1970

Sea Alaska Board of Fish and Game and . . .

Alaska Dept. of Fish & Game

ANNUAL REPORT

WILLIAM A. EGAN
GOVERNOR

WALLACE H. NOERENBERG
COMMISSIONER

STATE OF ALASKA

WILLIAM A. EGAN, Governor

DEPARTMENT OF FISH & GAME

OFFICE OF THE COMMISSIONER · SUBPORT BUILDING
JUNEAU 99801

1970

The Honorable William A. Egan
Governor of Alaska
Juneau, Alaska

Dear Governor Egan:

This summary of activities for 1970 reflects the increasingly complex role which the Department of Fish and Game is playing in the management and conservation of Alaska's vital fish and wildlife resources.

The past year saw the establishment of a number of new management, research and protection programs which should be of long-lasting benefit to the resources and the people of Alaska. Other new programs will be added this year to meet the needs caused by the growing pressure on our resources.

I am confident that the Department's performance will continue to reflect the high level of dedication which our personnel have demonstrated to date.

Sincerely yours,

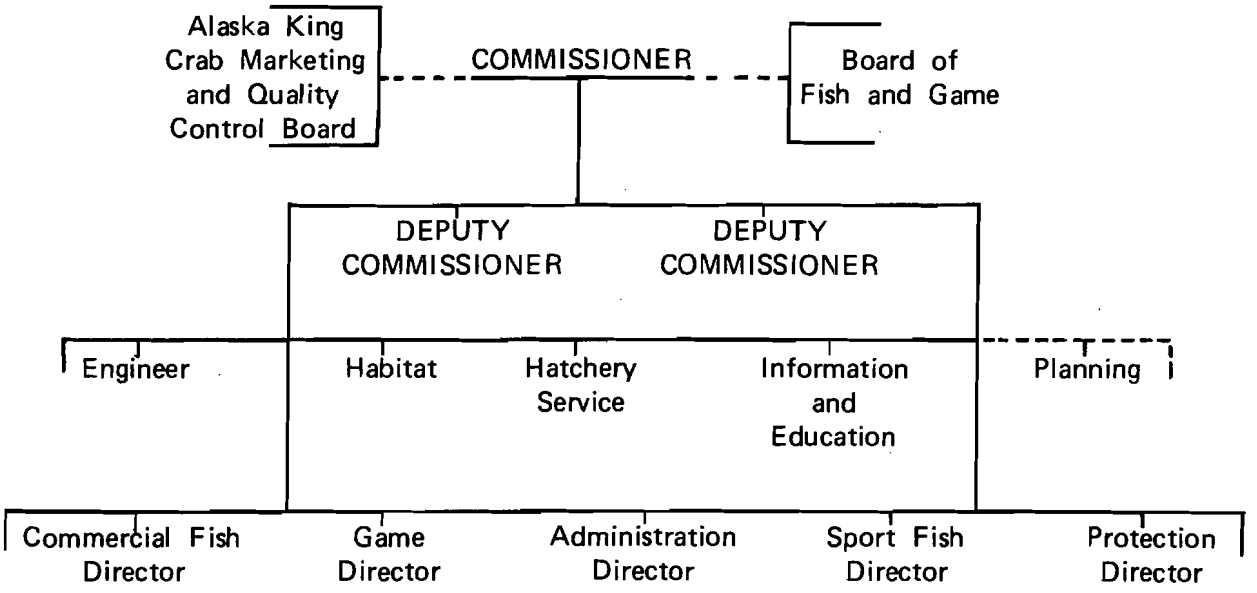
Wallace H. Noerenberg
Commissioner

OFFICE OF THE COMMISSIONER

I. PURPOSE AND DUTIES:

The Office of the Commissioner provides overall leadership and general supervision for the Department and is responsible for the successful execution of its various executive and legislative programs. The Fish and Game Code (Title 16 of the Alaska Statutes) assigns to the Commissioner the primary responsibility for managing, protecting, maintaining, improving and extending the fish and game resources of the state, and delegates to him the necessary power to accomplish the job.

II. ORGANIZATION:



III. ACCOMPLISHMENTS:

Major reorganization and enlargement of the Information and Education and Habitat Development functions were completed in 1970. The Hatchery Services Section was first established in 1970 and resulted directly from the approval of a $3 million hatchery construction bond issue in 1968.

Other accomplishments included significant improvements and additions to physical facilities. The Department staff occupied new offices, or activated new stations, at Juneau (regional office), Cold Bay (regional office), Ketchikan, Soldotna, Unalaska and Deadhorse. Projects which were approved and funded for 1971 included the new Fairbanks regional office and the Cordova area office. Budget approvals will also result in new stations at Adak, Sand Point, Chignik, Kotzebue, Fort Yukon and Bettles early in 1971.

In addition to his Fish and Game responsibilities, the Commissioner is an ex-officio member of eight other boards and agencies as designated by various state statutes. These include Secretary of the Board of Fish and Game, Commissioner of the Pacific Marine Fisheries Commission, member of the King Crab Marketing and Quality Control Board, member of the International Development Commission, member of the Air Pollution Control Commission, member of the Commission for Ocean Advancement Through Science and Technology (COAST) and member of the Pesticides Control Board.

The Commissioner also represents the Department and the state on numerous other inter-state and international groups and agencies.

When the Commissioner is absent from Juneau, the two Deputy Commissioners serve as Acting Commissioner on a rotating basis.

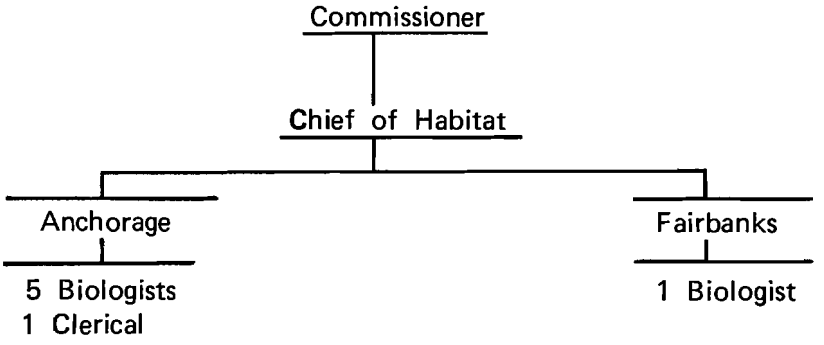
HABITAT SECTION

I. PURPOSE AND DUTIES:

It is this Section's function to coordinate the Department's involvement in environmental quality programs. It administers the Department's statutory authority over the protection of waters important to fish (16.05.870; 16.10.010; 16.05.020).

In addition, it coordinates the Department's program in land and water use planning. It also works with the Department of Health and Welfare in enforcement and updating of the state's water quality standards.

III. ORGANIZATION:



III. BUDGET:

Line Item:	Amount:
100	$140,000
200	25,000
300	20,000
400	6,000
500	1,500
900	9,600
TOTAL:	$202,100

Federal Receipts PR	$ 69,500
Federal Receipts DJ	$ 35,600
State Receipts	
Fish and Game Fund	
(Sport Fish)	$ 10,000
(Game)	$ 19,500
General Fund	$107,500

IV. ACCOMPLISHMENTS:

The consolidation of the access program of the Sport Fish Division, the lands program of the Game Division and the water rights program of the Commercial Fish Division into the Habitat Section within the Commissioner's Office commencing July 1, 1970, was requested by the Department and given tacit approval by the Governor's Office and legislature with their approval of the consolidated budget.

During the following six months the Section spent much time on organization problems.

Most of the effort was directed towards establishment of permitting procedures under 16.05.870 and 16.10.010 and in strengthening the land planning function.

Two major accomplishments have been establishment of "Department" approach to permitting, which heretofore has been divisional, and the completion of a land management agreement with the Department of Natural Resources and the Matanuska-Susitna Borough encompassing in excess of 210,000 acres on the west side of Cook Inlet.

HATCHERY SERVICES SECTION

I. PURPOSE AND DUTIES:

The Section has three basic goals:

1) Completion of the development of the new fish hatching and rearing facilities in accordance with the Fish Hatchery construction statute, SLA 1968, Chapter 227.

2) Entering the operational phase with the new facilities and integrating the new and existing fish hatchery facilities into a unified state-wide fish hatchery operation.

3) Fully utilizing the fish hatching and rearing capabilities to provide the Sport Fish and Commercial Fisheries Divisions with adequate fish for their expanding needs.

The final aspects will allow for the production of more than 160,000 pounds of salmon and trout when fully operational. It will provide the capability to stock fish in quantity in selected waters of the Southeast Highway and Ferry System and the Kodiak, Prince William Sound, Cook Inlet, Interior Highway areas.

It will allow the increasingly important fishery enhancement and rehabilitation projects of the Department to proceed with adequate stocks of salmon and trout eggs, fry, fingerling and smolt.

It is anticipated that the increased production capability will be used immediately to plant fish in accessible waters where the stocks are being endangered by continuing commercial fishing and rapidly increasing recreational fishing pressures.

II. ORGANIZATION:

The organization currently consists of the Chief of Hatchery Service, secretarial help and temporary assistance. Next fiscal year it is planned to transfer to Hatchery Services the personnel currently operating the Sport Fish and Commercial Fish hatcheries, along with the operation of the hatcheries. These include one biologist, three fish culturists, one fishery technician and temporary technicians.

III. BUDGET:

Line Item:		Amount:
100		$32,100
200		5,000
300		2,800
400		600
500		-
600		-
700		-
800		2,500
900		1,000
TOTAL:		$44,000
	General Fund	$44,000

IV. ACCOMPLISHMENTS:

Hatchery Services was activated in FY 1969-70. Engineering and fish culturist consultants were procured and supervised. During 1970 the evaluation of more than 30 fish hatchery sites was completed and two sites selected for immediate development - Crystal Lake Hatchery near Petersburg and the Ft. Richardson Fish Rearing Facility at Anchorage. The final planning and design for construction of these efficient, modern hatchery facilities has progressed on schedule after a slight delay in site selection.

Actual construction will start in February at the Ft. Richardson site and in April at the Crystal Lake site.

Improvement in critical aspects of the existing Ft. Richardson facility will be accomplished this winter and the completely expanded operation will be underway next fall. It involves the complete utilization of the newly modernized Fire Lake Hatchery as well.

The Crystal Lake Hatchery is scheduled to be operational by FY 72.

INFORMATION AND EDUCATION SECTION

I. PURPOSE AND DUTIES:

The Information and Education section is responsible for informing the public about the fish and wildlife resources of Alaska and the Department's research, management and protective activities.

This is accomplished through a variety of informational and educational programs which include news releases, films distributed throughout the state, a weekly television program, a magazine, pamphlets, exhibits, feature stories, photo displays and personal appearances. The Department's technical library is part of the Section and provides valuable research facilities to staff personnel. The Section answers more than 6,000 letters per year from persons seeking information about Alaska's fish and game.

II. ORGANIZATION:

The Information and Education Section is part of the Commissioner's office. The permanent staff consists of a Chief Information Officer, a Visual Education Specialist, a Librarian and a Clerk-Steno, all stationed in Juneau, and a Regional Information Officer stationed in Anchorage. Temporary help is hired in the graphic arts, photographic and clerical fields as needed.

III. BUDGET:

Line Item:	Amount:
100 Personal Services	$64,200
200 Travel	7,000
300 Contractual Services	19,400
400 Commodities	6,200
500 Equipment	700
900 Interagency	1,100
TOTAL:	$98,600

All funds from the General Fund

IV. ACCOMPLISHMENTS:

Primary accomplishments of 1970 included reorganization and strengthening of the Section and establishment of a Department magazine. The post of Chief Information Officer was established and filled and a Regional Information Officer was assigned to Anchorage. Filling these positions provided overall direction for the Section and boosted informational activities in the populous Anchorage area. The Department's newsletter was upgraded to magazine status and its circulation increased. This magazine has been well received by its readers and will continue to be a major outlet for news of Department activities and programs. Expanded news coverage of fish and game activities, production of new publications and completion of a new Department film, "Return of the Musk Oxen," were other accomplishments noted by the Section.

SPORT FISH DIVISION

I. PURPOSE AND DUTIES:

The Sport Fish Division is responsible for the management and research of the recreational fisheries resources within the state. The Division's basic objective is to promote and develop the recreational potential of the state's fishery resources concurrent with public demands and utilization and consistent with sound resource management practices and equitable distribution of the harvest. This purpose may best be exemplified by the following broad divisional goals:

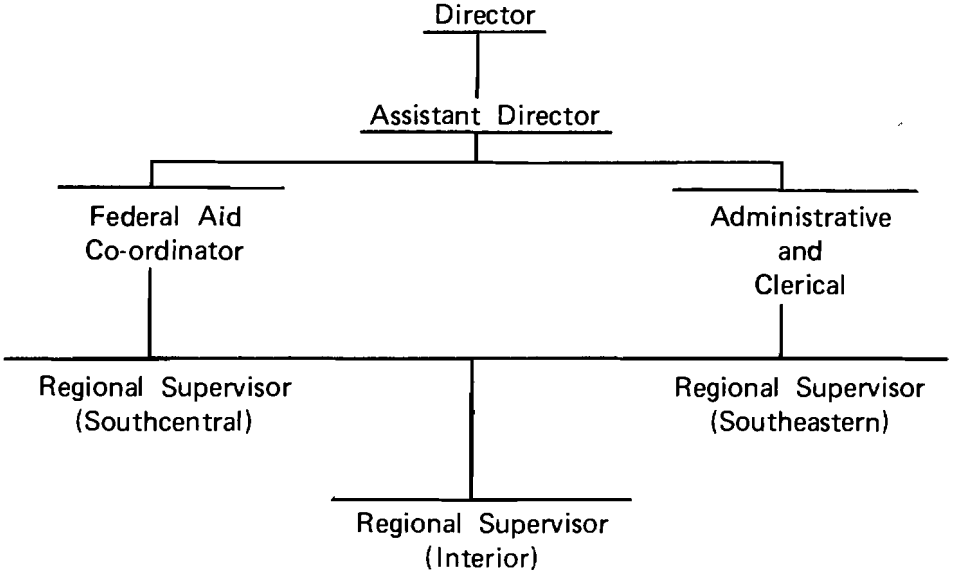
1) To develop and improve the fishery resources to provide maximal recreational benefits and economic values for Alaska consistent with sound resource management.

2) To acquire the necessary biological information on fish stocks, habitat, and other species requirements in order to provide the basis for applying and assessing the Department's management of the resource.

3) To develop and improve the artificial and semi-artificial propagation and habitat improvement practices in biologically suitable waters capable of providing a significant return to the recreational angler in areas which receive more pressure than natural stocks can support.

4) Through aggressive local programs, maintain an awareness of potential angling pressure trends and angler needs to assure continued free access to the state's sport fishing waters.

II. ORGANIZATION:



The Division consists of 40 permanent positions including 32 professionally trained fishery biologists, one administrative assistant, five clerical positions, one fishery technician, and one maintenance mechanic. Divisional personnel are located in 14 communities throughout the state.

Of the professional staff 31 per cent have completed some advanced education and 60 per cent of these received advanced degrees. In addition to the permanent staff, the Division hires temporary fish and game technicians for approximately 200 man-months each year. This assistance is required to help support existing programs during busy seasonal periods created by increased angler demands which, during the past ten years, have risen 79 per cent.

Of major importance is the rapid increase of recreational fishing as a tourist benefit. During the same ten-year period, nonresident license sales have had an individual increase of 155 per cent.

III. BUDGET:

Line Item:	Amount:
100	$ 700,000
200	87,200
300	137,800
400	70,800
500	23,625
600	-
700	-
800	12,675
900	-
TOTAL:	$1,032,100

Federal Aid Restoration Funds	$ 507,950
Special Fish and Game Fund	524,150
	$1,032,100

IV. ACCOMPLISHMENTS:

More than 150,000 persons fished in Alaska during 1970 and an increase is expected next year. The nation's population is expanding and with it, more people are seeking recreation in the form of fishing, especially wilderness fishing.

The continued growth of sport fishing in Alaska depends on its ability to produce a quality fishing experience. Alaska's recreational fishing will continue to expand as long as the sportsman feels his experience will be worth the dollars spent.

Capital Improvements - Three research field stations were completed during 1970. The Deshka River station, located approximately 40 air miles northwest of Anchorage, was constructed to accommodate personnel working on the continuing Susitna River drainage king salmon studies. A second station was established on Lower Russian River Lake (Kenai Peninsula) to assist biologists in their study of Russian River red salmon. The red salmon sport fishery in this river is one of the largest single fisheries in the state. The third research facility is located near the outlet of Bear Lake and the community of Seward. It was constructed for the study of silver salmon production in Bear Lake. As a result, an attempt is being made to increase salmon production by the control of competitive fish species during their freshwater life stage. A permanent weir has been constructed to prevent re-entry of undesirable fish species into the lake and to accommodate the passage of salmon.

The new, enlarged Fire Lake Hatchery was dedicated on June 27, 1970. The cost of updating this facility was $538,000. The hatchery has many advanced features and an annual rearing capacity of about 10 million fry and fingerling. The additional fish holding capacity of this station is expected to make important contributions to the angling public.

Plans, budget, and an initial work program for a steelhead-salmon rearing pond adjacent to the Buskin River have been prepared. The structure is scheduled for completion by August of 1971, and will immediately be stocked with 150,000 to 200,000 steelhead fry.

Lake Rehabilitation - The rehabilitation of Quartz Lake, a 1,500-acre lake located near Delta Junction, is the largest project of its kind in Alaska. A population of stunted northern pike and whitefish was removed for conversion of the lake to a rainbow trout fishery. Catchable sized trout should be available for the angler in Quartz Lake by 1972.

Lost Lake, a productive 90-acre lake approximately 60 miles from Fairbanks, was rehabilitated in order to restore its production of trout and salmon. The lake had become infested with rough fish.

Three lakes in the Matanuska Valley, totaling about 128 surface acres, were chemically treated for stocking of salmonid fish species. A small lake on the Kodiak Naval Base was chemically rehabilitated to investigate rainbow trout-grayling relationships. The information gained will assist in the planning of comprehensive lake stocking programs.

Management - The 12 Sport Fish field offices located in the various key recreational areas of the state had one of their busiest seasons. In Anchorage, angler requests for information necessitated the hire of additional clerical help from May through September.

The Arctic-Interior area field offices recognized an accelerated use of the sport fish resource, especially in the North Slope development area, along the highway system, major rivers and those waters accessible by snowmobile. Boat traffic in major rivers is increasing. It is estimated that more than 200 fishing float trips occurred on the Yukon River from Eagle to Circle this year.

A new field office was opened at Delta Junction to provide better field coverage and monitoring of the Interior fisheries and to provide the recreational-oriented public with area information.

New quarters were made available for regional staff personnel in Southeast Alaska by the establishment of a separate office. An area management position shift was made from Sitka to Juneau to facilitate better coordination with other agencies and administration of the area extending from Petersburg to Yakutat.

Economic Survey - A 40-day economic survey (July 20 - August 28, 1970) was conducted on the east-side tributaries of the Susitna River between Willow and Talkeetna. Approximately 21,500 man-days were expended in the area. Anglers spent a minimum of $135,000 as a direct result of their angling activities. Of this amount, approximately $102,000 was spent in the Anchorage area prior to departure.

Fisheries & Surveys - Cooperative management plans with Parks and Recreation have been worked out for the development of a fisheries in the Nancy Lake State Recreation Area.

Survey work conducted in the Upper Cook Inlet area revealed the largest king salmon spawning escapement in these streams since statehood.

The Copper River dip net subsistence fishery was censused for the first time. The study showed that 2,082 dip netters caught 18,557 red salmon and 253 king salmon. The average catch per fisherman was seven salmon.

The Resurrection Bay silver salmon fishery received 27,100 man-days of sport fishing effort. This is the largest effort recorded and represents a 350 per cent increase over that recorded in 1961. The silver salmon catch was 14,850 fish, which is slightly below average for this effort.

In the Wood River Lake system of Bristol Bay, information on the distribution of sport fish species has been collected to be used in making recommendations to the Department of Natural Resources, Division of Lands, in the event this area becomes a state park.

Steelhead spawning streams in the Situk River near Yakutat were surveyed and biologists concluded that it is one of the outstanding steelhead streams in North America. More than half of the fish sampled were found to be repeat spawners. Normally, this figure would be less than 10 per cent. The bolstering economic impact to the area has been welcomed by the local citizens. Most of the fishermen come from Anchorage. Nonresident fishermen also contribute a significant share of the anglers.

For the first time in 10 years, Ship Creek, flowing through downtown Anchorage, was open to king salmon fishing. Several thousand persons lined the banks of the creek during the first weekend of fishing. A total estimated king salmon escapement of 1,746 was obtained as a result of a continuing effort to build up the anadromous fish run in this creek by the release of pond-reared king salmon smolts.

During the Cook Inlet king salmon punch card fishery, in which 3,000 persons participated, some 630 successful anglers landed one or two king salmon over 20 inches in length.

Investigations - During this past season, an extensive limnological study of the Colville River system, the largest river on the North Slope, was undertaken as part of the North Slope fisheries study. Fish investigations of the drainage revealed resident fish populations of grayling, round whitefish, burbot, sucker and sculpin. Grayling were either the dominant fish or at least strongly represented in each river. Rearing anadromous char and whitefish were found in the smaller headwater streams.

A cooperative study with the U. S. Fish and Wildlife Service was initiated on the Arctic Wildlife Range waters. Work was confined to the river mouths and offshore islands along the entire Beaufort Sea coast from Demarcation Point to Canning River.

Monitoring of the sport fishing activity on the North Slope was conducted in conjunction with river and lake surveys. Hunting and fishing guides have camps on many of the lakes of the North Slope and at present, their clients and North Slope workers are the principal anglers. An estimated 500 lake trout were harvested from Itkillik Lake this past season. Expected additional use of the resource in this area will necessitate closely monitored surveillance.

An intensive study of the Chena River grayling was continued. The program design includes a basic life history of the species encompassing reproduction, growth, migrations and interspecies competition. The work is being conducted in some part on the Tanana River drainage, as well as the North Slope waters.

Studies on sheefish are continuing to obtain more effective information on how to manage this species in face of a growing fishery. In addition to the collection of life history information, attempts have been made to rear the fish in a pond environment. Both success and failure have resulted. Hatchery-reared sheefish planted in Four-Mile Lake near Tok two years ago continue to exhibit fine growth and now average 16 inches in length. An experimental yearling stock has been introduced into Engineer Hill Lake near Fairbanks.

Northern pike studies have been confined to the Minto Flats area near Fairbanks, one of the best pike-rearing areas in Alaska. The study is geared to gathering information on age, growth, food, spawning habits and physical and chemical limnology. Monitoring of the extensive angler usage is also a part of the program. An increased fisherman use will undoubtedly occur now that a road has been completed into the heart of the area.

Information on the proposed oil pipeline route between Valdez and Prudhoe Bay was collected on a continuing basis. The Sport Fish Division has sought not only to keep pace with the needs of the resource involved, but also to anticipate future impacts.

Research on the survival rates of various sizes of stocked rainbow trout fry was initiated. The objective of the study is to determine what fry sizes provide the highest survival commensurate with rearing costs.

Further information on distribution, migration patterns, life history and population parameters of Lake Iliamna rainbow trout has been collected and is being analyzed. The majority of the information has been obtained from Lower Talarik Creek where the Division is acquiring land for the establishment of a research station. A permanent weir will be constructed on this stream for further research of the Iliamna rainbow trout.

This past year marks the end of a nine-year study on the life history of Dolly Varden char, as the final work was completed in November. A series of scientific reports has established the project leader as an international authority on char. A final report summarizing the entire study is planned for the spring of 1972.

Four new studies are proposed for the coming year. A full-time biologist will be assigned to the project of collecting needed information on the North Slope fishery resource. A study of the effects of logging on important freshwater rearing fish species will be initiated. A biologist will be assigned to a king salmon life history study in Southeast Alaska. Additional information is required on Alaska's stocks for management purposes. A life history study on the sea-run cutthroat and steelhead trout will also be undertaken.

Programs undertaken by the Division generally add to the economy of the area where the work is conducted by program expenditure and direct benefits derived by anglers attracted to the area.

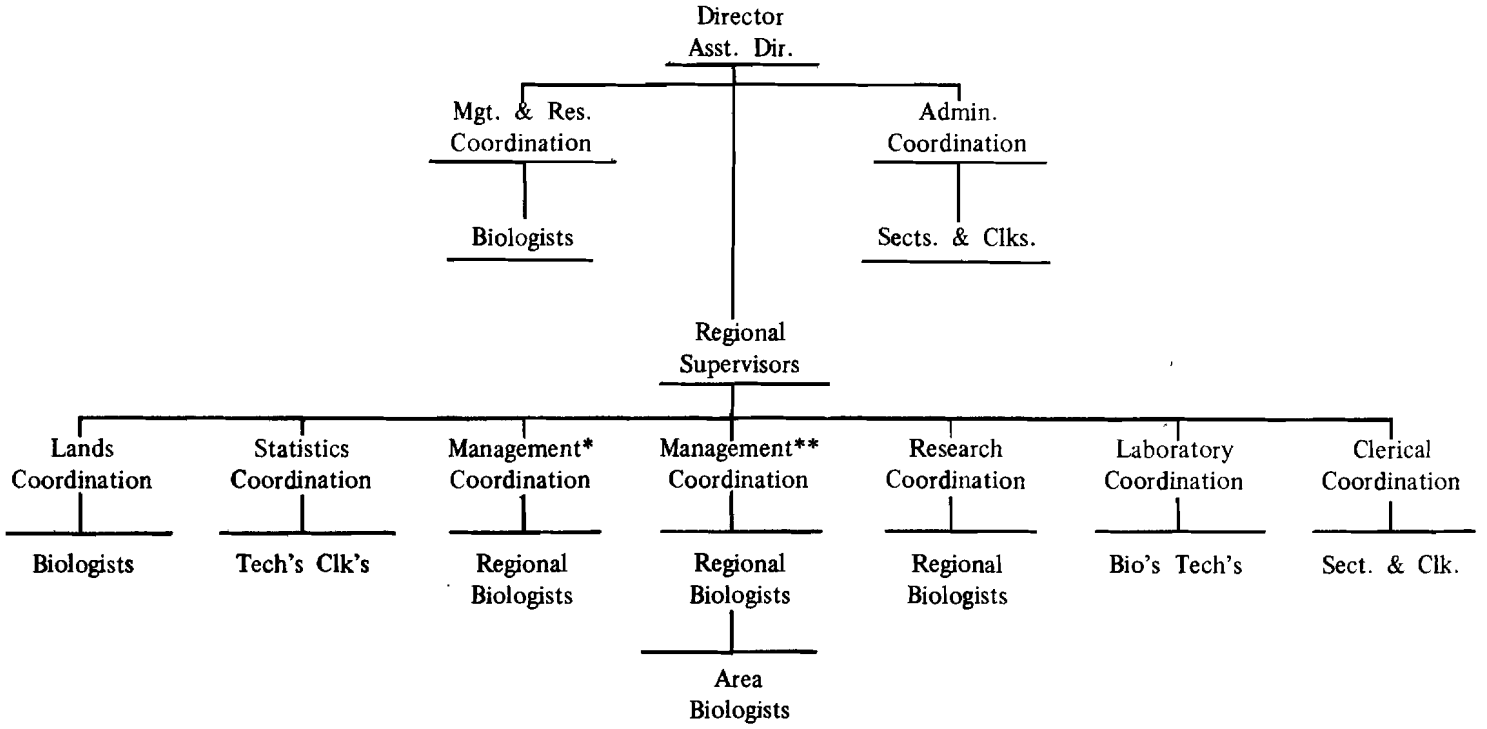
GAME DIVISION

I. PURPOSE AND DUTIES:

The Game Division, in accordance with the concept of sustained yield as specified in Section 4, Article VIII of the Constitution of the State of Alaska, has the responsibility of conducting a conservation program involving all species of land animals and marine mammals in the state. Basically, the goal of the Division's program is to provide maximum benefits to the citizens of Alaska through orderly utilization of the state's game resources.

Game Division operations, which are directed toward managing, maintaining, and improving game resources while knowledgeably directing the utilization of harvestable surpluses, are divided into three distinct categories: management, research and survey-inventory. Management activities include administration of guide examinations, enforcement of guide and hunting regulations, administration of controlled hunts, preparation of regulatory proposals and public relations work. Research activities, surveys and inventories of game populations and their habitat provide information necessary for the proper management of Alaska's game resources.

II. ORGANIZATION:



* Management Coordination - Marine Mammals
** Management Coordination - Land Mammals and Birds

The Game Division was restructured during 1969 with the primary goal of placing biologists in locations closer to the people and wildlife of Alaska. Supervision and administration, originally centered in the headquarters office, was decentralized into three regions to better support the field staff of Area Biologists. Regional Supervisors assisted by research and management staffs provide this support under the new organization.

The Game Division professional staff is comprised of highly-trained biologists, many of whom possess advanced degrees. In comparison with other states this staff probably has the highest average level of educational training in the country. Several of these biologists, because of experience gained in Alaska while it was a territory, have a history of experience with Alaskan species which predates Alaska as a state.

III. BUDGET:

Line Item:	Amount:
100	$1,262,800
200	141,100
300	396,400
400	82,400
500	37,200
800	95,000
900	149,900
TOTAL:	$2,164,800

Federal Receipts	$1,452,600
State Receipts	
Fish & Game Fund	712,200
TOTAL:	$2,164,800

IV. ACCOMPLISHMENTS:

1970 was a year of shakedown for the Game Division. The reorganization of 1969 produced an entirely new system which was unfamiliar to much of the staff and communication networks, chains of responsibility and authority, etc., needed to be learned and understood. By the end of 1970, the new organization was functioning smoothly and benefits of the new system were being felt.

During 1970 a Program Review Committee, comprised of supervisory and staff officials from each region and the Headquarters office, was developed to serve as a planning and review board for Divisional programs. This body will provide quality control for all programs, will serve to implement long-term planning throughout the Division, and will insure proper integration of statewide Division efforts.

Not all accomplishments within the Game Division were limited to personnel matters, however. During 1970 preliminary action on a new headquarters complex for Game, Sport Fish, and Protection Division personnel in Fairbanks was accomplished. Construction of this complex, which will be funded with Federal Aid, Fish and Game Fund and General Fund monies, is expected to begin in June, 1971.

Major accomplishments for the Game Division in 1970 included musk ox transplants from Nunivak Island to several areas of the Alaska mainland. In cooperation with the Bureau of Sport Fisheries and Wildlife, 36 of the animals were moved to a site near the Feather River on the Seward Peninsula, 36 were transplanted to Cape Thompson on the Northwest Coast, and 13 were moved to Kavik on the North Slope.

In another transplant operation the states of Oregon and Washington received 30 sea otters each from Alaska's Amchitka Island. British Columbia received its second sea otter transplant in two years. The animals were captured in Prince William Sound and transplanted in tanks aboard a government vessel.

During the spring and summer of 1970 Game Division personnel completed extensive surveys of North Slope wildlife species as a part of the Game program directed towards minimizing adverse environmental impact of oil development in this region.

A complete photo-census of the Arctic caribou herd was accomplished, a survey of Dall sheep populations along the proposed pipeline corridor was completed, and wolf, moose and wolverine censuses were made on much of the Brooks Range. In addition, the Division initiated an extensive research program directed towards ascertaining the requirements of wolf denning sites on the North Slope, and contributed greatly to a study of grizzly bear populations in this area.

Intensive studies of Alaskan polar bear populations were continued in 1970, and progress of this major research program was reported by a Game Division biologist at the International Convention for Research and/or Conservation of the Polar Bear at Morges, Switzerland. Results of Alaska's polar bear research program and international concern for this species led to the adoption by the Fish and Game Board of stringent regulations aimed at more restrictively controlling polar bear harvests in Alaska. This action is expected to result in a harvest in 1971 of somewhat less than 300 bears.

With the Moose Research Center on the Kenai Peninsula completed, 1970 was a very productive year for the Game Division's moose research staff. This facility, consisting mainly of four one-square-mile enclosures, is essentially the first of its type in North America. It is expected that the type of research being conducted on moose populations within the Center will yield answers to many of the questions presently facing moose managers in Alaska and the rest of North America.

Although antlerless moose harvests have become well established in some portions of the state, the Game Division staff expended much effort to insure the continuation of the hunts in the face of local opposition in other areas. Cropping of cow moose from populations greatly distorted in favor of female animals is a portion of the Division's management program which received much public information effort in 1970 and will continue to receive much attention in the future.

In 1970 the Delta bison herd invoked many problems for the Game Division staff. Expanded agricultural efforts at Delta resulted in numerous crop depredation complaints from local residents. Division personnel expended much effort attempting to minimize destruction to crops and establish bison management policies which will satisfy both bison and agricultural interests in this area.

Game Division biologists in 1970 made great strides towards creating formalized management policies on which statewide management of each species will be based. This form of resource planning, initiated recently by the State of California, will ultimately lead to long-term management plans for each species and each Game Management Unit in Alaska.

DIVISION OF COMMERCIAL FISHERIES

I. PURPOSE AND DUTIES:

The Division of Commercial Fisheries has the responsibility of managing all of Alaska's commercial fish species (except halibut) and of conducting research to provide the best information possible to obtain a maximum sustained yield from the fisheries resources.

II. ORGANIZATION:

This Division operates with a total of 123 permanent personnel. These positions are summarized as follows:

Director	1
Assistant Director	1
Staff Biologists	3
Regional Supervisors	4
Regional Research Supervisors	3
Management Biologists	34
Research Biologists	33
Biometricians	2
Fishery Technicians	9
Administrative Assistant	1
Publications Technician	1
Clerical	26
Secretary	1
Pilot	1
Maintenance Mechanic	1
Research Analyst	1
Statistical Technician	1
TOTAL:	123

III. BUDGET:

General Fund - Management	$1,939,200
General Fund - Research	979,500
Federal Aid Research PL 90-551	304,000
Federal Aid Research PL 89-304	388,000
Test Net Fisheries	50,000
TOTAL:	$3,660,700

MANAGEMENT SUMMARY:

Southeast Region - The reduced return of pink salmon in the southeastern region adversely affected the purse seine fisheries. However, record salmon catches were made in the gillnet fisheries at Portland Canal, Taku Inlet and Lynn Canal.

Red salmon catches by the set net fisheries in Yakutat continued an upward trend which began in 1965.

With slightly reduced effort, the dungeness crab catch in offshore waters of the Yakutat area continued at a high level in 1970.

Increasing interest in herring pushed utilization of this resource to the highest level in several years.

In the troll fisheries, king salmon production remained at approximately the five-year average but coho production was the lowest in many years.

Central Region - Significant features of the 1970 season in Central Alaska included a new record commercial harvest of salmon in the Arctic-Yukon-Kuskokwim area in excess of one million fish.

The Bristol Bay sockeye run, while not up to expectations of a record high, was still an exceptional run with a harvest of 21 million, the eighth largest catch in the 77-year history of the fishery. Good escapements were achieved throughout the area.

Cook Inlet experienced the lowest even-year salmon harvest on record. All species were weak except chum salmon. Shrimp production is well ahead of any previous year with a catch in excess of six million pounds by the end of 1970. King crab production was slightly ahead of 1969 by the end of this year.

The 1970 salmon season for Prince William Sound was very close to the 20-year average overall. Two particularly strong elements were the Copper River sockeye and king salmon runs. These runs produced the highest catches since 1952 and 1955 respectively.

Westward Region - In the Kodiak area, king crab production was down again, reflecting a weak recruit year class. Shrimp production increased to over 62 million pounds, a record for the area. 1970 was another good pink salmon year for the area, with 12 million being caught. Tanner crab production increased again in 1970 with a catch of 7.75 million pounds. Dungeness crab production was normal, and a razor clam fishery is starting up again with a take of 132,000 pounds for food and bait. The area also produced 1,417,612 pounds of scallop meat.

The Chignik area had the highest return of red salmon in recent history, with a total run of over 2.5 million.

The king crab production in the Unalaska area was excellent, and the Fish and Game Board increased the quota for the registration area by 2 million in December.

RESEARCH ACTIVITIES:

Southeastern Region

Pink and Chum Salmon Research - The 1970 return of approximately 16 million pink salmon to Southeastern Alaska fell below the pre-season forecast of 28 million. The major forecast error occurred in southern Southeastern where 9 million fewer pinks returned than were forecast. Errors in future forecasts are expected to decrease as additional data is accumulated.

Studies were continued to determine effects on salmon production of stream environment alteration resulting from timber harvest.

Red Salmon Research - Red salmon research consisted primarily of continuing enumeration and biological sampling of escapements to several systems and sampling of commercially harvested sockeye.

Coho Salmon Research - Coho research continued a second and final year of extensive commercial catch sampling. The catch has been predominantly four-year fish which have spent two winters in freshwater. Scale analyses suggest that nearly all coho taken in Southeastern Alaska are of local origin. Several studies were conducted on methods of determining habitat utilization based on minnow-trap index catches of rearing juveniles.

Herring Research - Herring research continued with primary emphasis on basic life history, resource inventory and investigation of methods for quantitative assessment of herring stocks.

Central Region

Salmon Forecasts - Salmon runs in 1970 in the Central Region fell considerably below the level of pre-season forecasts in all areas but Prince William Sound. The Bristol Bay sockeye run was forecast at 56 million fish, with a range from 41.5 to 74.6 million. The actual inshore return was 39.6 million sockeye. Apparently, the primary reason for this reduced level of run was the failure of the 1965 Kvichak River brood year to produce as expected. Forecasts of a return of 2 million pink salmon in the Southern and Outer Districts of Cook Inlet also fell considerably below expectations. Reasons for these errors are still being investigated.

The Prince William Sound pink and chum salmon run forecasts were well within the range of accepted accuracy, although below the point estimate of forecast.

Sonar Research - Significant progress was made toward the development of a sonar counter for sockeye salmon smolt in Bristol Bay. This counter, when completed, should enable accurate estimation of numbers of sockeye salmon smolt migrating down from the various lakes in the Bay, improve forecast accuracy and increase the precision with which we can delineate optimum escapement to various river systems.

Mesh Size Experiment - Work continued on the effects of mesh size in Bristol Bay in catch and escapement of sockeye salmon including analysis of a mesh experiment project in 1969 and collection of vital statistics on the large 1970 run. The results of this work favoring the retention of a minimal mesh size were presented to the Board of Fish and Game.

Stream Rehabilitation - In Prince William Sound, rehabilitation work on streams damaged by the March, 1964 earthquake continued. This year's activities centered around reworking some of the areas previously worked on and preparing for a major restocking effort to be undertaken in 1971.

Razor Clams - A major hurdle was passed in 1970 when the primary razor clam beaches in Alaska were cleared for intrastate commerce for fresh, frozen and canned clams and interstate commerce for canned products.

King Salmon - Sampling and counting of king salmon escapement over Whitehorse Dam on the Yukon River was initiated with the cooperation of the Canadians in 1970. This and possible further future expansion of research into Yukon Territory should provide much needed information on escapement quantity and composition.

Westward Region

King Crab Research - Alaska Peninsula - Aleutians - Biologists collected catch and effort information, obtained data on size composition, king crab growth and the feasibility of estimating king crab abundance on the rich fishing grounds of Atka Island.

King Crab Research - Kodiak - A king crab log book program was continued, as well as studies concerning the overall abundance of Kodiak area king crab stocks and the average catch per pot size. A mating study was conducted to determine if the sexual capabilities of the male king crabs vary with size and/or shell age.

Federal Aid King Crab Program - A report is being prepared summarizing the results of the data collected on king crab reproduction and abundance during cruises at selected locations on the south end of Kodiak Island.

Tanner and Dungeness Crab - Studies were conducted to determine the size at maturity for Alaskan tanner crab. A tagging experiment and log book program was initiated for growth, migration and size frequency studies on dungeness crabs.

Kodiak Sockeye Rehabilitation Program - Biological data on age, weight, length, sex composition, spawning distribution and escapement were collected for each major sockeye stock in the Kodiak area. A comprehensive rehabilitation plan was prepared to study the feasibility of habitat enhancement and rehabilitation of selected lakes for establishing new sockeye production areas, as well as increasing existing runs by continuous plants of eyed eggs and fry and transplants of spawners.

Pink Salmon Research Program - Major pink salmon producing streams were sampled for abundance of pre-emergent fry in Kodiak, Chignik and the Alaska Peninsula management areas.

Shrimp Research - Biologists monitored the age class composition of the commercial catch to discover any apparent trends in the strength of recruit classes. A log book program was continued.

FEDERAL AID RESEARCH:

Considerable financial assistance in the commercial fisheries research program is presently being supplied by two separate Federal Aid Acts. The Acts passed by Congress in 1964 and 1965 have enabled the Department of Fish and Game and the National Marine Fisheries Service to cooperate on a cost sharing basis in a wide variety of commercial fishery projects.

The older of the Acts, "Commercial Fisheries Research and Development Act" (PL 88-309, renewed in 1969 as PL 90-551) is chiefly directed to the acquisition of biological and fishery statistics information on the state's non-anadromous fish and shellfish resources. Projects under this Act now include research on king crab, dungeness crab, scallops and shrimp.

The second Federal Aid Act, "The Anadromous Fish Act" (PL 89-304) is restricted to those projects concerned with the state's anadromous resources, e.g., salmon, char and sheefish. Research projects are being conducted on pink, sockeye, and king salmon throughout the major fishery areas of the state. A sheefish research project is underway in the Yukon and adjacent arctic drainages.

DIVISION OF PROTECTION

I. PURPOSE AND DUTIES:

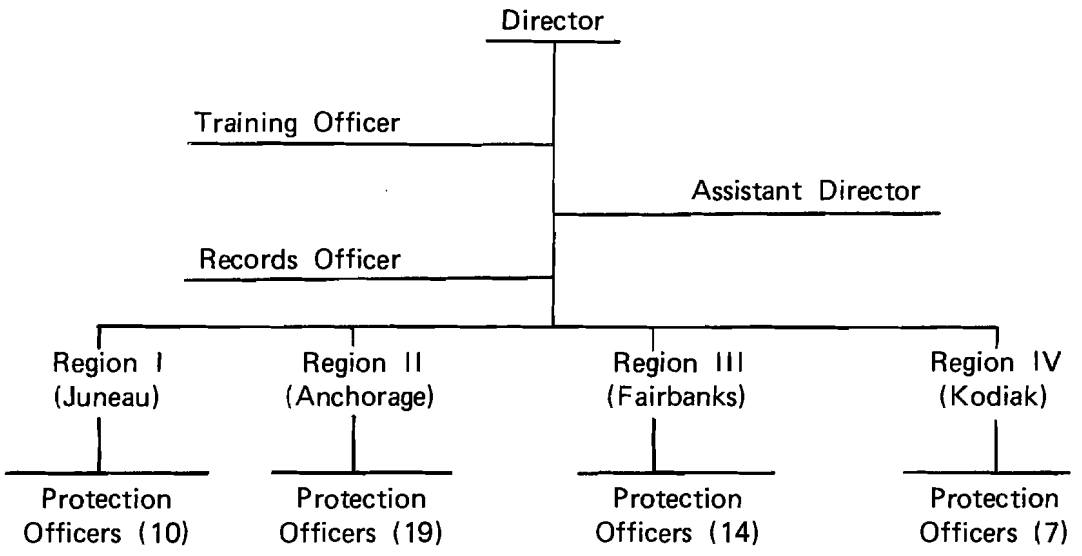
The Division of Protection's responsibility and role within the Department of Fish and Game is to provide effective enforcement of all regulations and laws which have been implemented to insure the sustained yield principle in dealing with Alaska's fish and game resources. In addition to law enforcement, program responsibilities include education, bounty, a service division for the programs of Commercial Fisheries, Sport Fish and Game divisions and field support to the Fish and Game License Division of the Department of Revenue. Protection officers also serve the broad capacity of peace officers of the state when necessary to assist the Department of Public Safety.

The trend in resource regulation has been to reach far beyond the traditional season and bag limit concept of mangement and to promulgate regulations which are increasingly more complex. Areas are divided into smaller units for management purposes, controlled and permit hunts are offered the sportsman, limited entry is presented to the commercial fisherman. Many other management innovations face the resource user and the resource protector as population increases within the state and there is increasing effort by sportsmen and commercial fishermen to utilize the resource. Each meeting of the Board of Fish and Game has resulted in the adoption of management proposals which demand an increase in protective effort to specific areas.

II. ORGANIZATION:

The Division of Protection has 68 permanent positions in all categories. This total includes 10 clerical classifications, 50 field officers, four supervisors and four administrative officers attached to the Juneau Headquarters. The staff of 50 field personnel is supplemented with from 80 to 100 temporary assistants each summer season for employment periods ranging from one month to an average of three months. This temporary staff is primarily directed toward the protection of anadromous streams throughout the coastal areas of the state and other phases of commercial fisheries enforcement. Officers of the Division are located in 36 field stations, four of which are maintained on a seasonal basis for the present because of housing facilities. These stations were established July 1, 1970 and plans for permanent residency by a Division officer are being formulated.

Protection Officers of the Division recorded 28,300 contacts with resource users during the calendar year period. These contacts resulted in 1,100 apprehensions for violations of statute and regulation.



III. BUDGET:

The Division budget for the fiscal year ending June 30, 1970 was approved as follows:

100 Personal Services	$ 873,900
200 Travel	75,500
300 Contractual Services	391,400
400 Commodities	83,800
500 Equipment	33,500
TOTAL:	$1,458,100

IV. ACCOMPLISHMENTS:

Accomplishments for the calendar year 1970 include a systematic enforcement monitoring of the crab and scallop fishery of Western Alaska with year-round surveillance of all commercial fishing activity in the westward portions of the Aleutian Peninsula. This program was initiated in the fall of 1969 and fully implemented in the spring of 1970 with temporary personnel. Approval for permanent officers was granted and the temporary program was replaced with permanent field officers during the latter portion of 1970.

Surveillance of activity related to oil exploration and production was initiated and funded with permanent personnel in 1970. Two positions for Bettles, one for Deadhorse and an additional position for Valdez and Glennallen marked the beginning of Protection efforts to monitor activity and supervise the outdoor recreational pursuits of the many employes engaged in occupations related to the oil industry.

DIVISION OF ADMINISTRATION

I. PURPOSE AND DUTIES:

The Division of Administration acts as business manager for the Department of Fish and Game and provides centralized services including accounting, personnel, supply, data processing, switchboard, central mail room, warehousing, records storage and preparation and monitoring of departmental budget. In addition, the Director of Administration has responsibility for the operation and maintenance of Department-owned vessels and aircraft.

II. ORGANIZATION:

The Division of Administration is staffed by a total of 48 personnel, with the Director and 30 employees in administrative and clerical functions, five persons in aircraft maintenance and operations, and 12 persons in vessels maintenance and operations.

III. BUDGET:

Division of Administration

Line Item:	Amount:
100	$334,600
200	2,000
300	223,400
400	27,400
500	2,600
600	-
700	-
800	-
900	137,500
TOTAL:	$727,500

Working Capital Summary

Aircraft Operations	$122,700
Vessel Operations	295,900
Major Aircraft Purchase	52,000
Major Vessel Equip. Pur.	-
TOTAL:	$470,600

IV. ACCOMPLISHMENTS:

During the last year, significant progress was recorded in all areas of the Division of Administration. The accounting section processed documents for travel, per diem, purchases, contracts, leases and other expenditures, excluding payrolls, of $5.2 million as well as processing and collecting claims to the federal government for $2.56 million. The supply section, in addition to its routine handling of requests, made significant strides toward bringing Department inventory records to a current, completely accurate status. The personnel section processed and maintained the necessary records for 374 permanent and an equivalent number of temporary employees. Data processing activities included new systems for handling game harvest statistics, sport licenses files and protection case reports, while maintaining 150 operational programs as well as compiling and publishing several statistical reports on commercial fishing in the state.

The Department established a separate office in Juneau for regional activities and relocated some 30 employees to that office. This allowed for reallocation of space within the headquarters building.

Services at regional offices continued to expand with increased purchasing authority as one of the steps forward.

The vessels section obtained and put into operation the M/V Resolution, a 91-foot patrol and research vessel, in the westward region. Additionally, the section operated a total of 1,225 days of vessel charter, covering approximately 60,000 nautical miles, hauled more than 300 tons of freight to Department locations and served protection, research and management activities. These accomplishments were through the use of 14 boats which were maintained by personnel of the vessels section.

Also added to the Department's fleet was the M/V Montague, a 58-foot custom-built limit seiner which will be used for research and management in the Prince William Sound area.

The aircraft section averaged more than 330 hours of operation for each of the nine aircraft on flight status, including the DeHaviland Beaver acquired in September. In excess of 180,000 pounds of cargo was hauled which included transplants of live fish from both Kitoi and Fire Lake hatcheries. Department aircraft were also used for patrol, game and fish surveys as well as search and rescue missions. The Department hangar at Lake Hood was remodeled and expanded to provide better facilities for Department personnel to maintain the equipment.