ANNUAL REPORT

of the

GAME, FORESTATION AND PARKS COMMISSION

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INDEX

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Introduction:

The following report and statistical addendum is prepared for the information of any group or individual interested in the efforts of the Nebraska Game, Forestation and Parks Commission to realize the most productive results possible from the practical investment of the income derived from the sale of hunting and fishing permits. Many of the year's records are all-time "highs" in production and development. It is sincerely hoped that all who read this report will realize that this record was possible only because the Commission and its personnel were not inhibited by political or personal restrictions or obligations, and further because of the high quality of cooperation between wildlife clubs, the Commission, the farmer and the sportsman. This type of results, as is also being reflected in most other states, is a fine tribute to the Commission form of government with trained administrators and field men--a far cry from the dark ages of conservation when fish and game were merely vote getters and administrative and field personnel were political friends and relations.

Organization:

The diagram in the addendum represents all of the budgetary divisions of the Department and their relationship to the generalized Departmental administrative plan. All divisions shown are supported by the sale of hunting and fishing permits and related income, excepting State parks. In Nebraska, as in most states, the State parks are financed by direct Legislative tax appropriation.

Commission:

The Nebraska Game, Forestation and Parks Commissioners comprise the official body responsible by law for over-all administration and general policy, including planning and checking of projects and activity records of all Departments and the employment of all personnel in the advanced classifications.

The Commission is composed of seven members appointed by the Governor for a five-year term; the terms being so staggered that no more than two new Commissioners are appointed in any one year. No more than four Commissioners may be of the same political party and no Commissioner may succeed himself by immediate reappointment. Commissioners receive no salary for their services, other than reimbursement for actual expenses and per diem, when attending meetings. All official meetings are held in the Commission offices on the ninth floor of the State Capitol Building at Lincoln. During the year 1952, the Commission held eight official meetings.

Office:

The office of the Commission, considered as a physical unit, provides working accommodations for all supervisors and their secretaries, as well as the Executive Secretary and all accounting and bookkeeping personnel. The office as a budgetary unit, however, includes only the Executive Secretary, seven bookkeepers and one secretary.

The Executive Secretary is the administrative head of the organization, placing in operation the Commission projects and orders and reporting back the activities and progress in all divisions. The Executive Secretary is appointed by the members of the Commission for a term of six years. In addition to the administration of the Department in accord with Commission policy, the Executive Secretary presented fifty-two radio programs, eight television programs, seventy-four speeches and attended fifty-four other meetings.

The legal counsel assigned to this division found the growth of the Department reflected also in the increase in legal problems of the Commission. Such problems classify themselves into the following general types:

1. Vehicle accidents involving State cars or trucks.
2. Compensation cases involving Department personnel.
3. Lawsuits affecting game or recreation areas.
4. Land purchase problems, leases, abstracts, etc.
5. Collection of overdue permit accounts.

Some of these cases are of long duration and of considerable importance to the Commission and its budget. Such cases for the most part are beyond the time capacity

of the field representatives of the Attorney General's office and, in total, losses from such cases could have cost the Department over a million dollars. The actual loss was negligible compared to this amount. In addition to handling these problems the legal counsel also served as an assistant in the public relation work presenting a total of thirty-two programs.

The office division is responsible for the following activities:

1. Setting up of permit sale accounts over the State. At present there are 1125 accounts.

2. Collection and depositing with the State treasurer of all income. In 1952, $995,706.28 was collected from all income sources, excepting Legislative Park appropriations and cash collected from parks which totaled $16,483.14; making an over-all total of $1,012,189.42.

3. Payment of all vouchers for all divisions. In 1952, $929,364.76 was paid out, including State Parks.

Appropriate records are maintained in all transactions and all records of the Commission's individual departments are audited each year by the office of the State Auditor and, when such transactions involve Federal-aid funds, by the auditors of the Fish and Wildlife Service.

Education and Information Division -- Dick Schaffer, Supervisor:

This division, smallest of the seven in the organization of the Nebraska Game Commission, has as its major assignment the state-wide and prompt dissemination of information to keep all abreast of Commission progress in all activities in Nebraska. By means of publications, radio broadcasts and personal contact, the division not only informs the public, but also directly and indirectly educates it in sound conservation management as applied to wildlife management.

The staff of the information division is composed of one supervisor, an artist-exhibitor, a secretary and a circulation assistant. The supervisor has over-all charge of all division activities and in particular his duties consist of editing Outdoor Nebraska magazine, writing news release and Outdoor Nebraska column, preparing and relaying spot and special news items, photographing desirable material, scheduling public service programs, preparing the various regulations and other departmental publications and planning exhibits. Preparation of all original art work for Outdoor Nebraska magazine and other publications of the Department is the responsibility of the division's artist-exhibitor. He also creates all art work for exhibits and assists in public service programs.

Assignments of the division can more ably be broken down into eight different classifications which are as follows:

1. Correspondence--This division was responsible for answering all routine correspondence (not requiring involved and technical answers) addressed to the Game Commission. These inquiries were answered either by letter or by mailing one or more of many publications distributed by the Game Commission. During 1952, this division's publications consisted of Trapper's Guide, fishing regulations, hunting regulations, boating regulations, State parks, Sportsman-Farmer Cooperation, law book, Outdoor Nebraska maps, Outdoor Nebraska magazine and two reprints for the magazine. In addition to these, this division began preparing a new "Guide to Outdoor Nebraska" which will replace the Outdoor Nebraska map, the supply of which is almost exhausted. Requests for material were received from all of the forty-eight states and five foreign countries--Argentina, Spain, Canada, Brazil and Japan.

2. News Service--Dissemination of news of all departmental activities was a weekly assignment, The number one vehicle of news presentation was the weekly news release which was sent to all daily and weekly newspapers, radio stations and television stations in Nebraska. Others on the mailing list included conservation officers and conservation departments of other states. A total of 605 different names appeared on the mailing list which average four pages in length each week. Approximately 36,500 copies of the news release were mimeographed and mailed during 1952.

In addition to the regular news release and column, this division provided special coverage on the better fishing period, duck and pheasant season and the buck and doe deer hunts. The Fishing Report was issued weekly for a seventeen-week period and contained the most complete report on fishing conditions available. This information was sent to the office by all conservation officers. The purpose of this report was to keep Nebraska sportsmen abreast of where good fishing had occurred and could be expected to occur.

Wire reports were received two times each week during the pheasant and waterfowl seasons from "good" areas. These reports were compiled and relayed immediately by telephone to the two major wire services and local newspapers. During the deer hunting seasons, this division had an office at Chadron from which it distributed daily stories on the hunt. Twenty-five newspapers, two wire services and one television station received either wire or mail reports during the first four days of both seasons. Photographs were also taken by this division of successful hunters and these, too, were distributed to appropriate newspapers. A total of two hundred stories and forty-five photographs were mailed during the deer seasons. Spot news was relayed immediately by telephone to wire services from the Game Commission office during the year. Special stories were prepared on several occasions.

3. Radio and Television--The Game Commission's weekly radio program Outdoor Nebraska added one new station during 1952, making its total station coverage to seventeen (sixteen in Nebraska and one in Kansas). The radio broadcast, though financed by this division, was under the direction of the Executive Secretary. A total of 884 platters were cut during the year. Only costs involved by the Game Commission in the radio field were the cutting and mailing of the platters. Radio time was given free of charge by the respective stations as a public service. Though another station was added, the cost was still decreased for the one-year period through the change in mailing from express to parcel post and change in mailing a two-program platter rather than one. Total costs for this project in 1952 amounted to $2,419.99 as compared to $3,253.50 for the previous year. Five programs were made by this division for Station KRVN (Lexington). These programs were used in that station's "The Nebraska School of the Air" series. Television Station WOW-TV (Omaha) provided the Game Commission with a thirty-minute allotment of time each Sunday night for a six-week period. The Executive Secretary directed the program which was entitled "Field and Fireside". There was no cost involved on behalf of the Game Commission.

4. Public Service Programs--In 1952, this division arranged to have its own personnel or other representatives of the Game Commission, or films--or a combination of both--on over 700 different programs throughout the State. The Department received, as always, far too many requests for its available films and personnel. Requesting groups often had to wait as long as two or three months before they could receive a film. Due to the heavy use of the films, they required constant repair. The Game Commission was anxious to improve this service and contacted the University of Nebraska in regard to transferring all of its films. The University's Audio-Visual Education department, organized for this particular service, agreed to take the films and make them available to the public. This transfer has expedited the entire service. All films transferred from the Game Commission to the University are available at the minimum service charge. There is no charge for rental. The Game Commission hopes to purchase additional films in the future and loan them to the University for use by sportsman and civic groups.

5. Exhibits--Receiving major attention of this division during the past year was the annual exhibit staged at the State Fair Grounds. The past year's exhibit featured live animals and waterfowl which inhabit the State plus mural paintings of wildlife groupings by the division's artist. Several other exhibits, though on a much smaller scale, were presented by the Department.

6. Conservation Camp--The annual State Conservation Camp was held at Chadron State Park during the period June 24-27. This division aided in scheduling speakers and other participants and assisted in arranging the camp program. Attendance was open to 4-H Club members from Nebraska. A record attendance of three hundred was reported, which reflects the interest and success of the camp. This division also scheduled departmental personnel for other similar camps held in the State.

7. Exchange Magazine & News Release Library--This division maintains a library containing magazines and news releases from conservation departments in other states. They are received on an exchange basis. All material is available to Departmental personnel.

8. Outdoor Nebraska magazine--This quarterly 28-page magazine--the State's one and only fishing and hunting magazine--is prepared and edited and its circulation supervised by this division. Through this vehicle, the Game Commission attempts to inform all readers of activities and progress of the Department and presents other interesting and informative material pertaining to fishing, hunting and conservation. The past year has gone on record as being the magazine's largest and greatest period of achievement.

The first month of 1952 saw the first accomplishment credited to the magazine. Its format was changed from the small 6 x 9 inch page size to the conventional 8½ x 11 inch page. A four-color process cover page and a two-color process Fauna page were added.

Following are the records established by the magazine during the past year:

1. Established an all-time record high in total receipts for one year from subscription and news stand sales combined. Total receipts in 1952 were $6,083.53 which exceeded the previous high of $5,254.52 set in 1951. The previous year's total receipts of $1,225.95 reflect the growth made by the magazine during the past two years.

2. Established an all-time record in receipts for one month. In December, subscription and news stand sales accounted for $849.05 which easily surpassed the previous record month of $644.35 set in September, also in 1952.

3. Established an all-time record in number of subscriptions sold during one year. Total subscriptions numbered 5,643 which represents more than one-third of the present paid circulation. Breakdown of subscriptions received in 1952: one-year subscriptions (2,403), two-year subscriptions (2,219) and five-year subscriptions (1,021).

4. Established an all-time record in number of magazines sold on news stands. One hundred and twenty-two dealers sold a total of 5,445 copies. All dealers but one are from Nebraska. The other dealer is from Sioux City, Iowa.

Major factor in the magazine's increase in circulation was attributed to the subscription letters sent to permit buyers throughout most of the year. A number of articles were reprinted from Outdoor Nebraska, foremost of which was the hawk story and accompanying art work which was later run in "Fishing and Hunting". Outdoor Nebraska is available to all interested on a "per cost basis". Rates are 15 cents per single copy and by subscription at 50 cents for one year, $1.00 for two years and $2.00 for five years. Increased printing costs and no marked increase in money for publication made it necessary for the Department to discontinue free mailing of the magazine to schools in Nebraska. The schools, however, were given the opportunity to subscribe at slightly reduced rates.

Following is a compilation of the different publications mailed by the division during the year and the number of each. (This number consists of copies, not packages.)

Letters	1,130
Misc. Regulations, Pamphlets	4,000
Hunting-Trapping Regulations	180,000
Fishing Regulations	155,000
Boating Regulations	15,000
Hunting by Permission Signs	10,000
Outdoor Nebraska Magazine	62,500
News Release	36,500
Outdoor Nebraska Column	3,500
Fishing Report	1,245
Deer Hunting Reports	245
Total	469,120

Law Enforcement Division -- William R. Cunningham, Supervisor:

The division is now composed of twenty-five district wardens and one supervisor. A complete listing of personnel is contained in the addendum. Again in 1952 we have experienced some personnel changes involving three officers and creating three temporary vacancies--two of which have been filled by transfer of other Department personnel. The vacancy created by the resignation of A. O. Edmunds in January 1953, has not been filled as yet.

Resignations -- W. G. Schultz, McCook and A. O. Edmunds, Grand Island
Replacements by Transfer -- Norbert Kampsnider, to McCook and Jim McCole to North Platte

The vacancy at North Platte was caused by the illness of Officer Lee Jensen who is being transferred to a position commensurate with his physical condition. Officer A. G. McCarroll was injured in a car-train accident early in 1952 and consequently was out of service for approximately six months. As a result of the above personnel problems, the enforcement division did not function at full strength for the entire year. Uniformity of operation has improved considerably with the introduction of the new Warden Manual in the summer of 1952.

Arrest Analysis — The number of violations and arrests increased materially in 1952 as compared to the immediate preceding years---Reflecting a 14% increase over 1951. This increase can be attributed to several factors, the most important being (1) increased number of hunters and fishermen; (2) excessively warm dry weather during a major portion of the open season making field hunting highly uncomfortable beyond the first hour in the mornings, causing some hunters to resort to road hunting from vehicles and (3) increased violation trend all phases of law enforcement reflect. It is encouraging to note that, while arrests increased 14% the total fines increased 26% and liquidated damages increased 20% which would seem to indicate that courts are levying heavier penalties; that the proportionate increase in total fines is greater than the increase in arrests. Collection of liquidated damage fees was much better this year since authorization of officers to request immediate payment or execution of judgment. There are still some instances where the court makes its own arrangements for the defendants to pay on installments or by set dates. Total of liquidated damages was $5,455.00.

Major Violations — (1) Loaded shotgun in vehicle and shooting from the highway 20% (2) Fishing without permit 12½% (3) Shooting game birds out of season 11%. More success was realized this year on apprehending deer poachers and successful prosecution of seven offenders in this category. The largest single case involved illegal possession of waterfowl wherein the individual was fined $145.00 and liquidated damages of $725.00. This particular case had a great preventative effect on spring waterfowl shooting.

Non-residents continue to be a source of violation in Nebraska and again about 16% of the total arrests were non-residents. Twenty-four non-residents were successfully prosecuted for purchasing resident permits. Five non-residents were prosecuted in California for violation of Nebraska's game laws. Many of the no-permit cases are non-residents. Non-resident military officers of high rank are also offenders as proven by prosecution of seven such officers before they reached military plane transportation from Nebraska. The Nebraska non-resident permit law is responsible for many permit violations and is very weak and poorly defined. The system of permit issuance is also at fault in that the people who sell permits have no responsibility for issuance to non-residents. Unless an individual voluntarily declares his out-of-state residence, he is usually issued a resident permit.

During 1952, two units of the small "handy talkie" type of two-way radio were operated for field use. This division now has its own operators' permits from the FCCC with its own frequency assignment of 31.50 M.C. and the two federal agents for Nebraska are installing large two-way units in their vehicles permanently to operate on this frequency. These two-way units have proven their value in working on out-of-season poaching. Eight new units are being placed in service for the patrol of the spring waterfowl flight in Nebraska. Increased use of two-way radio is anticipated from now on. Until there is enough equipment to go around, it will be necessary to set up on a crew assigned basis in three points of the State, such that equipment may be moved about where needed and when available.

It will be noted that there was a drop in total flying hours of use of the Department airplane. This is due to the fact that the plane was out of service for almost three months for major engine repairs requiring hard-to-get parts. It is quite apparent that the plane should be replaced as soon as possible.

Use of the Department patrol boat dropped in the 1952 season at McConaughy because of decreased fishing activity at the reservoirs which was due to drouth conditions and heavy irrigation which had drawn the reservoirs down to a low level.

The 1952 year was the first of complete operation under the effect of the replacement program involving the heavy-duty police units and the operating cost per mile continued its downward trend as shown:

1949.	4.6 per mile
1950...	3.89 per mile
1951.	3.09 per mile
1952.	3.00 per mile

resulting in a total cost per mile reduction of 1.6 cents since 1949 which with mileage of 940,000 miles per year represents a reduction of approximately $15,000.00 from what it could have been under the old replacement program with standard units. The major reduction in operating expense has been in the category of repairs which are much less than they were previously even though this division is operating more units than in 1949 and 1950.

Court Action Financial Record --

I.	Total offenses committed by persons arrested	601
	Total number of actual arrests	522
	Total convictions	512
	Total found not guilty	5
	Per cent of convictions	98%
II.	Total fines (to county school funds)	$ 8,995.50
	Total costs (to county courts)	2,078.84
	Liquidated damages (to the state)	5,455.00
	From sale of confiscated guns	4,305.00
III.	Guns confiscated	130
	Fish, game and fur confiscated	938
	Illegal devices confiscated	210
IV.	Loaded shotgun in vehicle and shooting game from highway	20%
	Fishing without permit	12.4%
	Shooting game birds out of season	11.2%

Summary of Activities Figures --

Miles traveled	940,093
Hunters checked	29,158
Fishermen checked	46,784
Trappers checked	1,746
Complaints investigated	1,481
Illegal devices confiscated	210
Fur confiscated	831
Public meetings attended	509

Vehicle Operating Expense --

Gasoline	$16,969.40
Oil	1,056.27
New tires	1,384.30
New tubes	87.79
Lubrication	799.50
Special service	1,831.02
Repairs	5,989.09
Total	$26,541.59

Cost per mile . . . 3¢

Personal Expenses --

Meals	$17,803.10
Lodging	2,255.41
Telephone and telegraph (does not include billing directly on office phone)	128.30
Postage	211.10
Legal fees	10.50
Railroad fare	56.63
Miscellaneous	885.66
Total	$21,401.42

Airplane Expense --

Total Hours flying	123:15
Gasoline	$ 271.00
Oil	28.65
Storage	153.00
Repairs	816.25
Total	$ 1,268.90

Boat Expense (Chris-Craft) --

Operating hours	35
Gasoline	$ 33.45
Oil	3.20
Storage and service	228.15
Total	$264.80

Fishery Division -- Glen R. Foster, Supervisor:

This term, while acceptable in general discussion, does not reflect the true budgetary breakdown of the many related sub-categories of this division. The fisheries division is actually composed of the following budgetary divisions:

1. Fisheries administration
2. Fish research
3. Fish purchase
4. Fish salvage crews
5. Gretna Hatchery
6. Valentine Hatchery
7. Rock Creek Hatchery
8. North Platte Hatchery

Space does not permit a true description of all of the activities of each of these interesting sub-divisions, however, a paragraph in general on each division is appropriate to this report.

1. Fisheries Administration: This division represents the administrative phase responsible for all other phases of fisheries management. Personnel in this division includes a supervisor and his secretary. This division is responsible for the planning and direction of all fishing activities, as well as the promulgation of suggested fishing regulations for the Commission, and is constantly striving, not particularly to stock more fish, but actually fewer small fish and greater numbers of large fish. This division is also responsible for 292 commercial fishing permits, 14 private fish hatchery permits and 9 minnow hatchery permits.

2. Fish Salvage and Distribution: This crew is comprised of one superintendent, two foremen and eight crew members and is located at North Platte and is assigned the rugged work of seining under the ice in winter for "rough fish", such as carp, buffalo and quillback. In the spring, this crew removes game fish from over-populated, under-fished lakes for stocking over the State in more available waters. In the summer, the salvaging of fish from drying ponds and trapped flood waters is the all important work. An undesireable phase of this crew's activities is the attempted salvage of bodies when drowning accidents occur.

Fish Seined and Transferred for Stocking Other Waters --

Species	Fing.	Adult	Total	Total Stocked
Bass		589	589	
Bluegill		92	92	
Crappie		1,609	1,609	
Bullhead		106,583	106,583	
Walleye		140	140	
Northern Pike		476	476	
Goldfish		24	24	
Total		109,513	109,513	109,513

Fish Stocked Out of State --

White Bass (to North Dakota)		414	414	414

Fish Salvaged and Stocked from Irr. Canals, Low Lakes & Bayous --

Bullheads	500	52,702	53,202	
Walleye		6,062	6,062	
Bass		6,053	6,053	
Crappie		29,089	29,089	
Drum		7	7	
Catfish		5,741	5,741	
Bluegill	12,825	24,311	37,136	
Perch		211,141	211,141	
No. Pike		150	150	
Mooneye		30	30	
Trout		20	20	
	13,325	335,306	348,631	348,631

Catfish Trapped & Stocked from Missouri & Niobrara Rivers --

Catfish trapped and stocked.....7,443		7,443	
Catfish held from 1951 & stocked..10,737		10,737	
	18,180	18,180	18,180

(31,635 catfish are being held for 1953 stocking)

TOTAL GAME FISH HANDLED BY THE SEINING CREW 476,738

Total Rough Fish removed from Lakes and Streams --

Carp	228,150#
Buffalo	15,792
Quillback	8,861
Shad	6,650
Goldfish	3,900
	263,353

Of the above total 57,522 were buried or given away
54,605 were sold (40,125# carp)
151,226 were stocked (83,560# carp)

Production Costs & Other Work Costs --

Trapping catfish from Missouri River	
39,078 @ $18.77 per M.	$ 733.54
Cost of rough fish removal of fish sold 54,605#.	4,286.55
Income from fish sold 54,605#.	4,781.01
Carp, 40,125#	$3,671.37
Buffalo, 10,436#	1,073.30
Shad, 3,000#	7.50
Quillback, 1,044#	28.84
	$4,781.01

Carp are generally sold at .10¢ per pound; buffalo, .15¢; shad, quillback and small carp around .20¢ to .30¢ per cwt. Prices depend on size and condition of fish. Some of the smaller sizes are buried if it is too far from a rendering plant.

Salvage of fish; transfer of fish from overstocked lakes
Test seining and miscellaneous jobs. $ 3,642.94

Breakdown of work accomplished --

1. State Fair Exhibit--collecting and transporting specimens for exhibit and men working at exhibit during the fair.

2. Assisting in search for drowning victim at Maloney Lake.

3. Thirty-three lakes were seined to remove coarse fish or stunted fish.

4. Twenty-seven lakes and canals were seined to salvage fish that would have died from low water or when water was removed.

5. Eight lakes were seined for checking the condition of fish to determine what should be done to improve fishing.

6. Ravenna State Lake was completely drained and all fish removed and held until the lake was refilled. All stunted fish were removed and the lake was restocked at the correct stocking ratio. The lake remained dry through last winter and was restocked in the spring of this year.

7. Made extensive repairs on holding ponds at Maloney Lake.

8. Installed one new winch on fish truck.

9. Built two new pulling winches for ice seining.

10. Drained all holding ponds at Maloney Lake and transferred 52,942 fish to hatchery ponds, so that a new dike could be built by the Power Company.

11. Other work consisted of rehanging nets and seines, dipping and weatherproofing nets, patching and repairing torn nets, repairing trucks, tanks, motors, boats, live boxes, dip nets, etc. Our men are trained to make the majority of necessary repairs, even to tanks, trucks, motors, etc.

3. Valentine Hatchery: Located near Valentine, Nebraska, this hatchery is used primarily for the propagation of "warm water" game fish. Personnel at this hatchery include the superintendent, one foreman and one fish culturist. A new rearing pond for warmwater fish was completed this fall by the construction crew. Labor and equipment were charged to the construction crew and miscellaneous repairs and hatchery personnel labor charged to Valentine. This will be the last new pond that can be built on this station with the present land available. We intend to use this large pond for raising more adult sized fish. Fish will be held over a two to three year period before stocking.

Game fish produced and stocked --

Species	Fry	Fing.	Adult	Total	Total Stocked
Bass		31,177	1,843	33,020	
Bluegill		143,801	11,264	155,065	
Bullheads		3,000	1,500	4,500	
Crappie		34,813	2,900	37,713	
Sub-totals		212,791	17,507	230,298	
Brown trout	117,844	314		118,158	
Rainbow trout		653		653	
Brook trout	334			334	
	118,178	967		119,145	349,443

Fish transferred and stocked from over-populated lakes --

Bass	5,000		5,000	
Bluegill	3,726		3,726	
Crappie	5,000	1,000	6,000	
Bullheads	4,960		4,960	
	18,686	1,000	19,686	19,686

Fish stocked from other hatcheries --
(Federal--Crawford, given to State and stocked at Valentine)

Brown trout	56,486	10,775	67,261	
Rainbow trout	48,632	18,000	66,632	
Brook trout	11,460		11,460	
Sub-totals	116,578	28,775	145,353	

Stocked by Crawford for the State:

Brown trout	45,000		45,000	
Rainbow trout	30,000		30,000	
Brook trout	12,000	1,170	13,170	
Sub-totals	87,000	1,170	88,170	
Bluegill	115,000		115,000	
			203,170	348,523

Fish salvaged and stocked --

Bluegill	1,459	1,459	
Crappie	784	784	
Bullheads	900	900	
Perch	559	559	
Sub-totals	3,702	3,702	3,702

Fish transferred to North Platte holding ponds --
(For stocking in 1953; not counted in totals)

Bass	5,000
Crappie	5,000
Bluegill	3,726
Bullheads	4,960
	18,686 --- Total handled

TOTAL FISH STOCKED BY VALENTINE	721,354
TOTAL FISH HANDLED BY VALENTINE	740,040

Production costs --

Producing 119,145 fry and fingerling @ $3.60 per M.	$ 428.80
Stocking 119,145 fry and fingerling @ $1.37 per M.	165.75
Producing warmwater 230,298 fing. & adult @ $12.70 per M.	3,156.82
Stocking warmwater 230,298 fing. & adult @ $8.63 per M.	1,987.94
Stocking 145,353 adult & fing. trout from Crawford @ $10.86 per M. .	1,578.78
Salvage & transfer of fish, checking lakes & misc. work	2,836.51

Salvaged and stocked adult fish -----3,702
Transferred 19,686 adult and fingerling from overstocked lakes
Transferred 18,686 hatchery fish to North Platte hatchery holding ponds for spring 1953 stocking
Continual checking during the year of water levels in sandhill lakes and special checks on Willow Lake
Attending meetings of sportsmen's clubs and checking on proposed lakes, etc.
One man spent one week at State Fair Exhibit

4. North Platte Hatchery: Located near the city of the same name is the Commission's newest hatchery and is considered to be the largest walleye pike hatchery in the world. It was completed at a total cost of $684,269.47. The last segment of this construction has just been completed by the addition of twenty new ponds, each with separate water supply and draining systems. This, of course, points to an all time record production in 1952. Personnel consists of one superintendent, one foreman and four fish culturists. Other improvements made at this hatchery are (1) new ponds were finished and put into use in the spring; steel control gates were installed in the twenty ponds, (2) all bottoms of ponds were leveled and graded to drain correctly, (3) all overflow pipes were cut off to exact water level elevations, (4) five thousand multiflora rose seedlings, furnished by the Pittman-Robertson division, were planted along the west side of the new ponds to provide a future living fence, (5) twenty-four balled Austrian pines, furnished by the land management division, were planted along the south border of the new ponds, (6) water level marks were painted on all spillways and permanent numbers were made for the ponds and installed for better control, (7) new fish screens were constructed and installed for all twenty ponds, (8) a new six-inch pipeline was laid for better irrigation for all twenty ponds, (9) all nets (dip nets, gill nets, etc.) were repaired and other minor repairs made around the hatchery. The twenty new ponds were used this year for the first time, giving us a total of thirty-nine ponds for rearing of walleye pike, resulting in the largest output of walleye fingerling ever raised or stocked in Nebraska.

Game fish produced and stocked --

Species	Fing.	Adult	Total	Total Stocked
Walleye pike	1,115,128		1,115,128	
Bass*	6,084		6,084	
	1,121,212		1,121,212	1,121,212

*holding 2,247 bass for spring stocking

TOTAL FISH PRODUCED AND STOCKED AT NORTH PLATTE 1,121,212

Production costs and miscellaneous work costs --

All fish produced at North Platte are raised by the same method; that is, the fry are stocked in rearing ponds and ponds fertilized. Therefore, the costs are figured together.

Producing 1,121,212 fing. @ $10.58 per M.	$11,872.66
Stocking 1,121,212 fing. @ $2.77 per M.	3,114.30
During the winter months and to January 1, the North Platte crew was used in construction of fish attractors or brush shelters in Johnson and Midway reservoirs. Fifty shelters were constructed at Johnson lake and forty at Midway. These were all ready to be installed by January 1. This work will take about a week to complete. Cost to January 1, 1953.	1,896.56
Two men spent about five weeks helping stock fish at the Valentine Hatchery. Cost to North Platte hatchery	900.20
Two men helped the seining crew for two weeks on salvage work .	234.65
One man was used on warden work during pheasant season.	101.50

5. Rock Creek Hatchery and Benkelman Sub-Station: Located near Parks, Nebraska, this hatchery is the most costly of all the hatcheries to operate due to its production specialty of rainbow trout. This hatchery, because of the specialized production, requires large quantities of beef liver which, although classified as "inedible" is still costly in the large quantity necessary for feed. While this hatchery takes considerable eggs from its own "spawners", the Fish and Wildlife Service cooperates in supplying large numbers of eggs from its Federal hatcheries. This division is operated by a superintendent, one foreman and three fish culturists. Work was started by the construction crew in cleaning and deepening all ponds at Rock Creek and Benkelman and in constructing a new flood diversion ditch around the Rock Creek ponds. This work was not completed this fall, but a large amount of the work was finished. Two ponds that had been of very little use in holding trout were deepened and widened and drains lowered. This will enable the men to keep more of the trout that are held through the winter closer to the hatchery where they can be watched closer. Large numbers of trout fingerling are lost each year through ducks feeding on the ponds not close in to the hatchery. Number four, our largest bass pond, was enlarged still more, the channel straightened for better drainage and seining and the entire bottom deepened and sloped to the channel. Two other warm-water fish ponds at Rock Creek, and two at Benkelman were improved by cleaning and enlarging. Flood ditches were nearly completed and some channel changes and repairs made. Work on the remaining ponds can be done next year at any time the construction crew is free and when the ponds are dry. Frank Weiss, superintendent, has been

experimenting with the fish held in the concrete circular pools. He has found by putting pans of sandy loam in the pools the trout will clean themselves and, thus, keep free from parasites and disease. We have had much less trouble with fin rot and parasites since he started this practice. Mr. Weiss is now working on an automatic feeder for trout fry and we hope he comes up with something as it would save considerable on labor costs.

Game fish produced and stocked --

Species	Fing.	Adult	Total	Total Stocked
Bass	36,220		36,220	
R. bass	12,480	581	13,061	
Bullhead	25,875	125	26,000	
Bluegill	105,805		105,805	
	180,380	706	181,086	
Brown trout		9,100	9,100	
Rainbow trout		84,916	84,916	
Lake trout		7,700	7,700	
		101,716	101,716	282,802
Fish salvaged and stocked --				
Catfish	15,000		15,000	15,000
Fish received from Crawford Federal Hatchery --				
Rainbow trout	25,000			
TOTAL FISH STOCKED BY ROCK CREEK & BENKELMAN				217,802
TOTAL FISH HANDLED BY ROCK CREEK & BENKELMAN				242,802

Production costs and miscellaneous work costs --

Trout:	
Producing 101,716 adult trout @ $287.95 per M.	$29,289.14
Stocking 101,716 adult trout @ $10.28 per M.	1,317.93
(The above adult trout were hatched in January 1951, held and fed until March 1952 before stocking.)	
The trout hatched in January of 1952 are still being held and will be stocked mostly in March of 1953. Cost to January 1, 1953.	24,529.97
Warmwater fish:	
Producing 181,086 fing. & adult @ $36.14 per M.	6,645.70
Stocking 181,086 fing. & adult @ $1.41 per M.	254.98
Fish salvaged and stocked:	
Catfish (fingerling) 15,000	76.10

6. Gretna Hatchery: This is the oldest of the Nebraska hatcheries and is a favorite picnic spot of eastern Nebraska. This is a "warm water" hatchery and specializes in the difficult propagation of channel catfish. This hatchery is operated by one superintendent and two fish culturists. In addition to this production, this hatchery maintains a large picnic area and participates in considerable fish salvage work in eastern Nebraska.

Game fish produced and stocked --

Species	Fing.	Adult	Total	Total Stocked
Bullhead	1,300	200	1,500	
Bass	9,390		9,390	
Crappie	7,350		7,350	
Bluegill	3,950		3,950	
	21,990	200	22,190	
Catfish (Channel)*	119,000		119,000	
(Blue)	13,800		13,800	
	132,800		132,800	
*27,000 channel catfish were traded to the State of Minnesota for bullheads and walleye eggs.)				
Rainbow trout	9,000		9,000	
	9,000		9,000	163,990
Fish received from Minnesota --				
Bullheads		7,135		7,135
(Of the above total 4,835 were purchased for $84.00 and the remainder, 2,300, were on a trade deal)				

Fish stocked for Valentine --				
Bass		2,125	2,125	
Bluegill		2,000	2,000	
Crappie		3,125	3,125	
		7,250	7,250	
Fish stocked for Rock Creek hatchery --				
Rainbow trout		3,600	3,600	
Fish transferred and stocked --				
Bullheads	12,955	5,000	17,955	
Crappie	2,350		2,350	
Catfish	6		6	
Buffalo	3		3	
Sunfish		2,000	2,000	
	15,314	7,000	22,314	22,314
Fish salvaged and stocked --				
Bullhead	40,250	211,977	252,227	
Bluegill	400		400	
Crappie	1,028		1,028	
Sunfish	32		32	
Bass	1		1	
	41,711	211,977	253,688	253,688
TOTAL FISH HANDLED BY GRETNA				457,977
TOTAL FISH STOCKED BY GRETNA				447,127

Production costs and miscellaneous work costs --

Channel and blue catfish		
Producing 132,800 fing. @ $37.37 per M.		$4,963.25
Stocking 132,800 fing. @ $1.59 per M.		211.25
Trout		
Producing 9,000 fing. @ $1.15 per M.		103.75
Stocking 9,000 fing. @ .26¢ per M.		24.06
Warmwater fish (bass, bluegill, crappie, bullhead)		
Producing 22,190 fing. & adult @ $8.20 per M.		1,820.25
Stocking 22,190 fing. & adult @ .40¢ per M.		90.21
Fish stocked for and from other hatcheries.		491.98
Minnesota bullheads, 7,135 adult, 3 loads.	$175.22	
Stocked for Valentine, 7,250 fing. 2 loads	197.68	
Stocked for Rock Creek, 3,600 adult trout (3).	119.08	
	$491.98	

Fish Salvaged by Conservation Officers and Stocked --

Species	Fing.	Adult	Total	Total Stocked
Bullhead	56,900	52,750	109,650	
Sunfish	1,750		1,750	
	58,650	52,750	111,400	111,400

The above work was reported by Officers, Ahern, Benson and Owen.

7. Fishery Research: In order to more effectively understand some of the many biological problems pertinent to fish management, the Commission employs a qualified fishery biologist and an assistant quartered in a newly completed and well equipped fishery laboratory in Lincoln. Activities and studies appropriate to this division are as follows: (a) examination of lakes and farm ponds prior to recommending stocking, (b) study of fish food habits in relation to growth, (c) analysis of fish disease factors, (d) experimental plants for proper habitat for fish, (e) construction and location of fish shelters for experimental studies in rejuvenating habitat areas in lakes and reservoirs where definite loss of such fishery values have been experienced, (f) lake development plans in relation to requirements for fishery management (g) public relation programs appropriate to fishery management and its problems, (h) review of published fishery research information pertinent to Nebraska.

For example, the first part of the year was spent at Jeffrey Lake directing and supervising the making of crappie beds. At the same time, winter examinations were made on the several reservoirs, as well as on farm ponds in Buffalo, Polk, Nance, Cheyenne, Morrill, Sioux, Sheridan, Blaine and Custer counties. Many farm ponds were found to be low on water during the winter and had they had fish in them, these fish would have winter-killed. Much work was done in the laboratory studying age and rate of growth of fish from which scales were collected the previous summer. Similarly, stomach contents of fish were studied to ascertain food habits. Laboratory work on fish ageing and growth rate was kept up and preliminary studies for rotenoning the lake at Ravenna were made. Ravenna lake was rotenoned in May,

and in this connection several trips were made there. Golden shiners were found in this lake--some of which were parasitized by leeches. It was also learned that the fish population in the lake was badly unbalanced as evidenced by the preponderance of goldfish, buffalo and carp. Routine examinations were made of Johnson, Jeffrey, Maloney, Sutherland and McConaughy reservoirs. A sample from Pibel lake was made at the time the seining crew made a test seining. Much investigating work was done on the fish from Ravenna lake during the time spent in the laboratory. A trip was made to Jeffrey reservoir for lifting crappie beds for biological examination, and followed this up with routine checks on nearly all the reservoirs of the Platte Valley. Examined some ponds and streams in Hat Creek Basin in Sioux county and investigated Whitney, Minatare and West Kimball reservoirs on routine summer examinations. A week was spent at Alexandria with the construction crew in riprapping the new dam. Continued summer checking of the North Platte river and Lake McConaughy. The minnow situation in the Ogallala area was investigated and collected many sick minnows, which later proved to be heavily infested with internal parasites. Much laboratory time was spent studying these diseased minnows.

Sarpy county farm ponds were examined and laboratory studies continued on fish collected earlier. Much time was spent on Lake McConaughy investigating the mortality of white bass and walleye which were killed mostly due to temporary lack of dissolved oxygen in the water. Much time was spent in the laboratory in studying fish which had died earlier in Lake McConaughy, and considerable time was also spent on an investigation of pollution problems created by Omaha's dumping garbage into the Missouri river. Pollution checks were made as far down as south of Rulo. During October a new alarm of more fish dying in Lake McConaughy turned out to be false, but it led to further investigations of the lake under autumn conditions. Several of the other reservoirs were also studied, and a number of streams sampled to ascertain their minnow populations. The construction and placing of over one hundred crappie beds by a hatchery crew was supervised necessitating several trips to Johnson and Midway reservoirs in November and December. During these months much progress was made in the laboratory in working up field data and in studying fish specimens and plankton samples obtained during the year in field studies. During the year many contacts were made and much correspondence taken care of by this division in addition to many public relation programs.

1952 GRAND TOTALS

Produced and stocked from hatcheries (all species). 1,917,447

	Fry	Fing.	Adult	Total
Bass		82,871	1,843	84,714
R. bass		12,480	581	13,061
Bluegill		253,556	11,264	264,820
Bullhead		30,175	1,825	32,000
Crappie		42,163	2,900	45,063
Walleye		1,115,128		1,115,128
Catfish (Channel)		119,000		119,000
Catfish (Blue)		13,800		13,800
		1,669,173	18,413	1,687,586
Rainbow trout		9,653	84,916	94,569
Brown trout	117,844		9,414	127,258
Brook trout	334			334
Lake trout			7,700	7,700
	118,178	9,653	102,030	229,861

Federal fish stocked (all species). 348,523

Rainbow trout	78,632	18,000	96,632
Brook trout	23,460	1,170	24,630
Brown trout	101,486	10,775	112,261
	203,578	29,945	233,523
Bluegill (Warmwater)	115,000		115,000
	115,000		115,000

Fish salvaged and stocked (all species). 732,421

Bluegill	13,225	24,770	38,995
Northern pike		150	150
Walleye pike		6,062	6,062
Catfish	15,000	5,741	20,741
Bullhead	97,650	318,329	415,979
Crappie	1,028	29,873	30,901

Perch		211,700	211,700	
Drum		7	7	
Bass	1	6,053	6,054	
Sunfish	1,782		1,782	
Trout		20	20	
Mooneye		30	30	
	128,686	603,735	732,421	
Fish transferred and stocked from other lakes (all species).....				151,513
Crappie	7,350	2,609	9,959	
Bullhead	17,915	111,583	129,498	
Bluegill	3,726	92	3,818	
Bass	5,000	589	5,589	
Catfish	6		6	
Buffalo	3		3	
Sunfish		2,000	2,000	
Walleye		140	140	
Northern pike		476	476	
Goldfish		24	24	
	34,000	117,513	151,513	
Fish obtained from other states.				7,135
Bullheads from Minnesota		7,135		
Catfish trapped from Missouri and Niobrara Rivers				18,180

Rough fish stocked. . . . . 151,226# (83,560# were carp)
Rough fish sold . . . . . 54,605#
Rough fish given away 57,522
Pounds removed 262,353

Grand Total Fish Stocked. 3,175,219

Fry.	118,178
Fingerling	2,178,270
Adult.	878,771

In conclusion of this report of Commission activities in 1952 appropriate to fisheries, it should be noted at this point that the total number of fish stocked in the State each year is becoming smaller each year. This is due to the fact that in the past, while larger numbers of fish were indicated as being stocked, the majority were "fry" or fish just from the egg, which gives impressive stocking records but the survival of this type of stocking is so low that such figures are meaningless. The Commission the past ten years or more has been shifting from the stocking of "fry" to the stocking of at least fingerling size. This, of course, requires holding in ponds, feeding and management, but results in stocking totals not as impressive as "fry" fish stocking. Proceeding even further, the Commission is now attempting to hold more fish over a longer period with the resultant stocking of fewer fingerlings, but far more adults or near adults with assurance of survival. In general, adult fish are stocked where fishing pressures do not permit smaller fish adequate growing periods. The Commission is appreciative of the generous cooperation of the U.S. Fish and Wildlife Service hatchery at Crawford which stocks all adult trout propagated in this hatchery and many fingerlings in Nebraska waters. (See addendum for fish stocking records.)

Land Management Division — Jack D. Strain, Supervisor:

This is a somewhat newly created division which has come into being because of the greatly increasing land management areas under the jurisdiction of the Commission; such as new lake areas, public shooting grounds and the many new large reservoir areas being developed. In the past, each division managed its own land within its obligations. This resulted in fish specialists, game specialists and park specialists all managing land areas with the obvious lack of time and training for sound conservation soil management and uniform leasing and cropping procedures. In answer to this problem, this operational division has been formulated since July 1, 1951, and is now in the act of unifying all leases, involving grazing, crop and soil management, according to sound soil, water and wildlife policies. The following distinct budgetary divisions fall within this generalized administrative area:

1. Land management administration
2. Land management crews
3. Arbor Lodge Park
4. Chadron Park
5. Victoria Springs Park
6. Stolley Park
7. Niobrara Park
8. Ponca Park
9. Ft. Kearny Park

The Land Management division is charged with the operation and maintenance of lands owned or operated by the Commission. These lands can be roughly divided as State recreation areas and State parks. Combined, the total area is something in excess of 30,000 acres of land devoted to the outdoor recreation of the people of Nebraska. To manage these areas, the division is divided into three management units: Administration, Field crews and State parks. The field crews are further subdivided into recreation ground maintenance and reservoir management. The table of organization provides for two persons in administration, fourteen men on the crews and twelve men in the State parks. These are permanent personnel. Provision is also made for temporary labor during peak load seasons.

The administrative section is manned by a supervisor and a clerk-steno. In addition to direct supervision of field personnel, this section furnishes reports, maintains financial records, administers leases and answers inquiries from the public. Toward accomplishing these ends in 1952, the section mailed out 1,836 pieces of mail--the greater part of which, by far, was first-class mail. Twelve monthly reports were submitted, as were a number of special reports on the activities of the division. Three different types of leases for use on Federal impoundments, a better method of maintaining records of lease income, new park registration cards, a comprehensive accident report, a new method of estimating attendance at State parks, and memorandums on operational procedure are samples of administrative activities accomplished this year. The supervisor visited all of the State parks several times and, in addition, visited forty-three of the fifty-two recreation areas--some of them several times. All field personnel were contacted. The supervisor spent an average of 12½ days per month in the field, a total of 151 in all activities, and drove a total of 36,865 miles accomplishing the various inspections and supervisory activities noted in the foregoing. In addition to the routine activities noted above, the supervisor attended a number of meetings with various State and Federal agencies concerned with activities of the division, attended the National Conference on State Parks at Custer, South Dakota, and appeared at numerous wildlife and civic club meetings.

Recreation Ground Maintenance: The field crews are charged with the maintenance, planting and general improvement of the State recreation grounds. In March and April, 40,819 trees were planted on these areas. 36,000 of these were conifers and were planted primarily in the north and west part of the State. All areas were visited during the early part of the season to be cleaned up, pumps checked and equipment readied for the fishing and picnic season. The mowers were started on May 20th. Three crews consisting of two men, a truck, tractor mower, road blade and hand tools, were busy on maintenance until late September. All areas were visited three times and some of the larger ones such as Fremont and Louisville, near population centers, were visited monthly. Each crew mowed the grounds, bladed the roads, picked up and disposed of rubbish, scrubbed the latrines and checked the water supplies. In addition to standard equipment, tractors are equipped with plows, tiller, scoops, terracing blades, etc., for tree planting operations. Four nursery beds have been established at Sutherland, Johnson and Maloney lakes where pines and cedars are grown to landscape size for planting in other parks and recreational areas. Other activities of the crew were the salvage of a large barn on the Pressey area, rip rapping at North Platte, relocation of old latrines and installation of new ones, watering trees and seeding grass areas.

Long Lake (28 miles southwest of Ainsworth): New cattle guard installed, two new picnic tables and fireplaces set up. Trash cans placed and fences repaired. Planted one hundred red cedar trees.

Cottonwood Lake (Merriman): Latrines repaired, new trash cans placed and general maintenance carried out.

Shell Lake (15 miles north of Gordon): New auto gate installed and old gates cleaned out. Fences repaired and a new identification sign erected.

Smith Lake (23 miles south of Rushville): This lake opened to fishing in July. Two auto gates relocated, one new one installed. New identification signs erected at each entrance. Sand roads hayed at various times throughout summer. New lock and chain installed on headgate after damage by vandals. State-owned hay measured and tons calculated.

Gilbert-Baker (5 miles north of Harrison): Auto gate cleaned out as needed and hay, cut on contract, measured and calculated.

Chadron State Park (Chadron): Rendered emergency help to park superintendent in preparing road for oil mat and erection of prefabricated metal shop building.

Otter Creek, Lake McConaughy: Repaired roads, latrines, auto gates and general maintenance.

Champion Lake: Relocated latrines and carried on general maintenance.

Wildcat Hills Recreation Grounds (10 miles south of Gering): This is a large area consisting of three shelter houses, two large combination latrines, and 10,000 gallon reservoir filled from a dug well. Maintenance consists of keeping reservoir full, shelter houses cleaned, roads and buildings repaired. Building repair has been increased by vandalism and carelessness. One of the large shelter houses was burned to a near total loss by a careless or willfully negligent picnicker.

Wildcat Hills Big Game Refuge: Work here mainly consists of winter feeding of the buffalo and elk herd and fence maintenance. Feeding has been a problem this winter due to the heavy snows, which has required that hay be distributed approximately every other day. Approximately 60 tons of State-owned hay has been hauled to the area this winter. Hay is cut and stacked on shares at State-owned areas where such operations are feasible and not in conflict with game bird nesting procedures. Work is presently proceeding in the fencing of an additional forty acres of pasture land which will include the cabin site. The cabin and garage in the administrative area were enlarged and reshingled. With the exception of some shingles, salvaged materials were used for these repairs.

Reservoir Management: This section was recently created to administer the Commission's responsibilities in conjunction with the management of the resources of the large Federal impoundments for public use. As will be noted later in this report, this section was nearly self-supporting during its initial year of operation and it is expected to become completely self-sufficient as initial expenditures are completed. Following is a summary of activities of 1952:

From January 1st to May 1st temporary office space was arranged with the Bureau of Reclamation in their Indianola headquarters. During this period details of operation were worked out with the Bureau, U.S. Fish and Wildlife Service and the National Park Service. All tenants were contacted and a survey made of each area. Contour lines were surveyed for tree plantings and machinery, signs, posts and other equipment were acquired. On May 30th, the final lease with the United States became effective, and the lands within the take line on Medicine Creek and Enders came under Commission management. Routine management and maintenance procedures were soon halted by the unseasonable drouth that hit the area in June. Due to the drouth, it became necessary to direct maximum effort to irrigation of trees in the recently planted recreation areas. Over 100,000 trees and shrubs were irrigated three times at Medicine Creek and the 90,000 trees at Enders were irrigated seven times. Even with these operations losses were sustained, mostly among cottonwoods and primarily at Enders.

The recreation areas were mowed as necessary. Trash was hauled away and the latrines and directional signs were repainted. Gravel was placed around fireplaces as a fire preventative. One and one-half miles of terraces were built and a water diversion terrace was constructed for the swimming beach at Medicine Creek. Forty acres were sown to brome and twelve acres to alfalfa. These sowings will provide additional game bird cover as well as hay. Eight miles of fence was salvaged and non-usable posts were stock-piled for fireplace fuel. Wire was saved for cross fencing pastures. Supervision was given the construction of the concession building and seven private cabins. All crop harvesting procedures were carefully inspected. Twenty-eight agricultural and grazing leases were administered on the reservoir areas. In addition to the foregoing routine activities, the foreman appeared at various civic, wildlife and religious functions and performed law enforcement duties as required.

Hayes Center Recreation Grounds:

This is the only recreation ground in the State provided with a separate caretaker. Activities at this area were confined to regular maintenance operations the past year, pending the possible discontinuance of the caretaker, cabins and messhall. The advent of the large reservoirs has largely absorbed fishing pressure in the general area formerly served by Camp Hayes and it appears economically sound to revert the area to a regular recreation ground status.

The foregoing completes the summaries of activities of the various sections of the division. Activities of the State parks, being of different nature, will be detailed elsewhere in this report. In line with Commission policy, certain agricultural practices resulting in income, are permitted on some of the State-owned areas where such practices will not interfere with recreational or wildlife use.

Average Unit Cost of Operation of Vehicles	All Under 2 Yrs. Use		Over 2 Yrs. Use
*Passenger cars	.0301	.0333	.0238
Pick-ups ($\frac{1}{2}$T, 3/4T)	.0328	.0284	.0343
Trucks (1$\frac{1}{2}$T, 2T)	.0480	.0443	.0603
Tractors	.4220	.2736	.4715

*The old car here has had no major repairs due to the fact it will shortly be declared surplus.

State Parks: Because of the fact that the State parks are operated on appropriated funds, records are maintained entirely separate from the rest of the division which is operated on proceeds of the sales of permits and other Departmental income.

Arbor Lodge State Park: (Major Activity) Preservation, maintenance and display of the former home of J. Sterling Morton, founder of Arbor Day, and care of the grounds on which are growing a large variety of trees and shrubs. During the early part of the year, all machinery and tools were repaired and equipment overhauled. Signs were repainted and relettered. The stables building was reshingled. Part of the mansion roof was repaired. New installations were hot water heater, complete hail screen frames for greenhouse, thirty-foot steel culvert in scenic drive, new tractor mower, chain saw, electric tools and small road grader. A complete fire detection and warning system was installed in the mansion and stables. Office work consisted of weekly records and reports of cash receipts and admission ticket sales, attendance estimates, monthly records, cash remittances, vouchers, requisitions and correspondence. Annual plantings consisted of magnolias, scarlet maples, pines and spruce, shrubs, roses, bulbs and bedding plants and geraniums. The planting program has been a little heavier due to replacement of all missing trees in the original arboretum and replacement of loss due to old age, lightning, wind and disease. The spraying program of the past four years is apparently paying dividends as the entire area has been more free of insects and fungus diseases the past season than before. Typical groups visiting the park included forestry students, garden clubs, reunions, study clubs, women's clubs, patriotic organizations, schools, boy and girl scouts, 4-H clubs, botanists and others. The visitor's register shows names from all the states and territories and many foreign nations. Estimated Attendance: During the calendar year 1952, 36,891 people visited the park.

Chadron State Park: The major activities were protection, preservation and display of the natural beauty of the Pine Ridge area within the park, operation of the group camp, rental cabins, swimming pool and related facilities. Accommodations available at the park this year were modern cabins, the group camp, store and cafe, swimming pool, boats, playground equipment, fireplaces, picnic tables, roads, scenic trails, ball grounds, drinking water and public rest rooms. The water system supplied over 25,000,000 gallons of water during the year. This large amount of water, of course, reflects numerous changes of water in the swimming pool which was necessary due to the fact that the new chlorination system was not received until late summer. The modern rental cabins at the park accommodated 1,830 guests while 1,713 people in ten different groups used the facilities of the group camp. There are approximately ten miles of roads and trails through the park. One major accomplishment this past summer was the oiling of the road through the picnic and main administration areas. This alleviated a very bad dust problem in these areas. The rural fire fighting equipment including the fire truck of the local SCS district is headquartered at the park under the jurisdiction of the superintendent. During the extreme dry period in the late summer and fall, park personnel were called upon innumerable times to fight forest fires in the Chadron area. Two fires originating in the park were extinguished with this equipment. Further improvements were twenty new dining tables and seats constructed out of native pine for the dining hall; three new water heating units installed at the group camp; swimming pool completely renovated with rock walls, concrete floor, circulating and chlorination systems; all septic tanks cleaned; sixty bunk beds completely rebuilt; new all metal prefabricated shop building 24' x 40' set up; and the old Boy Scout building salvaged. Estimated attendance: The park was estimated to have had 56,191 visitors during the year. This is slightly less than last year, but the park was closed almost a month during the fire season.

Victoria Springs State Park: The major activity was the operation of large recreation area including boating, fishing, picnicking, ball diamond and play ground. Operations at the park are primarily maintenance. Some rather extensive improvements are planned in 1953-1954, however. Part of the park area consists of an old stand of cottonwood trees which require year around maintenance and care. Also the picnic area received heavy use during the summer, requiring constant attention. The ball diamond which is used extensively by nearby communities, had a new backstop added this year. Estimated attendance: During 1952, it was estimated that 11,908 people visited the park.

Stolley State Park: The major activity was the operation of a large recreation area including extensive picnic facilities, the preservation and display of early pioneer buildings and the maintenance of the deer herd. Constructed a large new deer pen and salvaged portions of the old one. Built a new equipment shed and carried on regular maintenance of grounds, buildings and equipment. New playground equipment was received including more swings and a new merry-go-round. A new blade and universal frame was installed on the tractor. A new forced air furnace was installed in the residence replacing an old, dangerous coal type heating unit. 1500 petunia plants, 363 cannas and 1400 tulips were added to the flower display at the park. Estimated Attendance: Stolley's attendance increased again this year with an estimated 35,475 people using the park throughout the year.

Ponca State Park: The major activity was the operation and preservation of timbered area along the Missouri River. Park area includes extensive picnic area, shelter houses and play ground equipment. Rental cabins are available as is a group camp providing mess hall and men's and women's barracks. New eight and sixteen foot picnic tables were built and installed in the picnic areas. The kitchen of the mess hall was renovated with new sink and work space facilities. One of the old cabins was remodeled for the assistant's quarters. The administrative building and old cabins were painted as were the group camp showers. New small tools were purchased including a power saw and drill. A new set of swings for children were installed and a new merry-go-round purchased. A new electric motor was purchased to pump water in place of the old gas pump. General maintenance included repair of roads, bridges and mowing of grounds. A pit-type garbage disposal area was set up. Forty-one different groups used the park from family reunions of one day duration to religious groups of two weeks stay. Estimated Attendance: The attendance for 1952 was estimated to be 50,315.

Niobrara State Park: The major activity was the operation of rental cabins, group camp, large picnic and recreation area including fishing, boating and swimming. Around the first of the year a crew was sent to the park to install two jetties to stop erosion of river along east boundary of the park. The crew was also utilized in salvaging wire from the old pheasant pens. Part of the northern half of the park was flooded due to an ice jam at the confluence of the Niobrara and Missouri rivers. This necessitated considerable road repair and maintenance. All cabins and group camp buildings were painted during the year. New windows were installed in some of the old cabins, a new double sink, two cabinets and new dishes were purchased for the group camp mess hall. The latrine facilities at the group camp which were formerly inadequate were enlarged. Floor coverings were installed in the cabins. Twenty new picnic tables were constructed and new dinette sets installed in the three water front cabins. Improvements were made in the superintendent's residence, a double tub washer was purchased for the park laundry and the posts were set for the new deer pen. A new sedan delivery was purchased for administrative and cabin service use. New hot water heater and shower stalls were purchased to further modernize six of the older cabins. Some new tractor attachments were purchased, a merry-go-round was added to the play ground equipment and the dike around the north side of the park was repaired. Estimated Attendance: 42,987 people were estimated to have used the park during 1952.

Ft. Kearny State Park: Pending further development, this area is maintained as a picnic grounds. The site is of considerable historical significance, but unfortunately the buildings were removed prior to naming the area a State park.

Average Unit Cost of Operation of Vehicles	All	Under 2 Yrs. Use	Over 2 yrs. Use
Sedan deliveries & panels	.0432	.0378	.0534
Pick-ups ($\frac{1}{2}$T)	.0382	.0300	.0491
Tractors	.4576	.2952	.4982

The past year has been a productive one for the division. Groundwork was laid for much better maintenance of the recreation area which will reflect in better service to the public in 1953. The acquisition of the large reservoir areas added hundreds of acres of land to free public hunting in the State, two fine recreation grounds, as well as swimming beaches and boating facilities. In addition, many surface acres of water and miles of shore line were added to the Nebraska fishing scene, all providing free access to the public. Income from lands exceeded any previous year, and State park income was the second largest in history, exceeded only by a small amount in 1950. Again there can be little doubt that had not all parks been closed during the extreme fire danger period in the late summer and early fall, a new high in park income and attendance would have been attained. Looking forward in 1953, we can expect more efficient service from the maintenance crews and extensive improvements in the State park system. Several State park projects are currently budgeted and some are already on the drawing boards.

Construction-Engineering Division -- Eugene H. Baker, Supervisor:

This division is composed of a supervisor, survey crew, construction crew and supply depot personnel. This supervisor and his personnel are responsible for the following programs and activities:

1. Requisitioning of all materials, supplies and equipment
2. Storage and shipping of all materials requisitioned from the supply depot
3. Maintenance of a perpetual inventory at the supply depot
4. Compilation of Department inventory
5. Responsible for the making of preliminary surveys of proposed new impoundments
6. Responsible for the preparation of plans, specifications and construction of all new projects
7. Responsible for preparation of plans, specifications for all projects requested by other divisions
8. Responsible for fulfillment of approved plans by use of Commission personnel or by letting of contracts as determined by the Commission
9. Legal disposal of surplus and depreciated material and equipment
10. Construction and maintenance in all other divisions when properly requested and approved
11. Correspondence pertinent to detailed administrative or technical information
12. Public relations pertinent to this division

Projects completed in 1952 --

Atkinson Mill Dam (Atkinson) -- In order to provide adequate flood protection to this dam and complete work agreed upon in acquisition, the following additions were made: (1) An additional 6000 cu. yds. of compacted fill was added, raising the dam 2½ feet and increasing both slopes, (2) The side wall of the auxiliary spillway was broken out and this spillway widened to twice its old width using 25½ cu. yds. of new concrete. This concrete was all poured in zero weather making it necessary to inclose the area with tarpaulins and use heating units, (3) 238 bags of gravel were laid at the outlet of the auxiliary spillway for a discharge apron, (4) Concrete floors were located, broken up, hauled and hand placed on the face of the entire fill for riprap to prevent wave action erosion; 11,600 sq. yds. of concrete was used, (5) Fencing of the mill race was completed, a total of 120 rods of four-wire fence, (6) Twenty feet of 24" corrugated culvert pipe was laid in the mill race and a roadway across the race was constructed, (7) A wood cattle and foot bridge was constructed at another point across the mill race.

Bowman Lake (Loup City) -- Pressure of the river had caused several severe leaks through the dike near the headgate. In order to protect this, a 120 lin. ft. cut off wall of eight gauge sheet piling was driven in the dike. The face of the dike was riprapped with both brush and rock. Other work accomplished was reconstruction of a 16' x 20' bridge, which was both raised and lengthened, filling in around headgate, cleaning out of canal from the bridge north to the headgate. A total of 1600 cu. yds. of fill was hauled.

Benkelman Hatchery (Benkelman) -- A tough job of earth moving was accomplished at this hatchery in the cleaning out of hatching and rearing ponds which were badly silted in. Five of the ponds were cleaned out and the waste earth used to rebuild roads and dikes. Flow channels were straightened and new flood control waterways excavated. This type of work is particularly rough due to the surface water and saturation of the soil being worked. A total of 17,675 cu. yds. of earth was moved in this operation.

Chadron State Park (Chadron) -- The construction of the new swimming pool was one of our major projects this year. This pool is 72' x 100' in size with water depth ranging from 28" at the lower end to 7½ feet at the deeper end. The walls are constructed of rock masonry with a concrete floor. The water is treated and recirculated; recirculation period is one turn over every nine hours. A children's wading pool was also constructed outside of the main pool and also has circulated-treated water. A total of 1046 sacks of cement and 304 tons of aggregate and 71 cu. yds. of rock were used. The rock was hauled from a quarry at Hot Springs, South Dakota. In addition to this an estimated 4200 cu. yds. of earth was moved in excavation and fill.

Cottonwood Lake (Merriman) -- Drouth conditions made the following emergency work necessary: (1) To salvage all water possible, a sand bag fill was installed across the outlet of Dry Creek, forcing all flow to go into the lake, (2) As Dry Creek completely stopped flowing, an earth fill was installed across Bear Creek,

making it necessary to remove the temporary one across Dry Creek. The lake was filled in this manner, then an earthen fill was installed again across Dry Creek to hold this "backed up" water. A total of 1400 cu. yds. of dirt and 42 sand bags were used in these operations. This work insured an adequate amount of water to prevent winter kill of the fish.

Jefferson Recreation Grounds (Alexandria) -- Work on this dam was completed. Through the cooperation of the State Aeronautics Department we were able to secure concrete floors at the Bruning Air Base. These floors were broken up, hauled and hand placed, riprapping the entire face of the fill. A total of 2840 cu. yds. of concrete was used. This has made excellent wave action protection and the lake is now filled to maximum capacity. A box screen was also constructed and installed over the overflow to prevent the escape of fish.

Louisville Recreation Grounds (Louisville) -- The dragline was used to clean out the flood canal, some of the waste dirt was used in building up the road adjacent to the canal. An estimated 3500 cu. yds. of earth was moved.

Maloney Lake (Seining Crew holding ponds, North Platte) -- Ice jam had taken out one of the dikes. This dike was reconstructed using 2500 cu. yds. of dirt. Running water in the canal at the time the work was being done made it very difficult to hold our fill.

Memphis Recreation Grounds (Memphis) -- A continuation of our last year's program of deepening areas adjacent to the shore line was completed this summer. A barrow was dug along the south and southeast end of the lake, with five other barrows averaging 400 feet long spaced along the easterly shore line. The waste dirt was used to increase the height of the dike and raise the roadway. A control gate was constructed across Silver Creek for diverting of water to this lake. This gate is a roller type with concrete abutments and apron. Another control gate was constructed to control the water from this diversion. It is planned to take only water fairly free of silt in order to prevent the rapid silting in of the lake. This latter control gate is in a dike cutting Silver Creek away from the lake. This dike was also raised and reinforced. An estimated 17,000 cu. yds. of earth was moved in these operations and 24½ cu. yds. of concrete poured.

Niobrara State Park (Niobrara) -- Protective measures along the river south of the highway bridge were made in the manner of revetments. Two 125 foot revetments were constructed. These revetments were made with 3/4" cable anchored by cement blocks at four intervals, each block in the river. Trees were secured to this cable above the ice and let sink as the ice went out. Holes were cut through the ice to drop the anchor blocks through. Some roads were rebuilt and washouts filled in after the spring flood.

North Platte Hatchery (North Platte) -- Work on the new hatchery ponds was completed which included haulin 2380 cu. yds. of dirt, running two concrete control boxes, and fine grading.

Otter Creek (Lake McConaughy) -- The following work was done at this area: (1) All pontoons and barrels under both the public boat dock and the Commission's boat house were scraped and painted. The dock and house were also painted and launched. As these were launched in a new and separate location, new anchors had to be installed. (2) The lean-to on the cabin was dismantled and the cabin was moved to a new location and set on a concrete foundation. (3) A boat launching ramp of concrete pillars, salvaged at the McCook Air Base, was constructed. These pillars were hauled to this site and laid in place. A concrete strip was run along each side of the ramp to hold them in place. This ramp is 106 feet long and 12 feet wide.

Pibel Lake (Ericson) -- As the old spillway was inadequate for the flood waters, it was necessary that it be remodeled. This spillway was broken out and a new concrete retaining wall with apron was constructed. This new outlet is twice the width of the old one and was raised to form normal over-flow to discharge out of the controlled drop inlet. The mouth of the spillway was widened and trees and brush removed. Rock protection was laid at the culvert through the road.

Ponca State Park (Ponca) -- The dragline excavated a garbage pit at this area. A total of 304 cu. yds. of earth was moved.

Shell Lake (Gordon) -- Due to a drainage project being carried on in the valley above this lake, it was necessary to install an additional tube through the dam to permit a more rapid escape of the run off water. The tube installed was a 30" x 40' corrugated iron pipe set with a concrete headwall.

Valentine Hatchery (Valentine) -- A new rearing pond was constructed. This is the largest one at this hatchery with a little over five surface acres and 43 acre feet of water. 180 feet of 8" drainage pipe was laid through the fill for water control. This entire area was grown up with trees and willows and had to be cleared. Due to the extreme sandy conditions it was necessary to pump water to keep the barrow wet in order to load the scrapers. A total of 13,875 cu. yds. of fill was made.

Verdon Lake (Verdon) -- Repairs were made to the dike and roadways. Seepage had caused the dike to sluff off endangering it. 428 cu. yds. of dirt was hauled and compacted in these places.

Walgren Lake (Hay Springs) -- Due to inadequate outlet, flood waters had been backing up on farm grounds adjacent to this lake. To prevent this, we enlarged the spillway to twice its old length. It was also necessary to enlarge the mouth of the outlet canal. The waste dirt was used to build up the roadways. A flat slab of concrete 12 feet wide and 45 feet long with tapered end was poured using 15 cu. yds. of concrete.

Willow Lake (Valentine) -- In order to prevent this sand fill from going out and to prevent legal action, the Commission directed that protective measures be taken, also that the lake be drained to 6" above old concrete wall. It was necessary to lower this lake in two stages. Following work accomplished in first stage: (1) Drove 510 lin. ft. of steel sheet piling, (2) Laid 60 lin. ft. of C.I.P. arch 50" span 31" rise with control gate at inlet, (3) Willow riprapped outlet of tube, (4) Raised dike 2½ feet. Moving approximately 1900 cu. yds. (5) Protected entire face of dike with baled hay laid between steel posts and wire netting, (6) Laid two culverts in Horse hay road, (7) Rebuilt wing walls on bridges, (8) Rebuilt 16 x 20 bridge in county road, (9) Increased height of road along water area estimated 1200 cu. yds. sand moved, (10) Spread manure from sale barn over sand fill to prevent wind erosion, (11) Run concrete wall behind sheet piling, (12) Left one and two men at lake to take water level readings and watch for possible damage for period of fifteen weeks. Following work done in second stage after lake had lowered as far as possible in first operation: (1) Tube and temporary control gate were removed and tube was lowered to stipulated elevation, (2) A new screw type control gate was installed and concrete head wall was poured.

In addition to surveying required on the aforementioned construction jobs, the following were also run:

1. Pawnee Lake (Guide Rock) -- Topographical and property line on land adjacent to the northwest, west and south of lake.
2. Oak Creek (Lincoln) -- Property line and surface acre for biological report.
3. Sacramento Area -- Completion of existing topographical survey.
4. Ravenna Recreation Grounds (Ravenna) -- Staked out fence line.
5. Reconnaissance and Topographical Surveys -- These were run on proposed lake sites for feasibility of construction; one of the Stauffer site near Humboldt and one near Nebraska City.

Cost account figures are available to the public at the Commission's Lincoln office on each individual project.

The following is an average of the unit costs of construction during the past year:

1. Earth moving -- hauled with D-4 caterpillar and 4 cu. yd. scoop, average haul 600 ft. fill compacted with sheepsfoot and water.. .151 per cu. yd.

2. Earth moving -- combination trucks loaded with dragline average haul 4500 ft. D-6 caterpillar also used on close haul for approximately 20 per cent of earth moved. .12 per cu. yd.

3. Earth moving -- with dragline, dozer and trucks loaded with traxcavator, all earth very soft as it was silt being removed from ponds in hatchery. Most of the dirt moved with dragline was handled at least twice; all dirt hauled with trucks handled two and three times. .249 per cu. yd.

4. Earth moving -- all D-6 with 6 cu. yd. scoop haul average 650 feet, fill compacted. .084 per cu. yd.

5. Earth moving -- all truck hauled and loaded with small Ford loader (loader has now been replaced), average haul 1¼ miles, hauled in January and February partly frozen. .41 per cu. yd.

This makes an average cost of .203 per cu. yd. which includes movement of equipment and men between jobs.

6. Concrete -- this includes both floors and low formed walls and abutments all of which were reinforced. $16.50 per cu. yd.

7. Broken concrete riprap -- this includes the breaking up of concrete floors, loading trucks with traxcavator, hauling 20 miles round trip, and hand placing on slope of fill. $2.44 per cu. yd.

8. Laying up rock masonry wall -- this includes the hauling, cleaning and placing of rock in vertical wall ten inches wide. $1.40 per sq. yd.

Supply Depot -- This is operated for the use of all departments in the Commission as a medium of making quantity purchases for both price advantage and availability of material. The filling of orders from this depot greatly decreases the paper work and time element involved in making purchases through channels. This is operated by one man, who also carries on other direct service activities, such as, construction of small items; i.e. tables, tool boxes, shipment of parcels, maintenance of grounds, heating offices located in this building, etc.

Total material purchased	$15,242.80
Total material transferred	11,661.85
Total material sold to State parks . . .	1,205.04
Total material inventory	16,596.89

Game Division -- Lloyd P. Vance, Supervisor:

There appears to be growing confusion in the minds of many regarding the term Conservation. To some it means save or hoard, and to others it means use. If we are to accept the dictionary definition of the word, it will be necessary to observe the meaning in more than one text, as there you will also find confliction in the meaning of the term. In the broad sense, conservation implies wise use, especially when used in reference to our natural resources. The wildlife of Nebraska is an important natural resource. The perpetuation of this resource is a responsibility of many. The concept that wildlife is a crop that may be harvested is indeed difficult for some of us to understand. Too often we are prone to forget that abolition of shooting is not the panacea for increased game populations. Too often we fail to remember that wildlife, in order to live, must have homes, even as you and I have homes. How many times have we heard the plea to establish a refuge for the pheasants when not one thought has been given for the establishment of needed winter cover, nesting cover, or any of the living requirements of the bird. How few times have we found realization of the most obvious--that wildlife in order to exist must have space; that wildlife populations can increase only to the carrying capacity of their normal range; or that Mother Nature is important, not only as she affects production, but also as she affects the harvest. How much we have heard regarding restrictions on bag limits and seasons, and how little on the promiscuous use of weedicides and herbicides which destroy the cover and feed of the wildlife we love so well. Our wildlife is a by-product of the soil, even as the corn, wheat, and cattle, and in our way of life it must be a by-product not taking dominance over the agricultural economy of our land. Many people, in addition to our sportsmen, enjoy our wildlife. Conserve it--use it wisely.

Doves: The mourning dove was legal game in 29 of the 48 states during the 1952 hunting season. This game bird is unique among all game birds hunted in Nebraska, as it is the only game bird which breeds in all 48 states, is multi-brooded in that two broods are produced in the northern states and as many as five or six broods in the southern states, and both of the parents secrete 'pigeon milk' to feed the nestlings--sharing equally in rearing the young. The season dates and bag and possession limits were the same in 1951 and 1952, being September 1 through September 30, with 10 birds the bag and possession. As usual, in Nebraska, the dove population hit a peak in late July and early August when the migration moved many birds out of the state. Good numbers remained until about September 10, when most of the doves departed. Dove hunting is not popular over the whole of Nebraska, but each year increasing numbers of sportsmen are appreciating the opportunity to harvest a portion of the annual crop.

Ducks and Geese: Drought enveloping Nebraska during the summer and fall caused the poorest duck and goose hunting in many years. Satisfactory water levels of sandhill lakes attracted breeding ducks during the spring migration, resulting in favorable production of blue-wing teal and mallards. Reports on reproduction of waterfowl from all of the main breeding areas indicated improved shooting for 1952. Many water areas in the sandhills and in the rainwater basins of south central Nebraska had evaporated prior to the annual fall migration of waterfowl, resulting

in limited concentrations on some of the favored lake areas. With the opening of the season, excellent hunting was afforded the few who had opportunities to hunt on sandhill lakes. Most waterfowl departed with the flurry of gunfire, and although the lakes remained free of ice for a longer than usual period, the expected movement from the north did not materialize in the expected manner. Reports of kills fell far below the reported kills of 1951, but equalled the five year average of 1947 through 1951. The fall movement of waterfowl was non-spectacular due to (1) open weather to the north did not force mass movement, (2) lack of strategically located bodies of water diverted main flight of Central Flyway waterfowl to the east of Nebraska. The 1952 waterfowl season of 60 days was for the period of October 11 through December 9, as compared to the 50-day period of October 19 through December 7, 1951. As usual, the waterfowl hunters wanting an early season still want it to open at an earlier date, and those wanting a later season want a later closing date. A decrease in the number of ducks (mallards) wintering (January 1952 count) was noted. Goose hunting was spotted in 1952, and generally did not approach the hunter success noted in 1951.

Coot: Very few coot were taken by Nebraska sportsmen during the 1952 waterfowl season. At best, the coot is not a popular game bird in Nebraska, and a decrease in water areas affected the limited harvest of this bird also.

Pheasants: Pheasants are found in all counties, but they reach their greatest abundance in northeastern, central south central, southwestern and western counties where general farming is practiced. For the state as a whole, they are the most abundant game bird, but in some areas they are exceeded by other native species, the quail or grouse. Pheasants reached a peak of abundance about 1942, then declined to the period 1946-47, and again gained in the period from 1947 through 1952. Blizzards of 1949 had little effect upon pheasants in the most heavily hunted range of southern Nebraska, but losses were severe in northern and western counties. In part of the stricken area populations are again good. Open seasons in the period of the last decade have varied in length from ten half-days to eighty days. Neither the long seasons nor the short seasons took a very large part of the supply of cock pheasants. Population trend data on pheasants indicates that more or less regular or periodic increases and decreases in the pheasant population can be expected. Harvest data, coupled with population data, indicate that much of the State's pheasant range is getting no more than a moderate or light harvest, compared to the potential that is there. The large area of good pheasant range, and the distance of much of it from large centers of human population brings about this condition. While there are many farming practices that are not favorable to wildlife in general, it seems particularly significant that the best pheasant populations have usually been in counties where much of the land is quite intensively cultivated. It is only on class one lands--lands used chiefly for production of commercial alfalfa, etc.--that agricultural landuse over large areas has held the pheasant population down. The pheasant is one form of wildlife which fits in well with general farming conditions even in areas of better than average productivity and land value.

The 1952 pheasant season was statewide for the first time since 1948. The State was divided into two zones to effect a limit of the harvest of cock pheasants in the north central area. The limited zone comprised the counties of Cherry, Keya Paha, Boyd, Brown, Rock, Holt, Grant, Hooker, Thomas, Blaine, Loup, Garfield, and Wheeler, where the season was open during the period of October 17 through October 26, with a bag and possession limit of two cock pheasants. In the remainder of the State, the open season was for the period of October 17 through November 23, with a bag and possession limit of four cock pheasants. In 1951, the portion of the State that was open had a bag and possession limit of five for the season of October 26 through November 25. Pheasant hunting was disagreeable during the 1952 season. The prolonged drought which struck Nebraska delayed the normal harvest of corn. Dry fields and weeds heralded the approach of oncoming hunters and birds generally elected to run ahead of the hunters and disappear without offering a shot. A better than average supply of birds combined with adverse hunting conditions resulted in some dissatisfied hunters and above average violations of hunting laws.

Quail: Some quail are found in every county. In the panhandle counties and in the sand hills, they occur only along the creeks or where land operators have planted permanent woody cover sufficient to give the birds the protection quail require. The most quail, and the best distribution of quail on a countywide basis, are found in southeastern counties where the topography is rolling, fields are smaller, and woody cover--either planted hedgerows or native brush--is found adjacent to most of the cultivated fields. This is the combination required by quail. Good quail populations are also found in the Platte Valley and in the Republican drainage of southcentral and southwestern Nebraska. In the southeast, popularly called "the quail country", quail are more abundant than pheasants. Quail numbers in southeast Nebraska are similar in most years to those in northwest Missouri and northeast Kansas. There are places in western Nebraska and in sand hill counties,

where land operators have planted woody cover that quail populations exist. Similar cover, provided on more farms or ranches, would make it possible for quail to exist in fair numbers in much of the State where they are not abundant. The quail population increased in the early 1940's, declined somewhat about five years ago, then increased very noticeably in 1950 and 1951, with some levelling off or even local decreases in 1952 apparent. It is especially interesting to note that population trends have been practically the same, both in the area open to quail hunting and in the remaining quail areas closed to hunting. It is already well known that moderate hunting has no effect upon the next year's quail population; destruction of cover combined with adverse weather conditions is the general limiting factor.

Nebraskans have now enjoyed nine consecutive quail seasons. November seasons have varied from five days to twenty-five days, and harvests have been moderate. Early November seasons, as in 1952, run the chance of finding quail not yet in fall coveys, especially in a year when hatching is very late; late November seasons have the chance of snowstorm complications. Shooting will probably average better in most years in the last half of November than earlier in the month. It appears that part of Nebraska will afford good quail hunting most years, and that quail in about half or two-thirds of the State are likely to lack the general distribution and abundance needed to make them attractive to the general hunting public. In view of the rigorous winters in most of this State, quail are likely to remain much more important in the south and southeast than elsewhere. Quail could have safely been harvested in recent years in some counties which were not open to quail hunting. The general public has not been sufficiently aware of this possibility. Travel lanes, provided through the establishment of brushy field borders, on the less hilly lands of southcentral and southeastern counties, would almost certainly raise the quail population.

The 1952 quail hunting season was open in the same counties as in 1951, and for about the same dates. In both years the quail season opened on November 1. The open season closed on November 25 in 1951 and on November 23 in 1952. The bag and possession limit remained the same for each year being 7 and 7. Quail hunters with dogs were generally more successful in their quest for game than were pheasant hunters. It also appears that quail were subjected to heavier hunting pressure in some of the opened counties in 1952 than in the previous years.

Grouse: Sharptail grouse breed in at least twenty-three counties, including the sand hills and panhandle areas. They occur with prairie chickens in the central and eastern sand hills, but replace the chicken as the most abundant native grouse in the central and western sand hills and in the panhandle counties. Grouse numbers went up during the past several years, to excellent numbers in 1951 and 1952. Seasons of three days were opened in 1950 and 1951, and in 1952 a five-day season was declared. Good hunting was available, but relatively light hunting pressure was attracted. Sharptails occur mostly in the part of the State where the human population is very small, and where much of the country is virtually inaccessible because of lack of roads. Much of this area is lightly hunted when seasons are open. Since pheasants are available much nearer home, most hunters from a distance are not inclined to travel to the grouse country for a low or moderate bag of birds. Annual grouse seasons seem to be quite appropriate with good management. In peak years, grouse could provide more shooting than was furnished by the seasons of the past three years. The sand hills seem destined to remain in grass, which means that the habitat required by grouse will remain relatively undisturbed unless some other economy replaces the cattle industry.

Prairie chickens breed in at least thirty counties, mostly in and adjacent to the sand hills, in a broad belt extending across the State from northcentral to southwestern counties. A seasonal movement brings a good part of the population somewhat southeast of its breeding range for late fall and much of the winter. In the pheasant season, flocks of chickens are often encountered in areas where the birds do not breed locally. Nebraska has probably as many chickens as (and probably more than) any other state today. The chicken population gained in the early 1940's, declined some in the mid-forties, then gained markedly in the past few years. They were more abundant the past decade than through the thirties. The recent grouse seasons were not open in most of the main prairie chicken range, and bag checks showed that this resulted in keeping the kill mostly to sharptails rather than chickens. Chickens are located further east and south than the sharptails. They are more readily available to larger numbers of hunters from eastern areas than are sharptails. This means that chickens would receive heavier hunting pressure than sharptails, if the area to the east and south were opened to grouse hunting. The emphasis on a grassland economy in recent years has resulted in good range management which has been favorable to both prairie chickens and sharptailed grouse. Chickens will respond to any change which will give us more tall grass in central and eastern Nebraska. With no great changes in landuse, prairie chickens will

probably continue to occur in the same places, and in about the same numbers, as in recent years. Management to help the chicken would, in addition to seeing that the native grasses are maintained, need to establish more grass in the farming country or more winter food in the grass country. Best populations generally occur where farmland meets extensive grassland. The area opened to grouse hunting in 1952 was expanded considerably over the area hunted in 1951. From the original counties of Cherry, Rock, Brown and Keya Paha, and that part of Sheridan county south of the Niobrara River, the open area has been extended to include all of Sheridan county, Arthur, Box Butte, Dawes, Grant, Hooker and McPherson counties; the bag and possession limit was increased from two to three; the number of days for hunting increased from three to five; and the season opened about a month earlier--October 11 through 15, instead of November 10 through November 12.

Hungarian Partridge: Remnant populations of this introduced game bird still persist along the northern portion of Nebraska from Wayne county in the east to Dawes county in the west. In an attempt to secure wild, live-trapped, Hungarian partridge for release purposes, a trip was made to Calgary, Alberta, Canada, in January of 1952 for the purpose of organizing trappers and supervising the trapping and shipping operations. With leads provided by the Alberta Fish and Game Association, twenty-five trappers were contacted and in operation by January 22nd. Trapping took place from ten miles north of Edmonton, Alberta, to within a few miles of the United States border on the south. Extreme cold weather prevailed during the first part of January, and than a quick change brought the temperature up to forty degrees during the daytime. This condition continued during the balance of the month. The warm weather caused the coveys to split up--a condition which decidedly reduced the daily take of each trapper. Also there were hundreds of acres of wheat left in the fields and never harvested because of the early snows. Trapping success depended on baiting the birds into the traps and food was to be found everywhere. Seventy birds were trapped and shipped to western Nebraska by mid-February. Since trapping and shipping procedure was established, it was agreed that the Alberta Fish & Game Association would continue with the operations and ship as many birds as they could take during the remainder of the winter. An embargo on the exportation, from Canada, of birds and animals, resulted from an outbreak of hoof and mouth disease. After holding a number of Huns for approximately a month, they were finally released to the wild again by the Alberta Fish & Game Association. No Hungarian partridge have been received by this Department since that time. Reports from ranchers of the release in the Cheyenne county area have indicated some reproduction of the Huns. Answers to inquires sent to Alberta, Saskatchewan and Montana, indicate that some additional partridge may be forthcoming from those areas for stocking in Cheyenne county in 1953.

Chukar Partridge: No change in numbers of these birds has been reported. A few coveys persist in the Walgren Lake area of Sheridan county. Occasional reports of birds which might be Chukars have been received from other areas, but have not been verified.

Sage Hen: Sage hen were reported observed in Sioux and Dawes counties in 1951. No reports were made of observations in 1952.

Wild Turkey: Considerable interest is developing in certain northern and northwestern counties concerning the liberation of wild turkey in the Pine Ridge, and in the valley of the upper middle Niobrara River. The wildlife clubs at Cody, Valentine and Gordon, have secured wild turkey, which they intend to propagate and release for initial stocking.

Rabbits: Next to the pheasant, rabbits provide more recreation through hunting than any other non-migratory kind of game in the State. Hunting pressure upon rabbits is considerable, especially in eastern and southeastern counties, where pheasants are least abundant and where the human population is greater than elsewhere in the State. Both cottontails and jackrabbits have apparently been more numerous recently than in the middle and late 1940's. Very little work of a formal nature has been done with rabbits in Nebraska. In concurrence with the established trend of high numbers of cottontails, the bag and possession limit remained at ten, as in 1951. A year around open season with the exception of February and March was again declared for 1952. With the high reproductive potential of these game animals, provision is thus made to allow orchardists and other land operators to legally hold these animals under control during periods other than when they are normally hunted for sport. As the jack rabbit is neither game nor fur, as defined by statute, no provision for seasons on these animals are made.

Squirrels: Squirrel numbers in Nebraska are limited by the extent of timber. About three-fourths of the squirrel hunting now occurs in about ten southeastern counties, where native timber is common along the streams. The fox squirrel is an

important game resource. No appreciable change has been noted in the squirrel population the past several years. The open season of October 1st through December 31st, with a bag and possession limit of five, is the same as the past several years.

Deer: Deer occur in all counties and they are common to very abundant in northern and western counties, as well as in some Platte River and Missouri River counties, and in addition are becoming common in several southeastern counties away from major drainages. Most of the western deer are mule deer, while the Virginia deer, or white-tailed deer, are more common in eastern Nebraska. Deer have increased very rapidly in the past fifteen years with numbers high enough more recently that deer have become readily evident to people in many parts of the State. A number of local areas already show browse over-use, which indicates deer numbers cannot be expected to go much higher there without serious problems to farm crops. Five open seasons, four of which have been in consecutive years (1949 through 1952), have been held, and between four and five thousand deer have been harvested. A thriving herd, reproducing rapidly, has made deer available for harvest faster than the public could bring itself to a realization that deer hunting can be an actuality in Nebraska. Deer are already available in great enough numbers to provide an annual kill somewhat larger than any of the first five open seasons have produced. The number of permits issued can be increased greatly and the area open to hunting can be enlarged as soon as that becomes legally possible. Indications are that deer can be maintained in good numbers over much of the State and annual open seasons are quite probable.

The fourth consecutive open season during the period of December 1 through December 7 for buck deer and December 8 through December 14 for doe deer, in the counties of Morrill, Banner, Scotts Bluff, Sioux, Dawes and Sheridan, (Sheridan was not opened to doe hunting), resulted in a known kill of 1,916 deer by 2,500 permittees. The 1,500 buck hunters checked out 1,081 deer; the 1,000 doe hunters checked out 835 deer. Some 8,839 applications were received for the special permits, of which 5,091 were for buck permits and 3,748 were for doe permits.

The 1952 deer hunting season was the most successful on record when judged from the hunters' standpoint. Following is a tabulation showing the year of season, number of permits issued, and the percentage of successful hunters.

Year	Permits Issued	Deer Checked	Percent Permits Successful
1945 (any deer)	500	361	72.2%
1949 (buck)	1,500	910	60.2%
1950 (buck)	1,000	686	68.6%
1951 (buck)	1,200	712	59.3%
1952 (buck & doe)	2,500	1,916	76.6%
	(1,500 (buck)	(1,081)	(72.0%)
	(1,000 (doe)	(835)	(83.5%)

Weather conditions were generally satisfactory, especially in view of the timely snowfall occurring in late November, which cancelled the extreme fire hazard evident before the snow. Numerous letters were received during the period that postponement of the season was considered, requesting that the season be held as planned, as ranchers could better stand the risk of fire than the known hazard of excess deer numbers. Again, as reported in 1951, increasing numbers of reports of damage to agricultural crops by deer are being received from land operators outside the counties which the Commission is authorized to open to deer hunting.

In addition to deer taken by hunters, there is an annual toll of deer taken by traffic on the highways. District conservation officers are instructed to salvage all deer killed on highways, if they can reach the animal within a reasonable time. Such carcasses are processed by the local locker plant and shipped directly to the Beatrice Foods Locker Plant in Lincoln. This venison is made available to wildlife clubs and other organizations for banquets. Deer which cannot be salvaged for human consumption are buried or given to the nearest rendering plant for disposal. Hides of deer killed on the highways are removed, salted and sent to the Department holding plant in Lincoln, where they are sold to the highest bidder at the annual gun sale. During 1952, a total of 1,577 pounds of venison were sold to wildlife clubs at the rate of 60 cents and then 45 cents per pound. Total revenue from this source amounted to $828.60. Some 43 deer hides salvaged in 1951 were sold in 1952 for an additional $74.00. Since the plan of salvaging useable deer carcasses has been put in operation the following summary has been made:

Year	Venison Sold	Amount Paid
1949	572	$ 256.80
1950	1,610	724.50
1951	1,441	676.60
1952	1,577	828.60
	5,200	$2,486.50

Surplus venison has also been made available to the Board of Control and to the several Veteran's Hospitals. The largest number of kills was reported from Scotts Bluff county with 45. There were 12 from Morrill, 9 from Dawes and Keith, 6 from Sheridan and Brown, 4 from Madison, 3 from Antelope, 2 each from Banner, Kimball, Cherry, Lincoln, Furnas, Holt, Howard, Merrick, Washington and Douglas, and 1 each from Sioux, Cheyenne, Garden, Deuel, Dundy, Hitchcock, Blaine, Rock, Dawson, Harlan, Kearney, Buffalo, Valley, Greeley, Knox, Dixon, Stanton, Colfax, Burt, Sarpy, Hamilton, Lancaster and Nemaha counties, for a total of 134.

Antelope: While annual estimates on antelope numbers for the past ten years indicate the herd is relatively static, the number of complaints received on antelope damage would indicate a sizable increase in the size of the herd. Antelope in Nebraska are confined to the counties of the panhandle, although two were observed from the air between Maxwell and Brady, in Lincoln county. It appears that three inter-state antelope herds are involved in addition to our own resident Nebraska antelope. With open season on Antelope in Colorado, Wyoming and South Dakota, some movement across State lines results in larger numbers for at least a portion of the year. Present areas of greatest numbers are south of the Lodgepole community, especially in Cheyenne county; north and west of Oshkosh in Garden and Morrill counties; north of the Pine Ridge, especially in Sioux county; and again in Sioux county and western Box Butte counties, between the Niobrara and Platte rivers. Seasonal problems also occur in Scotts Bluff county.

Buffalo and Elk: Aside from the large herds of buffalo and elk maintained by the Fish and Wildlife Service in their Fort Niobrara Big Game Reserve near Valentine in Cherry county, the State herd in the Wildcat Hills Big Game Refuge south of Gering in Scotts Bluff and Banner counties contains the largest numbers of these animals at the present time. Some twenty to twenty-five buffalo and fifteen to twenty elk are maintained in this enclosure, with the annual surplus made available to wildlife clubs and related organizations for banquets. From the Wildcat Hills Big Game Reserve, the following were sold in 1952:

6 buffalo	$770.00
2 buffalo heads	15.00
5 buffalo hides	17.00
1 buffalo head & hide	40.00
	$842.00

Raccoon and Opossum: These nocturnal furbearers and game animals have increased throughout their entire range, resulting in a continuation of the policy of a year around open season. It appears that these animals may have reached the peak and passed the top of the cycle. As long as fur prices remain low and the raccoon population high, it will probably be necessary to retain relaxed restrictions. While the opossum does not occupy as much range throughout Nebraska as does the raccoon, the similar methods of hunting preclude separate seasons for these two animals. Low fur prices, plus the inclination of these animals to feed on domestic poultry, indicate the advisability of holding these animals in check at the present time.

Midwinter Waterfowl Survey: In cooperation with the United States Fish and Wildlife Service, wintering waterfowl survey, our men attempt as nearly an accurate count as possible of all waterfowl wintering in Nebraska. The information thus obtained from all wintering areas of waterfowl is used as a basis for determining the continental breeding population of waterfowl. Wintering areas are observed by air whenever possible, and checked by ground counts also. The Platte River system in Nebraska ordinarily holds the most wintering waterfowl, although the new reservoirs are holding increasing numbers. The total number of ducks and geese reported wintering in Nebraska in mid-January is reported in the following table:

Jan. 10-15	Ducks	Geese
1949	104,240	270
1950	172,800	1,870
1951	269,320	1,375
1952	151,454	1,495

Big Game Survey: An annual estimate is made of numbers of big game in Nebraska as of December 31st each year. This survey covers all State, Federal and private lands, and classifies as to big game in the wild and in parks or reserves.

	Wild				Confined			
	1949	1950	1951	1952	1949	1950	1951	1952
Mule deer	9,035	13,420	12,830	18,285	8	11	12	16
W-tail deer	340	1,290	2,040	7,740	9	8	17	2
Other deer	70	25	50	70	84	43	36	33

Antelope	1,795	2,120	1,830	3,140	2	3	3	7
Elk					54	23	61	68
Buffalo					100	106	339	343
Bear					4	4	7	7

Hunting Season Dates:

	1950	1951	1952
Doves	Sep. 1 - Oct. 1	Sep. 1 - Sep. 30	Sep. 1 - Sep. 30
Ducks	Oct. 20 - Dec. 3	Oct. 19 - Dec. 7	Oct. 11 - Dec. 9
Geese	Oct. 20 - Dec. 3	Oct. 19 - Dec. 7	Oct. 11 - Dec. 9
Coot	Oct. 20 - Dec. 3	Oct. 19 - Dec. 7	Oct. 11 - Dec. 9
Pheasant*	Oct. 28 - Nov. 19	Oct. 26 - Nov. 25	Oct. 17 - Oct. 22 Oct. 17 - Nov. 23
Grouse*	Nov. 10 - Nov. 12	Nov. 10 - Nov. 12	Oct. 11 - Oct. 15
Quail*	Nov. 10 - Nov. 26	Nov. 1 - Nov. 25	Nov. 1 - Nov. 23
Rabbits	Oct. 1 - Jan. 31	Jan. 1 - Jan. 31 May 1 - Dec. 31	Jan. 1 - Jan. 31 Apr. 1 - Dec. 31
Squirrels	Oct. 1 - Dec. 31	Oct. 1 - Dec. 31	Oct. 1 - Dec. 31
Raccoon	All year	All year	All year
Opossum	All year	All year	All year
Deer* (Buck)	Dec. 4 - Dec. 17	Dec. 8 - Dec. 17	Dec. 1 - Dec. 7
(Doe)	- - -	- - -	Dec. 8 - Dec. 14

*Restricted areas

Fur Bearers -- Muskrat and Mink: As a result of studies of fur harvests of these two important fur bearing animals, a revision of zoning for the taking of these animals was made in 1952. From a practical standpoint, muskrat and mink must be managed together as few trappers can selectively trap for one without the chance of taking the other. In previous years an attempt was made to generally separate the lake 'rats from the stream or bank 'rats, as a basis for setting seasons. This method was not entirely satisfactory as mink and muskrat do not prime or arrive at maximum value at the same time. Mink are normally at their best in November and December, and fall off rapidly in January, while 'rats reach their maximum size and pelt value in February and the first two weeks in March. Also, 'rats in the lake area are not normally trapped until after the lakes have frozen over, while bank 'rat trapping is at its best during the periods when the water is free from ice. In areas where muskrat are economically more important than mink, the season should be such as to allow the trapper to take the highest quality of muskrats; and conversely, where mink are most economically important, the season should be set to allow the trapper to take the highest quality mink.

From the Trapper's Fur Take Cards, a record was made of the relative importance of each of these furbearers in each county. Since over the past few years muskrat pelts have averaged just a little over $1.00, and mink pelts have averaged about $15.00, we used those figures as the basis for our division of the State into two new areas. Any county averaging less than 15 muskrats per mink was included in Area II, and in that area the season was regulated so as to allow the trapper to take the highest quality mink--November 15, 1952, to January 15, 1953, inclusive. Any county with over 15 muskrats per mink was included in Area I, and in that area the season was regulated so as to allow the trapper to take the highest quality muskrats--December 15, 1952, to March 15, 1953, inclusive. To avoid confusion, the line dividing the two areas was kept as straight as possible. A few counties in both areas appear to be out of place. As indicated on the tabulation of fur take for the past several years, muskrats probably hit their peak population during the 1951-52 trapping season. Drouth conditions affecting the important muskrat areas probably accelerated the anticipated decline in the 'rat harvest for the 1952-53 trapping season. Numbers of mink have not fluctuated as greatly as indicated on the same chart, varying from 12,000 to 15,000 each year.

Beaver: There is an estimated population of beaver in Nebraska in excess of 30,000 and the total value of the 4,933 beaver pelts harvested by Nebraska trappers, by nuisance permits during the 1951-52 fur harvest season, is estimated in excess of $50,000. The vast area of agricultural land in Nebraska does not necessarily lend itself to a high beaver population, which has led to a declaration of an open season on beaver for the 1952-53 trapping season. Figures are not yet available on the season take.

Skunk, Civet Cat and Badger: Because of low pelt prices, each of these furbearers has become increasingly abundant to the point where a year around open season has been declared on them. It is anticipated that with a rise in fur prices, and a reduction of their numbers, that less damage will be attributed to these animals.

Fur Taken by Nebraska Trappers:

	1949-50	1950-51	1951-52
Badger	246	793	521
Beaver	2,575	5,477	4,933
Bobcat	266	33	67
Civet	1,388	2,670	2,175
Coyote	4,930	5,484	3,836
Fox	336	213	277
Mink	12,344	15,270	13,053
Muskrat	165,104	209,544	366,921
Opossum	2,401	4,863	5,733
Raccoon	17,373	27,791	26,506
Skunk	3,761	11,853	8,654
Weasel	436	749	727
Total	214,838	284,740	433,505
Trappers		4,098	5,079

Sale of Fur: Fur taken by the State Trapper, who is also assigned other duties, is offered for sale each year. Following is a record of the kind and amount of fur sold during the past two years:

	1951		1952	
	Number	Selling Price	Number	Selling Price
Muskrat	218	$ 324.60	316	$ 291.30
Beaver	49	827.00	132	1,193.50
Mink	5	60.00	8	68.00
Raccoon	4	9.00	8	4.00
Opossum			3	.50
Badger			1	.50
Wildcat			2	1.00
	376	$1,220.60	470	$1,558.80

Beaver Damage Permits: Permits to take beaver damaging real or personal property were issued to 679 landowners or landoperators in 1952, as compared to 871 for the 1950-51 season. Beaver removed by authority of these special permits totaled 2,575 as compared to 3,617 the previous year. Opening the beaver season to trapping was responsible for the decline in number of permits issued and beaver taken.

Officer	1951		1952	
District	Permits	Beaver	Permits	Beaver
1	58	203	29	111
2	--	---	--	---
3	36	173	32	134
4	43	119	35	95
5	101	431	65	195
6	21	59	25	47
7	20	125	14	66
8	12	78	6	31
9	49	226	27	135
10	48	215	48	155
11	31	96	29	61
12	68	80	29	91
13	14	122	14	85
14	55	165	25	124
15	76	418	88	330
16	24	118	56	261
17	39	256	17	116
18	46	171	49	190
19	50	232	18	62
20	45	199	24	129
21	3	---	14	70
22	18	90	16	63
23	2	4	5	9
24	12	37	9	25
25	—	---	5	11
Total	871	3,617	679	2,575
Av.		4.1		3.8

Game Farm Permits: During 1952, a total of 304 game farm permits were issued, as compared to 274 during 1951. Revenue from these permits to keep protected species of wildlife in captivity totaled $653.00, as compared to $619.00 the previous year.

Scientific Permits: The laws provide that permits may be issued accredited persons to take for scientific or educational purposes only, protected species of wildlife. Only 23 such permits were issued in 1952, as compared to 34 in 1951.

Game Farm: With an anticipated opening of the entire State to pheasant hunting during the fall of 1952, emphasis was not placed on producing larger numbers of pheasants at the State game farm. Favorable weather factors at the game farm resulted in less than normal loss of birds reared in range pens, enabling total production figures to almost equal 1951--17,007 as compared to 17,496. A total of 7,150 four-week old pheasants was furnished booster units in 1952, as compared to 9,600 in 1951. Release data compiled in the following tabulation shows the spring release of 1,182 breeders as compared to 1,190 in 1951, booster unit releases of 5,451 as compared to 6,997 in 1951, and releases from the game farm of 10,374 as compared to 9,309 in 1951. Studies were continued on the use of infra-red lamps as a source of heat for brooding. This method of supplying warmth again demonstrated superiority by lower death loss during the brooding period, and increased feed consumption. The use of anti-biotics in the feed ration was also tried. While not enough feed or birds have yet been used, the initial work indicates that by the use of anti-biotics in the feed the rate of growth and development may be accellerated to enable release at an earlier age than the 12 to 14 week age now believed most satisfactory.

1952 Pheasant Releases:

County	Spring Breeders	Booster Units	Game Farm To B. Units	Game Farm	Total
Antelope	365				365
Banner			195		195
Brown		569	620		1,189
Cherry		1,584	1,720		3,304
Cuming				300	300
Dawes		380	460		840
Garden		393	680		1,073
Holt		445	600		1,045
Kimball		233	340		573
Madison	439			1,200	1,639
Morrill		583	800		1,383
Pierce	378			160	538
Platte				1,414	1,414
Scotts Bluff		204	145		349
Sheridan		1,060	1,220		2,280
Stanton				520	520
Totals (1952)	1,182	5,451	6,780	3,594	17,007
(1951)	1,190	6,997	--- 9,309 ---		17,496

1952 Pheasant Booster Units:

County	Town	Representative	1951 Pheasants Started	1951 Pheasants Released	1952 Pheasants Started	1952 Pheasants Released
Box Butte	Alliance	Floyd Stone	1,500	341	---	---
Brown	Ainsworth	A.D. Austin	600	572	640	569
Cherry	Cody	Rex Stotts	300	285	360	280
Cherry	Valentine	Harold Jordan	1,200	827	1,260	1,170
Cherry	Wood Lake	Geo. O'Halloran	150	133	150	134
Cheyenne	Sidney	Mr. Moore	750	500	---	---
Dawes	Chadron	Don Berlie	450	391	675	380
Garden	Lewellen	C. E. Cooper	150	114	150	92
Garden	Lisco	Lynn Chichester	---	---	150	29
Garden	Oshkosh	Jack Newkirk	---	---	300	272
Holt	Atkinson	Geo. Mentzer	---	---	300	285
Holt	Emmett	Homer Mullen	150	143	---	---
Holt	O'Neill	F. Montgomery	1,050	856	---	---
Holt	Page	R. A. Snell	150	146	200	160
Keith	Ogallala	W. E. Craig	300	293	---	---
Kimball	Bushnell	Tex Chandler	150	138	---	---
Kimball	Dix	Gus Wendt	300	228	---	---
Kimball	Kimball	Leo O'Hare	300	244	300	233
Morrill	Bayard	Frank Smith	---	---	150	138
Morrill	Bridgeport	Ed Kimmel	600	426	600	445
ScottsBluff	Scottsbluff	John Herstead	---	---	300	204
Sheridan	Gordon	Bill Davis	600	563	725	540
Sheridan	Rushville	Bill Hewitt	600	517	890	520
Totals			9,600	6,997	7,150	5,451

The following are Pittman-Robertson Federal-aid reports of the game division:

Wildlife Survey & Investigation -- Levi Mohler, Project Leader:

This project employs four men, plus some part-time seasonal help, whose work in 1952 came under three general headings as follows: (1) Conducting basic investigations involving muskrats, waterfowl, deer, grouse, quail and pheasants. Information from such work serves as a basis for use in planning future surveys, harvests and habitat improvement work; (2) Organizing extensive Statewide surveys for use by Department personnel and other cooperators in getting population trend information concerning the more important kinds of wildlife and compiling the data from such surveys; (3) Organizing methods for measuring hunter and trapper success of game and fur harvest and compiling the data from such surveys. All of the above kinds of work are summarized in reports prepared for administrative use. Field jobs by project personnel included the following activities, listed according to the kind of wildlife involved, together with very brief summaries of the results.

Deer: (1) Deer food inspection, late winter and spring. Spot checks of key forage plants indicated need for increased harvest of deer in 1952, including harvest of female deer. Utilization of deer food plants on Nebraska National Forest approached condition which led to the initial deer hunt there. (2) Collecting deer data at checking stations. 1,921 deer taken by 2,500 permittees, including 1,080 in buck season, and 841 in doe season; buck kill was about 50% yearlings in counties open previous year; 45% for entire hunt.

Grouse: (1) Counts of breeding male prairie chickens on Keystone area, Keith county. Population up about 60% compared to 1951. (2) Counts of male chickens and sharp-tailed grouse on miscellaneous areas in several counties. Population gains were apparent.

Quail: (1) Winter covey checks: Quail wintered well in 1952. (2) Summer pre-season survey via whistle count method. Population somewhat below 1951 in southeast, but higher than 1951 in southcentral and southwest areas.

Pheasant: (1) Breeding population survey via crowing counts. 1952 population index nine percent higher than in 1951 in 12 counties checked both years. (2) Summer roadside count of pheasants. Roadside counts in 6 counties indicated a higher population than in the late forties, but below that of 1942. (3) Brood observations. (See officers' summer data in later section.) (4) Check of known kill on two two-section areas in Clay and Fillmore counties. Known kill first three weeks was 35 cocks per section Clay area; 15 per section Fillmore area.

Muskrat Investigations: (1) According to the trapper take cards, the 1951-52 muskrat harvest was the best since this system of inventory was started eleven years ago. The State-wide take was calculated to be 366,920. This can be compared to a take of 165,104 in 1949-50 and 209,544 in 1950-51. Intensive work on the study areas gave us information that led us to believe that we were approaching a peak in muskrat populations. Such information as: (a) increased numbers of young-of-the-year females bearing a litter of young, (b) higher survival of young muskrats than one would expect on marshes supporting top-heavy populations, (c) muskrats tolerated more crowding. (2) During the past summer many pot-holes and smaller lakes throughout the State dried up as a result of the rather severe drouth. Many of these water areas had taken on a semi-permanent status during the past few years of unusually wet weather and they supported many muskrats. As these areas dried up these muskrats were forced to migrate. Most muskrats are doomed to die when forced to leave their home territories. These losses were probably substantial enough to be reflected in our 1952-53 harvest. An examination of a small sample of adult females taken from one of our study areas during the 1952-53 trapping season indicates that for that area there was a striking reduction in productivity. More evidence is needed before we will be able to determine whether this might mean that we have passed the peak of the cycle. (3) A great deal of time during the past year has been spent in the office working on data that we gathered during three years of field operations on the muskrat project. (4) Routine checks were made on the study areas.

Laboratory and office jobs other than routine reports and compilations included the following, listed according to wildlife species, with brief summaries of results:

Waterfowl: (1) Examination of 384 duck gizzards by fluroscope to determine extent of ingested lead shot. Two percent of these gizzards (Ogallala, 1951 season) contained ingested shot. (2) Analysis and mapping of band returns. (In progress. Some winter bands from Nebraska recovered in Canada; most summer bands recovered in area south of here, including South America.)

Deer: (1) Analysis of stomach contents from 72 deer, 1951 season. Buckbrush was the most important single food item, both by volume and occurrence. Yucca, or soapweed, was the next most common item. Farm crops were more important from the Platte valley than elsewhere. (2) Deer data, 1951. 712 deer taken by 1,200 permittees; 75 percent taken first five days; 29 percent yearlings in Banner county kill, 51 percent elsewhere; hunters saw over 13 deer per hunter day.

Quail: (1) Collection of wings. Hunters sent in nearly a thousand wings from 1952 season, from which age and hatching dates can be determined.

Pheasant: (1) Summary of summer observations by officers. Officers saw the ratio of young pheasants per adult hen increase from 2.92, week of July 14, to 5.70, week of August 11; five weekly samples ranged from 684 to 1,433 young. (2) Age determination from spurs and feet. Conservation officers sent in over 1,200 pheasant feet; ratio in first week of season was 2.36 young per adult; a higher proportion of young was found in western areas than elsewhere. (3) Analysis of 239 pheasant crops. Corn was most important food item, but wheat more important in summer. Crops contained less food in warm months. (4) Comprehensive bulletin covering Nebraska pheasant studies nearly ready for publication.

Owl & Coyote Studies: Analysis of food habits materials. 560 horned owl pellets, 97 coyote droppings, and a few miscellaneous crops were examined. The owl pellets contained mostly mice and rabbits, considerable small bird remains but no quail.

Fur Harvest for 1951-52: Data from 838 trappers' cards indicates lower take than in 1950-51 for most species except muskrat and opossum. The total muskrat take was the highest in eleven years. Low fur prices discouraged some kinds of trapping.

Extensive Surveys & Investigations: To get extensive information, which can be interpreted by comparing with detailed studies by technicians, several kinds of extensive investigations were used in 1952. These include: (1) Field bag checks by conservation officers during the open seasons; this work was expanded in 1952 after an encouraging start a year earlier. Officers in 1952 checked and recorded bag results in the field from more than 7,400 individual hunter contacts. Most of this data remains to be compiled, but 57% of the parties possessed pheasants when contacted. (2) Statewide game bird counts by rural mail carriers. Six hundred or more individual carriers cooperated in four-day counts in winter, spring and summer. Pheasants, quail and both species of grouse generally showed upward trends in 1952. (3) Reports from wildlife reporters. Reports from 364 land operators in the spring and 366 in the early fall, indicated that landowners believed pheasants, quail and both kinds of grouse had good nesting years in 1952. There was a striking increase in comments about deer on a Statewide basis. Many of the wildlife reporters have now reported from the same farms for ten or more years. An important part of this survey is the information bulletins which go back to these farm and ranch cooperators in the entire State.

Field Meetings: Several years of detailed investigations have yielded the basic information necessary for formulating year-to-year field surveys by the regular field staff of conservation officers. Meetings were held at Gering, Cody, O'Neill, and Nebraska City, to demonstrate field methods to the officers and discuss local problems with them. These meetings in 1952 included pheasants, deer, grouse and quail work, whereas previous meetings had concentrated on pheasant work. This approach makes Statewide discussion and considerations more meaningful than formerly, since uniform methods form a basis for understanding and comparison.

Waterfowl Investigations -- Harvey Miller, Biologist:

Seasonal Conditions: (Winter) The 1952 winter was for the most part rather severe. Storms starting in December continued in some areas, especially the eastern part of Nebraska, until mid-February, keeping waterfowl populations well concentrated. Corn, frostkilled and allowed to remain in the fields, was available throughout the season, allowing the ducks and geese to feed well and to carry through in excellent condition. (Spring) Dry weather prevailed throughout the spring season, though carry-over water from the extremely wet 1951 season made a large number of potholes and maximum lake levels available to the population as it arrived on the breeding grounds. The dry-up occurred at a normal time, but was more pronounced in that large numbers of good potholes dried up between the May and June surveys. Few, if any, heavy rains and hails of the size and intensity to harm waterfowl populations occurred. (Summer) Severe drought conditions prevailed throughout the sandhill region during the summer. Lake levels receded alarmingly and nearly all potholes, including many of the semi-permanent areas, dried up completely. Haying operations commenced early, and hay was mowed in locations where paired ducks were observed

during the breeding population counts. (Fall) The drought conditions continued until mid-October when minor amounts of precipitation somewhat relieved the situation. Fall pre-migratory duck concentrations were heavy, though the available water was probably not much below that of a normal year, as the lakes had been at new high levels at the outset of the season. Few, if any, of the potholes around the border of the sandhills, and into the rain water basins of Clay, Fillmore and Perkins counties, remained at the beginning of the migration.

Winter Population: Wintering waterfowl was almost non-existent in some of the usually good areas, such as the South Platte River near Ogallala. Nearly all the wintering areas had lower populations than in 1951, with the result being a State-wide count of only slightly over one-fourth the 1951 figure. Apparently, the early storms and rather general freeze-up forced the ducks to move on southward. The wintering goose flocks numbered about the same as in 1951, and were found in about the same areas.

Migrations: (Spring) The first signs of waterfowl movement were noted about ten days earlier than in 1951. Open weather to the north allowed the population to move rapidly and continuously without the large build-ups seen in 1951. Some minor shifts from east to west and back were noted, but in general a normal pattern was followed. The breeding population began to stablize from ten days to two weeks earlier than in 1951, and very little movement was noted after early May. (Fall) The drought conditions evidently forced a marked shift in both time and routes of the fall migration. Early band returns from the summer banded ducks seem to show the summer residents (especially the blue-winged teal) as moving in a north-easterly direction into the lake states and then southward. These same returns also seem to indicate the population as being entirely gone from Nebraska by mid-October. Early hunter reports and band returns also indicate that a good part of the southward movement from the Provinces shifted to the wet Mississippi Valley and thus by-passed Nebraska. These shifts all resulted in a very low numbered migration in this State.

Breeding Population & Production Trends

Table 1. Breeding population - Ground Counts

Routes & dates	Computed pairs*	Pairs sq. mi.	Total ducks	Ducks sq. mi.	lone males :100 pairs
A (5-11)	377	20.0	698	37.1	97:100
(5-25)	331	18.0	483	26.3	139:100
(6- 9)	282	15.2	402	21.6	235:100
B (5-12)	331	28.8	611	53.1	58:100
(5-25)	337	30.9	676	62.0	44:100
(6- 9)	275	24.8	449	40.5	141:100
D (5-12)	143	51.1	320	115.0	30:100
(5-25)	151	34.9	274	83.0	66:100
(6-10)	114	33.5	242	71.8	84:100
All (1st	851	25.4	1629	49.2	67:100
Western (2nd	819	25.1	1433	43.9	77:100
Routes (final	671	20.3	1093	33.0	158:100

Change, 1951 to 1952, (all western routes)

1st	-32%	-24%
2nd	(no comparable figures)	
final	-4.2%	-4.1%

*Assuming lone males to be territorial and to represent a pair.

The indicated drop of about four percent in breeding population figures is negligible, and in any event is probably due to the advancement of the 1952 season over that of 1951. It may be noted that the June count most accurately samples the true breeding population from the great differences in the above indicated changes. It may be assumed that the larger number of ducks present on the routes in mid-May of 1951 was due to the presence of late migrating individuals.

Table 2. Species Composition - Breeding Population (final count)

Species	percent of breeders* western	eastern	overall	percent of all ducks
Mallard	21.0	16.0	20.3	21.7
Gadwall	7.3	2.3	6.6	6.7
Baldpate	.3		.3	.2
Pintail	9.4	5.2	8.8	10.3

Green-winged teal	1.5		1.3	1.0
Blue-winged teal	31.3	74.0	37.4	30.7
Shoveller	5.9		5.1	4.9
Canvasback	.3		.3	.2
Redhead	17.1	1.7	14.9	17.9
Scaup	.1	1.7	.5	.2
Ruddy	5.6		4.8	6.1
Hooded merganser				.2

*Breeders are those seen as pairs, plus those represented by a territorial male. All ducks are those actually observed.

No important change in species composition occurred in the comparison with 1951. The ruddy duck represented about ten percent of the 1951 breeding population in the western sandhills, and as the figures for the eastern breeding population counts of 1951 are not available, the effect of this drop on a unit of population is unknown.

Table 3. Sandhill Brood Counts*

	broods		broods sq. mi.	pairs	broods pair**
western sandhills	82		2.5	671	.12
eastern sandhills	84		8.6	112	.75
overall sandhills		(1948)	1.3		
		(1949)	3.4		
		(1950)	1.8		
		(1951)	2.2		
	166		3.85	783	.21
percent change			76% above average 75% above 1951		

* Counts made July 10-14, 1952. **Actual pairs plus territorial drakes.

The 1951 brood per pair figure was .12 for the western sandhills, or the same as found in 1952, (no breeding pair figures are available for the eastern sandhills in 1951 due to flooded roads). Three counts were made over the western routes during the 1952 brood season. One hundred and forty-seven (147) broods were identified on these counts which would increase the brood per pair figure to .22 or near double that found on the main count, source of data in table #3. The above correction points out the fact that these figures are not actual, but rather indicies of trends. Some bias will have been introduced into the broods per pair figures in table #3. The breeding population was sampled when potholes and lakes were at maximum levels, hence tending to allow maximum dispersal of the population. The brood counts were made after the effects of the drought would have concentrated the ducks into the more or less permanent water along the sample routes. It is assumed that this factor affected only the brood per pair count and that the available water area at the time of the brood counts was comparable with other years thereby making the brood per square mile figures actual, within the sample limits.

Table 4. Species Breakdown and Breeding Population Comparison

	western broods		eastern broods		Overall*		
Species	#	%	#	%	# broods	%	% of breeders
Mallard	27	32.9	4	4.8	31	18.7	20.3
Gadwall	1	1.2			1	.6	6.6
Baldpate							.3
Pintail	7	8.5	4	4.8	11	6.6	8.8
Green-wing							1.3
Blue-wing	27	32.9	75	89.2	102	61.4	37.4
Shoveller	2	2.4			2	1.2	5.1
Redhead	11	13.4			11	6.6	14.9
Canvasback	2	2.4			2	1.2	.3
Scaup							.5
Ruddy	2	2.4			2	1.2	4.8
Unidentified	3	3.6	1	1.2	4	2.4	

*Only the 166 broods observed on count, table 3. Breeders recorded from table 2.

The great difference between percent of breeders and percent of broods in the blue-winged teal is probably due to that species tendency to remain in the open and not sulk into cover as other species do, making it easier to count with accuracy. Differences in the others may in part indicate that species' occurrence as non-breeding loafers in the sandhill region. The average brood size for the broods observed during 1952 was seven plus or the same as found during all other survey years. It has been observed that brood sizes remained somewhat more stable for the various species, probably due to the lack of serious decimating factors such as hail and heavy rain. Also very evident in table 4 is the great difference in species composition between the eastern and western sandhill waterfowl populations. As the eastern area is somewhat larger than the western breeding area, and as the blue-winged teal is by far the most important nester on the rain water basins of south

central Nebraska, this species represents a greater part of the Statewide total than is indicated by the figures in table 4.

Waterfowl Hunting Season:

Table 5. 1952 Check Station Results (ducks).

Species	Total	% Total	Sex ratio (male:100 female)	Age ratio (young:100 old)
Mallard	923	74.3	157:100	48:100*
Gadwall	73	5.9	128:100	247:100
Baldpate	37	3.0	208:100	825:100
Pintail	49	3.9	81:100	126:100
Green-wing	43	3.4	185:100	230:100
Blue-wing	5	0.4	400:100	
Shoveller	21	1.7	110:100	950:100
Redhead	21	1.7	133:100	320:100
Canvasback	7	0.6	133:100	
Lesser scaup	20	1.6	233:100	233:100
Goldeneye	27	2.2	107:100	68:100
Bufflehead	6	0.5	100:100	
Amer. merganser	3	0.2	50:100	
Hooded merganser	2	0.1	100:100	
Surf scoter	2	0.1	100:100	
Amer. scoter	2	0.1	(0:2)	
Ruddy	1	0.1	(1:0)	
Old squaw	1	0.1	(0:1)	
Mallard-pintail	1	0.1	(1:0)	
Total	1244	100.0		
all ducks except mallard	321			212:100

*To facilitate rapid handling of this large mallard sample, age ratios were determined by aging males only.

The mallard sex ratio of 157 males to 100 females is slightly higher than the 1951 ratio of 147:100. The sex ratio was checked periodically and found to vary from 113:100 at the forepart of the open season, to as high as 222:100 during the latter part. The above findings follow along with the known fact that the young and the females move south earlier than the old males. The early season ratio compares with that found in the summer banded ducklings of 118:100 which may be taken as the sex ratio of the mature but not hunted flock. The mallard age ratio of 48 young per 100 adults is down from the 1951 ratio of 62:100, but above the 1950 ratio of 41:100. The age ratio of all other species as a group is down from that of 1951, 255:100, to the 212:100 shown in table 5. Waterfowl hunters checked 1,901 ducks into the DeFord Game Bird Dressing Station at Ogallala (data in table 5 is collected at this station). The 1951 total was 2,845 and the average number checked in for 1948 through 1951 was 2,069. Therefore, the 1952 total is 33.2% below that of 1951, and 8.1% below that of the four-year average. The average number checked in from 1948 through 1950 was only 1,811. Therefore, the 1951 kill was outstandingly high, and the 1952 kill compared favorably with that of an average year.

Table 6. Percent of Mallards in Hunter Bags

1946	84% of ducks killed are mallards*
1947	85% of ducks killed are mallards
1948	76% of ducks killed are mallards
1949	65% of ducks killed are mallards
1950	78% of ducks killed are mallards
1951	60% of ducks killed are mallards
1952	74% of ducks killed are mallards

*As determined by dressing station check.

The 1951 low percentage figure for the mallard kill, as shown in table 6, may indicate that the large increase in kill for that season occurred in other species and that the mallard kill remained about the same numerically, or that its population has remained somewhat stable for the past few years. Insufficient data is available on the 1949 season to know whether or not its low figure may be explained in the same manner. In addition to the 1,244 ducks checked, 23 geese--including 2 lesser snow, 14 lesser Canada, and 7 common Canada types--were checked. The kill trend showed that 16.7% of the ducks killed were bagged during the opening week end. Reports from other parts of the State indicate the shift in migration mentioned before may have affected the Statewide kill much more than is apparent from the Ogallala check. Early hunter report cards and conservation officer checks indicate what may have been the lowest kill in years.

Banding Information: (Winter) Banding was carried on at Leshara in Saunders county, from December 29 through February 25. A projected net trap was operated in the panhandle area attempting to band geese. Table 7 gives the results of all banding. (Spring) Spring banding was continued at Ogallala. A poor catch was made due to the large number of potholes available to the migrating population on the tableland surrounding the Ogallala area. Late ice prevented operation of the traps earlier than April. (Summer) Broods were again banded in the northeastern sandhills with the use of the drive traps, or by driving the ducklings from the ponds into the surrounding vegetation and capturing them by hand or with the dog. These ducklings were of the 'local' or non-flying age group, and were definitely raised within one or two miles of the banding site. (Fall) The banding station at Spring Lake, Sheridan county, was operated again this year. 1952 makes the fifth consecutive year banding has been done at this location.

Table 7. 1952 Banding Locations with Dates and Species

Species	Leshara 12-29-51 to 2-25-52	Panhandle Febr. & Mar. 1952	Ogallala April, 1952	Summer -1 June-Aug. 1952	Fall -2 Sept. 1952	Total -3
Mallard	1436	17	5	69	405	1932
Gadwall			77	4	2	83
Baldpate	1		75	3		79
Pintail	3		22	34	15	74
Green-wing			10	11	4	25
Blue-wing			24	931	149	1104
Shoveller			24	16		40
Redhead			83			83
Les. scaup			3			3
Canvasback			3			3
Black duck	2					2
Coot				3	2	5
Les.Can.goose		48				48
Com.Can.goose		7				7
Long-bill curlew				4		4
Totals	1442	72 -3	326	1075	577	3492

-1 Banded in Holt, Rock, Wheeler, Garfield, Cherry, Sheridan, Keith & Perkins counties.
-2 Banded at Spring Lake, Gordon, Sheridan county.
-3 Includes listed 55 Canada-type geese.

Table 8. Banded Sex and Age Groups

Species	male local	male imm	male adult	female local	female imm	female adult	not sexed	total
Mallard	67	457	766	48	283	307	4	1932
Gadwell	3		51	3		26		83
Baldpate	2		60	1	1	15		79
Pintail	22	6	22	13	7	4		74
Green-wing	5	2	7	6	1	4		25
Blue-wing	505	51	23	432	77	16		1104
Shoveller	6		16	10		8		40
Redhead			56			27		83
Les. scaup			2			1		3
Canvasback			3					3
Black duck			1			1		2
Coot							5	5
Les.Can. goose		12	14		5	17		48
Com.Can. goose		1	3			3		7
Long-bill curlew							4	4
Totals	610	529	1024	513	374	429	13	3492

Upland Game Restoration Project -- James H. Ager, Project Leader:

This project is aimed at restoring some of the woody cover that our fathers and forefathers knew in the draws and gullies of the State. When the first settlers arrived in Nebraska, they found an abundance of native plum, chokecherry, sandcherry, buckbrush, etc., choking the draws and covering the hillsides. Plows, livestock and drouths have eliminated most of these areas and our upland birds have little good winter cover in most parts of the State. The habitat restoration program has as one of its aims the replacement of as many of these areas as possible, by plantings on private land. These plantings serve a dual purpose, first in giving cover where needed, and secondly, to serve as demonstrations to the farmers and encourage them to plant such areas for themselves. The present program, now in its sixth year, is doing that. Inquiries concerning methods of planting, advice, availability of planting stock, and many others are coming in daily, not only from farmers but from sportsmen's organizations who want to help. At the present time most work is done

in very close cooperation with the Soil Conservation Service. We have memoranda of understanding with practically all of the districts of the Soil Conservation Service; we have full-time working agreements with 58 of these districts. These 58 agreements cover 57 complete counties in the south central, east central, the northeast, north central and south panhandle of the State. This is the area of intensive agriculture in which cover is lacking. The advantages to the farmers are many. Probably the most important is the erosion control. To insure the permanency of the area, only land which has no other use is used. This means our areas are usually gullies, odd corners, farm ponds, etc. Waste land which should have cover to protect it from further erosion is used. Such an area increases the bird population on the farm. This includes both game birds and song birds which not only are of esthetic value, but assist greatly in the control of insects and weeds. Since these areas are generally placed in a spot that was an eyesore, they add greatly to the beauty of the farm as they contain many flowering and fruiting shrubs. These same fruiting shrubs, plum, sandcherry, Nanking cherry, raspberry, chokecherry, etc., also add materially to the farmer's fruit cellar. Through the increased use of rosa multiflora many farms are getting the benefit of a permanent living fence which will require no maintenance. A portion of the State has been divided into nine areas, each in charge of a foreman who handles all fencing, planting, and cultivation in that area for one year. Such plantings were made in fifty-four counties during 1952 making a total of 401 new areas planted. The total number of plantings reached 845,587 of which 548,104 were rosa multiflora and the remaining 297,483 consisted of the above mentioned other plantings. The Game Commission planted a total of 193 areas, the Soil Conservation Service 140 and the farmers 64. The following listed counties have new planting areas: Adams, Banner, Boyd, Brown, Buffalo, Butler, Cass, Cedar, Cheyenne, Clay, Colfax, Dawson, Deuel, Dixon, Fillmore, Franklin, Frontier, Furnas, Gage, Garden, Garfield, Gosper, Hall, Hamilton, Harlan, Holt, Howard, Jefferson, Johnson, Kearney, Keya Paha, Kimball, Knox, Lancaster, Nance, Nemaha, Nuckolls, Otoe, Pawnee, Phelps, Pierce, Platte, Polk, Rock, Saline, Saunders, Seward, Sheridan, Stanton, Sherman, Thayer, Wayne, Webster and York. Planting stock was also furnished for replanting the total of which was 86,178 planting of which 51,896 were rosa multiflora. Using the total of the new areas for 1952 plus the replant stock the total plantings for 1952 were 931,765. Prior to 1952 the plantings totaled 2,519,764 thus making an overall total of 3,451,529 through the year of 1952.

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General Information:

The following pages are devoted to general itemized and statistical information for those who are interested:

Departmental Cash Income:

Year	Total	Permit Sales	Federal Aid	Cash from Parks
1940	$ 236,794.33	$ 225,846.12	$ 6,513.74	$ 4,434.47
1941	275,178.55	244,364.33	24,594.43	6,219.79
1942	298,694.94	254,488.64	38,542.13	5,564.17
1943	258,489.09	230,742.29	21,307.90	6,438.90
1944	319,644.65	308,134.76	4,414.22	7,095.67
1945	379,757.67	365,045.90	6,562.88	8,148.89
1946	571,783.97	553,119.64	8,131.76	10,532.57
1947	459,065.98	421,969.24	24,836.09	12,260.65
1948	650,621.87	501,366.98	133,399.55	15,855.34
1949	757,902.42	480,964.18	260,796.04	16,142.20
1950	774,076.04	652,733.54	104,558.78	16,783.72
1951	869,890.33	740,245.36	113,558.51	16,086.46
1952	1,012,189.42	803,304.64	192,401.64	16,483.14

It is interesting to observe that, in spite of this tremendous increase of fishing and hunting pressures, satisfactory take is being experienced and, in addition, several additional species of fish and game are now available through legal open seasons.

* * * * * * * * *

Real Properties —

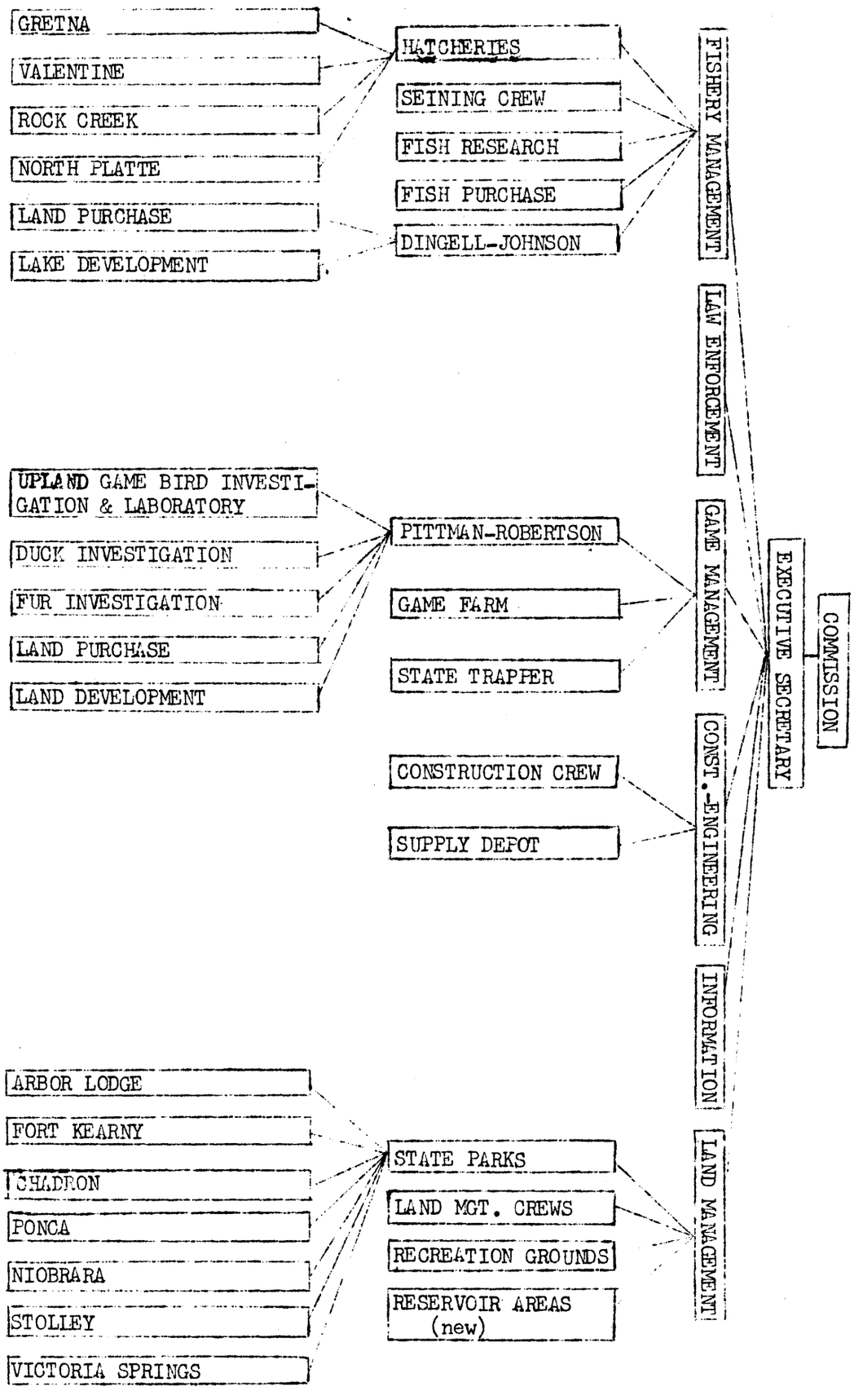
42 Lakes and Recreation Grounds
6 Hatcheries
4 Public Shooting Grounds
3 Big Game Refuges & Shooting Grounds
3 Bird Refuges
7 State Parks
1 Big Game Refuge

Vehicles and Equipment:

40 Cars	1 Aeroplane
82 Trucks	49 Small boats
30 Tractors	1 Dragline
1 Six-inch gravel pump	2 Caterpillars
1 Inboard patrol boat	1 Four-inch pump
1 Inboard work boat	1 Hydraulic loader

* * * * * * * * *

Organization:



The following reflects the fish stocked in Nebraska in 1952. It is realized that some individuals, not too familiar with fishery management, like to compare Commission activities on a proportion basis to counties selling the most permits. Fortunately for the game and fish, as well as the people involved, the Commission manages their game and fish stocking assignments without thought of county lines, politics or personalities. In general, the following figures reflect larger numbers of fish stocked in western Nebraska, however, these fish are of smaller size and stocked in waters where they have the time and food conditions to mature, while in the east, the smaller stocking ratios represent for the most part adult or near adult sizes, due to the high fishing pressures in comparatively poor waters. This explanation is made only because of the knowledge that such questions arise. Actually, the better hunting and fishing areas of our State are not adjacent to the cities of highest human population. Other than the acceptance of this fact, the excuse to ever draw arbitrary boundaries or promote sectional jealousies is not becoming a true sportsman of Nebraska. Actually the time will come in the history of fishery management when the public will cease to make constant insatiable demands for more and more fish stocking in areas where fish are already present. This will come, however, only when the facts can be presented to each fisherman who is inherently unyielding in his own convictions. These facts will be proven ultimately on the basis that most all waters of the State are overpopulated with fish at present, and that reduction in numbers, rather than increasing such numbers by continual stocking, will result in the ultimate big fish supply so desired by the average fisherman. Such species as trout and possibly walleye pike and catfish may need to be continually stocked, however, most other species will be managed by other means than continual output. The fact remains that this prophecy of future management is yet preparative as far as public acceptance is concerned and, therefore, we have such stocking records as follows:

STOCKING TOTALS BY COUNTIES
1952

County	Warm	Cold	Total
Adams	16,249	------	16,249
Antelope	18,224	6,374	24,598
Arthur	------	------	------
Banner	------	------	------
Blaine	5,823	------	5,823
Boone	10,660	3,662	14,322
Box Butte	------	------	------
Boyd	4,458	------	4,458
Brown	40,273	29,708	69,981
Buffalo	8,430	------	8,430
Burt	1,727	------	1,727
Butler	2,624	------	2,624
Cass	16,180	2,200	18,380
Cedar	------	------	------
Chase	162,505	7,946	170,451
Cherry	72,219	109,311	181,530
Cheyenne	------	------	------
Clay	7,500	------	7,500
Colfax	4,771	------	4,771
Cuming	6,000	------	6,000
Custer	5,415	------	5,415
Dakota	18,807	------	18,807
Dawes	198,074	32,424	230,498
Dawson	174,517	500	175,017
Deuel	------	------	------
Dixon	------	------	------
Dodge	52,437	4,100	56,537
Douglas	18,724	------	18,724
Dundy	56,677	11,870	68,547
Fillmore	10,000	------	10,000
Franklin	950	------	950
Frontier	51,553	------	51,553
Furnas	------	------	------
Gage	200	------	200
Garden	------	2,900	2,900
Garfield	400	------	400
Gosper	------	------	------
Grant	500	------	500
Greeley	23,804	------	23,804
Hall	4,805	------	4,805
Hamilton	88,200	------	88,200

Harlan	------	------	------
Hayes	11,870	------	11,870
Hitchcock	25,400	500	25,900
Holt	43,525	47,256	90,781
Hooker	1,970	------	1,970
Howard	------	------	------
Jefferson	14,225	------	14,225
Johnson	700	------	700
Kearney	11,348	------	11,348
Keith	446,664	36,400	483,064
Keya Paha	4,566	100	4,666
Kimball	85,966	3,400	89,366
Knox	11,960	500	12,460
Lancaster	48,926	------	48,926
Lincoln	216,247	6,200	222,447
Logan	------	2,000	2,000
Loup	------	------	------
McPherson	1,000	------	1,000
Madison	54,201	------	54,201
Merrick	9,307	------	9,307
Morrill	6,464	3,800	10,264
Nance	------	------	------
Nemaha	10,220	------	10,220
Nuckolls	529	------	529
Otoe	4,000	------	4,000
Pawnee	1,986	------	1,986
Perkins	------	------	------
Phelps	16,617	------	16,617
Pierce	21,192	------	21,192
Platte	12,540	------	12,540
Polk	3,000	------	3,000
Red Willow	3,940	500	4,440
Richardson	26,737	------	26,737
Rock	65,447	18,330	83,777
Saline	47,112	------	47,112
Sarpy	45,390	------	45,390
Saunders	5,374	------	5,374
Scotts Bluff	184,355	15,900	200,255
Seward	42,100	------	42,100
Sheridan	28,121	24,740	52,861
Sherman	2,454	------	2,454
Sioux	------	90,370	90,370
Stanton	6,700	------	6,700
Thayer	50	------	50
Thomas	500	------	500
Thurston	------	------	------
Valley	4,722	------	4,722
Washington	------	------	------
Wayne	24	------	24
Webster	1,129	2,000	3,129
Wheeler	14,636	1,500	16,136
York	61,485	------	61,485
Totals	2,687,405	464,491	3,151,896

233,523 --- Trout stocked in Nebraska from Federal hatcheries
348,523 --- Federal fish stocked
83,560 --- Pounds carp stocked
732,421 --- Fish salvaged and stocked
151,513 --- Fish transferred and stocked from other lakes
7,135 --- Fish obtained from other states
18,180 --- Catfish trapped from Missouri and Niobrara Rivers
1,917,447 --- Produced and stocked from hatcheries (all species)

118,178 Fry ------ 2,178,270 Fingerling ------ 878,771 Adult fish stocked

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Non-Resident Fishing Permit Fee --

Georgia - - - - - - - - -	$ 10.25
South Carolina- - - - -	10.50
Oregon- - - - - - - - -	15.00
All other states- - - -	10.00
Ten-day - - - - - - - -	3.00

Non-Resident Hunting Permit Fees

Alabama	$ 25.00	Montana	$ 25.00
Arizona	20.00	Nevada	15.00
Arkansas	15.00	New Hampshire	20.25
California	25.00	New Jersey	15.50
Colorado	10.00	New Mexico	15.25
Connecticut	11.35	New York	10.75
Delaware	15.50	North Carolina	15.75
Dist. of Columbia	10.00	North Dakota	25.00
Florida	26.50	Ohio	15.25
Georgia	20.25	Oklahoma	15.00
Idaho	50.00	Oregon	35.00
Illinois	15.00	Pennsylvania	20.50
Indiana	15.50	Rhode Island	10.25
Iowa	10.00	South Carolina	15.25
Kansas	10.00	South Dakota	20.00
Kentucky	15.50	Tennessee	10.00
Louisiana	25.00	Texas	25.00
Maine	10.25	Utah	16.00
Maryland	20.00	Vermont	15.00
Massachusetts	15.25	Virginia	15.75
Michigan	15.00	Washington	15.00
Minnesota	25.00	West Virginia	25.00
Mississippi	25.25	Wisconsin	25.00
Missouri	20.00	Wyoming	10.00

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NEBRASKA RADIO STATIONS
carrying
Game Commission Broadcast

KWBE	Beatrice, Nebraska	6:45 P.M.	Friday	1450 kc
KXXX	Colby, Kansas	7:30 A.M.	Saturday	790 kc
KCNI	Broken Bow, Nebraska	12:45 A.M.	Saturday	1280 kc
KCOW	Alliance, Nebraska	8:30 P.M.	Tuesday	1400 kc
KGFW	Kearney, Nebraska	5:30 P.M.	Saturday	1340 kc
KJSK	Columbus, Nebraska	3:15 P.M.	Saturday	900 kc
KMMJ	Grand Island, Nebraska	10:45 A.M.	Saturday	750 kc
KBRL	McCook, Nebraska	10:15 A.M.	Sunday	1450 kc
KFOR	Lincoln, Nebraska	5:15 P.M.	Saturday	1240 kc
WJAG	Norfolk, Nebraska	8:30 A.M.	Sunday	780 kc
KODY	North Platte, Nebraska	4:30 P.M.	Saturday	1240 kc
KOLT	Scottsbluff, Nebraska	9:15 P.M.	Saturday	1320 kc
KRVN	Lexington, Nebraska	8:30 A.M.	Saturday	1010 kc
WOW	Omaha, Nebraska	10:15 A.M.	Sunday	590 kc
KFGT	Fremont, Nebraska	9:15 P.M.	Monday	1340 kc
KBON	Omaha, Nebraska	8:05 P.M.	Tuesday	1490 kc
KHAS	Hastings, Nebraska	5:30 P.M.	Saturday	1230 kc

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DEPARTMENT PAYROLL
December 1952

Full-time Employees --- 133

Position Title	No.	Salary Schedule	Salary Range Monthly	Average Wage Monthly
Executive Secretary	1	Set by Comm.	520.00	520.00
Supervisor	6	340.00 to 420.00	380.00 to 420.00	401.66
Legal counsel	1	---	390.00	390.00
Superintendent	11	270.00 to 340.00	320.00 to 340.00	338.18
Foreman	22	270.00 to 310.00	270.00 to 310.00	281.36
Skilled labor	18	245.00 to 265.00	245.00 to 265.00	253.88
Apprentice labor	22	200.00 to 220.00	200.00 to 220.00	207.27
Conservation officer	26	200.00 to 295.00	200.00 to 295.00	264.57
Project leader	2	320.00	320.00	320.00
Senior Specialist	6	310.00	310.00	310.00
Junior Specialist	1	270.00	270.00	270.00
Caretaker	1	---	150.00	150.00
Trapper	1	---	280.00	280.00
Surveyor	1	---	320.00	320.00
Steno. Assistants	14	145.00 to 245.00	160.00 to 235.00	193.21

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NEBRASKA GAME COMMISSIONERS AND DISTRICTS

		Counties	
DISTRICT NO. 1			
Harold Hummel Route 1 Fairbury, Nebraska	Cass Gage Jefferson Johnson	Lancaster Nemaha Otoe Pawnee	Richardson Saline Seward
DISTRICT NO. 2			
Bennett Davis 1646 North 53rd Omaha, Nebraska	Butler Colfax	Douglas Sarpy Dodge	Saunders Washington
DISTRICT NO. 3			
LaVerne P. Jacobsen 325 Sheridan St. Paul, Nebraska	Antelope Boone Burt Cedar Cuming Dakota	Dixon Greeley Howard Knox Madison Merrick Nance	Pierce Platte Stanton Thurston Wayne Wheeler
DISTRICT NO. 4			
W. O. Baldwin Hebron Nebraska	Adams Buffalo Clay Fillmore	Franklin Hall Hamilton Kearney Nuckolls	Polk Thayer Webster York
DISTRICT NO. 5			
Don F. Robertson Pawnee Hotel North Platte, Nebraska	Chase Dawson Dundy Frontier	Furnas Gosper Hitchcock Harlan Hayes	Lincoln Perkins Phelps Red Willow
DISTRICT NO. 6			
Frank P. Button Ogallala Nebraska	Arthur Blaine Boyd Brown Cherry Custer	Garfield Grant Holt Hooker Keith Keya Paha Logan	Loup McPherson Rock Sherman Thomas Valley
DISTRICT NO. 7			
Jack H. Lowe Sidney Nebraska	Banner Box Butte Cheyenne Dawes	Deuel Garden Kimball	Morrill Scotts Bluff Sheridan Sioux

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GAME COMMISSION EMPLOYEES -- 1952

Division	Name of Employee	Title
Office	Paul T. Gilbert	Executive Secretary
Office	Lau Dell Leupold	Steno. Clerk
Office	Louise E. Lucas	Accounting Clerk
Office	Ella Nora Wallace	Accounting Clerk
Office	Ruth Bassett	Accounting Clerk
Office	Lucille M. Kerr	Steno. Clerk
Office	Mary Raye Hawkins	Steno. Clerk
Office	Jean Hedstrom	Steno. Clerk
Office	Carl Peterson	Legal Counsel

Education & Information	Richard Schaffer	Supervisor
Education & Information	Jean Bowers	Steno. Clerk
Education & Information	Lois Jones	Steno. Clerk
Education & Information	C. G. Pritchard	Senior Specialist
Fisheries	Glen R. Foster	Supervisor
Fisheries	Lucille Brazil	Steno. Clerk
Fisheries	Walter Kiener	Senior Specialist
Fisheries	Elmer Carlson	Junior Specialist
Fisheries	Paul Todd	Superintendent
Fisheries	Lloyd Winkleman	Foreman
Fisheries	Victor Matousek	Foreman
Fisheries	Jerome Molek	Skilled Labor
Fisheries	Emil Nieman	Skilled Labor
Fisheries	George Halsey	Apprentice Labor
Fisheries	Harold Worrell	Apprentice Labor
Fisheries	John Morris	Apprentice Labor
Fisheries	George Schneider	Apprentice Labor
Fisheries	Erdman Leu	Skilled Labor
Fisheries	Gerhard Lenz	Hatchery Superintendent
Fisheries	Gilbert Dell	Skilled Labor
Fisheries	John J. Deloske	Skilled Labor
Fisheries	Jack Mendenhall	Hatchery Superintendent
Fisheries	Jim Gray	Foreman
Fisheries	Jesse Jones	Skilled Labor
Fisheries	H. C. Howard	Hatchery Superintendent
Fisheries	Frank Sleight	Foreman
Fisheries	Victor Forney	Skilled Labor
Fisheries	William J. Rhodes	Skilled Labor
Fisheries	Jack Edwin Morgan	Apprentice Labor
Fisheries	Cecil Beauchamp	Apprentice Labor
Fisheries	Frank Weber	Apprentice Labor
Fisheries	Frank Weiss	Hatchery Superintendent
Fisheries	Charles Blank	Foreman
Fisheries	Elvin Bray	Skilled Labor
Fisheries	Gerald Plucker	Skilled Labor
Fisheries	Raymond Lawson	Skilled Labor
Construction-Engineering	Eugene Baker	Supervisor
Construction-Engineering	Virginia Sack	Steno. Clerk
Construction-Engineering	Richard Wickert	Superintendent
Construction-Engineering	Earl Harrison	Surveyor
Construction-Engineering	Herbert Bucknell	Foreman
Construction-Engineering	Lewis Klein	Foreman
Construction-Engineering	Paul Meyer	Foreman
Construction-Engineering	Ernest E. Gibbs	Skilled Labor
Construction-Engineering	Stanley Bryant	Skilled Labor
Construction-Engineering	James W. Kinney, Jr.	Apprentice Labor
Construction-Engineering	Gordon G. Howard	Apprentice Labor
Construction-Engineering	Glen Hill	Apprentice Labor
Construction-Engineering	Siegfried Wickert	Apprentice Labor
Construction-Engineering	Billy G. Hafner	Apprentice Labor
Construction-Engineering	Tony Krebsback	Apprentice Labor
Construction-Engineering	Leo Hubert Mack	Skilled Labor
Construction-Engineering	T. G. Neill	Skilled Labor
Construction-Engineering	Lee Jensen	Skilled Labor
Game	L. P. Vance	Supervisor
Game	Jean Marie Clark	Steno. Clerk
Game	S. E. Ling	Superintendent
Game	Orden E. Allen	Foreman
Game	Harold J. Miner	Trapper
Land Management	Jack Strain	Supervisor
Land Management	Norma Jean Conneally	Steno. Clerk
Land Management	John J. Tooley	Superintendent
Land Management	Lem Hewitt	Foreman
Land Management	B. J. Miller	Apprentice Labor
Land Management	Gust Junior Nun	Apprentice Labor
Land Management	Roger Eschliman	Apprentice Labor
Land Management	Merle Marburger	Apprentice Labor
Land Management	Edward M. Cassell	Foreman
Land Management	Melvin Grim	Skilled Labor
Land Management	Archie Campbell	Apprentice Labor

Land Management	Dallas Johnson	Skilled Labor
Land Management	Grant McNeel	Park Superintendent
Land Management	Richard McNeel	Apprentice Labor
Land Management	L. M. Snodgrass	Park Superintendent
Land Management	Irene Goff	Apprentice Labor
Land Management	C. O. Williams	Park Superintendent
Land Management	Christopher Dobson	Apprentice Labor
Land Management	George Markhofer	Park Superintendent
Land Management	H. E. Jones	Park Superintendent
Land Management	Henry Bruhn	Apprentice Labor
Land Management	Paul Heil	Park Superintendent
Land Management	Merl Johnson	Apprentice Labor
Pittman-Robertson	Marjorie Hayes	Accounting Clerk
Pittman-Robertson	Levi Mohler	Project Leader
Pittman-Robertson	Henry Sather	Senior Specialist
Pittman-Robertson	George Schildman	Senior Specialist
Pittman-Robertson	Harvey Miller	Senior Specialist
Pittman-Robertson	James Ager	Project Leader
Pittman-Robertson	Wade Hamor	Senior Specialist
Pittman-Robertson	Calvin O. Sampson	Foreman
Pittman-Robertson	Ira Glasser	Foreman
Pittman-Robertson	Charles Stenstrom	Foreman
Pittman-Robertson	Elwin E. Hall	Foreman
Pittman-Robertson	Herman Kloke	Foreman
Pittman-Robertson	Marvin Nelson	Foreman
Pittman-Robertson	John Ferry	Foreman
Pittman-Robertson	William Eral	Foreman
Pittman-Robertson	Jack Stuart	Foreman
Law Enforcement	William R. Cunningham	Supervisor

Conservation Officers

Dist. No.	Name	Address	Counties
1	L. J. Cunningham	606 Fourth Street Crawford	Sioux--north half Dawes
2	Edmund H. Greving	Box 221 Rushville	Sheridan Garden--north half Cherry--west half Grant
3	Allen G. McCarroll	Cody	Cherry--east half Hooker Thomas
4	W. J. Ahern	Box 232 Bassett	Keya Paha Brown Rock
5	John Donald Green	119 West Clay O'Neill	Boyd Holt Knox
6	Ralph Von Dane	Box 141 Hartington	Cedar Dixon Dakota Thurston
7	George Weidman	Box 83 Gering	Sioux--south half Scotts Bluff Banner Kimball
8	Joseph P. Ulrich	Box 1382 601 K Street Bridgeport	Box Butte Morrill Cheyenne
9	Yule Dorwart	Box 343 Sargent	Blaine Loup Garfield Custer--north half Valley

1952

10	M. L. Burney	Box 143 Neligh	Antelope Wheeler Boone Greeley
11	Robert E. Benson	1007 Nebraska Avenue Norfolk	Pierce Wayne Madison Stanton Cuming
12	Richard Wolkow	2586 Ida Street Omaha	Burt Washington Douglas
13	Loron Bunney	Box 675 Ogallala	Garden--south half Arthur Deuel Keith Perkins
14	Jim McCole	1011 East Fourth Street North Platte	McPherson Logan Lincoln
15	H. Burman Guyer	Lexington	Custer--south half Sherman Dawson Buffalo
16	- - - - -	- - - - -	Nance Howard Merrick Hall
17	C. W. Shaffer	Box 202 Columbus	Platte Polk York Hamilton
18	Vernon Woodgate	Box 403 Fremont	Colfax Dodge Butler Saunders
19	H. Lee Bowers	Benkelman	Chase Hayes Dundy Hitchcock
20	Norbert J. Kampsnider	Box 754 804 Fifth East McCook	Frontier Gosper Red Willow Furnas
21	Sam Grasmick	Box 375 505 East Hawthorne Minden	Phelps Kearney Harlan Franklin
22	Edward Bosak	Fairfield	Adams Clay Webster Nuckolls
23	Roy Owen	Box 288 Crete	Fillmore Saline Thayer Jefferson Gage--west half

24	Bernard L. Patton	3325 Van Dorn Lincoln 2	Seward Lancaster Sarpy Cass Otoe
25	John D. Harpham	924 Morton Street Falls City	Gage--east half Johnson Nemaha Pawnee Richardson

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EXPENDITURE SUMMARIZATION

This preceding report of the various divisions under the Commission has listed the various budgetary divisions of the Game Commission. The total expenditures for each division for 1952 may be summarized as follows:

Office		$ 41,212.62
Information		29,016.02
Commission		3,458.64
Law Enforcement		164,946.41
Fisheries Administration	$ 15,961.63	
Fish Purchase	84.00	
Fish Research	10,490.44	
Salvage and Distribution	45,542.55	
Gretna Fish Hatchery	14,228.01	
Valentine Fish Hatchery	15,397.44	
North Platte Fish Hatchery	28,946.38	
Rock Creek Fish Hatchery	28,909.66	
Total Fisheries		159,560.11
Construction-Eng. Administration	8,604.92	
Construction-Eng. Crews	101,375.66	
Supply Depot	3,611.57	
Revolving Fund (inventory increase)	3.580.95	
Total Construction-Engineering		117,173.10
Game Administration	19,326.97	
Game Farm	36,365.34	
State Trapping Crew	4,463.72	
Total Game		60,156.03
Land Management Administration	23,085.36	
Land Management Crews	66,020.83	
Total Land Management		89,106.19
Pittman-Robertson Coordination	2,459.99	
Pittman-Robertson Research ($21,619.35)		
P-R Research (Upland Game)	10,947.68	
P-R Research (Waterfowl)	8,026.40	
P-R Research (Fur Investigation)	2,645.27	
Pittman-Robertson Development	132,562.81	
P-R Hungarian Partridge Project	1,294.22	
P-R Sacramento Development Project	11,937.33	
Dingell-Johnson Development	2,692.75	
Total Federal Projects		172,566.45
Arbor Lodge State Park	18,199.74	
Chadron State Park	34,355.77	
Victoria Springs State Park	5,640.93	
Stolley State Park	7,589.93	
Niobrara State Park	15,368.55	
Ponca State Park	11,014.27	
Total State Parks		92,169.19
Total all divisions (310)		$837,195.57
Total State Parks		92,169.19
Total		$929,364.76

The above cost figures represent total costs and do not take into consideration the cash revenue received through the several divisions. Because of the fact that all used equipment and surplus items must be sold outright instead of traded on new equipment, the above cost totals reflect the total cost of new equipment. The revenue within the various divisions, is worthy of mention, excluding the usual permit income and Legislative Park appropriation. Actually, in private business, these special revenue sources would be credited to the appropriate division, however, because of the exigencies of the overall accounting system used, these amounts are

placed in the Commission's general budget fund for reallocation to all divisions in proportion to the needs of such divisions. The special income sources other than permit income and parks are as follows:

Special Income Sources:

Niobrara State Park	$ 3,928.70
Ponca State Park	1,269.25
Ft. Kearny State Park	---
Arbor Lodge State Park	3,695.49
Chadron State Park	6,659.50
Stolley State Park	426.00
Victoria Springs State Park	504.20
Resident license to fish	160,982.10
Resident license to hunt	154,877.74
Resident license to fish and hunt	254,831.72
Non-resident license to hunt	87,257.15
Non-resident license to fish	24,788.00
Ten-day license to fish (non-resident)	21,867.10
Alien license to fish	30.00
Resident license to trap	13,630.65
Non-resident license to trap	100.00
Game Farm	668.00
Beaver (nuisance only)	3,025.00
Bait vendors	602.50
Seining vendor (Missouri River)	4,435.00
Resident fur-buyers licenses	870.00
Non-resident fur-buyers licenses	150.00
Private fish hatchery licenses	200.00
Pittman-Robertson refunds (Federal)	168,783.66
Sale--food fish	4,780.31
Propagation fish	15.65
Confiscation	4,205.00
Liquidated damages	3,760.00
Beaver seals	5,101.00
House rents	2,174.00
Leases	30,709.12
Pressey Recreation Grounds	2,399.51
Refunds	15.80
Norfolk Game Farm	1,421.32
Outdoor Nebraska	5,661.44
Camp Hayes	186.55
Wildcat Hills	---
Cottonmill Lake	50.00
Rock Creek Hatchery	---
Lost statements	123.25
Gretna Hatchery	---
Delinquent accounts	586.00
Law enforcements	---
Shipping orders	1,279.67
Boat permits	309.00
Sale cars and trucks	15,751.02
Miscellaneous (etc.)	57.16
Sale Scrap Material	228.80
Delinquent accounts closed out	334.00
Sale buffalo and venison	1,825.80
Insurance claim	383.16
Deer permits	12,450.00
Fur sale	1,650.10
Beaver permits	3,150.00
Total	$1,012,189.42

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Conclusion:

This year there will be no attempt to try to tabulate all of the records broken in 1952 inasmuch as they would considerably lengthen my report already too complex. If you have been following the many preceding pages, you will know that it would merely be a recapitulation of all that has been heretofore described. 1952 was without doubt the Commission's outstanding year to date. No one in the Department is lingering under any delusion that the 1952 results were our ultimate goal,

but rather we are proud of the fact that they are merely another step in the direction of better game management. As public servants of the people of the State, we well realize that the Commission and its personnel have not been able to satisfy everyone, however, before being too critical, it must be remembered that individuals analyze game and fish problems from the view point of their local territory or their personal desires, while the Commission and its personnel must look at such problems from the view point of State management as a whole with the maximum benefits planned for the majority and for the greatest possible area. The Commission and its personnel do not claim perfection in all projects attempted conscientious errors always occur as conscientious work progresses, however, such errors have certainly been at a minimum in 1952. In fact the only reason that this point is even considered for mentioning in this report is to bring out the fact that much progress and perfection can be realized by all of us by the cooperatively constructive criticism or suggestion of such individuals as you who take the trouble to read this report, while irreparable damage can occur and precious time lost in the development of our wildlife resources by destructive criticism born of personal or political jealousies or animosities, With the increase of industry and human population in the Middle West, our wildlife resources are already being strained to the limit of the abilities of Mother Nature to procreate and, if ever in the history of fish and game comradeship of action and understanding between wildlife managers, sportsmen, farmers and government is needed, it is certainly at this moment. It is towards this end that this report has been completed in as great detail as herein represented.

Respectfully submitted for the

GAME, FORESTATION AND PARKS COMMISSION

Paul T. Gilbert
Executive Secretary