SCOMM

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The School of Fisheries and Ocean Sciences

University of Alaska Fairbanks

Strategic and Capital/Facilities Plan 1995

November 1995

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Summary of Actions
Board of Regents Meeting
December 1–3, 1994

School of Fisheries and Ocean Sciences Task Force

PASSED

"The Board of Regents requests that the University of Alaska implement the recommendations of the School of Fisheries and Ocean Sciences Task Force and adopt a strategic goal-setting document accompanied by a capital plan and academic plan by September 1995. The Board requests that the document be reviewed annually with any revisions to be accompanied by a progress report. This motion is effective December 2, 1994."

School of Fisheries and Ocean Sciences

STRATEGIC AND CAPITAL/FACILITIES PLAN 1995

This Strategic Plan is not intended to be rigid and immutable; rather, it is to be a living document continually under examination and revision. This will allow us to remain responsive to new opportunities and needs, and change our emphases as we accomplish some of the goals. A process for such review will be initiated immediately, to be described below.

BACKGROUND

This Strategic Plan evolved from a series of discussions following the formation of the School of Fisheries and Ocean Sciences effective July 1, 1987. While taking into account the recommendations from task forces and councils during this period, and considering the priorities identified in a previous Long Range Plan, the current plan recognizes that the School has reached a new threshold in its evolution, while the external environment, both federal and state, also has changed. Against the background of this changing world, the School needs to devise a strategy which will allow it to effectively serve the State while participating in the national and global marine and fisheries education and research community.

The first body which provided guidance to the School was a UA restructure Level II Task Force. This was composed of faculty, administrators and members external to the University; the task force was charged with defining steps needed to coalesce the School and providing guidance on the immediate actions required. Recommendations, such as the development of the Ph.D. program in fisheries, the appointment of an Advisory Council and the focusing of undergraduate fisheries instruction on the Fairbanks campus, were all implemented during the following years.

It would have been easier to build a strong School of Fisheries and Ocean Sciences had the university environment been one of financial growth over the past few years. SFOS *was* encouraged to produce a series of major budget increment requests during the late 1980s and early 1990s, to little or no avail. Then, the SFOS Advisory Council encouraged the development of a Long Range Plan and this, too, was done. We now need to look at the realities, and plan accordingly.

The future direction of SFOS must adhere to the Strategic Plan: UAF 2000, and also must take into account the recommendations of the Board of Regents Special Task Force which met during the summer of 1994. Further, the guidance provided by the thoughtful and constructive advice of the School of Fisheries and Ocean Sciences Advisory Council needs to be considered. The SFOS Advisory Council has repeatedly emphasized the unique opportunity offered through SFOS to pioneer collaborative fisheries and oceanographic programs in our state, where the marine environment is critical. This is one way in which the School can help to assure a healthy natural resource base for Alaska, and also contribute to a well-educated public that respects natural resources. The Council also has recognized the many areas of strength and excellence already present within the School.

THE APPROACH

The planning activities were initiated through two committees:

STRATEGIC PLANNING COMMITTEE

Membership: Ron Dearborn, John French (inactive), Hank Pennington (Chair), Tom Royer, Bill Smoker, Arliss Sturgulewski (external), Craig Wiese

THE CAPITAL PLAN AND FACILITIES DEVELOPMENT COMMITTEE

Membership: Gil Bane, (external), Dick Bower (external), Mike Castellini, John French (replaced by Scott Smiley), Tony Gharrett (Chair), Dave Nebert (staff), Dan Ogg (BOR), Joan Osterkamp (staff), Ray RaLonde

These two groups began their work in mid-winter, 1994–1995, and each has produced a report. These are included as submitted. The vision and philosophy embedded in the Strategic Planning Committee's report expanded the responsibilities of the School to the State of Alaska and to the School's constituents within the State, and those concepts are an important part of this plan. As an introduction to the two plans, this lead-in document incorporates an Action Plan, which will serve as the anchor for the broader goals and objectives of the Strategic Plan. Those portions of the previous Long Range Plan for the School which have not been accomplished, and which also were identified through the present planning process, have been abstracted into a section of this document. That Long Range Plan had been reviewed extensively and accepted by all parts of the School, and there was a desire not to jettison that effort. A small group of faculty and administrators therefore re-examined it in the context of the present plan. The complete Long Range Plan also is attached as an appendix. However, it is important to recognize that this current Strategic Plan is not a redevelopment or reforming of the Long Range Plan, but rather that both have elements in common and that there is value in continuity where appropriate, and that there is much to be gained by not abandoning history. In particular, the faculty asked that the mission statement developed early in the School's history be included.

MISSION STATEMENT

The mission statement presented here was developed as part of the SFOS Long Range Plan and is endorsed throughout the School.

MISSION

SFOS has the primary responsibility within the University for research, education, and public service in oceanography, marine biology, fisheries, seafood and fisheries technology, and limnology. Although our activities extend worldwide, the emphasis is on Alaskan waters and the Arctic. Through research, we seek to better understand physical, chemical, and geological processes in marine and freshwater environments; the interactions among environmental factors and organisms which control the productivity of aquatic ecosystems; the impact of natural environmental variability and anthropogenic environmental change on aquatic organisms, systems and resources; and the resource management and utilization methods which will lead to enhanced economic returns consistent with conservation of resources, habitats and environments. Through education we disseminate the knowledge gained through research, and through student participation in research we enhance their ability to apply knowledge to problem-solving and to expand upon what they have been taught. Through public education and service we inform the community about important marine and fisheries issues, develop utilization technologies and strategies needed by those who use marine resources, and assist them in applying these technologies and strategies. The School's goal is to maintain and develop the broad expertise among its faculty and students needed to contribute to the wise use of Alaska's natural resources.

FUTURE PLANS

It is important to recognize that the priorities outlined here do not include the majority of our activities, but rather are those areas in which we must focus efforts in the near term.

Alliances and Partnerships

The School will place a strong emphasis on maintaining current strengths while developing new, and enhancing ongoing, partnerships with industry, resource management agencies, state and federal agencies, and international entities, with a view towards identifying needs, conducting programs in response to these needs, providing timely information and assistance, and sharing progress. SFOS must provide trained personnel in response to Alaskan industrial, research and management needs as a critical element in our service to the State. For example, the Juneau Center is a leader in developing new fisheries management techniques and also plays a major role in application of new fisheries scientific knowledge into the management efforts of the North Pacific Fishery Management Council. SFOS as a whole can be a powerful provider of courses to help resource managers develop professionally and incorporate new research findings and scientific techniques into their day-to-day efforts to manage

fisheries. We can do even more in serving resource management in Alaska. The same applies to resource utilization. In these areas, partnerships and alliances are a key strategy for the future. In ocean sciences, too, we serve a public need. For example, we need to understand coastal ocean dynamics so that coastal communities can deal with waste disposal without fouling their nearshore areas, we need to model the trajectories of tsunamis so that coastal communities can be warned and protected, and we need knowledge of benthic faunal assemblages in areas where offshore mining is planned. These, too, require partnerships among agencies and/or with coastal communities.

This element is critical to the UAF 2000 Goal "Be a Leading Partner with Communities, Industry and Government to Solve Specific State and National Needs." The associated objectives in the SFOS Strategic Planning Committee's report (p. 18–23) are "Partnerships for Well Managed Natural Resources" and "A Well Educated Public with Respect for Natural Resources."

Finances

The School of Fisheries and Ocean Sciences is facing difficult times financially, for two reasons. First, and most obvious, is the continuing decline in state appropriation funds relative to the increasing costs. Secondly, SFOS is heavily dependent on external funds, which are becoming increasingly difficult to secure and which now often come with reduced indirect cost recovery. This latter problem is in large part due to a heavy involvement in *Exxon Valdez* oil spill assessment and restoration research, but also results from the fact that many of the sources of external funding available for fisheries and fish processing research supply no funds to cover indirect costs. The Institute of Marine Science was built up beginning in the early 1960s based largely on external funds, and in this way has grown to be one of the two largest and most successful research institutes in the University of Alaska system. Now, we must be very careful to maintain the excellence and competitiveness, while not extending activities beyond our ability to maintain viable funding.

In response to these constraints, we will need to focus efforts and increase productivity in order to better utilize the limited state appropriation support. Our first thrust therefore will be directed at evaluating our productivity and taking steps to increase it. This is happening currently at FITC, and we will be launching a school-wide effort to identify appropriate productivity measures for all the major functions, with a view towards providing professional, teaching and research incentives and rewards. A review process involving faculty will be initiated, probably to be conducted in concert with the annual evaluation, and support for faculty initiatives or other rewards will be based on the results of the review as funds are freed up.

At the same time, we will try to identify new programs and new avenues for external funding. This will include continuing our private fund raising, our international efforts and creating new programmatic alliances with agencies. FITC is vigorously pursuing a National Science Foundation (NSF) University/Industry Center. We have initiated

meetings with the Alaska Department of Fish and Game (ADF&G) to explore mutual interests, and have formed a new partnership with the National Oceanic and Atmospheric Administration (NOAA) for Bering Sea fisheries research. The Sound Ecosystem Assessment (SEA) is another program which has developed through strong alliances with agencies and institutes.

Facilities

Arguably, facilities currently pose the greatest challenge to the effectiveness of our instructional and research programs. The School presently operates a number of sites, with permanent faculty clustered in four major areas: Juneau, Kodiak, Anchorage and Fairbanks. In addition, faculty are based at Seward and MAP agents are scattered throughout the coastal regions of the State. It is unlikely that the School of Fisheries and Ocean Sciences could accomplish its responsibilities based on one or two sites. The state of Alaska is so vast, and the coastline and problems so gigantic, that to some extent a distributed system is inevitable. In fact, SFOS is evolving *de facto* towards a functional structure with its core at the Fairbanks campus and three major coastal centers: Juneau, Kodiak and Seward. The Fairbanks campus provides a strong foundation of educational resources in the basic sciences, colleagues in a wide range of disciplines who collaborate productively in fisheries and ocean science research, and excellent research and teaching facilities. SFOS oceanographic and marine biological programs, the primary research activities in Fairbanks, aim to achieve a fundamental understanding of the ocean, upon which wise use of its resources and prediction of its response to human activities can be based. Each of the coastal centers has a primary mission, but also supports research and instruction (at least at the graduate level) on behalf of any of the missions of SFOS. For example, FITC is dedicated to supporting the fishing industry, and as a result its mission is highly applied. However, fisheries research is already conducted from the facility by faculty based elsewhere, and the site shows excellent promise for supporting marine biological research and instruction in addition to its applied mission. The Juneau Center maintains a strong and vital program related to fisheries, but faculty based there also conduct oceanographic and ecological research. Their primary benefit to Alaska, however, is highly trained fisheries scientists and scientific contributions to the effective management of Alaska's fisheries. Some graduate students based in Fairbanks or Juneau have committee members located, or take courses, at the other site. The Seward Marine Center supports oceanographic and marine biological research, and the new Seward Association for the Advancement of Marine Science (SAAMS) Alaska SeaLife Center will offer outstanding facilities for work with marine mammals and birds. The SFOS capital requests are in accord with this concept of distributed coastal facility support.

Faculty

SFOS currently has inadequate faculty expertise in some essential areas, for example, fisheries science, seafood/fishing technology and chemical oceanography. We will be requesting these positions as requisites for supporting the missions of the School,

recognizing that the need for marine and fisheries knowledge is vital to Alaska's future economy and well-being. Several replacement or challenge marine science faculty hires have been accomplished over the past few years, on the gamble that external resources can be secured for long-term support. This assumption is no longer valid for any faculty hires, but is especially unwise for fisheries or fisheries technology permanent tenure-track faculty.

Ongoing Review and Revision of the Plan

Responsibility for the review and tuning of this plan will rest with the Executive Committee of the School. This committee consists of the Directors of the Institute of Marine Science, the Fisheries Division, the Fishery Industrial Technology Center, the Alaska Sea Grant College Program, and the Marine Advisory Program, the Executive Officer, and Dean of the School, and is convened and chaired by the Associate Dean.

Not later than four weeks prior to the spring meeting of the Executive Council, the Dean's office will prepare a draft outlining accomplishments and actions, and provide these to the Directors. The Directors will then modify or revise the draft as it pertains to their area, involving faculty and staff in the review. Subsequently, the revised draft will be discussed at the Executive Council meeting, and accomplishments discussed, and changes in future directions and priorities will be reached by consensus. The resulting plan will then be presented and discussed at the spring meeting of the SFOS Advisory Council. Since the Directors normally attend this meeting, they will be part of the discussion and it will be possible to further fine tune the plan in response. The plan will also appear on the agenda for other Executive Council meetings, and faculty, staff and student input will be welcomed at all times.

ACTION ITEMS
2–5 Years

These are practical and specific actions which are viewed as internal guidance for SFOS operations. They are additional or complementary to the priorities identified under Future Plans above.

A. FURTHER THE DEVELOPMENT OF COHESIVENESS AMONG THE UNITS AND FACULTY OF SFOS.

This was recommended by the Board of Regents Special Task Force. It will be accomplished by:

- involving faculty throughout the School, and providing incentives for their pursuit;
- increasing faculty options to conduct research and participate in instruction at any SFOS site;

- development of clearly-defined criteria for productivity with appropriate measures and rewards, and a process for their application;
- identifying new opportunities for collaborative research, teaching and service measures and rewards, and a process for their application;
- acquiring communications equipment to enable, among other functions, regular "virtual" faculty meetings and courses offered at two or more sites;
- encouraging part-time participation by faculty at any and all SFOS sites;
- fostering close relationships among the marine advisory function and the research and education programs in SFOS;
- facilitating greater participation by faculty and students, especially at the coastal centers, in the Alaska Native Marine Science Internship Program, through enhanced communication facilities and travel support; and
- producing SFOS recruiting materials emphasizing interdisciplinary opportunities for graduate study.

B. DEVELOP THE FACILITIES NEEDED TO ENSURE THE ABILITY TO OFFER THE TRAINING NEEDED FOR PROVIDING EDUCATED MANPOWER AND CITIZENS, WHILE MEETING ACCREDITATION REQUIREMENTS AND FULFILLING THE SFOS ROLE IN STRATEGIC PLAN: UAF 2000, AS OUTLINED IN THE FINANCIAL PRIORITIES STATEMENT.

This implies, in the short term, adequate facilities at the Juneau Center, as well as enhanced facilities and housing in Kodiak and adequate oceanographic vessel docking capabilities. SFOS acceptance of graduate students, especially in fisheries, currently is limited by the availability of suitable space. In this regard, adequate facilities on the Fairbanks campus also are important.

C. ENHANCE THE FACULTY IN SELECTED AREAS NEEDED TO ACCOMPLISH THE MISSION.

The faculty body also will be focused over time, as positions become available through retirement or departure, in response to the evolving Strategic Plan.

D. INCREASE FACULTY AND SFOS ADMINISTRATION PARTICIPATION IN PLANNING AND DEVELOPMENT OF STATE, NATIONAL AND INTERNATIONAL RESEARCH PROGRAMS.

Although these activities are already extensive, funding opportunities can be enhanced by carefully directed release time and travel support.

E. EXPAND COMMUNICATION WITH THE PUBLIC, TO INCREASE PUBLIC AWARENESS OF THE RESOURCES AVAILABLE AT SFOS AND SFOS KNOWLEDGE OF PUBLIC NEEDS AND CONCERNS.

SFOS will address the legislative need for information and enhance public effectiveness in the resource management process through further public education.

Also, SFOS should respond to the needs of aquatic farmers, coastal and inland waterway communities, and other users of the marine or freshwater environments.

1. *Expand communications with the fishing industry through targeted publications, formal and informal meetings and other forms of communication.*

   This dialogue will culminate in the development of joint projects with industry, will serve to apprise industry of research results and personnel available to assist with problems, and will also transmit the latest technology to industry.

2. *Cooperate with the Alaska SeaLife Center, using its facilities and the existing K. M. Rae facility, to inform the public about important marine and freshwater environmental and resource issues.*

3. *Facilitate and encourage faculty participation in K–12 education.*

   We will help to initiate and develop students' interests in math and science, assist with marine-related curriculum development, and interact with and assist teachers. The use of electronic methods (i.e., the internet) will evolve as an attractive approach to presenting marine topics.

F. MAINTAIN A STRONG PRESENCE ON THE FAIRBANKS CAMPUS, AND ULTIMATELY PROVIDE IDENTIFIABLE AND UNIFIED SFOS SPACE.

The facilities available for IMS research are substandard, and inadequate for one of the two largest and most successful research institutes in Alaska. The Fisheries Program has essentially no assigned space on the Fairbanks campus. The SFOS Advisory Council has recommended attention to this deficit, as has a previous accreditation team.

SUMMARY OF FINANCIAL SUPPORT NEEDS

Capital/Facilities

A. AUKE CAPE FISHERIES COMPLEX

Construction	$11,000,000
Equipment and furnishings	$2,000,000

We are seeking to identify external sources of financing for part of this cost.

For details of this initiative, please see the Capital Plan and Facilities Development Committee Report (p. 34). This initiative was strongly recommended by the SFOS Advisory Committee, to the extent that its letter report of the April 1995 meeting stated that the viability of SFOS may hinge on it.

Participation in this NOAA initiative as a co-locating party is a golden opportunity for the University of Alaska. Shared facilities, including a fisheries library, the creation of a critical mass of scientific expertise, and the consolidation of federal activities pertaining to Alaska in Alaska, are all prospects which make this facility critical to SFOS and to UAF.

The SFOS instructional program in fisheries will benefit enormously from this development, which will allow us to provide a concentration of expertise unavailable anywhere else. Given that we plan to offer an undergraduate year or years at the upper division level at Juneau for fisheries majors as well as entertain a growth in the Ph.D. program, this has the potential to make ours the premier fisheries program in the United States.

B. FITC PHASE II (THERE IS NO SPECIFIC FUNDING REQUEST AT THIS TIME)

This development is underway, with UAF participation through funds from the Exxon Valdez Trustee Council. The Kodiak Island Borough is taking the lead in developing the facility, which is to be a multiple-use building for federal and state agencies and the University. An important part of the UAF plan is to develop housing for visiting scientists and student dormitories, since the success of the SFOS Kodiak-based programs depends on this. Housing is so important for developing the Kodiak program that inclusion of faculty/staff/scientist housing in Phase II is an extremely high priority.

C. OCEANOGRAPHIC FACILITIES

Pier $4,000,000

Within the next few years we anticipate replacement of the R/V *Alpha Helix* with a larger vessel. The proposed plan calls for UAF to be assigned the R/V *Oceanus*, a 177-foot vessel currently operated by the Woods Hole Oceanographic Institution. This plan is, of course, subject to change, but a replacement vessel within a few years is inevitable if we are to remain an ocean-going vessel-operating institution. At the same time, the initiative for the United States to acquire an Arctic Research Vessel is continuing to develop. If this vessel is built, we, as the arctic university, stand a good chance in the competition to be the operating institution. In light of these initiatives, the long-expressed need for new docking capability becomes more urgent.

D. A HOME BUILDING FOR SFOS

Ultimately, the identity and cohesiveness of SFOS will require a central headquarters. An identified building on the Fairbanks campus is needed to provide a focus for the School. This is an important part of the long range Strategic Plan. No specific dollar amount is given here, because we recognize that there may be a number of possible solutions to this need.

Faculty Positions (In order of priority)	Salary + Benefits
Faculty position in process engineering*	$80,000
Faculty position in fisheries science	$80,000
Faculty position in chemical oceanography	$80,000
Faculty position in industrial systems modeling*	$80,000
Associated start-up costs	$100,000 per position

*May be filled by non-tenure track research faculty

The positions identified here are only those for which the need is most urgent. The goals are to (1) achieve the "critical mass" of faculty needed to make FITC productive and responsive to industry needs, (2) ensure maintenance of accreditation for the undergraduate fisheries program, and (3) respond to rapidly emerging research needs and opportunities as well as to a need for broader instructional capability in chemical oceanography. There are other needs for faculty which also are great. Recognizing that new funding will be in short supply, these needs will be addressed by refilling positions as they become vacant. The process engineering position is the top priority because we have a mandate to provide, through FITC, a viable program in support of the fishing industry, and this is one area in which external funds to support the research are immediately available. The industrial systems modeler will further support this program. The second priority is for the fisheries position, which is urgently needed to maintain the quality and content of our fisheries instructional program and also to conduct research needed for the maintenance of Alaska's viable fish stocks. The chemical oceanography position is needed for instruction as well as in support of UAF's effective participation in current and planned arctic and fisheries oceanographic research, all with a strong potential for external financial support.

Infrastructure

Equipment and support for communications and networking	$100,000 per year

The School of Fisheries and Ocean Sciences is distributed throughout Alaska, and its effectiveness in fulfilling its mission depends on communications for operational, educational, research and extension purposes. Funds are needed for purchase and maintenance of hardware, including dedicated equipment for enhancement of the SFOS web site.

(n.b., Action Items not specifically mentioned will be accomplished by rebudgeting of existing funds.)

RELATIONSHIP TO STRATEGIC PLAN: UAF 2000

The mission of the School of Fisheries and Ocean Sciences meshes closely with University of Alaska priorities as outlined in Strategic Plan: UAF 2000 (shown below in italics—only pertinent numbered items are included). In this section a brief analysis is included, with emphasis on the future directions as manifested in the financial request and action steps.

- The SFOS plan supports the goal, *"BECOME THE WORLD'S LEADER IN ARCTIC RESEARCH AND GRADUATE EDUCATION"* through its commitment to further the excellence in research and graduate education in the marine and fisheries sciences. All the faculty positions identified in this document will support this goal. Further, the self-evaluation process described under the action items will support this goal of excellence in arctic research and graduate studies.

  A. *Train graduate students who will play leading roles in tomorrow's society.*

  The proposed facilities will allow us to maintain and increase the number of graduate students in the area of fisheries. Fisheries is one area in which the potential for increasing the number of Ph.D. students is both possible and desirable. The demand is evident. The Auke Cape facility will allow a significant expansion of the fisheries graduate program. The planned housing in Kodiak will allow us to maintain and increase the number of graduate students there. It will also enhance programs through accommodating postdoctoral fellows and visiting scientists. We will continue to produce excellent graduates in the fields of marine biology and oceanography; our past graduates in these fields have made important contributions in research, education and public service.

  B. *Function as a national center of excellence in arctic and subarctic research.*

  1) *Emphasize and encourage research to provide an understanding of physical, biological, and social processes and phenomena as they occur in or are relevant to the arctic and subarctic region and its population.*

  2) *Facilitate interdisciplinary research and graduate study.*

  3) *Improve and maintain the infrastructure for research and graduate education at UAF, including state-of-the-art facilities, equipment, and networking.*

  4) *Integrate all UAF campuses into research efforts, paying particular attention to the advantage afforded to UAF by the locations of and expertise at rural campuses.*

  The SFOS plan endorses maintaining and promoting the excellent opportunities for graduate work in marine sciences and fisheries. The oceans are an important element of the Alaskan and arctic environment, and SFOS has the responsibility for research in all areas pertinent to them, whether basic or applied. Our

programs are largely interdisciplinary in approach. In order to reach its potential as a graduate/research entity, SFOS urgently needs the requisite facilities, hence the capital items identified in this document. SFOS's distributed nature encourages working with the rural and other campuses.

- The SFOS plan supports the goal, *"PROVIDE HIGH QUALITY UNDERGRADUATE EDUCATION FOR TRADITIONAL AND NON-TRADITIONAL STUDENTS."*

  SFOS is dedicated to providing an outstanding undergraduate fisheries degree, and to this end is planning the facilities and staffing needed to accomplish this goal. Many Alaskan students are oriented from childhood towards a lifestyle that involves fishing. SFOS also provides undergraduate courses in marine sciences, including a course in the natural science core curriculum, which also supports our goal of an educated marine public.

  B. *4) Regain Alaska's global leadership in distance delivery education.*

  SFOS needs to continue developing distance delivery as a tool—this was successfully initiated in fisheries instruction during academic year 1994–1995. Additionally, we are planning upper division residency for one or two years for fisheries majors at our Juneau Center as a tool for improving access to faculty and fisheries resources and broadening the students' experience. We intend to offer selected oceanography and marine biology courses at the coastal sites, if adequate distance delivery equipment becomes available.

- The SFOS plan supports the goal, *"BE A LEADING PARTNER WITH COMMUNITIES, INDUSTRY AND GOVERNMENT TO SOLVE SPECIFIC STATE AND NATIONAL NEEDS."*

  A. *[Be] The leading Alaskan Research Partner with communities, business, government agencies, the military, and other universities within and outside Alaska.*

  All units of SFOS are deeply involved in this area, which is a major emphasis in this plan. Cooperative work with other universities around the world is strong in the marine sciences and fisheries areas. For example current planning for PICES-related North Pacific Ocean research involves many SFOS faculty. Faculty engage in cooperative research with the National Marine Fisheries Service, the Alaska Department of Fish and Game, the Minerals Management Service, the National Biological Survey, the National Oceanic and Atmospheric Administration, the United States Forest Service, and more. The Strategic Plan places high emphasis on maintaining the national and global perspective. SFOS delivers a tremendous amount of public service to management and other agencies, including the North Pacific Fishery Management Council, the National Research Council, the National Science Foundation, the Western Regional Aquaculture Consortium and so on. The

Alaska Sea Grant College Program is dedicated to promoting applied marine and fisheries programs in Alaska as well as public outreach and education. The Fishery Industrial Technology Center joins with business and communities to solve practical problems relating to the fishing industry. The new positions and the high priority placed on housing are in accord with this mission.

1) *Place particular emphasis in areas of study that highlight our geographical location and our strengths.*

The School of Fisheries and Ocean Sciences has significant strength in oceanography, marine biology and fisheries. These are among the most appropriate areas for Alaska, which has the largest viable commercial fisheries resources and is bordered by the only U.S. arctic seas. University involvement in many areas specific to high latitude waters and their resources is important. The wedding between fisheries science and oceanography provides strong support for the basis of marine resource development and conservation. The importance of the fishing industry makes our applied industrial support and our extension programs vital.

B. *[Be] a builder of human capital for Alaska with emphasis on the areas of our strength.*

1) *Work closely with industry and statewide and local agencies to determine trends and likely areas of growth.*

The School of Fisheries and Ocean Sciences has enjoyed a very high success rate in the placement of graduates in all fields. Many of the fisheries and marine sciences M.S. graduates remain in Alaska and occupy positions of responsibility with state agencies and research and educational organizations, and all the fisheries Ph.D. graduates to date are employed in the state.

2) *Create stronger ties between UAF faculty and staff and K–12 schools and students.*

3) *Create in each unit proactive outreach projects in the community and state and coordinate into the planning process the information those contacts provide.*

4) *Emphasize master's degree programs and selected doctoral programs in the humanities, social sciences, natural sciences, and engineering as professional and mid-career programs for Alaska's labor force. Encourage inter-institutional arrangements to create such programs in Alaska.*

5) *Emphasize vocational-technical programs to meet the workforce needs of Fairbanks and the rural areas of Alaska and to enhance economic development.*

Graduates of SFOS are highly successful in gaining professional employment with government agencies and academic institutions; many are now working in Alaska. The SFOS Marine Advisory Program also addresses the above goals, which could in a sense be viewed as the central mission of MAP. FITC, too, carries out many of these, especially 1), 3) and 5). Our fisheries graduate degree programs offer mid-career professional training for Alaska's labor force, and a large number of agency scientists have taken advantage of the opportunity. SFOS has a commitment to foster strong programs in marine sciences, fisheries, applied fishing technology and seafood science, and to provide excellent marine advisory services. This is reflected in the financial request as well as in the body of the plan.

- The SFOS programs allow full participation in the goal, *"BECOME THE EDUCATIONAL CENTER FOR ALASKA NATIVES"* due to our location at several coastal sites, and the nature of our programs which are intrinsically of interest and concern to Natives. We offer internships to Alaskan Native students through an externally-funded program, and we offer various training opportunities at coastal communities as part of our mission.

- The SFOS plan also supports the goal, *"BE THE ACADEMIC GATEWAY TO THE RUSSIAN FAR EAST, THE NORTH PACIFIC, THE ARCTIC AND THE CIRCUMPOLAR NORTH."*

  SFOS faculty, staff and students conduct research throughout the North Pacific, the eastern Arctic and the western Arctic. A close relationship exists and is fostered with organizations in Russia and Japan, and there is a developing relationship with China. SFOS scientists are involved in the planning of essentially all major North Pacific marine programs, and most arctic programs. Maintaining this international perspective is a priority. Specific examples of international cooperation include work with (and, in part funded by) the Japan Marine Science and Technology Center (JAMSTEC), a very close relationship with the fisheries academic and research programs at several institutions in Japan, but most notably with the Faculty of Fisheries at Hokkaido University, exchange visits with Russian scientists, and a heavy involvement in the North Pacific Marine Science Organization (PICES). The proposed faculty and facilities will contribute directly to enhance this kind of activity.

CONTEMPORARY ELEMENTS OF THE SFOS LONG RANGE PLAN

In this section, we have extracted and abstracted those objectives and strategies from the previous SFOS Long Range Plan which remain a priority. However, the new Action Plan incorporates concepts developed through the current strategic planning effort through the work of the SFOS Advisory Council and through the August 1995 meeting of the School's Executive Committee, and does not rest on the Long Range Plan. The Long Range Plan as updated in 1992 is appended; some of the objectives identified in it have already been accomplished.

INSTRUCTION IN FISHERIES AND OCEAN SCIENCES

OBJECTIVES

Improve the facilities and equipment available for instructional activities in the marine and fisheries sciences.

Emphasize quality instruction based on contemporary understanding of fundamental principles and their application to marine resource utilization, enhancement and management.

Offer appropriate fields of study, in tune with scientific objectives, the expertise of the faculty and state and national needs.

Maximize interdisciplinary instructional opportunities so that graduates are not only experts in their specialty, but also have an appreciation for the broader aspects of oceanography, marine biology and fisheries sciences.

Seek and attract the best graduates and undergraduates from among students residing in Alaska, in the nation and internationally, for continuing career development.

STRATEGY

Continually upgrade teaching equipment and facilities. Where appropriate, utilize existing research equipment/laboratories in the formal teaching program. Make more use of seaside laboratories, field stations and vessels in teaching programs.

Increase recognition in SFOS for quality classroom instruction and for advising and other graduate student training activities.

Provide opportunities for short-term exchange of faculty and students between the disciplines for seminars, short courses, workshops, guest lectures and, occasionally, full semester courses.

Encourage Alaska Native students to pursue degrees in marine science and fisheries through faculty/student mentoring programs.

Increase funding for graduate students and undergraduate internships as part of a more active recruiting program.

UNDERSTANDING OF MARINE AND FRESHWATER SYSTEMS

OBJECTIVES

Better understand the oceanographic environment, its natural variability, and the relationships between this variability and local and global atmospheric and climatic.

Increase knowledge of the biology of northern aquatic organisms, including their biochemistry, genetics, nutrition, physiology, behavior, productivity, and predator-prey interactions.

Understand the relationships between environment and ecosystem structure, function, and variability.

Develop an ecosystem-based understanding of the natural variability of fisheries, especially the relationships between recruitment, yield, growth and survival, quality attributes, and physical, chemical, and biological oceanographic parameters and processes.

Use basic understanding of the biology of commercial and subsistence species and the ecosystems of which they are components, along with data on fisheries resource utilization, to assess and predict the impact of fisheries on ecosystems.

Investigate the sources and fates of climatically active gases such as carbon dioxide, sulfur dioxide, and nitrogen dioxide in high-latitude oceans.

Use an understanding of natural environmental variability and its causes to identify, quantify, and predict changes caused by human activities.

Use knowledge of the effects of natural environmental variability on ecosystems to understand and predict the effects of anthropogenic environmental change.

STRATEGY

Fund and recruit new faculty in fields which can contribute to achieving these objectives. These should include outstanding scientists in physical, chemical, biological, and geological oceanography and marine biology who are interested in conducting research at high northern latitudes.

Fund and recruit new faculty in fields of fisheries and fisheries oceanography.

Increase participation in planning, development, and execution of national research programs which incorporate these objectives.

Facilitate planning, development, and execution of multidisciplinary research programs involving SFOS faculty and researchers at other institutions.

Promote interdisciplinary research on ecosystems supporting commercial, subsistence, and recreational fisheries and/or marine mammals. Seek more funding from state and federal fisheries programs and from industry.

STRATEGIES AND TECHNOLOGIES FOR INCREASING THE ECONOMIC BENEFITS OF FISHERIES AND OTHER MARINE RESOURCES

OBJECTIVES

Develop techniques to increase fishery selectivity, and to maximize seafood quality and shelf life after capture.

Assist in developing new seafood products.

STRATEGY

Recruit and fund new faculty with interests related to improved economic yield from marine resources, including the fields of aquaculture, food science and nutrition, and fisheries technology.

Increase information to state government on enhanced economic benefits through research, and seek state investment in this research.

Maintain a strong Marine Advisory Program and enhance extension relating to SFOS programs.

FACULTY INTERACTION AND COLLABORATION

OBJECTIVES

Improve communication among the SFOS faculty and staff.

Set up workshops for developing research projects and responding quickly to RFPs.

STRATEGY

*Maintain annual faculty meetings, encourage presentation of seminars when visiting [centers] of SFOS, and update electronic mail and fax directories.**

Have principal investigators exchange information on current areas of research, upgrade communications through SFOS, and improve early announcements and deadlines of RFPs.

*Develop research and teaching projects that involve staff from [throughout the School and from various] locations within the School.**

*Wording is changed in response to the current operating structure of SFOS.

STRATEGIC PLANNING COMMITTEE REPORT
September 1995

COMMITTEE MEMBERS

Ron Dearborn, Sea Grant
John French, SFOS (inactive)
Hank Pennington, MAP (Chair)
Tom Royer, IMS
Bill Smoker, Fisheries Division
Arliss Sturgulewski (external)
Craig Wiese, MAP

Rationale: School of Fisheries and Ocean Sciences

In the foreseeable future the School of Fisheries and Ocean Sciences must make critical decisions affecting not only its own programs and future, but also the natural resources, ecosystems, and economies of the State, and ultimately a significant portion of the world.

Although often perceived as remote from human impacts, Alaska's marine resources are profoundly influenced by global oceanographic processes which can dramatically affect conditions and biological growth rates. These processes now threaten to deliver pollution, just as they deliver the nutrients that fuel Alaska's fisheries. The marine organisms themselves can move far beyond national boundaries and live in many parts of the marine and freshwater environment during their life cycle. Global studies may apply directly to Alaska's marine environment and fisheries, and make national and international links to the world scientific community critical.

The SFOS faculty have a wide spectrum of interests, activities and backgrounds and are working to understand the marine environment and apply this essential knowledge to the needs of the citizens of Alaska. Support for these efforts is derived from a broad spectrum of sources ranging from federally funded peer-reviewed projects to state funding for marine industrial development. Bringing such diversity of disciplines, activities and funding to a single organization requires integrated effort and strong communication throughout the School.

The following Vision, Mission, Values, and Goals and Objectives are the core of a Strategic Plan which, when implemented along with a Capital Plan, will provide guidance to lead the School of Fisheries and Ocean Sciences into a challenging future. Annual reporting and periodic, regular review and revision of the Strategic Plan will provide opportunities to adjust the structure and function of the School to best respond to changes not foreseen at this time.

VISION: To be a leading partner for a healthy and productive ocean.

MISSION: Sound judgment in the use of the ocean.

VALUES: Partnerships, good work, worldwide alignment, learning, wise use of resources, collegiality, academic freedom, intellectual curiosity.

Goals and Objectives

A. Goal: Professional Enhancement

1. Focus area—UAF Students

Objectives

- To identify opportunities and needs for producing excellent students
- To stay on and advance the cutting edge through relevant research
- To develop and deliver curricula
- To place students in marine science and resource management fields

2. Focus area—Professionals in the Field

Objectives

- To identify opportunities and needs
- To work with agencies (e.g., ADF&G and NMFS) to define and enhance curricula
- To develop and deliver curricula
- To foster professional development of faculty and staff

3. Focus area—Vocational/Technical

Objectives

- To identify information needs of resource users
- To develop and provide in-service technical training to users

B. Goal: Prediction of Marine and Related Ecosystems

1. Focus area—Academic Science

Objectives

- To determine research needs and opportunities
- To participate in the development of research plans
- To propose research
- To carry out research
- To disseminate research results

2. *Focus area—Cooperative Research Programs*

Objectives

- To work with resource agencies to identify research needs
- To develop and participate in federal, state, and foreign partnerships for research

3. *Focus area—Industry Driven Science*

Objectives

- To cooperate with and assist organizations conducting or fostering industrial science and technology
- To sponsor and participate in regular meetings with industry to learn needs
- To engage in research to help solve industry problems
- To publish and distribute data in forms readable by and useful to industry

C. GOAL: PARTNERSHIPS FOR WELL MANAGED NATURAL RESOURCES

1. *Focus area—Dynamic Marine Research*

Objectives

- To match resource questions with appropriate tools
- To join in cooperative science ventures
- To share research progress of School with resource research organizations

2. *Focus area—Effective Management of Resources*

Objectives

- To participate in management bodies
- To provide increased communication and interaction among agencies
- To identify and respond to research needs of management agencies
- To share progress of School with resource managers

3. *Focus area—Resource Users*

Objectives

- To help users understand the limits of current knowledge and the need for conservative management
- To develop relationships with user groups
- To provide information and personnel to companies
- To assist resource users in increasing value of exploited resources
- To share progress of School with resource users
- To provide information and assistance in contending resource users
- To refine and state appropriately to managers the needs of resource users

4. *Focus area—Policy Makers*

Objectives

- To propose and play a role in resource policy changes
- To clarify the role of UAF faculty in policy issues

- To provide information to policy makers
- To participate in policy formulation by executive branch agencies
- To be aware and responsive to policy issues in the Legislature

D. GOAL: A WELL EDUCATED PUBLIC WITH RESPECT FOR NATURAL RESOURCES

1. *Focus area—An Informed and Aware Public*

   Objectives
   - To establish SFOS as a credible information source for diverse audiences
   - To conduct resource education programs for journalists
   - To increase use of media by SFOS
   - To meet educational opportunities for visiting public at school facilities, including the Alaska SeaLife Center, through design, display and programs

2. *Focus area—Public Participation in Political/Management Processes*

   Objectives
   - To support legislative need for information
   - To help candidates address marine issues in platforms
   - To help public be more effective in resource management process

3. *Focus area—Attracting and Retaining Children's Interest in Math and Science*

   Objectives
   - To determine ways to interest students in math and science
   - To work with DOE and teachers to develop curricula
   - To nurture K–12 students
   - To interact with and assist teachers

E. GOAL: APPROPRIATE UTILIZATION OF NATURAL RESOURCES

1. *Focus area—Industry Involvement and Partnerships*

   Objectives
   - To work with industry in developing joint projects
   - To apprise industry of research results and personnel available for assistance
   - To transmit the latest technology to industry

2. *Focus area—Commercial Harvest and Processing of Fish, Shellfish, and Marine Plants*

   Objectives
   - To improve product quality among harvesters and processors
   - To develop increased value products from traditional and underutilized species
   - To foster more "value added" production activities in Alaska
   - To reduce wastage or utilize non-target species
   - To increase efficiency and productivity of harvesters and processors

3. *Focus area—Other Users of Finfish, Shellfish, and Marine Plants*

   Objectives

   - To work with subsistence, recreational and non consumptive users to identify research, education and service needs
   - To respond to those needs

4. *Focus area—Other Marine Resources*

   Objectives

   - To identify research, education and service needs of water users, aquatic farmers, communities and other users of the marine environment
   - To respond to those needs

F. GOAL: ACADEMIC FREEDOM AND INTELLECTUAL CURIOSITY

1. *Focus area—School Faculty*

   Objectives

   - To assure a degree of salary support for undesignated activities
   - To enable faculty to pursue academic interests outside their current disciplines
   - To increase the number of successful grant proposals from School faculty
   - To increase accountability of faculty using state funds for the purpose of writing grant proposals
   - To provide incentives for faculty to be active in diverse forums for setting research agendas
   - To enhance sabbatical leave process by strengthening review of innovative thinking
   - To identify and develop opportunities for accomplishing long-term good

2. *Focus area—Encouraging Development of New Ideas*

   Objectives

   - To provide a forum within the School to debate issues on the state and federal agenda well served by faculty insight
   - To establish a forum for faculty in other disciplines to conduct interdisciplinary activities with SFOS faculty
   - To encourage inter-campus cooperation in research, service and education
   - To encourage team teaching in marine science and fisheries
   - To consider broader resource needs in discussions of specific ideas

G. GOAL: INFRASTRUCTURE AND MANAGEMENT FOR A WIDELY DISPERSED SCHOOL

1. *Focus area—Managing School*

   Objectives

   - To support teaching, research and service
   - To cooperate with other agencies in developing facilities
   - To manage for the long-term good of the School, the State and its resources

2. *Focus area—Representing the School*

   Objectives

   - To articulate a long-term view of the School for funding bodies
   - To look with broad vision at the School and the issues affecting it
   - To define means for broader presentation of the School to diverse constituents
   - To present the School to political bodies as an integral part of the state economy and source of practical knowledge
   - To make presentations to the legislative committees and Board of Regents

3. *Focus area—Communication*

   Objectives

   - To develop a policy for dispersal of information while protecting academic freedom
   - To define communication responsibilities of academic program chairs, dean, associate dean and faculty
   - To incorporate communication of information to broader audiences into research projects, conferences and meetings, and extension projects

4. *Focus area—Collegiality*

   Objectives

   - To conduct regular SFOS faculty meetings
   - To increase opportunities for off-campus faculty to conduct seminars on campus, and vice-versa

CAPITAL PLAN AND FACILITIES DEVELOPMENT COMMITTEE REPORT
Summer 1995

COMMITTEE MEMBERS

Internal:

Mike Castellini, IMS
Tony Gharrett, Fisheries Division (Chair)
Dave Nebert, IMS/SFOS Administration (staff)
Joan Osterkamp, SFOS Executive Officer (staff)
Ray RaLonde, MAP
Scott Smiley (replacing John French), FITC

External:

Gil Bane, Kodiak College
Dick Bower, Alaska Board of Fish
Dan Ogg, UA Regent (ex officio)

Conclusions Reached by the Facilities and Capital Plan Development Committee August 1995

The School of Fisheries and Ocean Sciences at UAF has primary responsibility for the marine-related programs within the University of Alaska. It carries out its mission and meets the needs throughout Alaska through its units: the Institute of Marine Science (IMS), the Marine Advisory Program (MAP), the Fisheries Division, the Fishery Industrial Technology Center (FITC) and the Alaska Sea Grant College Program. Each unit plays a different role in fulfilling the SFOS mission and has a different focus in meeting the University of Alaska's and the State's needs in teaching, research, and service. The diversity of the units and their broad regional representation are important in SFOS' success in such a geographically large and resource rich state with such a low population density.

This committee first developed preliminary facility descriptions and needs for each of the units in the context of their roles and activities within SFOS (Appendix E). From this preliminary effort, we have identified a number of situations that affect the ability of SFOS to meet the State's needs that can be addressed by facilities and capital planning. The things we have identified involve the fundamental functions of SFOS units and are relatively independent of the Strategic Planning that involves a more detailed examination of program directions and needs. The most critical facilities and capital planning issues that affect SFOS are the inadequacies of the fisheries facility in Juneau, the FITC facilities in Kodiak, and the dock in Seward. In addition, improved communication capabilities among the units would enhance their recognition and value.

The National Marine Fisheries Service (NMFS) is developing plans for a facility at Auke Cape (near Juneau) that will house the Auke Bay Laboratory and the Regional Office, which is responsible for marine fish management in federal waters adjacent to Alaska. SFOS was asked to participate in the planning. Because this offer provided an extraordinary opportunity to secure much needed space and to be a partner in developing the center of fisheries excellence in Alaska, SFOS has been participating in the planning. A variety of funding sources are being pursued, but funding has not yet been identified. The Auke Cape facility will allow SFOS to further develop its fisheries program and enhance its ability to prepare students to become professionals who manage Alaska's fisheries and to perform research and service important to Alaska's resource management agencies and to the conservation of Alaska's living marine resources.

The Phase II of facilities development for FITC in Kodiak is going forward. This development is being underwritten largely by the Borough of Kodiak and will enhance the ability of SFOS to serve the needs of Alaska's fishing industry and processors as well as develop its role in preparing students for work in the industry. Development of housing for students and visiting researchers is also important to success.

The dock at Seward will be inadequate for the new National Science Foundation vessel that SFOS will administer. The vessel is integral to much of the research and graduate education conducted on marine resources of Alaska's waters and as such is an important component that IMS plays in national and international marine and oceanographic research and education as well as within Alaska.

Communication ties the SFOS units into a single entity. It is also of fundamental importance to SFOS' ability to meet its education, service, and even research missions. Therefore, communication capabilities are extremely important to the integrity of SFOS. The Marine Advisory Agents are the "face" of SFOS to many marine resource users and communities throughout Alaska. It is important that they be able to communicate effectively with the public and other SFOS units using modern communication technology.

A Brief History of the School of Fisheries and Ocean Sciences, University of Alaska Fairbanks

The first Alaska Legislature, in recognition of the enormity of Alaska's aquatic resources and in order to reduce Territorial dependence on the University of Washington, Oregon State University, and other institutions for training professionals and conducting research on those resources, established in 1960 the Institute of Marine Science at the University of Alaska Fairbanks to provide a "program of education and research in physical, chemical and biological oceanography and related fields" (First Alaska Legislature, 1960). Over the past three and a half decades, IMS expanded to a maximum of 28 faculty, and now has 23 tenure track faculty (and four research faculty). The development of substantial

expertise in the major oceanographic disciplines occurred during the first two decades along with the expansion of faculty, and has enabled IMS to play leading roles in multi-faceted studies of Alaska's coastal and continental shelf waters as well as participate in studies throughout the world oceans. In 1970 the Institute moved its base of marine operations from Douglas, Alaska to Seward and, in 1980, began operating a 133-foot ice-strengthened vessel, the R/V *Alpha Helix*. Access to the newly acquired vessel greatly increased IMS' capabilities for oceanographic research. During the 1980s, IMS enhanced its national and international reputation with its participation in a broad range of research programs, extending from the Gulf of Alaska through the Bering and Chukchi Seas to the Arctic Ocean. The first of many graduate marine science degrees were granted to IMS students in 1965. Since that time, IMS students have earned approximately 150 graduate degrees, 30 percent of which have been at the Ph.D. level.

The second Alaska Legislature, to assist the State's fishing industry, appropriated funds for the Cooperative Extension Service (CES) to provide a fisheries extension program. In 1963, Fisheries Extension broadened its outreach efforts to include all of the maritime public and changed its name to the Marine Advisory Program. Since 1963, the MAP faculty has grown to seven field agents and five specialists. Several field agents have also developed specialty areas for their activities. MAP provides educational and technical assistance in the areas of fisheries, marine safety, business management, seafood technology, seafood quality, aquaculture, marine mammals, and recreation/tourism. MAP was a combined effort of Sea Grant and CES until it became a unit of the new School of Fisheries and Ocean Sciences in 1987. MAP receives funding support from both the Sea Grant Program and the State of Alaska.

Alaska has long acknowledged the need to conserve its fisheries resources, its foremost renewable source of wealth. In 1974, the University established a fisheries program at the University of Alaska, Juneau, which grew from one director in 1975, with part-time help from scientists at the National Marine Fisheries Service Auke Bay Laboratory, to a School of Fisheries and Science with 12 faculty and a dean in 1986. The Juneau Center, School of Fisheries and Ocean Sciences (JCSFOS) was established and incorporated into SFOS when the School was created in 1987.

The fisheries program on the Fairbanks campus was originally in the College of Natural Sciences. One fisheries faculty member was hired to coordinate that program in 1976. In addition, the Alaska Cooperative Fish and Wildlife Research Unit (ACFWRU) has provided faculty and support for graduate student projects since 1978. The Fairbanks fisheries program has focused on arctic and subarctic ecology and has taken advantage of the breadth of expertise of non-fisheries faculty at Fairbanks.

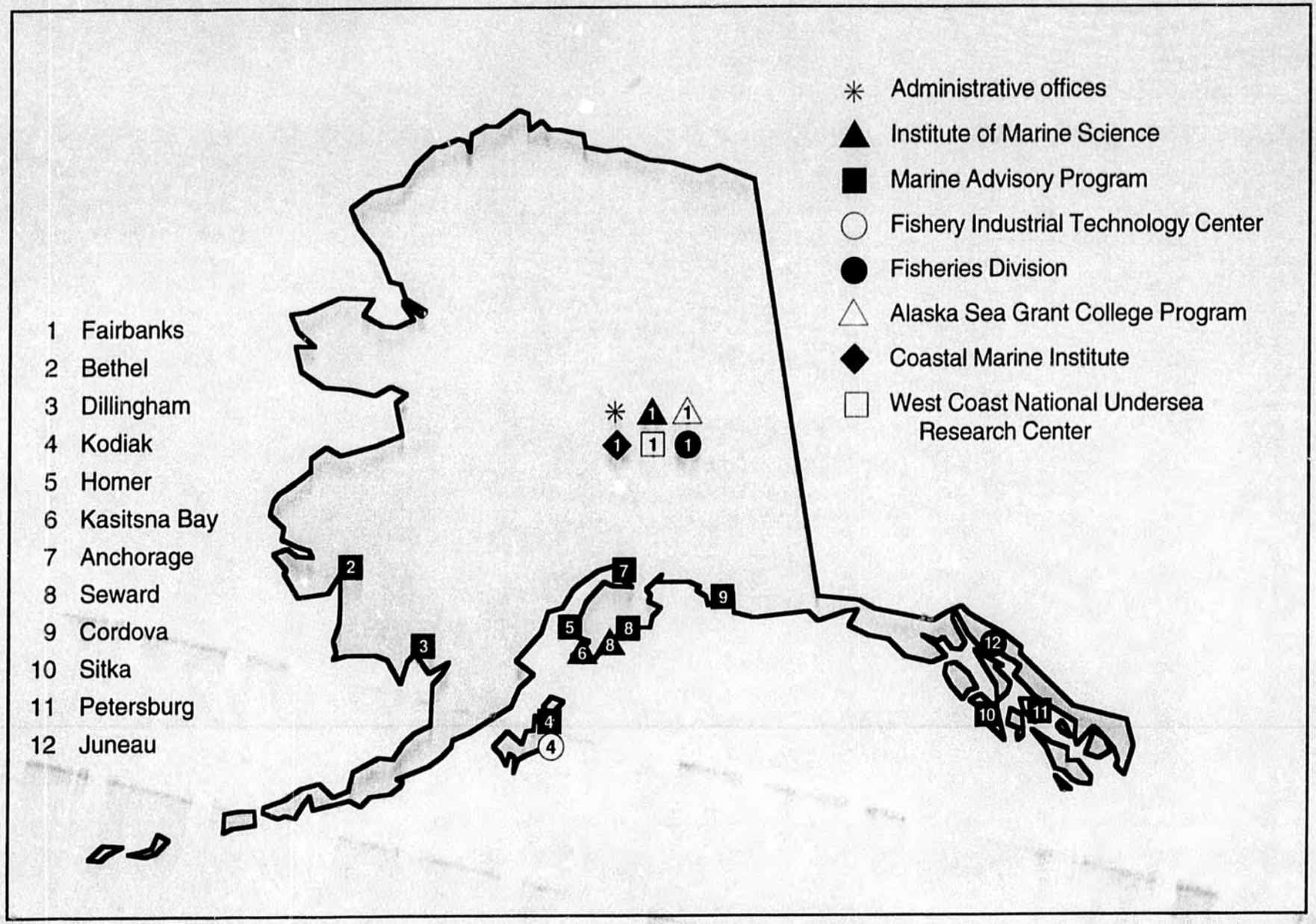
The Fisheries Division that resulted from restructuring remains geographically divided between Juneau and Fairbanks. Research and graduate teaching are the focus of efforts for the seven faculty now at the Juneau Center, School of Fisheries and Ocean Sciences. At the Fairbanks campus, three faculty are responsible for the undergraduate program and the Fairbanks graduate students, who are supported primarily by ACFWRU. Other SFOS

and Fairbanks faculty have research interests in fisheries related areas and contribute to the program. The combined research and educational programs at both locations provide an important pool of fisheries experts for the state of Alaska. Since 1965, more than 120 graduate fisheries degrees have been awarded by the University of Alaska. Eighty-five percent of those graduates are working in fisheries or closely related fields and 70 percent of the total reside in Alaska.

Sea Grant College status was awarded to the University in 1980 to maintain "a balanced program of research, education, training and advisory services in fields related to ocean and coastal resources" (1966 Sea Grant College and Program Act). The Sea Grant College Program was developed to "increase the understanding, assessment, development, utilization and conservation of the nation's coastal resources by providing assistance to promote a strong educational base, responsive research and training activities, and broad and prompt dissemination of knowledge and techniques" (1976 Sea Grant Program Improvement Act).

The Alaska Legislature acknowledged the State's responsibility to advance the development of its fishery industries. In 1981 the Fishery Industrial Technology Center, a "technology training and research center under the University of Alaska [that] is best able to aid the individuals and business in the development of fishery resources" (Alaska State Legislature, 1981), was established in Kodiak, a major fishing port in Alaska. Following the hiring of the first director in 1982, FITC grew to five faculty in 1986, with core expertise in seafood processing science and technology.

In 1987 when SFOS was created, the University of Alaska merged fisheries and ocean sciences faculties into the unified School to improve coordination and efficiency. SFOS, with a combined faculty of 52 (plus three active faculty with emeritus status) is now able to pursue more complete and well-integrated studies of marine and freshwater processes and resources.


1 Fairbanks
2 Bethel
3 Dillingham
4 Kodiak
5 Homer
6 Kasitsna Bay
7 Anchorage
8 Seward
9 Cordova
10 Sitka
11 Petersburg
12 Juneau
Administrative offices
Institute of Marine Science
Marine Advisory Program
Fishery Industrial Technology Center
Fisheries Division
Alaska Sea Grant College Program
Coastal Marine Institute
West Coast National Undersea Research Center

School of Fisheries and Ocean Sciences Administration

prepared by Dave Nebert

A. Overview

The SFOS administrative offices provide administrative integration and support for the entire School in the areas of planning, personnel, purchasing, proposal preparation and fiscal management.

B. Facilities

The SFOS administrative space is adequate for present and anticipated needs but the floor plan is poorly designed for the functions provided. A rearrangement of existing space is desirable from a functional and presentability standpoint. Ideally, a well thought out entry and office area with visual appeal would be desirable.... if we ever have sufficient funding for amenities.

There is an area adjacent to the SFOS office area that is now being used as a lounge. The space is illegal since it forms a part of a hallway in which combustibles are not permitted. It's important that we wall in this space, no matter what the use, as soon as possible since it may need to be cleared out if requested by the University Fire Department.

SFOS units on the Fairbanks campus are widely spread, in several buildings, none of which is occupied exclusively by SFOS units. And in spite of the fact that IMS is one of two large research institutes on campus, there is no IMS or SFOS building and this has hindered the development of a local identity on campus. While this is of a lower priority than many other concerns within SFOS, a plan to draw together all of the Fairbanks SFOS units into one building should be established as a long range goal as it will serve to strengthen both individual units and the school as a whole.

C. Remedies

Minor changes to the SFOS office layout can be made from time to time to improve the functioning of the office as required without major modifications. When funding is difficult to secure, it is not reasonable to divert funds for major modifications to the SFOS offices.

While not one of the highest priorities in SFOS, it is in the best interest of the School to bring all units on the Fairbanks campus under one roof. This should be considered as a long term goal for SFOS. There are no long range plans in place to accomplish this goal and with the present funding picture, it does not look likely. However, opportunities may arise and the School must be poised to take advantage of them.

Academic Program

prepared by Laura Bender

A. Overview

There are two academic entities within the SFOS Academic Program. One is the Graduate Program in Marine Sciences and Limnology (GPMSL), and the other is the Fisheries Program. The former consists of a Program Head who is a full-time IMS faculty member. The Fisheries Program does not have a program or department head, but is administered by the Director of the Fisheries Division, currently located at the Juneau Center. The Academic Program has a 3/4 time support staff person located in the Irving II Building of the Fairbanks campus. Currently there are 22 full-time and 17 part-time oceanography students, ten full-time and four part-time marine biology students, and 26 full-time and 22 part-time fisheries students. Thirty-five of these fisheries students reside with the Juneau Center and 13 students are in Fairbanks. We also have five interdisciplinary seafood science and nutrition students at FITC in Kodiak. All full-time students in Fairbanks have at least a desk and a chair, but because of space limitations, they are often located a distance from their major professors and cohorts.

The Academic Program administrative assistant is responsible for all inquiries and tracking of students from admission through graduation. Coordination of semester classes and numerous other responsibilities involving the Academic Program are centered in the support office. Anything having to do with students, classes or the degree program is funneled through this office.

B. Faculty

The Academic Program does not contain faculty in the same way other units do, but does have direct faculty involvement as described in the overview above.

C. Facilities

The only space specifically assigned to the Academic Program is the 120 sq ft room occupied by the administrative assistant. There are also three classroom/conference rooms routinely used by GPMSL and the Fisheries Program in Fairbanks, but those spaces are listed under IMS. Other campus units, including Summer Sessions, frequently use these classrooms when they are not being used for SFOS classes.

Present office space for support staff is limited. It is not near other administrative support and therefore the Academic Program cannot easily share part-time student or staff personnel. The office would be more effective if there was access to student part-time help. The existing office space would be adequate if storage was available at a nearby location. If student record storage must remain in the office, a larger office is required. An increase to 150–200 sq ft would be adequate with an optimal layout.

Student office space assignments, including desks and bookcases are somewhat haphazard, which results in some students having less than adequate work space. Oversight for student space should be through the Academic Program office.

D. REMEDIES

Nearby storage space should be found to alleviate crowding in the Academic Program office. Other options include moving the office to a somewhat larger room and/or relocating to an area where shared help could be more readily obtained. It is also recommended that student space assignments be controlled through the Academic Program office with input from faculty.

Fisheries Division

prepared by Tony Gharrett

A. OVERVIEW

Alaska's marine resources are key to Alaska's economic present and future. Renewable marine resources could continue to support Alaska after non-renewable resources are exhausted if sufficient care and planning are devoted to their maintenance and protection. However, the recent problems facing salmon and marine resources in the Pacific Northwest and the collapse of the east coast marine fisheries foretell a similar potential fate in Alaska. It is essential to commit now to Alaska's resources, rather than wait until they are directly threatened. A strong, preemptive effort is required to avoid erosion of the resource.

Fisheries Division faculty vigorously contribute to research on Alaska's fisheries resources, educate fisheries scientists, and serve as advisors to fisheries resource management bodies. The research broadly includes salmon, marine and freshwater fish, and invertebrate resources important to commercial and recreational fisheries as well as to the ecosystem. The research that the faculty conduct is the primary source of support for graduate students. That research is an important component of the education for students who are future resource managers or will work in the fisheries industry. Faculty members participate in committees advisory to the North Pacific Fishery Management Council, sit on the Board of Directors for the Prince William Sound Aquaculture Association, and are called on by the National Research Council to examine national problems or to review the results of those efforts.

The Fisheries Division, which includes ten faculty located on both the Fairbanks and Juneau campuses, resulted from consolidation in 1987 of the fisheries programs at the University of Alaska Fairbanks and the University of Alaska Juneau. Previously, both programs offered M.S. and B.S. degrees in fisheries. The restructuring enabled the University of Alaska Fairbanks to develop a Ph.D. degree in fisheries, but the undergraduate program in Juneau was discontinued. Having the Fisheries Program

and faculty split between two campuses creates some challenges in curricular offerings. Both instruction and research at each campus require some of the same expertise; and in the recent fiscal climate, the breadth of the program has been reduced. The erosion of the Juneau fisheries faculty (no vacated faculty positions have been filled since the restructuring) and small size of the Fairbanks faculty have created problems in course offerings at both sites and have limited the number of graduate students that can be accommodated. The Capital Plan and Facilities Development Committee recognized that the problems experienced by Fisheries Division faculty occur in the other SFOS academic units too. Maintenance of a core faculty in fisheries has been deferred in the same way that maintenance of physical facilities has been deferred.

FAIRBANKS

A. FACULTY

The fisheries faculty in Fairbanks is understaffed. The undergraduate fisheries program has 1.5 fisheries faculty. The undergraduate curriculum was one of the problem areas noted by the Northwest Association of School and Colleges accreditation team, but until the students can get together more with the fisheries faculty, it will be difficult to strengthen the program. The graduate fisheries program is primarily supported by the Alaska Cooperative Fish and Wildlife Research Unit. Although the graduate program benefits from the breadth of offerings at the Fairbanks campus, it lacks the fisheries offerings that are available at the Juneau Center where most of the fisheries faculty reside.

B. FACILITIES

The only facilities devoted to the Fairbanks fisheries faculty are their offices. There are no graduate student offices, no dedicated teaching lab, and faculty do not have research laboratories.

C. REMEDIES

Providing office and laboratory space would alleviate some of the problems, but as long as the fisheries faculty and programs are geographically split, there will be both redundancy and competition for faculty resources to provide strong programs. It is not possible to cleanly separate the undergraduate and graduate curricula. Many entering graduate students come from disciplines such as mathematics or biology and need introductory (upper division) fisheries courses to fill in their backgrounds. Both undergraduate and graduate students deserve a reasonable variety of marine and aquatic science related courses. One possible course of action is to consolidate the faculty and programs at the Juneau Center. However, the facilities in Juneau are presently inadequate to accommodate the students, faculty, and staff in Juneau; and

adding more faculty and students would only make the situation worse. As a solution to the space problems, planning for an adequate facility has begun (see below). Discussions of the possibility of consolidating fisheries programs and faculty in Juneau are being made and the academic/fiscal climate seems right because the system-wide Academic Council has recently issued a call for enhanced collaboration between faculties of the statewide University of Alaska. Locating the last two years of the undergraduate fisheries program at the Juneau Center (SFOS) would require the cooperation and support of UAS.

Consolidating the fisheries faculty in Juneau is not without disadvantages. At the present time, the graduate program in Fairbanks is primarily due to the Alaska Cooperative Fish and Wildlife Research Unit and its Leader, Jim Reynolds. Whereas the graduate students in Fairbanks do not have ready access to faculty and courses in Juneau, they do benefit from a diversity of (non-fisheries) faculty and broad curriculum support available on the Fairbanks campus. The research focus of many of those students is on arctic and subarctic ecosystems. Consolidation at the Juneau Center would reduce access to those habitats and probably reduce emphasis on that aspect of fisheries science. The role and activities of ACFWRU must be considered carefully in any changes in the graduate fisheries program.

JUNEAU

A. FACULTY

Although larger than the fisheries faculty in Fairbanks, the Fisheries Division faculty at the Juneau Center is also understaffed. Since the restructuring of SFOS in 1987, the Division at the Juneau Center has lost a fish pathologist and a quantitative fisheries management specialist and will soon lose a salmon management biologist to retirement. The initially small size accompanied by loss of faculty jeopardizes the program as a whole; there is barely a critical mass. Plans are being made to replace the retiring faculty member with a quantitative fisheries scientist, the discipline needed most immediately by the program. Other specific disciplines that the Fisheries Division needs to support its educational and research programs include (but are not limited to) fish/shellfish physiology, salmon management biology, fish/shellfish pathology, and habitat/freshwater ecology.

B. FACILITIES

As a result of the formation of SFOS, the Fisheries Division now shares facilities with science and math instructors at UAS. The Anderson Building, originally constructed for the Juneau fisheries program is shared between UAS and the SFOS Fisheries Division faculty. Since SFOS was created, the building has been inadequate for the fisheries program; part of the fisheries faculty and the outdated computer laboratory are in leased quarters approximately 1.5 miles away (a new lease is being bid and

those faculty may have to move again); student office space has been lost to student housing (which is also limited); faculty and students share extremely limited lab space (there is little security for research or isolation of experiments using hazardous materials); and developing UAS programs are creating additional pressure on space availability in the Anderson Building. The Northwest Association of Schools and Colleges accreditation team noted in 1993 that the sub-par facilities in Juneau and the dispersal of faculty and students continue to compromise the Fisheries Division programs.

C. Remedies

The primary solution to Juneau's facilities problem is development of appropriate adequate space for the Fisheries Program. The U.S. National Oceanographic and Atmospheric Administration (NOAA) has begun planning a new facility located at Auke Cape near Juneau which will house the National Marine Fisheries Service regional office, NMFS Auke Bay Fisheries Laboratory (ABL) personnel and labs, and the National Weather Bureau. SFOS was invited by James Baker, Administrator of NOAA, to participate in the project and SFOS has been involved in the planning process since 1992. Of course, UAF participation in the process is ultimately subject to availability of funds, but the opportunity offered by this project is unique in our history. Co-location of the Juneau Center with and strong ties to NMFS would follow a successful pattern observed at a other universities such as the University of Washington, Scripps Institution of Oceanography, and the University of Rhode Island; moreover, one of the primary reasons a fisheries program was developed in Juneau was the proximity to the professional resources of ABL. NMFS enthusiastically supports the concept and has been very supportive in helping us to participate.

Planning the (possible) SFOS component of the Auke Cape Facility has been based on a core of 12 faculty. This number would provide a solid core of disciplines (including those described above); it is not unreasonable to expect the program to grow to that size within a decade. Twelve is certainly not a maximum number that might be expected in a world-class fisheries program, but provides a reasonable basis for planning in the near future. For planning purposes, each faculty member was considered a unit that averages (conservatively) one technical staff and four graduate students. A space requirement study (Alpha Engineering Group and MAKERS architecture and urban design) for offices, wet and dry laboratories, classrooms, and administrative facilities for 12 faculty, 12 technical staff, 48 graduate students, and five administrative staff members indicated an area of 22,075 net sq ft (31,838 gross sq ft) and a cost of about $11 million, exclusive of furniture and equipment.

FACTS ABOUT FISHERIES IN ALASKA, THE FISHERIES DIVISION, FISHERIES GRADUATES

Alaska has

- 1/2 of U.S. coastline
- 2/3 of U.S. continental shelf
- 56% of U.S. fish and shellfish landings
- Only one graduate fisheries program

Fisheries in Alaska

- Is the largest private employer, about 20% of jobs
- Is a renewable resource, unlike oil and minerals

University of Alaska fisheries graduates since 1965

- More than 120 M.S. and Ph.D. degrees
- 70% work in Alaska
- 85% work in fisheries or closely related fields
  - Many are mid-range federal and state career biologists in Alaska, agencies include ADF&G (including 4 regional supervisors) and NMFS (including many at the GS 12 levels or higher).

Demography of 1994–95 graduate students

- Mid-career agency employees
  - ADF&G (3 M.S. and 2 Ph.D.)
  - NMFS (4 Ph.D.)
  - USFWS (1 M.S.)
  - USFS (1 M.S.)
- Foreign (6, including Japan, Germany, Argentina, Greece, and China)
- Other (29)

Student admissions

- In 1994 SFOS was the only UAF unit with a significant increase in applications
- Faculty and facility constraints resulted in a decreased acceptance rate

Source of Fisheries Division funding

- Between 1991 and 1994, every dollar of state funds leveraged $1.80 in other funds

North Pacific Fishery Management Council

- 6 Fisheries Division faculty serve on committees
- Terry Quinn chairs the Scientific and Statistical Committee (SSC)

Fishery Industrial Technology Center (FITC)

prepared by Scott Smiley

A. Overview

The Fishery Industrial Technology Center's mission is to help increase the value of fisheries in Alaska. FITC does this through teaching, research, and service. FITC's enabling legislation lists three areas of focus: harvesting, processing, and conservation of resources. The highly applied nature of FITC's mission—working on research instigated by industry—makes it unique within the School of Fisheries and Ocean Sciences, and within the UA system.

FITC's location in Kodiak complicates its teaching mission. It is a distant and expensive town. FITC has no housing facilities for students; and its graduate students are seriously burdened with costs and the lack of affordable housing. Transportation of our faculty to Fairbanks to teach seafood science does not seem cost effective given the lack of a food science program and low undergraduate enrollments. When the housing planned for Phase II is constructed, FITC will be better able to attract students. This will allow us to increase our graduate student enrollment and to attract undergraduates for semester long programs or summer courses.

The term "service", as applied to FITC, means being responsive to the needs of the Alaskan fishing industry. The recipients of FITC's service include the major corporate processors, minor processors, and thousands of fishermen and harvesters. Also included are cannery workers and rural communities. Fishing is the largest employer in Alaska, and the second largest in terms of economic value. FITC's service involves increasing the value in this industry through training of personnel and research and development on a variety of industry problems.

There are five principal areas of application for FITC's efforts: harvesting, processing, quality, contaminants, and ecosystem research. Each has the potential for significant impact on the fishing industry in Alaska. It is critical that the highly applied nature of our research be understood; FITC's research is principally directed by the industry itself. In collaboration with industrial partners, we are pursuing a variety of projects in these areas. Few of these involve basic research; and in most cases the time to market for the research we are involved in is a matter of months or only a few years.

B. Faculty

A single non-tenure track researcher conducts FITC's efforts in harvesting part time; FITC plans additional non-tenure track staff in this area. There are 2.8 full time equivalents (FTE), all tenured, and one non-tenured faculty, each directing a major part or all of their efforts to seafood processing. Seafood processing is our most active research focus. We will need to hire another seafood process engineer soon, and to augment existing and new faculty with non-tenured staff. FITC has 2.0 FTE faculty

working indirectly in the area of quality: a microbiologist and a biochemist. We anticipate developing these areas using non-tenure track staff in the fields of refrigeration and cryoprotectant technology.

Besides present research at FITC, we anticipate expansion in the areas of refrigeration and cryoprotectant technology, paralytic shellfish poisoning (PSP) problems, and ecosystems research. FITC faculty are presently moderately involved in PSP research. We plan to augment our staff in this area by hiring non-tenure track personnel. FITC is not involved in ecosystems research. However, faculty based at IMS and the Juneau Center are expert in many aspects of this. One faculty member at FITC plans to develop faunal lists for the region. The focus of these efforts is to address fisheries concerns in the northern Gulf of Alaska. The addition of a computer modeler will contribute to solutions of these problem areas as well as to others such as process modeling and data base development.

C. FACILITIES

FITC devotes most of the space in the Owen Building towards processing research. Existing harvesting efforts use part of one office. Other currently available space includes laboratories for microbiology, chemistry, biochemistry, and engineering—disciplines intimately connected with our quality and contaminants efforts.

D. REMEDIES

FITC has an immediate need for another seafood process engineer, either tenure track or non-tenure track. We will soon need a computer modeler to work on various aspects of database development and modeling of process engineering problems. FITC has developed, with NMFS and ADF&G and the Kodiak Island Borough, a plan for the development of new facilities called Phase II. The details of square footage and cost are still being negotiated. Most important among the facilities collected under Phase II is the new housing. This housing will allow us to attract new staff as well as students. Using the housing, investigators from other SFOS facilities can visit Kodiak to conduct research. It will also enable graduate students, post-docs, and visiting investigators to come to Kodiak to assist in this research. There is a promise of a zero net cost to the University for the new facilities. The University's contribution to Phase II will be about $3 million dollars from EVOS monies.

Phase II will allow us to pursue recovering valuable components from harvested species by implementing a biotechnological approach. Our efforts in harvesting research will be bolstered by the shore-side facilities designed into Phase II. Laboratories in Phase II will enable us to pursue the areas of quality and contaminants research efficiently. The P-2 level containment lab will allow us to do this safely. Phase II will provide seawater systems that make possible studies of benthic invertebrates that may serve as indicator species for analysis of the complex food webs of the north Gulf of Alaska. Their life history traits may also be useful in predicting the environmental influences over the ecosystem.

The Owen Building has some design defects, many of which are listed among the SFOS request for maintenance and renovation. In addition, computer system upgrades and networking, both within-house and between FITC and the main campus, are urgently needed. The problems described immediately above not covered by the new maintenance and renovation funds must be addressed soon. If feasible, FITC would renovate our pilot plant to allow compliance with our food processing certificate. This would add a cleanable ceiling 15 feet above the floor of the pilot plant. If funds were available, we would use the newly created space for storage of equipment. Equipping Phase II with scientific machinery, microscopes and computers, and the networking of Phase II with the Owen Building will be expensive.

Institute of Marine Science (IMS)

prepared by Mike Castellini

A. Overview

Alaska has great potential for gaining economic benefit from its vast coastal and broad continental shelf regions. The primary areas of potential economic benefit are minerals extraction, fisheries resource harvesting, and tourism. Economic opportunities in these areas can be maximized through intelligent management only if we have a good understanding of how the marine environment and the ecosystems within that environment function. It is therefore important to gather basic marine information from which we can gain an understanding of how physical, chemical, geological, and biological systems work in Alaskan waters. The Institute of Marine Science has been unraveling the workings of the ocean environment and the ecosystems contained therein since it's inception in 1960. This effort has been beneficial to the State of Alaska as well as to the development of marine science in general.

The faculty of IMS have been particularly successful in competing at the national level for funding from the various federal agencies which support ocean and limnological related research. Faculty funded research supports a portion of the faculty salaries, most of the students seeking degrees, as well as research support staff (and there are also obvious spin-offs into the local economy of Fairbanks and the State). Information provided by these projects and the personnel supported by them provide the necessary background and the means for understanding Alaska's unique marine environment. The research at IMS, though primarily federally funded, helps to provide answers to managers in Alaska, which in turn helps them to solve Alaskan problems.

The primary products of the funded research at IMS are information and students. Some of the graduating students remain in Alaska to work with local Alaskan problems while others eventually take positions elsewhere. But even those students that choose to work outside of Alaska have contributed information about local marine related problems through their degree work at UAF.

B. FACULTY

IMS is strong in most oceanographic disciplines but is weak, in terms of numbers and breadth of faculty, in others, specifically chemical and geological oceanography and invertebrate zoology. IMS competes nationally and internationally for high quality graduate students. Since degree candidates in the ocean related sciences are required to take a broad spectrum of course work, it's important that IMS remain strong in all areas of ocean science. Failure to do so will make it difficult to retain the present high level of national and international credibility, to continue attracting top quality students, and to retain well qualified faculty. This, in turn, will make it difficult to remain competitive in attracting federal funding to address Alaskan marine research issues.

C. FACILITIES

Space assigned to IMS on the Fairbanks campus is adequate in most areas, but the unit needs a minimum of two additional research labs and a teaching lab since IMS presently has no teaching lab space at all and is short of labs for existing faculty. Additional lab and office space will be needed if the areas of deficiency noted above are addressed by adding new faculty.

IMS programs in Fairbanks are housed in several buildings on the West Ridge, none of which is occupied exclusively by IMS or SFOS. In spite of the fact that IMS is one of two large research institutes on campus, there is no IMS or SFOS building and this has hindered the development of a local identity on campus. While this is of a lower priority than many other concerns in SFOS, it should be established as a long range goal to bring all Fairbanks faculty together in one building since it will serve to strengthen both IMS and the School.

D. REMEDIES

It is a top priority within IMS, and should be a high priority item within SFOS, to expand existing IMS capabilities in the areas of chemical and geological oceanography and invertebrate zoology. This is needed to remain a viable full capability oceanographic institution able to compete nationally and internationally for funding and top quality students. IMS is successful with present capabilities, but to continue with this level of productivity given the changes in the funding picture, along with increasing demands, new expertise must be developed. Alaska is a large state and much work remains to be done in the marine environment if the State is to wisely manage its resources. However, IMS cannot be expected to deal with growing demands in marine research and academics unless existing strengths are broadened. In order to do this, it may be necessary to fill existing vacant positions within IMS.

Several units on the Fairbanks campus are scheduled to move into the new Natural Sciences Building. When this occurs, a number of "domino" moves are expected to occur that will free two labs and limited adjacent office space in the O'Neill Building. Since this is one of three buildings presently occupied in part by IMS, it seems

appropriate to request and expect that some of this space will be made available to SFOS for assignment to IMS. This will help meet present demands for lab space. If this opportunity does not occur, there are no other readily apparent solutions available to meet present or future IMS space needs.

Seward Marine Center (SMC)

prepared by Tom Smith

A. Overview

The School of Fisheries and Ocean Sciences' Seward Marine Center (SMC) was designed to be the Institute of Marine Science's ocean-side site dedicated to marine science research and education. The Center serves as the IMS and University National Oceanographic Laboratory System (UNOLS) staging area for shipboard oceanographic studies. It also provides facilities for shoreside research in addition to providing a focus for marine education for the general public.

SMC has laboratories, which include a high quality running seawater system, that are used in support of marine biological, chemical and medical research. The SMC seawater system was designed specifically to study high latitude fishes and invertebrates. Located on a deep fjord, the Center has the unique ability to easily obtain high quality, low temperature sea water with year round stable physical properties. This allows researchers to hold live North Pacific, subarctic and some arctic research fauna.

The adjacent non-profit Alaska SeaLife Center (ASLC) which is under construction is expected to provide University of Alaska staff, as well as other scientists, with facilities to study captive seabirds, marine mammals and fresh water organisms. It will also contain a fish genetics laboratory. The Alaska Department of Fish and Game operates a shellfish mariculture experimental laboratory and shellfish hatchery at the Seward Marine Center. It is anticipated that a building will be constructed on SMC land to house this operation. Both of these facilities are expected to have a positive impact on the marine research capabilities in Seward, but both are expected to require additional support from and interactions with SMC. During the summer months University of Alaska Marine Advisory Program and SMC staff operate marine science education programs aimed specifically at children and for the general public.

B. Faculty

Two IMS faculty are presently located at the Sewrad Marine Center. Space for additional faculty or research staff is limited. SMC has facilities to support live research on fishes and invertebrates. Most of the work on bioenergetics of Alaska fishes, much of the information on the life history of Alaskan king and Tanner crabs plus the pioneering exploration of the neurochemical and neuroanatomical characterizations of salmonid brains are products of SMC. Additional faculty and researchers associated

with the School of Fisheries and Ocean Sciences may be assigned to the Alaska SeaLife Center once it is in operation.

C. FACILITIES

Present facilities includes a public education building, warehouse, two salt water laboratories, an upwelling pond, a four-plex apartment for visiting scientists, a dock, machine shop and outdoor salt water tanks as well as the sea water system previously mentioned. Three vehicles, two forklifts, a front end loader, a 20-ton crane and a dump truck are also available. The station operates the NSF owned 133-ft ocean going research vessel R/V *Alpha Helix*. A 26-ft research vessel and several skiffs with motors are also available for inshore research.

The Seward Marine Center laboratory and support facilities are near saturation. Increased scientific research or teaching, or the planned, NSF owned, UAF operated, Arctic Research Vessel, will require significant enhancements to the existing facility. This will include additional wet laboratories, classrooms, a lecture room, an increase to the library, as well as a new dock to accommodate the larger Arctic Research Vessel. A shared city, Alaska Department of Transportation, and university dock is planned but remains unfunded. The dock must be capable of berthing a 340-ft vessel and must allow the vessel to be loaded/unloaded for scientific cruises. It must provide year round docking, secure from adverse weather.

D. REMEDIES

Perhaps the most critical need for improvements at the Seward Marine Center is a dock to accommodate the planned NSF Arctic Research Vessel that is to be based in Seward and operated by SMC. If the ship cannot be accommodated in Seward, it is likely that the vessel will be assigned to a university elsewhere. In addition to the new ship, the development of the Alaska SeaLife Center and the ADF&G hatchery and research center are expected to increased demands on SMC facilities. The following list contains the ***additional*** facilities needed at SMC:

Arctic Research Vessel dock – 380 ft (length)
Off-site storage near new dock (non-heated, uncovered) – 1000 sq ft
Flatbed truck for loading/unloading the Arctic Research Vessel
Improved data communications link to Anchorage and the rest of the world
Laboratory – 3200 sq ft
Classrooms – 800 sq ft
Lecture room – 750 sq ft
Computer users room – 800 sq ft
Research offices – 400 sq ft

Planning for the dock is on-going. Since there is a long lead time between planning and construction, it is important that funds for the construction of the dock be located and that planning be initiated for the other needed facilities.

Kasitsna Bay Laboratory

prepared by Tom Smith and Ray Highsmith

A. Overview

Kasitsna Bay Laboratory, situated on the south side of Kachemak Bay in Lower Cook Inlet, is owned by NOAA and leased to the University of Alaska Fairbanks' School of Fisheries and Ocean Sciences. The site is dedicated to support of shore side and offshore marine science research on the Kachemak Bay ecosystem. The site is semi-isolated, being nine miles by road from the town of Seldovia, which is serviced by the state ferry Tustemena and two air taxis. The ferry operates biweekly April through September, weekly October through December, and is shut down from January to March. Air taxi service is available year round.

B. Faculty

There are no full time faculty or postdoctoral candidates presently attached to the facility. The Kasitsna Bay Lab is staffed with a facility manager and half time office manager. It is visited by approximately 40 researchers and/or research assistants and 105 graduate and/or undergraduate students per year.

C. Facilities

The site has one building and two trailers designed as dry labs. The trailers are double labs of 280 sq ft each; the building is divided into two 400 sq ft labs. Two housing units each have one bath, kitchen facilities, laundry facilities and a lounge. A total of 18 sleeping spaces are available. A 200 gal/min salt water system is available that draws water from a 30 foot depth at low tide. Salt water is not piped into the labs. Additional facilities consist of:

Two 22-ft Boston whalers with twin 70 hp engines
One 28-ft Munson aluminum boat with bow crane and twin 200 hp outboards
One 10-ft aluminum skiff
Shop and storage building -- 512 sq ft
Generator building with a 30 kw emergency generator – 144 sq ft
Storage building (unheated) –168 sq ft
Walk-in freezer – 768 cu ft
Shop and storage (unheated) – 384 sq ft
Facilities manager housing and storage – 1,608 sq ft
Four wheel drive trucks – 2 each
Two wheel drive truck – 1 each

The laboratory has easy access to a rich marine environment and excellent tidal pools and a wide variety of beach types. The laboratory can support limited live research on fishes and invertebrates. A planned upgrade to the site's sea water system should

expand this capability. The dry laboratories are spacious and are well equipped. The site provides an ideal location at which to conduct intertidal field research and marine related classes.

The seawater system requires an upgrade and plumbing to make it available to the laboratories. New heating needs to be installed in one of the housing units, a new four wheel drive truck is needed, and replacement for the station's boats should be programmed. As the facility use increases, additional staff will be needed. The requirements for station maintenance and boat operations place a great demand on the single facility manager/maintenance mechanic. Both maintenance and usage demands peak in the summer when weather allows outside maintenance to be performed. Additionally, leave by the facility manager is difficult because of the need for a replacement.

All of the buildings need to have equipment replaced and upgraded but the budget does not allow an aggressive, planned replacement program. The remoteness of this site, however, demands such planning because of the extreme lack of supply and maintenance support available locally.

The station also needs to expand its communications capability. Only one telephone line is available and is shared between the facility and station management. The installation of electronic mail capability would be an asset to this site.

D. Remedies

Short term remedies require the scheduling of maintenance and upgrades to address the immediate needs of the lab. This may require hiring additional personnel for part of the summer season since this is the time when exterior maintenance must be done, yet it is the time when activities at the lab are the greatest, leaving little time for the facility manager to accomplish them. A more comprehensive facility upgrade must await the development of a detailed long range plan for the site.

Marine Advisory Program (MAP)

prepared by Ray RaLonde

A. Overview

The mission of the University of Alaska Fairbanks Marine Advisory Program is to provide education and public service to the citizens of Alaska, University of Alaska staff and faculty, and governmental agencies. Planning documents (e.g., Strategic Plan: UAF 2000; the SFOS Long Range Plan; SFOS Draft Unit Action Plan) define specifically the goals of the University of Alaska Fairbanks and the School of Fisheries and Ocean Sciences. From these goals the specific role of MAP is to:

- provide formal and informal instruction for citizens, university students, and K–12 schools;
- provide information to governmental agencies;
- conduct joint projects with the University, government, and private enterprise that focus on marine resource problems;
- transfer technology;
- collect and disseminate information;
- maintain community based advisory capabilities;
- establish an information network between the School, information services throughout the United States and internationally; and
- improve delivery of information through more effective strategies.

MAP facility requirements are often dictated by the need for accessibility to constituents in the communities where MAP offices are located and by the need to use distance communication capabilities. In small communities in Alaska this can place MAP in a precarious position of choosing an inadequate facility to ensure the requirement for access.

As an extension service for the University of Alaska Fairbanks School of Fisheries and Ocean Sciences, MAP is often seen as the primary mechanism of the School to meet its public service mission. In this respect, public access to the University is often directed through MAP. In complementary fashion, solutions are conveyed from the University to the public through the MAP program. In this delivery system, MAP needs to be equipped with facilities that are matched to the need to perform effective and efficient information transfer.

SFOS, Sea Grant, and many other organizations produce exceptional quality publications that should be displayed for public review at MAP facilities. A MAP office located within easy public access provides an opportunity for the University to communicate information on university activities directly to Alaska citizens.

MAP offices need storage space to hold the large amount of published information collected by MAP agents. With adequate display area, storage areas need not be located on the premises, but should be easily accessible.

Because of the need to provide public service, MAP agents and specialists often work unusual hours. This requirement means that MAP personnel must have 24 hour access to their offices. When meeting with constituents, MAP personnel need adequate space and privacy to house a small group (2–3) to meet in the MAP office. The need for privacy is important since MAP is often the vehicle used by citizens and agencies to discuss sensitive topics. When larger group meetings are necessary for discussions or teaching, other facilities are often available.

As the extension part of SFOS, MAP should display the best and most effective presentations at public workshops and conferences. Facilities should enable productions of these presentation materials by adequate copying equipment, computer hardware and software, and audiovisual equipment. To the MAP agent these resources are an integral part of the facility in which the office is housed. Easy access to distance communication services including internet is important, especially for remote locations which need access to current information.

MAP is composed of faculty and staff positioned in eight locations: Anchorage, Kodiak, Dillingham, Bethel, Cordova, Sitka, Petersburg, and Homer. These facilities house seven specialist positions, seven MAP agents, and seven support personnel. Facility descriptions and needs for the future are different for each location. The following descriptions and assessment of facility needs is based on the emphasis for access as well as the actual facility currently in use.

ANCHORAGE

A. OVERVIEW AND STAFFING

The Anchorage facility houses five MAP specialists plus two support personnel who serve Anchorage and MAP field offices. In addition, the office supplies space as needed for field agent activities while they are in Anchorage.

The Anchorage office is located in the Carlton Trust Building at 2221 E. Northern Lights Boulevard #110, Anchorage, Alaska 99508. The office is situated outside the boundary of the University of Alaska Anchorage campus, but less than one mile from campus facilities. Carlton Trust Building also houses the Anchorage office of UAF Alaska Cooperative Extension and UAF Alaska Cooperative Extension Community Development Program.

B. EXTENSION/TEACHING CAPABILITIES

The Anchorage office consists of space for faculty and staff offices; storage; a support services room which houses the fax, photocopier, computer printers and work table; public reception area for display of publications and receptionist; and a library/ conference room capable of seating approximately 30 people. The library contains several thousand documents, teleconference equipment, audiovisual equipment, and several large tables.

With assistance from a grant from the Alaska Seafood Marketing Institute, the office has computer capabilities to scan and produce graphic illustrations, and to edit video tape programs and MAP publications. In addition, MAP staff have access to UAA facilities which include faculty and support services, distance delivery, library, and communication resources. Photocopy capabilities are severely hampered because the current copier is in disrepair and breakdowns are a repeated occurrence.

C. EXISTING USABLE SPACE

The following are details on usable space controlled by Anchorage MAP including shared space available as a part of the lease agreement:

SPACE TYPES	NET SQ FT
Faculty and staff offices	870
Storage	124
Support services room	142
Reception area and reception office	176
Conference room and library	550
Total MAP controlled space	1,862

Facilities to which Anchorage MAP has occasional access for scheduled use:

SPACE TYPES	NET SQ FT
Large conference room	875

D. USE ANALYSIS

The space for instruction, support services, and office use is adequate for the immediate future. The conference room is particularly useful, enabling us to house meetings and classes. Computer equipment and communications capabilities are adequate, but in need of upgrading. Distance communications are hampered by aging equipment in need of replacement.

E. ANCHORAGE OFFICE REQUIREMENTS

There is no critical need for an immediate increase in space. More efficient use of existing space will allow us to continue operation with little capital outlay. This may require changes and/or additions of office furnishings. Purchase of a new photocopier is our most immediate need. Hard wiring our computers to the university network would be a very helpful improvement in our current electronic communication capabilities.

PETERSBURG

A. OVERVIEW AND STAFFING

The Petersburg office houses one MAP agent and one half-time office support person. The office is located on the main street in Petersburg at 219 N. Nordic Drive, Petersburg, Alaska 99833. Strategically positioned in a high traffic area, the office is within the immediate vicinity of the main boat harbor and seafood processing plants.

B. Extension/Teaching Capabilities

The current location of the Petersburg MAP office has only been occupied since October 1994. The change in location was requested to enable greater visibility and improved public access. Since the move to the current location, walk-in traffic has increased substantially. The MAP agent is pleased with the change, indicating to us that the new location is ideal for maximum public access. Most of the equipment in the office is old and in need of repair or upgrading.

C. Existing Usable Space

Areas to which Petersburg MAP has complete access are:

Space Types	Net Sq Ft
Faculty and staff offices	650
Display	50
Total	700

D. Use Analysis

The facility is being utilized to its maximum. The Petersburg office has an extensive number of publications, and also serves as a depository and distribution office for University of Alaska Cooperative Extension publications. Increased public access to these resources has vastly improved with relocation to the current site. Office equipment is old and needs frequent repair. A single computer, a Macintosh SI, is adequate for current use, but anticipated needs for electronic communication will require an upgrade.

E. Petersburg Office Requirements

There is no immediate need for a facility change of the Petersburg MAP office. Equipment to support the MAP office future needs are a photocopier, fax machine, computer upgrade to a Power Mac, and hard wiring the office to enable more efficient access to internet communication and the world wide web.

Cordova

A. Overview and Staffing

The Cordova office houses one MAP agent and one half-time support service person. The office is composed of a single office, storage closet, library shelving, and rest room. A small area (4x4 ft) is used as a fire pump room with access from the outside of the building. The building is located on pilings on the Cordova dock adjacent to Breakwater Avenue.

B. EXTENSION/TEACHING CAPABILITIES

The office, being the former Harbor Master's office, is in an excellent location for visibility and public access. Because the office is on the Cordova dock, it does not have the capabilities for expansion in this area. For larger meetings Cordova MAP has access to meeting rooms on a scheduled basis at Prince William Sound Community College, Masonic Hall, and the public library. Office equipment capabilities have recently been improved with purchase of a photocopier, fax machine, and contribution of a new computer and laser printer from Alaska Cooperative Extension.

C. EXISTING USABLE SPACE

SPACE TYPES	NET SQ FT
Office space	216
Library in office (shelving only)	20
Rest room	16
Display area	8
Total	260

D. USE ANALYSIS

The office is located in an ideal area for visibility and public access. The office is too small to house meetings larger than six people, and more space is needed for storage of publications. In general the location of the facility is excellent for MAP use, but insufficient space is definitely a constraining factor.

E. CORDOVA OFFICE REQUIREMENTS

Additional storage shelves are necessary for publications. Additional space is needed to enable publication display, meeting space, and space to locate equipment. To do this, however, would require moving to a less desirable location. Equipment needs to support the office are adequate.

KODIAK

A. OVERVIEW AND STAFFING

The MAP office in Kodiak consists of a full time agent, a half-time marine mammal specialist, and a half-time seafood specialist. The three MAP faculty are located in three separate offices within the Fishery Industrial Technology Center at 900 Trident Way, Kodiak, Alaska 99615. Located on Near Island, which connects to Kodiak Island via a bridge, FITC is less than one mile from downtown Kodiak. The main boat harbor and several fish processing plants are less than one mile from the MAP office.

B. EXTENSION/TEACHING CAPABILITIES

FITC is well known by the residents of Kodiak so access does not appear to be a problem with its location away from the main flow of traffic. MAP staff do not have designated office support staff or equipment, but resources from FITC are available for MAP use. Much of the equipment is personally owned by MAP faculty and used for work.

MAP faculty make extensive use of space at Kodiak College on a scheduled basis. Support staff and facilities at the College are also available for MAP use.

C. EXISTING USABLE SPACE

Facility space controlled by MAP faculty is:

SPACE TYPES	NET SQ FT
Office space for 3 agents	330
Storage	40
Total	370

Facilities managed by FITC which MAP does not control but has access to are:

SPACE TYPES	NET SQ FT
Library	720
Classroom/conference room	910
Laboratories on occasion	n/a*
Storage	400
Cold room	100
Total MAP controlled space	2,130

*Note: MAP staff are not considered tripartite faculty. Labs are available on an "as needed" basis and are seldom used for MAP activities.

D. USE ANALYSIS

MAP office space in the current FITC building is limited. Agents are finding that the approximately 100 sq ft per office is difficult to manage. MAP agents need space to house the collections of information, publications, etc. The FITC building has a library, but the information contained in the existing library collection has little information of use for MAP agents. The laboratories and classroom facilities at FITC are excellent. Location seems adequate since the community is aware of the FITC building site. The need to use personal computer equipment is a deficiency of the MAP offices in Kodiak.

E. Kodiak Office Requirements

Office space for agents needs expansion. At least 50 sq ft additional space is necessary for agents to be comfortably housed and hold private meetings in their offices. An extension section of the library or a separate room for document storage would also be helpful to reduce the cramped condition of the offices. Provision of computer equipment is necessary for the Kodiak MAP offices to allow agents to perform their duties.

Dillingham

A. Overview and Staffing

The MAP office in Dillingham is a single room housing one MAP agent and one support person. The office is located in the front corner office of the University of Alaska Bristol Bay campus, a 12-room single story building. The building site is 1-1/2 blocks off the main business street of Dillingham between the high school and museum/public library buildings.

B. Extension/Teaching Capabilities

The facility is adequate for extension activities. The size of the room is suitable for conducting small meetings. MAP has access to larger meeting rooms at the Bristol Bay campus on a scheduled basis. Office and communication equipment are also shared resources between MAP and the Bristol Bay campus. The office is a depository for MAP and Alaska Cooperative Extension publications.

C. Existing Usable Space

Facilities where MAP has complete control are:

Space Types	Net Sq Ft
Office space	252

D. Use Analysis

The major concern for the Dillingham office is the effect caused by expansion of the activities at the Bristol Bay campus. Currently, increased use of the campus has resulted in the MAP office being used as a location for teleconference classes during the evenings, which restricts the office access of our MAP agent for evening work. With continued expansion of students and faculty, there is an increasing prospect for eviction. Some expansion of campus activities can be absorbed by the present building, but that would mean reduced space for MAP use. Any decrease in space will adversely effect the program's effectiveness.

E. Dillingham Office Requirements

The present space available is adequate, but the addition of a small area for display of publications would be helpful. If required to move out of the building, MAP would need to invest in office equipment now available for use on a shared basis with the Bristol Bay campus. Location of the MAP office on a campus may detract some clients from utilizing MAP, but the in-town location and visibility outweigh any disadvantage. If moving is required, a downtown location is more appropriate than a location near the boat harbor since access would be better, particularly during the winter. Current computer capabilities are adequate, but the office has an older Macintosh computer that may need upgrading for the office to effectively use newer software and to improve communication capabilities.

Sitka

A. Overview and Staffing

Sitka MAP houses one agent and one half-time support person. The MAP office is located on Japonski Island in a building that was previously the administration office of Mt. Edgecumbe High School. The office is over one mile from downtown Sitka and is accessible by bridge. The address is 1297 Seward Avenue, Sitka, Alaska 99835. The office space is shared with University of Alaska Fairbanks Cooperative Extension and an alternative high school. The second floor is often used to house visiting sports teams.

B. Extension/Teaching Capabilities

The office is isolated from the main traffic in Sitka. Prior to the current location, the MAP office was in the post office building in downtown Sitka. Since relocation the office receives very few visitors. The numbers dropped from several per day at the previous site to one or two per month at the current location. The building is in poor structural condition. Rooms are available for holding workshops, but they are often used for overflow activities from the Mt. Edgecumbe High School and as classrooms for the alternative high school. In summary, the current site is a poor location for the Sitka MAP office.

C. Existing Usable Space

MAP controlled and space shared with UAF Cooperative Extension is:

Space Types	Net Sq Ft
Office space	300
Shared space with Cooperative Extension	300
Display area*	100
Total	700

*Note: This area is difficult to control. High school students frequently vandalize it.

D. Use Analysis

The actual area is adequate, but classroom access is often limiting. Meeting space is also limited or not available. The facility is aging. Heating is poor, windows are painted shut, and pipes that deliver water are badly corroded. The bathroom is unheated. Access problems cause the current location to be inadequate.

E. Sitka Office Requirements

MAP badly needs a publicly accessible office that has up-to-date facilities. Combined with Cooperative Extension, MAP needs at least 850–1,000 sq ft of space which has separated office space, a public area, and good access to classrooms.

Projected space requirements for the Sitka MAP office are:

Space Types	Net sq ft
MAP office (exclusively MAP)	250
Public area (shared)	300
Classroom area (shared)	300
Storage (shared)	200
Support area (shared office machines etc.)	150
Total	1,200

Alaska Cooperative Extension and MAP are currently seeking new office space in downtown Sitka with good public access (American Disability Act approved).

Bethel

A. Overview and Staffing

The Bethel MAP office houses a single agent who works one day per week for MAP. The remainder of the time our agent is employed with the University of Alaska Fairbanks Kuskokwim campus as staff for the continuing education program. The office is located at 201 Akiak Drive, Bethel, Alaska 99559.

B. Extension/Teaching Capabilities

Located in the University of Alaska Fairbanks Kuskokwim campus building in downtown Bethel, the MAP office is in an excellent location for public access. The office is composed of a single room with very good opportunities to share the space resources with other tenants of the building.

C. Existing Usable Space

Area controlled by MAP exclusively for the one day a week office is:

Space Types	Net Sq Ft
Office space	200

Shared space is available. Two classrooms with 75 and 300 person capacities are available on a scheduled basis.

D. Use Analysis

The MAP office is adequate for the needs of the program. The office is large enough that meetings can be held with a few clients. Display area is limited, and publications cannot be visually accessed by the public. In the near future the University of Alaska Cooperative Extension office will be moved into the building. This additional office is not expected to have an impact on MAP space requirements.

E. Bethel Office Requirements

Facilities in the Bethel office are adequate. A display area would be helpful.

Homer

A. Overview and Staffing

The Homer office houses one MAP agent and one support person. The facility is located on the second floor of the National Bank of Alaska building on 4014 Lake Street #201B, Homer, Alaska 99603 in the center of Homer. Housed with MAP on the second floor are the Natural Resources Conservation Service (NRCS) and the Agriculture Stabilization and Conservation Service (ASCS) which shares some facility space.

Homer MAP also uses an office in Seward, Alaska. This office is located in the K. M. Rae Building, a part of the SFOS Seward Marine Center. In this building our agent has access to an office, museum display area, and an auditorium that seats 100 people.

B. Extension/Teaching Capabilities

The Homer MAP office is centrally located and access is good. Being upstairs in a bank building reduces visibility. An elevator allows for handicap access to the office. Meeting space is limited since the conference room seats only ten people comfortably and ventilation is poor.

The Seward MAP facilities are excellent for extension and education services. The auditorium is probably the best off-campus, educational facility UAF operates.

C. EXISTING USABLE SPACE

The following area is under complete control of MAP at the Homer site:

SPACE TYPES	NET SQ FT
Office space	268

Also at the Homer site, MAP has occasional access on a shared basis to the following facilities:

SPACE TYPES	NET SQ FT
Classroom and conference	231
Service area (e.g. kitchen etc.)	30
Storage	73
Total	334

At the Seward site MAP has access to:

SPACE TYPES	NET SQ FT
Office	80
Display area	600+
Auditorium	1000+
Total	1,680+

D. USE ANALYSIS

The Homer office is adequately placed and space is available to perform the necessary work. The conference room, storage room, and workroom are contained in the interior block of the building and lack windows. Air and heat circulation is a chronic problem that makes the conference room uncomfortable. The storage area is now filled to capacity. The conference room is used to store extra chairs, audio and video equipment, and a light table, all of which contribute to the overcrowding. Floor display area for Sea Grant and MAP publications is lacking. A hallway wall is used for hanging a display and there is a hanging bulletin board. Two bookcases in the reception office are for publication and video display.

The Seward site is utilized by our Homer agent two days per month, year around. During the summer MAP makes extensive use of the Rae Building auditorium for educational presentations and Elderhostel classes. The facility is excellent for these uses.

E. HOMER OFFICE REQUIREMENTS

Homer MAP entered into a shared lease agreement with NRCS and ASCS which runs from January 1, 1995 through December 30, 1999. We do not anticipate a move away from the current premises. Additional storage space and a designated display area are needed and would be a great asset to the facility. Hard wire computer access is necessary for Homer to effectively access the internet.

Specific needs for additional space in Homer:

SPACE TYPES	NET SQ FT
Storage	150
Display floor space	20
Total	170

Specific needs for additional space in Seward:

For the Seward location, the MAP program would benefit by access to a permanent office space within the Rae Building.

SUMMARY OF MAP PROGRAM FACILITY REQUIREMENTS

With the exception of Sitka, facilities as defined by access to MAP are adequate with a few modifications. The Cordova office, though adequate, is very cramped for space. The most apparent deficiency in most locations is the lack of adequate capabilities to display publications for review by constituents. SFOS, Sea Grant and many other organizations publish materials regularly that are often contained in storage boxes because adequate display areas are not available at MAP stations. Storage for many MAP offices is a problem. The need to collect and archive information requires adequate storage to prevent disposal of documents that later may be valuable.

Particularly deficient in MAP facilities is equipment necessary to meet requirements to disseminate information. In this area needs are for adequate photocopy and fax capabilities, and improved computer services. In some offices these resources are shared or available at low cost in cooperation with other users, but if a MAP office like Dillingham or Sitka is compelled to move to a location where equipment is not accessible, the equipment must be purchased. Access to the internet is essential, and agents have expressed frustration with attempts to access it with present computer capabilities and training. Upgrading computers, providing software, and hard wiring MAP offices can help substantially with this problem.

Alaska Sea Grant College Program

prepared by Brenda Baxter

A. Overview

The Alaska Sea Grant College Program provides development and oversight of scientific research, education, and outreach projects. It contains a public information services unit which works with all units of SFOS as well as other university, government, and industry groups to develop and coordinate conferences and workshops; and create, write, edit, and/or produce proceedings, reports, marine advisory bulletins, brochures, fact sheets, news releases, media advisories, displays, videos, slide shows, educational materials for schools and industry, special projects, and a radio program series.

B. Staffing

As of March 1995, the staff included four full-time permanent professional people, three full-time permanent technical people, two full-time permanent support people, one part-time Regional Marine Research professional, one student assistant (almost half-time), and one writing intern (almost half-time each semester).The Sea Grant staff includes both the administrative and public information services units of the program.

C. Facilities

For the past two years Sea Grant has resided in temporary space providing approximately:

Offices – 1,040 sq ft
Administrative files and fax – 90 sq ft
Printers/computer network server/paper supply – 90 sq ft
Publications and publications files; mail machines,
supplies, mailboxes, packing tables; copy machine;
office supplies; and desk space for two staff members – 850 sq ft
Drafting/light table/graphics files/photo files/computer station – 120 sq ft
Conference table/library/reference materials – 250 sq ft.
Display storage – 70 sq ft
Unusable space/corridors – 314 sq ft
Total – 2,824 sq ft

This current space and configuration does not adequately meet our publications shelving, mailing, or our staff office needs. We have inadequate publications storage space at the old University Park school. The space is so disjointed that we can't even provide an estimate of its size.

D. REMEDIES

a. **Staff** – It is Sea Grant's intent to not only maintain the current level of activity, but to increase it as soon as the funding climate permits. In the early 1990s Sea Grant and SFOS developed a plan for revamping and enhancing SFOS's methods of communicating with its various audiences. The Dean's intention to add a person to work under the supervision of Sea Grant on SFOS publicity and outreach projects has not yet been realized due to budgetary restrictions. We anticipate this addition will be made within the next few years. In the meantime, Sea Grant has increased its output of publications and has initiated a radio program. An additional part- or full-time person to assist with writing, editing, and publication production will be added as soon as funding is available.

In addition, our reliance on advancing electronic technology is increasing in the realms of both hardware and software. With our anticipated physical move later in 1995, we will have to redesign our means of communicating with the rest of the world via computer networks and will then require an in-house computer network manager.

Therefore, we anticipate our staff to include the 12 current members plus the SFOS outreach/publications person, a computer network manager (at least part-time permanent), and a publications writer/editor.

b. **Facilities** – Our space needs include:

Office space for 15 staff @ 120 sq ft – 1,800 sq ft
Publications and publications files, mail machines, supplies,
mailboxes, packing tables; copy machine; office supplies – 850 sq ft
Drafting/light table/graphics files/photo files/computer stations – 120 sq ft
Printers/network server/paper supply – 100 sq ft
Administrative files and fax – 100 sq ft
Display production, assembly, and storage – 100 sq ft
Radio program production – 100 sq ft*
Conference table/library/reference material – 300 sq ft
Total – 3,470 sq ft

*Our radio program is developing under the cooperative effort of several UAF units. The production equipment is housed in a Sea Grant staff office. The equipment requires separate space so that members of the cooperating staffs can use it without inconveniencing the Sea Grant staff member. Also sound-proof space is necessary for high quality audio production, making the space unsuitable for use as an office.

Assuming no space will be available on campus, we will continue to request easily accessible publications storage space adequate to hold the necessary number of publications in an organized manner.

West Coast National Undersea Research Center (WCNURC)

prepared by Cindy Van Dover

A. Overview

The West Coast Center of the School of Fisheries and Ocean Sciences is one of six regional centers within the U.S. that supports *in situ* marine research and technological development through the National Undersea Research Program (NURP) within NOAA. Much of the Center's annual budget is awarded as grants to scientists at private, state and federal institutions for undersea research within west coast and polar regions and for associated instrumentation development. This is accomplished through WCNURC administration of an annual peer-review proposal process with national competition. The Center also organizes the funded field programs through the lease of submersible and ROV charters, scheduling of field programs, etc. and supports developmental projects, including the sponsorship of national symposia and workshops. Scientific staff within the Center conduct independent peer-reviewed research in addition to undertaking administrative responsibilities.

B. Existing Facilities

WCNURC is currently staffed by six individuals (director, science director, regional coordinator (faculty), and operations manager, administrative assistant, and student assistant) occupying four offices in the O'Neill Building (UAF) and one leased office for the Regional Coordinator at the Monterey Bay Aquarium Research Institute in Moss Landing, California.

C. Facility Requirements

Without further expansion of WCNURC, additional space is required for a reception area, a conference room, and a video editing/duplicating room as well as a research laboratory for the scientific faculty. Ideally, reception area, offices, conference room and video room would comprise a suite of adjacent rooms, with the laboratory not far removed. As WCNURC grows, a requirement for one or two more offices and an electronics and staging room are anticipated to accommodate an additional staff scientist and technical support and hardware for an ROV and/or other underwater systems.

UA Coastal Marine Institute (CMI)

prepared by Dave Nebert

A. Overview and Staffing

The UA Coastal Marine Institute (CMI) is an administrative office which operates under the School of Fisheries and Ocean Sciences and disburses and assists in administering Minerals Management Service (MMS) monies to University of Alaska and other state researchers involved in marine resource related research. All CMI funds require a one-to-one match from non-federal sources. The program involves five persons within SFOS, one half-time and others with lesser time. The total commitment in personnel is slightly under 12 months per year. Personnel involved with the CMI presently have offices or work stations elsewhere within SFOS.

The main function provided by the CMI office is the administration of research projects funded in part by MMS. The CMI establishes an area of interest and invites scientists to write letters of intent to address them. The eventual outcome of the process is that each year a number of scientists are invited to develop proposals to address one or more of the problems identified by the CMI. These proposals are evaluated and some are funded.

B. Facilities

Since the personnel involved in the CMI have office space within other units of SFOS, there presently are no distinct spaces allocated to the CMI.

C. Remedies

If the CMI continues to operate (get funding), it would be prudent to create an identity for the Institute within SFOS. Two offices, one for clerical support and one for the project coordinator, would be desirable. It would be helpful if the coordinator office should also have a 4–5 person conference capability and the clerical office should have storage room for reports and filing cabinets for correspondence, etc. A total space of about 250–300 sq ft would be adequate.

General Needs of Fairbanks SFOS Units

prepared by Dave Nebert

A. Overview

There are needed facilities that would benefit all Fairbanks units—the establishment of an SFOS library and the combining of all SFOS units into one common building. These items are broken out here since they will serve all SFOS units on campus.

B. SFOS Library

There presently is no SFOS library. The School "shares" crowded library space with the BioSciences Library (under the Rasmuson Library) which is located on the West Ridge in the Arctic Health Research Building. IMS had a small library and reading room but lost it due to space and fiscal constraints in December 1986.

Remedy – It would be desirable to re-establish an SFOS library on the Fairbanks campus. This could be done most efficiently by dedicating a large room (or rooms) in an existing library for marine science volumes and journals. A reading area would be appreciated. The present BioSciences Library is too small to accommodate this request and the Geophysical Library is full and is facing building structural weight restrictions. A new, combined West Ridge Research Library would be the ideal solution, with dedicated rooms or areas for the various disciplines.

C. SFOS Building

There is no SFOS building on the Fairbanks campus, in spite of the fact that the School operates with a budget similar to the Geophysical Institute which has a building, an addition, and is now working on its second addition. The fact that the School is spread through several buildings on campus and the associated lack of identity has hindered the development of SFOS as a well integrated research unit. Politically, it will be difficult to get an SFOS building built on the Fairbanks campus because Fairbanks is a long way from the ocean.

Remedy – When possible, SFOS facilities should be consolidated. Perhaps SFOS could acquire an entire building on campus by moving other units out. It will be useful to create a visible identity for the School on the Fairbanks Campus. There should be a long range goal to design and construct an SFOS building on the Fairbanks campus to house all the SFOS units that are located at UAF.

Appendix A

SFOS Faculty

SFOS FACULTY

October 1995

FAIRBANKS

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University of Alaska Fairbanks
Fairbanks, AK 99775-7220

SFOS

Vera Alexander
John French
Al Tyler

Fairbanks Fisheries

Will Barber
Jim Reynolds (ACFWRU)

IMS

Don Button
Mike Castellini
Ted Cooney
Sven Ebbesson
Bob Elsner
Dave Eslinger
Howard Feder
Bruce Finney
John Goering
Susan Henrichs
Ray Highsmith
Mark Johnson
John Kelley
Zygmunt Kowalik
Peter McRoy
Dave Musgrave
Sathy Naidu
Joe Niebauer
Brenda Norcross
Gerry Plumley
Andrey Proshutinsky
Tom Royer
Don Schell
David Shaw
Alan Springer
Cindy Van Dover
Geoff Wheat
Tom Weingartner

SEWARD

IMS

Seward Marine Center, P.O. Box 730, Seward 99664
A. J. Paul

JUNEAU

Juneau Center

11120 Glacier Hwy., Juneau 99801
Bob Fagen
Tony Gharrett
Lew Haldorson
Ole Mathisen
Terry Quinn
Tom Shirley
Bill Smoker

KODIAK

FITC

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Gour Choudhury
Chuck Crapo (1/2 time MAP)
Brian Himelbloom
Scott Smiley

Various Locations

MAP

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John Doyle *2221 E. Northern Lights Blvd., #110 Anchorage 99508-4140*
Dolly Garza *1297 Seward Ave., Sitka 99835*
Terry Johnson *P.O. Box 1549, Dillingham 99576*
Don Kramer *2221 E. Northern Lights Blvd., #110 Anchorage 99508-4140*
Brian Paust *P.O. Box 1329, Petersburg 99833*
Hank Pennington *900 Trident Way, Kodiak 99615-7401*
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Rick Steiner *P.O. Box 830, Cordova 99574*
Craig Wiese *2221 E. Northern Lights Blvd., #110 Anchorage 99508-4140*
Kate Wynne *900 Trident Way, Kodiak 99615-7401*

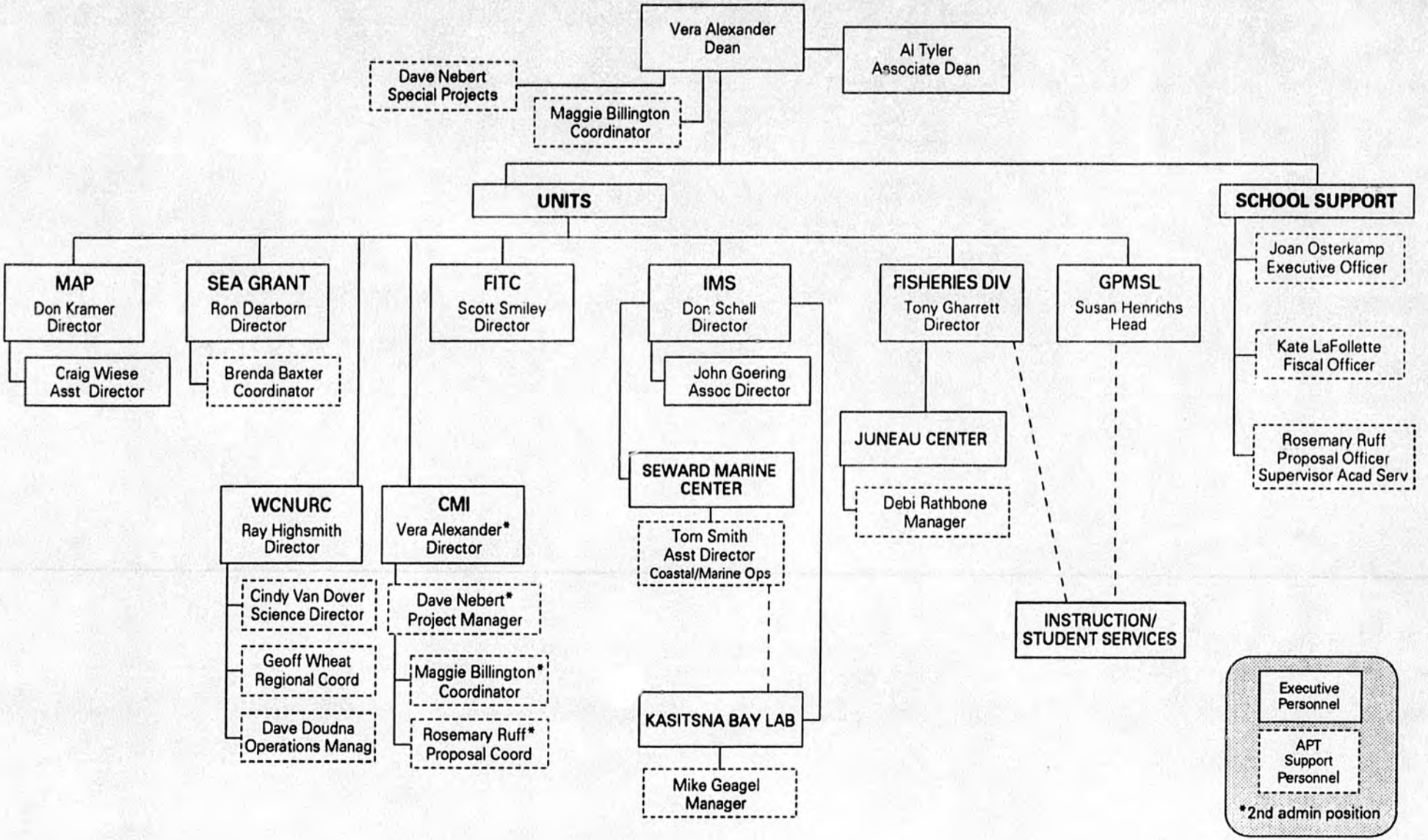
Appendix B

SFOS Administrative Structure

School of Fisheries and Ocean Sciences

Administrative Support Structure

11.10.95



Appendix C

Advisory Boards to SFOS and Its Units

School of Fisheries and Ocean Sciences
University of Alaska Fairbanks
Advisory Council
October 1995

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Science and Research Director
Alaska Fisheries Science Center
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Kodiak, Alaska 99615
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Term: May '95 – May '98

Mr. Jim H. Branson (Chairman)
Executive Director Emeritus
North Pacific Fishery Management Council
P.O. Box 6401
Halibut Cove, Alaska 99603
(907) 296-2208 (Fax: 296-2208)
(Anchorage: 258-7468)
Term: May '90 – May '96

Ms. Marlene A. Johnson (Vice Chairman)
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North Pacific Fishery Management Council
and
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Pacific Seafood Processors Association
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Term: May '92 – May '98

Fishery Industrial Technology Center

School of Fisheries and Ocean Sciences
University of Alaska Fairbanks

Policy Council
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Rasmuson Fisheries Research Center

School of Fisheries and Ocean Sciences
University of Alaska Fairbanks

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May 1995

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University of Alaska Coastal Marine Institute
Technical Steering Committee

October 1995

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Appendix D

Letters of Transmittal for Capital Plan and Facilities Development Committee Report

School of Fisheries and Ocean Sciences

UNIVERSITY OF ALASKA FAIRBANKS

P.O. Box 757220 Fairbanks, Alaska 99775-7220

27 July 1995

MEMO TO: V. Alexander, Dean
School of Fisheries and Ocean Sciences

FROM: A.J. Gharrett, Chair
Facilities and Capital Plan Development Committee (FCPDC)

RE: Description of problems identified during April FCPDC meeting

A number of problems that affect efficient and productive operation of each unit (IMS, FITC, MAP, and Fisheries Division) and that require facilities and capital planning was recognized in our April meeting. We have dealt with these problems unit by unit and present our analysis here.

Facilities and capital planning for the School of Fisheries and Ocean Sciences (SFOS) must be done within the context of the mission of SFOS, plans and needs of the University of Alaska Fairbanks (UAF), needs of Alaska and Alaskans, and nation-wide needs. Planning documents (e.g. *Strategic Plan: UAF 2000*; the *SFOS Long Range Plan*; SFOS Draft Unit Action Plan) and accreditation reports and increment requests articulate specific goals and objectives for SFOS and UAF; these can be generally stated as follows:

The state of Alaska is both geographically large and sparsely populated. The marine and fisheries resources are enormous and derive from 33,000 miles of coastline (54% of the nation's total), a large continental shelf (76% of the U.S. total), and abundant freshwater systems which serve as spawning and rearing habitat for salmon and other fish species. The value of Alaska's commercial and recreational fisheries exceeds three billion dollars annually; Alaska's waters account for more than one-half of the total value of the U.S. catch and its fishing industry employs about 35,000 people. As the most northern state, bounded by both the Pacific and Arctic Oceans, Alaska is positioned to provide key information on global change. Also, its proximity to Pacific Rim countries, especially ones that share some of Alaska's marine resource concerns, places UAF in a unique situation to engage in international efforts important to both Alaska and the nation.

SFOS's Mission is the primary responsibility for the marine-related programs within the University of Alaska. Because UAF is the only doctorate-granting institution in Alaska and the leading research institution, SFOS should and does play a vital role in research on marine related resources and education of resource managers. Alaska's large geographic size and scattered population create special problems for fulfilling the SFOS Mission in research, education, and extension programs, particularly in deploying financial and human assets. The size and value of the marine resource demand a strong commitment by the state and the University. Their commitment must provide the support needed to learn enough about our resources to ensure their long-term persistence, productivity, and wise allocation among very diverse (and changing) users.

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Both the *Strategic Plan: UAF 2000* and the *SFOS Long Range Plan* stress the need for human and physical assets to match the UAF and SFOS missions. Both plans speak to the need for UAF and SFOS to assist in the economic development of the state and training of its citizens. Strong and current programs must be maintained to meet our responsibilities to Alaskan people, to the U.S., and to the resources themselves. The programs must be prepared to adapt quickly to unanticipated changes in or challenges to Alaskan marine resources; and the facilities supporting our faculty, students, and staff must keep pace with technological changes.

This report attempts to present SFOS's problems within the framework provided by the planning documents. The information presented is organized by academic unit within the School, rather than organized by functions of the School or by geographic locations because the units tend to be geographically and in some cases functionally distinct and because the individual authors are most familiar with the units they represent.

School of Fisheries and Ocean Sciences

UNIVERSITY OF ALASKA FAIRBANKS

P.O. Box 757220 Fairbanks, Alaska 99775-7220

16 August 1995

MEMO TO: V. Alexander, Dean
School of Fisheries and Ocean Sciences

FROM: A.J. Gharrett, Chair
Facilities and Capital Plan Development Committee (FCPDC)

RE: Presentation of FCPDC Report

Attached is a draft report from the Facilities and Capital Plan Development Committee (FCPDC). The committee is:

Internal -
- M. Castellini, IMS
- A. Gharrett, Fisheries Division (Chair)
- D. Nebert, IMS/SFOS Admin
- J. Osterkamp, SFOS Exec Officer
- R. RaLonde, MAP
- S. Smiley (replacing J. French) FITC

External -
- G. Bane, Kodiak College
- R. Bower, AK. Board of Fish and Wildlife
- D. Ogg, UA Regent (ex officio)

This report was developed in stages: 1) preliminary descriptions of SFOS facilities and associated needs were prepared by each SFOS unit; 2) a meeting of the committee was held on April 27 and 28 to evaluate the facility descriptions and to plan the organization of this document and the tasks needed to complete those tasks; 3) each unit, starting with the preliminary descriptions above, developed a more complete assessment of its capital and facilities requirements in the context of its role in the SFOS mission within the University of Alaska, the state, and the nation; 4) a meeting of the SFOS members of the committee on August 9 to develop a statement of the conclusions reached by the committee at this stage of analysis. This draft report is being circulated among the committee members for final modifications.

The organization of the report was developed at the 27-28 April meeting and includes several forms of information. First we present the conclusions of the committee. SFOS includes several units, each of which addresses different aspects of the SFOS mission. To clarify the roles played by each unit, we have included a brief history. Next, a map of Alaska is included that shows the locations of all SFOS units. This map shows the large portion of Alaska that is served by SFOS. The conclusions of the committee were developed from unit reports, which themselves were based on deliberations from the 27-28 April meeting and the descriptions of SFOS facilities developed prior to that meeting. Both the unit reports and facility descriptions are included here.

Appendix E

Synopsis of Facilities and Program Information

School of Fisheries and Ocean Sciences
University of Alaska Fairbanks

SYNOPSIS OF FACILITIES AND PROGRAM INFORMATION

Assembled For the Capital Plan and Facilities Development Committee April 1995

School of Fisheries and Ocean Sciences

UNIVERSITY OF ALASKA FAIRBANKS

P.O. Box 757220 Fairbanks, Alaska 99775-7220

16 April 1995

MEMO TO: Capital Plan and Facilities Development Committee
THRU: V. Alexander, Dean SFOS
FROM: A.J. Gharrett

RE: Synopsis of facilities/program information for SFOS:

Attached are descriptions of SFOS facilities. These were developed in the context of the programs that use each facility. The objective is to provide a brief description of each facility that can be used for communication purposes. The initial audience is the Capital Plan and Facilities Development Committee, who will modify the draft to a form that can be more broadly circulated. I expect that development of this document will be an iterative process and expect to receive considerable constructive criticism. To make this an effective means of communication, it is essential for the descriptions to be concise, provide an indication of the kinds of work that can be done (strengths), and indicate the shortcomings from a programmatic perspective (weaknesses). Subsequent audiences might include, 1) UAF and SFOS administration and faculty, 2) UAF Regents, 3) other agencies, and 4) legislators or congressmen.

In our 27-28 April meeting the Capital Plan and Facilities Development Committee should be able to identify the School's programmatic requirements for facilities modification and acquisition. With guidance from the committee that is developing a Strategic Plan for SFOS, we can present those requirements in the framework of SFOS's mission, the SFOS Long Range Plan, and Accreditation requirements as well as in the context of the UAF missions -- Strategic Plan: UAF 2000.

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I. SFOS Administration/support

A. Existing SFOS Facilities at Fairbanks campus

Overview and staffing The SFOS facilities discussed in this section consist of the offices of the Dean the Associate Dean, Executive Officer, Fiscal Officer, and the Proposal Officer. In addition to those positions mentioned above (five positions), there are nine full-time supporting staff, with one and a half under the Dean, one half under the Associate Dean, one under the Executive Officer, four under the Fiscal Officer and two under the Proposal Officer in a group called Academic Services. The SFOS offices also employ several (four) part-time students for some of the less demanding office tasks. This constitutes a total of 14 full-time positions and about four part-time student positions.

Location The SFOS offices are located on the second floor of the O'Neill Building on the West Ridge of the University of Alaska Fairbanks campus.

Functions and capabilities The SFOS offices provide administrative integration and support and oversight for the entire School in the areas of planning, personnel, proposal preparation, and fiscal management.

Existing usable space Following are details on usable space used by the SFOS offices, broken down roughly by function. It does not include main hallways, lavatories or physical plant.

Space types	**Net(sq ft)**
Office space for above individuals	819
Admin support & storage	3039
Copier room (end of hallway closed in)	120
Total space	3978

Use analysis and comments The offices of the Dean and Associate Dean contain conference tables and are frequently used by not only the Dean and Associate Dean but by others in need of a place to meet as well as for receptions. (The O'Neill building is short of conference space.) The administrative support area includes storage and interior passages that are included in the totals. The SFOS administrative support personnel assist all SFOS units. Since we do not have accurate floor plans, square footage remains an estimate.

B. SFOS facility requirements

Present space allocated for this function is adequate although a rearrangement of present space would be desirable from a functional and presentability standpoint. But while a change is desirable, it's not at the top of the "need to do list".

II. Academic Program

A. Existing Academic Program Facilities

Overview and staffing There are two entities within the SFOS Academic Program. One is called the Graduate Program in Marine Sciences and Limnology (GPMSL), and the other is called the Fisheries Program. The former consists of a Program Head who is a full-time IMS faculty member, presently located in the Irving II Building. The Fisheries Program does not have a program or department head, but it is administered by the Director of the Fisheries Division, currently located at Juneau Center. The Academic Program has a 3/4 time support staff located in the Irving II Building of the Fairbanks campus. Currently there are 22 full-time and 17 part-time Oceanography students, 10 full-time and 4 part-time Marine Biology students, and 26 full-time and 22 part-time Fisheries students. Thirty-five of these Fisheries students reside with the Juneau Center; 13 are in Fairbanks. We also have five interdisciplinary Seafood Science and Nutrition students at FITC in Kodiak. All full-time students in Fairbanks have at least a desk and a chair, but because of space limitations, they are often located remote from their major professors and cohorts.

Location The staff office is in room 230 Irving II. The Program Head and Director of the Fisheries Division are located as noted above.

Functions and capabilities The Academic Program support staff is responsible for all inquiries and tracking of students from admission through graduation. Coordination of semester classes and numerous other responsibilities involving the academic program are centered in this support office. Anything having to do with students, classes, or the degree program are funneled through the support office.

Existing useable space The only space specifically assigned to the Academic Program is the 120 sq ft room occupied by the support staff. There are also three classroom/ conference rooms routinely used by GPMSL and the Fisheries Program in Fairbanks, but those spaces are listed under IMS. Other campus units, including the summer program, frequently use these classrooms when not being used for SFOS classes.

Space types	**Net(sq ft)**
Staff support office	120

B. Academic Program Requirements

Basis for planning Present office space for support staff is limited. It is not near other administrative support and therefore cannot easily share part-time student or staff personnel. The office would be more effective if there was access to student part-time help to assist the staff. The existing office space would be adequate if storage was available at a nearby location. If student record storage must remain in the office, a larger office is required. An increase to 150-200 sq ft would be adequate.

The recent addition of two more classrooms/conference rooms in Irving II in addition to the classroom/conference room in O'Neill has alleviated the space crunch previously experienced for classes. Space for student offices and attendant desks and bookshelves are not allocated through the Academic Program. As a result, students often have less than adequate office and work space, where ever space can be found. It would be preferable to have student space and desks assigned by the Academic Program Office.

III. Fisheries Division

Background The Fisheries Division includes ten faculty located on both the Fairbanks and Juneau campuses. This resulted from consolidation of the fisheries programs at the University of Alaska Fairbanks and the University of Alaska Juneau under the UAF umbrella in 1987. Previously, both programs offered M.S. and B.S. degrees in fisheries. The consolidation enabled the development of a Ph.D. degree at the University of Alaska Fairbanks.

The three fisheries faculty members in Fairbanks include the Associate Dean of SFOS and the Leader of the Alaska Cooperative Fish and Wildlife Research Unit (ACFWRU). The faculty came from the Fisheries Program of the Department of Biology, Fisheries, and Wildlife in the College of Natural Sciences. The focus of the program offered by these faculty was originally freshwater and anadromous fisheries. These faculty share facilities with other units on the Fairbanks campus.

Fisheries faculty at the Juneau Center, School of Fisheries and Ocean Sciences, UAF, were originally part of the University of Alaska campus in Juneau. The seven faculty (plus one emeritus) faculty work primarily with marine and anadromous fish and shellfish. These faculty share facilities with the science programs at UA Southeast.

A. Existing Fisheries Division Facilities in Fairbanks

Overview and staffing and research/teaching capabilities All 28 undergraduate students (Spring 1995 enrollment) are at the Fairbanks campus. The graduate program includes about 13 graduate students of which 12 are sponsored by the ACFWRU. These faculty conduct broad-based fish ecology and management research and as well as research directed at the assessment and dynamics of marine fish and shellfish populations. In addition to the three Fisheries Division faculty, three other SFOS faculty (Cooney, Norcross, and Ebbesson) also conduct fisheries related research and supervise graduate students in fisheries related research.

Location and existing useable space The Fairbanks Fisheries Program has no facilities or space other than provided as office space to Drs. Barber and Tyler. All other office and laboratory space used by Fairbanks Fisheries Program faculty and graduate students is provided by the College of Natural Sciences and Institute of Arctic Biology, most of it through the Alaska Cooperative Fish and Wildlife Research Unit.

B. Fairbanks facilities requirements

The present needs of the Fairbanks Fisheries Program are clear, two faculty members need laboratory space and fisheries graduate students need office space. Predicting additional needs will require decisions about the future of the undergraduate program. If it is to be a vigorous program on the Fairbanks campus, space for additional faculty will be necessary. Space and additional faculty will also be required if there is to be a more vigorous graduate program regardless of the future of the undergraduate program.

Basis for planning If an effective, viable program in fisheries is to be realized on the Fairbanks campus, both faculty and facilities must be made available. Because of the past history of the Fairbanks campus, there is a hesitancy to add new faculty. Therefore, it is assumed that staffing will remain constant, one faculty member, the Associate Dean, and an Alaska Fish and Wildlife Cooperative Unit Leader or Assistant Leader and the same number of graduate students.

Projected Fairbanks space requirements

Space type	Number	Net (sq ft)
Teaching lab/ classroom	1	900
Research laboratories	3	1800
Offices (est 15 graduate students)	5	750
Total		3450

C. Existing Fisheries Division Facilities at Juneau Center

Overview and staffing The Juneau Center houses about 75% of the Fisheries graduate program and seven of ten fisheries faculty. Spring semester 1995 there are about 30 graduate students, six postdoctoral/research associates or technicians, and three office staff.

Research/teaching capabilities The Juneau Center provides traditional classroom, laboratory, and field instruction for masters and doctoral students as well as computer laboratories for quantitative courses. Research conducted at the facilities includes laboratory and field work on early life history of marine fishes, marine benthic ecology, invertebrate fisheries biology, mariculture, animal behavior, molecular and population genetics, and computer intensive work related to biometrics and population dynamics for both marine and freshwater fish and shellfish. At other facilities research work includes salmon culture, salmon biology, and quantitative genetics.

Location The facilities, located approximately 11 miles north of Juneau, are split between the Anderson Building (shared with UAS) and space leased in the Sherwood building approximately two miles away. The faculty in Juneau, through various agreements, also conduct research at facilities (some remote) operated by other organizations [NMFS Auke Creek Hatchery, Little Port Walter, and Laboratory; the Douglas Island Pink and Chum (DIPAC) Gastineau Hatchery and Kowee Creek Hatchery; and USFS Pack Creek Reserve].

Existing useable space Following are details on useable (net sq ft) space controlled by SFOS as well as an attempt to show how the space is partitioned and how much is shared with UAS. It does not include hallways, lavatories, or physical plant. The Juneau Center also has a 16' aluminum skiff and will soon have a 26' Boston Whaler.

Space types	Number	Net (sq ft)	Number	Net (sq ft)
	Anderson Bldg		Sherwood Bldg	
Faculty office space	8	850	4	510
Student room/library	1	300	1	240
Computer lab	1	225	1	600
Administrative area	1	600	1	260
Research wet lab (w/seawater supply)	1	800		
Research labs	1	2125		
Instrument room	1	375		
Class/conference room	1	300		
Totals		5650		1910

Shared space

Class/conference room	2	1300 (shared with UAS)
Teaching lab	1	900 (shared with UAS)
Specimen storage	1	175 (shared with UAS)
Total space		2375

Other miscellaneous

Hazmat storage	1	200
Refrigerator (walk-in)	1	100
Freezer (walk-in)	1	100
Outside covered storage	1	350

Use analysis These facilities house seven faculty, six science technical staff, and 30 graduate students as well as three administrative people. This means that each "unit" of a faculty member with four graduate students and a technical person has less than 800 sq ft for offices labs, and immediate storage. That is less than 150 sq ft per individual. The space is insufficient; only a few kinds of tasks can be done efficiently in this limited space. In addition, the photocopying machine is unsecured in the hallway; there is no space for shipping and receiving; and we have no facilities for divers or for fabricating experimental devices.

D. Juneau Center facilities requirements

Basis for planning In order to have an effective, viable program in fisheries, we must increase the size of our faculty. We have not replaced any faculty lost since 1986. Moreover, the needs of fisheries in Alaska are developing and now include several areas in which we have little or no expertise including fish/shellfish pathology and nutrition/physiology which are critical aquaculture disciplines; ecosystem modelling, which has become an important direction of inquiry affecting all resources; and hydrology and habitat protection will soon be important concerns in conservation of our resources. Therefore, the space requirements presented below assume about 12 faculty, each working with 1 or 2 postdoctoral/research associates and advising 4 graduate students. This number is used for planning in the near future. In many institutions, the fisheries faculty numbers are much larger. Clearly, any facility must be designed with options for eventual expansion. Fully developed fisheries units at other universities typically have about 20 or more faculty.

Projected space requirements *(based on 12 faculty)*

Space types	**Number**	**Net (sq ft)**
Research offices	30	4500
Research labs	16	6400
Wet labs	2 or 3	2400
Research storage	16	1600
Lab and research support		
Classrooms	1	1000
(could be conference room also)	2	600

Projected space requirements (continued)

Space types	Number	Net (sq ft)
Library/student gathering room	1	300
Instrument room	1	1000
Computer lab (at least 10 stations)	1	1000
Teaching lab	1	600
General support		
Dark room/ copy stand area	1	150
Administrative support	1	1500
Ice machine (could be in hallway)	1	25
Freezer, walk-in	1	200
Refrigerator, walk-in	1	200
Other		
Covered unheated storage		
Accessible year-round	1	1000
Hazmat storage	1	200
Radioactive waste storage	1	100
Boat storage		
(26' vessel, 24' vessel, 16' vessel)		
Boat docking (26' vessel)		
Parking for >50		
SCUBA facilities (6 sets of lockers and drying area)		

Discussion/explanation

-- each office will accommodate:

	1	faculty member
	2	postdoctoral/research associates
or	3	graduate students

-- diverse and changing directions of research require "flexible" facilities

These requirements are presented in more detail in a planning document developed by Makers, an architectural firm. That specification/planning document will provide specifications for bids by architectural and engineering firms for the design of the Auke Cape facility and should be available in late April.

IV. Fishery Industrial Technology Center (FITC)

Background The Fishery Industrial Technology Center was established in 1981 by AS 16:52 to provide research & development, technology transfer and training in fish harvesting and processing for the fishing industry and citizens of the State. In 1982 the Board of Regents approved the Project Program for FITC, including facilities to be built in three phases: Phase I; the seafood processing building, Phase II; a warehouse, dock and housing, Phase III; the fish harvesting technology building. In 1985 the Board of Regents approved the Programmatic Master Plan for FITC. This plan included building facilities of 14,986 sq ft in 1985 and expanding to 31,075 sq ft by 1992. Also in 1985 the University of Alaska and the City of Kodiak signed the Near Island land agreement, under which Tract A (7.153 acres) was transferred to the University and Tract B (16,821 acres) is being held for up to 20 years for use in Phases II and III of FITC.

A. Existing FITC Facilities in Kodiak

Overview and staffing In March 1991, the seafood science and technology facilities (Phase I) were opened and dedicated as the Alfred A. Owen building. The Owen Building currently houses 22 people (six faculty, one APT, six classified, seven students, and two NMFS-UR). The facilities have also been used on a seasonal basis by up to four researchers at a time.

Research/teaching capabilities FITC conducts teaching and research in seafood processing and engineering, seafood chemistry and biochemistry, seafood microbiology, and sensory analysis. The facilities are well equipped with modern analytical and food processing equipment. A pilot plant is equipped with 110, 220, and 400V service, hot and cold water, flake and cube ice, and high and low pressure steam.

Location The University's 24 acre tract is located on the northeastern side of Near Island in the City of Kodiak. It is within 0.5 miles of the Port of Kodiak facilities in St. Herman Harbor and within two miles of nine processing plants which processed 374 million pounds (4.6% of U.S. total) of fish landed in 1993, including all major fisheries in Alaska. Salmon hatcheries are easily available at Pillar Creek and Little Kitoi Bay, as is a shellfish farm on Middle Bay.

Existing useable space The Owen Building is a two-story, 21,000 sq ft structure with a 1,000 sq ft heated storage building and a 200 sq ft HAZMAT module. The main building houses a 40 ft x 60 ft pilot plant for seafood processing, roll-in freezers for storage at 4°C, -20°C or -40°C, research laboratories for seafood engineering (600 sq ft), seafood chemistry (600 sq ft), seafood biochemistry (600 sq ft), seafood microbiology (700 sq ft), and sensory analysis (500 sq ft). The laboratories have RO water, propane, and compressed air, as well as hot and cold water, 110 and 220V services.

Space types	**Number**	**Net(sq ft)**
Faculty offices		
FITC	4.5	495
MAP	2.5	275
NMFS	3	330
other		220
Administrative		600
Student space		320

Existing useable space (continued)

Space types	Number	Net(sq ft)
Library		720
Classroom/conference room		910
Research labs	3	1920
	1	700
	1	680
	2	220
Instrument rooms	2	540
Cold room		100
Pilot plant		2240
Cold storage		780
Storage		400
Total space		10450
Other:		
HAZMAT module		200
Heated storage		1000
Sea water tanks		200
Total space		1400

Use analysis The Owen Building houses six SFOS faculty, two NMFS-URD scientists, four technical research staff, and seven graduate students. The administrative staff is two people as is the maintenance and custodial staff. With two SFOS units and NMFS-URD it is difficult to define a basic research unit. Backing out the classroom and storage space leaves 7,540 sq ft of office and research space for 19 scientists, or approximately 400 sq ft per scientist, 130 sq ft of which is pilot plant space and is occupied by some major pieces of equipment. The seafood technology space in the Owen building is adequate, especially if the fish harvesting group and MAP were housed in the phase II facilities. The facilities issues in Kodiak arise from the needs of researchers doing fish harvesting technology and fisheries science, contaminants research, biotechnology, and the needs of other scientists visiting the Kodiak archipelago.

B. FITC facilities requirements

New facilities requirements In order to have an effective viable program in seafood science and technology we must increase the size of our faculty. Similarly we must increase our faculty in fish harvesting technology and related fisheries science in order to have a meaningful program in that area. The public education aspects of such a program are also critical. Thus co-location with MAP and CES is desirable. The Owen Building should continue to house the Seafood Technology Group, NMFS-URD, and the FITC administration. Based on previous planning documents and the size of other stand-alone food science units at other universities, the Seafood Technology Group should have at least eight faculty to cover the required disciplines. This group along with NMFS-URD, associated postdocs/research associates, and graduate students would fully utilize the Owen Building.

The minimal staffing plan for the Fish Harvesting Group calls for four faculty and two research associates to cover the necessary disciplines. Some of the physiology and fisheries oceanography could be done elsewhere but require specialized facilities to study commercial adults and a commitment to do so.

The facilities needs project for the UAF-Near Island Research Facility requirements study were based on the needs of basic faculty units built around these numbers. A unit was considered to include a senior researcher, usually a faculty member, and the following: one to two postdocs or research associates, and three graduate students. Visiting faculty research teams were projected as doubling current use. Visiting industrial research scientists were arbitrarily estimated at one research unit of three people. Use by visiting scientists, although seasonal, was assumed to be concurrent.

V. Institute of Marine Science (IMS)

A. Existing IMS Fairbanks Facilities

Overview and staffing IMS contains a large percentage of the total research faculty, students and support staff in SFOS, with a total of 25 faculty and about 64 support staff. This number for support staff includes 21 personnel at Seward Marine Center and two at Kasitsna Bay. The number fluctuates significantly as large projects build, shrink and eventually terminate (e.g., EVOS). GPMSL has 51 students; most of them carrying out their research through IMS.

Location The Fairbanks based program for IMS is primarily located in three buildings on the West Ridge of the University of Alaska Fairbanks campus, mostly in Irving II and O'Neill Buildings with some offices and labs in the Arctic Health Research Building.

Functions and capabilities The Graduate Program in Marine Sciences and Limnology provides a wide spectrum of courses for students enrolled in masters and doctoral programs. Research projects at IMS provide opportunities for students enrolled in the GPMSL programs. As expected from the relatively large number of faculty, research interests and projects vary widely and include studies in benthic biology, satellite imagery for biological research, understanding fish habitat in Cook Inlet, oceanographic conditions affecting fish hatcheries in Prince William Sound, salmon brain development, marine mammals research at high latitudes in both north and south polar regions, chemical and biological aspects of high latitude marine ecosystems, northern paleoceanography, and physical circulation studies in the Arctic, Gulf of Alaska, and the Greenland Sea. Investigations are also focused on bacterial respiration and molecular biology. In addition to the above, IMS has a growing computer capability which includes an expanding subnet. This facility is linked directly with the Cray supercomputer at the Arctic Region Supercomputing Center as well as to the rest of the world. IMS also has ready access to a visualization lab located in the O'Neill Building which is supported by the Supercomputing Center.

Existing useable space Following are details on the net space assigned to IMS (including associated GPMSL students) as well as an attempt to show how the space is partitioned. This space does not include physical plant, hallways or lavatories

Space types	**Net(sq ft)**
Faculty offices	4066
Research labs	12662
Research support spaces (E.g. instrument, workshop and other specialty spaces)	8232
Student offices (GPMSL)	3150
Staff offices	1587
Class/conference rooms	1501
Administrative offices	418
Hazmat storage	160
Storage, on-campus (heated)	2120
Storage, off-campus, leased (heated)	3200
Total space, including leased	37096

B. IMS Facility Requirements

Basis for planning The present faculty provide a broad area of expertise but additional capabilities are needed to round out the Institute. IMS is presently below desirable strength in the general areas of chemical and geological oceanography as well as invertebrate zoology. IMS needs additional lab space to support an existing paleoceanographer who presently has only an "office lab". It is also imperative that a teaching lab be created for courses which have previously been unable to offer a lab component because of a lack of facilities. There is also a growing demand for more office-type space to accommodate the needs of researchers who have acquired one or more computer workstations which are a part of a growing IMS network. This need is for more computer access space, as more and more research is being done on networked computers. This computer lab space must be relatively secure, but outside of faculty offices to allow student access to the machines. Teaching, chemistry-type lab space is not available for graduate or undergraduate courses. Students have been turned away because of this. If any of the several faculty positions presently open within IMS are filled as a means of broadening institute capabilities, the new faculty will need additional lab and office space to accommodate their research and the anticipated increase in students.

Projected space requirements (additional needed)

Space types	**Number**	**Net(sq ft)**
Research offices (replacement faculty)	2	300
Research labs (2 for present needs, 2 for anticipated)	2-4	1400-2800
Computer lab space for computer workstations	2	300
Student offices (@50 sq ft each)	6-10	300-500

VI. Seward Marine Center (SMC)

A. Existing Seward Marine Center Facilities

Overview and staffing The Seward Marine Center serves as the Institute of Marine Science's ocean-side station within SFOS, which also serves as both a UAF and a University National Oceanographic Laboratory System (UNOLS) staging area for shipboard oceanographic studies. The total staffing of about 21 is included in the IMS breakdown but is also shown here. There are two faculty and 3 full-time technicians involved directly in science. About five personnel are involved in shoreside support and there are nine crew members for *Alpha Helix*, the UNOLS vessel based in Seward. One or two part-time personnel work at the station with hours that vary seasonally.

Location SMC is located at the head of Resurrection Bay in Seward. The Center is located on just under 13 acres of land, some of which has been purchased from and some of which is being leased (through the year 2076) from the City of Seward. The Center is connected via 130 miles of road to Anchorage, the state's major transportation hub, which has an international airport. This allows investigators, their equipment and freight, year round access to SMC. Seward also has direct rail, water and air transportation access as well.

The Alaska Department of Fish and Game will be constructing a shellfish hatchery and research center on the property, and the privately owned, non-profit Alaska SeaLife Center will be located adjacent to SMC. The addition of these two co-located research facilities will beneficially increase the breadth and depth of marine science research conducted in Seward.

Functions and capabilities The unique setting of SMC on a deep fjord allows the Center to draw deep, oceanic water from a depth of 70 meters in support of high latitude marine invertebrate and fish research which requires reliable high quality sea water. This water system allows researchers to hold and conduct experiments with live North Pacific, subarctic, and some arctic research fauna. Research completed at SMC includes most of the work on bioenergetics of Alaskan fishes, much of the life history of Alaskan king and Tanner crabs plus pioneering exploration of the neurochemical and neuroanatomical characteristics of salmonid brains.

In addition to the research conducted at the station by SFOS scientists, the Center provides significant support for the marine research community by providing dock-side support for research vessels from various institutions, including the University of Alaska operated 133-foot ocean going UNOLS research vessel, *Alpha Helix*. A 26-foot research vessel and several skiffs are also available in support of research at SMC.

Existing useable space (Not broken out by rooms at this time.)

Space types	**Net(sq ft)**
Laboratory building (wet)	1830
Laboratory Building (wet with tank room)	6418
Warehouse with admin office	17526
Public education building	5947
Machine shop	2193

Existing useable space (continued)

Space types	Net (sq ft)
Apartment building (4-plex)	4536
Pier	180
Total space	38630

B. SMC Facility Requirements

Basis for planning In order to meet anticipated demands for scientific research, teaching and the planned NSF owned, University of Alaska operated, Arctic Research Vessel, SMC facilities must be increased. Present lab facilities are fully utilized with existing programs. Anticipated needs include new wet labs, classrooms, a lecture room, a larger library and a new dock to accommodate the planned larger vessel. A shared city, Department of Transportation (ferry), and University of Alaska dock has been planned but remains unfunded.

Projected space requirements

(Not broken out by room at this time.)

Space types	Net(sq ft)
Laboratory space (wet)	3200
Classrooms	800
Lecture room	750
Library (size increase)	?
Computer room	800
Research offices	400
Off-site storage (unheated, uncovered)	1000
Dock	380
Additional needed space	7330

VII. Kasitsna Bay Laboratory

A. Existing Kasitsna Bay Facilities

Overview and Staffing The Kasitsna Bay Laboratory is owned by NOAA and leased to the University of Alaska Fairbanks School of Fisheries and Ocean Sciences The site is dedicated to support shore side and offshore marine science research of the Kachemak Bay ecosystem. There is a full-time site manager and a part-time technical assistant at the lab. No faculty or post-doctoral candidates are assigned to the lab facility. However, the lab is visited by approximately 40 researchers or research assistants and 105 graduate or undergraduate students each year.

Location Kasitsna Bay Laboratory is situated on the south side of Kachemak Bay in Lower Cook Inlet, and is nine road miles from the town of Seldovia, Alaska. The site is semi-isolated but is serviced by the state ferry Tustemena and two air taxis. The ferry operates biweekly April through September, weekly October through December and is shut down from January to March. Air Taxi service from Homer is available all year.

Facilities and capabilities The laboratory has easy access to a rich marine environment and excellent tidal pools and a wide variety of beach types in Kachemak Bay and Lower Cook Inlet. The laboratory can support limited live research on fishes and invertebrates. A planned upgrade to the site's sea water system should expand this capability. The dry labs are spacious and are well equipped. The site provides an excellent location from which to conduct intertidal research and marine related classes. Several small boats are available to support research in the area.

Existing useable space

Space types	**Net(sq ft)**
Laboratory Building (2ea, 400 sq ft labs)	800
Trailer Lab Building (2ea, with double labs of 280 sq ft ea)	560
Housing Facilities (2ea, w/bath, kitchen, laundry and lounge)	
A total of 18 sleeping spaces are available.	?
Facilities Manager Housing and Storage	1,608
Shop and Storage Building	512
Storage Building , unheated	168
Generator Building with a 30KW emergency generator	144
Shop and Storage - unheated	384
Walk-in Freezer	768

Other capabilities and equipment

A 200 gal/min salt water system is available that draws water from a 30 foot depth at low tide. Salt water is not presently piped into the labs.

- Two 22 ft. Boston Whalers with twin 70 HP engines
- One 28 ft Munson aluminum boat with bow crane and twin 200 HP outboards.
- One 10 foot aluminum skiff
- Four wheel drive trucks - 2 each

B. Kasitsna Bay Facility Requirements

Basis for planning The buildings need to have equipment replaced and upgraded but the facilities budget does not presently allow an aggressive, planned replacement program. The remoteness of this site, however, demands such planning because of the extreme lack of supply and maintenance support available locally. Because the facility is remote, maintenance is important and should be routinely scheduled.

The seawater system requires an upgrade and plumbing to make it available to the laboratories. New heating needs to be installed in one of the housing units, a new four wheel drive truck is needed, and replacement for the station's boats should be programmed.

As the facility use increases, additional staff will be needed. The requirements for station maintenance and boat operations places a great demand on the single facility manager/ maintenance mechanic. Both maintenance and usage demands peak in the summer, when weather allows outside maintenance to be performed. Additionally, leave by the facility manager is difficult because of the need for a competent replacement. Additional housing space will also be needed to accommodate heavier use of the facility. Bunking and kitchen space is limiting when the site is near capacity during busy summer months.

The station also needs to expand its communications capability. Only one telephone line is available and is shared between the facility and station management. The installation of a reliable computer link to the rest of the world would be an asset to this site.

Short term remedies require the scheduling of maintenance and upgrades to address the immediate needs of the facility. This may require hiring additional personnel for part of the summer season since this is the time when exterior maintenance must be done, yet it is the time when activities at the lab are the greatest, leaving little time for the facility manager to accomplish them. A more comprehensive facility upgrade must await the development of a detailed long range plan for the site.

VIII. Marine Advisory Program (MAP)

Background The University of Alaska Fairbanks Marine Advisory Program is composed of faculty and staff at eight locations: Anchorage, Kodiak, Dillingham, Bethel, Cordova, Sitka, Petersburg, and Homer. These facilities house 7 specialist positions, 7 MAP agents, and 6 support personnel. Facility descriptions and needs for the future are unique to each location.

A. Anchorage Facilities

Overview and staffing The Anchorage facility houses 5 MAP specialists plus 2 support personnel that serve Anchorage and MAP field offices. In addition the office supplies space as needed for field agent activities while they are in Anchorage.

Location The Anchorage office is located in the Carlton Trust Building at 2221 E. Northern Lights Boulevard #110, Anchorage, Alaska 99508. The office is sited outside the boundaries of the University of Alaska Anchorage campus, but less than 1 mile from the campus facilities. The Carlton Trust Building also houses the Anchorage office of UAF Cooperative Extension and UAF Cooperative Extension Community Development Program.

Extension/teaching capabilities The Anchorage office provides space for faculty and staff offices; storage; support services room housing the Fax, photocopier, computer printers and work table; public reception area for display of publications and receptionist, and a library/conference room capable of seating approximately 30 people. The library houses several thousand documents, teleconference equipment, audiovisual equipment, and large table working space. In addition, MAP staff has access to UAA facilities to include faculty and support services, distance delivery, library, and communication resources.

Existing usable space Following are details on usable space controlled by Anchorage MAP as well as space to which MAP has assess to as a part of the lease agreement.

Space type	**Net (sq ft)**
Faculty and staff offices	870
Storage	124
Support services room	142
Reception area and receptionist office	176
Conference room and library	550
Total Anchorage MAP controlled space	1862

Facilities to which Anchorage MAP has occasional access for scheduled use

Space types	**Net (sq ft)**
Large conference room	875

Use Analysis The space for instruction, support services, and office space is adequate for the immediate need. As MAP extension facility we are beginning to feel the cramped space available for publication storage. Particularly useful is the conference room space that allows us to house small and larger meetings and classes.

B. Anchorage office facilities requirements

There is no critical need for immediate increases in space. More efficient use of existing space will allow us to continue operations with little capital outlay. This may require changes and/or additions of office furnishings.

C. Petersburg office

Overview and staffing and location The Petersburg office houses 1 MAP agent and 1 office support person. The office is located on the main street in Petersburg at 219 N. Nordic Drive, Petersburg, Alaska 99833. Strategically positioned in a light traffic area the office is within the immediate vicinity of the main boat harbor and seafood processing plants.

Extension/teaching capabilities The current location of the Petersburg MAP office has only been occupied since October 1994. The change in location was requested to enable greater visibility and improved public access. Since the move to the current location "walk in" traffic has increased substantially. The MAP agent is pleased with new location and notes that it is in an ideal area with maximum capabilities for public access. The office is located on the main street in Petersburg at 219 N. Nordic Drive, Petersburg, Alaska 99833.

Existing usable space The space to which Petersburg MAP has complete access is:

Space type	Net (sq ft)
Faculty and staff offices	650
Display area	50
Total Petersburg space	700

Use Analysis The facility is being utilized to its maximum. The Petersburg office has an extensive number of publications, and also serves as a depository and distribution office of University of Alaska Cooperative Extension publications. Increased public access to these resources is vastly improved with relocation to the current site.

D. Petersburg office facilities requirements

There is no immediate need for a facility change of the Petersburg MAP office.

E. Cordova office

Overview and staffing and location The Cordova office houses 1 MAP agent and 1 support service person. The office is composed of a single office, storage closet, library shelving, and restroom. The building is located on pilings on the Cordova dock on Breakwater Avenue.

Extension/teaching capabilities The office, the former Harbor Master's office, is in an excellent location for visibility and public access. Because the office is on the Cordova dock, it does not have the capabilities for expansion in this area. For larger meetings Cordova MAP has access to meeting rooms on a scheduled basis at Prince William Sound Community College, the Masonic Hall, and the public library.

Existing usable space

Space type	**Net (sq ft)**
Office space	216
Library in office (shelving only)	20
Restroom	16
Display area	8
Total Cordova space	260

Use Analysis The office is located in an ideal area for visibility and public access. The office is too small to house meetings larger than 6 people, and more space is needed for storage of publications. A small area 4' X 4' is used as a fire pump room with access from the outside of the building. In general the facility is excellent for MAP use.

F. Cordova office facilities requirements

Additional storage shelving necessary for publications. No additional space is required.

G. Kodiak office

Overview and staffing and location The three MAP faculty are located in three separate offices within the Fishery Industrial Technology Center (FITC) at 900 Trident Way, Kodiak, Alaska 99615. Located on Near Island which connects to Kodiak Island via a bridge, the FITC is less than one mile from downtown Kodiak. The main boat harbor and several fish processing plants are less than 1 mile from the MAP office.

Extension/teaching capabilities FITC is well known by the residents of Kodiak so access does not appear to be a problem with its location away from the main flow of traffic. The current facilities occupied by MAP at FITC are three offices with a total of 275 sq ft of floor space. In addition to the office space, MAP has access to FITC library, laboratories, and classrooms. Support services at FITC are limited. MAP staff do not have designated office support staff or equipment.

MAP faculty make extensive use of space at Kodiak Community College on a scheduled basis. Support staff and facilities at the college are also used.

Existing usable space Facility space controlled by MAP faculty is:

Space type	**Net (sq ft)**
Office space for 3 agents	275

Facilities managed by FITC to which MAP has occasional access

Space type	Net (sq ft)
Library	720
Classroom/conference room	910
Laboratories[a]	
Storage	400
Cold room	100
Total Not controlled by Kodiak MAP	2130

[a] MAP staff are not considered research faculty. Lab space is available on an as needed basis and is seldom used.

Use Analysis MAP office space in the current FITC building is limited. Agents are finding that the approximate 100 sq ft per office is difficult to manage. MAP agents need space to house the collections of information, publications, etc. The FITC building has a library, but the information contained in the existing library collection has little information of use for MAP agents. The laboratories and classrooms facilities at the FITC are excellent. Location seems adequate since the community is aware of the FITC building location.

H. Kodiak office facilities requirements

Office space for agents needs expansion. At least 50 sq ft additional space is necessary for agents to be comfortably housed. An extension section of the library or a separate room for document storage would also be helpful to reduce the cramped condition of the offices.

I. Dillingham office

Overview and staffing and location The MAP office in Dillingham is a single room facility that houses 1 MAP agent and 1 support personnel located in the front corner office of the University of Alaska Bristol Bay campus, a 12-room single story building. The building site is 1-1/2 block off the main business street of Dillingham between the high school and museum/public library buildings.

Extension/teaching capabilities The facility is adequate for extension activities. The size of the room is suitable for conducting small meetings with more than one person. MAP has access is a meeting room at the Bristol Bay campus on a scheduled basis. Office and communication equipment are also shared resources between MAP and the Bristol Bay campus. The office is a depository for MAP and Cooperative Extension publications.

Existing usable space Facilities over which MAP has complete control are

Space type	Net (sq ft)
Office space	252

MAP also has access to a meeting room, classroom, and library at the Bristol Bay campus.

Use Analysis The major concern for the Dillingham office is the effects caused by expansion of the activities of the Bristol Bay campus. Currently, use of the campus has resulted in the MAP office being used as a location for teleconference classes during the evenings which restricts office access for our MAP agent for evening work. With continued expansion of students and faculty, there is an increased prospect for eviction. Some expansion can be absorbed by the present building, but that would mean reduced space for MAP use. Any decrease in space will adversely effect the program's effectiveness.

J. Dillingham office facilities requirements

The present space available is adequate, but the addition of a small area for display of publications would be helpful. If required to move out of the building, MAP would need to invest in office equipment now available for use on a shared basis with Bristol Bay campus. The location of the MAP office on a campus may discourage some clients from utilizing MAP, but its in-town location and visibility out-weigh any disadvantage. If a move is required, a downtown location would be more appropriate than a location near the boat harbor since access would be better, particularly during winter.

K. Sitka office

Overview and staffing and location Sitka MAP houses 1 agent and 1 half-time support person. The MAP office is located on Japonski Island in a building that was previously the administration offices of Mt. Edgecumbe High School. The office is over a mile from downtown Sitka and is reached by bridge. The address is 1297 Seward Ave., Sitka, Alaska 99835. The office space is shared with University of Alaska Fairbanks Cooperative Extension. An alternative high school is also housed in the building. The second floor of the building is often used to house visiting sports teams.

Extension/teaching capabilities The office is isolated from the main traffic in Sitka. Prior to this location the MAP office was located in the post office building in downtown Sitka. Since relocation the MAP office receives very few visitors. The numbers dropped from several per day at the previous site to one or two per month at the current location. The building is in poor structural condition. Rooms are available in the building for holding workshops, but they are often used for over-flow activities from the Mt. Edgecumbe High School and as classrooms for the alternative high school. In summary, the current site is a poor location for the Sitka MAP office.

Existing usable space MAP controlled and space shared with UAF Cooperative Extension is:

Space type	**Net (sq ft)**
Office space	300
Display area[a]	100
Total Sitka space	400
Shared space with Cooperative Extension	300

[a] This area is difficult to control; High school students frequently vandalize the area.

Use Analysis The amount of space is adequate, but classroom access is often limiting. Meeting space is also limited or not available. The facility is aging. Heating is poor, windows are painted shut, and pipes that deliver water are badly corroded and the bathroom is unheated.

L. Sitka office facilities requirements

MAP badly needs a publicly accessible office that has up-to-date facilities. Combined with Cooperative Extension, 1200 sq ft of space which has separated office space, a public area, and good access to classrooms is needed.

Projected space requirements for MAP Sitka office

Space type	**Net (sq ft)**
MAP office (Exclusively MAP)	250
Public area (Shared)	300
Classroom area (Shared)	300
Storage (Shared)	200
Support area (Shared) (office machine etc)	150
Total	1200

Alaska Cooperative Extension and MAP are currently seeking new office space in downtown Sitka where we can have good public access (American Disability Act approved).

M. Bethel office

Overview and staffing and location The Bethel MAP office houses a single agent who works 1 day per week for MAP. The remainder of the time our agent is employed with the University of Alaska Fairbanks Kuskokwim campus as staff for the continuing education program. The office is located at 201 Akiak Drive, Bethel, Alaska 99559.

Extension/teaching capabilities Located in the University of Alaska Fairbanks Kuskokwim campus building in downtown Bethel, the MAP office is in an excellent location for public access. The office is composed of a single room with excellent opportunities to share the space resources with other tenants of the building.

Existing usable space Area controlled by MAP exclusively of the one day a week office hours is:

Space type	**Net (sq ft)**
Office space	200

Shared space is available. Two classrooms with 75 and 300 person capacities are available on a scheduled basis.

Use Analysis The Map office is adequate for the needs of the program. The office is large enough that meetings can be held with a few clients. Display area is limited, and publications cannot be visually accessed by the public. In the near future the University of Alaska Cooperative Extension office will be moved into the building. This additional office is not expected to have an impact on MAP space requirements.

N. Bethel office facilities requirements

Facilities in the Bethel office are adequate. A display area would be helpful.

O. Homer office

Overview and staffing and location The Homer office houses 1 MAP agent and 1 support person. The facility is located on the second floor of the National Bank of Alaska building on 4014 Lake Street #201B Homer, Alaska 99603. This address is located in the middle of Homer. Housed with MAP on the second floor of the building are the Natural Resources Conservation Service (NRCS) and the Agriculture Stabilization and Conservation Service (ASCS) which shares some facility space.

Homer MAP also uses an office in Seward Alaska. This office is located in the Rae Building at the SFOS Seward Marine Center. In this building our agent has access to an office, museum display area, and an auditorium that house 100 people.

Extension/teaching capabilities The MAP office is centrally located and access is good. Being upstairs in a bank building somewhat reduces visibility. An elevator allows for handicap access to the office. Meeting space is limited since the conference room seats only 10 people comfortably and ventilation is poor.

The Seward MAP facilities are excellent for extension and education services. The auditorium is probably the best, off campus, educational facilities UAF operates.

Existing usable space The following areas are under complete control of MAP at the Homer site.

Space type	**Net (sq ft)**
Office space	268

Occasional access to facilities at Homer:

Space type	**Net (sq ft)**
Classroom and conference	231
Service area (e. g. kitchen, etc.)	30
Storage	73
Total	334

Access to facilities at Seward site

Space type	Net (sq ft)
Office	80
Display area	600+
Auditorium	1000+
Total	1680+

Use Analysis The Homer office is adequately placed and space is available to perform the necessary work. The conference room, storage room, and workroom are contained in the interior block of the building and lack windows. Air and heat circulation is a chronic difficulty that makes the conference room uncomfortable. Storage area is now used to capacity. The conference room is used to store extra chairs, audio and video equipment, and a light table, all of which contribute to the overcrowding of the conference room. Floor display area, for Sea Grant and MAP publications is lacking. A hallway wall is used for hanging a display and a hanging bulletin board is used. Two bookcases in the reception office are used for publication and video display.

The Seward site is utilized by our Homer agent 2 days per month, year around. During the summer MAP makes extensive use of the Rae Building auditorium for educational presentations and Elder-hostel classes. The facility is excellent for these uses.

P. Homer office facilities requirements

Homer MAP entered into a shared lease agreement with NRCS and ASCS which runs from January 1, 1995 through December 30, 1999. We do not anticipate a move away from the current premises. Additional storage space and a designated display area are needed and would be a great asset to the facility.

Specific needs for additional space -- Homer

Space type	Net (sq ft)
Storage	150
Display floor space	20
Total	170

Specific needs for additional space -- Seward

For the Seward location, the MAP program would benefit by access to a permanent office space within the Rae Building.

IX. Alaska Sea Grant College Program Administrative Office

A. Existing Sea Grant Fairbanks Staff and Facilities

Overview and staffing The administrative unit provides development and oversight of scientific research, education, and outreach projects. The public information services unit works with all units of SFOS as well as other university, government, and industry groups. As of March 1995, the staff includes four full-time permanent professional people, three full-time permanent technical people, two full-time permanent support people, one part-time Regional Marine Research professional, one student assistant (almost half-time), and one writing intern (almost half-time each semester). The Sea Grant staff includes both the administrative and public information services units of the program.

Location The Alaska Sea Grant College Program offices are scheduled to move to new quarters on the Fairbanks campus in the near future. It is presently located in the Eielson Building on lower campus.

Functions and capabilities In addition to its role in development and oversight of Sea Grant funded research, the Alaska Sea Grant College program works with other units to develop and coordinate conferences and workshops; and to create, write, edit, and/or produce proceedings, reports, marine advisory bulletins, brochures, fact sheets, news releases, media advisories, displays, videos, slide shows, educational materials for schools and industry, special projects, and a radio program series.

Existing useable space For the past two years, Sea Grant has resided in temporary space providing approximately:

Space types	Number	Net(sq ft)
Offices	8	1040
Administrative/computer resources		180
Publications distribution (includes 2 work stations)		850
Publication/display production resources		190
Conference/library/reference materials		250
Minimally useful corridors (1 work station)		314
Total		2824

B. Sea Grant Program Requirements

Basis for planning The current space does not adequately meet publications shelving or mailing needs, nor is it optimally configured to meet staff office needs. The Sea Grant Program anticipates moving to a different location in 1995; the amount and quality of space are not yet known. Also, publications storage space at the old University Park school is inadequate.

Future space requirements should take into account an increased level of Sea Grant activity and anticipation of assuming some of SFOS's communication functions (based on a plan Sea Grant and SFOS developed in the early 1990s for revamping and enhancing SFOS's methods of communicating with its various

audiences), as well as an additional part- or full-time person to assist with writing, editing, and publication production which will result from increased output of publications and a new radio program. An increasing reliance on advancing computer technology will require that Sea Grant upgrade its communication methods to keep pace with the rest of the world. This will require the services of a computer network manager.

Projected space requirements *(Based on 9 full-time and 3 part-time current staff and the anticipation addition of three new staff; total of 15.)*

Space types	**Number**	**Net(sq ft)**
Offices	15 (120 SF ea)	1800
Publications distribution		200
Publication/display production resources		850
Radio production*		100
Conference/library/library/reference materials		300
Total		3470

* Radio program production equipment requires separate space in a sound-proof room for high quality audio production.

X. West Coast National Undersea Research Center (WCNURC)

A. Existing WCNURC Facilities

Overview and staffing The West Coast Center of the School of Fisheries and Ocean Sciences is one of six regional centers within the US that supports *in situ* marine research and technological development through the National Undersea Research Program (NURP) within NOAA. WCNURC is currently staffed by 6 individuals (Director, Science Director, Regional Coordinator, and Operations Manager, Administrative Assistant, and Student Assistant) occupying 4½ offices in the O'Neill Building (UAF) and one leased office for the Regional Coordinator. The first three positions are SFOS faculty.

Location WCNURC is located in the O'Neill building on the West Ridge of the University of Alaska Fairbanks campus. The Regional Coordinator is located at the Monterey Bay Aquarium Research Institute in Moss Landing, California.

Functions and capabilities Much of the Center's annual budget is awarded as grants to scientists at private, state and federal institutions for undersea research within west coast and polar regions and for associated instrumentation development. This is accomplished through WCNURC administration of an annual peer-review proposal process with national competition. The Center also organizes the funded field programs through the lease of submersible and ROV charters, scheduling of field programs, etc. and supports developmental projects, including the sponsorship of national symposia and workshops. Scientific staff within the Center conduct independent peer reviewed research in addition to undertaking administrative responsibilities.

Existing Useable space Following are details on useable space occupied by WCNURC in the O'Neill Building on the UAF campus.

Space types	Number	Net (sq ft)
Office	4½	603
Laboratory	1	200
Storage		
(inconvenient, off-campus SFOS storage is available)		?

B. WCNURC Facility Requirements

Basis for planning Presently, without further expansion of the WCNURC, additional space is required for a reception, a conference room, and a video editing/duplicating room as well as additional research laboratory space for the scientific faculty. Ideally, reception, offices, conference room and video room would comprise a suite of adjacent rooms, with the laboratory space not far removed. As WCNURC grows, a requirement for one or two more offices and an electronics and staging room are anticipated to accommodate an additional staff scientist and technical support and hardware for an ROV and/or other underwater systems.

XI. University of Alaska Coastal Marine Institute (CMI)

A. Existing CMI Facilities

Overview and staffing The UA Coastal Marine Institute (CMI) is an administrative office which operates under the School of Fisheries and Ocean Sciences and disburses and assists in administering monies from Minerals Management Service (MMS) to the University of Alaska and other state researchers involved in marine resource related research. All CMI funds require a one to one match from non-federal sources. The administrative function involves five people within SFOS, one half-time and others with lesser time. The total commitment in personnel is slightly under 12 person-months per year. Personnel involved with the CMI presently have offices or work stations elsewhere within SFOS.

Location The CMI function is distributed to various offices within the O'Neill Building and Irving II on the West Ridge of the UAF campus.

Functions and capabilities As mentioned above, the main function provided by the CMI office is the administration of research projects funded, in part, by MMS. The CMI establishes an area of interest and invites scientists to write letters of intent to address them. The eventual outcome of the process is that each year a number of scientists are invited to develop proposals to address one or more of the problems identified by the CMI. These proposals are evaluated and a few are funded each year. Funding is available for appropriate projects for up to three years.

Existing useable space Since the personnel involved in the CMI have office space within other units of SFOS, there are no distinct spaces allocated to the CMI.

B. CMI Facility Requirements

Basis for planning The Cooperative Agreement with MMS that established the CMI suggests that funding, which is allocated by MMS annually, will continue through federal fiscal year 1997, with an opportunity to extend the agreement if all parties agree. If the CMI continues to operate (get funding), it would be useful to create more of an identity for the Institute. Two offices, one for clerical/technical support and one for the project coordinator, would be desirable. It would be useful to have an area set aside to accommodate 4-5 persons for discussions. This could probably be located within the project coordinator's office. The clerical/technical support office should have some local storage for reports and filing cabinets for correspondence, etc. A total office space of 250 sq ft, if well configured, would be adequate. Eventually, external SFOS storage might be needed for report storage.

XII. General needs of Fairbanks SFOS units

There are a couple of needs that would benefit all Fairbanks units; the establishment of an SFOS library and the combining of all SFOS units into one common building. These needs are broken out here since they will serve all SFOS units on campus.

SFOS Library There is no SFOS library. The School now shares crowded library space with the BioSciences Library (under the Rasmuson Library) which is located on the West Ridge in the Arctic Health Research Building. IMS had a small library and reading room but lost it due to space and fiscal constraints in December 1986. It would be desirable to reestablish an SFOS library on the Fairbanks campus. This could be done most efficiently by dedicating a large room (or rooms) in an existing library for marine science volumes and journals. A reading area would be appreciated. The present BioSciences Library is too small to accommodate this request and the Geophysical Library is full and is facing building structural weight restrictions. A new, combined West Ridge Research Library would be the ideal solution.

SFOS Building There also is no SFOS building on the Fairbanks campus, in spite of the fact it operates with a budget similar to the Geophysical Institute which has a building, an addition, and is now working on its second addition. The fact that SFOS is spread through several buildings on campus and the associated lack of identity has hindered the development of SFOS as a well integrated research unit. Politically, it will be difficult to get an SFOS building built on the Fairbanks campus. Whenever possible, SFOS facilities should be drawn together. It would be useful to create a visible identity for the School on the Fairbanks Campus.

Appendix F

SFOS Long Range Plan

School of Fisheries and Ocean Sciences

LONG RANGE PLAN

"Looking to the Future through Research, Education and Public Service"

August 1992

School of Fisheries and Ocean Sciences

UNIVERSITY OF ALASKA FAIRBANKS

Fairbanks, Alaska 99775-1080

LONG RANGE PLAN
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LETTER OF TRANSMITTAL

TO: Vera Alexander, Dean
School of Fisheries and Ocean Sciences

FROM: John J. Kelley, Chairman
Long Range Plan Writing Committee

DATE: 14 August 1992

SUBJECT: SFOS Long Range Plan

The Long Range Plan Writing Committee has completed its task to develop a long range plan for the School of Fisheries and Ocean Sciences. We have tried throughout every phase in the development of this plan to involve the faculty of the School.

We hope that this plan meets with your approval and will prove to be a useful guide to the further development of the School.

Sincerely yours,

John Kelley

JJK/gt

Enclosure

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PREFACE

The dean of the School of Fisheries and Ocean Sciences (SFOS) was advised by the school's external Advisory Council to develop a Long Range Plan. A faculty committee was formed in October 1990 to draft the plan. The plan was to serve as a guide for planning activities of the School of Fisheries and Ocean Sciences over the next five to ten years and to assist in unifying the goals and objectives of the SFOS faculty for the governance and future direction of the school. Furthermore, the plan was to be written in such a way as to enable it to be updated periodically to take advantage of new opportunities.

The Long Range Plan writing committee initially produced an outline for the plan, which was presented to the Advisory Council. The council suggested the addition of a Preamble to the plan. The Preamble would identify how the faculty, with their diverse disciplinary interests (Appendix 1), view the school and its future direction.

The committee met primarily by audioconference and occasionally as a group in Fairbanks or Anchorage. It did not seem adequate simply to take a "snapshot" of where we are currently as a guide to the future. Instead, a series of goals, objectives and strategies were developed, based as much as possible on faculty participation. It was a goal of the committee that, through the development of such a plan, it would allow for a much more effective modification of the plan in future years as new issues emerge and older ones are resolved. The committee felt that this strategy would also make it easier for the faculty to incorporate their views as either a major issue, objective, or strategy item. A draft plan was presented at the annual faculty meeting in Seward in August, 1991.

SFOS LONG RANGE PLAN

PREAMBLE

Introduction

The School of Fisheries and Ocean Sciences (SFOS) is dedicated to expanding knowledge of marine and freshwater systems and associated resources, especially those in high latitudes. The School's far northern location, unique among the nation's universities, and the expertise of its faculty, create special opportunities in the fields of marine and freshwater science. The School can pursue these opportunities and responsibly serve Alaska and the Nation by maintaining high standards in carefully chosen research, teaching and extension programs.

The primary goals of SFOS are excellence in research and education in marine science, limnology, and fisheries. Research excellence is the basis of our strong national and international reputation. Research generates fundamental understanding of marine and freshwater environments, which is passed on through education and extension services. Because of the importance of the ocean in the Alaskan lifestyle and economy, SFOS places a major emphasis on research directed toward the wise use, development, and management of marine resources.

History

Recognizing marine research needs in the northern oceans, in 1960 the first Alaska Legislature established the Institute of Marine Science (IMS) at the University to provide a "program of education and research in physical, chemical and biological oceanography and related fields".[1] Over the past three decades, IMS has expanded from two to twenty-eight faculty, with broad research programs which concentrate on Alaskan and Arctic waters, but extend worldwide. From 1960 to 1980, the faculty grew to twenty-two, giving the Institute substantial expertise in the major oceanographic disciplines and enabling IMS to play leading roles in multifaceted studies of Alaska's continental shelf waters. In 1970 the Institute moved its base of marine operations from Douglas to Seward and, in 1980, began operating a 133-foot ice-strengthened vessel, the R/V *Alpha Helix*, greatly increasing capabilities for oceanographic research. During the 1980's, IMS enhanced its national and international reputation with its participation in a broad range of research programs, extending from the Gulf of Alaska through the Bering and Chukchi Seas to the Arctic Ocean.

Since 1965, IMS graduate students have earned eighty M.S. and forty-one Ph.D. degrees in oceanography and related disciplines.

To assist the State's fishing industry, the second Alaska Legislature appropriated funds for the Cooperative Extension Service (CES) to provide a fisheries extension program. In 1963, Fisheries Extension broadened its outreach efforts to include all of the maritime public and changed its name to the Marine Advisory Program (MAP). Since 1963, the MAP faculty has grown to seven field agents and three specialists. MAP provides educational and technical assistance in the areas of fisheries, marine safety, business management, seafood technology, aquaculture, and recreation/tourism. MAP was a combined effort of Sea Grant and CES until it became a unit of the new School of Fisheries and Ocean Sciences.

Alaska has long acknowledged the need to conserve its fisheries resources – its foremost renewable source of wealth. In 1974, the University established a fisheries program at the University of Alaska, Juneau, which grew from an initial director to a faculty of nine. The Juneau Center for Fisheries and Ocean Sciences (JCFOS) was established and incorporated into SFOS in 1987 with university reorganization. Research and graduate teaching at JCFOS constitutes the majority of the SFOS fisheries program, which additionally has one faculty member plus the staff of the Alaska Cooperative Fishery Research Unit at Fairbanks supporting an undergraduate and graduate program. The combined research and educational programs at both locations provides an important pool of fisheries experts for the state of Alaska.

Sea Grant College status was awarded to the University in 1980 to maintain "a balanced program of research, education, training and advisory services in fields related to ocean and coastal resources."[2] The Sea Grant College Program was developed to "increase the understanding, assessment, development, utilization and conservation of the nation's coastal resources by providing assistance to promote a strong educational base, responsive research and training activities, and broad and prompt dissemination of knowledge and techniques."[3]

The Alaska Legislature acknowledged the State's responsibility to advance the development of its fishery industries. In 1981 the Fishery Industrial Technology Center (FITC), a "technology training and research center under the University of Alaska [that] is best able to aid the individuals and businesses in the development of fishery resources,"[4] was established at Kodiak, a major fishing port in Alaska. Following the

hiring of the first director in 1982, FITC grew steadily to five faculty in 1986, with core expertise in seafood processing science and technology.

In 1987, the University merged the fisheries and ocean sciences faculties into the unified School to improve coordination and efficiency. SFOS, with a combined faculty of 67, is now able to pursue more complete and well-integrated studies of marine and freshwater processes and resources.

Need

Alaska has 76% of the Nation's continental shelf, and its 33,000 miles of coastline are 54% of the U.S. total. Alaska's fresh waters are of obvious importance as spawning and nursery areas for salmon and as habitats for numerous sport fishes. Alaska's commercial fisheries are annually worth two billion dollars at first sale. However, the State does not retain the full value of these resources, most of which is realized outside Alaska's economy. Subsistence fisheries and marine mammal harvests are crucial to many communities. Tourism relies on attractions provided by Alaskan waters, particularly sport fishing and other recreational activities. Offshore oil and mineral development offer economic benefits but could result in environmental costs. The surrounding ocean influences the lives of Alaskans in many ways, such as providing transportation routes, moderating the climate of coastal areas, and occasionally threatening coastal communities, by tsunamis or storm surges. The School's commitment to high quality research, teaching and service positions it to forge new partnerships with users of marine and freshwater resources.

Oceanographic and fisheries issues transcend national and marine boundaries; they have broad implications which are shared by other Arctic and Pacific Rim nations. For example, the high latitude oceans are expected to be among the first regions to reflect climatic change. This makes the arctic and subarctic oceans, seas and fresh waters important natural laboratories for global change research. The distributions of important commercial and subsistence species range far outside U.S. waters and these fisheries are valuable resources for several Pacific nations. The School's faculty is qualified to promote and encourage scientific and economic interaction in a multinational effort.

[1]First Alaska Legislature, 1960
[2]1966 Sea Grant College and Program Act
[3]1976 Sea Grant Program Improvement Act
[4]Alaska State Legislature, 1981

MISSION

SFOS has the primary responsibility within the University for research, education, and public service in oceanography, marine biology, fisheries, seafood and fisheries technology, and limnology. Although our activities extend worldwide, the emphasis is on Alaskan waters and the Arctic. Through research, we seek to better understand physical, chemical, and geological processes in marine and freshwater environments; the interactions among environmental factors and organisms which control the productivity of aquatic ecosystems; the impact of natural environmental variability and anthropogenic environmental change on aquatic organisms, systems and resources; and the resource management and utilization methods which will lead to enhanced economic returns consistent with conservation of resources, habitats, and environments. Through education we disseminate the knowledge gained through research, and through student participation in research we enhance their ability to apply knowledge to problem-solving and to expand upon what they have been taught. Through public education and service we inform the community about important marine and fisheries issues, develop utilization technologies and strategies needed by those who use marine resources, and assist them in applying these technologies and strategies. The School's goal is to maintain and develop the broad expertise among its faculty and students needed to contribute to the wise use of Alaska's natural resources.

FUTURE DIRECTION

To accomplish our Mission, SFOS must encourage faculty and students to pursue a range of research and educational activities. Changing needs of the University, State, and Nation can best be met by maintaining the breadth of expertise to respond to opportunities as they arise. In 1991 SFOS faculty identified important issues which they expect to provide a focus for many researchers, educators, and students in the coming decade.

With its broad mandate in fisheries and ocean science, the School is uniquely poised to address important practical issues such as:

- Basic understanding of the biology of commercial and other key marine species of Alaskan waters, including their biochemistry, genetics, nutrition, physiology, behavior and interactions with other species, and
- Understanding of marine mammal population dynamics and the relationships to food supply, including predator-prey relationships among fish and mammals, and interactions of mammals with fisheries

The School's ability to tackle these problems stems in large measure from its great strength in addressing the fundamentals of such an understanding through research focused on:

- The adaptations of organisms and biological communities to high-latitude marine environments, particularly effects of sea ice and extreme seasonal variability.

This knowledge, when developed in the context of the intellectual breadth characterized by SFOS, will be especially suited for application to natural resource issues such as

- Development of ecosystem-based fisheries management and forecasting,
- Identification of culturable species and development of aquaculture methods suited to Alaskan waters, and
- Assessment of the impact of ocean ranching and mariculture on wild stocks of salmonids, which will enhance potential for
- Increasing Alaska's economic base through full utilization of fishery and marine mineral resources, including quality improvement and value-added processing of seafood.

To be most effective, all of the above studies must be conducted with full cognizance of local changes likely to occur, such as

- The impact of development and resource utilization on northern marine environments, which must include baseline information on undeveloped areas.

Furthermore, in order to be most valuable, this new understanding must also take into consideration

- The impact of natural and anthropogenic global environmental change on the arctic and subarctic climate, ecosystems, and fisheries.

The above serial listing of these issues does not imply priority. Rather it demonstrates the interlinkages among them and it stands as testimony to the fact that, because of the School's broad and strong interdisciplinary nature, Alaskan scientists will be able to effectively pursue an important and timely mission at the interface between fishery and ocean sciences.

The faculty envision that in the future, as now, SFOS will educate students in the fundamental principles of fisheries and ocean sciences and teach the application of these principles to problems in resource management and utilization. Education programs must evolve with new discoveries in these rapidly developing fields and with changing needs for fisheries and marine science professionals. SFOS must also maintain and expand research and education programs outside the university, with increased emphasis on providing technical assistance and information and developing joint research projects which serve the needs of the users of Alaska's marine resources. Investment in SFOS research, teaching, and public service coupled to our commitment to excellent performance will yield increasing benefits to the State from its marine and freshwater resources.

INSTRUCTION

Although the School's broad responsibilities related to teaching, research, and public service are intertwined in the pursuit of its mission, individual goals in each of these, plus administrative and facility needs, provide a blueprint by which to assess progress in this pursuit. The following section details these goals, their objectives, and suitable strategies for attaining them as envisioned for the next several years. Specific year-to-year priorities for implementation will be developed and presented annually as separate documents.

GOAL 1

TEACH THE FUNDAMENTAL PRINCIPLES OF FISHERIES AND OCEAN SCIENCES

Rationale: Academic strength in the sciences is grounded in a clear understanding of fundamental principles. Students pursuing careers in fisheries and the ocean sciences are challenged by the complex interdisciplinary character of these fields. Students must acquire competence in basic conceptual and independent thinking and problem-solving skills.

The objectives of SFOS graduate programs parallel those of the University of Alaska Fairbanks. Specifically, they are to provide graduate students with deeper insights and a better working understanding of basic principles in their fields and to perform scholarly or research activity in the acquisition of new knowledge and the application and transmission of knowledge.

Formal degree programs leading to a B.S., M.S. and Ph.D. in Fisheries, an M.S. and Ph.D. in Oceanography and an M.S. in Marine Biology are preparing SFOS students for careers in academia, industry and state and federal agencies. Historically, a large percentage of these students have accepted employment in Alaska, where some now occupy important decision-making positions. New and important questions concerning resource enhancement, allocation, utilization and management are driving the need for Alaskan graduates with strong backgrounds in fisheries and the marine sciences.

Objectives: **Improve the facilities and equipment available for instructional activities in the marine and fisheries sciences.**

Emphasize quality instruction based on contemporary understanding of fundamental principles and their application to marine resource utilization, enhancement and management.

Offer appropriate fields of study in tune with scientific objectives, the expertise of the faculty and state and national needs.

Maximize interdisciplinary instructional opportunities so that graduates are not only experts in their specialty, but also have an appreciation for the broader aspects of oceanography, marine biology and fisheries sciences.

Seek and attract the best graduates and undergraduates from among students residing in Alaska, in the nation and internationally for continuing career development.

Strategy: *Continually upgrade teaching equipment and facilities. Where appropriate, utilize existing research equipment/ laboratories in the formal teaching program. Make more use of seaside laboratories, field stations and vessels in teaching programs.*

Undertake frequent course/curriculum revisions consistent with the entry of "new knowledge" into core and advanced subjects. Attract faculty who profess a strong desire to participate in formal teaching and to advise and work with students.

Increase recognition in SFOS for quality classroom instruction and for advising and other graduate student training activities.

Review the need for offering the B.S. in Fisheries. Strengthen the curriculum in food science and nutrition and establish a Ph.D. degree for Limnology and for Marine Biology.

Provide opportunities for short-term exchange of faculty and students between the disciplines for seminars, short courses, workshops, guest lectures and, occasionally, full semester courses.

Develop more effective recruiting practices, including institutional and individual faculty efforts to increase the awareness of SFOS degree programs statewide, nationally and internationally.

Encourage Alaska Native students to pursue degrees in marine sciences and fisheries through faculty/student mentoring programs.

Increase funding for graduate students and undergraduate internships as part of a more active recruiting program.

Increase support for post-doctoral scholars as a means of increasing the exposure of students and faculty to new information, ideas and perspectives.

GOAL 2

TEACH THE APPLICATION OF FUNDAMENTAL KNOWLEDGE TO PROBLEM SOLVING IN MARINE RESOURCE MANAGEMENT AND UTILIZATION

Rationale: SFOS provides a statewide forum linking the University of Alaska with the region's large and diverse marine resources communities. Within this context, the school interfaces with industry, the private fishing sector, resource agencies (both federal and state) and the general public. This interface serves as a vital conduit for information exchange. To operate effectively, the School must be aware of current needs and possess the ability to respond at many levels. Formal programs in marine advisory and information and technology transfer establish a basis for important educational activities. The interdisciplinary structure of SFOS provides opportunities for all faculty, students and staff to assist with programs applying fundamental knowledge to current needs.

Objectives

Increase information exchange between faculty and students in the units comprising SFOS.

Create and advertise informal educational opportunities to meet public needs outside the general campus setting.

Recognize the importance of information and technology transfer as a vital function of SFOS.

Strategy:

Encourage more exchange between faculty and staff in the Marine Advisory and Sea Grant Programs with those in the formal disciplines of the school. Use computer "bulletin boards" and other modern communication means to provide current information on major resources issues.

Structure short courses, workshops, seminars and public discussions around needs arising from communities and constituencies that cannot be accommodated in the formal campus setting. Demonstrate that problem solving is a natural outgrowth of fundamental knowledge.

Stress the importance of informal teaching and public service in all units of SFOS and acknowledge this activity as a faculty priority.

RESEARCH

GOAL 1

ENHANCE FUNDAMENTAL UNDERSTANDING OF MARINE AND FRESHWATER SYSTEMS

Rationale: To conduct research directed at solving specific marine science and fisheries problems, scientists must first develop a thorough understanding of the basic principles and processes which govern aquatic systems. Student participation in research is the best way to demonstrate the fundamental principles of their discipline and to develop problem-solving skills.

Objectives:

Better understand the oceanographic environment, its natural variability, and the relationships between this variability and local and global atmospheric and climatic changes.

Improve understanding of rare and extreme marine events, including severe storms, storm surges, and tsunamis.

Increase knowledge of the biology of northern aquatic organisms, including their biochemistry, genetics, nutrition, physiology, behavior, productivity, and predator-prey interactions.

Improve understanding of the adaptations of arctic and subarctic organisms to their extreme environment.

Understand the relationships between environment and ecosystem structure, function, and variability.

Strategy:

Increase participation in planning, development, and execution of national research programs which incorporate these objectives.

Facilitate planning, development, and execution of multidisciplinary research programs involving SFOS faculty and researchers at other institutions.

Fund and recruit new faculty in fields which can contribute to achieving these objectives. These should include outstanding scientists in physical, chemical, biological, and geological oceanography and marine biology who are interested in conducting research at high northern latitudes.

Increase financial support for and recruitment of graduate student research assistants.

Improve and expand research facilities. Particularly important are the acquisition of state-of-the-art research instrumentation, and renovation or construction of laboratories which meet current research needs as well as modern safety and health standards.

Acquire a mid-size coastal research vessel to support oceanographic studies in the Gulf of Alaska and the Bering Sea.

Expand international cooperation in research with Pacific Rim and Arctic nations in order to expand the geographic coverage and to conduct comprehensive studies of systems which extend across political boundaries.

GOAL 2

INCREASE UNDERSTANDING OF THE ECOSYSTEMS WHICH SUPPORT COMMERCIAL, SUBSISTENCE, AND RECREATIONAL SPECIES

Rationale: Commercial, subsistence, and recreational species have evolved as components of complex ecosystems, and their productivity and response to exploitation is inextricably tied to the structure and function of those ecosystems. Recognizing that many of the seas surrounding Alaska support a wealth of renewable resources, and that particular importance can be assigned to the Gulf of Alaska and the Bering Sea, SFOS marine studies must include these areas.

Objectives:

Develop an ecosystem-based understanding of the natural variability of fisheries, especially the relationships between recruitment, yield, growth and survival, quality attributes, and physical, chemical, and biological oceanographic parameters and processes.

Use basic understanding of the biology of commercial and subsistence species and the ecosystems of which they are components, along with data on fisheries resource utilization, to assess and predict the impact of fisheries on ecosystems.

Increase understanding of the interactions of hatchery and wild stocks of salmonids.

Understand marine mammal population dynamics and relationships to food supply among fish and mammals, and interactions of mammals with fisheries.

Develop predictive tools for determining harvest levels and management strategies in the context of ecosystem structure and function.

Strategy: *Many of the basic strategies listed under Goal 1, including improvement of research facilities, increased student research assistant support, and expanded international cooperation, also apply to Goal 2.*

Promote interdisciplinary research on ecosystems supporting commercial, subsistence, and recreational fisheries and/or marine mammals. Seek more funding from state and federal fisheries programs and from industry.

Fund and recruit new faculty in the fields of fisheries and fisheries oceanography.

Increase cooperation with subsistence users of marine and freshwater species to identify key problems and secure their assistance with research directed at these problems.

GOAL 3

UNDERSTAND THE OCEANIC ENVIRONMENT AND PROCESSES IN THE WESTERN ARCTIC

Rationale: The Arctic Ocean Basin and adjacent seas are the least known of the world's oceans. Yet, it is clear that knowledge of this region is essential for the understanding of processes affecting the climate and other environmental aspects of the Northern Hemisphere. The environmental impact of arctic processes could have a significant effect on the global economy. The importance of this region was recognized by the U.S. Arctic Research Commission, which has assigned it the highest priority in research planning.

Objectives: **Observe and develop an understanding of the response of the Arctic Ocean to human-caused environmental change, including that due to increasing carbon dioxide and methane in the atmosphere, decreasing ozone, and pollution-derived "Arctic Haze."**

Understand the effects of seasonal and interannual variations in sea ice on global heat exchange and on biological productivity of the Arctic.

Increase knowledge of arctic marine ecology and its response to disturbance, including fisheries and subsistence activities.

Investigate sea bed geology to address questions related to the evolutionary history of the Arctic Basin, its climatic history, and the impact of human activities.

Strategy: *Many of the basic strategies listed under Goal 1, including increased participation in national programs, enhancement of multidisciplinary research programs, improvement of research facilities, increased student research assistant support, and expanded international cooperation, also apply to Goal 3.*

Develop new Arctic-oriented research programs and recruit faculty in fields including arctic physical oceanography, arctic geology, and arctic ecology.

Participate in the design and promote the construction of an ice-capable research vessel for the western Arctic.

GOAL 4

UNDERSTAND AND PREDICT THE IMPACT OF HUMAN ACTIVITIES ON THE NORTHERN AQUATIC ENVIRONMENT

Rationale: Human activities are affecting marine and freshwater environments, but the present extent and future impact of these effects are poorly understood. In particular, many scientists believe that high latitudes will be the first regions affected by anthropogenic carbon dioxide-caused global warming and will ultimately experience the largest climate change. On a smaller scale, we must understand the potential and actual effects of offshore oil and mineral development in order to mitigate their environmental impact.

Objectives: **Investigate the sources and fate of climatically active gases such as carbon dioxide, sulfur dioxide, and nitrogen dioxide in high-latitude oceans.**

Improve damage assessment and rehabilitation capabilities for oil spills and other human insults to cold or ice-covered seas.

Use an understanding of natural environmental variability and its causes to identify, quantify, and predict changes caused by human activities.

Use knowledge of the effects of natural environmental variability on ecosystems to understand and predict the effects of anthropogenic environmental change.

Strategy: *Many of the basic strategies listed under Goal 1, including increased participation in national programs, enhancement of multidisciplinary research programs, improvement of research facilities, increased student research assistant support, and expanded international cooperation, also apply to Goal 4.*

Fund and recruit outstanding new faculty in fields which can contribute to achieving these objectives, including ecosystem modeling, chemical oceanography, and ocean-atmosphere interactions.

Increase cooperation with offshore oil and mineral industries, and seek their financial and logistical support for environmental impact and remediation research.

GOAL 5

DEVELOP STRATEGIES AND TECHNOLOGIES FOR INCREASING THE ECONOMIC BENEFITS OF FISHERIES AND OTHER MARINE RESOURCES

Rationale: Increased competition in the world marketplace has eroded the value of some of Alaska's marine resources. Also, much of the value of Alaska's resources is realized outside the state.

Objectives: **Contribute to the wise management of hatcheries, and to the optimization of mixed-stock salmon production.**

Develop techniques to increase fishery selectivity, and to maximize seafood quality and shelf life after capture.

Evaluate the potential for shellfish, sea vegetable, and finfish mariculture and assist in the development of appropriate technologies.

Assist in developing new seafood products.

Strategy: *Many of the basic strategies listed under Goal 1, including enhancement of multidisciplinary research programs, improvement of research facilities, and increased student research assistant support, also apply to Goal 5.*

Recruit and fund new faculty with interests related to improved economic yield from marine resources, including the fields of aquaculture, food science and nutrition, and fisheries technology.

Expand interaction and cooperation with the salmon hatchery, harvesting, and processing industries. Identify important needs of user groups and increase financial support to SFOS for user-oriented research.

Increase information to state government on enhanced economic benefits through research, and seek state investment in this research.

PUBLIC SERVICE

GOAL 1

PROVIDE TECHNICAL ASSISTANCE AND INFORMATION TO USERS OF THE FISHERY AND AQUATIC RESOURCES OF ALASKA

Rationale: Managers and users of Alaska's fishery and marine resources often need technical assistance and reliable information to make informed decisions about their tasks, whether they are tasked to conserve those resources or capture and expand their value. SFOS is a significant information resource for industry, coastal residents and government as they look toward their future.

Objectives: **Maintain a network of advisory faculty to provide information to local industry and the public, and establish a community-based advisory process.**

Participate in a national network of extension personnel, to constantly improve the School's extension capability and to provide better and more effective delivery strategies.

Strategy: *Review personnel needs both in numbers and technical specialty Produce a biannual document outlining anticipated technical assistance and personnel needs.*

Develop publications and other instructional and informational media to educate and update industry and the public.

GOAL 2

IDENTIFY AND NURTURE RESEARCH AND EDUCATION OPPORTUNITIES FOCUSED ON THE NEEDS OF ALASKA'S MARITIME COMMUNITY

Rationale: Alaska's marine resources are critical to the State's economic future and to the lifestyles of its residents. SFOS can play a significant role in the wise use and conservation of these resources by conducting research and educational activities that address the long-term multiple use of the marine and coastal environment.

Objectives: **Nurture within the School research focused on the wise development and conservation of Alaska's coastal and marine resources.**

Identify important constituent needs.

Stimulate joint projects between the university, government and constituent groups which address important marine and coastal issues.

Strategy: *Involve faculty from various units of the School, facilitating interaction and collaboration in research and education on resource issues.*

Expand the faculty tenure and promotion process within the School and University to reward research and instruction that are focused on constituent needs.

Establish a formal constituent-based organization to identify issues that Alaska's maritime community considers important.

Periodically survey Marine Advisory Program constituents to identify and update important issues.

Establish and maintain a rapport with federal and state agencies regarding research on important marine and coastal issues.

Host an annual meeting between the governor's marine advisor, key agency personnel and constituent groups to exchange information on existing research programs and opportunities for future collaboration.

Take the lead in bringing government, university researchers and public together to deal with specific topics in marine development and conservation.

GOAL 3

PROVIDE SCIENTIFIC ADVICE AND EXPERTISE TO THE ACADEMIC, GOVERNMENTAL AND PUBLIC COMMUNITIES IN MATTERS PERTAINING TO FISHERIES AND AQUATIC SCIENCES

Rationale: SFOS is part of a publicly-funded university and therefore has an obligation to make its knowledge, expertise and facilities available.

Objectives: **Disseminate information gained through research to the general public.**

Inform government agencies about key scientific issues and present scientific knowledge concerning these issues, as well as the needs for future research.

Strategy: *Serve on local, regional, national and international panels and committees.*

Review proposals, papers, manuscripts, and other documents submitted to funding agencies, scientific journals, and other publishers.

Serve on university committees, task forces, and other governing and advisory bodies. Contribute to the maintenance of high academic standards for research and education both at UAF and at other universities.

Increase public information activities. These activities may include publication of articles in newspapers or magazines, participation in educational radio or television programs, preparation of both long-term and portable exhibits for schools, museums, and other appropriate locations, and delivery of public lectures.

Use the annual performance evaluation of faculty to document progress and set goals for information transfer.

ADMINISTRATIVE SUPPORT

Various administrative and support services are required for any organization to accomplish its objectives. Because the focus and efficiency of these functions affect the ability of the School of Fisheries and Ocean Sciences to fulfill its mission, a separate section on administrative support has been included in this plan.

GOAL 1

DEVELOP AN IMPROVED ADMINISTRATIVE AND SUPPORT STRUCTURE FOR SFOS

Rationale: The structure of the School defines the mechanisms and processes through which the faculty make the critical decisions affecting the future of the School. This structure includes the statement of its goals and objectives, the allocation of resources toward meeting those goals, and the identification and selection of new faculty. The School of Fisheries and Ocean Sciences was formed by units which each had a structure to assist them with these critical functions. However, with the formation of the new School by administrative fiat, and with the expansion of horizons and opportunities created by the combined faculty, the administrative structure and support functions may be more effectively addressed on a school-wide basis.

The success of the School of Fisheries and Ocean Sciences in accomplishing its mission and goals as described in this plan depends substantially on the structure through which the faculty will work. Issues of faculty interaction and collaboration, of budget development and allocation, and of fiscal responsibility are all tied to the structure of the School.

Objective: **Develop an organizational flow chart along programmatic lines that clearly defines lines of communication and responsibility.**

Strategy: *The chart will reflect responses derived from the Comprehensive Self-Study and Full-Scale Evaluation of SFOS by the Northwest Association of Schools and Colleges (December 13, 1990; P. O'Rourke).*

GOAL 2

DEVELOP A COMPREHENSIVE BUDGET PROCESS FOR SFOS

Rationale: The School of Fisheries and Ocean Sciences was formed by bringing together a variety of University of Alaska units from across the state. Most of these units had a budget process which played a critical role in their planning and development. The new School of Fisheries and Ocean Sciences has pooled the unit budgets and has a centralized fiscal office, but as yet no comprehensive budget process exists. It is impossible for units and individual faculty to plan their time and develop programs without better input into budget development. Part of the budget process should be a new mechanism whereby units and individuals can monitor and track their budgets throughout the fiscal year.

Objective: **Increase faculty participation in and understanding of the budget process.**

Strategy: *Provide formal mechanisms for faculty input to budget development at the unit and school level.*

Establish a budget monitoring procedure (feedback) at the unit level.

GOAL 3

EXPAND SOURCES OF FUNDING FOR SFOS

Rationale: Traditional sources of funding for research and instruction are often limited, or subject to changes of emphasis. To stabilize support for its programs, the School must seek additional funds.

Objectives: **Support travel to meetings with agencies and foundations.**

Establish a positive rapport with state legislators, Congress, and private industry.

Provide a mechanism for timely response to new research opportunities.

Provide a mechanism to accurately track research funding and research trends.

Conduct more effective public relations programs within the state, the university and the community.

Obtain new funding for the support of research assistants and Teaching Assistants.

Aggressively seek support for Research Experience for Undergraduates and for minority science incentive training programs.

Establish endowed chairs.

Strategy: *Budget funds relative to SFOS priorities.*

Budget funds to send representatives to meetings with agencies and foundations to develop research ideas and to solicit support.

Investigate more effective uses of telecommunications and teleconferencing.

Seek or allocate funding for faculty travel to other unit locations.

Expand development of SFOS computer programs to track research funding and research trends (e.g., Appendix 2).

Refine and expand statistical data and reports appropriate to the needs of the faculty (e.g., Appendix 2).

Develop and support an effective publications and public relations program to highlight the research and research products of SFOS.

Publish an SFOS internal newsletter, news releases, technical news notes and continue publication of the SFOS Bulletin.

Actively seek funding from government, private industry and alumni.

GOAL 4

ENHANCE FACULTY INTERACTION AND COLLABORATION

Rationale: Faculty interaction and multi-disciplinary projects are necessities if the School is to use human and physical resources most effectively. Such projects enhance the capability of the School to pursue research projects and support institutional funding.

Objective: **Improve communication among the SFOS faculty and staff.**

Set up workshops for developing research projects and responding quickly to RFPs.

Strategy: *Maintain annual faculty meetings, encourage presentation of seminars when visiting units of SFOS, and update electronic mail and FAX directories.*

Have principal investigators exchange information on current areas of research, upgrade communications through SFOS, and improve early announcements and deadlines of RFPs.

Develop research and teaching projects that involve staff from different units and locations within the School.

GOAL 5

DEVELOP A RATIONALE AND STRATEGY FOR IMPROVING THE PHYSICAL FACILITIES OF THE SCHOOL

Rationale: Facilities are soon to become a limiting factor for the development of the School of Fisheries and Ocean Sciences.

Objective: **Develop a rationale and objective for improving the physical facilities of the School**

Strategy: *Form a planning subcommittee to build on current facilities planning processes leading to the development of a space inventory, including location, use and priorities as it fits the objectives of the Long Range Plan.*

GOAL 6

REVIEW AND UPDATE THE LONG RANGE PLAN ANNUALLY

Rationale: There is a need to assess how well goals and objectives are met and to address new issues. In addition, this annual self-study will promote greater collegiality and a clearer understanding of overall programmatic and fiscal direction.

Objective: **Perform an annual review and revision of the Long Range Plan.**

Strategy: *Appoint a faculty writing committee composed of representatives of all units to coordinate the annual update of the Long Range Plan (LRP).*

Direct the LRP writing committee to inform the Advisory Council and others on the current status of the Long Range Plan.

APPENDIX 1

FACULTY DATA BASE CHART

SFOS FACULTY AREAS OF INTEREST[1]

Faculty	Affiliation	Type of Appointment[2]	Administration[3]	Biochemistry/ Molecular Biology	Biology	Chemistry	Ecology	Engineering	Extension	Fisheries	Food Science & Tech.	Geology	Math Statistics Modeling	Microbiology	Physics	Remote Sensing	Seafood Engineering	Sediment Geo-Chem	Limnology
Alexander, V.	IMS	F	AB		S		P												P
Babbitt, J.		A				S					P								
Barber, W.	SFOS	F	AA		P		P			P									
Brown, E.	IMS	J	AA AP AB		P	B	B	S											
Button, D.	IMS	F	AA		P	P	P						P						
Castellini, M.	IMS	F	AB		P	P	S			S			B						
Choudhury, G.	FITC	F				B		S			P		S				P		
Collie, J.	JCFOS	F	AB		S		P			P			P						
Cooney, T.	IMS	F	AB		P		P			P			S			S			
Coughenower, D.	MAP	F				S			P										
Crapo, C.	FITC	F				S		S	P	B	P		S						
Doyle, J.	MAP	E	AP AB				B		P	P	P		B						
Ebbesson, S.	IMS	F	AA	P	P					P									
Ekström,	IMS	A			P														
Eley, T.	MAP	J			S		P		P	P					B				
Elsner, R.	IMS	E	AB AP		P														
Eslinger, D.	IMS	F																	
Fagen, R.	JCFOS	F	AB		S		S			P			P						
Fay, F.	IMS	F	AB		P		P						S			B			
Feder, H.	IMS	E			P		S			B									
Finney, B.	IMS	F				S						P	S					P	P
French, J.	FITC	F	AP	P	B	S	B			S	S								
Garza, D.	MAP	F			P				P										
Gharrett, A.	JCFOS	F			P	P S B				P			S B						
Goering, J.	IMS	F	AB AA AP		P	P	P	B	B	S		B	S		B	B			
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	P	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Faculty	Affiliation	Type of Appointment[2]	Administration[3]	Biochemistry Molecular Biology	Biology	Chemistry	Ecology	Engineering	Extension	Fisheries	Food Science & Tech.	Geology	Math Statistics Modeling	Microbiology	Physics	Remote Sensing	Seafood Engineering	Sediment Geo-Chem	Limnology
Hameedi, J.	IMS	A	AA AP AB		P		P		B1 B2	S			S						
Henrichs, S.	IMS	F	AB			P	S						B	S				P	
Highsmith, R.	IMS	F	AA AB		P		P												
Himelbloom, B.	FITC	F			P						P								
Hopkins, D.	IMS	J	AA AP AB				B		B1 B2			P							
Ito, H.	IMS	A			P														
Johnson, M.	IMS	F	AB		S	B	S			P			P		P	P			
Johnson, T.	MAP	F							P	P									
Kelley, J.	IMS	F	AA AP AB		S	P	S	S	B			S	B		P	B			
Kennish, J.		J				P				S	S								
Kowalik, Z.	IMS	F													P				
Kramer, D.	MAP	F	AA AB						P										
Lee, J.	FITC	F	AA AB		S	S			B		P			P					
Mathisen, O.	JCFOS	F	AP AB		B		S			P									S
McRoy, P.	IMS	F	AA AP AB		P	S	P			S		B	B		B				
Musgrave, D.	IMS	F	AA AP AB		S	S	S			B			P		P				
Naidu, S.	IMS	F	AA AP AB		B	B	S					P						P	P
Niebauer, J.	IMS	F			S					S			P		P	P			
Nishiyama, T.	IMS	A			P					P									
Norcross, B.	IMS	F			S		S			P			B						
Paul, A.	IMS	F	AB		P	S	P			P					S				
Paust, B.	MAP	F	AP		P	B	P	S	P	P			S			P			
Pennington, H.	MAP	F							P	P									
Plumley, G.	IMS	F			P														
Quinn, T.	JCFOS	F	AB							P			P						
RaLonde, R.	MAP	F			P	S	P	B	P	P			S						
Roohurgh, W.	IMS	F	AA AP AB		S	P	P					S	B		B				

Faculty	Affiliation	Type of Appointment[2]	Administration[3]	Biochemistry/ Molecular Biology	Biology	Chemistry	Ecology	Engineering	Extension	Fisheries	Food Science & Tech.	Geology	Math Statistics Modeling	Microbiology	Physics	Remote Sensing	Seafood Engineering	Sediment Geo-Chem	Limnology
Reynolds, J.	FF	F	AA AB		P	S	P	B	S	P			P		S				
Royer, T.	IMS	F	AA AP AB										P		P	S			
Schall, D.	IMS	A																	
Schell, D.	IMS	F	AA AB		S	P	P					S							
Shaw, D.	IMS	F				P	S												
Shirley, T.	JCFOS	F	AB AP		P		P			P									
Smiley, S.	IMS	J	AB		P	P	B			S		B							
Smith, R.	IMS	J	AP		P					S									
Smoker, W.	JCFOS	F																	
Springer, A.	IMS	R			S		P			S						S			
Steiner, R.	MAP	F					S		P	P									
Stekoll, M.	JCFOS	J		S	P		S												
Testa, W.	IMS	R			P		P			B			S			S			
Tyler, A.	SFOS	F	AB AP		S		P			P									
Wakefield, W.	NURP	F	AA AB		P					P									
Wasson, D.		A				S					P								
Wiese, C.	MAP	F	AB				B		P	S									

[1]INTEREST AREA CODES:

- P Primary activity in which you are currently involved and have recognized understanding or expertise in the subject or field
- S Secondary activity in which you are less involved, but still have expertise.
- B Background or interest. You have worked in this area in the past, but are not currently active.

[2]TYPE OF APPOINTMENT CODES:

- F SFOS Faculty
- J Joint Appointment
- R Research Faculty
- A Affiliate
- E Emeritus (active)

[3]ADMINISTRATIVE ACTIVITIES CODES:

- AA Director of a major project (active).
- AP Director of a major project (former).

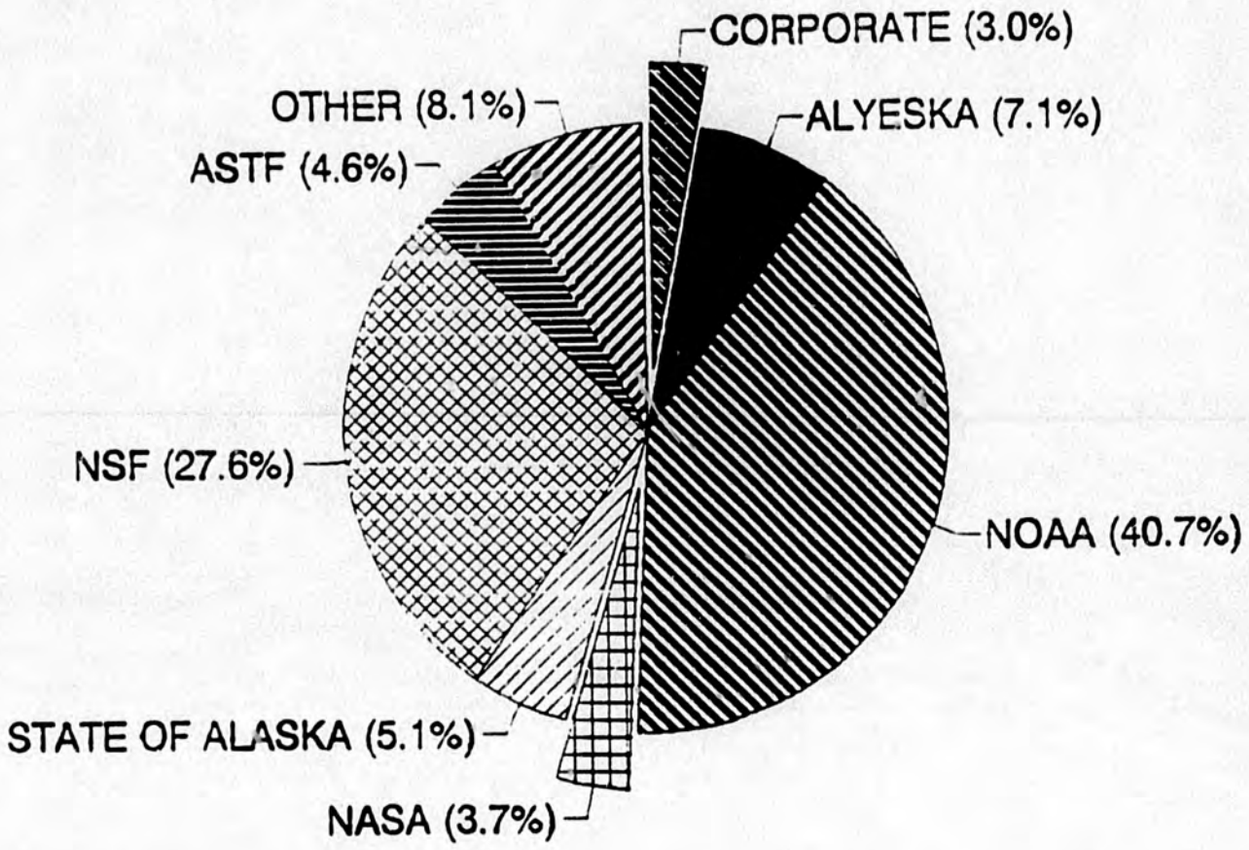
APPENDIX 2

FINANCIAL SUMMARY

(Source: FAS Cycle 13 and Final M223 Reports)

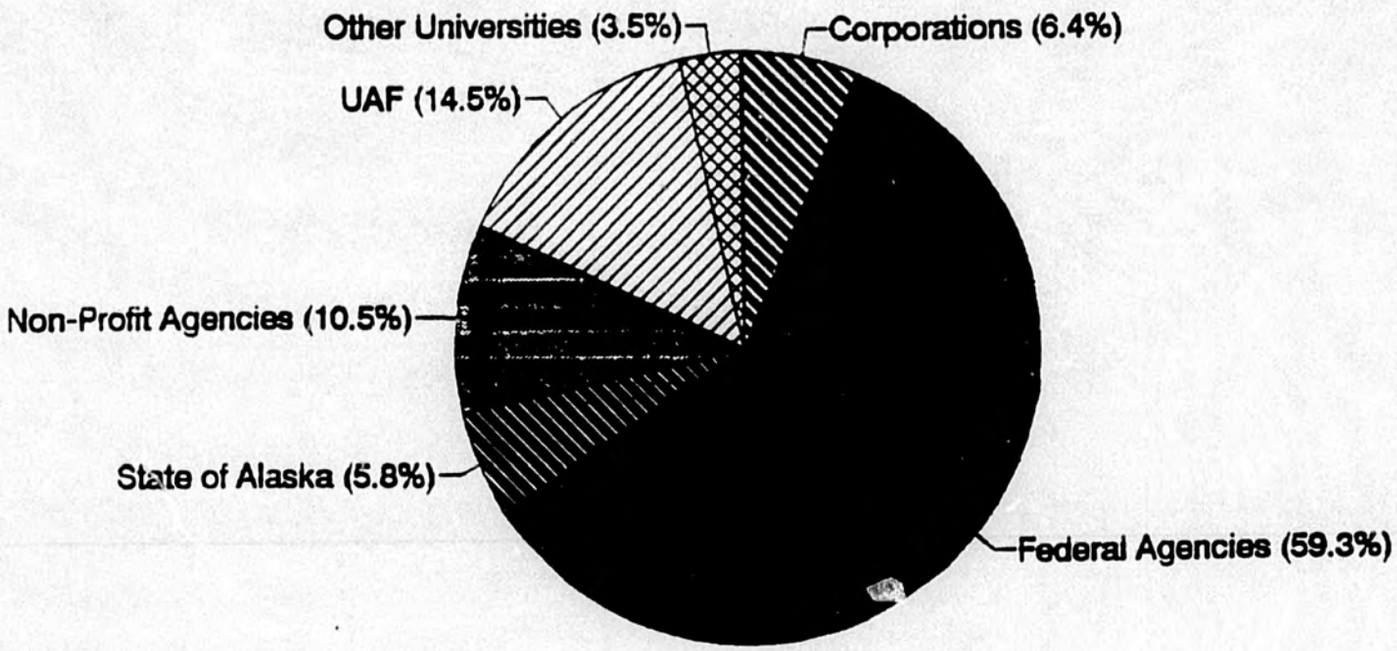
The following graphs indicate the distribution of requests for restricted funding and the distribution of restricted funding receipts from those agencies for fiscal years 90 and 91. Records for FY90 are incomplete. However, sufficient information was available to provide reliable estimates.

FY91 RESTRICTED FUNDING AWARDS



NOTE: These figures are based solely on awards received in direct response to proposals and revisions submitted in FY91. They do not include awards made by Alaska Department of Fish and Game, and the U.S. Forest Service to support research on the Exxon Valdez Oil Spill.

FY91 PROPOSAL SUBMISSIONS



SCHOOL OF FISHERIES AND OCEAN SCIENCES
EXPENDITURES

	INSTRUCTION	RESEARCH	PUBLIC SERVICE	ADMINISTRATIVE SUPPORT	TOTAL
FY91	$ 622,496	$ 19,653,690	$ 1,056,576	$ 858,030	$ 22,190,792
FY90	525,241	20,945,680	1,078,918	870,776	23,420,615
FY89	461,343	13,122,750	1,025,302	657,384	15,267,279

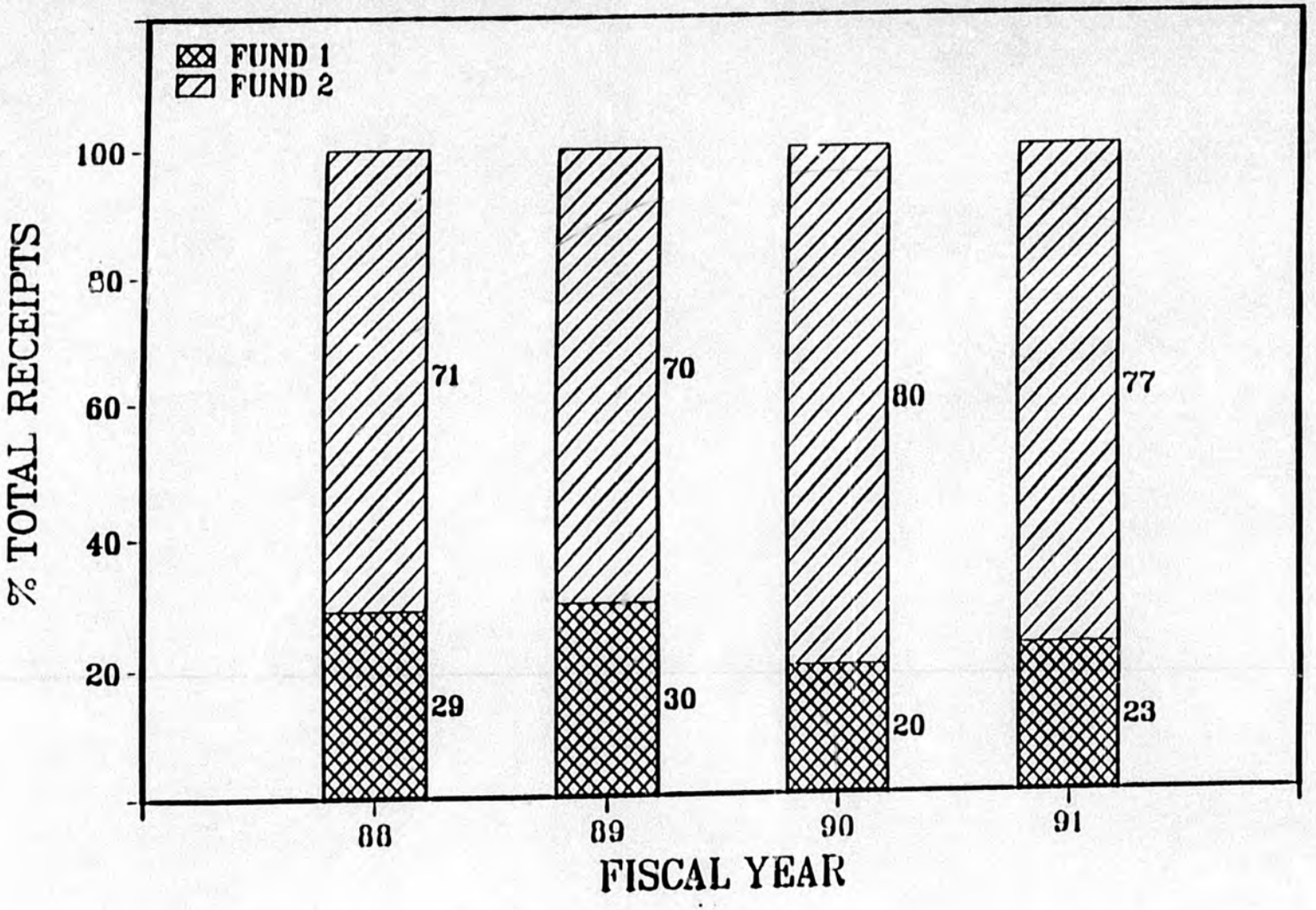
SCHOOL OF FISHERIES AND OCEAN SCIENCES
REVENUES

	FUND 1				FUND 2			
	STATE APPROPRIATION	OVERHEAD RECOVERY	RECHARGE CENTERS	OTHER	FEDERAL G&C	STATE G&C	OTHER	TOTAL
FY91	$ 5,076,567	$ 2,372,576	$ 407,327	$ 412,956	$ 12,317,648	$ 461,771	$ 1,141,947	$ 22,190,792
FY90	4,676,896	2,524,804	581,056	278,354	12,958,198	893,224	1,466,895	23,379,427
FY89	4,650,029	1,554,709	396,599	344,962	6,900,928	634,842	785,210	15,267,279

GRADUATE STUDENT ACTIVITY

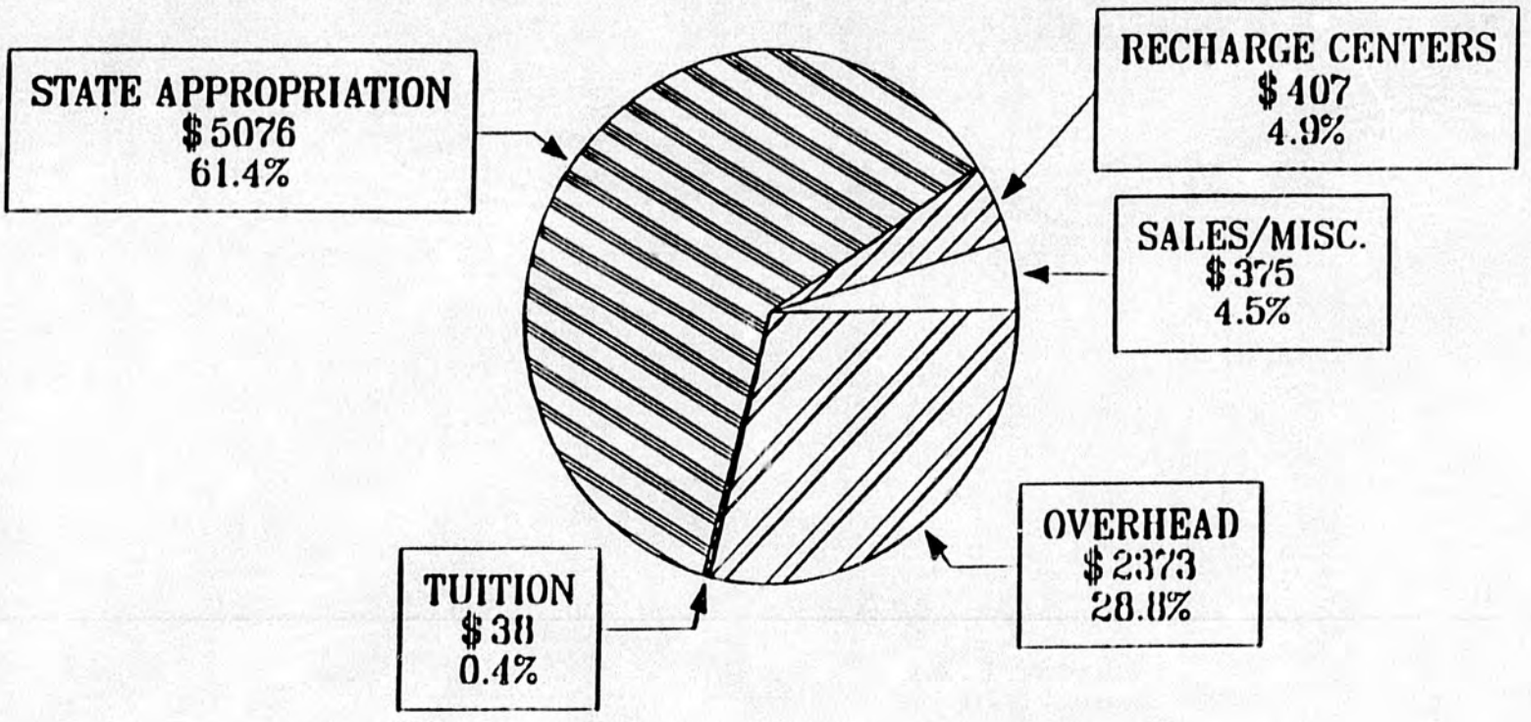
	PROGRAM	UNDERGRADUATE APPLIED	UNDERGRADUATE ACCEPTED	GRADUATE APPLIED	GRADUATE ACCEPTED	TOTAL APPLIED	TOTAL ACCEPTED	GRADUATE STUDENT SUPPORT
1991	FISHERIES	23	18	20	7	43	25	
	MARINE BIOLOGY	1	1	12	6	13	7	
	OCEANOGRAPHY	0	0	17	9	17	9	
	TOTAL	24	19	49	22	73	41	$ 453,678
1990	FISHERIES	9	7	9	4	18	11	
	MARINE BIOLOGY	0	0	14	5	14	5	
	OCEANOGRAPHY	2	2	18	6	20	8	
	TOTAL	11	9	41	15	52	24	$ 457,694
1989	FISHERIES	14	12	6	1	20	13	
	MARINE BIOLOGY	1	1	12	3	13	4	
	OCEANOGRAPHY	2	2	17	7	19	9	
	TOTAL	17	15	35	11	52	26	$ 385,816
1988	FISHERIES	7	6	17	9	24	15	
	MARINE BIOLOGY	1	0	15	8	16	8	
	OCEANOGRAPHY	0	0	13	4	13	4	
	TOTAL	8	6	45	21	53	27	
1987	FISHERIES	14	6	14	7	28	13	
	MARINE BIOLOGY	0	0	14	3	14	3	
	OCEANOGRAPHY	0	0	25	8	25	8	
	TOTAL	14	6	53	18	67	24	

SFOS STATE FUND 1
RELATIVE TO TOTAL (FUND 1 + FUND 2)



SOURCE: FAS FINAL REPORTS, M223

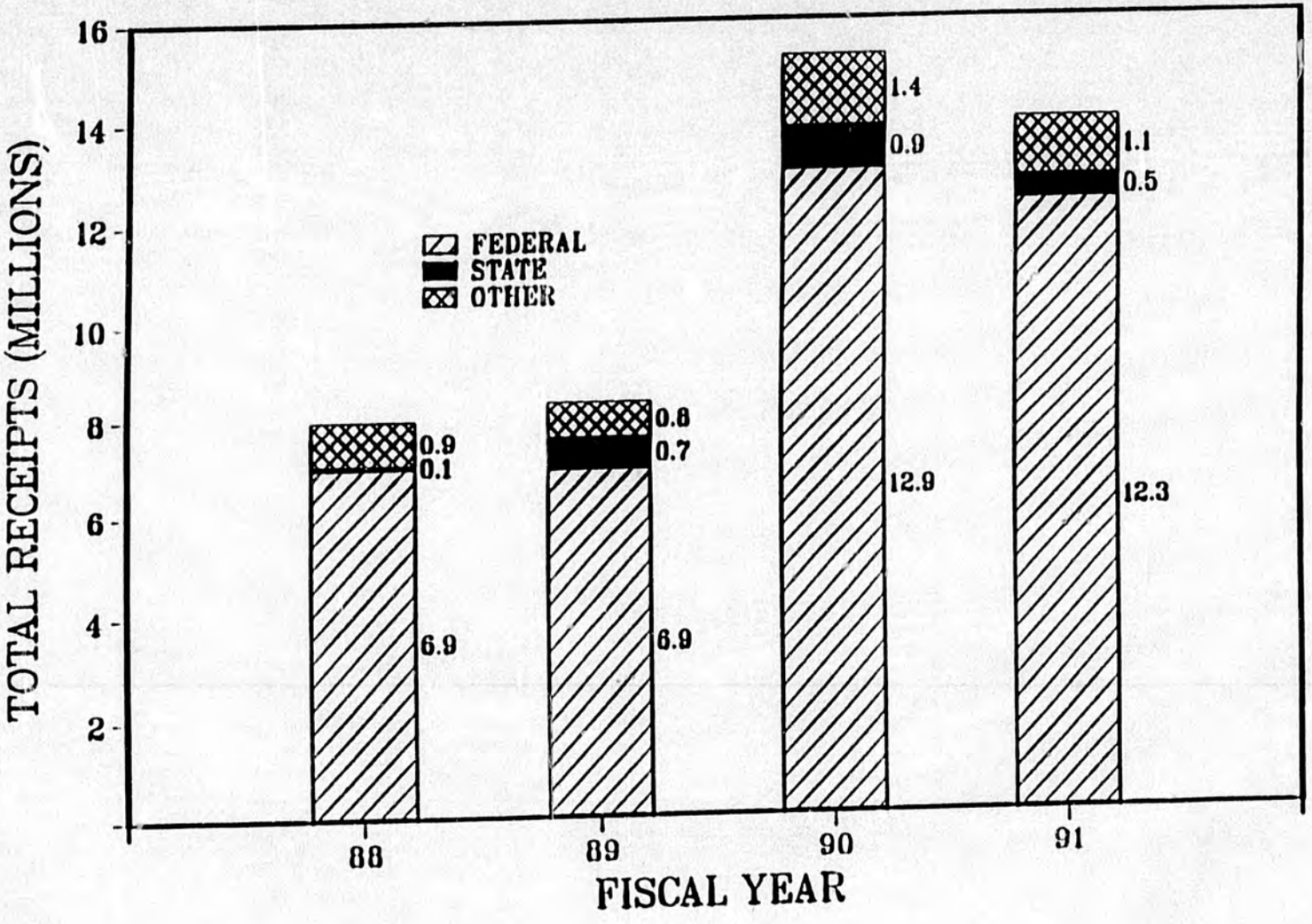
SFOS
FUND 1 REVENUE
(In Thousands of Dollars)



FY91 **TOTAL: $8269**

SOURCE: FAS CYCLE 13 M223 REPORTS

SFOS FUND 2 REVENUE



SOURCE: FAS FINAL REPORTS, M223

APPENDIX 3

SFOS LONG RANGE PLAN

DRAFTING COMMITTEE

Maggie Billington
Michael Castellini
Ted Cooney
Douglas Coughenower
Ronald Dearborn
John French
John Goering
Susan Henrichs
Brian Himelbloom
John Kelley, Chair
Ole Mathisen
Sathy Naidu
A. J. Paul
Brian Paust
James Reynolds
David Shaw
William Smoker
Craig S. Wiese