOAA scientists and project people need to be exposed to the alternative methodologies that have proved so technically satisfactory and economically advantageous in the marine research operations of other federal activities.

I strongly recommend against funding any new construction or modernization of any NOAA ship at this time. As evidenced by the flawed plan created by the NOAA Corps, which comprised all of the agency's marine experts, NOAA does not at this time have either the breadth of experience or knowledge of other methods to specify the design criteria for new ships. The next budget should not fund operation, overhaul or major repair of present NOAA ships beyond those sums absolutely and minimally necessary to support programs until a fresh analysis has been made as to their material condition and economic usefulness and, for those which it is determined that decommissioning is appropriate, until replacement assets or arrangements are brought on line.

Aircraft:

The Aircraft Operations Center - about 90 people, of which about 20 are attached to the P3 aircraft - was until fairly recently under the command of an admiral, which is yet further evidence of irresponsible management. The admiral's replacement by a four-striper (captain) did little to mitigate the excessive rank (and cost) for the billet.

In 1987, before the Corps took over management of Aircraft Operations, 8 Corps officers were part of the operating team and the P3 hurricane hunter aircraft flew about 800 hours a year. Under Corps management, the number of officers has increased to over 40 and the flight hours have dropped to about 200 hours a year. Civilian scientists (most recently one of but six hurricane-experienced flight meteorologists) and engineers have been replaced by officers. In one documented case, a NOAA Corps P3 Navigator was sent for two years to the Navy Postgraduate School to become a meteorologist and immediately displaced a civilian flight meteorologist upon his return to duty.

It is also reported that the Commanding Officer of the AOC has taken flight training for the new G4 aircraft, a wholly unwarranted waste of time and money for a person who is an executive, not an operator.

I recommend that Congress require the Administrator to immediately return AOC to civilian control; conduct a complete review of Aircraft Operations and consider placing the activity under the National Weather Service that it serves. A 1997 budget should not be established until after the best approach to operations, possibly including contractor operation of the aircraft, has been determined. It is useful to repeat that contractor operation of P3 aircraft was long ago proved safe and cost effective by the Navy.

## WHAT CONGRESS SHOULD FUND, AND WHY

NOAA , the Institution:

At the top of the list of things the Congress should fund in the science budget is NOAA itself, intact and complete (minus the Corps) as to function and responsibilities, and preferably as an independent agency within the Executive Department. It should, in addition to its present responsibilities, be charged with designing for your approval an organic act that consolidates its duties and authorities. That act should also charge NOAA act as national advisors on ocean policy and to lead the development of government-industry-academic partnerships that will bring about sensible exploitation of ocean resources in an environmentally-sound context.

NOAA Programs:

I know of no NOAA programs that lack merit, and several are of special interest to me because the Oceanographic Center of Nova Southeastern University of which I am a member of the Board of Governor participates in them. I'd like address some that I think are particularly worthy of your support.

Sea Grant - It's one of NOAA's most visible, widespread and useful investments of tax dollars, and I particularly urge full funding for NOAA's Sea Grant programs. Sea Grant has uniquely linked the academic and government research

communities with our society; and Sea Grant-funded research, both basic and applied, delivers direct and recognizable applications and other objects of value to the public. Sea Grant projects address specific themes, such as seafood quality and maintaining high quality in the estuarine waters from which the public gets both food and recreational benefits. NOAA has structured Sea Grant so that it sometimes can and does fund small, relatively high risk projects; it is in this role a science entrepreneur in the best American tradition, willing to take reasoned chances chance on what it hopes will prove to be exceptional ideas. Further, Sea Grant supports information and idea exchanges at meetings like a recent regional conference on Florida Bay, as well as valuable workshops on seafood and fisheries. And not only do the Sea Grant programs of various states sponsor seminar series' and traineeships for students, they have helped and advised people starting new businesses. Individual state programs are now beginning to form regional networks to improve research and educational experiences for scientists and students. Since the '70s, NOAA Sea Grant program has been an important supporter of research and graduate student education at Nova's Oceanographic Center. And Sea Grant has funded Nova's studies of the Gulf stream front, and of coral reefs and estuaries research.

Coastal Ocean Program - Also well worth supporting is NOAA's Coastal Ocean Program. In my home state of Florida, NOAA has brought together many scientists to study deteriorating conditions in Florida Bay, and actions based on their recommendations are helping to restore the ecological and economic vitality of this important breeding area. The program has conducted several groundbreaking collaborative (NOAA lab + University) projects in fisheries. Most recently, the Coastal Ocean Program has supported the Land Use-Coastal Ecosystems Study, a major effort to identify and develop strategies to manage the impact of some of the largest regional population growth in the country that will occur in the southeast over the next few decades. This project will involve the Carolinas, Georgia and Florida and will include scientists from major research universities as well as federal, state and local management personnel.

Fisheries - I would like to comment on the importance of maintaining NOAA's National Marine Fisheries Service (NMFS), the unquestioned chief steward of the health of our nation's living marine resources. The commercial harvest of marine resources directly produces about $4 billion for U.S. fishermen, and has an indirect economic impact on the GNP of more than $50 billion annually. Furthermore, over 17 million Americans participate in marine sport fishing each year, producing an estimated economic contribution of several hundreds of million dollars to regional economies. The NMFS plays the leading and primary role in the protection and management of our fishery resources, and its continued existence and enhancement is indispensable for maintaining the nation's long term, sustainable fishing harvests. The conscientious governance of U.S. marine resources has become even more critical in light of the recent catastrophic declines in so many of the world's major fisheries.

Climate Change and Prediction - The last specific programs for which I wish to fly banners of support are NOAA's immensely beneficial efforts in the realms of climate change (global warming associated with the "Greenhouse Effect") and climate prediction (associated with the "El Ni o" phenomenon). Few NOAA science programs offer as much are present and potential value to the nation, and to the world community at large. NOAA programs have played a major role in advancing our knowledge in both of these areas and, based on this excellent track record, are likely to do so in the future.

The "Greenhouse Effect" results from increased carbon dioxide in the atmosphere, which absorbs extra heat from the sun thereby causing the atmospheric (and hence oceanic) temperatures to rise. There is now considerable scientific evidence that the amount of carbon dioxide and temperatures are in fact increasing globally. Some scientists are alarmed by the rate of increase, which they attribute to mankind's increased burning of fossil fuels, and they predict catastrophic effects (e.g., rising sea level) within the next 50 years unless that burning is greatly reduced. Other respected scientists argue that the geological record shows that similar increases have taken place in the past, suggesting that the current increases may result from a natural process rather than an anthropogenic one. Given that the social and economic impacts of both the questions and the ultimate answers on this issue are monumental, reaching the truth as soon as possible is crucial. NOAA should be funded not only to continue, but to expand and accelerate, research on global warming.

"El Ni o" is now known to be a global atmospheric event that is strongly related to changes that take place primarily in the Pacific Ocean. It is associated with droughts in Indonesia, Australia and India, and it also influences weather on our continent. The ability to predict when "El Ni o" events will occur is emerging from efforts like NOAA's Tropical Ocean Global Atmosphere (TOGA) program, and the potential economic benefits are in the billions of dollars. For

example, when farmers can know whether to expect light or heavy rainfall during the next growing season, they and can then make informed planting decisions and pre-plan better cultivation, irrigation and drainage strategies.

Nova's Oceanographic Center has not yet participated in NOAA's paleoclimate studies, but recognizes their importance and urges continued funding support for them. Studies of recent climate change have been augmented and enhanced by studies of ancient climate in the recent and far past. NOAA sponsored research is helping to unravel thousands of years of paleoclimate history. In such cases, the past can be the key to the present whereby understanding of long ago past climate variability can promote our understanding of the intricacies of the present climate system and dynamics.

Climate prediction has long been one of mankind's dreams, and NOAA sponsored research is making this a reality.

NOAA Corps Termination:

It is important that the termination of the NOAA Corps be fair, complete and permanent. Its officers should be separated from government service with absolutely everything to which they are entitled by law and contract with the government, and the severance should be clean and final, leaving former officers free to retire or to compete without prejudice or preference for government or civilian employment.

Replacing NOAA Corps Services:

Alternatives - Excluding implementation of the NOAA Corps plan to civilianize itself and 'steam as before' as totally inconsistent with Administration and Congressional intent and goals for government cost reduction, there are four practical ways to replace the NOAA Corps ship and aircraft services needed to support NOAA missions:

Make use of UNOLS ships to the extent of their availability and suitability

Have NOAA-owned ships and aircraft contractor operated (GOCO facilities).

Charter or lease crewed ships/aircraft -full time/part time as economically appropriate

Contract for data acquisition and reduction (e.g., hydrography, bathymetry, photogrammetry)

Any of these methods can be used alone, but the sensible approach is to use whichever method or combination of methods best suits a particular set of mission criteria, and to remain flexible to change methods in response to situations that change with time.

Cost - Each of these methods will cost money, but the total for any one or any combination used as a replacement will cost much less than operation of NOAA assets by NOAA personnel (NOAA Corps or civil service).

A Changing Environment: NOAA's Budget Request for FY 1997 asks for $131.2-million for program support, the bulk of which is for marine and aircraft services and the associated administrative costs. The figure also includes procurement of two multi-beam survey systems that should be leased, not bought, because of the rapidity with which such equipment becomes obsolete and requires upgrading.

Assuming that the mission support needs will be satisfied by any one or combination of the methods cited above, Congress may safely reduce the requested budget by 25% ($32.8-million). That is an arbitrary number reflecting the estimated savings attributable to better management of ship services and scientific data acquisition processes; the considerable influences of competition; the use of new and more efficient technologies when hydrography is farmed out rather than performed with NOAA's older and less productive methods; and the large cut in administrative expense that will be associated with reductions in the numbers of government personnel.

The saving may be greater than 25%, but it surely will not be less.

Ship Management - In the past, NOAA Administrators relied on the executives of the NOAA Corps to direct, manage and control the provision of ship services. For many years, that reliance has been misplaced. The NOAA Corps

ignored much advice and many opportunities to improve its modus operandi and disserved NOAA science by running the least efficient ship operation the government has ever mounted. Further, to protect its own turf, NOAA Corps misled NOAA and Commerce Department administrators by performing studies on outsourcing that were clearly designed to produce conclusions that alternatives to in-house performance were either inadequate, unavailable or overpriced. Corps-designed requests for proposals have carefully thwarted opportunities for contractor innovation and efficiency that would result in costs far lower than those of in-house performance.

The point of which is this: to realize the improvements in marine services and economies that are possible, NOAA needs to bring a few experts into its organization who will give what's good for NOAA scientifically and institutionally their very highest priority. It should be evident that no such expert is likely to be found among the transitioning senior officers of the NOAA Corps, the civilian staff of the Office of NOAA Corps Operations (ONCO) or ONCO's Fleet Modernization Project Office. Admission to any of those activities required acceptance and loyal commitment to the very philosophies that have hurt NOAA. A fresh start is needed.

Ship Czar - What NOAA specifically needs, first and foremost, is a person who has had industrial or UNOLS experience in the management of a number of oceanographic or geophysical research or technical project ships to serve as NOAA's marine support services manager, with the basic responsibility of providing to the science line offices the services they need using whatever resources will work best. Industrial experience is preferable simply because industrial managers tend to be more sensitive to customer service requirements and cost control/bottom line issues than their academic counterparts. The person to select will someone with actual experience and know-how in the arts of operating ships; selecting, motivating and retaining crew personnel; interacting comfortably with customers (e.g., the NOAA line office scientists) and managing a multi-million dollar service-oriented enterprise.

Marine Support Services Department - This paragon, whoever it may be, should be assigned the task of creating for NOAA a new marine support services activity (department, group, office?) designed to help NOAA ship users to get the best possible value from their ship budgets and safest, most responsive and inventive operations at sea. To insure that this department does not become another tail that wags the dog, it should administratively report to the Administrator but be directly responsible to NOAA's Chief Scientist for performance of its assigned duties. The new activity would have these specific capabilities and functions:

Providing technical liaison and assistance to ship users, including:
- Help in determining general platform requirements within the framework of mission objectives, operating area, time of year, duration and similar factors

- Recommendations on deck machinery, portable laboratories, rigging, hull penetrations, safety procedures and systems

- Services of research-platform experienced marine and airframe engineers and naval architects to prepare or review and approve designs, drawings, and configuration plans

- Developing a pool of instrumentation, deck machinery (e.g., winches) and portable laboratories for fitting out temporary-use UNOLS and charter ships.

- Scheduling ship operations (owned and charter), negotiating schedules for UNOLS ship time

- Review and approve shipyard overhaul packages for GOCO ships

- Specialized procurement, including negotiation of ship charters and leases, purchase or rental of specialized instrumentation, equipment and machinery, and contracting for professional services, ship and aircraft repair and overhaul

- Logistical/technical support of field operations, including coordination with ship operators with respect to - Arrangements for fuel and lube, ship's stores and supplies, food, berthing, travel of people and material, and repair services at domestic and foreign ports of call

- port engineer services

- Locating, buying and shipping scientific supplies as requested

Quality surveillance and enforcement of contractor performance

The many things the unit is to do notwithstanding, it need not (should not) be a large organization of narrowly focussed specialists but, rather, a small group of people who can switch hit in several jobs. A fleet of five oceangoing and ten coastal ships (government-owned or chartered) can be supported by a small staff - probably fewer than a score - including a ship operations manager, engineers, port captains, port engineers, contract specialists, clerical people and the part time services of an admiralty lawyer.

I recommend that It is possible that at some future time, this organization might be expanded to provide similar services with respect to aircraft operations.

Working with UNOLS - UNOLS has a central coordinating center that is in touch with the marine departments of all UNOLS-participating universities. This center knows the specifications of all UNOLS ships, the names of contacts at the schools, and the status, schedules and future availability of all UNOLS vessels.

Officer-filled Positions Ashore:

Positions ashore that are presently filled by NOAA Corps officers should be abolished, but funding provision should be made for line office managers to fill the vacancies through internal promotion, new hires or a combination thereof. If a line office manager wants to hire a former NOAA officer to fill a vacated post, customary civil service procedures should apply. There should be no requirement that any post be filled by a former officer occupant, or that it be filled at all.

Shipboard Positions:

These will be filled by ship operators (UNOLS, contractors) and funded through appropriations NOAA allocates to the line offices.

Internal Management of the Ship Budget - One of the things that gave the NOAA Corps extraordinary power over the line science offices was that NOAA Corps services - including the assignment of Corps officers as project scientists - were essentially "free" to the receiving activity. It may or may not be appropriate for Congress, in funding NOAA, to insist that the full costs of projects - including ship and aircraft services - be budgeted by and charged to the line office running the project. Among other advantages, this will result in improved accountability.

Present and Replacement Ships:

The new marine support services activity should review the status of all NOAA ships early on to determine the best way to deliver needed services to user(s). Depending upon the work to be done, the ship's material condition and many other considerations, the support activity may find it best to continue doing a specific project on a ship that has been doing it; to move it to another NOAA-owned vessel; to seek UNOLS ship time; to move the project to a newly refurbished or constructed NOAA ship; or to move it to a leased or chartered replacement vessel.

Some past decisions on fleet modernization and new construction may have been made functionally irreversible by contractual commitment and these may, for some indefinite period, impose some limits on the options available to the support activity. A very careful look will have to be taken, for example, at the cost/benefit trades of continuing to operate NOAA hydrographic survey ships with contractor crews and NOAA scientific parties, or outsourcing survey work to any of the well qualified and often better equipped geophysical survey companies. But what the activity can, and should be expected, to do is insure that NOAA does not shoot itself in the foot by writing procurement specifications that needlessly increase costs.

As previously mentioned, excellent models for government ship charters and contracts for the operation of government

ships already exist in the Navy, the National Science Foundation, and the Environmental Protection Agency. NOAA needs only to adapt one of more of these documents to its own needs, and should be able to do so with such expedition that contractor operation of NOAA vessels should be possible in the first quarter of FY 1997. If there is any need for legislation to grant NOAA the same contracting authority possessed by other federal agencies, NOAA should so advise the Congress.

There is an opportunity in this transitional process to fix an ancient flaw in NOAA's way of accounting for ship costs. The NOAA Corps persistently practiced creative accounting to that disguised these costs and inhibited not only the determination of costs attributable to specific projects, and comparative operational costs of NOAA sister ships, but also prevented valid comparisons with the crew, operating, maintenance and overhaul costs of UNOLS and private sector research ships. This situation should probably be remedied by requiring NOAA to improve its accounting systems and methods to provide appropriate data in the future as a condition of the budget process.

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