



Information Services Section

Program Review
Milford, CT
July 17-19, 1990

Briefing Book

Briefing Book

↻ *Information Services Section*

Program Review

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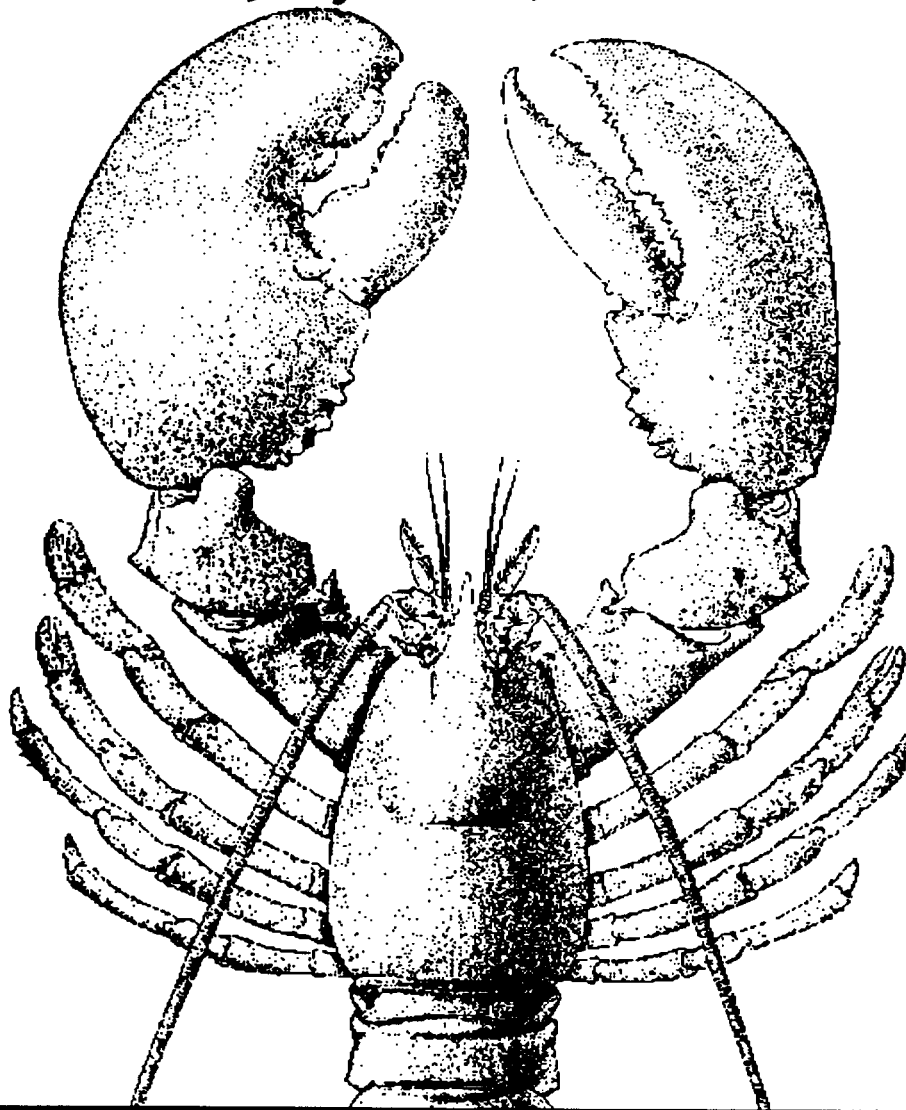
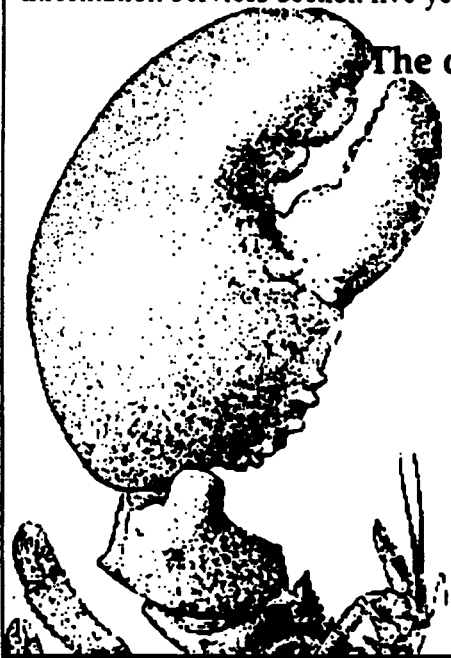


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**The open society, the unrestricted access to knowledge,
 the unplanned and uninhibited
 association of men for its furtherance - -
 these are what may make a vast, complex,
 ever growing, ever changing,
 ever more specialized and expert
 technological world,
 nevertheless a world
 of human community."**

J. Robert Oppenheimer
Science and the Common Understanding
 1953

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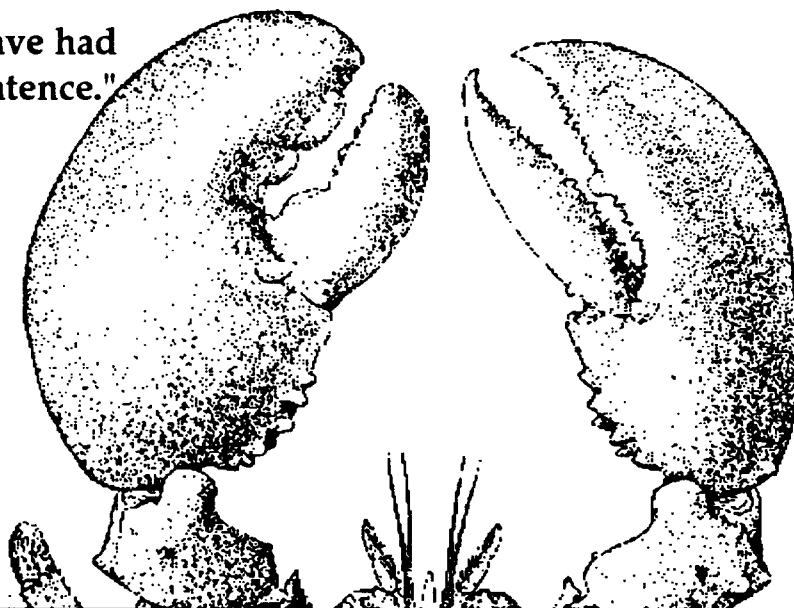
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"I attribute what success I have had to the use of the periodic sentence."

Edmund Wilson
Interview, 1962



INTRODUCTION

The Northeast Fisheries Center uses the peer review process as a method for routine evaluation of its programs, in order to remain current with the issues, needs, and state-of-the-art technology. Up to four peer reviews of various program areas are conducted annually for the purpose of examining scientific and programmatic merits. Program areas for review are recommended by the Science and Research Director and the Research Planning and Coordination Staff (RPAC).

This briefing book provides information relative to the Program Support, Information Services Section Peer Review scheduled to be held in Milford, July 17-19, 1990.

PRELIMINARY AGENDA

Tuesday, 17 July

1:00-1:30	Executive session ¹	
1:30-1:45	Opening and introductions	Moderator Ambrose Jearld
1:45-2:00	Welcome, purpose of review	Allen Peterson
2:00-4:00	Informal poster session	IS staff

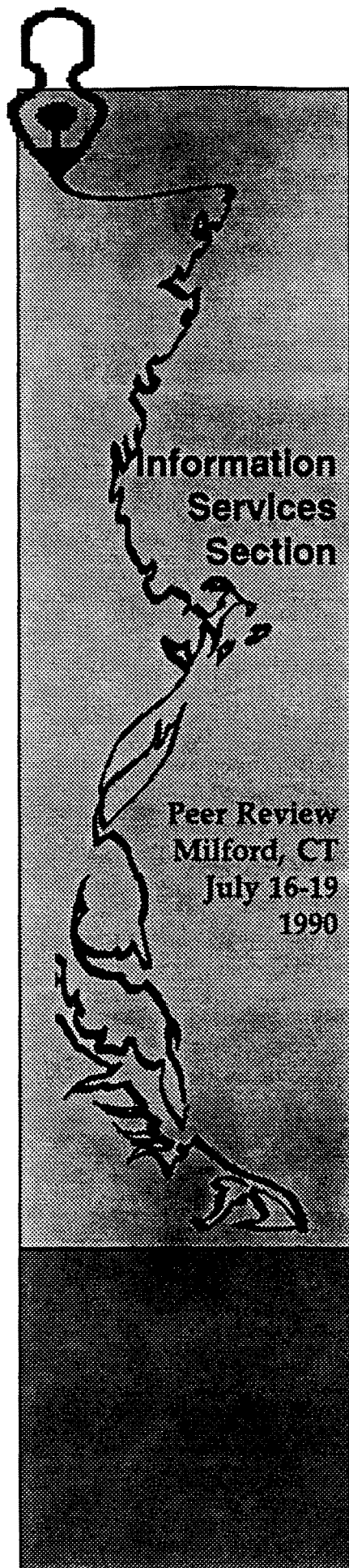
Wednesday, 18 July

8:30-8:45	Executive session	
8:45-12:00	Presentations Libraries	Claire Steimle Sandy Hook Librarian Susie Hines Oxford Librarian
	Technical publishing	Jon Gibson technical writer-editor
12:00-1:30	Lunch	
1:30-5:00	Public information, Employee relations, Graphics services	Staff

June 19, 1990

Review panel session to construct report to the director

¹ In addition to the review panel, Executive Session participants include the Science and Research Director, when available; Chief, Program Support Staff, and the moderator.



REVIEW PANEL

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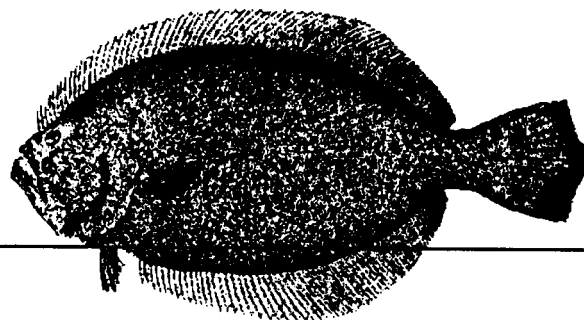
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The NMFS Mission:



To achieve a continued optimum utilization of living resources for the benefit of the Nation

It is the responsibility of the Northeast Fisheries Center to plan, develop, and manage multi-disciplinary programs of basic and applied research designed to:

1. Better understand the living marine resources (including marine mammals) of the northwest Atlantic Ocean and the environmental quality essential for their existence and continued productivity;
2. Describe and provide to management, industry, and the public, options for the utilization and conservation of living marine resources and maintenance of environmental quality which are consistent with national and regional goals and needs, and international commitments.

To fulfill its mission the Center shall:

1. Develop the scientific basis to determine and provide information on the status of stocks/populations of living marine resources, the status of fisheries for exploited species, the effects of pollution and human alterations on the habitats of the resources, the effects of environmental variability, the quality and safety of fishery products, and the enhancement of anadromous fishery resources;
2. Collect, document, and interpret scientific and economic data as technical support for management plans, international negotiations, and fishery development programs;
3. Provide technical advice, review, and monitoring of fishery plans and grant programs;
4. Pursue fundamental research on specified topics; and
5. Maintain strong relations with the academic community and industry (through grants, contracts, and cooperative programs as appropriate), and with the users and general public.

The Center shall cooperate with other Fisheries Centers of the National Marine Fisheries Service in the sharing of expertise and in multi-Center programs consistent with national goals and needs and international commitments.

OVERVIEW NORTHEAST FISHERIES CENTER

The Northeast Fisheries Center (NEFC) is a component of the National Marine Fisheries Service (NMFS) of the National Oceanic and Atmospheric Administration (NOAA) under the Department of Commerce.

The NEFC research program is conducted by three major Divisions (Conservation and Utilization Division, Fishery Ecology Division, Environmental Processes Division) and National Systematics Laboratory. Three support programs (Research Planning and Coordination Staff, Program Support Staff, and Data Management Support Staff) provide program guidance and administrative and technical support.

Center activities are carried out from seven laboratories located at Woods Hole, MA; Gloucester, MA; Narragansett, RI; Milford, CT; Sandy Hook, NJ; Oxford, MD; and Washington, D.C. Fisheries statistics data are collected in field offices located from Rockland, ME to Hampton, VA.

As the research arm of NMFS in the Northeast, the Northeast Fisheries Center (NEFC) studies the living marine resources and their habitats in the Northwest Atlantic, from Cape Hatteras through the Gulf of Maine, and advises on their conservation, management, development, and utilization. The core emphasis of NEFC research is to:

Define the limits to which the habitat and living resources of the Northwest Atlantic can be modified and still assure that the living resources populations can sustain themselves at levels consistent with prevailing fishery management policies and goals.

NEFC research activities under the core emphasis attempt to address four questions based on issues of concern to users and managers of marine resources of the region:

1. What are the physical and chemical processes that affect the abundance of living marine resources?
2. What factors control, limit, and cause variability in abundance, recruitment, and utilization of living marine resources, and how can they be predicted?
3. What are the effects of pollution and habitat degradation and loss on living marine resources and their utilization?
4. What are the methods of achieving optimal utilization of living marine resources, given that the system within which they exist is used for a variety of purposes?

NEFC studies the biomass, species composition, age structure, and environment of fisheries resources to determine effects of natural events and human activities on the resources, and to estimate their production. As stipulated by the Magnuson Fisheries Conservation and Management Act of 1976, the NEFC provides advice on the effects of economic and ecological factors on these production estimates to enable the Regional Fishery Management Councils to determine the optimum yield: the total catch of fish which should provide the greatest overall benefit to the nation, particularly as a source of recreation and food.

NEFC also investigates ways to improve the safety, quality, and quantity of seafoods; and seeks information on the actual and potential effects of pollutants on fisheries resources through studies on the occurrence of marine contaminants, investigations on the normal and pollution-stressed health of marine organisms, and monitoring of environmental factors such as water movements, temperatures, and dissolved oxygen concentrations.

PROGRAM SUPPORT STAFF

The Program Support Staff comprises financial planning and accountability, facilities management and maintenance, information services, and the WoodsHole Aquarium. The staff serves the entire Center rather than one laboratory. The staff maintains personnel at each facility to fulfill financial duties and maintain facilities. The staff chief also serves as budget advisor to the Science and Research director.

GUIDELINES FOR THE INFORMATION SERVICES SECTION PEER REVIEW

The review will be conducted in an informal setting. Panel members will have ample opportunity for clarification and discussion after each session of presentations and to meet with appropriate Center staff as necessary.

THE REPORT

A prompt report is required for timely action. One full day of the agenda has been dedicated for the purpose of drafting and presenting the report to the Science and Research Director. The Review Panel has the flexibility to tailor the report to the given situation so that it includes only relevant information that is concisely presented. The report should be preceded by an executive summary. Reviewers should clearly state their concerns and provide recommendations for resolution. Recommendations should be as realistic and as specific as possible, recognizing the resource and facility constraints on the Center. After the completion of the written report, an oral report, highlighting points of special significance, will be presented to the Science and Research Director.

Suggested outline for the report:

Title page

List of review panel members

Executive summary:

Should state what was reviewed and give a summary of panel findings, including strengths and weaknesses of the program, and a summary of recommendations.

Evaluation of the program:

The questions prepared and sent to reviewers earlier should serve as a guide.

The approach taken during the review should be described as part of a short introduction.

Assessment of each program component follows the introduction.

The Review Panel may address these items singly or as a group, depending upon the nature of their evaluation.

Recommendations:

Recommendations resulting from the evaluation should be enumerated and as specific as possible.

**" Try to be a help
and not be a pain in
the butt."**

Vaughn Anthony
**Division chief,
Conservation and
Utilization**

*Discussing the role of the
Information Services Section in
the Northeast fisheries Center
information transfer activity*

March 1988



NEFC Information Services Section: Its Short History

"The Information Services element will provide the technical basis for distributing information (e.g., graphics, editing, publishing.) The Research Coordination Office and the divisions will have primary responsibility for information content."

Northeast Fisheries Center: A Plan for Re-direction
Committee of Three,
1984

In 1984, the Northeast Fisheries Center completed a series of self-studies that kicked off a major reorganization. Existing programs were reviewed and a new framework for Center operations emerged, contained largely in a document called "Northeast Fisheries Center: A Plan for Redirection," or more commonly, the Committee of Three (COT) report, after the troika charged with its development. The COT's recommendations were used as a basis for reorganizing the Center into its current operating structure, which still undergoes small-scale changes.

The COT broadly dealt with information functions, most notably in its sweeping generalization describing activities of the Northeast Fisheries Center: "the product is information in support of the mission of the National Marine Fisheries Service." It did not deal in specifics however, on how that information is transferred among Center staff and to outside users.

Among the hallmarks of the COT plan and the eventual reorganization was a reduced role of discrete management at laboratories in favor of stronger centralized management and a concept of science pursued on a Center-wide basis. Two staffs, Program Support and Research Planning and Coordination (RPAC), were created to support the directorate, centralizing support and research planning and coordination at the Center level. As devised, the Program Support Staff included vessel operations, data processing, the Woods Hole Aquarium, financial services, budget support and advice, facilities management, and an information services section. RPAC was to conduct the scientific planning, coordinate research efforts among divisions, and coordinate center activities with constituents. Constituents were defined parenthetically as "regional fishery management councils, recreationalists, the public."

Reorganization planning began with a series of issue papers on Center operations and goals. Information services was not among those functions discussed. With regard to Support Services, the COT concluded simply that "in most cases, details concerning these elements are beyond the scope of this report." It described expectations for information services this way:

"The Information Services element will provide the technical basis for distributing information (i.e. graphics, editing, and publishing.) The Research Coordination Office and the divisions will have primary responsibility for information content."

The COT also recognized "the need for better communications, coordination, and integration between programs...a need for better communication with constituencies," and the problem that "external interactions with constituencies and academics are part of the general over-commitment problem of NEFC scientists."

The leap from recognizing these problems to addressing what should be done about them was not made because the COT considered them outside their area of expertise. In fact, the COT made no distinction between the information functions required for institutional planning (RPAC's concern), and the information functions required by researchers to conduct work (library services) and to fulfill the information transfer role that is required of every public institution--both of which would seem logically the domain of Information Services. Further, there was (and still is) an obvious missing link: one that provides for a link between management and RPAC for public information planning.

What the COT recommended was assigning the reactive public information function to RPAC and division scientists, and assigning the staff position with professional expertise in this area (public affairs specialist) to Information Services in the Program Support Staff. As described in the COT report, Information Services would provide the clerical and/or editorial assistance needed for RPAC and the divisions to pursue better communications with

each other and the public. Information Services was also to provide graphic services, but the graphic artists remained assigned to various investigations within three laboratories.

The COT recommendations were largely accepted. Most changes emerged as the institution wrestled with the reorganization goal of reducing the number of high level supervisory positions reporting to the director, and coalescing various research elements into three major divisions.

- The vessel support position was moved to RPAC.
- Early in reorganization planning, the aquarium staff was added to the Information Services Section, but was removed at the last moment before the reorganizational document was publically issued. The currently distinct Information Services Section and Aquarium Section have always been treated as one entity (the "Information Management and Transfer Task) by management for planning and evaluation reports to the Washington office. There was and is no supervisory or planning link between the two sections.
- The automated data processing group was eventually removed and became a separate staff, similar to RPAC and Program Support.

As the streamlined NEFC organization solidified, more functions were discovered that could be assumed by the RPAC and Program Support staffs from a centralized base. Many of these were not physical relocations of individuals from a particular location, but a supervisory link with the staff at Woods Hole.

In Program Support this translated to supervisors in each of the major functions (resource operations, facilities management, and information services) with employees in each location that requires services. This is the case in every area of Program Support except Information Services, which has no staff at Narragansett, Milford, or Gloucester.

As reorganization moved from discussion to done deal, libraries were added to the Information Services Section. Also, the supervisory technical information specialist job, the one that would manage the Section, began to take shape. Some recognition of the logical association of information transfer, libraries, publishing, and public information emerged; at least enough to include all those elements in the responsibilities of the supervisor.

In March of 1985, the editorial staff prepared two memoranda outlining suggested reorganization of the Center's approach to both public affairs planning and constituent support. In essence, the memoranda were developed because the reorganization team never did pick up where the COT report left off in planning for these functions. The staff was understandably concerned and somewhat at a loss as to what its responsibilities were, and offered the plans for consideration by management in providing some guidance. In 1987, a similar memorandum was developed by the same staff with regard to the more efficient arrangement of publishing activities at the Center.

These memoranda are discussed fully in the descriptive sections that follow. For the time being there are a few things about them that are historically important:

- They are the only attempt that has been made to formally review these operations within the Center until the program review we are concerned with today.
- They are the only planning documents with sufficient focus on and details about public affairs and information transfer within the NEFC that proved useful in devising the section plans contained in this document.

"...it is impossible for Congress or the public to obtain a succinct summary of what the agency is doing or how well the resources it manages are faring."

"...The Foundation found it impossible to adequately examine the "science program" because nobody at headquarters could explain it."

*Needs Assessment of
the National Marine
Fisheries Service
National Fish and
Wildlife Foundation
January 1990*

“...regardless of whatever legislative action occurs, the fundamental role of the Center's research program will be to provide information for the best use by society of its living marine resources.”

NEFC Research in the Year 2000
NEFC Research Council
July 1987

- The conditions that pervaded with regard to poor public affairs planning and evaluation at that time persist in spite of reorganization.
- They are the seminal example of Information Services planning at the NEFC: a self-directed staff pursuing activities it assumes are in support of the institution's goals, and thereby defining itself.
- They were not adopted, in part, or in full.

The window of opportunity for implanting the Information Services Section in the cycle of information development and transfer was largely missed for two reasons: the momentum of the 1970 reorganization that split NMFS from the U.S. Fish and Wildlife Service, and sought to decentralize most of the NMFS information transfer functions within a never-fully-accomplished communications unit at the NOAA level, and vacancy or temporary assignments in the ISS chief's position between 1985 and 1988, while the Center was undergoing significant change. During the time between the section's creation and the arrival of a section chief, the newly-conglomerated Information Services staff continued business as usual while the rest of the Center went about adjusting to the new organization. The section and its staff suffered from neglect within the new structure and acquired a somewhat subterranean visibility within the Center.

Here is a description of activities and major events that shaped staff attitudes toward the new section during this time.

Major changes occurred in library operations, their effects exacerbated by the fact that no knowledgeable supervisor was on hand to unify and support staff members, much less build the section:

Library budgets suffered. The Sandy Hook library, for example, was attempting to recover from a disastrous fire with virtually no additional funding. Across the libraries, routine binding, cataloging, and preservation duties were neglected because of budget and/or staff limitations.

The Milford librarian, after a several-year run at organizing and cataloging the collection, vacated the position. This position was not refilled due to budget and personnel limitations and considerations. Although significant resources were and are still required by staff at the Milford lab, no trained staff is available to handle even the routine matters of circulation and preservation of materials.

A horrific personnel conflict in the library at Woods Hole disrupted library service for several years.

The Woods Hole library, the oldest marine science library in the nation, was dismantled in favor of a service contract with the nearby Marine Biological Laboratory.

An eventual RIF and resignation in the Woods Hole library left the scientific staff without knowledgeable library assistance for two years and put the valuable collection of international and gray literature in serious disarray.

The Center lost a great deal of institutional memory with the Woods Hole lab librarian who, while quite knowledgeable herself, failed to fully document the significant historical collection.

The Center collected reprint series was stopped as were other Center-archival projects that had been handled by the Woods Hole library staff.

A joint operating agreement with the state at the Oxford, MD laboratory went into effect. The federal commitment included maintaining support staff for the facility. The librarian has since worked for the combined staff but with federal supervision and budget and no clear delineation of the lab's future, the library's status within the facility, or how (if at all) resources should be allotted between federal and state staff.

Library staff felt that their status had been reduced by the move to Program Support. Under laboratory directors, their services were more clearly seen by management as a part of the research cycle and as professionals with valuable skills. As part of Program Support, they felt Center management perceived them as operating outside the research cycle and in some cases competing with research for resources; and, in keeping with general perception of positions in Support Services, as some kind of clerical staff.

Rightly or wrongly, library staff also felt that because management was centered at Woods Hole, the library and staff at the Woods Hole lab provided senior Center managers with their image of these services throughout the Center. Given the ongoing difficult personnel situation at Woods Hole, the now apparent neglect suffered by the collection, and the trauma incurred by lab staff during this time, this was not a positive thought.

Editorial services were virtually undisturbed as were the nagging problems of an over-extended staff. The Information Services role was to provide copy editing, technical editing if asked, and publication paperwork for NOAA and Center series. This position also produced the Center annual listing of reports after 1985. The manuscript review process was updated but responsibility for tracking manuscripts was assigned to the director's special assistant. Responsibility for each laboratory's informal series was taken by various lab clerical staff.

The public affairs/constituent communication role continued to be the weakest area, largely because time could not be spared to pursue a proactive plan. The public affairs specialist was not included in executive staff meetings. While not relied on as an information professional in the course of decision-making, he was called on to provide editorial and writing tasks in support of these decisions. The staff concentrated on a few high-quality, regular information products and responding quickly to information requests referred by phone or mail.

Regular public affairs activities included:
Monthly Highlights—a newsletter/tip sheet announcing Center research findings and accomplishments

End-of-the-Year report—an annual summary of significant research activities styled after *Monthly Highlights*

Coordinating articles for *Commercial Fisheries News* four to six times a year. (These articles were devised and written by scientific staff and the space in CFN is purchased)

Logging and answering press requests for information

Preparing press releases and other public information reports as requested or as time and circumstances allowed—mainly in reaction to events

Serving as a writer for the directorate on special projects such as the Centennial celebration, summary reports in response to various agency requests, and descriptions of various activities for publication.

Development of center public affairs plans and/or policies; most of which went nowhere because of limited staff time to pursue them and a lack of authority.

Virtually no contact was made between Information Services staff and the Woods Hole aquarium until very recently (1990). The aquarium staff continued to answer hundreds of general information requests, conduct educational programs, and prepare their own display and handout material with no support from Information Services. Such support was not sought out, neither was it offered. The methods and materials available to aquarium staff were extremely limited in the past ten years.

There are three remaining graphics positions in the Center. In 1989, two were added to the Information Services section. One of these is vacant. The other is highly specialized and fully dedicated to the National Systematic Laboratory in Washington, D.C. The remaining staffed position has become a conglomeration of activities once spread over a number of graphics positions within the Center (drafting, scientific illustration, photography, exhibit building, computer-based graphic design, page design.)

Microcomputer-based graphics were pursued vigorously by scientific staff. Since scientific staff supervised the graphics position, the move to mi-

cro-based methods was made. However, the system was not designed for presentation graphics, nor were any considerations for page design and desktop publishing. The incumbent was not sufficiently trained on the system and continued to use a hodgepodge of half-learned computer techniques along with hand methods for producing graphics.

The section chief's arrival added more capability to the staff in the areas of publications, exhibits, graphic art, and to some extent public affairs simply because another pair of hands was available to carry the workload. Further, the section chief was a budget advocate for all the tasks in the sections, provided a link with the directorate, and gave the staff a focal point for planning and cooperation activities that have only recently begun to take shape.

Interviews with division leaders and management in 1988 by the new section chief indicated that:

Library services were generally regarded as good, but copying, citation verification and other clerical functions (perhaps a reflection of the general paucity of clerical staff throughout the Center) needed improvement. Staff not served by library staff were anxious to have some level of library assistance.

Staff involved in economics, marine policy and systems analysis were not adequately served by Center library collections

An archival function within libraries was missed.

Fast location and acquisition of gray literature was one of the major challenges for librarians

The manuscript review process did allow the directorate to approve virtually all material destined for publication.

The manuscript review process was cumbersome and inefficient, and resulted in significant publication delays.

It was becoming more common for staff to circulate manuscripts for review and publication consideration concurrent with the internal review process.

It was becoming more common for staff to circumvent or short-circuit the review process by co-authoring papers with colleagues outside the Center.

Publications released by the Center were not attractive nor were they accessible

Scientific staff spent too much time playing with computer graphics for publication and presentations

Inequities in graphic capacities within the divisions resulted in some pretty awful presentation graphics

The public didn't know what NEFC did or why. In Woods Hole, the NEFC is constantly confused with WHOI and/or MBL

Since termination of the old Bimonthly Report, the NEFC's own staff was ill-informed about activities among labs

NEFC and NMFS had poor visibility within NOAA and the Department of Commerce

The efforts of RPAC coordinators were consumed by the needs of critical but narrowly defined constituent groups and the research planning and evaluation process itself.

While RPAC rarely turned to Information Services for support in these areas, the public affairs function was not being actively pursued by this group. Rather, the information collected and transferred by this group fell squarely in the range of institutional planning rather than public affairs, education, or information.

There was some consensus that the public aspects of information transfer were the domain of Information Services despite a lack of documentation to that effect.

Scientific staff spent too much time answering public information requests.

Morale had never been so low.

As often happens with working supervisors and small staffs, the demands of day-to-day operations get the lion's share of attention. When the rest of the Center underwent a significant period of redefinition and planning, a number of information transfer problems were illuminated, but not addressed. Information Services was formed, but not described.

Since 1988, the section has been attempting to define itself as a unit and at the same time trying to catch up with its mission to serve the Center. This effort began with those interviews two years ago, and the concerns expressed then probably have not changed much. The staff has had some success in the areas of publishing and public affairs, but core problems continue to impede progress. These problems include:

- Lack of a clear mission
- Conflicting signals from management on priorities and responsibilities
- Seeming duplication or dissipation of information efforts around the Center
- Low visibility of the section and its potential for improving communications
- Lack of staff
- Lack of authority regarding and participation in information decisions

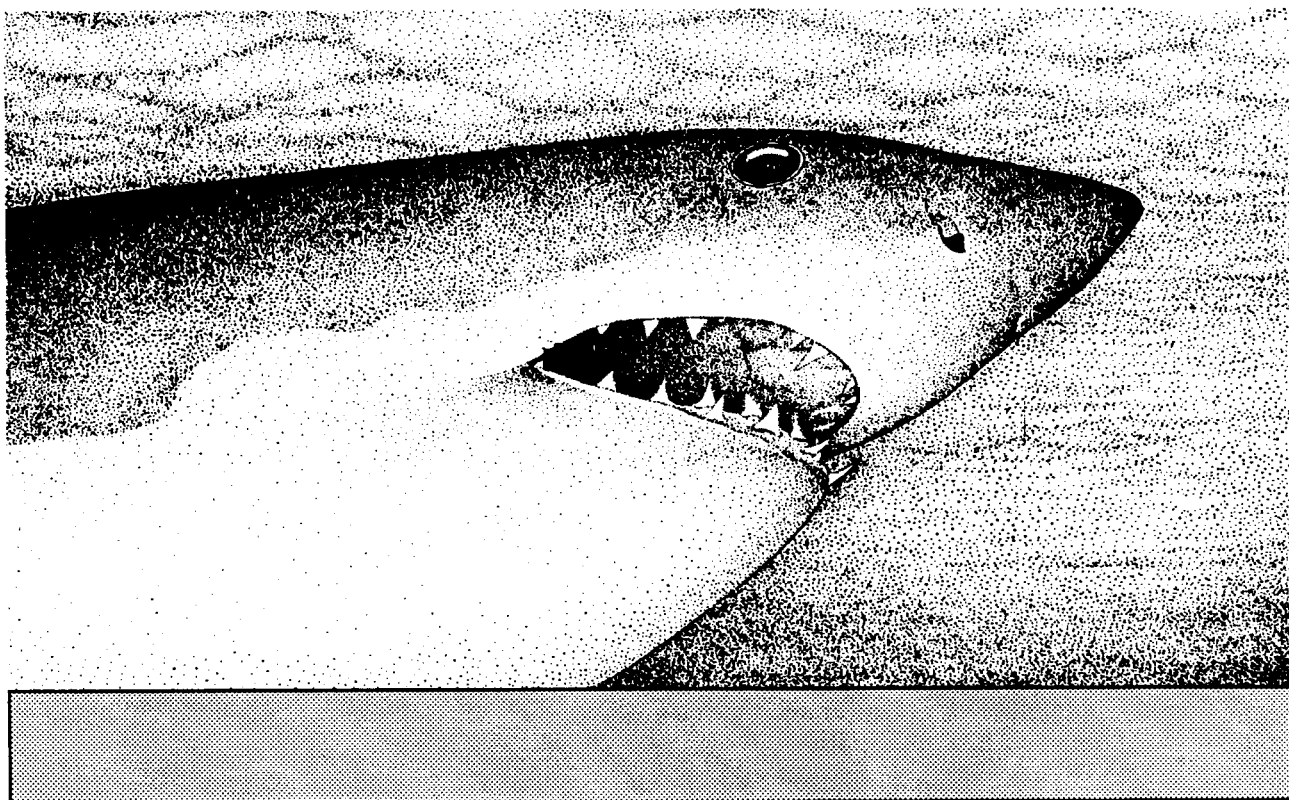
The chief has not yet contributed a plan for operation of the section as a unit. Nor has the chief successfully dealt with the diversion of information functions away from the staff best trained to fulfill them, the resulting low esteem the staff feels, and the attendant minimal understanding about the value of the section to the overall research and planning cycle on the part of Center staff. It is likely that the latter conditions follow the first to some degree.

There still is no leadership evident within the Center with regard to public affairs or public education, the efficiency with which the publication cycle operates fluctuates wildly among investigations, the outlying laboratories are disenfranchised from graphic, public information, and in some cases library services. The Information Services section fulfills day-to-day requests for services but has made little progress in achieving an overall information function for the Center.

This review has afforded the first opportunity for the section to take on a long overdue planning assignment: defining the information transfer cycle and the describing the maximum potential of information services professionals to support that cycle.

“The proposed organization [of the Northeast Fisheries Center] is designed to function as a vertically integrated team; the product is information in support of the mission of the National Marine Fisheries Service.”

Northeast Fisheries Center: A Plan for Redirection
Committee of Three, 1984





CURRENT OPERATIONS OF THE INFORMATION SERVICES SECTION AT THE NORTHEAST FISHERIES CENTER

The Information Services section is responsible for library services, technical editing and publishing, graphic services, and public information services for the Northeast Fisheries Center.

Agency guidelines include the NOAA Directives Manual, the NOAA Guide to Visual Communication Standards, and the NOAA Guide to Field Libraries. Other guidelines include periodic reports issued by internal groups, self-generated plans and procedures, and accepted professional practices.

STAFF ORGANIZATION

The section chief is stationed at Woods Hole, as are the technical editor/writer and the graphic artist. These three positions serve all Center staff.

The library staff primarily collect for and serve the local scientific staff, but there is a great deal of sharing among those facilities with library staff. Professional librarians are located at the Sandy Hook Lab's Lionel Walford Library and at the Oxford Laboratory Library. There is a professional librarian's position at the Milford Laboratory which is currently not staffed. There are library technicians at Sandy Hook and Woods Hole.

There are a number of cooperative agreements throughout the Center for swapping or sharing resources with nearby libraries. The most formal of these is a service contract for the Woods Hole Laboratory with the Marine Biological Laboratory (MBL) Library. This contract includes access to the collection, book cataloging and maintenance, inter-library loan, and literature searching. The other arrangements are more fully addressed in the library section.

The editorial assistants on staff are not assigned to the information services section and the persons in those positions devote a minimum amount of time dealing with editorial duties.

Of the three graphics positions, two are assigned to Information Services. One is vacant. The third position is dedicated exclusively to the National Systematics Laboratory located at the Smithsonian Institution's Museum of Natural History.

The Aquarium staff is also located at Woods Hole. That staff is linked with the Information Services current year operating plan (CYOP) and reports its activities to RPAC as part of Information Services. There is also a recently-created public affairs technician position in the aquarium. Despite these overlaps, there is in fact no direct supervisory or planning link between these sections.

Table 1 shows the number of positions assigned some degree of information function within the Center when reorganization was beginning (1985), and the staff involved in those functions today. The positions that are still staffed but unshaded in the table have information-type assignments or are misnomered, and are outside of the section.

Since 1985, the number of positions assigned to the section have increased from six to nine. Of these nine:

- 2 moved into section in 1989 from other investigations
Figuerido, v/Cox
- 2 vacant
v/Cox, v/Sabo
- 2 unchanged
Gibson, Hines
- 2 New
Frady, Berrien
- 1 RIF
Rockwell

Table 1. NEFC staff with some editorial, public information, graphics, or library duties, 1985 and 1990. Shaded positions are part of the current Information Services Section.

Location (Staff Served)	Name	Title	Status 1985	Status 1990
Management				
Woods Hole (Center)	T. Frady	superv. tech. info. specialist		GS12-FTP
Library Services				
Woods Hole (153)	J. Brownlow	librarian	GS11-FTP	converted GS5-FTP
	L. Forbes	library technician		RIF
	S. Rockwell	library technician	GS7-PTP	
Millford (40)	B. Sabo	librarian	GS7-FTP	vacant (GS9)
Sandy Hook (57)	C. Steimle	librarian	GS7-PTP (80%)	GS11-PTP (80%)
	J. Berrien	library technician		GS5-PTP(80%)
Oxford (40)	S. Hines	librarian	GS11-FTP	GS11-FTP
Technical editing/ Publishing/Public Information				
Woods Hole (Center)	J. Gibson	technical writer/editor	GS11-FTP	GS12-FTP
Woods Hole	G. Kelley	editorial assistant	GS5-FTP	converted
Woods Hole	W. Seigmann	information receptionist	GS4-FTP	GS4-FTP
	B. Simonis			
Narragansett (44)	J. Dunnington	editorial assistant	GS5-FTP	GS5-FTP
Millford	R. Riccio	technical publication editor	GS9-FTP	converted
Sandy Hook	M. Montone	editorial assistant	GS6-FTP	converted
	C. Noonan	editorial assistant	GS5-FTP	converted
Oxford	J. Swann	editorial assistant	GS6-FTP	GS6-FTP
Graphic Services				
Woods Hole (Center)	B. Figuerida	photographer graphics technician	GS7-PTP	converted GS8-FTP
Sandy Hook	M. Cox	illustrator	GS9-FTP	vacant
Narragansett	L. Armstrong	science illustrator	GS10-PTP	converted
Systematics (10)	K. Moore	science illustrator	GS11-FTP	GS11-FTP
Aquarium				
Woods Hole	F. Nichy	fishery biologist	GM-13 FTP	GM-13 FTP
	H. Jensen	fishery biologist	GS11-FTP	GS11-FTP
	T. Morris/D. Radosh	fishery biologist	GS9-FTP	GS11-FTP
	D. Place	biological technician public affairs specialist	GS5-FTT	GS7-FTP

1 Downgraded, title change
Brownlow/Forbes

The FTE for the section is currently 6.6. Estimates of time spent in each area for each position in 1990 are shown in Table 2.

A listing of 1985 effort in positions that would have been assigned to IS by 1990 (graphics and library positions that were staffed in 1985) is shown in Table 3. The relationship between the two tables is shown graphically in Figure 1.

From these figures it is clear that the overall effort in Information Services has been reduced, particularly in terms of libraries and graphic services.

Table 2. FTE commitment to various Information Services functions, June 1990

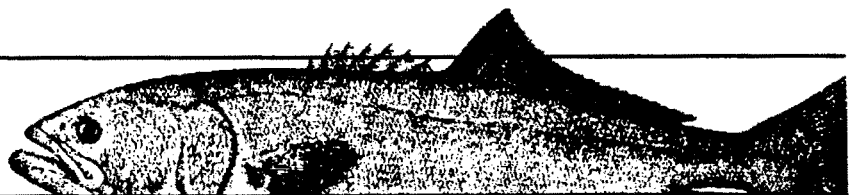
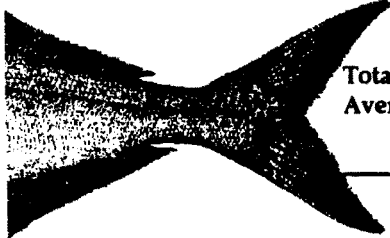
	Library Services	Technical Publishing	Graphics	Public Information	Management/Supervision
Frady	.10	.30	.15	.20	.25
Gibson		.65		.35	
Figuerido			.90	.10	
Forbes	.75			.25	
Steimle	.60			.10	.10
Berrien	.60			.20	
Hines	.85			.15	
Total FTE Effort	2.90	.95	1.05	1.35	.35
Total FTE: 6.6 Average grade: 9.2					

“Repeated attempts by the executive branch to downsize NMFS have created continuing confusion within the agency.”

Needs Assessment of the NMFS National Fish and Wildlife Foundation January 1990

Table 3. FTE commitment to various Information Services functions, March, 1985

	Library Services	Technical Publishing	Graphics	Public Information	Management/Supervision
Gibson		.35		.25	.40
Figuerido		.70	.10		
Cox		1.00			
Armstrong		.80			
Rockwell	.50	.20		.10	
Steimle	.60		.10	.10	
Sabo	.85			.15	
Brownlow	.60		.10	.30	
Hines	.85		.15		
Total FTE Effort	3.40	1.15	2.50	.80	Effort
Total FTE: 9.4 Average grade: 8.8					



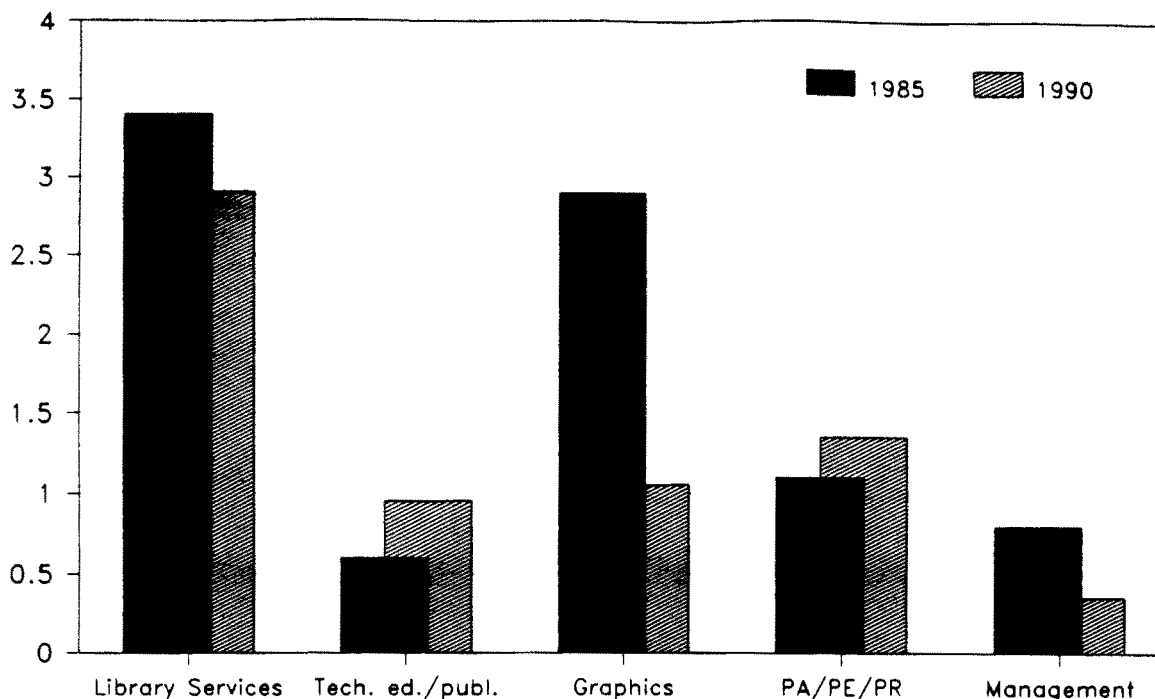


Figure 1. FTE in Northeast Fisheries Center Information Services Functions, 1985 and 1990

COMPARISONS WITH OTHER NMFS CENTER STAFFS

We attempted to compare our staff with that of other NMFS Fisheries Centers. We wondered if the declining trend in information services positions was similar. We were also wondering about overall organization of these staffs and how they handled public affairs, since this is a difficult area for us. In particular, we were interested in the Southeast Fisheries Center, since they are most similar to the NEFC in staff and number of facilities operated.

We knew that no other Center organized its information functions into a support section. We assume that this was the case for the same reasons the NEFC didn't do so until the reorganization: a unit such as that is an easy target for budget cutters at the headquarters level and positions are best protected if scattered among a number of different tasks. This has been a strategy of the Centers to hold on to staff since the Reagan-era budget cuts began decimating all NMFS staff ranks. The public affairs series was specifically targeted by the agency as a function best seated in Washington, D.C.

We didn't count on the difficulty of exhuming from the other Centers information on positions similar to ours, or for that matter, the total number of positions at any one lab.

Table 4 lists number of staff at each Center based on our best available information: the most recent Center phone directories.

Table 5 lists information-type staff positions at each Center compiled from interviews with administrative officers, librarians, directors, assistant directors, and others within the various Centers. It is not possible to tell if some of these positions actually perform information functions and if they do, for how much of the time. For our purposes, if it looked like information services, talked like information services, and had a job title we could use, we called it related.

Figure 2 graphically illustrates the range of positions. Figure 3 relates them to total staff size at the Centers.

The Northwest Center is undergoing a division of support staff between themselves and the Alaska Center. The Southeast is undergoing a review of library and editorial needs for possible contract services. As mentioned, sources for the figures were disparate, and clearly they are subject to some error. They are nonetheless presented here with the optimistic caveat that they are as accurate as anyone else's.



Table 4. Total staff and facilities at NMFS Fisheries Centers

Center	Staff
NEFC	
Gloucester	27
Milford	40
Narragansett	44
Oxford	40
(combined state and federal)	
Sandy Hook	57
Woods Hole	153
NSL	10
Total	361
SEFC¹	
Beaufort	95
Charleston	51
Galveston	56
Miami	40
NSTL	14
Pascagoula	50
Panama City	26
Total	332
SWFC--Total FTE 240	
Tiburon	
Lajolla	154
Honolulu	
Monterrey	
NWAFC²	
Northwest	420
Auke Bay	76
Kodiak	18
NMML	43
Total	557

¹ Compiled from 1990 library service review figures
² Compiled from 1989 phone directory

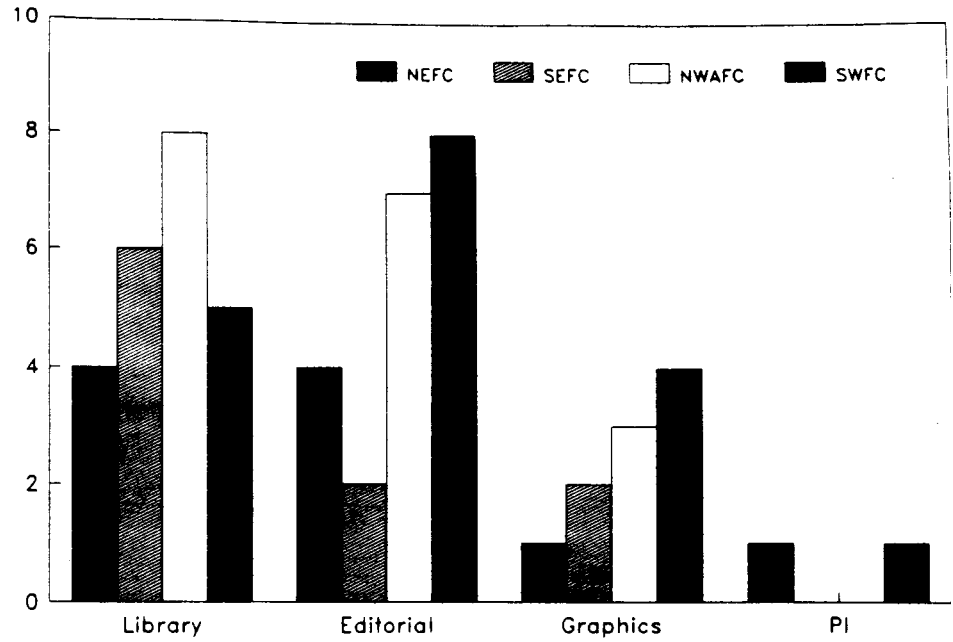


Figure 2. Number of Information Services positions in NMFS Centers, 1990

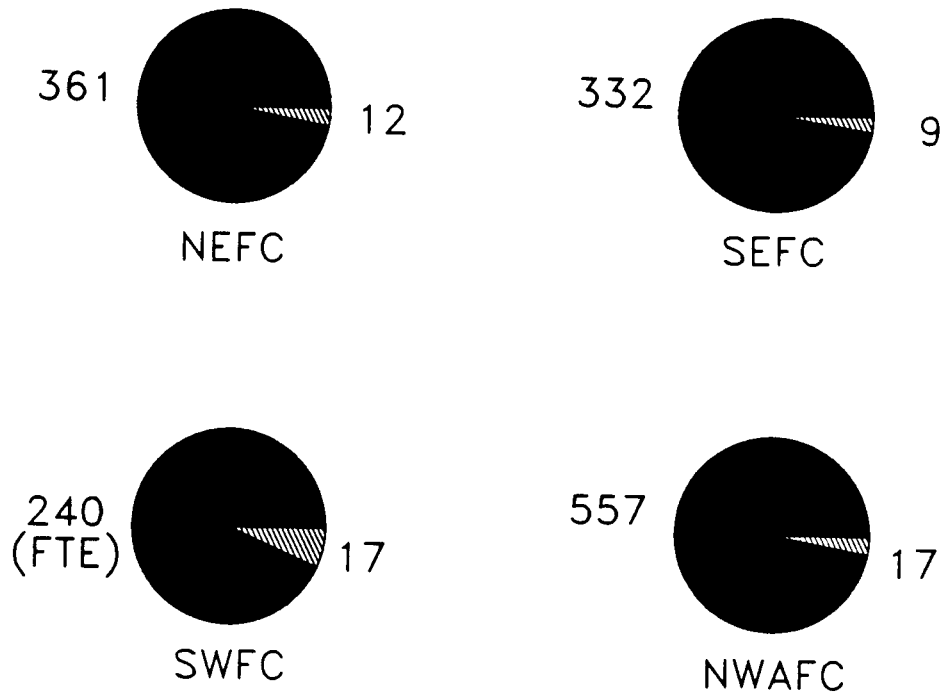


Figure 3. Information Services staff positions compared with total NMFS Center positions, 1990

Table 5. Personnel at NMFS Centers in positions with job titles similar to those found in the NEFC Information Services Section, 1990. v=vacant; PT=part time.

		NEFC	SEFC	NWAFc	SWFC
Librarians					
	GS11	2	1	3	1
	GS9			1	2
Library technicians					
	GS8		1		
	GS7		1		
	GS6			1	
	GS5	2	2	1	2
	GS3			2 (student)	
Technical information specialist-librarians					
	GS11		1		
Total personnel		4	6	8	5
Average grade		8.0	7.8	7.4	7.8
Technical publications writer-editor					
	GM15		1*		
	GS12	1			1
	GS11			1	
	GS9				1
	GS7				1
Technical publications editor					
	GS11			1	
Editor					
	GS9			1	
Writer					
	GS12				1
Editorial assistant					
	GS7				1
	GS6	1**	1	2	3 (one v/PT)
(typing)	GS5	2**			
	GS3			2 (student)	
Total personnel		4	2	7	8
Average grade		7.0	6.0	6.3	7.0
Scientific illustrator					
	GS12				1
	GS9	1 (v)	1	1	3
	GS7		1	2	
Graphics technician					
	GS8	1			
Total personnel		1	2	3	4
Average grade		8.0	8.0	7.7	9.8
Supervisory technical information specialist					
	GS12	1			
Public affairs specialist					
	GS7	1**			
Information specialist					
	GS9				1 (v/PT)
Total personnel		2			1

* GM15 fishery biologist serves as a combined scientific-technical editor

** Not part of section

These data show that the dissipation of functions continues in most Centers. In the 1986 A-76 management efficiency study conducted on technical publishing activities within NMFS the evaluators reported:

NMFS technical support personnel at all research facilities perform a wide range of duties. Positions identified as being involved in production of publications spend only a part of their time in this effort and many individuals, technicians and fishery biologists, also perform many publications-related functions such as photography, graphics, and scientific illustration.

Many different and closely-related positions at the four fisheries Centers have been combined in an attempt to reach a high enough number to study. Ten different series [were included]: writers, public affairs specialists, editors, editorial assistants, typists, scientific illustrators, and graphic specialists.

Thus, the splintering of staff among many divisions with no strong central plan for public information transfer, public affairs/education/reasons enjoys a historical precedence within the Service. More correctly, this study highlights a piecemeal approach to technical publishing, a dispersion of graphics and editorial support among those investigations willing to foot the bill, and limited commitment to the public information function.

Further scrutiny of positions listed in the 1986 A-76 study and those we could find in 1990 revealed another trend. Table 6 provides some insights into technical publications and public information effort in 1986. Figure 4 takes a look at the change in commitment to these areas between 1985 and 1990.

A reduction in the information positions is of course evident again. But most strikingly, there remains only one filled position in the public affairs series, an NEFC position not in the IS Section. It isn't possible to draw any conclusion from this fact alone. But it isn't hard to figure that it may be one reason that the activities of the Centers are poorly documented, poorly understood not only by the public but by Washington, D.C., and are even a mystery among ourselves. If there is an agency imperative to reduce average grades and downsize the organization as reported in the NMFS Needs Assessment Study (National Fish and Wildlife Foundation 1990), it has been succeeding in the information sections.

The good news with regard to this trend however, is that the NEFC, among all its fellow Centers, had the foresight to organize most of these functions into one section, breaking the mold of "divide and protect" that has persisted in other Centers. During lean funding times, this section has been better able to share resources and conserve effort than individual effort would have allowed.

It remains to be seen if this approach in fact improves information transfer or proves an easy mark for budget reductions. In the meantime, it has given the Northeast Fisheries Center a framework for supporting research; providing staff, public, and constituent access to information; publishing; and publicizing activities.

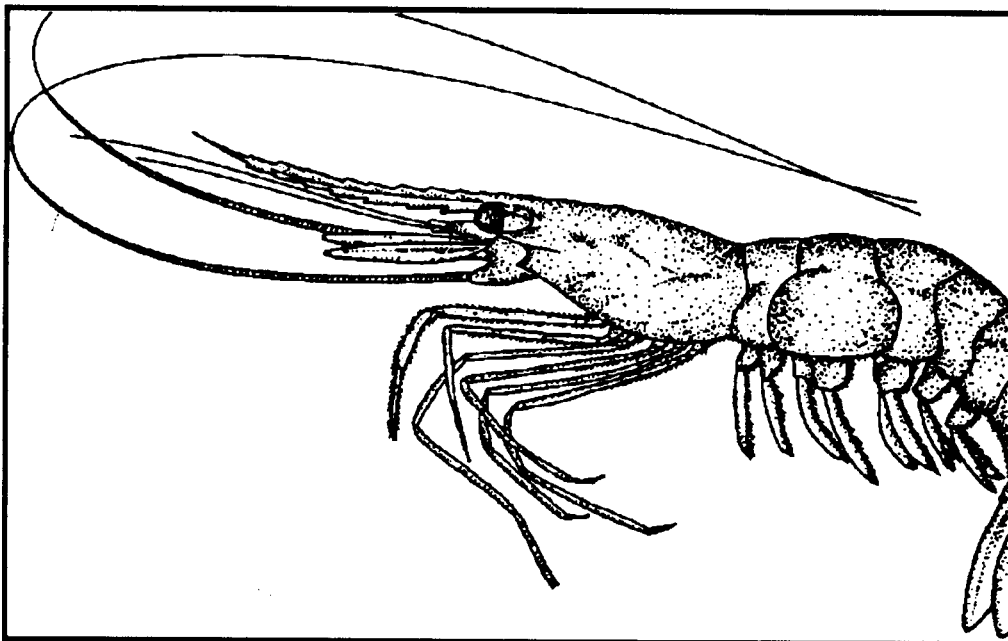


Table 6. Number of positions in NMFS Centers with some information functions (excluding library services), 1986.

	NEFC	SEFC	SWFC	NWAFC
Public affairs specialist	1	1	0	0
Tech. publication editor	1	1		
Writer			1	
Technical writer-editor			1	
Writer-editor				2
Editorial assistant (typing)	3			
Editorial assistant			3	3
Editorial clerk			2	
Scientific illustrator	2	3	4	4
Illustrator	1			
Photographer	1			
Supervisory fishery biologist				1

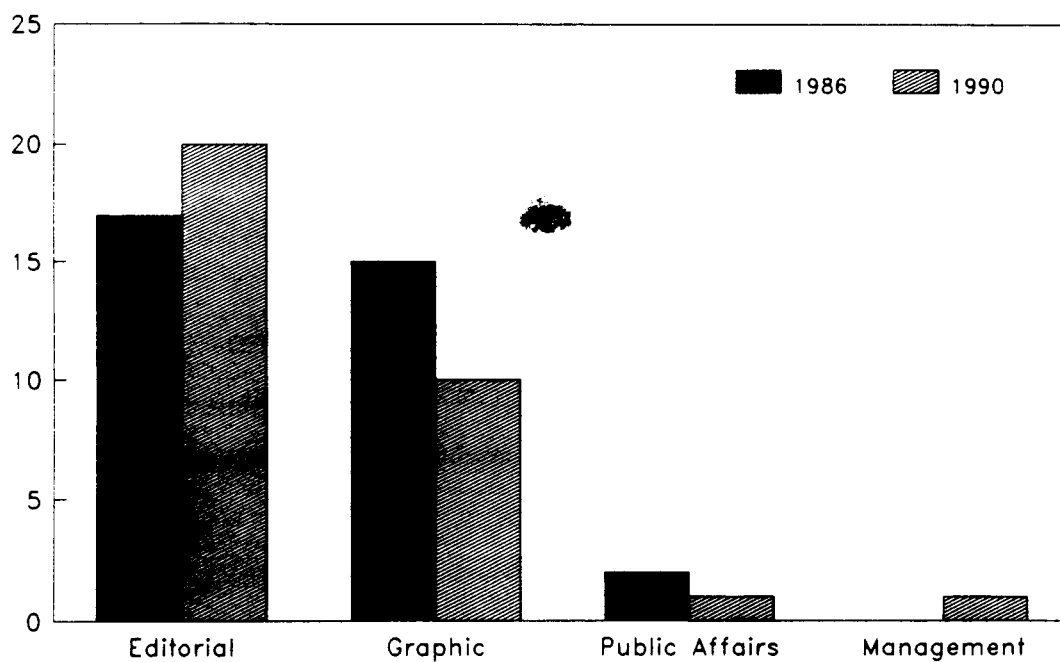


Figure 4. Number of Information Services positions in NMFS Centers, 1986, 1990, excluding libraries

Libraries

"The rate at which information is generated and published is overwhelming. To plan and conduct our research and to interpret the results, we need to be familiar (up-to-the-minute as possible) with what has been done and what is known in the areas we're working. To do this efficiently and accurately, we will need professional help from information specialists or librarians who, in essence, become part of the research team."

NEFC Research in the Year 2000
NEFC Research Council
July 1987

"All libraries and information centers within NOAA are responsible for acquiring, processing, and making available to NOAA staff and, upon request, users outside of NOAA, any literature-based information in the environmental sciences essential to the Agency's mission."

NOAA Guidelines to Regional Libraries
LISD/ESIC/EDIS
April 1982

"The first and most absolute requirement of investigative action or any planning effort is to examine objectively the "state of knowledge" to determine the real nature of the problem."

Dr. Thomas H. Ripley
Assistant to the Deputy Chief for Research
USDA, Forest Service
Washington, D.C.

In: Wildlife Management Techniques, 3rd ed., rev., 1971

Gloucester Laboratory Library
Judy Kryznowek, contact

Emerson Avenue
Gloucester, MA 01930

Facilities

The library at the Gloucester laboratory is located in the conference room of the main laboratory. Gloucester is the oldest of the nation's three federal fisheries technology labs, concentrating today on fisheries chemistry, food technology, quality assurance, and seafood processing.

Resources

The collection is housed in the laboratory's conference room. Books are arranged by Library of Congress classification and serials are shelved alphabetically. The bulk of the collection is journals, with long runs in the Journal of Food Science, Journal of the Fisheries Research Board of Canada, and the Bulletin of the Japanese Society for Fisheries, federal fisheries service serials, and a lab author reprint collection. The collection comprises approximately 600 books, standard reference works, and 50 active serials.

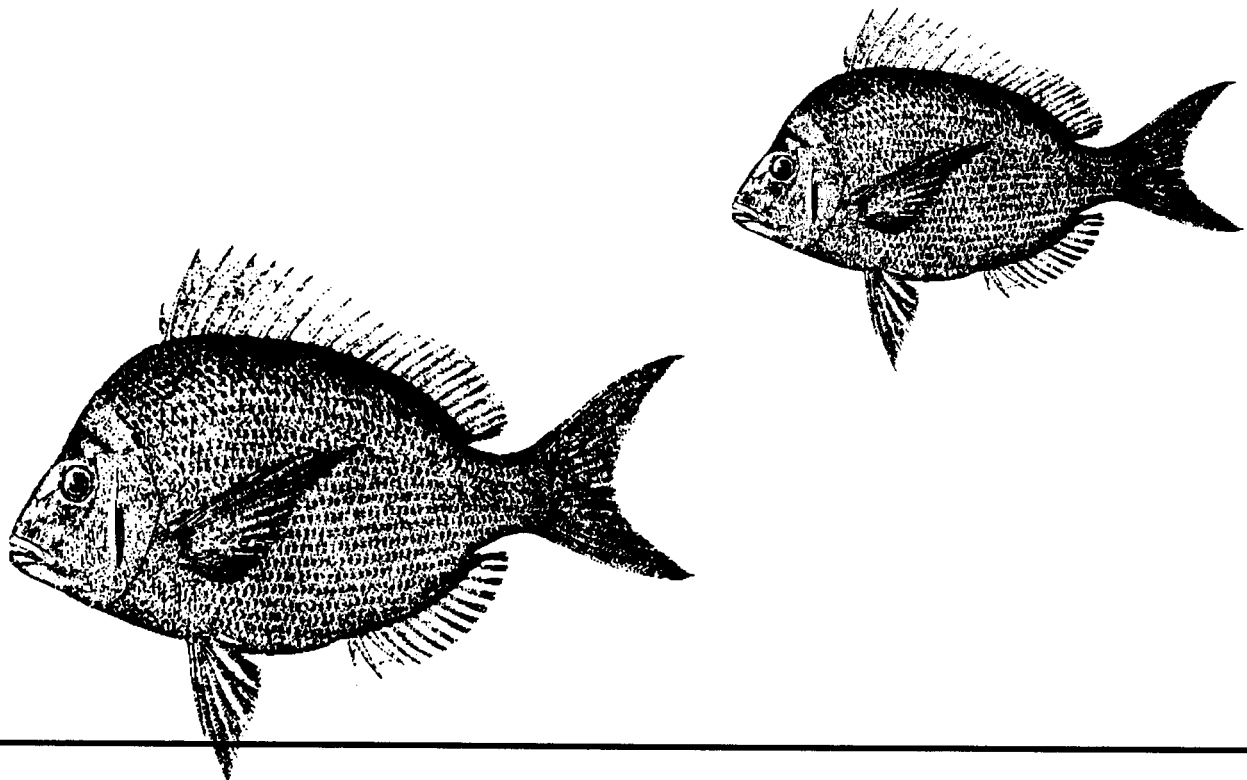
There is no librarian on staff. A research chemist is in charge of the library and its accounts.

Services

Interlibrary loan: The library maintains a purchase order with the MIT library for ILL services.

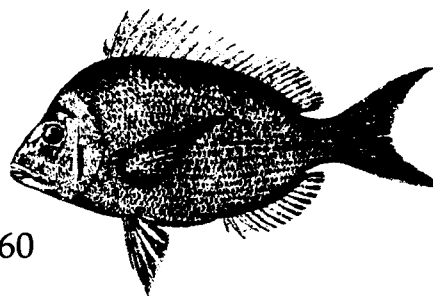
Literature searching: Dialog is used by various individuals from microcomputers in their offices. The assigned staff also performs some limited literature searching as time and priorities allow.

Circulation: Each journal is circulated when it arrives according to a routing slip devised annually.



Woods Hole Laboratory Library
D. Lynn Forbes, Library technician

Water Street
 Woods Hole, MA 02543
 FTS: 840-1260 Commercial: (508)548-5123 x260



Facilities

The Woods Hole Laboratory of the Northeast Fisheries Center is the oldest fisheries lab in the United States and one of the oldest in the world. The collection is quite old and eclectic, reflecting the long history of the lab. The library collection is housed over the maintenance shop in the same building as the public aquarium maintained by the Center. The space is approximately 500 square feet plus a small storage room. There is no reading or display area. Rare books are held in glass-front steel cases; informal Center documents in a bank of file cabinets; and various historical documents on shelves, in file cabinets and on shelves in the storage room.

Resources

The collection includes information collected by the first scientists to work in Woods Hole as well as current materials. It is the major repository of materials reflecting the work of federal fisheries service in the Northeast. The major subject areas are fisheries biology and assessment, international fisheries organization papers, and archive materials.

Fisheries biology and assessment: complete time series and indexes to the federal fisheries agency papers from the 1870s to the present, Canadian technical reports, fish commission reports from various Northeastern states from the early part of the century, time series data on landings and harvesting trends. Long time series of northeastern and European trade magazines and newspapers such as *National Fisherman*, *Commercial Fisheries News*, *World Fishing*, *Sou'Wester*, and *Canadian Fisherman*.

International Papers: complete sets of professional papers and proceedings of the International Council for Exploration of the Sea (ICES), International Commission for Northwest Atlantic Fisheries (ICNAF), Inter-American Tropical Tuna Commission (IATTC), North Atlantic Fisheries Organization (NAFO), and the International Commission for Conservation of Atlantic Tunas (ICCAT). The library also has a complete set of the monuments and counter monuments developed as part of the U.S./Canada Georges Bank territorial dispute.

Archive materials: The Woods Hole library for many years performed an institutional archival function for the Center. It is also the repository for artifacts and ephemera dating from the early days of the laboratory. A listing of historical materials is available. Of particular interest are: informal papers of the Northeast Fisheries Center and its predecessors, newspaper clipping scrapbooks from the *Gloucester Times* 1940-1954, *Fishing Gazette* 1912-1935, a complete set of Merchant Vessels of the United States, realia and scrapbooks compiled by Dr. Paul S. Galtsoff including original artwork for the **American Oyster**, and original laboratory notebooks kept by Vinyl Edwards.

The library is a member of FEDLINK with access to more than 30 NOAA libraries, OCLC, and Dialog database services. It is also a member of the International Association of Marine Science Libraries and Information Centers (IAMSLIC), MUSSEL, and CLAMS (the Cape and Islands Union Catalog.)

The Woods Hole lab also has access to two other major connections in the village: the Marine Biological Laboratory Library and the Woods Hole Oceanographic Institution Documents Library. A service contract with the MBL library contract provides Woods Hole staff with full privileges, access to the 5,000-title journal collection, copying services, reference librarians, interlibrary loan services, and various public

access terminals for searching union catalogs and databases on CD-ROM.

Services

Hours and staff: The Woods Hole library is open from 8:00 AM to 5:00 PM Monday through Friday. A library technician is available during those hours to assist with reference, literature searches, interlibrary loan, and to approve book purchases.

Lending policies: Library materials are available for use on-site and through interlibrary loan to users with library affiliations. Some materials are on permanent loan to staff members and may be recalled if requested.

Equipment: A photocopier is available on site. There is a microform reader-printer in the main building. A public-access terminal in the library allows patrons to search the NOAA library union catalog.

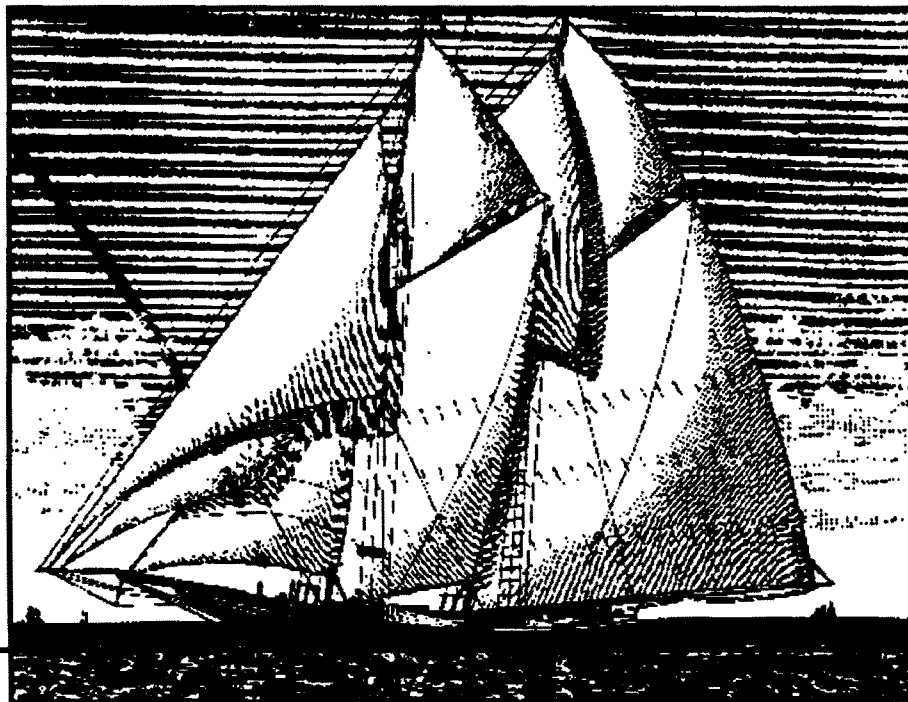
Contracting library: Woods Hole staff are accorded full privileges at the MBL library. Applications for library cards are available at both MBL and the Lab library. MBL maintains the book collection formerly housed at the Lab library.

Reference: The library technician is on hand to help with reference questions and with using the collection.

Location

The NEFC Woods Hole facility is located at the end of Route 28 in Woods Hole, Massachusetts. From the north, take route 28 through Falmouth. Bear right at the "Y" in the middle of town onto Woods Hole Road. From the east, take Route 28 all the way to the "Y" and turn left; or Route 6 or Route 151 to Route 28 and turn south at the "Y."

Follow Woods Hole Road into Woods Hole where it becomes Water Street. Follow Water Street over the drawbridge until the road takes a right angle turn at land's end. The Lab buildings are in front of you and on your immediate left.



Milford Laboratory Library

Facilities

The Milford Laboratory is located on Long Island Sound between Bridgeport and New Haven. The Center's organism-level and cellular-level experimental research on marine animals takes place there. The library is located on the second floor of the lab, primarily in the conference room. Holdings are also found in a large closet off the conference room and in the librarian's office.

Resources

The collection emphasizes aquaculture/mariculture, genetics, parasitology, environmental contamination, microbiology, fisheries, physiology, fish pathology, bivalve mollusks, and Long Island Sound. It houses approximately 4,500 books and monographs, 5,000 government documents, 342 active serials, and 7,800 reprints. In addition, the non-print collection includes 2,000 slides, 300 photographs, 10 8 mm films, and 200 microform publications. Special collections include lab archive materials including some papers of Dr. Victor Loosanoff. The slide collection emphasizes larval research and starfish/pesticide research done at the lab.

The library belongs to FEDLINK with access to Dialog database services and OCLC, and MUSSEL.

There is a public access terminal with the NOAA Library union catalog on CD-ROM and a copy machine. Materials are available for use onsite. Staff members check out material on an honor system.

A technician spends approximately 5 hours in the library per week, providing a minimal level of circulation control. Journal tables of contents are circulated to staff periodically.

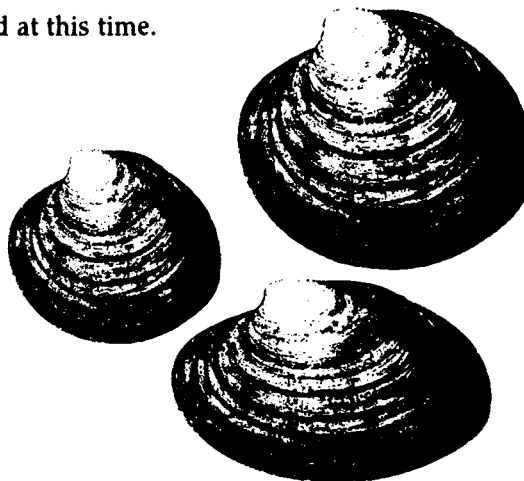
Services

Hours: The library is open to staff from 8:00 AM to 4:30 PM. Visitors may use materials on the premises but should make an appointment to assure that someone is there to assist them.

Reference and referral: There is no online access to OCLC or Dialog at this time. Reference questions are handled through ready reference tools. No research or finding aids are produced at this time.

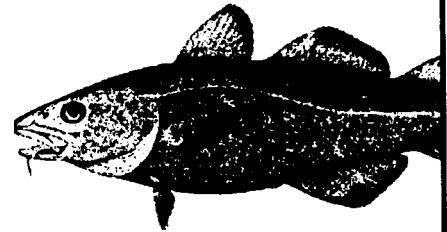
Interlibrary loan: A minimal ILL service is maintained by sending standard ALA forms to local or regional libraries without checking on OCLC.

Literature searches: Literature searches are not performed at this time.



Lionel A. Walford Library
Claire Steimle, Librarian
Judith Berrien, Library Technician

Sandy Hook Laboratory
PO Box 428
Highlands, New Jersey 07732
FTS: 342-8234 Commercial: (201)872-3034

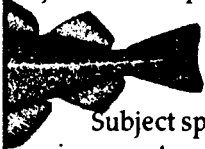


Facilities

The Walford Library was established in 1961 with the founding of the Sandy Hook Laboratory by Dr. Lionel A. Walford. The original collection comprised Walford's own donated books and personal papers. In 1985, a fire destroyed the library. Since that time, almost all of the original serial holdings have been recovered as well as many fine reference books and monographs through donations from the scientific and marine science library communities.

The laboratory is located in the Gateway National Recreation Area on New Jersey's Sandy Hook, the site of historical Fort Hancock. The lab is located in turn-of-the-century buildings and the library is contained in a 5,000 square foot space on the second floor of the main lab building. The property is maintained by the National Park Service and also houses other state and federal programs including the Coast Guard and the New Jersey Marine Science Consortium.

The library has a public access CD-ROM computer terminal for public access searching of the NOAA library union catalog and Abstracts in Fisheries and Aquatic Sciences. There is a microform reader/printer, and copier on-site. The library maintains a reference book collection, and abstract and index section, a serials list, a serial section, a government document collection, and a reading room with current journals displayed.



Resources

Subject specializations of the collection are in marine sciences, oceanography, ichthyology, marine environment and pollution, and marine ecology. Principal materials are serials, specialized monographs, theses, and dissertations, special works not formally published, reference materials, foreign language materials, and maps and charts. The collection comprises approximately 6,000 books and monographs, 600 government documents, 1,200 serial titles, 700 reprints, 1,000 non-print materials, and 165 newsletter titles.

Complete sets of most U.S. National Marine Fisheries Service series are held, as well as the Sandy Hook Laboratory staff publications from its 1961 inception, Woods Hole reference documents from 1897 onward, and Northeast Fisheries Center reprints from 1970 to the present.

The library holds a nearly complete run of the Bulletin of the National Museum from 1878 to the present, landings for most coastal states dating from the mid-1940s, and all of the U.S. Army Corps of Engineers technical report series from 1985. In addition, the collection contains U.S. climatological data from 1914 to the mid-1930s and for New England, New Jersey and New York from 1985 onward.

In addition to a rare book collection of mostly zoological content, holdings include valuable taxonomic references in the form of some of the major oceanographic expeditions: The Dana Reports, the Galathea reports, the Swedish deep-sea expeditions, the Siboga expedition, the "Michael Sars" expedition reports, and the Prince Albert Campagnes Scientifiques.

The Library holds publications of several international organizations:

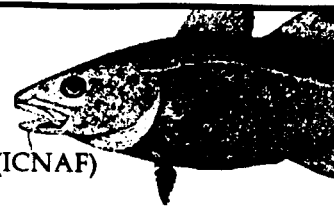
International Council for Exploration of the sea (ICES)

Annales Biologiques

Bulletin Statistique

Bulletin Trimestriel

Cooperative Research Reports
 Fiche d'Identifications
Journal du Conseil
 Oceanographic Data lists
 International Commission for Northwest Atlantic Fisheries (ICNAF)
 Inter-American Tropical Tuna Commission (ITTTC)
 North Atlantic Fisheries Organization (NAFO)
 International Pacific Halibut Commission (IPHC)
 International Commission for the Conservation of Atlantic Tuna (ICCAT)



Special collections include the New Jersey Sea Grant College Collection and the Myra S. Cohn Women's Collection.

Holdings also include a ready-reference collection of popular material and ephemera in approximately 250 pamphlet files on such subjects as acid rain, seafood products, beach erosion, ocean dumping, climate, and fisheries.

Services

Hours and Staff: The library is open to the public from 8:30 AM to 4:00 PM Monday through Friday. A librarian and library technician are available to assist patrons. Library users outside the laboratory staff are asked to call before coming.

Lending policies: Borrowing privileges are not extended to non-staff members, but items may be lent through interlibrary loan.

Services: Staff have access to complete reference, interlibrary loan, and literature searching support. The library is part of the Fedlink library system which provides access to all major marine science online databases, free borrowing privileges with more than 30 NOAA libraries, and interlibrary loan through a national online catalog. The library staff accesses other regional collections through membership in the New Jersey Library Network and the International Association of Marine Science Libraries and Information Centers (IAMSLIC), and maintains cooperating agreements with Rutgers University and the New Jersey Sea Grant College Program.

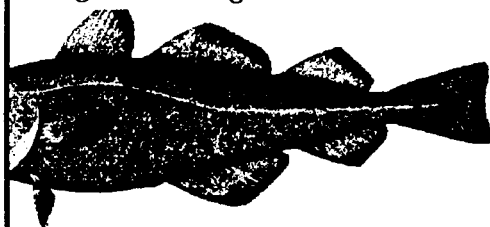
Equipment: The library has a public access CD-based catalog for searching the NOAA library union catalog and CD-based searching for the Aquatic Sciences and Fisheries Abstracts (AFSA). A microform reader with a plain-paper printer and photocopy machine are located in the main room of the library.

Location

Sandy Hook is accessible from Route 36 at Highlands, New Jersey.

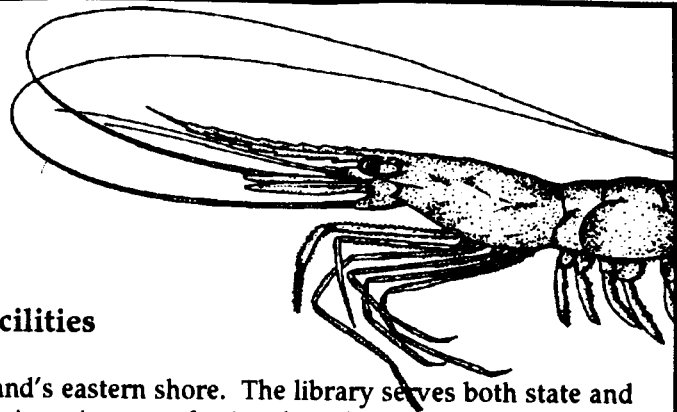
From the north, take the New Jersey Turnpike to exit 11, connecting with the Garden State Parkway.

From the south, take the New Jersey Turnpike to exit 8 at Highstown. Follow Route 33 to Freehold and Route 537 east through Colts Neck to Route 50 to Swimming River Road. Bear right on Route 50 to Tinton Avenue, turn left and proceed to the intersection at Route 35. Turn right and continue to Eatontown Circle where Route 36 east intersects. Follow Route 36 through Long Branch, Monmouth Beach, and Sea Bright to the Highlands turnoff.



Oxford Laboratory Library
Susan M. Hines, Librarian

Oxford Cooperative Laboratory
Railroad Avenue
Oxford, MD 21654



Facilities

The Oxford Laboratory is located on Maryland's eastern shore. The library serves both state and federal staff located at the lab, as well as other marine science professionals in the Chesapeake Bay area. The library is divided into several sections and housed in six different rooms around the lab. There is a reading room in the lab's main reception area. A microform reader/printer and copy machine are available on-site.

Resources

The Oxford collection is highly specialized, dealing in scientific and technical literature primarily concerning disease in fish and shellfish. The greater part of the collection contains 100 current serials in the fields of pathobiology, fisheries, habitat, and resources conservation and ecology. A considerable number of newsletters, technical and information bulletins, and similar publications are maintained. A large indexed reprint collection is the major special collection. In all, the collection comprises 113 current serial titles, 9267 monographs, and more than 30,000 reprints in the indexed collection.

The library is a member of FEDLINK with access to the national library catalog OCLC, and major online databases. It is also a recognized regional library in the Medical Library Network of the National Library of Medicine, a member of the International Association Marine Science Libraries and Information Centers (IAMSLIC), a depository for the Chesapeake Bay Information Network, and a contributing member of the Maryland Association of Health Science Libraries. The librarian also serves on the Board of Trustees for the Talbot County Free Library.

Services

The library is open to the public from 8:30 AM to 4:30 PM Monday through Friday. A librarian is on staff to assist users.

Loan Policy: Materials circulate to Oxford lab staff and, through interlibrary loan, to other libraries for use by government and non-government users in marine fields. All materials are available for visitors to use on-site. Materials are not removed from the lab without permission of the librarian. Materials may be permanently loaned to Oxford staff as long as they remain on-site.

Literature searches: The library has on-line access to more than 100 databases indexing published literature. Searches are conducted for staff by request on a first-come, first-served basis. Manual searches are conducted as time and priorities allow.

Interlibrary loans: Material not available in the collection may be borrowed from other libraries for official use. Conversely, other agencies may borrow from the Oxford library. No charge is made by the library for this service. ILLs circulate to other libraries for two weeks.

Bibliographic services: Books are arranged and classified by the Library of Congress classification system. The card catalog located in the library contains holdings by author, subject, and title. A monthly accessions list is circulated to staff and others on request. A serials list is maintained and available to users for easy access. A yearly list of publication by staff is prepared, sent to staff, and included in the annual list of Center publications.

Location of materials

Conference Room

Bound journals
Atlases

Copying Room

Reprints
Maps

Library

Books
Annual reports
NMFS reports
Fishery Bulletin
ICES documents
Tide tables
Abstracts

Special subject shelves: pollution, conservation, ecology, Chesapeake Bay

Librarian's Office

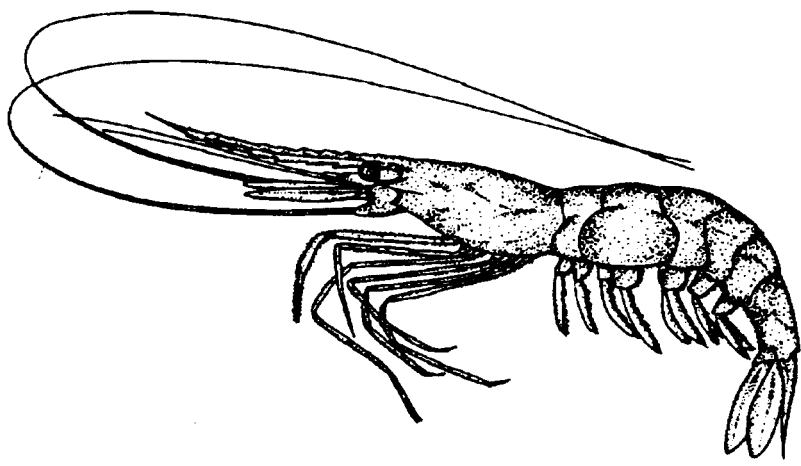
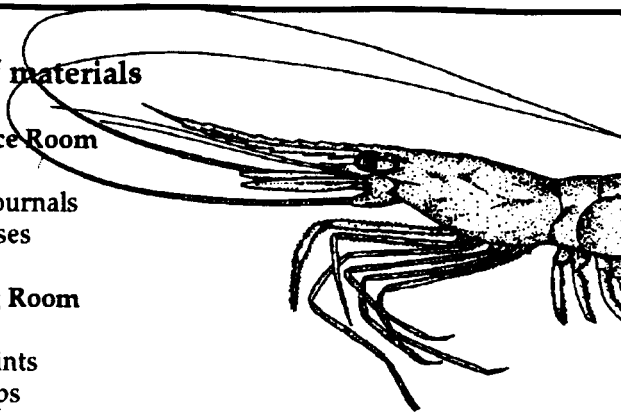
Discontinued journals
Fish landings
Bibliographies
Index Medicus
Zoological Record
Statistics

Reading Room

Current journals
Federal Women's Program materials

Laboratory Director's Office

Biological Abstracts



The summaries that start off this section describe facilities, resources, and services at the five largest libraries in the Northeast Fisheries Center. The Narragansett lab also has a library budget, monitored on a rotating assignment by scientific staff. The bulk of Narragansett library support is provided by the Pell Marine Science Library at the University of Rhode Island and few figures are available on costs and needs.

BUDGET AND STAFFING

A comparison of budgets is found in Figure 5. Figure 6 is a comparison of FTE library staff and FTE scientific staff at each facility.

"In general, the Council found no instance where large inefficiencies or obvious redundancy cried out to be corrected."

Library Services at the Northeast Fisheries Center NEFC Research Council January 1990

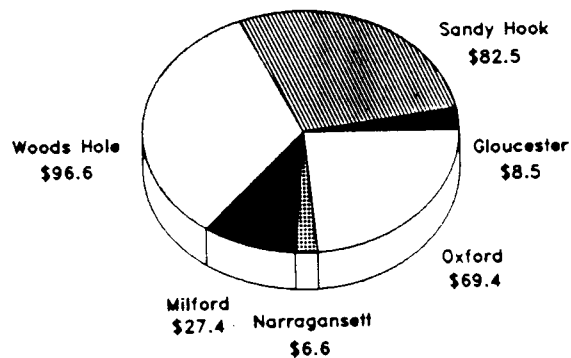
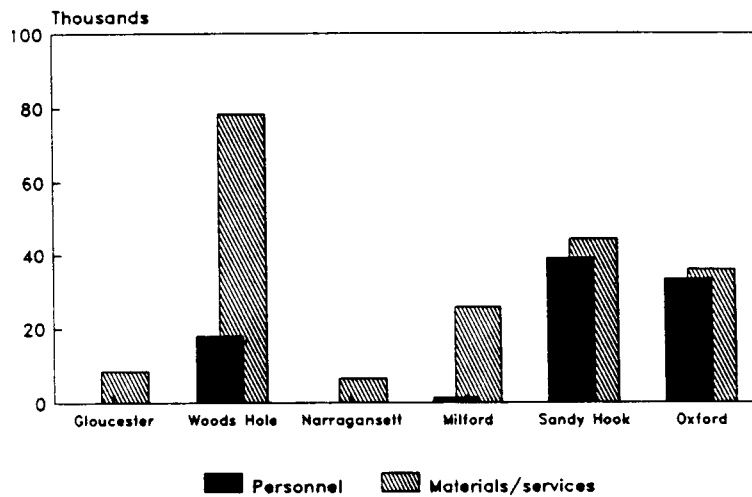


Figure 5. Total library budgets, NEFC 1990.

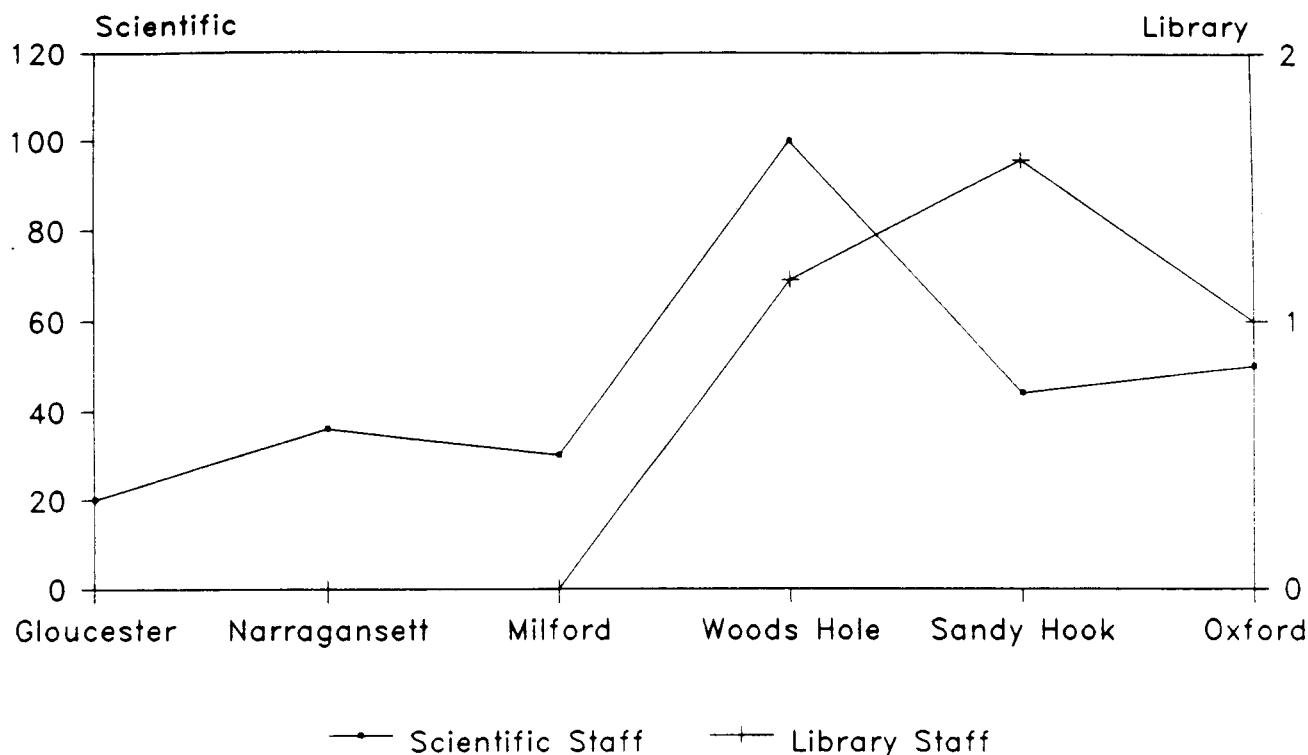


Figure 6. Library and scientific staff, NEFC 1990.

NOAA Guidelines to Regional Libraries (1982) provides some guidance on determining whether the collection qualifies as a library and how to determine an appropriate level of services for scientific and technical staff: Within NOAA, a collection is defined as a library if one or more of the following three conditions are met:

1. A collection of books, journals, and technical reports that total 1,600 bound volumes or more and current subscriptions of at least 100 or more periodicals or a combination of periodicals and subscriptions that equals 1,000.
2. Staffing by one full-time or part-time employee whose position is classified in the GS-1410, 1411, or 1412 series.
3. One staff member or more in any classification series, permanent or temporary, who spends the equivalent of 50 percent of one person-year maintaining the collection and providing library services to local staff.

Table 7 shows a comparison of Southeast Fisheries Center and Northeast Fisheries Center library services. Figure 6 shows a comparison of NMFS Center library and scientific staff.

Each of these libraries fits the definition of a NOAA library. The guidelines go on to say that:

Ratio of library staff to users varies according to the disciplines involved. A reasonable number for developing libraries to use is one library staff member for every active user group of 50 people.

In the case of the NEFC, this ratio is met at half of the laboratories (Woods Hole [if the MBL service contract is considered], Sandy Hook, and Oxford.) From what we can determine, the ratio is exceeded at half the SEFC facilities and barely met or not met at the other fifty percent. Our figures for staff came from the phone directory and from a recent review of library services at the SEFC.

Table 7. NEFC and SEFC library holdings, staff, budget (exclusive of salaries), and lab staff served, 1990.

	Books	Serials	Reprints	Library Staff	Budget (thousand \$)	Staff Served
NEFC						
Gloucester	1000	60	0		8500	27
Woods Hole	1000	350	5000	1.15	75,000	153
Narragansett	unknown	unknown	unknown	0	6600	44
Milford	09500	342	7800	0	25900	40
Sandy Hook	6600	1100	700	1.6	44400	57
Oxford	9000	30000	136000	1	36,000	40
(Books and serial titles)						
Average spending per staff member: \$544.04						
Average library staff per staff member: .010						
SEFC						
Galveston	5500	120	10000	0	1000	50
Panama City	14250	0	0	1	8200	26
Pascagoula	1000	400	17000	.6	4200	50
Beaufort	18000	180	16000	1	40,000	95
Charleston	8000	150	18000	2	18000	50
Miami	4000	19000	7000	1	30000	40
Average spending per staff member: \$315						
Average library staff per staff member: .017						

The NOAA Guidelines also discuss level of service, noting that the level of service required by a research group should be discussed before the library is established. NOAA has defined the various levels of service as minimum, intermediate, and advanced. The ratings of each NEFC library according to these guidelines is found on the rating sheets in Tables 8 to 13. Figures 7 and 8 show the level of service at each library based on the NOAA guidelines. The first bar in Figure 7 represents 100 percent service at each level.

We can conclude from this that the three facilities with on-site staff have the highest level of service available to staff. Interestingly, the staff at the physically isolated locations of Sandy Hook and Oxford enjoy a higher level of support than those of Woods Hole, which is located in the heart of a major marine science community. Not surprisingly, the two GS11 librarians and a GS5 library technician serve those staffs.

It is also important to compare the figures in Table 7 and Table 13, comparing resources available at each facility to the service level. Strikingly, the Milford laboratory with its significant collection, has a lower level of service than the much smaller Gloucester lab staff, which is served by a much smaller collection with an effective manager from the scientific staff. Thus, the Milford collection is in large part lost to the lab staff, and is also lost to other Center libraries. Milford will be discussed in a later section.

The NOAA library guidelines recommend staffing levels as well, taking into account three broad considerations. These reflect the size and uniqueness of the collections, the size of lab staffs served and the level of service rendered:

Recruitment of staff for the information activity should be undertaken with the same concern and attention to obtaining adequately trained scientists for the lab research programs.

The number of active users should determine the size of library staff...Most NOAA laboratories support fewer than 65 scientists and support personnel, but the grade for the librarian should be determined by services rendered.

Table 14 shows the NOAA recommended staffing based on level of service provided:

Table 14: NOAA-recommended laboratory library staffing levels.

	Minimum	Intermediate	Advanced
GS11-13/1410,1412			1
GS7-9/1410,1412		1	1
GS5-7/1411		1	
GS4-6/1411	1		
GS3-4/312			1
GS2-3/322	1	1	
GS1-2 student/technician			1

It is safe to say that the libraries in the Center are understaffed, regardless of the combination of standards used to determine what is appropriate: the NOAA staffing guidelines, the unique aspects of the collections both in subject matter and location, the scholarly activity at each location and in the fields of interest, and the significant contribution of these resources to those working in support of NOAA's mission. In particular, the lack of staffing at Milford and Gloucester represents a waste in federal investment as well as a missing information link for the staffs at those libraries.

We feel it is critical to have some trained staff at each laboratory that has a collection and a scientific staff to support.

TRENDS AND OPPORTUNITIES

Perhaps the most significant trends in information services today are the explosion and dispersion of information available in technical fields and the use of computer technology to retrieve it.

The NEFC Research Council is an advisory group of scientists whose members are drawn from various disciplines and from each lab. In 1987, they were asked to discuss research at the NEFC in the Year 2000. As part of that report, they projected the effects of the information explosion on staff at the Center:

The rate at which information is generated and published is overwhelming. To plan and conduct our research and to interpret the results, we need to be familiar (up-to-the-minute as possible) with what has been done and what is known in the areas we are working. To do this efficiently and accurately, we will need professional help from information specialists or librarians who, in essence, become part of the research team.

In preparation for this review, we attempted to verify the amount of information available today with the amount available ten years ago and failed. The reasons are compelling. One is that locating, indexing, and making available current literature is so time-consuming that few professionals have the time to consider and report on how to handle it. Secondly, technical fields, and marine science in particular, are becoming more interdisciplinary. Therefore, significant contributions to the literature are no longer limited to a core group of journals.

A conversation with John Sears (personal communication with D. Lynn Forbes, June, 1990) of Aquatic Sciences Fisheries Abstracts (ASFA) confirmed these trends strikingly. We had taken several marine-related keywords (for example: fisheries, ocean, marine, ecology) and searched the ASFA database for 1980 and 1989, hoping to show an increase in the number of "hits" between the two years. In fact, we got the opposite result. So, we called ASFA to see what we did wrong.

Sears advised us that the total number of abstracts had declined in the ASFA database over the past few year, in part because of financial problems that led to a

"The Council believes that each facility, simply by virtue of being isolated from another NMFS facility, requires at least one part-time professional librarian or full time library technician services to perform archiving and computer-assisted reference work."

*Library Services at
the Northeast
Fisheries Center
NEFC Research
Council
January 1990*

Library Functions at Three Levels Defined by NOAA

Function	Minimum Service Level	Intermediate Service Level	Advanced Service Level
<p>Acquisition/purchase of library books, serials and other materials</p>	<ul style="list-style-type: none"> ✓ Collects publications from offices ✓ Receives publications sent to library ✓ Keeps informed of interests and needs for library materials Reviews literature announcements and refers for purchase decision 	<ul style="list-style-type: none"> ✓ Selects publications in anticipation of office needs ✓ Expedites book and subscription orders ✓ Collects special materials, e.g. reprints, posters, pictures ✓ Maintain order file ✓ Review collection to discard, weed, augment collection Systematically consults staff to evaluate collection and determine needed materials 	<ul style="list-style-type: none"> ✓ Periodically surveys user needs Establishes contacts to acquire hard-to-get materials Prepares written selection policy Establishes special collections relevant to office programs
<p>Organization and cataloging</p>	<ul style="list-style-type: none"> ✓ Places books in order on shelves by broad subject groupings ✓ Places serials on shelves by title and date Files maps, a/v equipment, and other special materials Prepares author and title cards to catalog major publications 	<ul style="list-style-type: none"> ✓ Orders printed on catalog cards Adopts LC classification system and arranges books according to LC Develops subject catalog using LC system Devises access system for special collections, e.g. reprints 	<ul style="list-style-type: none"> Does original cataloging Contributes original cataloging to NOAA library system Participates in NOAA subject heading list development Indexes articles, reports, and reprints Prepares abstracts
<p>Dissemination of materials and information</p>	<ul style="list-style-type: none"> ✓ Maintain collection of reference books ✓ Answers simple factual questions ✓ Verifies titles and references Secures loan materials from other libraries Directs users to possible sources of information ✓ Notifies users of new periodical issues ✓ Routes publications to users on request ✓ Aware of resources in nearby libraries ✓ Maintain simple circulation system 	<ul style="list-style-type: none"> Gathers research materials for specific requestors Prepares bibliographies Does comprehensive literature searches on request Prepares and distributes acquisition list 	<ul style="list-style-type: none"> Locates, extracts, evaluates, and reformats information for user Prepares critical bibliographies Does exhaustive literature searches Prepares and distributes abstracts of current literature Secures and arranges for translations Knows user interests and needs and acts to fulfill them Knows sources of unpublished information Assists in editing office papers and publications

Table 8. Rating for Gloucester library services. Library staff: 0; lab staff: 30.

Library Functions at Three Levels Defined by NOAA

Function	Minimum Service Level	Intermediate Service Level	Advanced Service Level
<p>Acquisition/purchase of library books, serials and other materials</p>	<ul style="list-style-type: none"> ✓ Collects publications from offices ✓ Receives publications sent to library ✓ Keeps informed of interests and needs for library materials ✓ Reviews literature announcements and refers for purchase decision 	<ul style="list-style-type: none"> ✓ Selects publications in anticipation of office needs ✓ Expedites book and subscription orders ✓ Collects special materials, e.g. reprints, posters, pictures ✓ Maintain order file ✓ Review collection to discard, weed, augment collection ✓ Systematically consults staff to evaluate collection and determine needed materials 	<ul style="list-style-type: none"> ✓ Periodically surveys user needs ✓ Establishes contacts to acquire hard-to-get materials ✓ Prepares written selection policy ✓ Establishes special collections relevant to office programs
<p>Organization and cataloging</p>	<ul style="list-style-type: none"> ✓ Places books in order on shelves by broad subject groupings ✓ Places serials on shelves by title and date ✓ Files maps, a/v equipment, and other special materials ✗ Prepares author and title cards to catalog major publications 	<ul style="list-style-type: none"> ✗ Orders printed on catalog cards ✗ Adopts LC classification system and arranges books according to LC ✗ Develops subject catalog using LC system ✓ Devises access system for special collections, e.g. reprints 	<ul style="list-style-type: none"> ✗ Does original cataloging ✗ Contributes original cataloging to NOAA library system Participates in NOAA subject heading list development Indexes articles, reports, and reprints Prepares abstracts
<p>Dissemination of materials and information</p>	<ul style="list-style-type: none"> ✓ Maintain collection of reference books ✓ Answers simple factual questions ✓ Verifies titles and references ✓ Secures loan materials from other libraries ✓ Directs users to possible sources of information ✓ Notifies users of new periodical issues ✓ Routes publications to users on request ✓ Aware of resources in nearby libraries ✓ Maintain simple circulation system 	<ul style="list-style-type: none"> ✓ Gathers research materials for specific requestors Prepares bibliographies ✓ Does comprehensive literature searches on request ✓ Prepares and distributes acquisition list 	<ul style="list-style-type: none"> Locates, extracts, evaluates, and reformats information for user Prepares critical bibliographies ✗ Does exhaustive literature searches Prepares and distributes abstracts of current literature ✓ Secures and arranges for translations ✓ Knows user interests and needs and acts to fulfill them ✓ Knows sources of unpublished information Assists in editing office papers and publications

Table 9. Rating for Woods Hole library services. Library staff :; lab staff 150. ✗ = through MBL contract services.

Library Functions at Three Levels Defined by NOAA

Function	Minimum Service Level	Intermediate Service Level	Advanced Service Level
<p>Acquisition/purchase of library books, serials and other materials</p>	<p>✓ Collects publications from offices Receives publications sent to library Keeps informed of interests and needs for library materials Reviews literature announcements and refers for purchase decision</p>	<p>✓ Selects publications in anticipation of office needs ✓ Expedites book and subscription orders Collects special materials, e.g. reprints, posters, pictures Maintain order file ✓ Review collection to discard, weed, augment collection Systematically consults staff to evaluate collection and determine needed materials</p>	<p>✓ Periodically surveys user needs Establishes contacts to acquire hard-to-get materials Prepares written selection policy Establishes special collections relevant to office programs</p>
<p>Organization and cataloging</p>	<p>Places books in order on shelves by broad subject groupings Places serials on shelves by title and date Files maps, a/v equipment, and other special materials Prepares author and title cards to catalog major publications</p>	<p>Orders printed on catalog cards Adopts LC classification system and arranges books according to LC Develops subject catalog using LC system Devises access system for special collections, e.g. reprints</p>	<p>Does original cataloging Contributes original cataloging to NOAA library system Participates in NOAA subject heading list development Indexes articles, reports, and reprints Prepares abstracts</p>
<p>Dissemination of materials and information</p>	<p>Maintain collection of reference books Answers simple factual questions Verifies titles and references Secures loan materials from other libraries Directs users to possible sources of information ✓ Notifies users of new periodical issues Routes publications to users on request Aware of resources in nearby libraries Maintain simple circulation system</p>	<p>Gathers research materials for specific requestors Prepares bibliographies Does comprehensive literature searches on request Prepares and distributes acquisition lists</p>	<p>Locates, extracts, evaluates, and reformats information for user Prepares critical bibliographies Does exhaustive literature searches Prepares and distributes abstracts of current literature Secures and arranges for translations Knows user interests and needs and acts to fulfill them Knows sources of unpublished information Assists in editing office papers and publications</p>

Table 10: Rating for Narragansett lab library services. Library staff: 0; lab staff: 50.

Library Functions at Three Levels Defined by NOAA

Function	Minimum Service Level	Intermediate Service Level	Advanced Service Level
Acquisition/purchase of library books, serials and other materials	<ul style="list-style-type: none"> ✓ Collects publications from offices ✓ Receives publications sent to library Keeps informed of interests and needs for library materials Reviews literature announcements and refers for purchase decision 	<ul style="list-style-type: none"> Selects publications in anticipation of office needs Expedites book and subscription orders Collects special materials, e.g. reprints, posters, pictures Maintain order file Review collection to discard, weed, augment collection Systematically consults staff to evaluate collection and determine needed materials 	<ul style="list-style-type: none"> Periodically surveys user needs Establishes contacts to acquire hard-to-get materials Prepares written selection policy Establishes special collections relevant to office programs
Organization and cataloging	<ul style="list-style-type: none"> ✓ Places books in order on shelves by broad subject groupings ✓ Places serials on shelves by title and date Files maps, a/v equipment, and other special materials Prepares author and title cards to catalog major publications 	<ul style="list-style-type: none"> ✓ Orders printed on catalog cards Adopts LC classification system and arranges books according to LC Develops subject catalog using LC system Devises access system for special collections, e.g. reprints 	<ul style="list-style-type: none"> Does original cataloging Contributes original cataloging to NOAA library system Participates in NOAA subject heading list development Indexes articles, reports, and reprints Prepares abstracts
Dissemination of materials and information	<ul style="list-style-type: none"> ✓ Maintain collection of reference books ✓ Answers simple factual questions ✓ Verifies titles and references Secures loan materials from other libraries Directs users to possible sources of information ✓ Notifies users of new periodical issues ✓ Routes publications to users on request Aware of resources in nearby libraries ✓ Maintain simple circulation system 	<ul style="list-style-type: none"> Gathers research materials for specific requestors Prepares bibliographies Does comprehensive literature searches on request Prepares and distributes acquisition list 	<ul style="list-style-type: none"> Locates, extracts, evaluates, and reformats information for user Prepares critical bibliographies Does exhaustive literature searches Prepares and distributes abstracts of current literature Secures and arranges for translations Knows user interests and needs and acts to fulfill them Knows sources of unpublished information Assists in editing office papers and publications

Table 11. Rating for Milford library services. Library staff: 0; lab staff: 40.

Library Functions at Three Levels Defined by NOAA

Function	Minimum Service Level	Intermediate Service Level	Advanced Service Level
<p>Acquisition/purchase of library books, serials and other materials</p>	<ul style="list-style-type: none"> ✓ Collects publications from offices ✓ Receives publications sent to library ✓ Keeps informed of interests and needs for library materials ✓ Reviews literature announcements and refers for purchase decision 	<ul style="list-style-type: none"> ✓ Selects publications in anticipation of office needs ✓ Expedites book and subscription orders ✓ Collects special materials, e.g. reprints, posters, pictures ✓ Maintain order file ✓ Review collection to discard, weed, augment collection ✓ Systematically consults staff to evaluate collection and determine needed materials 	<ul style="list-style-type: none"> ✓ Periodically surveys user needs ✓ Establishes contacts to acquire hard-to-get materials ✓ Prepares written selection policy ✓ Establishes special collections relevant to office programs
<p>Organization and cataloging</p>	<ul style="list-style-type: none"> ✓ Places books in order on shelves by broad subject groupings ✓ Places serials on shelves by title and date ✓ Files maps, a/v equipment, and other special materials ✓ Prepares author and title cards to catalog major publications 	<ul style="list-style-type: none"> ✓ Orders printed on catalog cards ✓ Adopts LC classification system and arranges books according to LC ✓ Develops subject catalog using LC system ✓ Devises access system for special collections, e.g. reprints 	<ul style="list-style-type: none"> ✓ Does original cataloging ✓ Contributes original cataloging to NOAA library system ✓ Participates in NOAA subject heading list development ✓ Indexes articles, reports, and reprints ✓ Prepares abstracts
<p>Dissemination of materials and information</p>	<ul style="list-style-type: none"> ✓ Maintain collection of reference books ✓ Answers simple factual questions ✓ Verifies titles and references ✓ Secures loan materials from other libraries ✓ Directs users to possible sources of information ✓ Notifies users of new periodical issues ✓ Routes publications to users on request ✓ Aware of resources in nearby libraries ✓ Maintain simple circulation system 	<ul style="list-style-type: none"> ✓ Gathers research materials for specific requestors ✓ Prepares bibliographies ✓ Does comprehensive literature searches on request ✓ Prepares and distributes acquisition lists ✓ Aware of nationwide library resources 	<ul style="list-style-type: none"> ✓ Locates, extracts, evaluates, and re-formats information for user ✓ Prepares critical bibliographies ✓ Does exhaustive literature searches ✓ Prepares and distributes abstracts of current literature ✓ Secures and arranges for translations ✓ Knows user interests and needs and acts to fulfill them ✓ Knows sources of unpublished information ✓ Assists in editing office papers and publications

Table 12. Rating for Sandy Hook library. Library staff: 1.6 FTE; lab staff: 85.

Library Functions at Three Levels Defined by NOAA

Function	Minimum Service Level	Intermediate Service Level	Advanced Service Level
<p>Acquisition/purchase of library books, serials and other materials</p>	<ul style="list-style-type: none"> ✓ Collects publications from offices ✓ Receives publications sent to library ✓ Keeps informed of interests and needs for library materials ✓ Reviews literature announcements and refers for purchase decision 	<ul style="list-style-type: none"> ✓ Selects publications in anticipation of office needs ✓ Expedites book and subscription orders ✓ Collects special materials, e.g. reprints, posters, pictures ✓ Maintain order file ✓ Review collection to discard, weed, augment collection ✓ Systematically consults staff to evaluate collection and determine needed materials 	<ul style="list-style-type: none"> ✓ Periodically surveys user needs ✓ Establishes contacts to acquire hard-to-get materials ✓ Prepares written selection policy ✓ Establishes special collections relevant to office programs
<p>Organization and cataloging</p>	<ul style="list-style-type: none"> ✓ Places books in order on shelves by broad subject groupings ✓ Places serials on shelves by title and date ✓ Files maps, a/v equipment, and other special materials ✓ Prepares author and title cards to catalog major publications 	<ul style="list-style-type: none"> ✓ Orders printed on catalog cards ✓ Adopts LC classification system and arranges books according to LC ✓ Develops subject catalog using LC system ✓ Devises access system for special collections, e.g. reprints 	<ul style="list-style-type: none"> ✓ Does original cataloging ✓ Contributes original cataloging to NOAA library system ✓ Participates in NOAA subject heading list development ✓ Indexes articles, reports, and reprints ✓ Prepares abstracts
<p>Dissemination of materials and information</p>	<ul style="list-style-type: none"> ✓ Maintain collection of reference books ✓ Answers simple factual questions ✓ Verifies titles and references ✓ Secures loan materials from other libraries ✓ Directs users to possible sources of information ✓ Notifies users of new periodical issues ✓ Routes publications to users on request ✓ Aware of resources in nearby libraries ✓ Maintain simple circulation system 	<ul style="list-style-type: none"> ✓ Gathers research materials for specific requestors ✓ Prepares bibliographies ✓ Does comprehensive literature searches on request ✓ Prepares and distributes acquisition lists 	<ul style="list-style-type: none"> ✓ Locates, extracts, evaluates, and reformats information for user ✓ Prepares critical bibliographies ✓ Does exhaustive literature searches ✓ Prepares and distributes abstracts of current literature ✓ Secures and arranges for translations ✓ Knows user interests and needs and acts to fulfill them ✓ Knows sources of unpublished information ✓ Assists in editing office papers and publications

Table 13. Rating for Oxford library. Library staff: 1; lab staff: 40.

Level of service, NEFC libraries 1990

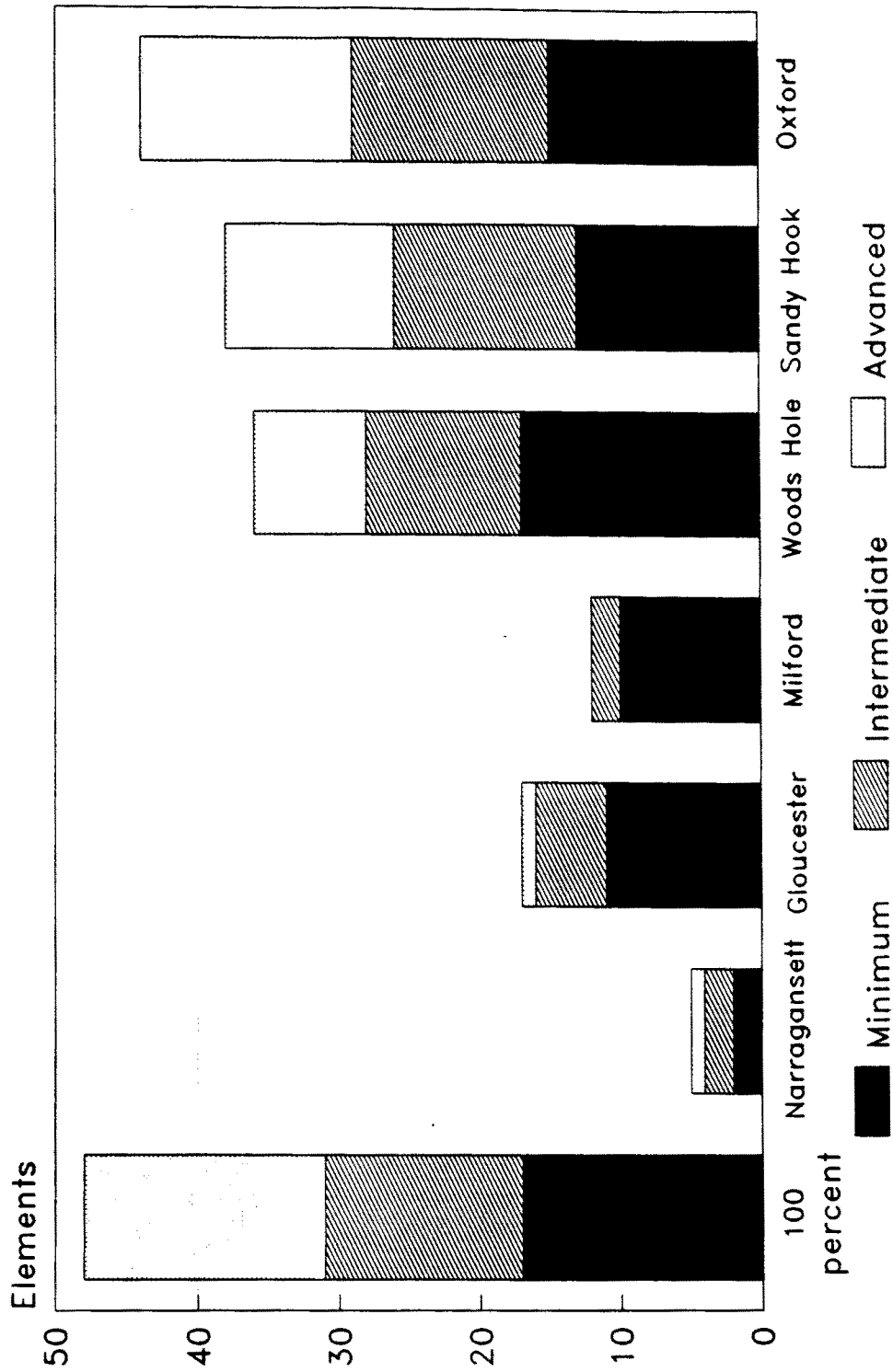


Figure 7

Figure 8. Library Services at the Northeast Center.

	Gloucester	Woods Hole	Narragansett	Milford	Sandy Hook	Oxford
Staff						
Librarian					X	X
Library technician		X			X	X
Serials list available		X			X	X
Literature searches						
Staff	X	X	X		X	X
Outside contract	X	X				
ILL						
Staff	X	X		X	X	X
Contract	X	X				
OCLC Cataloging		X			X	
Reference service		X			X	X
Acquisition lists		X		X	X	X
Bibliography					X	X
Pamphlet file		X		X	X	X
Cooperative/contract libraries offering NEFC staff privileges	MIT	MBL	PELL, URI	Yale	Rutgers	
Networking	Fedlink	Fedlink IAMSLIC CLAMS NELINET	Fedlink	Fedlink MUSSEL	Fedlink IAMSLIC NJLNet NJSGP	Fedlink IAMSLIC MLN/ (NLM) CBIN MAHSL

CBIN: Chesapeake Bay Information Network
 CLAMS: Cape and Islands Library Automation System
 IAMSLIC: International Association of Marine Science and Library Networks
 MLN: Medical Library Network
 MAHSL: Maryland Association of Health Science Libraries

NELINet: New England Library/Information Network
 NJSGP: New Jersey Sea Grant Program
 NJLNet: New Jersey Library Network
 NLM: National Library of Medicine

MUSSEL: Marine Union Serials List

backlog of materials to be input. While conversion to the online database would make input faster, not everyone has access to ASFA on-line. Further, the proliferation of important aquatic science papers in journals seemingly outside the field (nutrition, medicine, law) make it impossible to get all the significant abstracts into the database. ASFA can only abstract those journals to which it has rights. In some cases, the rights to abstract a journal of growing interest to ASFA is abstracted by another company.

Some conclusions to be drawn here with relation to the NEFC are:

- There is more information than ever, and its nature is web-like, not linear.
- Professionally trained information persons are required for any research staff hoping to keep in touch with important developments in the field.
- Computer-based storage and retrieval is integral to using information in the coming decades.
- The high cost of information makes investment in training, sharing, and networking among Center and NOAA libraries crucial to the question of whether we will be able to afford the research support we will need in the coming years.

"...databases in the earth sciences alone already contain about 100 trillion letters or bytes, or 100 terabytes, of information--over 10 times as much as in the entire Library of Congress."

D. Alan Bromley
Science Advisor
to the President

7th Annual
Forum on
Federal Informa-
tion Policies
March 21, 1990

The Information Services Section is a member of FEDLINK, a network of federal libraries that is the country's largest library network. Through FEDLINK, we can afford access to OCLC, the online computer catalog that every library that can afford it contributes to. In addition, we can also access several large online databases for literature searching at a price that we can afford. Most local libraries of similar size to NEFC libraries could never hope to access these services because of the cost.

The NOAA library is the connection for NEFC and NMFS libraries. When NOAA was formed, the NMFS brought more libraries into this system than any other group. Consequently, the NOAA library management has always taken a significant interest in our activities and staff. In fact, NOAA library administrators were also among the founding members of IAMSLIC (International Association of Marine Science Libraries and Information Centers), a professional organization for marine science librarians. The major NEFC libraries and the librarians are active members of IAMSLIC, benefiting from various exchange and borrowing arrangements with other members.

The NOAA library has recently revived an on-line NOAA catalog. Using the records of OCLC, they were able to compile a union catalog of holdings from NOAA libraries. The catalog was mastered onto CD-ROM disks, and the NOAA library has made the disks, their monthly updates, and the CD-readers available to major field libraries free of charge. The NEFC has three of these machines.

Missing from this catalog are those materials that have not been entered into OCLC. In the case of NEFC and most NMFS libraries, the records aren't entered because the facility lacked funds, training, or staff. The NOAA library has been working with OCLC to get an agreement for retrospective conversion of these collections, reducing the cost of adding a record from \$1.49 to \$29 for those who can add records. This virtually guarantees that NOAA libraries would be able to share collections effectively. However, the Centers have to make the funds available to input the information in order for the project to succeed.

Use of the computer links to DIALOG, OCLC, IAMSLIC's bulletin boards, OMNET, and SCINET just to name a few, puts us in immediate contact with other science institutions, libraries, professionals, and databases.

It is critical that we continue to support the equipment and training needed to take full advantage of this capability and that we support the NOAA library's networking efforts on our behalf.

PROBLEMS AND ISSUES OF IMPORTANCE AT SOME LOCATIONS

The Milford Case

The lab is located on Long Island Sound at Milford, south of New Haven and north of Bridgeport. The lab conducts much of the Center's cellular and organism level biological work. The collection emphasizes aquaculture, genetics, parasitology, microbiology, fisheries, physiology, and fish pathology.

From the early 1980s until 1987, the NEFC laboratory at Milford had library staff and a library collection. The librarian was hired in a training position. The government paid for the incumbent's education costs in pursuit of an M.L.S., in which she was successful and eventually advanced along the career ladder to a GS9 librarian.

During her tenure, the collection was fully cataloged for local circulation. A pamphlet file and reprint file were organized. A great number of the books were added to OCLC. Tables of contents listings, acquisitions lists, serials lists, statistics, annual reports of activities, subject bibliographies, and finding aids were developed for the collection. The circulation system was policed, the extensive journal collection (\$20,000 to \$25,000 invested in current serial titles annually) was maintained and bound. The librarian was among the first computer-literate staff, and she contributed to training others on micro-based software available for cataloging and indexing small collections as well as using online databases and mail systems.

The staff were fully supported with inter-library loans and reference services. An active library committee helped make decisions with regard to serials and book purchases. An informal arrangement was made with Yale University for ILLs and for NMFS staff to use the Yale library facilities.

In 1988, the incumbent resigned following a detail to Woods Hole. At the time, one of the seemingly annual summer hiring freezes was in effect and the position was not filled because of its restrictions. Two biological technicians were enlisted from the scientific staff and paid an average of 10 hours a week in overtime to keep up with the mail and try to keep some order in the stacks. In FY89, one of the technicians left Milford and the librarian's position wasn't filled in anticipation of the program review slated for 1990. The position was recommended in the FY1990 budget, but sacrificed at the last minute when funds were not available. No overtime money was allocated for library work until Spring of 1990. The technician averages 5 hours in the library per week. She is leaving the Milford lab in July.

During the past three years, the library budget has

been supported fully for purchasing materials. Table 15 shows a comparison of service level.

Table 15. Library services at Milford lab, 1987 and 1990.

	1987	1990
Reference and referral	x	
ILL	x	x
Subject bibliographies	x	
Current awareness	x	x
Literature searches	x	
Collection development	x	
Circulation	x	x
Cataloging	x	
Accessioning	x	x
Systems analysis	x	
Binding	x	
Acquisitions	x	x
Serials control	x	x
Statistics	x	
Reference and referral	x	

The technicians provided little if any reference service. Interviews with staff indicate they have a need for someone to set up and maintain a system of easily understood finding aids.

ILL

The technicians were not fully familiar with basic ILL procedures. When given a request, they simply filled out a standard ALA form and sent it out virtually blindly to any library without checking a serials list or OCLC first to increase chances of success.

Subject bibliographies

These are no longer developed.

Current awareness

Table of contents for recent journals are distributed among the staff. Monthly accessions lists and other memoranda are not. Collection, reading, and current awareness files maintained by former librarian were not continued.

Literature searches

The computer equipment that was in the library was moved to an administrative office, cutting the library off from DIALOG, OCLC, and the online circulation system set up by the prior librarian. The NOAA library sent a public-access CD-ROM terminal to the Milford Lab as part of its CD project, but it is unused since no one knows how to operate it.

Collection development

Book announcements are routed occasionally. Staff recommends purchasing. No one keeps track of what's needed to fill out the collection.

Circulation

These records are generally kept up, although users are on the honor system to check out and return materials. Many items have found their way to offices around the lab without being recorded as on permanent loan.

Cataloging

Some attempt has been made to catalog books on OCLC. If an item is not found on OCLC, it is put aside. The librarian developed an extensive cataloging and indexing system for the collection on the microcomputer. Technicians simply did not have the time or the background to decipher it.

Accessioning

This is generally kept up to date.

Systems analysis and program planning

The technicians have had to devise some new ways of doing things. However, the mother of these practices is necessity, not an understanding of standard operation.

Binding

None since December, 1987.

Acquisitions

Twenty books are recorded as new since 1987. However, examination of financial records indicates that more have been purchased.

Serials control

Technician prepares the annual order for journals purchased through Readmore and work through Readmore to claim missing numbers. No inventory of back issues needed has been done. A serials holding list from 1987 is still online, but the technicians are not able to update it.

Statistics

Not kept at this time.

This discussion reveals:

- Lab staff are not very well-supported in acquiring or discovering information.
- The collection is not well enough documented for staff to make optimum use of what is there.
- Materials are lost to staff because the collection is not controlled.
- Without staff and without online access, the materials in the collection can't be shared even by the NEFC libraries.
- The staff has almost no recourse for obtaining materials they can't find on site. The agreement with Yale has suffered because it was predicated on a librarian being at Milford to handle administrative matters such as ILL returns and verifying staff.
- Purchases are made with library funds but not added to the collection for everyone to use.
- Because they are not bound, the investment made in journals is not protected.

The tools are in place for reclaiming this collection, but a staff position is required to do so. Also, the staff and collection at the Milford lab is large enough and unique enough to require a position in the professional librarian series.

The Oxford Case

Oxford's laboratory was a federal lab until 1987, when it became a cooperative lab, jointly operated by the state and federal governments. As of June, 1990, the federal scientific staff has been reduced to nine. The state staff numbers between 25 and 35. As part of the agreement, the federal government agreed to maintain support staff at the facility, including the library. Since the researchers added by the state were engaged in similar research to that conducted by the federal staff, the subject matter of the library collection has proven appropriate.

The Oxford laboratory is located on Chesapeake Bay on Maryland's eastern shore. It is a highly specialized library located in a rural area. Consequently it is an important contributor to the medical and scientific communities in that region of Maryland. The Oxford Lab library and staff represent possibly the greatest single resource for medical and marine pathology

researchers in that region. The high level of support enjoyed by the combined staff of the Lab (reflected in Figures 8 and 9) is a testament to the librarian's professional expertise in maintaining the resources available and taking full advantage of network and cooperative agreements to fulfill the needs of the staff.

Since the cooperative agreement went into effect, several of the staff have been reassigned to other laboratories. The maintenance staff is no longer part of Program Support. There is ongoing discussion about the fate of the lab, much of it strongly indicating that it will be turned over to the state.

This indication is strong enough that researchers who were reassigned to other labs attempted to take large portions of the collection with them when they left, claiming that it would be lost to the state otherwise. This resulted in a "read my lips" memo generated by Information Services and distributed under the Research and Science Director's signature stating the NEFC policy with regard to library materials: that they are the property of the Center, not an individual researcher and belong to the collection unless specifically deaccessioned for cause by the librarian or the Information Services section chief.

The seeming impending close of the lab also precipitated a plan to move the collection in its entirety to Horn Point. A senior researcher at the Oxford lab involved in planning a new research center at Horn Point volunteered the collection during the planning phase. Potential staff at the new lab regarded such a gift as miraculous.

The section has received mixed messages from state management since the merger with regard to the library. At first, the state lab director suggested that it be moved altogether because his staff didn't need it. Since that time, he has circulated descriptions of the facility and the services offered to state scientists outside the lab, encouraging them to take advantage of the facility. Also, the state has indicated they would chip in some money for binding and for accounts on OCLC and DIALOG, if the librarian would provide searches.

Since the future of the lab is undecided, it would be wise for the Center to decide what to do with the collection in the event that the federal side closes. The collection has been maintained for almost two decades by trained librarians. The reprint col-

lection alone is a valuable research tool. The collection is sufficiently specialized and organized to represent a major special collection in any science library. Considering the federal investment in its development, it hardly seems prudent not to have a plan.

Although no official thought has been given to this problem, quite a bit of unofficial discussion has ensued. Some alternatives might be:

If the federal services wishes to maintain a presence in the region, continue to operate the library at the lab. It is integral to research carried on there anyway and has become an important part of the scholarly support system in that region of Chesapeake Bay.

Move the collection to another NEFC lab, probably Milford, which conducts pathology/shellfish research.

Whatever the decision, it is unconscionable that the collection and the work invested in it become lost to the federal system. We do not consider it acceptable that any alternatives be entertained that involve dismantling the collection, leaving it unattended, or placing it in a location or organization where its contents are not available to NEFC.

The Woods Hole Case

The Woods Hole Laboratory is the largest lab in the NEFC system and is home to the directorate of the Center as well as the support staffs and the bulk of the Conservation and Utilization Division. It has a long and rich history, stemming from the origins of the NMFS.

The collection was maintained by a GS11 librarian and a GS7 Library technician until 1987. In 1987, the technicians position was RIFed (reduction-in-force) in favor of a contracting library arrangement with the Marine Biological Laboratory.

The various happenings associated with the merger have been discussed elsewhere, but of interest to us here are some revelations of hindsight. Also, it is a good time to address the question of institutional archives.

The Woods Hole staff has for many years paid a fee to the MBL to use the library. The library is world known for its marine collection, specializing in biol-

"We are not in danger of losing our country's institutional memory, but we are in danger of losing control of it."

Kenneth Thibodeau
Center for
Electronic Records
National Archives

Joint Spring
Workshop
Library of Congress
March 1990

ogy and related physical sciences. It operates jointly with the Woods Hole Oceanographic Institution, and so carries a relatively strong collection in oceanography and ocean processes as well. It has a massive journal collection (more than 5,000 active titles) a modest book collection (approximately 4,000 volumes), and excellent reference collection, and is heavily developing online access to major databases.

The contract buys full access to the collection for NMFS staff; supports a portion of the journal subscriptions and binding costs; pays for the space taken up by the NMFS book collection housed there; ILL; literature searching; photocopying; and overhead for collection management and maintenance. The MBL cataloger enters new books into the OCLC database for us and the resulting entry is used both on the main catalog (as OAP) and on a local record (MBWF) for use in the MBL automated catalog.

The MBL library is an excellent facility and the NMFS staff wants full access. On the other hand, the contract has neither saved money nor has it improved services to the Woods Hole staff. Since the merger, the annual contract cost has burgeoned from approximately \$45,000 to \$73,000.

The contract places all services within "the operating policies of the contractor." This means that they do not collect for areas of fisheries interest unless they overlap with those of MBL-WHOI. They have no interest in papers of international fisheries organizations nor in any other "gray" technical literature where much of the ongoing government fisheries science activity resides.

One rationale for moving the book collection to MBL was to save space. In fact, the MBL is also interested in making the best use of its space. Books transferred to MBL in the original merger are maintained, but they are more selective about later additions to the collection and are asking us to weed the current collection radically. Since the lab has no book budget, books are purchased out of supply accounts and are limited to major reference works and back issues of serials for binding. Investigations purchasing books usually have them cataloged at MBL and assigned to them on permanent loan. Hence, space saved by moving the book collection is being used by individuals building personal or section libraries. These materials are not well-circulated and are sometimes effectively lost to the community.

The MBL staff is dedicated, but small. NMFS shares the services of one cataloger and one reference librarian with the staffs of MBL and WHOI. These professionals are highly trained, but there is a learning curve involved with fisheries literature. They exhibit no interest in becoming more knowledgeable in the governmental or international literature that is such a part of NMFS work. Further, the collection is light on

materials for economics, marine policy, and institutional planning staffs.

Like WHOI, the NMFS lab continues to maintain a documents library. After two years without staff, it was clear that there was sufficient activity in the NMFS documents collection and in reference for fisheries questions that a librarian was needed. Since the documents collection was only grossly documented during the time of full library service at the Woods Hole library, that has been the first priority of business since the position was filled with a technician.

For these reasons, it is important that the Woods Hole library put effort into organizing, documenting, and filling out the technical report collection. Further, some arrangement should be reached that allows other NEFC and NOAA libraries access to the MBL collection under the terms of the contract in order to take full advantage of the association with the MBL.

The Woods Hole lab library is clearly the front-runner for an archival function. Center documents were collected and bound annually by the staff at the Woods Hole library for some years. Also, the library has a very interesting collection of historical materials that could be an integral part of the Woods Hole community reference collection if it were processed. Archival materials turned over to MBL were returned because there was neither staff nor space for its storage. Among these things were:

- Complete set of bulletins of the U.S. Fish Commission
- Original artwork for Paul Galtsoff's *American Oyster*
- Scrapbooks and other realia belonging to Galtsoff
- Original laboratory notebooks of Vinyl Edwards
- Scrapbooks, 1916-1947, *Gloucester Times*

Finally, the library now serves as a central distribution point for the informal Center technical series: NOAA Technical Memoranda NMFS-NEC and the Northeast Fisheries Center Reference Documents.

For these reasons, we feel that staff should be structured not only to manage the document library functions, but also deal with processing and preserving the archival material. Perhaps this would also be a good place to put supervisory responsibilities for library technicians at Gloucester and Narragansett, should such positions ever be filled.

Further, clerical support should be made available to handle the collection and binding of Center

documents and reprints, handle document distribution mailing lists and their annual purge, and answer requests for publications on behalf of all Center personnel.

The Sandy Hook Case

The Sandy Hook library is our most active in discovering and promoting the advantages of online systems. The most critical problem looming in this facility's future is an impending move.

The lab is housed in an historical building that is part of Fort Hancock. A new marine science lab is being built across the street. When it is completed, the library will move to the new building, to a smaller space than it now occupies, while renovations are completed on the building in which it is now housed. Then the library is to move back into the old building, but into a different space.

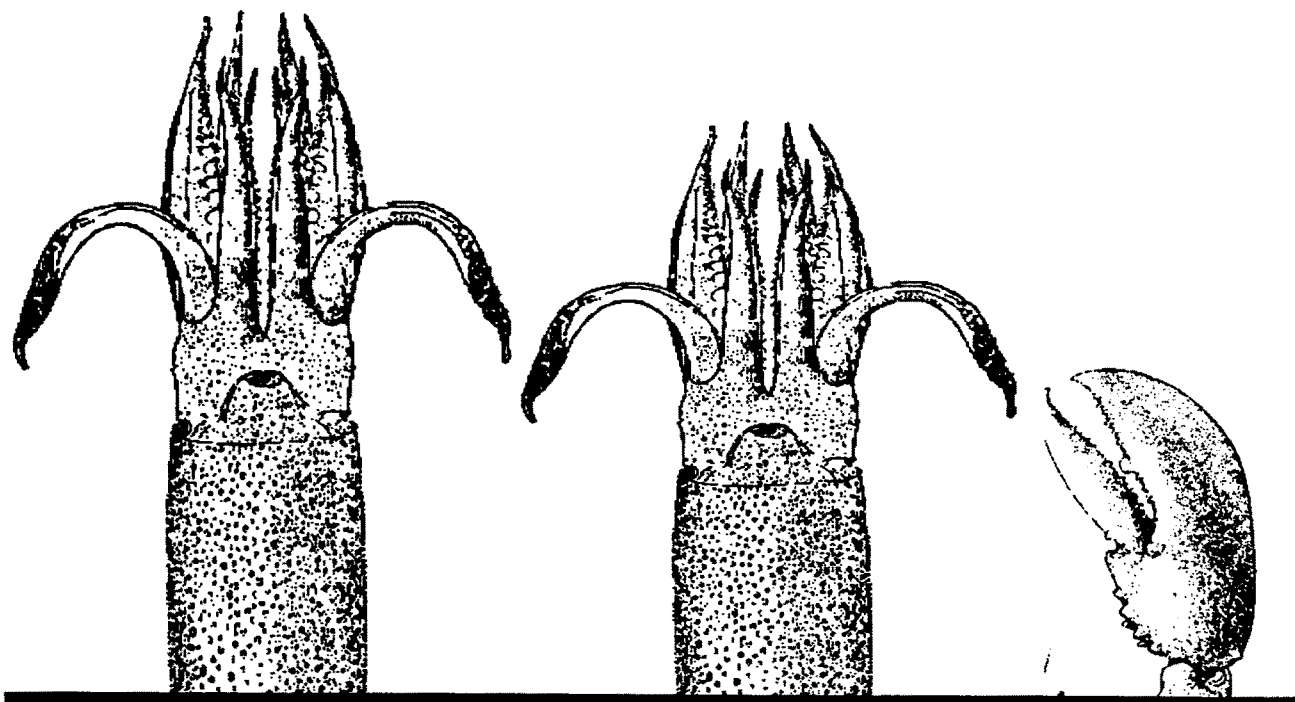
At this time, no serious attention has been given to the problems involved with these two moves. The staff has expended much effort over the past few years to rebuilding and re-documenting the collection following a September 1985 fire that destroyed much of the library. It has just reached the point where there are more materials on the shelves than there are in boxes. Moving the library means making decisions about what will remain an active part of the collection, and packing up some portion of it for the time the library operates in the new building. Further, guidelines will have to be established for use of the facility by other residents of the new lab who are not federal staff.

We feel that the move must be handled by professional library movers. Budget planning for this eventuality should begin now and management should be committed to the cost as soon as possible. Reasonable space for storage of inactive portions of the collection must be discovered and reserved as soon as possible so library staff can have some idea how much appropriate storage space can be found, and what will be required to store holdings there.

"The library profession must be concerned with programs whereby public documents and government information are easily accessible and readily available to all."

David Bender

**Executive director, Special Libraries Association
7th Annual Forum on Federal Information Policies
March 1990**



Publishing

"Publication is the indispensable outcome of research... Science is for people, and knowledge gained by arduous and rigorous scientific method must not be wasted. To prevent waste, results must be presented to people for their best uses."

Dr. Robert H. Giles, Jr.
Associate Professor,
Wildlife Management
Virginia Polytechnic
Institute

In Wildlife Management Techniques, 3rd ed., rev. 1971

TECHNICAL PUBLISHING

The 280 NEFC scientists engage in a variety of publishing activities. The Information Services staff devotes approximately .95 FTE in support of publishing. Among the scientific staff, activity ranges from consistent publication in peer-reviewed journals to significant publishing in gray literature. The most common gray literature outlets for Center information are the NOAA technical series, technical series of other government agencies, and international fisheries science organizations.

Scientific staff with positions that are narrowly defined by a discipline, such as the taxonomy work of the National Systematics Laboratory staff or the food chemistry and nutrition work at the Gloucester lab, tend to publish more often in the peer-reviewed literature. On the other extreme, the Conservation and Utilization staff, responsible for most of the science associated with fisheries management (regional management councils, support for various Congressionally-mandated fisheries programs, marine mammal contracts) contributes heavily to gray literature, although significant peer-reviewed articles are also developed.

There has long been a controversy regarding the heavy emphasis placed on peer-reviewed publishing in the Center, one that is not unique to the NEFC. One factor in performance evaluation of the scientific staff is scientific publishing. NMFS has been late coming to grips with the changes in scientific output that are a direct result first of the FCMA and second, budget reductions. The FCMA shifted the focus of fisheries center work from science with a conservation focus to science with a management focus. Budget reductions have curtailed not only the number of projects, but the number of field days and technicians scientists can use for research.

The publishing output has probably also changed as a result of these factors, as some staff claim. More NEFC scien-

tists may be publishing in international and gray literature than before the FCMA, in order to publish results of work of interest to groups managing the resources of the US EEZ. The lack of status for these series quite definitely affects the performance evaluations of federal scientists.

In 1988, the Science and Research director discussed this problem with the section chief. The upshot of the conversation was although many people claimed that the changes in the Center's focus had changed publishing activity, there was no way to determine the trends in Center publishing over time. Further, there was so little follow-up on the manuscript process that it was hard to determine anything concrete about publishing success. (If manuscripts were submitted to journals how many were accepted or rejected? How many were never submitted? How many went to other outlets? How many were lost on some supervisor's desk?)

All manuscripts are threaded through a Center manuscript review process. The manuscript is first approved by the author's chain of command. Upon approval by the author's division chief, the manuscript is forwarded to the Science and Research director's special assistant. The manuscript is logged in and forwarded to the Center directorate for approval. The directorate must approve the manuscript for publication as well as the intended outlet. The Information Services staff receives the manuscript after approval if it is intended for the Center-controlled series (NOAA/NMFS-NEC Technical Memoranda or the Center Reference Document series). The technical writer-editor handles paper work for the NOAA-NMFS series. The section chief handles the NEFC Reference Document series, which is completely produced in-house.

This process is the same for any manuscript regardless of its intended outlet. As much time is often spent on NOAA technical memoranda as is spent on an article for a major journal. In terms of review within the Center, there is no real difference and in fact, most papers are "peer reviewed" although that review is

internal. In 1988, the IS section chief suggested that an effort be made to place manuscripts in series according to the function of the series and that the overall archive and production quality of all series be upgraded to the fullest extent possible. This would help alleviate the "grayness" of the literature by making it citable and retrievable. After all, the material is published and represents a significant output for much of the NEFC staff. This suggestion was taken and the overall production and distribution of the informal documents has increased.

IS does not see any manuscripts intended for peer publication unless the author seeks copy editing or technical editing assistance. The IS staff technically edits manuscripts intended for NMFS series before proceeding with the final copy. All editorial decisions are subject to veto by the author. The section chief completes the mechanicals for publication using a desktop computer publishing station.

Offset projects for the Center are handled through a contract printer outside Boston. The Center offset printing contract is bid for annually. Before 1989, each job was bid separately. The quality of jobs was variable as were the locations and turn around times for the various successful bidders. In 1989, the first annual contract was bid and the resulting relationship with a printer has stabilized these things. The NEFC Reference document series is photocopied and bound in house and distributed by the authors and the Woods Hole Library. The technical writer-editor also produces several information products as a result of collecting other materials for publication. Monthly Highlights is a newsletter containing brief descriptions of Center research results and quarterly publication lists. The End-of-the-Year-Report is a similar document, an annual compilation of significant findings (some of which may not have been published in Monthly Highlights). The staff also produces the annual listing of Center publications. The most recent iteration was published as a NOAA Technical Memorandum, contains both formal and informal publications, and is fully indexed.

The snags in the publication system are generally related to the sometimes oppressive length of the supervisory chain that must approve each manuscript. At this time, there is no distinction within the process among manuscripts intended for a peer-reviewed outlet, a NMFS series, a Center series, or a popular outside publisher. There are reports of manuscripts languishing within the supervisory chain for years, even though the Center editorial policy provides for a two-week turn around. Further, most authors who are anticipating publication in a journal will send the manuscript out for simultaneous review by the publisher and the Center, technically a violation of policy but at the same time an expeditious way of getting approval should the manuscript be accepted by the publisher. Still other authors have given up on the Center cycle altogether and prefer to publish as co-authors with colleagues outside the Center or in association with another agency, thereby applying pressure for a quick turn-around in the process.

OTHER PUBLISHING

In addition to technical publishing, the IS and various other groups publish other things: public communications with constituents, employee information reports, popular articles, news releases, directories. Table 16 describes these.

The Information Services section has little to do with most of these publication except to produce mechanicals. Many of these are worthwhile public communications, but suffer from an overall lack of resources and Center focus for the communication. This leads to duplication of efforts, limited or inappropriate distribution, difficulty with mailing lists, and a vast array of production values for the many communications. Probably the most telling condition is that the communications fail to adequately inform NEFC staff and constituents, which is the whole point.

CONSOLIDATION OF ACTIVITIES

Because staff sense there is no overall plan or focus, they resort to publishing their own material in order to let others know what they are doing. This is an admirable

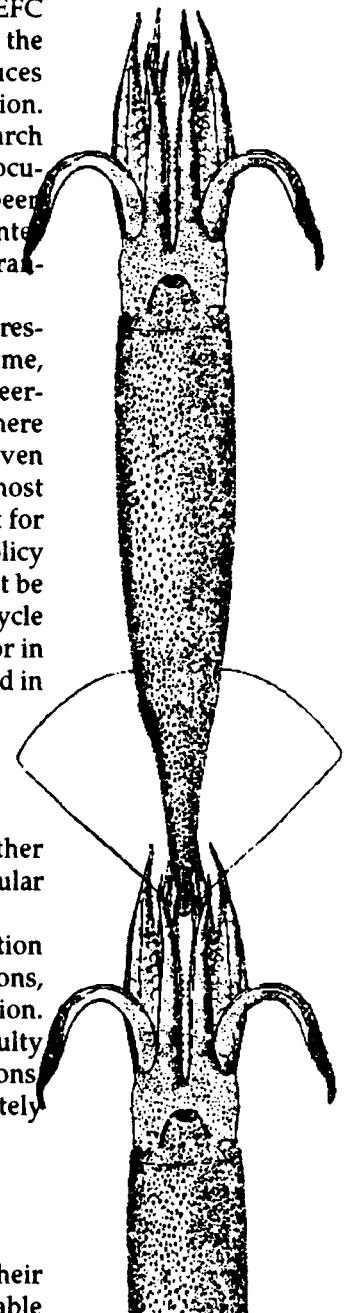


Table 16. Non-technical publications of the NEFC.

Product	Producer	IS Production	Distribution	MS review	Audience
Press releases	IS	Yes	IS list	Yes	Press
Press packets	IS	Yes	IS list	No	Press
Fishermen's Report	Survey	No	Survey list	No	Fishermen
<i>The Shark Tagger</i>	Apex Predators	No	AP list	No	Shark fishermen
<i>Linkages</i>	RPAC	Yes	RPAC list	No	NEFC staff RPAC constituencies
NEMFIS Directory	DMS	Yes	DMS list	No	users of NEFC online data
NEFC employee newsletter	Director's secretary	Yes	NEFC staff	unknown	NEFC staff
FWP newsletter	FWP coordinator	No	NEFC staff	No	NEFC staff
Research directory	RPAC	Yes	Constituents	Yes	General
<i>Commercial Fisheries News</i> articles	various	Yes	CFN	Yes	fishermen

impulse and should be supported. In order to make good and equitable use of the resources on hand, these efforts should be guided by Information Services.

The Center has moved toward this idea in the past few years. The various laboratory reference document series were consolidated into one series in 1989. The result is a clearly identifiable and retrievable document available from the Woods Hole library.

The immediate next step should be adoption of a Center-wide editorial policy contained in a handbook that describes the policies and procedures for all publishing. Such a document has been drafted and approved by division leaders. It has not been forwarded to the directorate for approval.

The second step would be to put control of the manuscript review process in the hands of Information Services:

The various approvals described in the editorial policy would be continued, but IS would have the responsibility for assuring that manuscripts proceeded through the process in a timely way.

IS would have all manuscripts in a log and not miss out on material that could be used for news releases, press packets, or in answering requests for information.

The section could easily provide the Center with a publication status and trends assessment annually that would help in planning for printing budgets and performance plans.

Compilation of the annual indexed Center publications would be more accurate and much easier.

All authors would have a single source for information on the progress of the manuscript and expected revisions.

The publications would acquire a uniform production quality.

The NOAA-mandated annual mailing list purge for serial publications could be accomplished more easily. IS staff could maintain some and train clerical staff to handle others, eventually converting all publication mailing lists to the same micro-based system.

The section would have access to a variety of information of interest to staff and Center constituents and be better able to develop news items.

The Woods Hole library could reassume its archival function, compiling annual Center Reprint volumes for distribution to key information centers, and distributing the NMFS and Center series.

Finally, the Woods Hole library, should it take on the Center archival function, should be the central distribution point for all Center publications. The library is already the central distribution point for the tech memo and reference document series and distribution of other series could be centralized and documented here. This is with the caveat that a clerical position be obtained to handle distribution and mailing.



PUBLIC EDUCATION, PUBLIC AFFAIRS, PUBLIC RELATIONS

The areas of public education, public affairs, and public relations are often discussed interchangeably. The Center IS section prefers the umbrella term "public information" to describe its activities in this area, because we function in all three categories. For the purposes of our discussion, definitions are as follows:

Public education: Providing the public with factual information about a topic through a variety of appropriate means.

Public affairs: Publicizing activities, events, or conditions; measuring public attitudes about and responses to the information; using the resulting information to refine publicity projects to engender more support for or better understanding of the institution and its products.

Public relations: Installing the public affairs program in the organization's management, with information project corresponding to management's objectives.

Public information: Some conglomeration of all three elements.

The IS section nominally has responsibility for these functions, although that responsibility is not exclusive. At this time, many of the NEFC staff are involved in public education, usually through answering requests for information. The IS staff with these responsibilities is spread thinly, and is also primarily reactive.

Referring to Table 2, approximately 1.35 FTE effort is spent in this function. The technical writer-editor and section chief pursue all three functions. The librarians are usually responding to general information requests or requests for publications. If the librarian time is separated out of the figure, the Center has .55 FTE pursuing formal activities such as press relations and development of education materials

The constituent coordinators in RPAC would seem to be conducting public information functions. Their role is to assist in transferring information between the NEFC and its major client groups:

- Regional fishery management councils
- Marine recreational fishermen
- Research vessel operations staff
- North Atlantic Fisheries Organization (NAFO)
- Habitat conservation constituencies
- Regional action plan
- Northeast Area Remote Sensing System
- Sea Grant community
- International Council for Exploration of the Sea
- Aquaculture

Activities in these positions seem to center around institutional planning rather than public information. Although some public requests for information are answered, there is no formal program except for Linkages, a monthly newsletter describing activities of the coordination group.

The most dispiriting factors with regard to public information are the following:

Public education: the major education facility is the NEFC aquarium. The staff is unable and/or unwilling to work with IS staff in producing improved documentation and exhibitry.

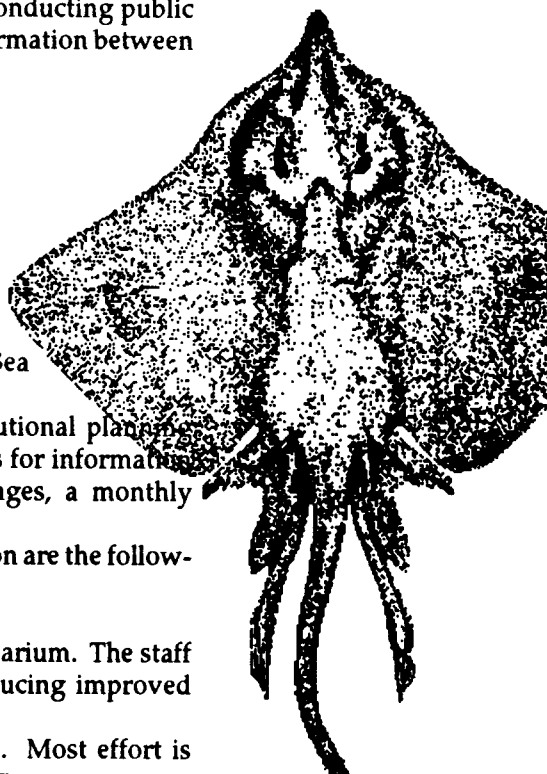
Public affairs: The staff is too small to pursue a formal plan. Most effort is

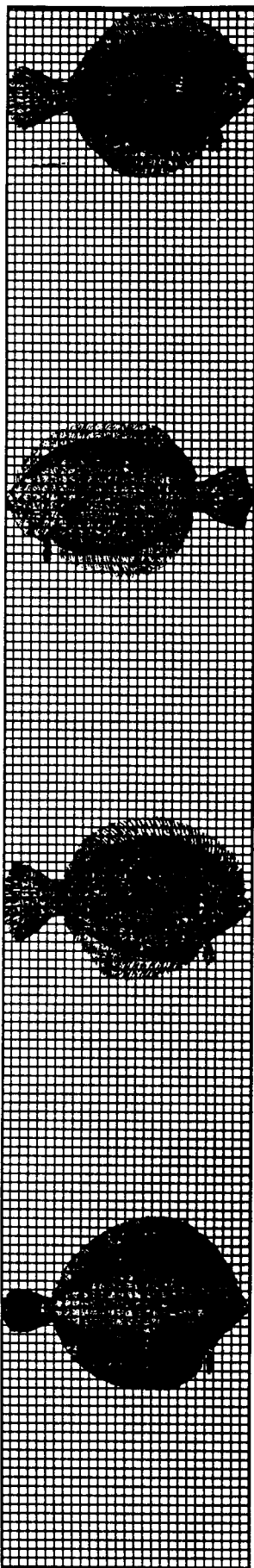
"...the [government's] long range planning of how to develop useful information has given away to a predilection for either reducing it, eliminating it, or hiding it."

*Sen. Jeff Bingaman
(D-N.Mex.)*

**Speaking as chairman
of the Senate
Subcommittee on
Government
Information and
Regulation**

**7th Annual Forum
on Federal
Information Policies
March 1990**





expended on a few high-quality projects. Other activities (press releases, feature stories, press feeds, participation in trade shows and/or local events) are pursued as time allows. This effort suffers because there is no system in place for IS to capture information about what is happening around the Center.

Public relations: At this time there is virtually no effort in this area. The IS section chief is not a part of the management structure and the section has not historically been relied on to provide public relations advice.

In general, we feel that NMFS fails to recognize the value and uses of a staff such as IS. As mentioned in the earlier discussion of staffing, positions in the public affairs series have all but disappeared since 1985. Of the two that remain, one is a half-time unfilled position in Honolulu and the other is newly-created in Woods Hole, and filled by a biological technician who has organized the aquarium's class tours and answers the bulk of the requests for information.

Personnel with training in this area are usually in the publishing series, and their duties are so diverse that no formal efforts are possible. Yet there seems to be little question that NMFS does not do a good job of informing its constituents or its management about its activities. If the results of the NMFS Needs Assessment (National Fish and Wildlife Foundation 1990) are to be believed, recovering information about NMFS activities is almost a joke in Washington, D.C.

The lack of public affairs positions is directly attributable the NOAA agency-level policy that this is a matter which can be handled from Washington, D.C., although that staff handles headquarters-level activity almost exclusively. Public affairs positions have been eliminated in the field for the most part, and staff pursuing public affairs activities are doing so as part of a much larger position description. While NOAA public affairs handles all press contacts regarding NOAA policy and all contacts with Congressional offices, they have little involvement in publicizing research. The NOAA handbook states that field laboratories are to conduct education and information programs based on their research activities. The NOAA Public Affairs office occasionally contacts the IS section for information, statistics, or for cooperation on a regional project (such as local visits by NOAA staff) but has shown no inclination to provide staff in support of what might be described as information efforts at the Centers.

This non-functional use of the information series is evident not only within the agency but within higher levels of government. A number of high-level Reagan appointees from various disciplines were converted at the end of his last term to career public affairs positions throughout government regardless of the candidate's background. This practice was prevalent enough to be the subject of a GAO investigation and a report in the Washington Post in 1989. No doubt this message further enhances the erroneous impression that people in this series are untrained, unskilled and nonprofessional and that anybody can do it.

NOAA has created an environment in which the information function is treated as a chore, one that can be completed by clerical staff armed with a photocopier and some form letters.

Public Education

Public education at the Center is primarily conducted by individual responses to requests that arrive by phone, mail, and memo. Some of these are simple, some are quite complicated. Questions are referred differently at different facilities. Those who sort mail and take phone calls usually route information requests to the subject area specialist at the lab or the library. Requests for publications are referred to the library or to the author.

Press queries are, we suspect, routed to the highest level supervisor with the expertise to answer the question who is willing to take them. At the Woods Hole lab, these are generally fielded by the Information Services section. Outside Woods Hole,

the section is not usually aware of these contacts until the article appears, the program airs, or the contact is reported as an item for Monthly Highlights or at the executive staff meeting. In the event of a major media contact (National Geographic, PBS, New York Times, Walt Disney Productions) the IS section chief will be notified, but after the fact and sometimes not even in time to publicize the resulting program or article.

On occasion the staff is called on to organize a press conference. IS staff usually accompany reporters from major markets on their interviews with Center staff. IS is the major contact with the NOAA public affairs office and responds to their requests for assistance and information. IS produces all official Center press releases.

Like most government agencies, NMFS has a responsibility to make information generated as part of its work available to the public. There is also an element of being proactive: that is, these agencies are formed in order to serve the public. Simply providing the information once some poor guy has discovered it exists is not enough. We are supposed to make it known that we have it, package it for the appropriate audience, and make it accessible in some priority to those who are most in need of it. Recently, the staff has developed an information pamphlet series. The idea is to continue it, providing one-page pamphlets on questions we are asked consistently. Marine mammal communication and navigation systems, shark habits, nutritional questions about fish, lobster and other shellfish aquaculture, fishing gear, fish abundance, questions about fish permits, and fish landing and price data are among these questions. Much time could be saved by such a product.

Another way to support staff in this area is to take on more responsibility for answering questions. The staff is small and not available at all labs, so this is not possible simply through routing all questions to IS. The IS staff already routinely logs and counts various types of information requests, but obviously does not receive all of them. But if staff members were available at each site, most requests could be routed through IS for a response. A combination of the pamphlet series discussed, online indexes to existing Center library pamphlet files, and designated experts for more technical inquiries are a likely answer. Routing these questions through IS for referral gives Center planners some statistical background for determining constituent interests, as well as the effectiveness with which the Center responds to the public.

The formalized education project is seated in the Woods Hole Aquarium. The staff of the aquarium is quite dedicated (under-funded and over-burdened, like everyone else) but the background of the personnel is in science, not in education or communications. Over the years the staff has obtained much practical experience in education, but is in desperate need of

support to efficiently plan for and execute responses to the many information requests, to develop education materials for their class tours, exhibitry, signage, and to help gain support for long-term plans.

In the past year, the IS section has helped aquarium staff revamp their aquarium group leader's guide. Some discussion of the student and teacher guides has been pursued. The IS section chief planned and executed a new Earth Day exhibit for the facility. The chief is working with the staff to secure an exhibit from the Smithsonian Institution that was developed by NEFC staff at the National Systematics Lab. She has also been negotiating for return of a \$20,000 recreational fish exhibit that is warehoused in the Gloucester Lab for use in the aquarium. After the review, the chief will finish a rotating exhibit designed to display science projects from various Cape schools in one of the major exhibition bays. The section has also supported new, updated signage for the building's exterior and purchased some equipment that will allow more exhibit construction to take place on site.

It is difficult at this time to make much headway in this area, since linkage between the two groups is minimal. More success is to be found on the staff level than at the management level. It is likely that this partnership will continue, although the extent to which IS can support the aquarium is directly related to time available and the desire of the aquarium director to cooperate in joint projects.

This year, the Center staff has also become more interested in educational outreach. One Woods Hole project is an attempt by the three Woods Hole institutions (MBL, WHOI, and Fisheries) to provide local k-12 science teachers with educational programs designed to expand their knowledge of marine science. The EEO committee at Woods Hole is interested in developing more student interest in marine science as a career choice.

The two projects have no connection with one another. While the IS section was included as a member of the EEO-based outreach committee, no advice was sought with regard to shaping these programs. The most successful outreach vehicle, the aquarium, was completely ignored as a focus for this activity--in fact, it is already fulfilling the goals of the EEO committee. The impulse of scientific staff to become involved with outreach activities is excellent. But in order for it to be successful, there must be a commitment on the part of Center management to dedicate the time and resources to develop a focused, effective project.

Public Affairs

The formal public affairs projects at the NEFC are focused on a few regular, high quality products:

Monthly Highlights: single paragraph descriptions of research results, expert contacts, and quarterly publication listing

End-of-the-Year-Reports: Similar to Monthly Highlights but also contains reports of ongoing work
press releases: generated by staff as the need and information is available

Press packets: new project generated quarterly. Collection of scientific information on a single topic along with Center expert list and story ideas. Sent to a highly targeted mailing list of environmental and science reporters in the Northeastern U.S.

Commercial Fisheries News articles: generated several times a year by scientific staff. One page is purchased in the Commercial Fisheries News and the story is run like an advertisement.

In addition, the staff attempts to feed ideas to the regional press. This is in part because we don't have the time to pursue the stories ourselves and in part because reporters are going to do the stories anyway. Successful projects include:

Feature on the Woods Hole lab benthic collection

(*Cape Cod Times*, Ottoway News Service)

Press conference for new NOAA administrator John Knauss

(cancelled day before arrival)

Feature on Woods Hole lab scientist assisting local first grade with science project

(*Cape Cod Times*)

Feature on new marine mammal project at Woods Hole lab

(*Cape Cod Times*, Falmouth Enterprise)

The IS section believes that it falls short in the area of public affairs for a number of reasons.

One is simply lack of staff time to pursue these activities. For example, the lecture series at the Woods Hole lab provides a number of interesting topics for articles, but the IS staff rarely has time to attend. The section chief and the technical writer-editor have attempted to write and pursue public affairs plans, but the demands of other activities have left little time to stay with such a plan. The strategy has been to concentrate on the regular projects and make an extra effort when time allows.

Another problem is not having a good handle on what is happening in the Center. You will note that the major thrust of public affairs activity is Woods Hole and Woods Hole staff. With six laboratories scattered from the Gulf of Maine to Chesapeake Bay, it is hard to keep informed. Recall that the IS section does not have staff at each facility to serve as a contact point. The chief of the section is not included in management meetings and is thus only partially informed about Center management's goals or priorities. The most helpful links for us are the submissions to Monthly Highlights and the RPAC quarterly summaries of activity.

Management does not seem to expect a full commitment to a public affairs plan from the section. It is not known whether this is by design, an understanding of the limited staff available for the effort; or through lack of experience about the possibilities of such a function since it has never been attempted at the Center.

Also, management has not given the section a clear idea of what course to pursue in public affairs. There seems to be an interest in raising the Center's visibility among marine science organizations and with marine resource users. This has translated into some press feeds and press releases. The directorate has been very supportive of articles featuring individual personnel accomplishments (awards, cooperation with local school groups) or stories about facilities or programs. It has been less enthusiastic about publicizing research findings.

If we look at a listing of press releases for the past three years, we are struck by two things. There are very few for an organization of this size and they are predominantly about awards, not communicating science.

Release Number

Topic

- * 88-01 1987 New England Fish Harvests down in weight, up in dollars
- 88-02 International Atlantic salmon organization elects U.S. president
- * 88-03 Fishing mortality at new high for Georges Bank cod
- 88-04 Deputy Center director garners New Jersey environmental recognition
- * 88-05 Fisheries center awards sea sampling contract
- * 89-01 1988 New England fish harvests up in weight, down in value
- 89-02 NMFS employee marks 50 years in federal service
- 89-03 Center scientists named to marine mammal advisory post
- 89-04 Less litter, more derelict boats found in Woods Hole clean-up

Release Number	Topic
89-05	UMASS cooperative research program
89-06	Fishery biologist receives award
90-01	Fishery biologist receives bronze medal
* 90-02	Preliminary 1989 landings and values of New England fish and shellfish
* 90-03	Preliminary 1989 landings and value of Middle Atlantic and Chesapeake finfish and shellfish
90-04	New marine mammal investigation
90-05	Center scientist garners USDOC grant
90-06	Salmon tags worth big bucks
90-07	Two NMFS scientists elected to international posts
* Some scientific content	

Only six of these eighteen releases have any scientific information in them. The section relies on *Monthly Highlights* to transfer information about research discoveries, but its function is different from that of a press release. *Monthly Highlights* is very successful as a tip sheet for reporters. The one-paragraph explanation of a research result along with the scientific contact provides an immediate start if the reporter is already interested in the information.

However, few media outlets have dedicated science reporters. While a few reporters might glean the implication of a research result for a story from *Monthly Highlights*, the press release allows the institution to point out the implications, as well as educate the receiver on why the information is important.

Although it is perfectly legitimate to use the press release series to announce staff achievements and highlight community involvement, the amount of scientific information transferred in this series needs to be increased. Otherwise, we miss the opportunity to be labeled as purveyors of scientific information and the series is branded as a "flak" document. We have so few tools available to transfer the information widely, the release series is critical to our mission.

The highly politicized nature of Center assessment and environmental activity is the root of this conflict. IS maintains that a public information program is rooted in the research and its results. Management agrees. IS maintains that the relationship with the press must be one of providing Center news, not news about the Center. Management is much more comfortable with news about the Center than it is with Center news.

To illustrate this point, let's take a look at two examples. In 1989, the staff successfully placed a story on the Center's benthic collection in a local paper owned by a chain. The story was picked up by other chain publications and received good play in southern New England. The collection contains hundreds of thousands of specimen obtained during the Woods Hole lab's existence, some from the late 19th century. The bulk were obtained between the mid-1950s and mid-1960s, particularly during the so-called "coastal margin program," a federally-funded attempt to geol-

ogically describe the continental shelf of the U.S. in preparation for offshore oil and gas leasing. Sediments were one characteristic to be described. In a series of cruises along the U.S. east coast from 1963 until 1968, the fisheries service was part of the sediment sampling program, assuming responsibility for sorting and describing macrobenthic organisms recovered during the geological grabs.

This collection has been variously touted and neglected within the fisheries center since that time. The original inspiration for the story was the onset of Halloween, when the section chief thought the local papers might be interested in the "creature" angle on the story and could use it as a vehicle for explaining some science. The project was a success and management was happy.

A somewhat less successful project was one revolving around a 1988 press release on fishing mortality in Georges Bank cod.

In September 1988, the chief scientist in charge of Georges Bank cod assessments received information from the Canadian government that changed his VPA estimation for this species. He explained in an internal memo to his supervisor what this meant to the assessment. The upshot was that fishing pressure had never been higher and there were far fewer young fish surviving to spawn than previously thought. The change was significant enough that the New England Fishery Management Council was duly informed. Sensing that this was a newsworthy item, the scientist suggested a press release explaining the implication of the new data. The press release was developed, passed through the manuscript review process, and mailed in mid-October. Along with major media outlets, the fishery management councils are on the mailing list for press releases.

On October 31, a story on the cod numbers ran in the *New York Times*, quoting the Center scientist. Sometime after that, the section chief was told that the release "never should have left the Center," and that a heretofore unknown link in the manuscript chain had been missed, namely that all releases that had any policy implications were to be approved not only by the Center director, but by the Regional director. Fur-

ther, the chairman of the NEFMC claimed that the council had no knowledge of this new report--clearly not true, since the scientific findings had been presented to the council prior to the release's development and since the council received copies of the release at the same time the press did.

At this time, most Center work can be said to have policy implications since it has become a scientific arm of federal marine resource management.

On November 15, 1988, the *Boston Globe* ran a front page article on the cod "crisis" in its Sunday paper. Again, Center scientists were quoted along with the NEFMC executive director.

In mid-December, in response to a scathing memo from the NEFMC regarding the release and the Center's annual publication on the status of Northeastern U.S. fish stocks, the Center Science and Research director and the Regional director apologized to the Council manager for the release.

Incredibly, the integrity of the information in the release was not questioned. No one suggested that the information wasn't accurate. In fact, the responding memo took pains to defend the release as unbiased. Instead the apology was one that discussed "propriety", fostering "good working relationships," and a "breakdown in our internal review process." The implication was that although this information was of significance, it should not have been publicized. In other words, the management system is clearly not working to rebuild this stock, but let's not draw attention to that fact.

Understandably, the Center walks a very tight line with regard to the Councils. Clearly, management has every interest in fostering a good working relationship with them and in protecting individual scientists from taking responsibility for predicting the unpredictable. However, it also has a responsibility to publicize information on this resource.

From the IS perspective, this was a great success. The release was picked up in two major markets. The reporters contacted not only Center scientists, but also other concerned parties for well-rounded stories. The information was accurate and the resulting stories were not particularly slanted. The attention drawn to the cod decline resulted in a number of spin-offs: a Pulitzer-nominated series by the *Hartford Courant* on the state of Georges Bank fishing, a CBS Evening News feature on the New England groundfishery that included an interview with a Center scientist, and a recent report on the groundfishery for the *Nightly Business Report* on PBS radio.

Most importantly, the attention drawn to cod numbers significantly broadened the debate on fish management, making the question of bias less significant to the overall importance of knowing the status of the fish stock. Later stories included not only the usual interest groups (fishermen, enforcement offi-

cial, other scientists) but also the public--people with an interest in the Georges Bank ecosystem and in the use of this public resource.

From management's perspective, the delicate balance between managers of the resource and the scientific base was tipped. They felt that the quotation of scientists identified them too personally with the issue in a way that could backfire should assessments prove wrong. Further, by angering council members, the Center ran the risk it would be accused of biasing scientific reports toward conservation rather than utilization.

Ironically, a similar situation occurred in December 1989. The total cod stock biomass had increased and was at its highest level since the early 1980s. The IS had the confirming report and was waiting for some signal from management before making plans to release it. On January 25, the council sent out a news release claiming that Center scientists said cod, haddock and yellowtail flounder were "showing signs of recovery after sharp declines in the 1980s." This release was misleading in that the increase in the biomass was mostly juvenile fish not available to the fishery, the "high" stock level was in comparison to the 1980s--a decade of historic low stock levels, and that the increase was seen in a period in which the annual survival rates, catch per day, recruitment, and spawning stock biomass continued a declining trend.

The Center did nothing to publicly correct this misinformation. We also missed the opportunity to put the information out as soon as we had it, with a fuller explanation of the increase and what it reflected.

The lesson learned here by IS was not to pursue scientific press releases until more can be learned about management's goals in transferring this information. We have concentrated on becoming known as a raw information source instead. However, if we examine the process in the cod debacle, it is clear that the IS section is capable of handling public affairs projects. We feel that we can be a significant part of a Center public affairs program should management choose to take advantage of our capabilities.

In summary, the section will continue its established vehicles for transferring information. It will attempt a closer relationship with the aquarium and with scientists interested in educational outreach projects. We will develop a modest project list, one that we feel we can accomplish given existing time and resources that includes a stronger emphasis on science reporting in press releases and press packets, as well as feeding more stories to the media.

We recommend that the section chief be an *ex officio* attendee at Executive staff meetings, that management endorse the idea of using the section as a focus for public affairs activities among the staff, and that management give some thought to goals and objective for public affairs planning.

Employee Relations

One of the most prevalent problems in dealing with public affairs at the Center is lack of an institutional identity to project. This is attributable first to the "shopping cart" identity of NOAA as an agency. Created by an executive order in 1970, it was part of an ongoing federal effort to combine various marine science activities in one agency. The original idea was to put NOAA in a Department of Natural Resources. It ended up in Commerce because its largest proposed element was the Environmental Science Services Administration (ESSA), which was part of Commerce. The plan called for NOAA to be moved to Commerce initially and later to be moved to the Department of Natural Resources. The DNR was never created however, and the fisheries service finds itself the only renewable resource management group in NOAA. Needless to say, this has not always been good for NMFS as is illustrated by the recent NMFS needs assessment study (National Fish and Wildlife Foundation 1990). The morale of scientific staff within NMFS is palatable. The dislocation and redirection of the Centers from science to management is still not fully assimilated by staff.

In addition to the problems associated with NOAA management, there has been a dislocation of science within the federal service from conservation to management, largely as a result of the Fishery Conservation and Management Act of 1976. Perhaps no one saw the effect FMCA would have on federal fisheries Centers as well as Dr. Robert Edwards. Edwards was the director of the Northeast Fisheries Center from the mid-1960s to 1985. During the 1985 centennial celebration at the Woods Hole lab, Edwards delivered a speech on the history of the lab that was prophetic in its discussion of how the move from conservation to management emphasis would affect staff:

...in...the period from 1963 when foreign exploitation began to appear formidable, until 1977, were extremely busy times. You will recall that our national policy then was still that of "freedom of the high seas." It was necessary to do many other things in



"A history of continuing changes in management emphasis has meant that staff are moved around, organizational structure is altered and old tasks--however valuable--are dropped or de-emphasized in favor of new ones."

"Agency staff have ceased to think proactively and creatively about marine resource problems and issues, in large measure because of the specter of the Administrations cut-the-budget attitude."

"NMFS presently lacks the stature it needs, both within the National Oceanic and Atmospheric Administration, and its parent body, the Department of Commerce. As a result, the numerous management problems faced by NMFS often are slow to be solved or remain uncorrected."

*Needs Assessment of the
National Marine Fisheries Service
National Fish and Wildlife Foundation
January 1990*



" The status report is a scientific technical report presented in a factual, straight-forward manner...I can only assume that you have taken objection to the summary statement "not meeting management goals." I see nothing wrong with this although I admit the use of the term "goals" was a poor choice. We should have used the term "targets" ...Nonetheless... I will review future Status reports to avoid any confusing statements regarding stock management."

**Richard B. Roe
NMFS Northeast
Regional Director**

**Memo to David V.D.
Borden, Chairman,
New England Fishery
Management Council,
regarding comments on
the Center's annual status
of the stocks document
December 1988**

addition to what one would normally regard as research. The United States and particularly the Woods Hole laboratory, had the responsibility not only for the bulk of the research on the stocks off our shores, but also for the maintaining a high degree of credibility in its studies and reports, and the manner in which we carried out our work...the ICNAF² days were characterized by never-ending intensive study and hard work. There is no way one can describe this time and this effort beyond the fact that the volume of papers and reports prepared, mostly gray literature of course, fill many shelves. The challenge was so great, and so stimulating, that we never had a serious case of burn-out. The nights were long, sometimes very long, and the frustrations great, but the successes sweet.

Following the extension of jurisdiction and the establishment of the Regional Fishery Management Councils in 1977, it was relatively easy, given the baptismal fire of the ICNAF days, to deal with the needs and attitudes of new managers. These were very different days, however. It was one thing to be dealing with separate cultures, with actions and words filtered through the mesh of diplomatic delicacy, quite another to be dealing with the sibling rivalry dominating the scene. It would appear that much of what was learned in ICNAF by decision makers seems to have been forgotten, and that in some ways we are back to ground zero.

The U.S.-Canada boundary argument, an issue brought to the fore by extended jurisdiction, occupied a great deal of laboratory\Center attention in the last four years...These were particularly trying times since the outcome was pretty well known even before we took the case to the World Court, and it was hard to put so much effort into what appeared to be a no-win situation..

Our research today is properly categorized as ecological in tone, but the discipline "ecology" is merely the tool. Living resource ecosystems will inevitably be modified to man's ends in many different ways, and natural ecosystems, per se, will not be the entities conserved or managed in the long run. In point of fact we have not been dealing with natural ecosystems for many years now. We are entering a period of redefinition of terms: for example, ecology is not synonymous with conservation, and conservation may soon be found to be synonymous with management.

Conservation and management both stem from value judgments made by society, not science.

If we combine these elements of confusion and budget constraints at the top levels of the organization, a major reorganization, and an undermining of the professional status of federal fisheries scientists, it is not hard to see why the morale is poor. No federal workplace enjoyed much status in the past decade. The chronic understaffing, underfunding, and underrating of NMFS staff has taken a toll.

Interestingly, this is also a trend in the nation's corporations and there are many parallels to be drawn with the NEFCs employee relations problems. Communication professionals report that competition and corporate restructuring have significantly expanded their role in implementing corporate objectives among staff. At the same time, they report that resources for these operations are fixed or decreasing.

According to a comprehensive study released in 1989 by the Conference Board of the Public Relations Society of America, communicators say the impact of restructuring is nowhere "more evident than in the rising responsibility of corporate communications units."

The survey was based on a survey of more than one thousand corporations including the 500 largest manufacturing and 500 largest service companies on the 1986 Fortune 500 listing. The 281 responses revealed that employees are "demanding better information about their firm's performance and future direction. Virtually all those

² The International Commission for the Northwest Atlantic Fisheries (ICNAF) was a treaty-based organization composed of the United States and most other nations fishing in the region. Prior to 1977, it was the forum for allotting and managing commercial fish .

surveyed see these trends intensifying during the 1990s." Almost two-thirds of the businesses surveyed had undergone some restructuring since 1984, nearly half of those had involved staff reductions, and about 45 percent involved mergers. Communications managers say the result is a five-year trend of doing more with less and that staffs have either remained the same or decreased. The analogies to the NEFC case are obvious.

Almost 90 percent of those surveyed are responsible for at least one periodical that goes to all employees: "communicators are now being asked to present serious business messages in employee publications."

One part of the study asked communications executives to rate various types of media for use in employee relations messages. Most (90%) felt that newsletters were the best vehicles for projects aimed at:

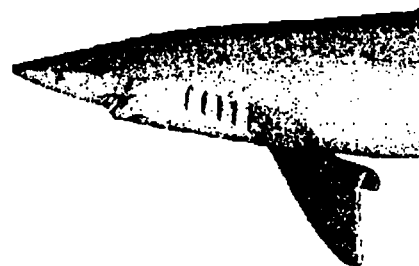
- Improving employee morale and fostering goodwill between management and employees
- Informing employees about internal changes (88%)
- Increasing employee understanding of the company and its products (83%)
- Explaining organization (84%)
- Describing changing corporate culture (76%)
- Changing employee behavior toward becoming
 - More productive (84%)
 - Quality-oriented (85%)
 - Entrepreneurial (54%)
- Explaining employee benefits (76%)
- Encouraging employee participation in community activities (74%)

Management's top priorities for employee communications were to explain changes in the company and fostering quality. Managers rated the following objective for employee communications projects as high or very high:

- Improving morale and fostering goodwill between management and employees
- Informing employees about internal changes (promotions, vacancies, retirements, restructuring, policy changes)
- Explaining competition and benefit plans (health-care, savings plans, incentive programs, employee assistance programs)
- Changing employee attitudes toward becoming more productive, and quality oriented.

Again, the implications for improving the NEFC's recent record of restructuring, budget crisis, and poor morale are evident.

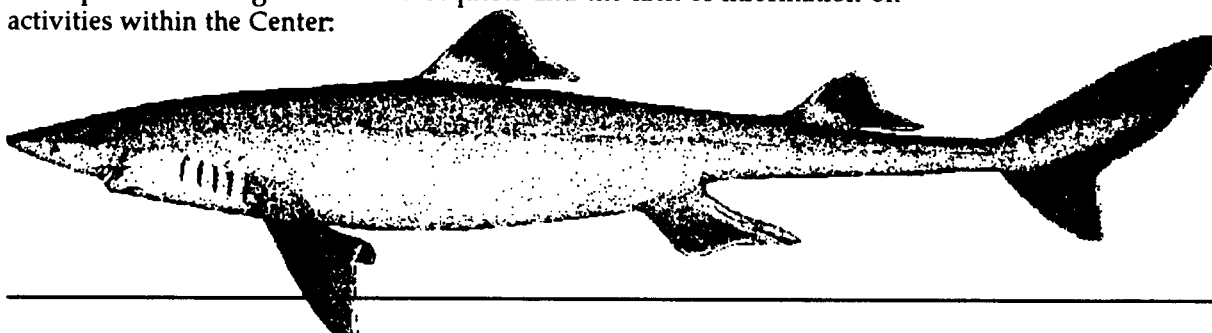
At this time, there is no Center employee relations effort. Yet there are references to problems caused by lack of communication among the far-flung labs in virtually every study or document we produce discussing information. In 1989, the Centers Research Council reported on Information Flow within the Center. They addressed issues such as libraries in the research cycle, the time spent answering information requests and the lack of information on activities within the Center.



"There is never enough data, that is, enough data to make a decision inescapable. As resources diminish, the demand for more data and information will continue to grow, both because there isn't enough fish to go around, and each decision, one way or another, threatens to change somebody's lifestyle."

Dr. Robert L. Edwards
Former NEFC Director

Address at the Centennial
Celebration
Woods Hole Laboratory
1985



"Information on future directions in Center research should be provided on a continuous basis, and would lead to more integrated research plans...[the council recommends] creation of a newsletter-type publication from RPAC modeled after *Linkages*, that periodically updates Center scientists on planning activities in the Center."

"The council feels strongly that research effectiveness and overall morale is strongly influenced by communication within the Center."

"...research planning in the Center still seems something of a dark corner. Little information on new initiatives is disseminated and the bigger picture of Center research eludes the bench scientist."

"Little personnel information at the 'local' level is provided by any present outlet."

"The creation of a quarterly personnel-oriented Center newsletter. Coordination, editing and production would best be handled by Information Services, with local reports contributed by representatives from each facility."

Information Flow Within the NEFC
NEC Research Council
May, 1989

The IS staff believes that a strong employee relations effort is long overdue at the NEFC and could make a critical difference in employee morale. The section is capable of producing a high quality employee newsletter and possibly managing some other information transfer functions now handled by the OIC offices at the various labs (given appropriate allocation of resources.) There may also be other func-

tions under this umbrella that could be discovered through discussion.

This is an issue that requires first, some serious evaluation by management of the significant opportunity this would represent for repairing employee relations.

Second, it would consolidate a number of projects that are now transferring information in a haphazard way throughout the Center: *Linkages*, the FWP newsletter, and bulletins from the EEO committee. Further, it would address the concerns of the research council regarding an open and ongoing dialog between management and employees, management's concerns about rumor control, highlighting employee activities, and providing more information on the research planning effort.

Third, it would take advantage of the IS staff expertise in this area.

We are suggesting this employee relations function in the IS section for several reasons. One is the clear need for it. Another is that it would give us another way to keep in touch with significant activities within the Center that are not reported in other outlets.

We also present the idea with the caveat that the guidelines for a newsletter and similar projects must be clear. Such a project was among the first things suggested by the section chief in 1988. The response from management was that an employee newsletter was a low priority. A few months after that meeting, the director's secretary suggested the same thing as a project. The director suggested that she pursue it.

Information Services believes that this can be a vital connection between IS and the staff and between staff and management and it deserves better planning and effort than can be expected from a collection of staff newsletters. We would appreciate serious consideration of this project not only as an employee relations activity, but as a tool for the Center to use in its attempt to improve the Center's battered self-image.

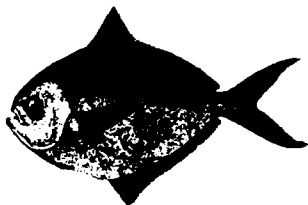
"...you may recall that I spoke to you in regard to formulating a 'newsletter with humor and news.'...I have heard some mumblings about other existing newsletters...What is really needed, say the mumblers, is a combined effort of news."

Pie Smith, Executive Secretary

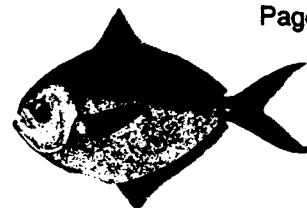
NER Science and Research Director's Office

Memo to potential associate editors regarding Center personnel newsletter

June 1990



Graphic Services



Graphic services support hit an all-time high in the Center in the early to mid-1970s. At that time there were three permanent positions and one temporary position in Woods Hole (draftsman, photographer, exhibit designer, graphics technician) as well as scientific illustrators at the National Systematics Laboratory, the Narragansett Laboratory, and the Sandy Hook Laboratory.

The three positions at Woods Hole were combined into one lesser-grade position that pursued all three activities along with photo archiving. The Narragansett position was lost to attrition. The Sandy Hook position has not been filled for more than a year. The NSL position has remained unchanged, but is dedicated to the NSL staff in Washington, D.C.

The graphics position at Woods Hole has hence become the Center graphics position. The Woods Hole Lab, the Conservation and Utilization Division in particular, is by far the biggest client. However as services were reduced at other labs and other staffs became more familiar with services offered, business has picked up among other labs.

Prior to 1987, work was primarily drafted by hand, photographed, lettered, or illustrated. (At this time there were illustrators at Narragansett and Sandy Hook.) the position has been supervised by virtually every Division at one time or another.

As microcomputer technology moved through the scientific staff and more people became aware of micro-based graphics programs, a computer was purchased for the unit. Since that time, the workstation has been steadily improved and upgraded. It includes several graphics programs, a slide generator, a scanner, and page design capabilities.

Training has been more difficult to provide. The equipment is unique among Center machinery and the Center maintains no onboard staff for computer training or resolution of problems.

Activity between January of 1989 and June 1990 is described as follows:

	Number of Jobs	Computer- based
Graphics and illustration	82	51
Reproduction	98	
Miscellaneous	12	

Many of these jobs require more than one method, most are multiple part jobs (25 overheads for one presentation would be recorded as one job.) The graphics jobs can involve hand illustration, use of archives, drafting, and various manipulation of the raw data to get the desired graphic.

Computer equipment has made it possible for one person to serve more people than would have been possible if only hand methods were used. This is not only because the computer can create images quickly but because jobs can be archived. Many of the products are similar (trend graphs for example) and only the data changes. In the past two years the department has been able to start a collection of computer images and computer graphics that can be used or altered and used more than once.

Particularly increasing are demand for scanned images and color products (overheads, slides). About fifty slide shows were produced in the 17-month period; 24 on the Polaroid palette and 29 were shot and developed in-house. Color overheads are produced on a color imager owned by another department and through a Polaroid process. The department also does a lively business in providing prints and slides to magazines, newspapers, journals, authors, schools, and the Woods Hole Aquarium. The government photo IDs and passport photos are also produced at Woods Hole.

The graphics department is not able to produce high quality materials in all media for which it is equipped. There are many reasons for this, but most are traceable to the fact that it is very hard to find one person who is a photographer, commercial artist, exhibit builder, fine artist, archivist, and computer jock. While there is a job tracking system in place, it is sometimes neglected. The incumbent works alone, and it is difficult to determine how best to deal with the problems of quality, delays, misunderstandings about products and processes, and so forth.

While the shop is well-equipped, it has not been well-publicized among the staff. This is in part because the section chief is not sure we can really handle everybody's graphic needs. The labs outside of Woods Hole are disenfranchised from graphic services and consequently, the micro-based systems are proliferating in these locations as are contracts with outside imaging companies.

The section's page production chores are handled by the section chief. This is because she is a trained editor and desktop publishing technician and because the added burden in the graphics department would cause unacceptable delays in Center publishing.

Whether high-level staff time is well spent in graphic chores and whether the Center is buying unnecessary graphic software and equipment is a question for management.

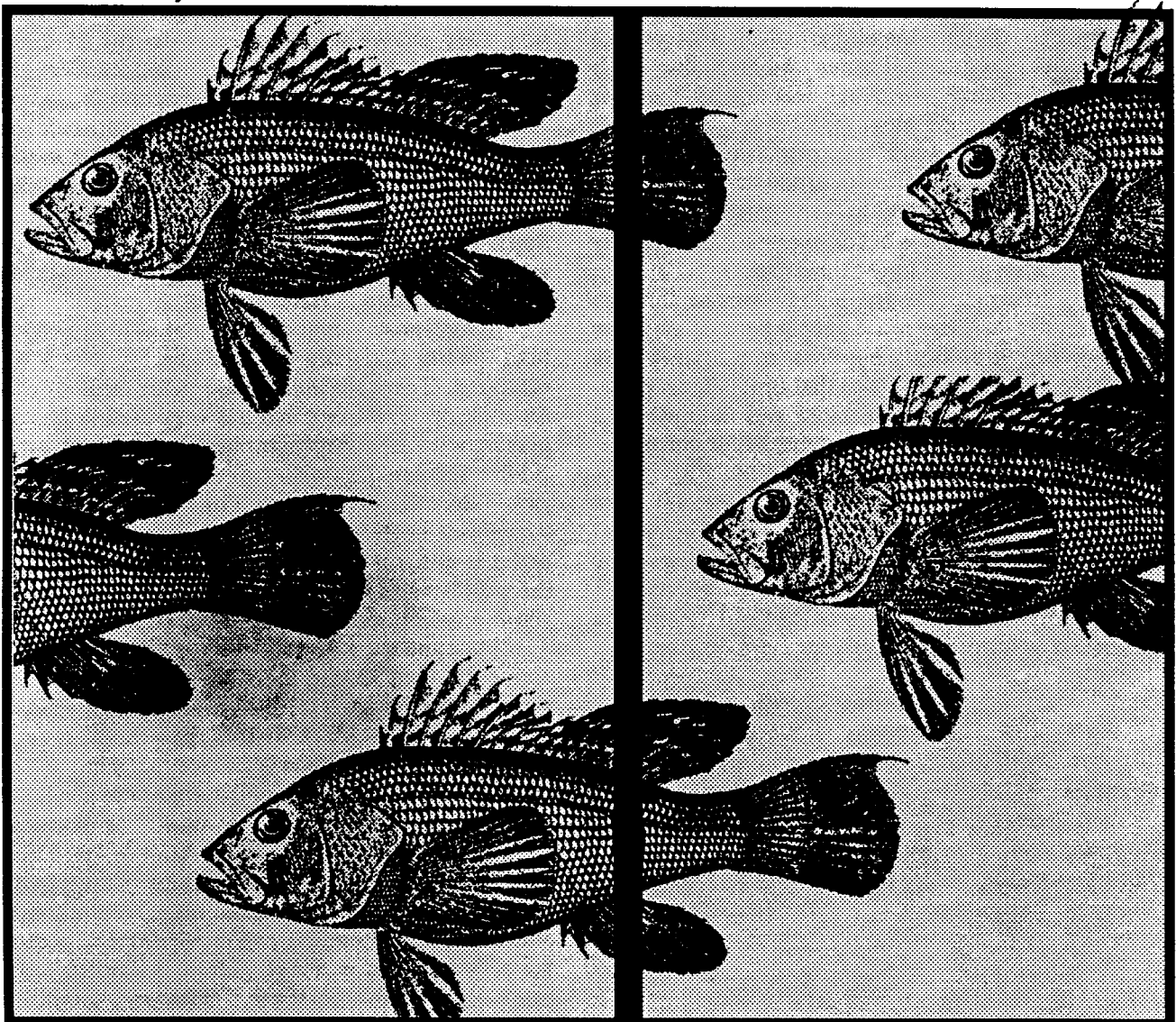
The section staff feels that in order to improve graphic services at the Center several problems should be addressed:

Providing services to all labs in the Center a reasonably efficient time frame (locally)

Reduce the number of media in which the Woods Hole shop deals Employ more freelancers to take on specialized projects or perhaps all functions in some areas (organizing and maintaining the archival collection, photography, signage, exhibitry. The same study that surveyed communication executive with regard to employee relations also revealed that these departments are hiring more freelancers than ever to help shoulder the workload without investing in permanent positions.)

There are several ways of addressing this issue. At this time, we do not feel that we are providing the best or the most equitable use of the Center graphics resources. We would appreciate some guidance in this area.

One suggestion has been to restructure the existing position to fill just one or two functions and arrange for contractors to provide other services and some level of service to all the laboratories. Other suggestions would be welcome, as would discussions on maintaining the current operation more efficiently.



Information Services Section Five-Year Plan

Mission Statement

The section transfers and retrieves information for staff and constituents from the vast array available; transfers significant information among staff, and from staff to others; builds the Center's public reputation as a source of high quality information on the conservation and use of marine resources in the federal waters off the Northeastern United States; and provides management with a valuable tool for promoting this perception of the Center among its partners in science, its parent organization, and its staff.

SECTION MANAGEMENT GOALS

Goal 1: Pursue recognition of the Section as an operating unit within the Center with valuable support capabilities in the areas of technical information access, publishing, public information, and graphic services.

Activities:

Produce an in-house pamphlet series providing explanations of:

Center library holdings and policies
Publication processes and services
Graphic services and policies

Design and use a logo

Redesign public information products to clearly identify them as part of a series

Goal 2: Through attrition and lobbying, attempt to approach a staffing level similar to that depicted in Figure 9.

Goal 3: Clearly promote Information Services staff as an integral part of the research and development cycle, as organic to the process as the buildings, laboratories, and equipment used in pursuit of science.

Activities:

Keep and publicize statistics on library activities

Make the most of opportunities to participate in the information activities of the Center

Support information products in other sections with page design and publishing capabilities

Track publishing success

Goal 4: Attempt to maintain budget levels, justifying use of appropriate technologies for information transfer.

SECTION LIBRARY GOALS

Goal 1: Secure staffing for Milford library.

Goal 2: Improve sharing and networking capabilities for all libraries.

Activities:

Support active cataloging of all collections

Secure CD-base for all labs (concentrate on ASFA)

Budget for retro-conversion of collections

Encourage development of regional network ties at all libraries

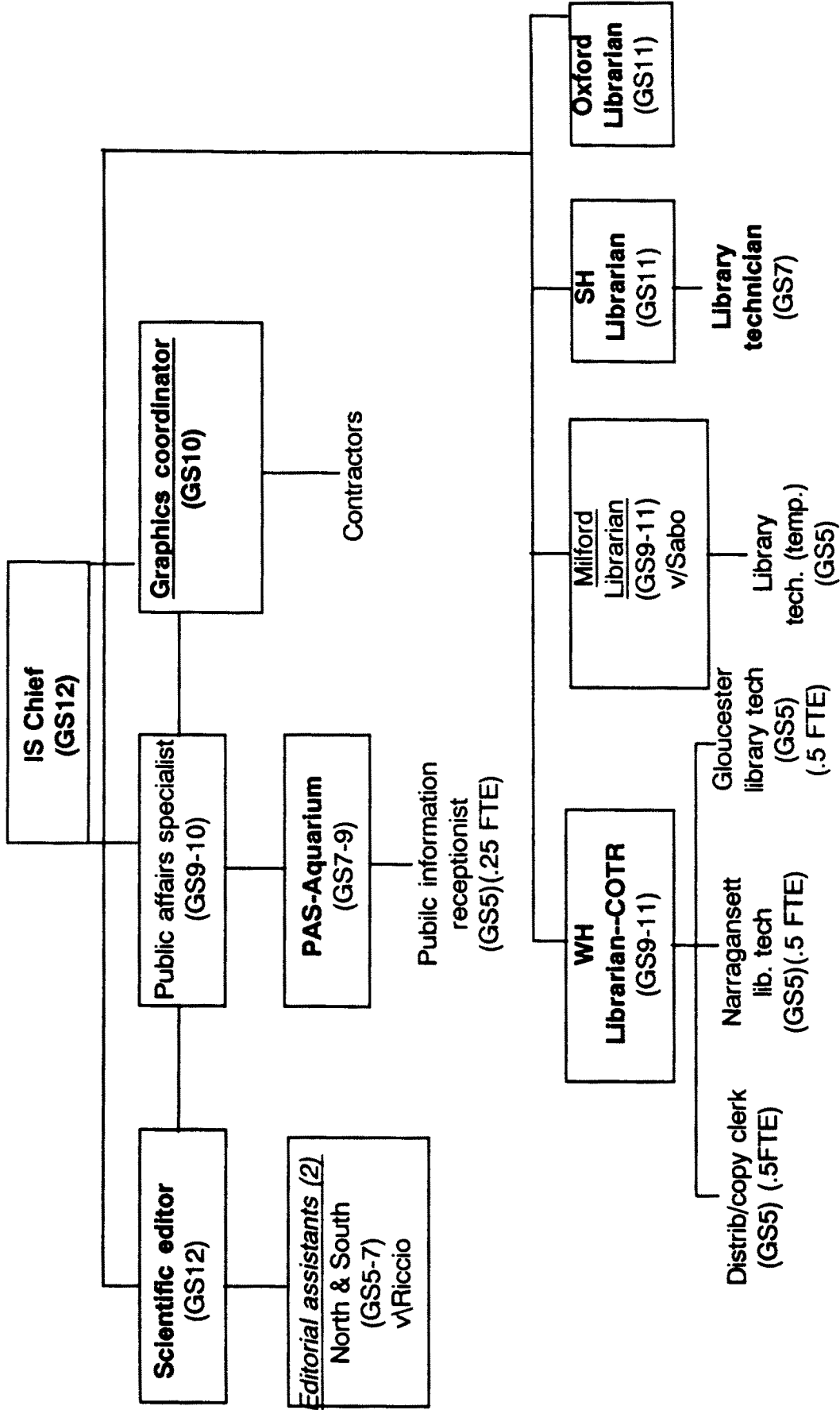
Provide all IS staff with modems

Train staff to use EMAIL on VAX

Secure accounts with OMNET for SCINET, a nationwide science institution mail system that includes IAMSLIC, Sea Grant, MELVYN [University of California including Scripps], and MIT

Prepare a Center union serials list

Figure 9. Proposed organization/staffing.



Bold--current staffing
Ita--reassignment
Underlined -- vacant positions
 Normal--new positions

Goal 3: Improve ability to locate and retrieve information needed to support research.

Activities:

Support NOAA library projects creating union lists of NOAA field library holdings and other projects in this area that they may undertake

Provide trained staff at each location for literature searching, ILL, and citation verification, concentrating on the systems available through FED-LINK

Provide a FAX machine at each library and establish a policy of sending a reasonable number of pages per job anywhere in the Center

Have an IS person at each facility prepare subject profiles for specific SDIs for NEFC staff who need them.

Pursue process for downloading files from CD-ROM and online searches to citation software allowing manipulation of files

Goal 4: Revive archiving projects to assure documentation of Center history and activities

Activities:

Charge the Woods Hole Library with archival responsibilities

Prepare a list of historical materials throughout the Center

Prepare an analysis of the material discussing archive quality, priorities for preservation, and what would be required to create finding aids

Aggressively collect the papers of recent Center luminaries for special collections

Create an aggregate special collection of materials developed in support of the Georges Bank Boundary dispute

Revive the Center annual reprint collection

Centralize NOAA/NMFS/Center document distribution at Woods Hole

Goal 5: Make plans for the Sandy Hook library move

Activities:

Determine cost for a professional library moving company to complete the moves

Secure adequate, appropriate storage space for parts of the collection that will have to remain inactive

Budget for adequate binding to preserve materials that will have to be stored

Goal 6: Discuss the options for using the Oxford collection in the event that the federal service discontinues operations there.

Make Center retention of the collection a priority

Goal 7: Attempt to broaden Center access to the MBL collection in the next contract negotiation.

Goal 8: Redefine the Woods Hole library mission

Activities:

Narrow collecting mission to documents and reference works

Concentrate on filling out technical series

Provide ILL and literature searching onsite

Assume archival responsibilities

Upgrade technician to professional series

Make the librarian the COTR on the MBL contract

SECTION TECHNICAL AND OTHER PUBLISHING GOALS

Goal 1: Finish the editorial policy and procedure document

Goal 2: Assume responsibility for the manuscript review process

Activities:

Follow-up on turn around time for manuscripts

Pursue a more aggressive copy and technical editing role

Keep statistics regarding publishing success to establish reporting for status and trends analysis

Goal 3: Consolidate other publishing activities as possible in Information services.

Activities:

Become recognized as expert resource for developing Center publications

Extend use of page design and production capabilities to all publication products that are distributed outside the Center

Goal 4: Pursue information pamphlet series as a way of transferring information and answering general information requests

Goal 5: Obtain a folder for information series production

Goal 6: Secure staff to handle distribution of Center publication and publication mailing lists. If staff is not available, attempt to train existing clerical staff for use of mailing list software

SECTION PUBLIC INFORMATION GOALS

Goal 1: Become more visible as experts in public affairs and public relations

Activities:

Attend executive staff meetings for information purposes

Insert as many suggestions for proactive responses to impending problems, significant issues, or events as possible

Goal 2: Improve coverage of Center science

Activities:

Continue press packet project

Upgrade the percentage of press releases covering science

Set aside time to pursue information gathering

Attempt a newspaper clipping project to better target feeds

Attempt to extend press release coverage to other labs

Goal 3: Continue association with Aquarium

Lobby for supervision of public affairs specialist

Urge long range plan for aquarium

Set aside planning time with public affairs specialist to upgrade and better target educational series

Use the pamphlet series to lighten the burden of answering information requests

Goal 4: Route more general information requests through IS staff. Prepare statistics on requests and responses annually.

SECTION EMPLOYEE RELATIONS PROJECT GOALS

Goal 1: Discuss the suggested element with management to establish goals

Goal 2: Devote significant staff time to developing an employee newsletter

Goal 3: Pursue discussions with Research Council, EEO committee, FWP and Black Programs coordinators, OICs, and management with regard to other activities that might be valuable under this element

SECTION GRAPHIC SERVICES PLANS

Goal 1: Study the current state of services: the amount of activity at other labs, the needs that are not being met, the strengths and weaknesses of the current shop, the effect of micro-based graphics.

Goal 2: Determine the best way to equitably support all facilities.

Goal 3: Assure adequate training for staff on computer systems

Goal 4: Audit and organize archival collection