BIENNIAL REPORT

May 1, 1956
April 30, 1958

MONTANA

Fish and Game Commission

BIENNIAL REPORT

of the

MONTANA FISH AND GAME COMMISSION

May 1, 1956 - April 30, 1958

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FOREWORD

Wildlife is an important part of Montana's natural wealth. Historically, it played a basic part in the formation of this state. Fur, particularly beaver, attracted early-day trappers who did much of the first exploration in the west. Game and fish sustained the white man and provided his clothing even as it had his Indian predecessors.

Today, wildlife is contributing a different and perhaps a more important value as a source of relaxation and recreation to break the pace of modern living. In Montana, wildlife and recreation are also assuming a very important role in the state's financial structure.

It is the job of the Fish and Game Department to maintain the maximum amount of fish and game compatible with other economic land and water uses. This task is becoming more difficult each year. The demand for hunting and fishing continues to increase at an almost startling rate while at the same time the habitat in which these animals must be raised becomes less.

Fish and game management must rely on research and basic facts to solve these problems. Gone are the days when guesses and casual observations can be used to manage game. Only scientific studies can be expected to indicate the proper action necessary for long-range game management.

Along with research, the department must rely on enforcement and education as well as fish and game production to meet the challenge of the future. Places for wildlife to live and places for sportsmen to pursue their sport are all part of the complex problem.

Of all the states, Montana has a favored position as an area for high quality outdoor recreation. This is an asset not just to Montana but to the entire nation and its perpetuation and management is a nation-wide responsibility.

Facing up to this challenge, the department is conducting a program of research management, enforcement and education which will perpetuate the resource. These, however, are joint responsibilities which must be shared by all Montana citizens. The department cannot provide recreation where waters are polluted or land habitat destroyed.

This report is a brief summary of the activities of the Fish and Game Department as it meets the problems of the present and prepares to meet those of the future.

To the Honorable J. Hugo Aronson
Governor of Montana

Dear Governor Aronson:

We herewith submit the Biennial Report of the Montana Fish and Game Commission for the period of May 1, 1956 to April 30, 1958.

This report summarizes the operations of the Fish and Game Department for the past two years with particular emphasis on income and expenditures. This is in compliance with Montana law.

The job of maintaining good hunting and fishing in this state is becoming more difficult each year. Population increases, changes in land and water use practices and constantly increasing demands for recreation complicate the problem.

Successful maintenance of this resource would be impossible without the help and cooperation of the Governor's office, the legislature and other Montana citizens.

We hope this report will be helpful to you, to members of the legislature and to all who have an interest in this state and its wildlife wealth.

Respectfully submitted,

E. J. Skibby, Chairman, Lewistown
H. W. Black, Vice Chairman, Polson
John T. Hanson, Sr., Member, Malta
R. D. Shipley, Member, Miles City
W. T. Sweet, Member, Butte
A. A. O'Claire, Secretary

Use of electronic business machines has greatly facilitated many facets of administration. Here, sportsmen attend a drawing for special big game permits.

ADMINISTRATION

Growth in the Fish and Game Department has proceeded at a remarkable rate during the past fifty years. Today, the department which operated on a budget of $100,000.00 in 1902 has an annual income approaching 2½ million dollars. The property inventory, including fish hatcheries, buildings, vehicles and all equipment, was worth $2,795,448.20 in 1957. Obviously, the Fish and Game Department has become not only an important unit of state government but a growing industry as well.

The administration section of the Fish and Game Department is charged with the responsibility of keeping accurate financial records, detailed property inventories and procurement through the state purchasing agent of materials and equipment, as well as the innumerable jobs associated with managing a big business.

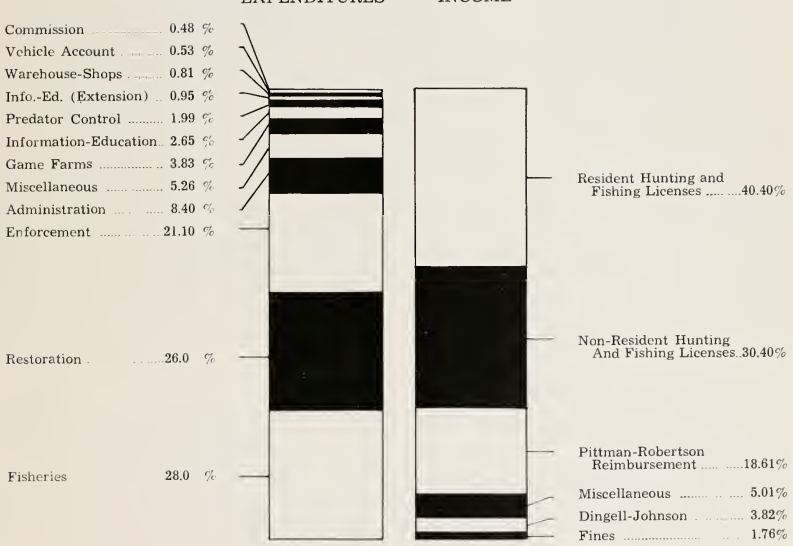
Most complicated are the means by which the Fish and Game Department obtains its finances. All activities of the department are paid for by state hunters and fishermen. This involves a state-wide network of license dealers located in nearly every city and town in the state. Because of the value as business stimulators, dealerships are in great demand. However, because of additional administrative cost, the department must limit the dealerships to the number necessary to adequately serve the public.

Like other state agencies, the department must maintain accurate records of income and expenditures which are examined regularly by the proper state officials.

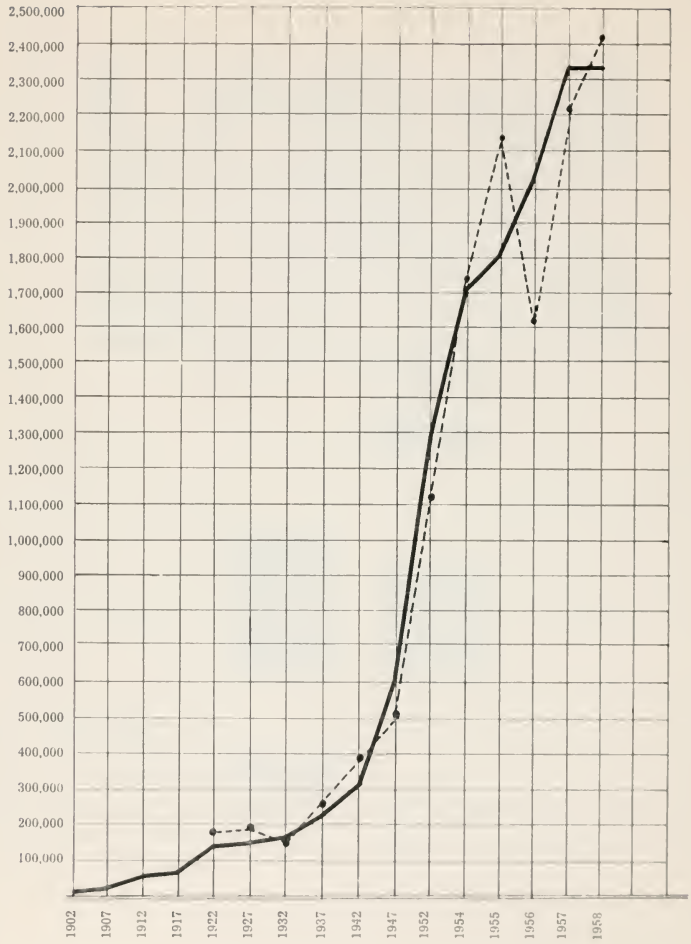
Recent use of modern business machines has streamlined the work of record keeping, issuing permits, marking of research questionnaires, and other similar mechanical duties which can be performed so much more efficiently and economically.

INCOME AND EXPENDITURES

May 1, 1956—April 30, 1958



COMPARISON OF INCOME AND DISBURSEMENTS
(1902 Through April 30, 1958)



RECOMMENDED LEGISLATION

Special Non-Resident Deer and Antelope Permits

The Thirty-Fourth Session of the Legislature enacted a law authorizing the Fish and Game Commission to issue special non-resident deer and antelope permits. This authorization expired on December 31, 1956. The Legislature was requested to extend this authority because there was yet a need to direct hunting pressure into areas where resident hunters were not exerting sufficient hunting pressure to control deer or antelope populations. The Thirty-Fifth Session extended the authorization until December 31, 1958.

During the past three hunting seasons, the following numbers of special $20.00 non-resident deer and antelope permits were issued:

	1955	1956	1957
Non Resident Deer	2623	6445	5038
Non Resident Antelope	3495	5033	2895

There is a need for directing additional hunting pressure into certain areas of the State; therefore, it is recommended that the Legislature grant authorization for the Commission to continue the issuance of special non-resident deer and antelope permits.

Revision of Law Limiting Eligibility of Moose, Mountain Sheep, Bison Permit Holders

Present statutes prevent persons who have received a moose, mountain sheep or buffalo permit from applying for a permit to hunt the same species for a succeeding ten-year period.

It is recommended that this ten-year limitation on the eligibility of any person to have a moose, mountain sheep or buffalo permit be amended so that the ten-year limit applies only to permit holders who kill an animal under such license or permit. The return of an unused moose, mountain sheep, or buffalo permit at the end of the hunting season would restore the hunter to the list of persons eligible to apply in following drawings.

Hunting Merriam's Turkey

The Montana Fish and Game Commission has been successful in introducing the Merriam's turkey in several areas of the State. The original transplants have increased in numbers to the extent that a portion of the turkeys may be harvested by hunting. Because of the limited numbers of wild turkeys, it will be necessary to issue permits in a limited number. Therefore, it is recommended that the Legislature grant authority to the Commission to issue special turkey permits under a drawing system if there are more applications for turkey permits than the number to be issued.

Reclassification of Fox, Canada Lynx And Black-footed Ferret

It is recommended that fox be removed from the fur-bearing animal list and be classed as a predatory animal.

The fox population has increased in eastern Montana. The pelt, however, has little commercial value and the fox is considered by most people as a predator.

Because fox are now listed as fur-bearing animals, persons must possess a trapper's license to legally kill them. The Montana Fish and Game Commission has declared an open season on fox throughout the entire year for the past three years.

The Canada lynx and black-footed ferret are rare animals in Montana. Montana is one of the few states which still has a few black-footed ferret. These species have never been a problem to either livestock or poultry operators. In order to prevent these species from being exterminated, it is recommended that the Canada lynx and black-footed ferret be placed on the regulated fur-bearing animal list.

Repeal of Non-Resident Game & Fish Shipping Regulations

For several years Montana law has restricted the removal by non-residents of fish or game to a single bag limit. This limitation was intended to prevent out-of-state shipment of fish from one or two areas in the State where it was believed non-residents were depleting the fish population. Subsequent study

and investigation has disclosed the fallacy of this belief. This law has made violators out of a great number of people. Therefore, it is recommended that the restriction on non-resident license holders to ship or remove only one legal limit of fish or game be repealed and that a non-resident be allowed to ship the same quantity of fish or game as a resident license holder.

Fish Habitat Conservation

The biggest single factor causing a decline in Montana fishing is habitat destruction. It is a more important factor, for instance, than increasing fishing pressure. To thrive, fish need more than just water. Food, cover, spawning areas, water quality and proper temperatures must be provided. Considerable effort was spent during the biennium to minimize habitat destruction. This was largely spent requesting cooperation from other agencies, for with the exception of the pollution law enacted by the 1955 legislature, there are few statutes protecting fish habitat.

For example, highway builders, other public agencies, or private individuals are free to straighten streams or remove gravel from them without mitigating the damage in any way, and water users are under no compunction to leave sufficient water in streams to keep them alive, or to keep their return water silt free.

Washington State, for one, has enacted legislation requiring that persons, agencies and others who would use, divert, obstruct or change the natural flow or bed of a river or stream or remove materials from the stream bed, obtain approval from the State Fish and Game Department. (Chap. 99, Ses.L '49; see Game Code of State of Washington). Similar legislation is needed in Montana since the Fish and Game Commission is responsible for managing the priceless fishery resource of the state without having a word to say about what may be done to the habitat of that resource.

Public Use Regulations On Impoundments

During the past few years a need has developed for promulgating public use regulations on impoundments of water which the Commission operates under license from the federal government. There is a need to set regulations for public recreational use for impoundments of water which the Commission constructs for fishing purposes. Such regulations will be in the interest of public safety, public health, protection of property and wildlife recreation.

It is therefore recommended that the Legislature grant authority to the Fish and Game Commission to promulgate public use regulations on certain impoundments of water which it operates and to enforce the same.

This is a section of Flint Creek in Granite County before highway construction. Note the overhanging cover of foliage.

A section of Flint Creek after adjacent highway construction.

Enforcement personnel hold "mock court" during in-service training at Montana State University.

LAW ENFORCEMENT

Since 1941, the numbers of hunters and fishermen in Montana have increased from 154,000 to 372,000. In addition, better roads and faster methods of transportation have added to the complexity of the warden's job. The enforcement branch has tried to keep pace by expanding the division to include fifty field wardens and seven district supervisors. Further, the efficiency of each warden has been increased through the use of more versatile equipment, e.g., two-way radios, planes and in-service training.

However, the duties of a warden have increased many-fold with this increase in license sales. In fact, so many new services are demanded by the hunting and fishing public today that a new report system (see Page 11) is required to properly evaluate the accomplishments of today's warden. Inspections of businesses directly associated with hunting, fishing or trapping are made so that the public may best be served. The management and research staff depend on the warden to furnish information and assist in surveys. The Information and Education Division must depend heavily on the warden force as they are the representatives of the department coming most frequently in contact with the entire populace. Also, the hunter safety program initiated last year has depended heavily on warden assistance. All of these duties and services are in addition to, or in conjunction with, his enforcement activities.

The following page is a reprint of the warden's monthly accomplishment report. The amount of attention each item requires varies widely between districts in direct relation to human population, hunting and fishing pressure, and game populations. This report does accurately record the warden's achievements during the course of the year when the monthly reports are compiled. Also, it serves as a guide to the comparative work load of each district.

The many requests for wardens from new communities have made it necessary to make an evaluation of warden districts present and proposed. This report will provide a basis for a more efficient distribution of men to equalize the increasing work load.

During the past year another examination was given to 132 warden applicants by the Montana State Employment Service at seven district Fish and Game headquarters. A register of men was established for the top 31 applicants and from this register seven men have been employed.

FISH AND GAME VIOLATIONS
By Warden Supervisor District

	May 1, 1956 thru April 30, 1957	May 1, 1957 thru April 30, 1958
District No. 1	178	166
District No. 2	267	183
District No. 3	268	298
District No. 4	306	273
District No. 5	90	106
District No. 6	75	99
District No. 7	53	49
TOTALS	1237	1174

FISH AND GAME VIOLATIONS
Classified as Follows

	May 1, 1956 thru April 30, 1957	May 1, 1957 thru April 30, 1958
Fishing Violations (All Types)	489	452
Big Game Hunting (All Types)	426	292
Trapping	22	33
Improper Licenses	189	272
Game Bird (All Types)	111	125
TOTALS	1237	1174

Name..... Address..... Month.....

ACCOMPLISHMENTS

A. ENFORCEMENT (Investigation, apprehensions and court procedure).

1. No. cases investigated
2. No. cases assisted
3. No. complaints filed

B. ADMINISTRATION (Routine inspections of license dealers, game and fur farms, fish ponds, outfitters, fur dealers, locker plants, monthly reports, equipment and headquarter maintenance, Department meetings).

4. No. license dealer checks
5. No. locker plant inspections
6. No. fur dealers checked
7. No. fish pond inspections
8. No. game and fur farm inspections
9. No. outfitters inspections
10. No. Department meetings attended
11. No. of beaver tagged
12. No. of marten tagged
13. Other (Specify)

C. FISH AND GAME MANAGEMENT (Census, game and fur damage, trapping and transplanting, game bag and creel check, stream and lake surveys, fish planting, predator control, checking stations, climatic and ecological observations).

14. No. creel checks
15. No. game bag checks (birds-big game-fur)
16. No. trips big game census
17. No. trips bird census
18. No. trips beaver cache count
19. No. beaver trapped and/or transplanted
20. No. days other trapping and transplanting
21. No. trips fish planting
22. No. trips stream and lake surveys
23. No. hours checking stations
24. No. trips predatory animal control
25. No. days climatic and ecological observations
26. Other (Specify)
27. Range surveys
28. Collections of biological specimens and data

No. days game and fur damage control

29. Fur
30. Big Game
31. Game birds

D. INFORMATION AND EDUCATION (Public contacts and group meetings in the following interests: law and policy, gun safety training and conservation education).

32. Sportsmen meetings
33. School
34. No. speeches given
35. No. training courses attended
36. No. training courses conducted
37. No. radio and/or television program appearances
38. Cooperation with other agencies (Specify)
39. Other (Specify)

E. OFF-DUTY DAYS

40. Vacation
41. Sick leave
42. Days off

III. OPERATIONAL DATA

43. Assigned vehicle miles
44. Other vehicle miles
45. Aircraft hours
46. Boat hours
47. Saddle horse hours
48. Walked hours
49. Subsistence cost
50. Incidental expenses
51. No. nights spent away from headquarters
52. State furnished meals
53. State furnished lodging

IV. SUPERVISOR'S REMARKS

Care of equipment:

Personal appearance:

Reports (promptness, accuracy, neatness):

Attitude (toward fellow employees):

INFORMATION AND EDUCATION

One of the basic goals of fish and game management is to provide more enjoyment of the state's wildlife resources. This has been expressed in many ways such as "shorten time between bites" or "more game in the sights". But whatever the terminology, the objective is to achieve more understanding, enjoyment and appreciation of the state's wildlife. To accomplish this end the Department of Fish and Game has the responsibility of keeping the public informed of regulations, new developments, plans and policies. It has a further obligation in providing educational services so the interested public can understand the basic reasons for the various policies and activities. Providing information and educational services is an important part of the job of every department employee. However, the need has become so extensive that a special division has been necessary to handle many of the services to the public.

The work is divided into several categories with information and education being the primary objective.

Information Services

Because of ever changing conditions under which fish and game live, it is necessary that its management be equally fluid. This flexibility makes it necessary that the public be quickly and accurately informed of any changes. Radio, television, and news services are the best media of rapid news transmission. To make use of these facilities the Information and Education Division provides news to the wire services as the stories develop. Each week these stories are compiled and sent to the state's newspapers, radio, television, and outdoor writers. Over 20,000 copies of the news release which vary from three to six pages are distributed annually to sources which in turn transmit them to the public.

The department's free quarterly publication "Montana Wildlife" has continued in popularity. It is placed in all Montana schools and is sent to any person making a request. The magazine features the activities and programs of the department and stresses game programs of interest to sportsmen. Current readership is estimated at 40,000.

Articles and photographs are supplied state and national publications as requested.

Spectators study a Fish and Game Department booth being displayed at one of Montana's sport and home shows.

During the biennium teletypewriters have been installed in all district headquarters. These have made it possible to transmit rapidly and accurately information of importance to department personnel who can in turn release this locally for public information

Radio and television facilities are regular features used to provide programs of an informative and educational nature.

Publicity

Although the department does not have a special publicity section there is much work of this nature accomplished. Each year the thousands of inquiries on Montana hunting and fishing are answered. These come from every state and many foreign countries and include not only requests for wildlife information but camping, boating, and travel as well. A special pamphlet "Guide to Hunting and Fishing in Montana" has been prepared to answer questions. In addition, maps, regulations and thousands of individual letters are included in these mailings.

Cooperation with the State Highway Advertising Division and the Montana Chamber of Commerce through sport shows, outdoor writer tours, and by providing literature, were additional services to the recreation industry in Montana.

Youth Education

The emphasis on youth education has shifted during the biennium since the Fish and Game Department is financing a conservation program through the Department of Public Instruction. However, there is still a great demand upon the Information and Education Division for youth instruction. Boy Scout camps, 4-H camps, Boys State, Campfire Girls, as well as many schools, are supplied with lectures and instruction on wildlife resources.

Instruction and lectures are devised so that a student receives an appreciation of all natural resources. Particular emphasis is placed on the relationship of animals to soil and vegetation.

Adult Education

The Department of Fish and Game is sponsoring wildlife extension for adults through Montana State University and Montana State College. However, department personnel also give numerous lectures and talks to adult groups.

Hunting Safety

The newest addition to the Information and Education work of the Fish and Game Department is the hunting safety program. This responsibility was delegated the Fish and Game Department by the 1957 legislature. New legislation requires that: "On and after January 1, 1958, no big game hunting license shall be issued to any resident person under the age of eighteen (18) years unless he presents to the person authorized to issue such license either: (1) evidence that he has held a hunting license issued by this state in a prior year, or (2) a certificate of competency as provided by this section; providing further that all resident persons under fifteen (15) years of age must present a certificate of competency even if he has held a hunting license in prior years.

"The Department of Fish and Game shall provide for a course of instruction in the safe handling of firearms and for that purpose may cooperate with any reputable association or organization having as one of its objectives the promotion of safety in the handling of firearms. The department may designate any person, found by it to be competent, to give instructions in the handling of firearms. A person so appointed shall give such course of instruction and upon the successful completion thereof shall issue to the person instructed, a certificate of competency in the safe handling of firearms."

To meet this assignment the Information and Education Division was given the responsibility of training the youngsters. One man was delegated to set up training and certification procedures. By the end of the biennium, in less than one year of operation, the division had trained nearly 9,000 teen-age Montanans.

Volunteer instructors using the course established by the Montana Fish and Game Department and the National Rifle Association did the class work. The department supplies material and training techniques. Men of the Enforcement Division serve as local contact men for the program.

From youngsters to aged, county fair visitors find wildlife one of the most interesting and educational exhibits.

In addition to techniques of safe hunting, the course includes sportsman-landowner relationship, and sportsmanship.

This program is expected to train new generations of safety conscious sportsmen. Many Montana lives should be saved as a result of this work.

District Education

Local administration of the Montana Fish and Game Department is based on seven district sub-divisions. In one of these a district educator has been established as a pilot project to show the value of this service. The exploratory work is in District 4, headquartered in Great Falls. District education includes all

phases of the department's Information and Education program, but gives the local people benefit of closer contact and therefore more complete services from the department.

The district educator in District 4 is also a qualified pilot and does much of the flying for the district staff. The success of the district education program indicates the desirability of eventually increasing this service to include a similar specialist in each of the seven areas.

General Services

General services include a broad field of activities which cannot be simply classified, but which contribute to the overall wildlife information and education effort.

The department's live wildlife exhibit grows in popularity each year. A regular schedule of fourteen state and county fairs is followed each year, and about 150,000 persons view the collection of native Montana fish and game. Conflicting fair dates restrict the extent to which this feature can be expanded since equipment and the number of animals limit the exhibit to two major units. Appreciation and understanding of Montana's wildlife is stimulated at each showing.

In cooperation with the Enforcement Division, an In-Service Training School for law enforcement personnel was developed through the cooperation of Montana State University. This school was held to keep field men informed on new and changing enforcement matters and is essential in keeping a staff operating at maximum efficiency.

A similar In-Service training in general game management has also been conducted in cooperation with Montana State College at Bozeman.

A technical library is maintained by the division in which current writings and reports are available as references to all employees. An inter-department news letter is prepared to keep employees posted on the activities of various sections of the organization.

Photography in the preparation of moving pictures, colored slides and illustrative black and white pictures is handled largely by the Information and Education Division. Also a lending library of outdoor moving pictures is available to sportsmen's clubs, schools and civic groups.

Expansion of the Department's Education and Information work is expected in the future as the public demand for this service has increased in all parts of the state. The department has a definite obligation in contributing to the state-wide effort to promote interest and education on all conservation matters. This will be met by all Fish and Game employees and the Information and Education Division.

No citizen can overlook the fact that the prosperity of the state and nation is tied directly to our natural resources, and basic education is an essential in creating the knowledge necessary to support and maintain this resource.

WILDLIFE EDUCATION EXTENSION PROGRAM

Adult Education

During the past two bienniums the Fish and Game Department has financed a program of adult education in cooperation with Montana State University and Montana State College.

Under terms of a memorandum of understanding between these institutions, a series of educational lectures on wildlife and resource management is presented to the public.

As stated in the original agreement, the purpose of this program is to: "develop a better understanding of advanced management of the natural resource base, to the end that a more favorable environment for wildlife species may be attained and maintained."

This program which developed at Montana State University in 1949 was adopted by the Montana Wildlife Federation in 1952. Since the goal of this series is to further the objectives of good wildlife management, the Fish and Game Commission agreed, in 1954, to underwrite the cost of conducting the work. Originally, $7,500 was deposited with the treasurer of each school. With the current increase in operation the program now amounts to $19,000 annually.

Men operating from the two university units present forum lectures to groups in many sections of the state.

Location of Forum Towns

1956-57—Red Lodge, Hardin, Roundup, Harlowton, Three Forks, Stanford, Lewistown, Havre, Ovando-Helmville, Philipsburg.

Les Pengelly (right) Wildlife Extensionist, discusses elk ageing techniques at a wildlife forum.

1957-58—Hamilton, Superior, Drummond, Boulder, Dillon, Livingston, Columbus, Ekalaka

Attendance at the series of forums totaled 8,500.

Public High School Lectures

Lectures were presented to approximately 1,500 public school students.

University and College Lectures

Teacher workshops and lectures were given to 737 advanced students and teachers.

Civic and Sportsmens Groups

Conservation talks were given to various civic organizations with an estimated attendance of 1,300 and approximately 3,000 members of sportsmens groups were contacted.

In addition to the lectures and conservation talks, many meetings of state-wide, and even national, importance were attended.

During the biennium, approximately 110,000 miles were traveled in conducting the duties connected with this work.

COOPERATIVE PROGRAM— DEPARTMENT OF PUBLIC INSTRUCTION

In 1951 the Montana Legislature passed a law directing that conservation education should be taught in public elementary and secondary schools of the state. The law also provided that such a program would be presented as a part of, and integrated with, other related subjects and courses. The instructions from the legislature further stated the extent and application of such a program should be determined by the State Board of Education and the State Superintendent of Public Instruction. No monies were provided for this program.

In 1957 the Montana Fish and Game Commission provided the State Department of Public Instruction with a grant of $9,000 to initiate this program. In August of 1957, a Conservation Education Supervisor for the Department of Public Instruction was appointed with funds provided under the cooperative program.

During the year 1957-58 the following four continuing programs have been established:

Teacher Institutes are offered in each Montana county every other year. This service has been extended to twenty-six western counties. The eastern thirty counties will be covered the fall of 1958.

Conservation Tips are mailed to most of the elementary teachers and all of the schools in the state. One *Tip* is mailed each month of the school year. Each *Tip* covers one phase of resource management and suggests an activity for use in the classroom.

A Study Guide in Conservation Education is being developed to cover the five basic natural resources in Montana —mineral, soil, water, plant life (range and forests) and wildlife. This guide will be available for use in the schools of Montana.

A Schedule of School Visits has been established as a counseling service for conservation education. This service is available from the Department of Public Instruction upon request by officials of any Montana school.

The vital importance of wise resource-use education takes on new dimensions of value as we examine the role of Montana in the area of proper utilization of soil, water, mineral, range, forests and wildlife.

Montana has much to offer the nation by way of food, materials and recreation. Only through the understanding and the appreciation of wise use and wise management of these resources can this vast treasure be expected to supply the needs of all Montanans and other citizens of the United States. Conservation education is part of the answer.

GAME MANAGEMENT

The past two years have been particularly important in Montana's Game Management program. The Fish and Game Department's reorganizational plan, extending over a period of several years was completed early in 1957 by the establishment of a Game Management section. In this way the management work having to do with big game, game birds, waterfowl, and fur bearers is more effectively carried out. The valuable assistance given by other sections still remains a vitally important part of the management program. Coordination of effort is now more readily achieved.

Big Game:

Particular efforts have been made in the past two years to obtain statewide uniformity in opening dates for big game seasons. It has been found that in this way, undesirable hunter concentrations can be very materially reduced. This wider distribution of hunters also tends to avoid over harvests in the smaller more accessible areas.

A special effort has been made to select high, less accessible areas in which an earlier than general opening date could be allowed. This makes available a longer season for high-quality "back country" type hunting. Early snows in these areas often handicap accessibility during the regular and extended seasons.

Montana is becoming increasingly known throughout the nation for its unusually fine wilderness hunting. Early seasons in these remote areas have been a most important factor in this regard. The general lessening of true high-quality hunting makes this a particularly important consideration.

Range and Season Setting:

Probably the most important development in game management during the past several years has been an increased awareness of the importance of range in the setting of seasons. The balancing of game numbers with winter food supply has become the primary objective of Montana's management program.

An analysis of range conditions and trends on a statewide basis represents an increasingly important segment of the management staff's work load. Cooperation with public and private land administrators is a particularly important factor of this program.

Problems of range depletion brought to light by recent cooperative studies have pointed up the need for an exhilarated hunter take, particularly in regard to deer. For several years the harvest of either sex has been an important factor of this program. Where special range problems have been observed, seasons have been extended. This has aided in pinpointing hunting pressure in areas of special need. The use of a legislative enactment allowing the issuance of $20.00 out-of-state deer and antelope licenses has represented another important aid in the control of game numbers. Antelope range problems appear to be, in most cases, reasonably well in hand. Deer, however, still present some serious use problems. Much appreciated cooperation of landholders, sportsmen, Legislators, and Federal Agencies has represented a vital factor in the working out of these problems.

The acquisition of small isolated tracts of key winter game range (discussed in detail further on in this report) has proven to be a solution to several of Montana's most perplexing elk problems. A careful study of the food relationship of elk and livestock on mountain ranges will, when completed, add a great deal to the fund of information necessary to properly manage both these important users of public range lands. It is becoming increasingly apparent that through careful management there is adequate forage for both domestic livestock and elk on the majority of mountain ranges.

Elk Planting:

The planting of elk from surpluses in Yellowstone National Park, although highly important during the years of herd establishment, is taking a less important place in the elk management program today. It has been found that elk have now been established on the majority of ranges adaptable to this highly prized species of big game. Major effort has now been shifted to the management of the herds in harmony with the forage supply and other uses of these ranges.

Harvest of moose by special permit has increased in scope and importance through the past several years. Starting as a mature bull harvest only, the seasons have been, in most cases, liberalized to either sex. The number taken has reached somewhat over 400 yearly. This represents only a little over 10% of the estimated statewide annual increase. It appears, therefore, that with careful management the harvest may be somewhat increased on a sustained basis in the future.

Hunters must work to get the prized Rocky Mountain Goat.

Mountain goat hunting has become an important sport of considerable magnitude. Several areas where goats were introduced in the '40s are now making a very important contribution to the mountain ranges where this game species has been hunted for many years. The Crazy Mountains represent an area of extreme importance as one of the newer hunting regions.

Bighorn Sheep:

The Rocky Mountain bighorn, long a rare species in Montana, has increased in recent years to numbers justifying a carefully regulated hunt. Coupled with the opportunity for mountain goats, sheep hunting has brought

sportsmen up into some of the state's most spectacular alpine country.

The grizzly bear, although on the threshold of extinction throughout the greater part of his original range in the west, is still available in Montana in sufficient numbers to afford wilderness hunting of the highest order.

The following tabulation indicates the trend of deer hunter harvest in Montana during the past seven years. These figures indicate a continued increase in hunter success through this period.

Statewide Harvest Trend

Year	No. License Holders	No. Deer Harvested	No. Harvested Per 100 License Holders
1951	101,985	39,000	38
1952	118,181	53,800	45
1953	119,591	80,000	67
1954	123,259	84,300	68
1955	129,735	100,000	77
1956	130,445	100,500	77
1957	127,047	105,100	83

Game Birds:

The introduction of the Merriam's turkey in eastern and central Montana has represented an especially important aspect of the wildlife restoration program during the past several years. To date, there have been nine individual plants of turkeys made throughout the state. A plant in the Long Pines section of southeastern Montana has indicated particularly rapid increase. It is expected that sport hunting will be available on this species in this portion of Montana in the near future.

Special efforts have been made to gain as much information as possible regarding the best management of the native grouse. The data collected to date is of value in setting seasons for these important native game birds. Waterfowl management areas previously described also present many benefits in the development of ringnecked pheasant populations in those areas. The population trend regarding this important game bird has been somewhat upward throughout several important areas in the state.

The blue grouse provides some fine mountain recreation for sportsmen with stamina.

The Hungarian partridge showed a particular marked upward trend in numbers. This was most obvious throughout their range in the north and central part of Montana.

Waterfowl:

A particularly interesting evaluation of waterfowl hunting in Montana was carried out in 1957. Four thousand questionnaires were mailed to hunters on the basis of the 1956 license sales.

Approximately 36,943 persons hunted waterfowl as indicated by waterfowl stamp sales as reported by Fish and Wildlife Service The average numbers of days per hunter was 6.84 and estimated number of man-days expended was 222,600. Average kill per duck hunter day was 1.05 and the average season kill per hunter was 7.18. The estimated statewide duck kill was 233,700 ducks. The species composition of 1957 duck season was: mallards —63.6%, blue-wing teal—10.1%, green-wing teal—6.7%, pintail—4.3%, scaup—2.9%, shovellers—2.2%, canvasback—1.7%, baldpate—1.6%, gadwall—1.8%, redhead—1.1%, and others and unknown—4.2%

An estimated 11,900 people hunted geese. An average of .72 geese per hunter were taken and an estimated 7,500 geese was the statewide harvest The reported species composition of

1957 goose season was Canada geese—67.4%, snow geese — 29.5%, white-fronted geese — 1.9%, and unknown—1.2%.

Waterfowl habitat development constituted a very important phase of the Department's program. Major state-owned waterfowl habitat development areas in the Flathead Valley, Ninepipe-Pablo; the Fairfield-Choteau area, Freezeout Lake; and the Milk River area, Sleeping Buffalo project, were the most important units where this type of development was carried out during the biennium.

Fencing, diking, establishment of water control facilities, as well as the planting of food and cover, represented important activities on these areas. In addition to the increased production of waterfowl, public hunting of major importance will be guaranteed by these areas.

This pintail must find several resting and feeding areas during his south-bound flight.

WINTER GAME RANGE ACQUISITION

The pattern of land ownership in western and central Montana results in many elk winter ranges being located partially or wholly on private lands which are adjacent to National Forests. The public-owned forest lands furnish forage for elk during the spring, summer, and fall. Competition with livestock is usually not a problem on the ranges which are used by elk during these seasons, but it may be intense on the privately-owned rangelands used by elk during the winter. Frequently, landowners along the entire foothill area of a mountain range are affected. These landowners should not be expected to support large numbers of elk at the expense of their livestock operations. The solution to such problems is to restrict an elk population to a definite winter range area. The restriction of elk to definite wintering areas, where they will not compete with livestock operations, is one of the primary functions of the game ranges which are acquired by the Montana Fish and Game Department.

Trail fork of Bear Creek in Madison county with the "Sphinx" and "Helmet" in the background is in the area of a recently acquired big game winter range.

Only occasional isolated tracts of land are suitable for winter elk ranges. Either singularly or in the aggregate, these tracts can never represent more than a relatively small area in the state. Tracts as small as 4,000 acres have solved long-standing problems of elk depredation over relatively large areas. Prior to the acquisition of a game range, elk invariably winter in scattered bunches along the foothills of a mountain range. After a game range is acquired, the animals wintering on private lands are either forced into a game range or they are harvested by extended hunting seasons. Under these conditions, an elk herd soon "learns" to use a definite range area. The best possible forage conditions are also maintained on a game range in order to attract and hold elk off private lands.

Since a state-owned game range simply transfers elk use from private to public lands, they cannot be expected to materially increase elk populations. However, the benefits derived from a state-owned game range cannot be measured in terms of elk numbers alone. The initial benefit is, of course, the alleviation of conflict with livestock operations. Further benefits relate to the fact that an elk herd may be managed on the basis of its own forage supply rather than the intensity of its depredations on privately-owned rangelands and haystacks. This permits a relatively stable management program where annual harvests can be gauged to the carrying capacity of a definite forage supply instead of variable or conflicting reports of damage.

Land for winter game ranges is purchased or leased. Marginal rangelands of relatively low value make the most satisfactory winter elk ranges. High value rangelands or croplands may be included in a purchase, but these lands are either traded (for other lands more suitable for elk) or sold to adjoining landowners. Permits for grazing livestock on forest lands may also be obtained as the result of a purchase. In every case, these permits are waived for redistribution or retirement, depending upon the judgment of forest grazing administrators. Since a permit is usually retired in lieu of adjustments needed to effect an improvement in range conditions, the retirement of a permit actually amounts to a redistribution of grazing privileges to the other permit holders on a forest.

Annual payments, comparable to assessed taxes, are made to the counties in which a state-owned game range is located. Payments are determined by local county assessors and are equal to the taxes paid on adjoining lands of comparable value. Local economies are also supplemented by the sustained recreational use which occurs as the result of a game range. Most game ranges provide places for public camping and fishing, as well as hunting. Local businesses usually develop or expand facilities to engage in the resulting recreational industry.

WILDLIFE INVESTIGATIONS LABORATORY

In 1957 a laboratory was set up by the Montana Fish and Game Department in cooperation with the State College at Bozeman. The expanding facilities and services of this laboratory are available to all wildlife personnel throughout Montana.

At present, a primary function of the laboratory is the preparation and analysis of big game stomach samples. This function is carried out for areas where important food habits work is being conducted in order to know exactly what kinds and proportions of foods are being eaten by various animal species.

A lab worker carefully washes big game stomach samples to eliminate residue too small for practical identification.

Samples are obtained and sent to the laboratory for analysis. These collections are usually taken from hunter kills, road kills, and winter-killed animals. The present work being

In the course of food habit studies, samples must be separated and contents identified.

carried out in regard to several big game species will make available important information needed for their management.

In addition to these important considerations, food habits information assists in the interpretation of data collected in other phases such as range surveys, checking station programs, winter kills, sex and age ratios, etc.

In addition to the food habits work, an important program having to do with a study of the skeletal characteristics of several important fur-bearing animals is also being conducted. Necessary management information in regard to age and sex ratio is being obtained from a sample of mink carcasses being collected in cooperation with the trapper harvest. This information is being analyzed along with the harvest reports and field observations to direct the future management of this important fur bearer throughout the state. In addition to mink, a great deal of important information has been obtained through the facilities of the laboratory in regard to the pine marten, beaver, and otter.

GAME BIRD FARMS

Ring-necked Pheasants

The Fish and Game Department continued to operate the three pheasant farms located at Billings, Fort Peck, and Warm Springs. However, the operation of the Billings farm was changed from a permanent station to seasonal status. The hatching and brooding phases of operation were discontinued and only the pens were used for rearing. Additional birds were hatched and brooded at the Fort Peck and Warm Springs farms and were then trucked to Billings when four to five weeks of age where they were put in the pens for rearing. The birds were then released in the fall. This method has proved to be practical as well as economical, and the total State production was maintained at approximately the same level as in previous years

Chukar Partridge

The Moiese Game Farm which had been in operation since 1953 as a chukar farm was discontinued in the Fall of 1956 and the last of the chukars were released in the Spring of 1957. It was felt that all areas considered to be possible chukar habitat had received initial releases of chukars and that game farm production should be discontinued. Release areas will be checked closely to determine the success of the stocking. It is hoped that natural reproduction in successful areas will provide birds for stocking other areas through trapping and transplanting.

Ring-necked Pheasant Production

	Billings	Fort Peck	Warm Springs	Total
1956-1957	10,383	11,269	12,007	33,659
1957-1958	11,730	11,385	12,329	35,444

Chukar Partridge Production

1956-1957	1,402
1957-1958	607

FUR ANIMAL AND PREDATOR RESEARCH AND MANAGEMENT

Fur animals always have been a characteristic part of the Montana scene. They constitute a renewable resource worth millions of dollars. It is the moral and legal obligation of the State Fish and Game Department to see that this resource is properly used. Accordingly, research activities are aimed at producing factual information as the foundation for sound management. Findings of these studies provide a basis for evaluation of current management, for recommendations for future improvements, and for restoration of depleted areas. New techniques and facts are constantly added to the existing fund of information.

The various activities conducted during the biennium are briefly summarized as follows:

Economic Survey

Fur animals are unique among wildlife resources in that they provide a direct cash crop in addition to providing recreation. This crop is harvested with only moderate investment on the part of the trapper. Seasonal workers often add to their income at a time of year when other types of employment are scarce. More than a hundred different occupations are listed by trappers. Obviously, recreation as well as remuneration is a motive for trapping by many people.

Mail surveys to determine trapper success and fur dealer surveys to provide average pelt prices for the 1957-58 season were not completed at the time of writing. Instead, the catch for 1956-57 is compared with that of 1955-56. During these two seasons a total of 3,077 trapper's licenses were issued. Listed on the following page are the furs taken by these trappers. Income to trappers from sale of these pelts also is shown.

Furs taken during these two seasons totaled approximately 140,000 pelts, worth more than one-half million dollars. Four species—beaver, mink, muskrat and marten—produced more than 95 per cent of the pelts and nearly all the income, reflecting current market trends.

The most important fur producing areas are in the western mountainous portion of the state and in the "high-line" area, north of the Missouri River. Since the three most important fur animals are associated with bodies of water, it is natural that they should be more abundant in the watershed and glaci-

ated pothole areas. Drouth conditions during the biennium have seriously reduced muskrat populations in northeastern Montana.

Size and Value of Fur Take

	1955-56 No. Pelts Value	1956-57 No. Pelts Value
Muskrat	55,812 $ 44,003	28,663 $ 15,310
Beaver	17,611 $ 137,326	9,812 $ 70,141
Mink	7,383 $ 124,146	7,964 $ 122,347
Marten	721 $ 5,638	494 $ 2,791
Weasel	1,543 $ 1,636	962 $ 605
Bobcat	1,209 $ 2,938	808 $ 2,554
Coyote	118 $ 122	100 $ 100
Skunk	2,547 $ 1,860	2,329 $ 1,467
Raccoon	763 $ 1,541	468 $ 735
Badger	264 $ 201	183 $ 119
Fox	87 $ 87	136 $ 301
Lynx	21 $ 105	45 $ 225
Wolverine	6 $ 120	4 $ 80
Otter	0 $ 0	62 $ 1,099
TOTAL	88,085 $ 319,723	52,030 $ 217,874

Beaver

Beaver investigations conducted during the biennium were primarily directed at keeping a finger on the pulse of populations. Population studies included analysis of pelt measurements, aerial colony counts and harvest analysis.

Aerial beaver colony counts constitute an index to population density and permit year to year comparisons to show population trends. Results of counts conducted in the fall of 1956 and 1957 are shown below.

Year	Stream Miles	Colonies Counted	Miles Colony
1956	3874	2518	1.5
1957	2394	1771	1.4

Although nearly 70,000 beaver have been taken in the last four seasons, these counts show excessive densities in many areas. In spite of liberal seasons, low prices simply have not provided enough incentive to produce desired harvests.

Comprehensive harvest analysis is conducted at the end of every season. This gives the number of beaver trapped, dates of capture, trapper success and ratio of private land to public land trapped.

Mink

Analysis of catch records has shown that mink have been subject to heavy trapping pressure for a number of years. Since the size of the mink take is influenced by market and weather conditions as well as by population size, information based on biological indicators is used to supplement catch records as a measure of population condition.

Approximately 3,300 mink carcasses were collected during the biennium from cooperating mink trappers throughout the state. Age and sex ratios from these samples are used to reflect trends in population condition.

Harvest age and sex ratios do not reveal the actual composition of the population. For this reason intensive live trapping and marking of wild mink is conducted to facilitate accurate evaluation of age and sex data from trapper catches.

Marten

The long-range investigation of marten living requirements conducted in cooperation with the Montana Cooperative Wildlife Research Unit was continued during the biennium. This study is based on live trapping and is producing an understanding of population ecology through long-term observation of marked wild marten. Results of this study and analysis of earlier marten seasons guided formation of improved management plans which allow annual cropping of marten populations. Formerly, seasons were held at irregular intervals. The 1957 open season was the third in this sustained yield program.

Restocking of vacant habitats was continued with the release of live trapped marten in the Big Belt Mountains during 1956 and 1957.

Predators

Fur animals, properly managed, are worth millions of dollars to the people of Montana. Predators, on the other hand, if mismanaged, may cost the people of the state millions of dollars. Such costs may be in the form of livestock and poultry losses or may involve unwise expenditures for ineffective or unjustified control measures. In order to execute predator management in accord with modern scientific principles, factual information relating to economics, population trends, distribution and certain aspects of predator ecology must be available.

The first step toward a thorough analysis of Montana predator problems was to undertake a mail survey of wildlife damage on ranches and farms. In cooperation with the State Department of Agriculture, questionnaires were mailed to approximately 10,000 of the state's 33,000 ranchers and farmers. Over 75 per cent of the survey forms have been received and are being processed. When this information is summarized and evaluated it will aid the Department greatly in better serving the ranchers and farmers who raise much of the state's wildlife.

Future investigations will deal with predator-prey relationships affecting management of the various game species in Montana.

Objectives

Fur and predator research is aimed at biologically and economically sound management of these segments of the wildlife resource. Trapping seasons and regulations based on factual information will insure that the people of the state will continue to reap the benefits to be derived from the fur resource. Action programs conducted by the Department in controlling private property or wildlife losses to predators will be guided by careful investigations. Such programs will be aimed at removing individual animals causing losses or at controlling depredations on specially managed areas, leaving the majority of predators free to carry on their natural and often beneficial functions.

Predator Control

Predation is only one of the factors that limit game populations. Investigations show that other natural forces such as weather, food availability, disease, cover and other factors may have a far greater effect on many species than do predators. Thus, indiscriminate predator control without the guidance of scientific investigation has no place in modern game management.

If studies show predation on game to be an important cause of keeping a population below the carrying capacity of its habitat, then predator control, used on a local and often temporary basis, can be one of the game manager's kit of tools. Before control measures may be used on much of our public lands, the managing agency properly requires that game populations must be under the carrying capacity of the habitat and that harvest by hunters must be adequate to keep herds in balance with the range.

During the biennium, the Fish and Game Department contributed $40,000 annually to the predator control program conducted by the U. S. Fish and Wildlife Service in cooperation with the State Livestock Commission, the counties and the game department. This contribution is not so much for purposes of game management as it is a means of discharging a part of the Commission's responsibility toward over all predator management. The State Fish and Game Director is a member of the Advisory Committee which makes recommendations on the conduct of the predator control program

The badger is a predator of minor economic importance.

Bounties on mountain lions ($50.00) and bobcats ($2.00) were continued. In addition the Commission reimbursed sportsmen's clubs for one-half the bounty paid on crows and magpies but not to exceed 10 cents per bird.

The more thickly settled farmland areas receive relatively little assistance with their predator problems at present. Problems in these areas are more likely to involve poultry losses to the smaller predators. In many areas skunks and badgers have increased. Fox and raccoon have extended their ranges greatly in recent years. Since they are new to many areas, farmers inexperienced in trapping sometimes find these animals difficult to capture. Other states have found extension instruction very effective in dealing with problems of this type. Accordingly, late in the biennium plans were made to initiate an extension predator control program on a pilot basis.

The extension trapping instructor will work with groups and with individuals. At group meetings he will show movies and slides of trapping, hand out informative bulletins and answer questions. Field demonstrations are made to groups or individuals right on a farm where damage is occurring. The final set may be made to catch the predator doing the damage.

This training is fast, effective and low in cost. If damage recurs, the farmer is trained and can handle the problem himself; or if more training is needed, he gets it in a follow-up call. This system will encourage the traditional self-reliance of the Montana citizen and will maintain the sovereignty of the private individual. Anyone interested is simply taught to help himself. It is anticipated that the same approach will be useful in dealing with beaver problems.

A recent survey of predator problems shows Mr. Skunk to be No. 1 nuisance.

MONTANA COOPERATIVE WILDLIFE RESEARCH UNIT

The Montana Cooperative Wildlife Research Unit was established at Montana State University in February 8, 1958. It is operated through a coordinating committee with representatives from the State Fish and Game Department, State University and U. S. Fish and Wildlife Service.

Objectives, as established, are:

1. To provide technical and professional training on various levels in wildlife management, teaching, research, demonstration and administration.
2. To investigate and correlate the production, utilization, management and restoration of desirable populations of wildlife compatible with good land use.
3. To demonstrate research findings through extension and practical management of game and fur-bearing animals and of other desirable species of wildlife, and encourage wildlife restoration through programs with schools, youth clubs and adult groups.
4. To make available to land-owners and operators, sportsmen, conservation officials, extension workers, teachers and others, the facts, methods and new findings discovered through research, and through literature suited to local and state conditions.
5. To disseminate research findings through the publications of reports, bulletins, circulars, and journal and magazine articles. These to include scientific, semi-popular and popular materials at all levels.

Research Projects

	Status
1. Magpie Predation on Ringneck Pheasants	Completed
2. Feed Requirements of Elk Calves	"
3. Population Study of Canada Geese in the Flathead Valley	Continued
4. Life History and Ecology of the Marten in Glacier Park	"
5. Motion Pictures of Unit Activities	"
6. Aging of Fisher and Analysis of Reproductive System	"
7. Experiments with the Plastic Jesse-Knot Marker	Continued
8. Antelope Aging	Completed
9. Physiology of Bighorn Sheep	Continued
10. Mule Deer Population and Range Studies in Western Montana	"
11. Studies of Alpine Ecology in the Northern Rocky Mountains	New
12. Quantitative Aspects of Raptor Predation	Continued

Winter Fishing — a favorite sport in Montana.

FISHERIES

Difficulties are beginning to be experienced in the production of sufficient numbers of fish for restocking rehabilitated waters in Montana. Rehabilitated waters are sometimes incurred from hydro-electric installation construction, but mostly from cleaning up infested waters that have populations of undesirable fish. The management tools as developed in the past few years through the rehabilitation of running water in conjunction with the construction of fish barriers make possible the reclamation of trout waters in Montana and the segregation of species, particularly native species, in designated sections of streams or watersheds.

Plans are completed and bids for construction of additional fish rearing facilities at Lewistown, Montana were opened on June 22, 1958 during the regular meeting of the Montana Fish and Game Commission. Construction may not be completed until the summer of 1959. This is the Montana Fish and Game Commission's answer to solving the problem of having fish available for rehabilitation projects.

Continued search for information by field personnel is resulting in a better over-all knowledge of the fish management problem and the program of fish management is being revised annually as improved practices are developed. Investigations, information gathering, and the fish planting program are our key annual programs that continually confront all people working with the fishery resources.

The problem of adequate waters for trout management and the need for guaranteed public access to trout waters in the state must be recognized and resolved. The first may be solved by legislative action guaranteeing the availability of water for fish. The second can be solved by the reservation of public-owned lands for fishing recreation by purchase of right-of-way to public lands, or gift of fishing lands and areas for public use by our people. The additional financial burden of an access purchase program must be backed by the desire of interested people to support the increased cost in license fees for fishing in Montana. If an access program is to be carried out that entails the expenditure of money, this money must be provided from license revenues for fishing.

This, then, reveals that a most important function on the part of our legislature is to guarantee this recreational resource for the people of Montana and the future generations. It can only be done by long range planning and the necessary financial backing. The legislature by its action of previous years has set up a program for pollution control. This program has developed and is working in the interest of the people of Montana.

The following resume of the fishery management program and the Montana fish hatchery system is presented for your information, and if there are any questions, may we suggest that they be referred to the people who are continually working at these problems and are familiar with the answers and information that may be valuable to you.

Department personnel work in knee-deep muck during a rehabilitation project.

GENERAL FISHERIES MANAGEMENT

General fisheries management covers all aspects of fisheries outside of fish propagation. It is concerned with fish losses, including those caused by the shrinking of fish habitat, with the proper use of hatchery fish, with stream and lake improvement and rough fish eradication, with fishermen access, with the creation of new fishing waters, and with investigation of management problems. This is the work of the fishery biologist. Much of it is supported with federal aid funds. Some of the more detailed studies are made in cooperation with the Zoology and Entomology Department of Montana State College.

The following is a summary of representative projects undertaken during the biennium.

Lake and Stream Survey

Sometimes the remark is made "the state has been surveying waters for five years now, how come the surveys are not all completed?" True, biological surveys have been conducted on many Montana waters already. However, only a beginning has been made, particularly when the many remote mountain lakes and smaller streams are considered. Obviously, a knowledge of the characteristics of each water and its fish population is essential to proper management. In addition, fisheries surveys are the backbone of the stream classification undertaken by the Montana Pollution Council in establishing adequate pollution control standards. Follow-up surveys are even more important than initial surveys since changes can be detected, management measures evaluated, and remedies applied as needed.

A survey of particular importance during the biennium was one made in connection with Nine Mile Prairie Reservoir on the Blackfoot River, a large reservoir planned by the U. S. Bureau of Reclamation. Chemical treatment of the site before impoundment is being considered to eliminate rough fish. Such questions arose as: What is the distribution of rough fish in the drainage; that is, how many miles of stream and how many lakes must be treated? Are fish barriers needed to prevent recontamination from rough fish downstream? What will be the cost of this work including replanting? The fisheries survey in 1957 disclosed 135 miles of stream and at least 15 lakes would have to be treated. Two fish barriers are needed and nearly 12,000,000 rainbow trout required for replanting. The total cost for fisheries work to minimize damage from construction of the reservoir is $1,125,000.00. This cost estimate has been furnished to the constructing agency for inclusion with project costs.

Lake and Stream Rehabilitation

Rehabilitation, as popularly used by fishery workers, means chemically eradicating all fish from a body of water that is over-run with undesirable species. After the chemicals have dissipated, game fish are planted. In 1957 alone, 15 lakes were treated and comprised a total of 4,500 surface acres of water when full. Results have often been spectacular. Small fish planted in these waters often grow as fast as they do in hatcheries. Growths of an inch a month are not unusual. Use of this tool is limited by its cost. The average cost for the chemicals alone in 1957 was $1.77 per acre foot.

Follow-up studies on the Marias Drainage which was chemically treated in 1955 showed that the primary purpose of eliminating carp and goldeye from the drainage above Tiber Dam was accomplished. At the time of this writing no carp or goldeye have been found and

fishing on Tiber Reservoir has been excellent. A study is being continued so the effective life of the Marias rehabilitation project can be determined. We must determine on the basis of fishing days provided, whether or not we are justified in treating a lake or a drainage that will be recontaminated in five or ten years.

A recent innovation in rehabilitation work is the use of fish barriers—low dams creating falls—to divide a drainage into smaller management units. This permits progressive rehabilitation downstream from the headwaters without danger of rough fish re-invading from below. The smaller management units can be more thoroughly treated with chemicals and managed individually. Late in 1957 a fish barrier was constructed just below the outlet of Rainy Lake in the Clearwater River Drainage. This is the first such fish barrier used in Montana.

Evaluating Hatchery Fish

The fish hatchery is the most expensive tool of fish management. During the biennium over half the fisheries dollar was spent on raising and planting trout. It is imperative that we learn to use these fish so they will do the most good. It must be realized that where the habitat is suitable fish populations can maintain themselves. In fact, the bulk of the fish caught in Montana today are wild fish.

In using hatchery fish, then, the actual need, suitability of the habitat and return to the creel must be considered. This requires continuous study. For example, a three-year study on six lakes in the Clearwater Drainage, completed during the biennium, was used to evaluate the different types of cutthroat trout planting, which were in use on these waters. It disclosed that even the heaviest type of cutthroat planting that we could afford was ineffective in increasing the numbers of cutthroat trout in these lakes. For practical purposes, every fish caught was a naturally spawned fish. As a result all the planting has been stopped. This represents a yearly saving of over 750,000 cutthroat trout, both fry and fingerlings.

Consequently a new management plan was inaugurated on the Clearwater Drainage with the construction of the fish barrier below the outlet of Rainy Lake. The three lakes and the complex of streams upstream from the barrier are scheduled to be rehabilitated in the fall of 1958 and replanted with rainbow trout the following spring or summer. If this proves successful, additional barriers will be built downstream allowing the entire drainage to be rehabilitated as described in the section "Lake and Stream Rehabilitation."

Pictured here is one type of tank used for aerial fish planting.

Two other studies during the biennium were on Flint Creek, the department's test stream near Philipsburg, and Smith Lake rearing pond near Whitefish. It was demonstrated on these waters that each stream and lake has a carrying capacity in pounds of fish regardless of numbers. For Flint Creek (when the flow was maintained at no less than 8 cubic feet per second) this was 210 pounds per surface acre and for Smith Lake Rearing Pond, 33 pounds per surface acre. Planting in excess of the carrying capacity resulted in slower growth, skinny fish, lower overwinter survival, and only temporary surpluses. It was also found on the test stream that transporting fish longer than six hours in certain fish tanks affected their survival. In still another test, fish raised on one diet survived twice as well as fish on another diet. Such studies are continuing and promise much needed information on hatchery techniques, planting rates, and survival of hatchery fish.

Pollution Control

Starting in 1957, a department fishery biologist was assigned full time to work in liaison with the State Board of Health and Pollution Council on pollution control and abatement in relation to fish and wildlife. Much of the initial work will be classification of Montana streams as to use. These uses are drinking water, rec-

reation, aquatic life (including fish), agricultural and industrial. A considerable portion of the biologist's time is spent working with new industries on their pollution abatement problems. To date the major effort has been on the Clark Fork of the Columbia Drainage.

Pulp mill wastes often have a high dissolved oxygen demand and may contain caustic compounds. Note foamy condition of water.

Fisherman Access

Obviously no fish management measure is worthwhile unless fishermen can get to the water. The stand might be taken that Montana has no great access problem at this time so it should be of no concern. Such an attitude is folly, for access problems are steadily growing and it can be anticipated that in ten to fifteen years Montana will be in the same situation as more heavily populated states — in desperate need of fishing access but faced with "house lot" prices. The approach today is to secure access through public lands whenever possible. Since 1951 a survey of state and federal lands to determine their value for fishing access has been in progress. As a result, to date the Bureau of Land Management has been requested to retain 99,000 acres and the State Board of Land Commissioners has been requested to retain an additional 152,000 acres so waters bordering these lands will be accessible to the public. It would be desirable if sites with high value as fishing access could be actually set aside for this purpose. There would be no cost involved. The lands would be administered by the same agency as at present, and leased for agricultural use, but they could not be sold.

Some of the finest agricultural land in the state is along river bottoms. Lake frontage has always been desirable real estate. As a result many important fishing waters are completely on private land. During the biennium five tracts comprising 3-3 4 miles of stream frontage have been purchased. Also, 1.1 miles of frontage was purchased on three lakes. These lakes have a total of 150 surface acres. Such purchases are handled by the Department Lands Agent.

Water Purchase

Through a joint agreement between the Montana Fish and Game Commission, the State Water Conservation Board, the Western Montana Fish and Game Association, and the Ravalli County Fish and Game Association. 5,000 acre feet of water will be available annually to the Fish and Game Department from the West Fork Dam in Ravalli County. The water which was purchased in early 1958 is in excess of agricultural needs. It will be released into the Bitterroot River during summer months when heavy irrigation draws the streams to a dangerous low for fish. This is the first time in Montana that water has been specifically reserved for fishing. The need arose because there is no provision in the state laws for minimum stream flows to preserve fish life.

Creel Census

In fish management the "proof of the pudding" is in the creel. The statewide creel census shows that in 1957 the average angler contacted by State Fish and Game Wardens caught about 1 fish per hour, while the average for fishermen voluntarily filling in the department's Fisherman's Log was 3 fish every two hours. On the basis that a fish every 2 hours is good fishing—fishing in Montana can be considered excellent.

The statewide creel census has been in operation since 1948. Information gathered by wardens, guides and outfitters, and received from sportsmen in Fisherman's Logs is tabulated by electronic business machines. This information is used by the District Fisheries Managers in managing the State's waters.

THE MONTANA FISH HATCHERY SYSTEM

Cost of fish production has become of prime concern to fish culturists as well as to sportsmen. Departments of the various states

and the Fish and Wildlife Service have each had their own system of cost analysis. Because of the differences in cost accounting breakdown it has been impossible to compare performance statistics of the different organizations. The Federal Fish and Wildlife Service has spent many years in developing an annual report system which would adequately present all phases of the hatchery operations.

Because the Federal Service operates hatcheries in all sections of the United States, the Montana Department feels they should take the lead in developing cost accounting and performance evaluation statistics. We have therefore adopted the federal annual hatchery report on a trial basis, and each foreman has prepared the report for the calendar year 1957. Copies of the reports may be inspected by the public at the Helena office or at the various hatcheries.

Under the Federal annual reporting system expenditures for items such as new construction, "park" maintenance, experimental work, hatchery assistance given other activities in the agency, central office overhead and amortization of the facilities are not included in the cost per pound of fish produced. Labor and funds used specifically for rearing fish were charged to fish production.

Because the Montana fish hatchery annual report was not begun until 1957, this type of breakdown is not available for the calendar year 1956. In 1957 approximately 50 per cent of the state hatcheries expenditures were used for fish production (see table 1).

It will be noted that there is considerable variation in the cost per pound of fish produced at the various stations. This is invariably a reflection of the size of fish being reared. For instance in 1957 it cost 53 cents per pound to rear fish at the Bluewater hatchery while at Somers it cost $2.31 per pound. The Bluewater fish poundage was predominately large catchable sized rainbow trout, while the Somers fish production was almost exclusively small fry and fingerlings.

Catchable sized trout are popular with most sportsmen in spite of the relatively high cost per fish. They are planted in heavily fished accessible areas of Montana streams. The smaller fry and fingerlings though more expensive by the pound are providing an economical means of re-establishing desirable game fish in rehabilitated lakes and streams.

Table No. 2 shows number, pounds and species planted by all Montana and Federal hatcheries in Montana for the years 1956 and 1957.

1957

TABLE NO. 1

	Numbers	Pounds Planted	Cost Per Pound of Fish Produced	Percentage of Funds Used For Production
Anaconda	352,955	23,462	.89	71%
Arlee	1,115,085	24,415	.89	62%
Big Timber	628,793	6,048	1.15	52%
Bluewater	205,467	31,818	.53	61%
Emigrant	336,263	9,287	.92	43%
Great Falls	4,128,511	43,575	.91	49%
Hamilton	72,355	4,542	2.14	58%
Lewistown	829,157	48,031	.55	70%
Libby	106,595	3,930	2.00	36%
McNeil	1,349,000	36	17.75	28%
Polson	2,282,548	546	2.86	28%
Somers	3,142,554	2,247	2.31	40%

TABLE NO. 2

Fish Planted by State and Federal Hatcheries in Montana

Species	Size	Jan. 1—Dec. 31—1956 Number	Pounds	Jan. 1—Dec. 31—1957 Number	Pounds
Rainbow	Fry	807,168	643	76,320	36
	1	1,233,658	990	379,677	1,055
	2	8,899,854	21,517	5,158,862	14,914
	3	152,170	1,803	577,398	4,786
	4	174,940	5,108	27,897	1,261
	5	108,338	6,305	46,345	4,213
	6	144,130	15,106	244,421	23,220
	Legal	813,854	239,705	1,193,855	341,816
	Adult	131,710	34,330	162,543	48,396
Cutthroat	Fry	2,878,198	663	1,410,070	290
	1	517,782	307	629,224	487
	2	557,105	1,047	694,369	1,178
	3	111,282	850	283,817	3,303
	4	49,590	868	260,592	4,097
	5	20,255	1,340	13,760	320
	6	32,205	2,205	59,876	5,591
	Legal	11,420	2,005	24,828	3,271
	Adult	1,839	4,122	880	2,676
Eastern Brook	4	9,828	252	15,861	909
Brown Trout	3	11,510	176		
Mackinaw	1	153,318	61	94,000	70
Golden Trout	Fry			2,000	1/2
	1	20,862	20		
	3	1,328	16		
Sockeye	Fry	2,364,382	895	2,597,011	614
	eggs			102,080	21
	1	39,437	8	209,356	49
Grayling	Fry	3,286,950	101	1,133,183	56
	4			10,022	341
	5	10,395	462	8,790	409
	Legal	20,000	2,711	13,747	786
Bass	3	306,900	2,692	85,110	989
	5	10,200	183		
Sunfish	1			974,400	309
	2	100,010	475		
Walleye	Fry	1,773,875	35	2,238,000	39
Northern Pike	Fry	639,720	18	120,000	4
	Adult	20	60		
TOTALS		25,396,233	347,079	18,848,299	465,506.5

STATISTICS

1956 LICENSE SALES BY COUNTIES

County	Resident Bird & Fish	Resident Big Game	Tourist Fishing	Non-Res. Fishing	Non-Res. Bird	Non-Res. Big Game	Bow and Arrow	Non-Res. Deer	Non-Res. Antelope	Mountain Goat	Special Permits	TOTALS
Beaverhead	2,843	1,890	3,521	307	3	137	27	79	.....	.....	.....	8,807
Big Horn	1,890	1,145	176	43	2	3	.....	125	34	.....	.....	3,418
Blaine	1,451	884	23	5	.....	.....	7	.....	.....	.....	.....	2,370
Broadwater	1,190	748	209	19	1	14	10	39	.....	.....	.....	2,230
Carbon	2,788	1,737	475	93	1	19	10	10	.....	.....	.....	5,133
Carter	703	676	17	3	2	44	2	1,035	1,040	.....	.....	3,522
Cascade	19,165	10,963	1,138	198	24	122	187	124	.....	18	.....	31,939
Choteau	1,878	1,287	70	10	.....	2	5	2	.....	.....	.....	3,254
Custer	2,808	2,206	51	8	2	112	23	1,382	1,762	.....	.....	8,354
Daniels	798	501	9	.....	.....	.....	4	.....	.....	.....	.....	1,312
Dawson	2,822	2,070	48	11	2	17	25	233	118	.....	.....	5,346
Deer Lodge	4,838	2,668	644	65	1	24	40	.....	.....	.....	.....	8,280
Fallon	977	830	8	9	.....	65	7	1,008	1,082	.....	.....	3,986
Fergus	5,259	4,184	457	57	7	59	78	210	.....	.....	.....	10,311
Flathead	12,570	7,801	2,839	329	8	132	95	.....	.....	109	.....	23,883
Gallatin	8,672	5,745	12,409	1,258	8	252	73	139	.....	.....	.....	28,556
Garfield	361	312	7	.....	.....	.....	.....	107	80	.....	.....	867
Glacier	2,442	1,158	285	43	5	23	16	.....	.....	7	.....	3,979
Golden Valley	432	325	19	2	.....	.....	4	.....	.....	.....	.....	782
Granite	1,200	908	153	18	.....	17	5	.....	.....	.....	.....	2,301
Hill	4,382	2,402	97	18	9	13	27	.....	.....	.....	.....	6,948
Jefferson	1,172	824	304	33	.....	19	5	4	.....	.....	.....	2,361
Judith Basin	1,063	784	82	6	.....	8	5	16	.....	.....	.....	1,964
Lake	3,801	1,809	2,861	152	24	19	1	.....	.....	13	.....	8,680
Lewis Clark	8,927	5,374	1,153	162	13	812	92	303	260	48	.....	17,144
Liberty	587	341	17	.....	.....	.....	9	.....	.....	.....	.....	954
Lincoln	5,004	3,400	1,157	191	2	24	43	.....	.....	14	.....	9,835
Madison	2,291	1,392	3,021	206	5	86	9	42	.....	.....	.....	7,052
McCone	653	534	10	.....	.....	.....	2	34	20	.....	.....	1,253
Meagher	1,116	865	153	14	.....	26	.....	97	.....	10	.....	2,281
Mineral	1,217	989	733	415	21	25	4	.....	.....	.....	.....	3,404

1956 LICENSE SALES BY COUNTIES—(Continued)

County	Resident Bird & Fish	Resident Big Game	Tourist Fishing	Non-Res. Fishing	Non-Res. Bird	Non-Res. Big Game	Bow and Arrow	Non-Res. Deer	Non-Res. Antelope	Mountain Goat	Special Permits	TOTALS
Missoula	12,445	7,743	2,033	266	26	192	74			49		22,828
Musselshell	1,608	1,225	133	20		7	12	19				3,024
Park	4,483	3,240	1,209	126	3	147	31	129		8		9,376
Petroleum	295	266	9	2				24	1			597
Phillips	1,714	1,237	46	1	6	10	8					3,022
Pondera	2,446	1,477	139	35	5	5	54	3		4		4,168
Powder River	628	564	13	3		30	5	499	429			2,171
Powell	2,473	1,843	255	37	2	63	9			6		4,688
Prairie	471	394	11				1	96	67			1,040
Ravalli	4,133	2,745	1,124	117	1	144	3					8,267
Richland	2,034	1,396	30	13	1		37					3,511
Roosevelt	2,405	1,533	46	9	15	8	30					4,046
Rosebud	1,223	977	28	4	3	4	5	308	126			2,678
Sanders	3,206	2,385	719	201	20	45	11			21		6,608
Sheridan	1,095	727	2		6							1,830
Silver Bow	14,173	6,041	1,168	156	1	81	61					22,281
Stillwater	2,346	1,575	321	40	1	12	6	76				4,377
Sweet Grass	1,373	1,026	329	50		17	4	137		39		2,975
Teton	2,384	1,302	169	28	7	23	31	18		14		3,976
Toole	1,942	1,213	48	36	5	7	45					3,296
Treasure	305	253	6					19				583
Valley	3,365	2,195	169	57	13	14	31					5,844
Wheatland	1,285	924	174	16		13	17	73		6		2,508
Wibaux	312	260		11				40				623
Yellowstone	17,637	11,133	1,001	187	13	78	163	15	14			30,241
Special Moose											405	405
Special Sheep											269	269
Special Goat (Helena Office)											485	485
TOTALS	191,081	121,026	41,328	5,090	268	2,974	1,453	6,445	5,033	366	1,159	376,223

1957 LICENSE SALES BY COUNTIES

County	Resident Bird & Fish	Resident Big Game	Tourist Fishing	Non-Res. Fishing	Non-Res. Bird	Non-Res. Big Game	Bow and Arrow	Mountain Goat	Non-Res. Deer	Non-Res. Antelope	Special Permits	TOTALS
Beaverhead	2,855	1,884	3,307	295	5	166	38	.....	74	.....	.....	8,624
Big Horn	1,719	1,106	133	54	6	4	6	.....	60	.....	.....	3,088
Blaine	1,493	935	45	11	.....	1	19	.....	.....	.....	.....	2,504
Broadwater	1,111	717	184	25	.....	13	10	.....	.....	.....	.....	2,060
Carbon	2,464	1,531	406	74	2	19	11	.....	.....	.....	.....	4,507
Carter	608	596	12	2	.....	19	5	.....	.....	.....	.....	1,242
Cascade	19,449	10,845	1,416	278	17	132	259	44	113	.....	.....	32,553
Choteau	1,887	1,139	115	20	1	4	11	.....	.....	.....	.....	3,177
Custer	2,587	2,027	46	15	.....	67	41	.....	447	.....	.....	5,230
Daniels	744	494	5	1	.....	.....	.....	.....	.....	.....	.....	1,244
Dawson	2,757	2,096	37	13	.....	4	31	.....	40	.....	.....	4,978
Deer Lodge	4,849	2,733	643	86	1	20	33	.....	.....	.....	.....	8,365
Fallon	869	742	8	5	.....	13	7	.....	.....	.....	.....	1,644
Fergus	4,836	3,784	450	58	7	54	94	.....	892	.....	.....	10,175
Flathead	12,397	8,215	2,938	371	7	93	96	111	.....	.....	.....	24,228
Gallatin	8,670	5,340	11,967	1,326	8	401	97	.....	185	.....	.....	27,994
Garfield	337	303	10	1	.....	.....	.....	.....	260	.....	.....	911
Glacier	2,390	1,215	362	73	5	36	29	2	2	.....	.....	4,120
Golden Valley	391	302	16	3	.....	2	1	.....	.....	.....	.....	715
Granite	1,186	855	151	23	.....	15	.....	.....	.....	.....	.....	2,230
Hill	4,749	2,523	261	39	3	13	37	.....	.....	.....	.....	7,625
Jefferson	1,141	774	262	17	.....	29	5	.....	.....	.....	.....	2,228
Judith Basin	993	780	90	14	.....	10	2	.....	32	.....	.....	1,921
Lake	3,797	1,871	2,648	172	23	24	8	19	.....	.....	.....	8,562
Lewis & Clark	8,733	5,444	1,082	166	6	1,385	146	13	1,970	2,895	.....	21,849
Liberty	1,183	383	174	44	.....	.....	23	.....	.....	.....	.....	1,807
Lincoln	4,725	3,342	1,258	176	3	33	58	18	.....	.....	.....	9,613
Madison	2,147	1,379	2,948	174	12	107	10	.....	74	.....	.....	6,851
McCone	725	620	8	1	.....	7	8	.....	10	.....	.....	1,379

1957 LICENSE SALES BY COUNTIES—(Continued)

County	Resident Bird & Fish	Resident Big Game	Tourist Fishing	Non-Res. Fishing	Non-Res. Bird	Non-Res. Big Game	Bow and Arrow	Mountain Goat	Non-Res. Deer	Non-Res. Antelope	Special Permits	TOTALS
Meagher	1,070	847	181	23		43	2		85			2,251
Mineral	1,200	1,014	759	544	14	59	2					3,592
Missoula	12,438	7,703	2,155	333	45	256	64	84				23,078
Musselshell	1,433	1,032	93	15		11	7		20			2,611
Park	4,581	2,982	1,399	165	1	138	26		86			9,378
Petroleum	213	191	5									409
Phillips	1,665	1,245	33	8	4	1	6					2,962
Pondera	2,642	1,525	207	31	2	12	71	8	18			4,516
Powder River	570	497	13	6		24	2		150			1,262
Powell	2,392	1,734	266	58	1	66	27	4				4,548
Prairie	464	426	10	1		2	13		30			946
Ravalli	3,995	2,668	1,172	105	3	156	2					8,101
Richland	2,042	1,490	13	7	9	1	47					3,618
Roosevelt	2,254	1,604	42	9	16	19	27					3,971
Rosebud	1,139	897	30	4	1	2	2		218			2,293
Sanders	3,362	2,508	779	176	23	40	20	13				6,921
Sheridan	1,111	774	1	1	4	4						1,895
Silver Bow	13,259	6,300	1,052	152	4	71	85		34			20,857
Stillwater	2,157	1,396	353	23		33	20		59			4,041
Sweet Grass	1,330	930	351	98		39	13		56			2,817
Teton	2,288	1,454	155	23	7	26	39	17	12			4,021
Toole	2,410	1,177	454	130	3	5	46					4,225
Treasure	270	238	4	1					20			533
Valley	3,592	2,377	155	46	13	12	74					6,269
Wheatland	1,188	857	151	17		25	28					2,266
Wibaux	277	239	3	13								532
Yellowstone	16,914	10,246	1,051	179	21	58	221		82			28,772
Special Moose											411	411
Special Sheep											195	195
Special Goat											731	731
TOTALS	188,048	118,235	41,869	5,705	277	3,774	1,929	339	5,038	2,895	1,337	369,446

MONTANA HUNTING AND FISHING LICENSE SALES
1946 Through 1957

LICENSE	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957
Resident Bird & Fish	140,640	140,327	152,581	160,484	159,284	170,449	183,770	181,560	186,395	189,449	191,081	188,048
Resident Big Game	74,316	71,819	77,390	79,329	87,261	100,740	116,566	117,984	121,712	124,932	121,026	118,235
Resident Sportsmen	1,712											
Non-Resident 6-Day Fishing	17,490	17,651	20,135	23,423	23,664	24,790	27,940	31,295	33,231	36,671	41,328	41,869
Non-Resident Fishing	4,351	3,567	3,863	3,994	3,741	4,385	5,017	4,080	4,005	4,134	5,090	5,705
Non-Resident Bird	292	121	163	184	124	216	262	149	201	242	268	277
Non-Resident Big Game	2,907	954	1,074	754	897	1,245	1,615	1,607	1,547	2,180	2,974	3,774
Alien Bird	2											
Alien Fishing	95											
Alien Big Game	4											
Bow and Arrow								535	715	841	1,453	1,929
Special Antelope	2,424	2,854	2,652	3,932	8,345	9,272	18,622	23,677	20,886			
Special Moose	90	95	80	82	76	105	211	142	192	343	405	411
Special Elk		264	270	185	245	357	341					
Special Deer		200	93	877	1,513	1,254	4,270					
Special Mountain Sheep								30	53	58	269	195
Special Mountain Goat								50	100	225	851	1,070
Special Buffalo								3	3			
Non-Resident Deer										2,623	6,445	5,038
Non-Resident Antelope										3,495	5,033	2,895
TOTALS	244,323	237,852	258,301	273,244	285,150	312,813	358,614	361,112	369,040	365,193	376,223	369,446

Montana State Fish and Game Department

STATEMENT OF INCOME AND EXPENDITURES, TWELVE-MONTH PERIOD

May 1, 1956, Through April 30, 1957

	TOTAL INCOME		COLLECTIONS		P. R. REIMB.		D. J. REIMB.		EXPENDITURES	
	May 1, 1955 April 30, 1956	May 1, 1956 April 30, 1957	May 1, 1955 April 30, 1956	May 1, 1956 April 30, 1957	May 1, 1955 April 30, 1956	May 1, 1956 April 30, 1957	May 1, 1955 April 30, 1956	May 1, 1956 April 30, 1957	May 1, 1955 April 30, 1956	May 1, 1956 April 30, 1957
May	$ 124,181.70	$ 83,068.39	$ 35,268.63	$ 34,244.20	$ 76,298.48	$ 34,008.66	$ 12,614.59	$ 14,815.53	$ 118,876.22	$ 267,862.83
June	279,282.16	272,010.73	204,596.40	225,956.63	69,160.82	35,865.31	5,524.94	10,188.79	273,763.71	247,964.55
July	233,251.69	194,631.32	144,468.35	184,699.30	84,538.85	9,678.75	4,244.49	253.27	45,262.93	53,997.70
Aug.	161,533.75	260,758.80	161,308.18	247,114.99		9,693.89	225.57	3,949.92	149,657.77	216,797.80
Sept.	178,622.80	136,429.40	178,622.80	136,429.40					139,456.69	191,002.31
Oct.	225,515.17	254,146.91	168,877.75	186,229.25	24,000.00	67,016.29	32,637.42	901.37	123,703.71	157,754.72
Nov.	291,093.68	597,329.39	281,146.80	438,069.24	1,397.25	148,124.46	8,549.63	11,135.69	183,426.03	159,949.24
Dec.	107,024.19	151,388.14	107,024.19	135,686.03		4,935.14		10,766.97	123,325.72	189,839.60
Jan.	61,833.24	146,746.15	51,685.30	56,027.53		76,305.28	10,147.94	14,413.34	135,693.49	256,464.78
Feb.	147,647.64	38,552.82	44,445.10	34,890.66	103,202.54	3,274.74		387.42	133,580.23	164,194.67
Mar.	171,743.36	126,036.21	134,823.54	56,865.77	29,839.30	54,400.85	7,080.52	14,769.59	154,825.23	165,747.96
April	44,419.55	65,517.24	19,244.95	28,470.13	25,174.60	32,550.82		4,496.29	118,379.89	146,087.90
TOTAL	$2,026,148.93	$2,326,615.50	$1,531,511.99	$1,764,683.13	$ 413,611.84	$ 475,854.19	$ 81,025.10	$ 86,078.18	$1,609,951.62	$2,217,664.06

Balance April 30, 1956	$ 583,152.05
Income May 1, 1956-April 30, 1957	2,326,615.50
Total	$2,909,767.55
Expenditures May 1, 1956-Apr. 30, 1957	2,217,664.06
Balance	$ 692,103.49
Bond Investments	$ 500,000.00

Montana State Fish and Game Department

STATEMENT OF INCOME AND EXPENDITURES, TWELVE-MONTH PERIOD

May 1, 1957, Through April 30, 1958

	TOTAL INCOME		COLLECTIONS		P. R. REIMB.		D. J. REIMB.		EXPENDITURES	
	May 1, 1956 April 30, 1957	May 1, 1957 April 30, 1958	May 1, 1956 April 30, 1957	May 1, 1957 April 30, 1958	May 1, 1956 April 30, 1957	May 1, 1957 April 30, 1958	May 1, 1956 April 30, 1957	May 1, 1957 April 30, 1958	May 1, 1956 April 30, 1957	May 1, 1957 April 30, 1958
May	$ 83,068.39	$ 61,218.61	$ 34,244.20	$ 34,634.00	$ 34,008.66	$ 21,022.76	$ 14,815.53	$ 5,561.85	$ 267,862.83	$ 89,598.35
June	272,010.73	291,348.42	225,956.63	227,679.43	35,865.31	58,671.20	10,188.79	4,997.79	247,964.55	331,789.29
July	194,631.32	204,061.72	184,699.30	203,538.35	9,678.75	523.37	253.27		53,997.70	108,288.77
Aug.	260,758.80	246,710.78	247,114.99	246,518.63	9,693.89	192.15	3,949.92		216,797.80	152,977.52
Sept.	136,429.40	264,706.30	136,429.40	184,543.47		59,196.36		20,966.47	191,002.31	247,959.79
Oct.	254,146.91	228,605.83	186,229.25	220,569.93	67,016.29	8,035.90	901.37		157,754.72	238,788.39
Nov.	597,329.39	479,546.76	438,069.24	351,222.97	148,124.46	112,050.66	11,135.69	16,273.13	159,949.24	188,345.09
Dec.	151,388.14	178,783.69	135,686.03	152,932.88	4,935.14	2,643.74	10,766.97	23,207.07	189,839.60	229,619.38
Jan.	146,746.15	147,327.95	56,027.53	61,918.51	76,305.28	75,661.37	14,413.34	9,748.07	256,464.78	211,597.28
Feb.	38,552.82	77,317.11	34,890.66	35,597.77	3,274.74	31,660.44	387.42	10,058.90	164,194.67	166,235.10
March	126,036.21	139,032.72	56,865.77	99,238.03	54,400.85	34,591.47	14,769.59	5,203.22	165,747.96	277,016.91
April	65,517.24	20,770.17	28,470.13	20,770.17	32,550.82		4,496.29		146,087.80	184,611.81
TOTAL	$2,326,615.50	$2,339,430.06	$1,764,683.13	$1,839,164.14	$ 475,854.19	$ 404,249.42	$ 86,078.18	$ 96,016.50	$2,217,663.96	$2,426,827.68

Balance April 30, 1957	$ 692,103.49
Income May 1, 1957-Apr. 30, 1958	2,339,430.06
Total	$3,031,533.55
Expenditures May 1, 1957-Apr. 30, 1958	$2,426,827.68
Operating Balance — May 1, 1958	604,705.87
Bond Investments	$ 500,000.00
Funds Available	$1,104,705.87

COMPARISON RECAP

	1956-57	1957-58	Increase	Decrease
Income				
May thru Apr.	$2,326,615.50	$2,339,430.06	$ 12,814.56	
Collections				
May thru Apr.	1,764,683.13	1,839,164.14	74,481.01	
Expenditures				
May thru Apr.	2,217,663.96	2,426,827.68	209,163.72	

MONTANA FISH AND GAME DEPARTMENT

STATEMENT OF INCOME

MAY 1, 1956-APRIL 30, 1957

Hunting and Fishing Licenses:

Resident Bird and Fish	191,081	@	$ 3.00	$ 573,243.00	
Resident Big Game	121,026	@	3.00	363,078.00	
Non-Resident 6 Day Fishing	41,328	@	3.00	123,984.00	
Non-Resident Fishing	5,000	@	10.00	50,900.00	
Non-Resident Bird	268	@	25.00	6,700.00	
Non-Resident Big Game	2,974	@	100.00	297,400.00	
Shipping Permits	6,025	@	.60	3,615.00	
Certificates of Identification	2,074	@	.50	1,037.00	
Bow & Arrow	1,453	@	2.00	2,906.00	
Fur Shipping Permits	222	@	.60	133.20	
Moose Permits	405	@	25.00	10,125.00	
Mountain Sheep	269	@	15.00	4,035.00	
Mountain Goat	851	@	5.00	4,255.00	
Non-Resident Deer	6,445	@	20.00	128,900.00	
Non-Resident Antelope	5,033	@	20.00	100,660.00	
				$1,670,971.20	
Less Dealers' Fees				37,754.10	$1,633,217.10
1954 Account Paid					2.90
1955 Accounts Paid					7,977.90
Total Income from Hunting & Fishing License Sales					$1,641,197.90

Miscellaneous Sales:

General Trappers	1,091	@	10.00	$ 10,910.00	
Land Owner Trappers	298	@	1.00	298.00	
Beaver Tags	16,138	@	.50	8,069.00	
Beaver Permits	382			5,573.00	
	(Permit for ten beaver $10.00)				
	(Each additional beaver 1.00)				
Outfitters	280	@	10.00	2,800.00	
Resident Fur Dealer	41	@	10.00	410.00	
Taxidermist	16	@	15.00	240.00	
General Season Beaver Royalties	9,325	@	1.00	9,325.00	
Fur Dealer Agent	28	@	10.00	280.00	
Non-Resident Fur Dealer	8	@	50.00	400.00	
Minnow Seining Permits	11	@	10.00	110.00	
Additional Beaver Granted	226	@	1.00	226.00	$ 38,041.00

Miscellaneous Revenue:

Fines	$ 46,619.00	
Sale of Confiscated Fish & Meats	3,490.06	
Other Revenue	34,450.59	
Sale of Confiscated Hides and Furs	272.08	
Royalty on Live Beaver Sold	6.50	$84,844.23
		$1,764,683.13
Pittman Robertson Income by Federal Reimbursement		475,854.19
Dingell-Johnson Income by Federal Reimbursement		86,078.18
TOTAL INCOME TO DEPARTMENT FOR PERIOD MAY 1, 1956-APRIL 30, 1957		$2,326,615.50

MONTANA FISH AND GAME DEPARTMENT
STATEMENT OF INCOME
MAY 1, 1957-APRIL 30, 1958

Hunting and Fishing Licenses:					
Resident Bird & Fish	188,048	@	$ 3.00	$ 564,144.00	
Resident Big Game	118,235	@	3.00	354,705.00	
Non-Resident 6-Day Fishing	41,869	@	3.00	125,607.00	
Non-Resident Fishing	5,705	@	10.00	57,050.00	
Non-Resident Bird	277	@	25.00	6,925.00	
Non-Resident Big Game	3,774	@	100.00	377,400.00	
Shipping Permits	6,478	@	.60	3,886.80	
Certificates of Identification	2,225	@	.50	1,112.50	
Bow and Arrow	1,929	@	2.00	3,858.00	
Fur Shipping Permits	159	@	.60	95.40	
Non-Resident Deer	5,038	@	20.00	100,760.00	
Non-Resident Antelope	2,895	@	20.00	57,900.00	
Mountain Goat	1,070	@	5.00	5,350.00	
Moose Permits	411	@	25.00	10,275.00	
Mountain Sheep	195	@	15.00	2,925.00	
				$1,671,993.70	
Less Dealers' Fees				36,841.40	$1,635,152.30
1956 Accounts Paid					5,170.10
Refund due Gregoire					+1.90
Total Income from Hunting & Fishing License Sales					$1,640,324.30
Miscellaneous Sales:					
General Trappers	1,032	@	10.00	10,320.00	
Land Owner Trappers	226	@	1.00	226.00	
Beaver Tags	15,429	@	.50	7,714.50	
Beaver Permits	545			2,959.00	
Outfitters	238	@	10.00	2,380.00	
Resident Fur Dealers	34	@	10.00	340.00	
Taxidermist Licenses	18	@	15.00	270.00	
General Season Beaver Royalties	409	@	1.00	409.00	
Fur Dealer Agent	26	@	10.00	260.00	
Non-Resident Fur Dealer	9	@	50.00	450.00	
Minnow Seining Permits	11	@	10.00	110.00	
Additional Beaver Granted	10	@	1.00	10.00	25,448.50
Miscellaneous Revenue:					
Fines				36,927.31	
Sale of Confiscated Fish & Meats				3,128.22	
Other Revenue				132,485.08	
Sale of Hides & Furs				99.60	
Royalty on Live Beaver Sold				8.00	
Rough Fish Sold — Fort Peck Lake				743.13	173,391.34
					$1,839,164.14
Pittman-Robertson Income by Federal Reimbursement					404,249.42
Dingell-Johnson Income by Federal Reimbursement					96,016.50
TOTAL INCOME TO DEPARTMENT FOR PERIOD MAY 1, 1957-APRIL 30, 1958					$2,339,430.06

DETAIL OF EXPENDITURES

For Fiscal Years Ending April 30, 1957, and April 30, 1958

	April 1957	April 1958
COMMISSIONERS		
Per Diem	$ 3,075.25	$ 3,922.50
Operation	6,860.18	8,904.30
TOTAL	$ 9,935.43	$ 12,826.80
ADMINISTRATION		
Salaries	$ 132,210.55	$ 142,306.74
Operation	43,340.08	52,914.22
Capital Expenditure	3,641.39	13,604.57
Repair & Replacement	946.49	1,781.93
TOTAL	$ 180,138.51	$ 210,607.46
MISCELLANEOUS ACCOUNTS		
Printing Licenses - Maps	$ 44,181.43	$ 32,670.46
Refunds	2,445.48	1,656.90
Appropriation to State Controller	7,628.87	3,232.05
Canyon Ferry Dam	718.59	479.90
Tiber Dam	3,988.84	1,175.64
River Basins Projects	756.66	11.40
Fishes of Montana		3,344.96
Search and Rescue		275.62
Miles City Goose Pasture		1,504.88
Land Agent		1,472.17
Extension Trapper		50.48
Game Damage	7,589.01	3,656.75
Turkey Transplanting (other than P.R.)	1,785.76	2,885.41
Elk Transplanting (other than P.R.)		7.54
Checking Stations (other than P.R.)		561.06
Bond Investment & Interest	100,441.96	441.96*
Bulk Gasoline and Oil Account	372.08	540.19*
TOTAL	$ 169,918.68	$ 52,012.07
INFORMATION AND EDUCATION		
Salaries	$ 26,798.26	$ 29,005.63
Operation	15,342.03	16,053.91
Capital Expenditures	11,888.13	5,363.80
Repair and Replacement	566.08	461.61
TOTAL	$ 54,594.50	$ 51,484.95

*Indicates Credit

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
HUNTER SAFETY PROGRAM		
Salaries	$	$ 6,623.72
Operation		9,339.75
Capital Expenditure		1,183.67
Repair and Replacement		21.30
TOTAL		$ 17,168.44
DISTRICT 4 EDUCATOR		
Salaries		$ 390.00
Operation		21.65
Capital Expenditure		
Repair and Replacement		
TOTAL		$ 411.65
APPROPRIATIONS		
Montana State University	$ 9,250.00	$ 9,500.00
Montana State College	7,500.00	9,000.00
Superintendent of Public Instruction		9,000.00
TOTAL	$ 16,750.00	$ 27,500.00
TOTAL INFORMATION & EDUCATION	$ 71,344.50	$ 96,565.04
PREDATOR CONTROL		
Salaries	$ 30,681.92	$ 30,528.66
Operation	10,501.83	6,942.62
Mountain Lion Bounties	4,250.00	2,350.00
Bobcat Bounties	3,280.00	2,786.00
Magpie and Crow Bounties	686.14	621.72
Capital Expenditure		
Repair and Replacement		
TOTAL	$ 49,399.89	$ 43,229.00
UNIVERSITY RESEARCH UNIT		
Salaries	$ 6,960.67	$ 8,446.39
Operation	2,890.17	1,961.91
Capital Expenditure	707.00	435.70
Repair and Replacement	1,116.40	406.64
TOTAL	$ 11,674.24	$ 11,250.64
AIRPLANE ACCOUNT		
Salaries	$ 1,368.88	$ 1,698.92
Operation	12,215.52	14,547.02
Capital Expenditure	12,915.00	
Repair and Replacement	13,513.16	4,774.70
*Credit for Airplane Rental	28,434.71*	30,976.03*
TOTAL	$ 11,577.85	$ 9,955.39*

*Indicates Credit

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
VEHICLE ACCOUNT		
Salaries		
Operation	$ 101,149.42	$ 91,541.25
Capital Expenditure	30,246.04	8,109.87
Repair and Replacement	82,735.58	122,195.92
*Credit for Vehicle Rental	204,819.50	218,698.42
TOTAL	$ 9,311.54	$ 3,148.62
ENFORCEMENT — District No. 1		
Salaries	$ 39,163.09	$ 41,656.70
Operation	21,237.22	24,713.34
Capital Expenditure	31,454.17	5,219.88
Repair and Replacement	503.70	467.63
TOTAL	$ 92,358.18	$ 72,057.55
ENFORCEMENT — District No. 2		
Salaries	$ 38,242.61	$ 40,742.40
Operation	25,208.23	25,250.97
Capital Expenditure	3,525.60	5,940.35
Repair and Replacement	581.03	1,072.89
TOTAL	$ 67,557.47	$ 73,006.61
ENFORCEMENT — District No. 3		
Salaries	$ 55,132.94	$ 60,330.52
Operation	35,533.64	35,464.25
Capital Expenditure	1,630.83	7,232.15
Repair and Replacement	1,037.22	435.17
TOTAL	$ 93,334.63	$ 103,462.09
ENFORCEMENT — District No. 4		
Salaries	$ 44,510.13	$ 48,052.52
Operation	26,693.19	29,347.59
Capital Expenditure	2,401.20	1,213.71
Repair and Replacement	1,808.21	576.33
TOTAL	$ 75,412.73	$ 79,190.15
ENFORCEMENT — District No. 5		
Salaries	$ 30,424.03	$ 37,703.33
Operation	17,796.84	20,219.13
Capital Expenditure	466.47	964.53
Repair and Replacement	40.35	169.09
TOTAL	$ 48,727.69	$ 59,056.08

*Indicates Credit

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
ENFORCEMENT — District No. 6		
Salaries	$ 26,549.40	$ 29,695.92
Operation	17,513.71	19,501.12
Capital Expenditure	1,376.82	1,670.95
Repair and Replacement	394.41	1,117.20
TOTAL	$ 45,834.34	$ 51,985.19
ENFORCEMENT — District No. 7		
Salaries	$ 26,817.80	$ 23,006.11
Operation	17,800.34	15,583.43
Capital Expenditure	26,225.62	2,014.38
Repair and Replacement	516.78	2,026.68
TOTAL	$ 71,360.54	$ 42,630.60
ENFORCEMENT — General		
Salaries	$ 1,838.94	$ 960.59
Operation	1,808.96	3,288.43
Capital Expenditure	25.68	579.85
Repair and Replacement		
TOTAL	$ 3,673.58	$ 4,828.87
TOTAL ENFORCEMENT	$ 498,259.16	$ 486,217.14
FISHERIES DIVISION:		
HATCHERIES		
ANACONDA		
Salaries	$ 19,934.15	$ 19,976.00
Operation	14,678.33	13,095.52
Capital Expenditure	12,978.84	651.74
Repair and Replacement	7,191.40	2,399.11
TOTAL	$ 54,782.72	$ 36,122.37
ARLEE		
Salaries	$ 14,016.40	$ 18,047.70
Operation	11,080.75	16,587.86
Capital Expenditure	1,597.37	105.33
Repair and Replacement	1,110.86	2,744.67
TOTAL	$ 27,805.38	$ 37,485.56
BLUEWATER		
Salaries	$ 14,674.13	$ 18,034.00
Operation	18,159.63	19,813.35
Capital Expenditure	27,113.17	911.42
Repair and Replacement	2,228.41	4,718.13
TOTAL	$ 62,175.34	$ 43,476.90

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
BIG TIMBER		
Salaries	$ 11,400.62	$ 9,656.07
Operation	6,068.59	8,752.53
Capital Expenditure	283.52	307.73
Repair and Replacement	483.15	543.81
TOTAL	$ 18,235.88	$ 19,260.14
EMIGRANT		
Salaries	$ 12,868.19	$ 14,762.92
Operation	7,825.26	5,121.36
Capital Expenditure	1,920.97	919.09
Repair and Replacement	989.65	1,286.87
TOTAL	$ 23,604.07	$ 22,090.24
GREAT FALLS		
Salaries	$ 16,544.38	$ 18,650.36
Operation	12,363.73	9,405.24
Capital Expenditure	1,430.31	3,454.78
Repair and Replacement	1,820.69	2,592.40
TOTAL	$ 32,159.11	$ 34,102.78
HAMILTON		
Salaries	$ 10,641.21	$ 11,732.93
Operation	6,261.71	6,169.56
Capital Expenditure	908.24	249.59
Repair and Replacement	588.79	971.83
TOTAL	$ 18,489.95	$ 19,123.91
LEWISTOWN		
Salaries	$ 18,023.69	$ 20,859.55
Operation	25,591.08	25,964.59
Capital Expenditure	23,557.51	13,701.76
Repair and Replacement	2,937.13	2,508.03
TOTAL	$ 70,109.41	$ 63,033.93
LIBBY		
Salaries	$ 9,928.47	$ 11,578.22
Operation	3,429.32	4,047.49
Capital Expenditure	1,844.10	404.00
Repair and Replacement	934.76	7,976.90
TOTAL	$ 16,136.65	$ 24,006.61

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
McNEIL		
Salaries	$ 1,850.87	$ 1,509.90
Operation	1,925.73	1,479.02
Capital Expenditure	46.57	
Repair and Replacement	139.27	170.39
TOTAL	$ 3,962.44	$ 3,159.31
OVANDO		
Salaries	$ 11.67	$ 113.27
Operation	41.92	224.13
Capital Expenditure		
Repair and Replacement		317.96
Refund from Fire Insurance		1,634.56*
TOTAL	$ 53.59	$ 979.20*
POLSON		
Salaries	$ 5,236.52	$ 4,293.35
Operation	2,211.74	2,652.73
Capital Expenditure	150.48	65.16
Repair and Replacement	304.67	900.25
TOTAL	$ 7,903.41	$ 7,911.49
SOMERS		
Salaries	$ 11,109.95	$ 11,864.42
Operation	5,322.84	5,061.63
Capital Expenditure	8,486.15	465.65
Repair and Replacement	1,846.40	705.04
TOTAL	$ 26,765.34	$ 18,096.74
FISHERIES GENERAL		
Salaries	$ 4,189.85	$ 2,125.93
Operation	7,284.66	10,422.42
Capital Expenditure	2,689.06	35,743.88
Repair and Replacement	513.98	366.92
TOTAL	$ 14,677.55	$ 48,659.15
SPAWNING STATIONS		
Salaries	$ 12,228.53	$ 12,141.97
Operation	5,629.64	8,270.45
Capital Expenditure	103.13	487.64
Repair and Replacement	1,039.35	1,740.09
TOTAL	$ 19,000.65	$ 22,640.15

*Indicates Credit

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
FEDERAL HATCHERIES		
CRESTON		
Salaries	$ 2,213.00	$ 2,362.50
Operation	2,510.58	2,779.22
Capital Expenditure	16.64	37.20
Repair and Replacement		55.80
TOTAL	$ 4,740.22	$ 5,234.72
EXNIS		
Salaries	$ 1,688.00	$ 2,839.42
Operation	2,287.60	1,397.37
Capital Expenditure	81.02	18.48
Repair and Replacement	793.97	673.06
TOTAL	$ 4,850.59	$ 4,928.33
MILES CITY		
Salaries	$ 4,578.75	$ 4,383.00
Operation	544.79	620.99
Capital Expenditure		
Repair and Replacement		
TOTAL	$ 5,123.54	$ 5,003.99
FISHERIES MANAGEMENT PROJECTS		
MISCELLANEOUS FIELD PROJECTS		
Salaries	$ 15,324.04	$ 53,615.07
Operation	9,708.48	24,553.05
Capital Expenditure	3,580.60	109,305.20
Repair and Replacement	1,772.83*	3,053.43
TOTAL	$ 26,840.29	$ 190,526.75
DINGELL-JOHNSON PROJECTS		
Salaries	$ 62,598.01	$ 75,986.83
Operation	37,705.93	75,032.77
Capital Expenditure	6,281.94	35,474.20
Repair and Replacement	1,448.53	1,867.36
TOTAL	$ 108,034.41	$ 188,971.25
TOTAL FISHERIES DIVISION	$ 545,450.54	$ 792,855.12

*Indicates Credit

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
GAME FARM DIVISION		
BILLINGS		
Salaries	$ 6,301.25	$ 6,645.70
Operation	4,857.30	5,297.13
Capital Expenditure	84.89	
Repair and Replacement	547.17	62.69
TOTAL	$ 11,790.61	$ 12,005.52
FORT PECK		
Salaries	$ 11,896.88	$ 12,682.08
Operation	9,263.58	12,178.65
Capital Expenditure	7.69	96.64
Repair and Replacement	1,794.54	2,061.51
TOTAL	$ 22,962.69	$ 27,018.88
WARM SPRINGS		
Salaries	$ 13,995.00	$ 15,258.48
Operation	8,306.45	11,361.20
Capital Expenditure	95.01	18.83
Repair and Replacement	716.15	474.05
TOTAL	$ 23,112.61	$ 27,112.56
MOIESE		
Salaries	$ 2,001.00	$ 295.51
Operation	1,568.19	34.08
Capital Expenditure	15.95	31.10
Repair and Replacement	278.78*	442.45
TOTAL	$ 3,306.36	$ 803.14
TOTAL GAME FARM DIVISION	$ 61,172.27	$ 66,940.10
WAREHOUSE AND SHOP		
Salaries	$ 13,425.93	
Operation	1,818.74	
Capital Expenditure	402.42	
Repair and Replacement	107.43*	
TOTAL	$ 15,539.66	
HELENA WAREHOUSE		
Salaries		$ 6,011.12
Operation		1,435.79
Capital Expenditure		129.06
Repair and Replacement		598.97
TOTAL		$ 8,174.94
MECHANIC SHOP		
Salaries		$ 14,500.00
Operation		1,535.76
Capital Expenditure		28.80
Repair and Replacement		683.81
Credit for Services		9,251.02*
TOTAL		$ 7,497.35

*Indicates Credit

DETAIL OF EXPENDITURES—(Continued)

	April 1957	April 1958
WOODWORKING SHOP & BUNKHOUSE		
Salaries	$ 6,979.82	$ 6,841.70
Operation	965.85	1,029.85
Capital Expenditure	177.28	76.55
Repair and Replacement	502.53	2,360.07
Credit for Services	4,265.05*	8,753.71*
TOTAL	$ 4,360.43	$ 1,555.36
STORES AND SUPPLIES		
Expenditures for Merchandise	$ 2,615.55	$ 60,878.66
Credit for Merchandise Checked Out		60,999.92
TOTAL	$ 2,615.55	$ 121.26
WILDLIFE RESTORATION		
Salaries	$ 225,516.66	$ 289,214.36
Operation	137,651.94	161,315.26
Capital Expenditure	193,714.57	168,612.41
Repair and Replacement	20,082.64	24,882.66
TOTAL	$ 576,965.81	$ 644,024.69
GRAND TOTAL	$ 2,217,664.06	$ 2,426,827.68
*Indicates Credit		
TOTAL SALARIES	$ 992,951.44	$ 1,171,663.01
TOTAL OPERATIONS	543,744.87	602,245.20
TOTAL CAPITAL EXPENDITURES	414,161.38	424,829.74
TOTAL REPAIR AND REPLACEMENT	149,614.41	201,031.69
TOTAL BOND INVESTMENTS	100,441.96	441.96*
TOTAL APPROPRIATIONS	16,750.00	27,500.00
GRAND TOTAL OF EXPENDITURES	$ 2,217,664.06	$ 2,426,827.68

RECAPITULATION OF FUNDS

May 1, 1956 to April 30, 1957

And

May 1, 1957 to April 30, 1958

Balance Forward April 30, 1956		$ 583,152.05
Income May 1, 1956-April 30, 1957		2,326,615.50
Funds Available During Fiscal Year 1956-57	$ 2,909,767.55	
Disbursements During Fiscal Year 1956-57	2,217,664.06	
Balance April 30, 1957		$ 692,103.49
Income May 1, 1957-April 30, 1958		2,339,430.06
Funds Available During Fiscal Year 1957-58	$ 3,031,533.55	
Disbursements During Fiscal Year 1957-58	2,426,827.68	
Balance With State Treasurer April 30, 1958		$ 604,705.87
Bond Investments		500,000.00
Total Funds April 30, 1958		$ 1,104,705.87