WATERFOWL STATUS REPORT, 1975

Special Scientific Report—Wildlife No. 226

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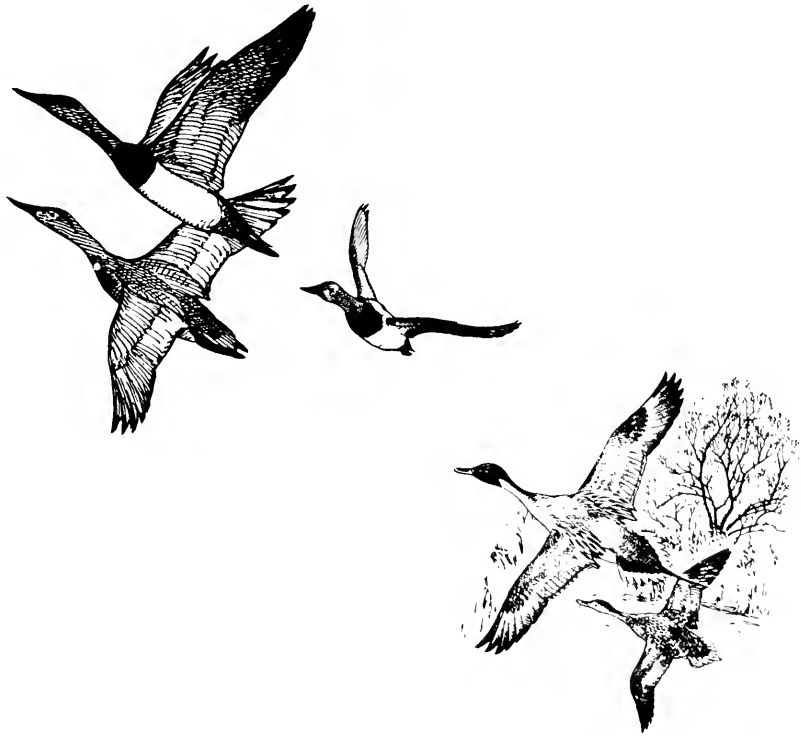

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

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WATERFOWL STATUS REPORT, 1975

Compiled and edited by
James R. Goldsberry
Sharon L. Rhoades
Lonnie D. Schroeder
Morton M. Smith

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Waterfowl Status Report, 1975

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Section of Waterfowl Population Surveys
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This report contains information obtained from the 1974-75 midwinter waterfowl survey, the 1975 waterfowl breeding population and production surveys, and the waterfowl harvest surveys for the 1974-75 hunting season.

The information was provided by the U.S. Fish and Wildlife Service, the Canadian Wildlife Service, and cooperating State natural resource agencies.

The winter surveys section is composed of the midwinter survey reports from United States and Mexico. The breeding ground surveys section is composed of reports from breeding ground surveys conducted in the United States and Canada. The waterfowl harvest survey provides estimates of waterfowl hunting activity and success in the United States. Information from these surveys is used in developing annual population estimates of waterfowl in North America and is instrumental in developing annual waterfowl hunting regulations.

Winter Survey

Each year during January, a survey of waterfowl on their wintering grounds is completed by the U.S. Fish and Wildlife Service and the Canadian Wildlife Service with assistance from State conservation departments, other Federal agencies, and private individuals. All important waterfowl wintering areas in the United States are surveyed. Data provided in the present report are comparable to previous years unless otherwise noted. This survey primarily monitors annual changes in waterfowl distribution on the wintering grounds within the United States, and indicates annual population trends. The survey has additional importance in providing the only annual population estimate for some waterfowl species. An aerial survey covering a portion of the west coast, central highlands, and east coast of Mexico is conducted by the U.S. Fish and Wildlife Service every 5 years.

Pacific Flyway

Data supplied by John E. Chattin,
U.S. Fish and Wildlife Service

The annual winter waterfowl survey started 6 January 1975 and was completed within the week, except for delays experienced in parts of the Columbia Basin and Pacific Northwest. Marginal weather for aerial flights occurred in Idaho, Washington, Oregon, and Utah, and significant numbers of birds may have been missed due to delays and poor visibility (See Table A-1).

Central Flyway

Data supplied by Harvey W. Miller,
U.S. Fish and Wildlife Service

The midwinter surveys of ducks in the Central Flyway were scheduled for 6-10 January 1975. Most States reported that conditions were nearly ideal until a mid-continent storm system moved down the Flyway 9-12 January. This system brought severe blizzards as far south as Kansas, snow to the Gulf Coast, and subfreezing temperatures to the lower Rio Grande Valley. Surveys in Wyoming could not be completed and others were delayed to as late as 24 January in Montana.

Most States reported unusually mild weather before the surveys. Texas, Oklahoma, and eastern New Mexico reported above-average precipitation in late 1974 and an abundance of water areas including many outside surveyed areas. Ducks were generally scattered because of this water and because of greater proportions of ice-free water in the northern States.

Estimates of populations of geese in the Central Flyway are obtained from surveys conducted in mid-December. Conditions were nearly ideal during the scheduled period of 16-20 December 1974, and all surveys were completed on time with a minimum of operational problems.

The estimated populations of ducks were considered low in several States because of conditions at the time of the surveys. Also included are comparisons of the estimates with those of previous years and the distribution of waterfowl among the States (see Table A-2).

Mississippi Flyway

Data supplied by Kenneth Gamble,
U.S. Fish and Wildlife Service

This year's survey was scheduled for the week of 6-10 January 1975. Inclement weather caused delays in some areas and prevented counts in others. Problems associated with flooding also were encountered.

Overall population estimates are difficult to evaluate because of the incomplete flyway coverage. Most dabblers were down, although mallards (*Anas platyrhynchos*) and black ducks (*Anas rubripes*) increased 39 and 47%, respectively. Both mallards and black ducks are still below the 10-year average, however. Blue-winged teal (*Anas discors*) were down 49% over last year, but still 60% above the 10-year average. Among divers, both redheads (*Aythya americana*) and scaup (*A. marila* and *A. affinis*) showed marked declines, but some of the major concentration areas for these species could not be surveyed this year because of adverse weather conditions. Canvasbacks (*A. valisineria*) were up 137% over last year and 60% above the 10-year average.

The total goose estimate was down 7% over last year and up 6% in comparison with the 10-year mean. Only Canada geese (*Branta canadensis*) registered gains in both categories. Coots (*Fulica americana*) were up 46% and were 68% above the average (See Table A-3).

Summaries and evaluations of the 1975 survey by regional cooperators are shown below:

Region 3.—The survey was conducted, for the most part, during the assigned period of 6-10 January 1975. The counts in Minnesota, Wisconsin, and on Pools 12-15 of the Mississippi River in Illinois were delayed until the week of 13-17 January because of inclement weather. The late count in those States had no appreciable effect on the outcome of the survey. The area covered by the survey was comparable to previous years in all of the States.

Region 6, Iowa.—Many counties were snow-covered with most water areas frozen over. Possibly some counties were not surveyed because of prior knowledge of water areas and waterfowl use. Many negative reports were received and probably some counties were not thoroughly checked. Snow cover and low temperatures moved most birds out of Iowa before the January inventory. Due to restricted areas available to waterfowl, the inventory figures are believed to be accurate.

Region 6, Missouri.—Unseasonably mild weather prevailed over most of the State throughout the survey period. Only the extreme northwest corner of the State was ice- and snow-covered, although freeze-up had occurred over most of the State in late December. Ducks and geese were scattered; thus counts are considered minimal.

Region 4.—Adverse weather conditions (high winds, rain, and fog) either delayed or prevented completion of surveys in Louisiana, Arkansas, and Mississippi. Flooded conditions in West Tennessee and some sections of Mississippi also existed during the survey period.

Surveys in Louisiana were incomplete along coastal bays and lakes where large concentrations of scaup usually occur. The Ouachita and Boeuf rivers in northeast Louisiana that usually have large concentrations of waterfowl were not surveyed due to adverse weather.

Many shallow-water areas in Arkansas were ice-covered, forcing birds into large open-water areas. This resulted in improved observation conditions.

Only about 70% of the survey units in Mississippi were completed. Flooded bottomland made duck concentrations difficult to locate (see Table A-3).

Atlantic Flyway

Data supplied by Warren Blandin,
U.S. Fish and Wildlife Service

The survey was scheduled for 6-12 January. Most States completed their inventories within the week, but some exceptions were noted. Inclement weather in western New York extended that State's survey period to 21 January. Vermont personnel were unavailable for survey work until 15 January; several northern States operated until 14-15 January because of intermittent inclement weather. Wind, rain, and fog delayed surveys until 14 January in Florida and Georgia, and 5% of South Carolina's survey was not completed because of unfavorable weather.

Weather was relatively mild; little ice cover was reported. Lack of snow cover in northern States resulted in more field feeding by waterfowl. The increased dispersion of birds probably resulted in a proportionally lower population count than in years of severe ice conditions.

Strong winds and high wave conditions may have had an adverse effect on Florida canvasback counts. An unusual concentration of 56,000 redheads was observed along Florida's Gulf Coast due west of Gainesville in Dixie County.

Compared with the 1974 survey, reductions occurred in the number of airplanes, cars, boats, and non-State or Federal participants (16). However, total kilometers

covered increased from 48,871 in 1974 to 62,842. Most of the 13,971 additional kilometers were covered by air.

Dabbling ducks showed a 21% decline from the 10-year average. This marks the 3rd consecutive year that all species of dabblers have fallen below the long-term average. Black ducks were 19% below the average; mallards 16% below; wigeons (*Mareca americana*) 15% below; and pintails (*Anas acuta*) 42% below. Compared with 1974, black ducks decreased in the counts by 3%, mallards increased by 3%, pintails increased by 2%, and wigeons increased by 27%.

The 1975 black duck count is the lowest on record. Although 19% below the 1965-74 average count, the 1975 survey figure is 35% below the 1955-64 average. A consistent downward trend in black duck wintering populations is evident.

Diving ducks were 3% below the long-term average but 15% above the 1974 survey counts. An increase of 39% in scaup accounted for most of the 1975 gain in diving ducks. Redheads declined 24% compared with 1974; canvasbacks increased 4%. Ring-necked ducks (*Aythya collaris*) declined 24% to their lowest count in 20 years (48,679) and were 46% below the 10-year average. Goldeneyes (*Bucephala clangula*) increased 22% compared with 1974, but were 31% below the 10-year average.

Eiders (*Somateria* spp.) declined 8% compared with the 1974 survey figures; scoters (*Melanitta* spp. and *Oidemia nigra*) decreased 31%. Both species combined were 34% below the 10-year average.

Canada goose counts exceeded 800,000 birds for the first time in the survey, an increase over 1974 of 8% and 24% above the 10-year average. Snow geese (*Chen hyperborea*) declined 26%, but remained 22% above the 10-year average. Brant (*Branta bernicla*) showed no change compared with 1974, but were 36% below the 10-year average.

Whistling swans (*Olor columbianus*) increased 4% over 1974 and were 14% above the 10-year average. Coots, though increasing 70% above 1974 counts, were 17% below the 10-year average.

Total waterfowl numbers increased 4% over 1974 and were unchanged compared with the 10-year average. The species showing substantial relative increases (10+%) compared with 1974 were wigeon, scaup, goldeneye, and mergansers (*Mergus* spp.). Numerically, wigeon, scaup, and Canada geese made the most significant contributions to the total waterfowl population increase in 1975 (see Table A-4).

Mexico

Data supplied by
U.S. Fish and Wildlife Service

For the first time since 1970 surveys of wintering waterfowl were conducted in all three major units in Mexico. The winter survey was begun in mid-January and completed by the end of the month. The three major survey units are (1) east coast from the Rio Grande Delta to the Yucatan Peninsula, (2) central interior highlands from Juarez to Mexico City, and (3) the west coast of mainland Mexico from Mexicali to Puerto Vallarta and both coasts of Baja California. The hours flown and approximate kilometers covered during the survey of Mexico are given below:

Major area	Survey dates	Kilometers flown	Flying hours to complete survey
East coast	January 19-31	7,097	40
Highlands	January 13-30	7,097	35
West coast	January 14-23	7,097	35
Totals		21,291	110

The surveys in Mexico are used in conjunction with the winter survey in the United States in determining the distribution and relative abundance of various waterfowl species, plus cranes (*Grus* spp.) and brown pelicans (*Pelecanus occidentalis*), in North America. The survey also provides a general impression of waterfowl habitat conditions in Mexico and habitat changes that are occurring there.

Weather, Habitat, and Populations

East coast.—Completion of the east coast survey was delayed due to very poor weather conditions. Habitat conditions in the Rio Grande Delta were only fair, but water levels and habitat condition along the remainder of the entire coast to the Yucatan Peninsula were good. Oil pollution was again evident in the Tampico region and in the vicinity of Minatitlan and Tabasco. Newly constructed oil catch basins were noted in the Tabasco area, however. The last comparable year for this survey unit was 1970. Overall waterfowl populations were up 12%. Ducks were down 6%, geese up 248%, and coots up 31%. Blue-winged teal were up 45% and redheads were up 464% over 1970. Five sandhill cranes (*Grus canadensis*) and 472 brown pelicans were observed.

Highlands.—The Highlands crew was forced to omit 10 areas from the survey because of bad weather. Seven of the 10 areas play an important part in the central highlands survey and their omission resulted in a lower number of waterfowl being recorded there in January 1975. As a result, direct comparison with the 1970 figures was inappropriate. In this report only those areas covered in both 1970 and 1975 were compared. Ducks, geese, and total waterfowl all increased in the comparisons made. The duck increase resulted primarily from a large gain in pintail numbers. All

diving ducks declined in the 1975 comparison but we know some of the unsurveyed areas in the South would have improved the count for the diver group. White-fronted geese (*Anser albifrons*) showed considerable gains whereas snow geese showed moderate losses.

Water levels in the northern part of the Highlands area were generally well above normal. The areas farther south had normal to above-normal water levels, but there were some areas where levels were very low. Overall habitat conditions of the central highlands are considered favorable with few changes from 1970.

West coast.—The west coast survey was completed in 9 days and survey conditions were considered optimum. The crew considered the 1975 effort to be the most accurate census in several years. Changes in habitat have taken place in recent years. On the mainland large areas have been put into grain production and waterfowl use has increased in such places. Irrigation is necessary for farming in many areas along the west coast of Mexico. To provide the needed irrigation water, large upstream storage reservoirs were constructed. Downstream water flows from such reservoirs are frequently insufficient and some coastal marshes and river deltas are being rendered unsuitable for waterfowl. There is a continuing degradation of waterfowl habitat along the upper west mainland coast of Mexico.

On Baja California two major changes are occurring that will affect waterfowl habitat. The first of these results from the paved highway that now traverses the length of the peninsula providing access to Baja for many more people. Second are those new laws making it much easier for U.S. citizens to lease land and develop it in Baja California. These changes will increase recreational activity and there is a potential for increased hunting of waterfowl wintering on the Baja—particularly the black brant (*Branta nigricans*).

The west coast of Mexico is surveyed annually, primarily to keep tab on the black brant. As a result, waterfowl census data are available for comparison from 1960 through 1974. But to maintain uniformity in this report, the 1975 counts for west coast areas are compared with those from 1970. Total ducks on the west coast were up 137% over 1970. Total geese (except brant) were 16% below the numbers recorded in 1970. Brant numbers were 6% below 1974, 12% below 1970, and 11% below the 10-year average (see Table A-5).

Breeding Ground Survey

Aerial surveys of waterfowl breeding populations and production were developed in the late 1940's by the U.S. Fish and Wildlife Service to monitor the status of habitat and waterfowl, primarily ducks, over a large portion of their breeding grounds in North America. Annual information in this regard is essential for effective management of this resource. Currently, waterfowl population and habitat changes are surveyed over about 3.4 million square kilometers of breeding habitat within portions of Alaska, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, the Northwest Territories, the Dakotas, Minnesota, and Montana.

In addition to the Service's annual breeding ground survey, a number of States conduct a similar survey. State reports that have been submitted to the Service are incorporated herein.

The procedures followed in conducting the breeding ground surveys are presented in the Service's standard operating procedures for aerial waterfowl breeding ground population and habitat surveys (1977).

Alaska and the Yukon Territory

Data supplied by
James G. King and Don Fortenberry,
U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Weather conditions for Alaska were near normal this year. In the Interior (tiaga) strata, conditions were at the long-term mean with little runoff. A few days of 27°C weather early in May melted most of the snow. In the western strata (tundra), spring was slightly later than average except on the northwest coast (Seward Peninsula) where it was a late spring. Flooding was confined to the mainstream of the Yukon River where an ice jam just above the Delta backed up water for 121 kilometers, flooding the lower Innoko Valley. The Innoko River did not flood and the water receded rapidly, leaving plenty of nest sites available by the time of the survey. With habitat not affected by either the local flooding or late thaw in the northwest, good production is possible.

Breeding Populations (Table B-1)

The survey was conducted from 22 May to 13 June 1975. The overall population index is down 30% from last year and 15% from the 10-year average. It is felt that the change of aircraft, the change of observers, and other survey problems may account for some of the indicated decrease for some species. Nevertheless, a true decrease is indicated. We believe the decrease to be more like 20% than the indicated 30%. American wigeon were down 51% from last year and 31% from the average, a true decrease of about 50%. Green-winged teal (*Anas carolinensis*) were down 74% and 58%, apparently a true decrease. Shovelers (*Spatula*

clypeata) were down 71% and 43%, respectively; the decrease appears inflated and may actually be about 25%. Pintails were down 29% and 20%, respectively; the decrease appears inflated by about 33%. Canvasbacks were down 52% from last year and 52% from the average. We suspect the decrease is only half that indicated. Scaup were up 4% from 1974 and 5% above the average. We feel scaup may actually have decreased slightly. Goldeneyes were up 15% and 13%, indicating a slight increase for this species. Buffleheads (*Bucephala albeola*) were down 32% from 1974 and 2% from average, another inflated decrease that should probably be no more than 10%. The sample of eider is too small to draw any conclusion. Scoters were down 25% and 15%; a true decrease as indicated. The sample of merganser is too small to draw any conclusion.

Northern Alberta, Northeastern British Columbia, and the Northwest Territories

Data supplied by James F. Voelzer and G. Hortin Jensen, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

The progression of the spring season was delayed as much as 2 weeks in the northern Alberta portion of the survey area, becoming more seasonal farther north. At Norman Wells spring breakup along the Mackenzie River and over the surrounding landmass was normal. This factor seemed to provide breeding birds with an escape from the more winter-like southland. Waterfowl populations, although down in numbers in the more normally preferred northern Alberta section, were increased considerably in the vast Northwest Territories, except the Arctic coastal areas and the Mackenzie Delta. It appears that due to the late seasonal development in the prairies, many birds chose to overfly and settle in the Northwest Territories.

Water levels in the Athabasca Delta were much below the high levels of 1974. However, habitat conditions for nesting were optimum and excellent production from that area can be expected.

Breeding Populations (Table B-2)

Results of the survey compared with 1974 and the 10-year average, respectively, are as follows (rounded to nearest whole percent): Mallards, +8% and +1%; wigeon, +12% and -12%; blue-winged teal, +125%; dabblers, +22% and +10%; and divers, +12% and +9%. Miscellaneous ducks were -18% and -21%; total ducks indicated a modest change of +10% and +4%.

The large increase in blue-winged teal is an indicator of an overflight from the delayed opening in the prairies to the more normal season farther north. A corresponding increase in canvasback numbers is suspect, due mainly to the relatively few individuals normally encountered. An addition or subtraction of only a few canvasbacks encountered in any given year can, if noted in the right stratum, give an unrealistic change. We felt that this situation occurred this year and that the indicated change is not realistic. An increase is warranted, but perhaps something less than the 133% indicated.

Overall, it appears that this year's potential for duck production compares favorably with the 10-year average and 10-20% above 1974. Mallards and green-winged teal are normal and pintails and scaup look strong. Oldsquaws (*Clangula hyemalis*) have decreased markedly and will likely have to await next year's survey for a judgment to be made. Such a large decrease is suspect. Some northern transects were not flown due to poor weather and this probably contributed to the indicated decrease in oldsquaws.

Because of poor weather conditions, we were unable to survey areas of swan (*Olor* spp.) and white-fronted geese concentrations. Canada geese, however, were 160% above 1974 and 72% above the 10-year average.

Northern Sasketchewan, Northern Manitoba, and the Saskatchewan River Delta

Data supplied by Arthur R. Brazda and Richard A. Gimby, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

The fall of 1974 was dry and the winter of 1974-75 was mild and generally "snowless." Carryover of water from the extremely high levels experienced during the summer of 1974 created good to near-optimum habitat conditions in most strata.

May 1975 was generally cold and very wet. Vegetative development was retarded by at least 2 weeks, and temperatures were below normal with numerous rainy periods. Snow fell intermittently throughout May in northern Manitoba and Saskatchewan, with Flin Flon, Manitoba, receiving 26 centimeters on about 22 May. The severe adverse weather was of short duration, but the wet, cool extended weather period undoubtedly affected nesting activities.

Breeding Populations (Table B-3)

The survey was initiated on 13 May and was completed on 12 June 1975. Total ducks increased 14% above 1974, but were 12% below the 10-year average. Dabbling ducks were up 21% above 1974, but were 35% below the 10-year average. Diving ducks were 3% below 1974 and 4% above the 10-year average.

Of the dabblers, green-winged teal were down 15% from 1974 and 4% from the 10-year average. All other dabblers indicated substantial increases over 1974,

but remained well below the 10-year average. Mallards were 17% above 1974 and 38% below the 10-year average; pintails, +121% and -18%; blue-winged teal, +199% and -44%; gadwalls (*Anas strepera*), +13% and -63%; shovelers, +173% and -14%; and American wigeon, +3% and -40%.

Diving ducks, except for scaup, indicated more fluctuation than the dabblers from 1974, but remained well below the long-term average. Redheads were 234% above the previous year and 57% below the 10-year average; canvasbacks, +214% and -49%; scaup, -11% and -23%; ring-necked ducks, +62% and -9%; goldeneyes, -28% and -16%; buffleheads, -11% and +2%; and ruddy ducks, -63% and -87%.

Canada geese were found in all strata resulting in a 45% increase over 1974, but remained 23% below the average. Coot were up 155% over 1974, but 55% below the average.

Summer Weather and Habitat Conditions

Weather conditions during much of May were, at best, marginal with slightly below normal temperatures and several short periods of drizzling rain, turning to snow in the more northerly portions of Manitoba and Saskatchewan. June and July, however, were warm with occasional very hot periods in July, when temperatures ranged between 27° to 35°C. These warm temperatures produced a luxuriant growth of vegetation.

Water levels dropped during June and July and many shallow ponds and string bogs were dry, or nearly so, at the conclusion of the survey. Since the termination of the survey, hot, dry weather has lowered water levels even more. For the most part, however, water levels were adequate and overall habitat conditions ranged from fair to excellent.

The situation on the Grand Rapids Hydro-Electric Project reservoir was no different than it has been in the past. The potentially prime nesting areas are on the west and more shallow side of the reservoir. A high breeding pair index has been recorded each year on the breeding pair survey. Some time after the survey these islands are inundated, flooding the nesting sites and resulting in a loss of production.

Production (Table B-3)

The survey was conducted between 8 and 23 July 1975. The duck brood index for 1975 was 59,000. Comparing 1975 strata with like areas surveyed in 1974, a 25.5% increase in broods was observed. West-central Saskatchewan, stratum 22, and northeastern Saskatchewan, stratum 23, indicated increases of 8,000 and 7,000 broods, respectively; the Saskatchewan River Delta, stratum 25, was down 3,000 broods from 1974. Ducks Unlimited data for the Saskatchewan River Delta area also suggested a decrease in broods from the previous year. Class II and III broods in stratum 22 averaged 7.4 ducklings per brood, which was well above the current year's brood average of 6.2.

Brood classification data indicated a class I brood index for 1975 of 41.9%, compared with 38.1% for 1974. Class II and III broods made up 89.4% of the broods observed in 1975 and 84.0% of those recorded in 1974, suggesting a close similarity of the production effort for the 2 years.

Observations indicate that the first nesting attempt of the early nesting species was less successful than normal. Near the conclusion of the production survey, Class I broods of mallards and occasionally pintails were being recorded.

The coot brood index of 4,000 was 33.3% less than 1974; however, we believe that coot production was very good.

Canada goose data are not projected to give an estimate of production for these strata. Four broods were observed, three with four goslings each, and one with three goslings.

The late nesting index for mallards for 1975 was 100% above 1974; for all remaining dabblers, the index was 43% below the previous year. All species of divers were 84% above 1974. No comparison was made in the narrative with the 10-year average late-nesting index because the appropriate stratum cannot be separated at this time for the years before 1974.

Southern Alberta

Data supplied by K. Duane Norman and J. Mike Cox, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

The first killing frost of the year occurred in Calgary on 10 September but did not occur in Edmonton until 28 September. September generally was mild and wet from Red Deer south but was rather cool farther north. October and November throughout southern Alberta was warm and dry. December continued mild and drier than normal. Most of the 21 centimeters of snow falling during the month in Edmonton fell during the 21-22 December storm.

January initially continued to be mild. Precipitation for the month in Calgary was only 75% of normal and was 50% of normal in Edmonton. February was cold but moderated toward the end of the month. Snowfall in Calgary for the first time exceeded the monthly average. Accumulations in Edmonton from September totaled 67 centimeters compared with 167 centimeters in 1974. Accumulations in Calgary were slightly below normal.

March in southern Alberta was cool with slightly below normal temperatures. Snowfall was near normal

in Edmonton but was almost 13 centimeters above normal in Calgary. April continued cool through the first half of the month making this the coolest April since 1967. Rain and snowfall were slightly above normal. Temperatures during May were near normal or just below normal. During the first 10 days in Calgary, rain, snow, and fog were encountered. Bright sunshiny days followed although 8 centimeters of snow fell during mid-month near Medicine Hat and 3 centimeters in Calgary. This was nearly a duplication of 1974 mid-month weather.

On 1 May snow was prevalent in the west hills between Pincher Creek and Calgary. Although the streams and rivers were ice-free, large chunks of ice remained along their banks. Most of the larger lakes were still frozen over, but by the time the survey was initiated ice on these lakes had become honeycombed. By the end of the survey some ice still remained on Sylvan Lake near Red Deer, but Cold Lake and Frog Lake much farther north and east had been ice-free for more than a week.

Although the aspen (*Populus* spp.) was only partly leafed or just in the bud stage in strata 28 and 29, it was fully leafed in the eastern extremities of strata 26 and 27 and was about half-leafed in the western areas. The lack of the normal amount of emergent vegetation was apparent until we reached stratum 27. In some of the type III wetlands in stratum 26, the vegetation had reached heights exceeding 15 centimeters above the water.

In stratum 29, water and ducks appeared in great abundance. Most of the water, however, was of a tenuous nature. A few warm days accompanied with moderately strong winds soon disposes of sheet water and temporary wetlands. The more permanent wetlands improved in quality since 1974 not because of winter snow accumulation but because of spring rains. Artificial wetlands and roadside ditches played an important role in waterfowl production and survival. Pakowki Lake had water throughout its basin this year for the first time in 10 years. Excellent habitat was found in the Milk River Ridge and in the foothills west of Lethbridge. At the time of our survey, Lake Newell and Glenmore Reservoir were ice-covered except along the lake margins which were receiving heavy use by waterfowl. The ice on McGregor Lake had just gone out and the lake was receiving little waterfowl use, but a few days before our actual survey in the stratum it was receiving heavy use by ducks and geese. Permanent wetlands appeared to be rather scarce but the rangeland was in good condition. When the rains ceased, the farmers were active with plowing and seeding. The important wetlands again were within an 81-kilometer radius of Calgary and in the Brooks-Tilley area.

Stratum 27 contained some very good wetlands with an abundance of temporary water. The knob and kettle habitat west of Hanna was in excellent condition and contained a good population of ducks. The wetlands in the Wintering Hills and Handhills will provide good nesting and brood habitat. Sullivan Lake was full as was Kirkpatrick Lake for the first time in 10 years.

The habitat in stratum 26 was generally good having changed only slightly since 1974. The Neutral Hills habitat was excellent. The Gough Slough-Marion Lake area also was very good. Most of the large water bodies were filled to capacity but the habitat tended to become drier north of Camrose and Vegreville. Unlike last year, most of the rivers and streams were well within their banks and below flood stage.

After adjusting the data for visibility bias, the decrease in the pond index from last year was near 36%. Greatest losses occurred in strata 26 and 27, but there was still adequate nesting and brood habitat available. Last year was an extremely wet year as the data indicate. When we compare the pond index with the average, this year's index is well above average.

Breeding Population (Table B-4)

The survey began on 10 May and ended 21 May 1975. Total ducks decreased 15% from last year but are still 16% above the long-term average. Puddle ducks decreased 20% from 1974. Gadwalls (-39%), green-winged teal (-43%), and pintails (-27%) showed the largest declines. Blue-winged teal and shovelers decreased less and were well above average population levels. Divers increased 20% and buffleheads (+116%), redheads (+74%), and ringnecks (+73%) increased substantially. Decreases were noted in canvasbacks (-21%) and goldeneyes (-13%).

A look at long-term averages indicates increases for all species except gadwalls (-21%), wigeons (-12%), scoters (-58%), and green-winged teal (-9%). Total ducks are 16% above the average.

Canada geese decreased only slightly from last year and coots decreased 9%. Coots are 64% above their long-term average.

The lone-drake index this year of 65% is about 17% below the long-term average. The mallard lone-drake index is 5% below the average whereas pintails are 26% below and canvasbacks 49% below the average.

Summer Weather and Habitat Conditions

May was cool and wet from Calgary south but was warm and only slightly wetter than normal to the north. Snowfall totaling about 24 centimeters was the heaviest May snowfall in Calgary since 1959. Total precipitation in Calgary was 37% above normal. Snow continued south of Calgary through 24 May but none fell at Edmonton after 1 May. The September-May snowfall in Calgary was 11 centimeters below normal

but was 35 centimeters below normal at Edmonton.

Temperatures during June were only slightly below normal but the amounts of rain were nearly double the normal in many northern areas. The greatest amounts of rainfall occurred during 25-29 June. Flooding was common, especially north of Edmonton. In contrast, the last part of the month was very hot and dry in the grasslands between Medicine Hat and Lethbridge.

July continued warm and dry south of Red Deer but rain was nearly a daily occurrence to the north through 20 July.

Habitat conditions in stratum 29 were considerably poorer than they were during May, although the wetlands in the Milk River Ridge and those adjacent to the foothills contained adequate water. Rains kept the range in good condition but failed to maintain all but the most permanent potholes. The dugouts and stockdams generally contained sufficient water. The wetlands between Conrad and Wrentham were in good condition again following a 3-year dry spell. Stratum-wide, there was an overall loss of about 28.6% of the permanent water since May.

The wetlands of stratum 28 were rather dry in spite of June rains. Vegetation was heavy in most water areas. The only areas of real value to ducks were in the Brooks-Tilley and the Calgary-Carseland areas. The number of ponds decreased about 51.5% since May in this stratum.

Northward into stratum 27, a continuing dry condition prevailed; grasslands were significantly drier. Water conditions were better north and west of Calgary but the knob and kettle habitat northwest of Hanna was choked with vegetation and was nearly dry. This area was supporting few ducks. Permanent water decreased about 40.4% since May in the stratum.

Wetland habitat in stratum 26 generally was excellent but it became progressively drier northward. The effects of the June rains were evident throughout the stratum even though the data indicate a 50.8% loss of permanent water since May.

Production (Table B-4)

The brood index for all strata combined shows an 18% decrease from 1974 and is 8% below the 10-year average.

A late breeding season is confirmed by the brood-class data. Class I broods made up 40% of the broods observed; Class II broods, 36%; Class III broods, 19%; and unknown class broods, 5%. On an area basis, Class I broods averaged 0.30 brood per square kilometer; Class II broods, 0.25; Class III broods, 0.13; and unknown broods, 0.03 brood per square kilometer.

The quality of the habitat is obvious when the broods per square kilometer are totaled by stratum. The survey area supported 0.68 brood per square kilometer which is a decrease of 47% from last year.

The survey area average brood size of 4.6 is 19% less than last year and 20% less than the 10-year average. Class II broods averaged 4.76 ducklings per brood and Class III broods averaged 4.3.

This year appeared to be the best year for the coot since 1966. The coot brood index of 35,900 is 332% higher than last year and 73% above the long-term average.

The late-nesting index this year is 159,600 which is an increase of 50% from last year and 115% from the long-term average. Dabblers increased 55%. Greatest increases are noted for shovelers (456%), mallards (67%), gadwalls (50%), pintails (44%), and green-winged teal (34%). Long-term averages for dabblers also increased by 122%.

Divers also indicate an increase from last year of 45% and +126% above the 10-year average. Scaup increased 54% while redheads decreased 35% and canvasbacks decreased 30%.

This year's lone-drake index (mallards, pintails, and canvasbacks) was 79%.

Southern Saskatchewan

Data supplied by Rossalius C. Hanson and James L. Nelson,
U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

During the past winter the prairies and parklands of southern Saskatchewan were not subjected to the record-breaking snows of the winter of 1973-74. In fact, little more than the normal amount of moisture was deposited from October 1974 to April 1975. During April the moisture came in the form of snow and rain, extending winter and delaying spring. April's snow and rain put the water in the potholes, which would have been depleted from the lack of winter accumulation. April moisture was several centimeters above normal.

Though large amounts of moisture were deposited in a short period of time, floods did not occur. There were large areas of sheet water and plenty of ponds caused by the excellent runoff. The weather delayed farm seeding and kept farmers out of the stubble. Because water levels were not as high as in 1974, pond numbers increased. The reason is that high water will many times cause one pothole to encompass several others. As the water level becomes lower, the one pothole becomes two or more. There was more actual water last year than this year.

Pond numbers in 1975 were lower than 1974 by 4%. The water index stood at 3.0 million compared with 3.5

million in 1974. This index is larger than any since the middle 1950's and 51% higher than the long-term average (1964-74).

There were few dry areas, mostly in isolated situations. The parklands were slightly drier than a year ago, whereas the Cypress Hills, southwest, and the southeast indexes were up. The shallower ponds held less water, but the more permanent ponds looked good.

Temperatures during May were generally conducive to good nesting. Only on 2 days during the month did the temperatures fall below freezing. The temperatures on those 2 days reached -1 °C.

On 4 days, flying was cancelled due to rain, winds, low ceilings, and inclement weather. Due to high moisture levels in the air, numerous thundershowers and storms built up during the daytime in May. Some hail occurred but no damaging losses to waterfowl or nests were reported. Therefore, most of May could be considered favorable for nesting birds.

Due to the late spring, the survey was delayed until 8 May when it appeared that gadwalls and blue-winged teal had arrived in sufficient numbers. Mallards and pintails had arrived the last 2 weeks of April and their nesting was evident in early May. Cold, wet weather delayed the arrival of other species. New vegetation was slow in making its appearance, both in the water areas and on land. Only toward mid-May did leaves appear en masse. Ice remained in small ponds in early May, something of a novelty, since usually at that date only a few of the larger lakes hold ice in any quantity. Snowdrifts were evident well into the month in some areas. The season could be said to be about a week to 10 days behind normal.

Cold, wet weather kept seeding and planting operations behind schedule, but by the end of the month a number of areas were near normal. Enough delay was observed so that stubble was not involved at an early date. This was encouraging and hopes are that early nests in stubble hatched before the summer fallowing operations. If success is forthcoming, then we can expect a fairly good early hatch.

Continuing is increased drainage, land clearing, plowing of marginal land, and general increase in intensified agricultural practices. The results are poorer wetland and upland waterfowl habitat. Real evidence of drainage and poor land use has become discernible the past several years. One individual described the scene as "more drainage this past year than the previous twenty." Water and wind erosion in some areas have and are creating infertile and almost untillable fields with deep gullies and soil-bare rock and gravel hilltops. The large drainage ditches needed to support the small pond ditching are now appearing. These were not in evidence several years ago.

In contrast to the poor upland cover, overwater nesters found good to excellent cover in the marshes. Emergent vegetation from last year was abundant and water levels high enough for good use by canvasbacks, redheads, and others.

Breeding Populations (Table B-5)

The survey began 8 May and was completed 26 May 1975. A look at the total duck population for 1975 indicates a 23% increase above 1974. The figure stood at 11,216,600 compared with 8,590,500 for 1974. This was 31% above the 10-year average (1964 to 1974). It is higher than any other in the past 10 years except 1970 and 1971.

Mallards showed an increase in 1975 as did most of the other important game duck species. Only wigeon, green-winged teal, and ruddy ducks (*Oxyura jamaicensis*) showed significant declines. The total for mallards is +17% compared with 1974 and +7% for the 10-year average.

The count on pintails indicated a decrease below 1974 and 22% above the average. This figure is higher than any in the past 10 years. Blue-winged teal were up about 72% above 1974, while green-winged teal and wigeon were up 2% and 9%, respectively.

Divers looked good this year, showing an overall increase of 64% above 1974. Canvasbacks and redheads were both up 68% and 61% above 1974 and showed increases over the 10-year average. All other divers except ruddy ducks showed increases. Ringnecks and scaup were late passing through this year, as a result of the late spring, and some may have been counted in more than one survey unit. The count this year may be inflated.

Canada geese showed no change in total numbers. However, fewer numbers were noted in the southwest this year, whereas nesting birds increased in the southeast and northeast. The survey does not pick up many geese and this should not be considered a good indicator of what is actually occurring. The survey is not intensive enough to obtain good statistics on geese.

Coot numbers were up in 1975 and are well above the long-term average. Coots tended to fluctuate depending on water conditions.

Summer Weather and Habitat Conditions

The season was not quite as late as last year and was near normal by middle and late June. The number of ponds and potholes in July was 1,540,800 compared with 1,495,100 last year. Two percent is considered a no-change situation and is 58% above the long-term average.

Frequent rains and showers occurred throughout June into the 1st week of July and continued to maintain the deeper potholes. During mid-July, a series of hot, dry days caused a rapid evaporation rate affecting

the shallower areas. This reduced the number of temporary and shallower water areas, and had noticeably affected some areas, in particular, the mid-central grasslands and the mid-south grasslands. Except for those, most of the other strata were in good to excellent condition. Except for 1970, no other year had higher pond numbers between 1955 and 1974.

Several areas had extremely heavy storm activities during the period. Regina in late June had a downpour that deposited almost 15 centimeters of rain during a 24-h period. Tornado-like storms, causing damage to crops and buildings, hit two areas around Macklin and Payton in stratum 30. No doubt these caused waterfowl losses. Precipitation from 1 April of this year was well above average for most of the reporting stations in southern Saskatchewan.

Temperatures were about normal for June, but above normal for most of July. Vegetative growth was heavy in the ponds as well as on the uplands. For this reason, broods were difficult to see and may have caused a slight lowering of the total number counted. Upland cover was fair to good during this survey period and should be adequate for renesting species and middle and late upland nesting species.

Lush green pastures and heavy hay crops were the rule throughout the prairies. As mentioned above, there were some dry conditions; however, an excellent soil moisture content offset those losses. Grain and other crops had adequate soil moisture and an above-average crop is anticipated.

Heavy rains during April of this year and last year, with abnormal water runoff, caused soil erosion that was visible in many of the hilly and rolling cultivated prairies. Due to high prices of grain crops, intensified farming practices have increased the tilling of marginal lands of former prairie sod. Eroded hillsides and deep ditches now are numerous as well as windblown bare hilltops in the lighter, sandier soil types.

Production (Table B-5)

The total for the survey period was 148,200 broods compared with 146,500 for the same period in 1974. This was a no-change condition from last year, and an increase of 22% from the average. The average brood size was 4.7, which was not significantly below last year's 5.3, and 11% below the average.

The early hatch this year did not materialize for mallards or pintails (the upland nesters), but canvasbacks (the overwater nesters) appeared to do very well. This was a result of poor early upland habitat while pond habitat for early overwater nesters was excellent. It appears that stubble nesting was again a failure for pintails and mallards that attempted it, since farmers summer-fallowed the stubble before the eggs could hatch.

Coot broods were the same as last year and they appear to have done very well. Canada goose broods were observed in a number of areas, indicating a continuing spreading-out process and increased use of available habitat. Sampling was not adequate to give us a reading on the brood status except that broods were evident over a widespread area and in a variety of habitats.

The late-nesting index was up 11% above last year and 66% above the average. The index was 302,100 compared with 271,700 for 1974, and 182,700 for the average. The magnitude of the late-nesting index gives support to an anticipated substantial late hatch.

Southern Manitoba

Data supplied by Douglas S. Benning and
John W. Koerner,
U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

The fall of 1974 was hot and dry in southern Manitoba. Despite the excessive rainfall in April and May 1974, growing season precipitation by the end of the summer was below normal. Snowfall through the winter was light and the water outlook in early March was bleak for the waterfowl nesting season. March and April rains brought water conditions up to near normal in the most productive waterfowl areas of southwestern Manitoba. Temperatures during the survey period were higher than last year although still below normal. Rain was infrequent, winds were generally light and most days were clear to partly cloudy. Only 3 days were lost during the survey due to weather.

Precipitation.—Growing season precipitation (that since 1 April 1975) from 10 selected stations in southern Manitoba was about 80% above normal by 26 May 1975.

Temperature.—Daily temperatures were below normal though slightly warmer than 1974. Temperatures in Brandon were unseasonably cool.

Phenology.—Arrival of spring was about normal in southern Manitoba this year. Upon our arrival to the survey area in May, there was little sign of greenery. Winter rye started growing along the border within a few days of our arrival. Aspen leafing was first noticed on 6 May along the United States-Canadian border. Leafing and appearance of emergents were late but progressed rapidly in the second half of May. Waterfowl arrival in southern Manitoba was about normal despite the wintery conditions in late April to the south. Early nesting waterfowl were on breeding territories and well dispersed along the southern border by 8 May when the aerial survey began.

Agriculture.—Due to the relatively heavy rains experienced in the southern portions of the Province, agri-

cultural field operations were started late, although field work was well under way by mid-May. Though much upland nesting habitat in some areas like Minnedosa was destroyed by fall burning, in general conditions were fair to good. Spring burning of stubble, brush, and pond borders was less severe than in past years.

Habitat.—The 1975 May pond index was down from 1974 and the 1965-74 average in all strata. The 1975 pond counts were down about 27% from 1974, and was near the 10-year average. Water conditions this spring were better than average and water quality was good in general. Overwater nesting cover was as good or better than last year, which was good to excellent. Upland nesting cover appeared to be of fair to good quality.

Breeding Populations (Table B-6)

The survey began on 8 May and was completed 25 May 1975. The total duck population estimate was down 16% from last year and was down 7% from the 10-year average. Mallards were 8% above 1974 and the 10-year average. Wigeons were down 37% from 1974 and down 46% from the 10-year average. Pintails were 28% below 1974, but remained 29% above the 10-year average. All other dabblers were down from 1974 and the 1965-74 average. Total dabblers were 31% below 1974 and 22% below the 10-year average. The loss of blue-winged teal is believed to be due to favorable nesting habitat encountered south of Manitoba in combination with a late, staggered migration by this species. Pintails may also have taken advantage of the improved condition to the south.

All divers except buffleheads were above 1974 and the 10-year average. Ruddy ducks were down significantly from last year and the 10-year average; this may be related to a delayed migration of this species.

Canada geese showed a decline of 31% from 1974 but this survey does not monitor changes in this species' population status. Coot declined 39% from 1974 but remained 18% above the 10-year average. This species, too, took advantage of good water conditions further south.

Lone-Drake Index

The lone-drake index for 1975 for mallards, pintails, and canvasbacks was slightly higher than average.

Summer Weather and Habitat Conditions

Early June rainfall was excessive in southwestern Manitoba, bringing water levels well above normal in stratum 39. The Souris River remained outside its banks when last observed on 20 July. Elsewhere within the survey unit June rains were generally above normal. During July appreciable rainfall was scarce. By 14 July 1975, growing season precipitation from 10 selected stations in southern Manitoba was 19% above normal and temperatures were averaging 1.2° C below normal.

Habitat conditions in early July were generally good to excellent due to the abundant water provided in June. Brood water was well distributed, plentiful, and of good quality. Continuous warm weather throughout the survey period caused appreciable deterioration of these conditions by late July. The July pond count was 2% below that of 1974 but 9% above the 1956-62 average. It is noteworthy that only in 1955 was the July pond count in stratum 39 greater than this year.

Production (Table B-6)

The duck brood index for southern Manitoba was 43% above last year, and 14% above the 1956-62 average. The average brood size of 6.0 ducklings per brood was above last year's 5.4 and the 5.3 long-term average. Coot broods showed no change from 1974 and no change from the average.

The total late-nesting index in 1975 for all species of ducks was 10% below 1974 and 5% above the 1956-62 average. Wigeons and pintails were up from 1974, while mallards, gadwalls, green-winged teal, blue-winged teal, and shovelers were down. Total dabblers were 3% below 1974 and 5% above the average. Redheads, ring-necked ducks, and goldeneyes were up from 1974, while canvasbacks, scaup, and buffleheads were down. Total divers were 56% below 1974 and 40% below average. Ruddy ducks were up 9% from a year ago and up 54% above the 1956-62 average.

North and South Dakota

Data supplied by Gerald Pospichal and L. Tinsley, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Total precipitation from September through January in South Dakota ranged from 12 centimeters below normal in the eastern part of the State to about a centimeter below normal in the western. Temperatures for this period averaged above normal. January brought light to moderate snow cover over most of the State but this melted late in the month, and through February most of the State was bare and very dry. A series of weather systems moved through the State in March, April, and May with precipitation 3 to 5 centimeters above normal for each month. This restored total statewide pothole numbers to 39% above 1974 and equal to the 1965-74 average. Stratum 44 benefited most with increases of 73% over 1974 and 123% above the average. Stratum 48 showed an increase in ponds of 36% above 1974 but was still 2% below the average. Stratum 49 benefited least and pond numbers

were still 8% below 1974 and 19% below the average. Water quality could be classed as fair to good. Nesting cover in most areas was only fair due to intensive cultivation and haying in the pothole basins that have been dry for the past 2 years. Trees had just leafed out, as had aquatic vegetation, at the beginning of the survey. Agricultural field work was well along by mid-May.

North Dakota experienced a dry September but had heavy rains in the northern and eastern parts of the State during October. Flooded fields along the Canadian border again interfered with the harvest in the Bottineau-Dunseith area. Precipitation was normal to slightly below normal from November through February. High winds and dust storms occurred in January. Temperatures were generally above normal from September through February but dropped to below normal in March and April. March blizzards deposited up to 51+ centimeters of snow over parts of the State. This and April rains caused flooding in many areas of North Dakota, particularly in the Minot area and the Red River Valley. In spite of the wet March and April, total pothole numbers were 3% below the wet spring of 1974 but were still 26% above the 1965-74 average. As in 1974, wet field conditions delayed farm operations in many areas. Several counties in the south-central part of the State may be designated as disaster areas. The lack of early field work will no doubt benefit the early nesting species.

Breeding Populations (Tables B-7 and B-8)

In South Dakota total ducks showed an increase of 62% over 1974 but were still 12% below the 1964-73 average. When compared with 1974, total dabblers were up 50%; increases were 29% in mallards, 60% in gadwalls, 32% in blue-winged teal, 75% in shovelers, and 122% in pintails. Among the divers, redheads showed an increase of 26% and ruddy ducks an increase of 305%; however, large flocks of ruddy ducks were evident and were probably still in migration. Canvasbacks and scaup showed increases of 14% and 10%, respectively. Compared with long-term average, all species except green-winged teal showed decreases. Coots showed an increase of 125% over 1974 but remained 41% below the average.

In North Dakota total ducks showed an increase and many major species showed increases or little change from 1974. Total dabblers showed an increase of 10% compared with 1974 with a 25% increase in mallards, 70% increase in gadwalls, and an 81% increase in wigeons. Decreases were noted in green-winged teal (5%), blue-winged teal (8%), and pintails (5%). Divers showed an increase of 51% over 1974 with a 51% increase in redheads, a 122% increase in scaup, and a decrease of 20% in canvasbacks. Coots increased 13% over 1974.

Mallards dropped 3%, shovelers 23%, pintails 22%, and canvasbacks 16% when compared with the 10-year average. Increases were noted in green-winged teal (49%), blue-winged teal (15%), gadwalls (5%), wigeon (224%), and redheads (49%) compared with the average. Coots were up 53% from the average.

The lone-drake index for South Dakota was the lowest since 1964. The low indexes for mallards and pintails indicated later nesting in these species. In North Dakota indexes for all three species were slightly lower though near the average.

Summer Weather and Habitat Conditions

Total May pond numbers were 3% below 1974 but were 26% above the 1965-74 average in North Dakota. May and early June precipitation was near normal. Beginning 27 June, the heavy rains arrived. Up to 31 centimeters were recorded in an 8-h period in eastern parts of the State. Severe flooding occurred in the Red River Valley and parts of the southeast causing damage to crops, roads, homes, and other property. The flood crest was still moving northward on the Red River as of 24 July. Total July pond numbers were up substantially over 1974 and the long-term average, 84% and 35%, respectively. Despite losses due to flooding in the east and northwest parts of the State, a bumper grain harvest was forecast for North Dakota. Haying operations were delayed 2 to 3 weeks by the wet weather. The crop is unusually heavy this year and, because of the poor crop farther south, all available areas are being harvested. Late-nesting losses due to hay cutting appeared to be high.

In May, water in South Dakota showed 39% improvement over 1974 and was at average levels. However, June precipitation was below normal. Although high temperatures (32-38° C) and below normal precipitation through late June and early July dropped water levels, pond numbers still exceeded 1974 with a statewide pond index 39% above 1974 but 10% below the average. Haying operations were well along by early July but the crop was light in most areas. Grain crops suffered from lack of moisture.

Production (Tables B-7 and B-8)

The July duck brood index for North Dakota was up 21% from 1974 but remained 5% below the average. The average brood size of 5.6 was 3% lower than 1974 and 3% lower than the average. Coot broods showed a decrease of 50% from 1974 and 57% from the average. Coot broods were late this year and it was felt the production prospects would improve. Water levels and quality were good and numerous coots were observed on nests during the survey. Class I duck broods were beginning to appear in good numbers toward the end of the survey. Pond vegetation was extremely heavy this year and indexes for both duck and coot broods

were probably depressed by the low visibility rate.

In South Dakota, the duck brood index, though not as high as anticipated in May, was still 12% above 1974 but 33% below the average. Average duck brood size was 5% larger than 1974 but 6% below the average. No coot broods were observed on transects in 1975. Despite improvement over 1974, water conditions in most of South Dakota were still critical.

The late-nesting index for total ducks in North Dakota was up 145% above 1974 and up 139% above the average. Dabblers showed increases of 153% and 153%, while divers showed increases of 160% and 117% from 1974 and the average. Species indexes, when compared with 1974 and the average, are as follows: mallards, +280% and +127%; gadwalls, +86% and +166%; wigeon, -15% and +10%; blue-winged teal, +164% and +247%; pintails, +288% and +55%; redheads, +467% and +183%; and ruddy ducks, +75% and +53%. The excellent water conditions favored the late-nesting attempts but late haying operations caused considerable losses.

In South Dakota, the total late-nesting efforts were much weaker, 15% when compared with 1974 and 12% when compared with the average. Dabblers were down 20% and 13% from 1974 and the average. Blue-winged teal showed increases of +14% and +14%. Redheads and ruddy ducks also showed increases.

Montana

Data supplied by
A. E. Weinrich, David Fisher, and Edgar Ferguson,
U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Generally in Montana the winter-spring of 1974 was below normal in precipitation or its equivalent and in May, June, and July 1974 the amounts were above normal. Portions of the survey area in August 1974 were variable. During the fall-winter of 1974-75, precipitation was below normal. Precipitation in March, April, and May 1975 was well above normal and resulted in good habitat.

A cool spring and early summer occurred in eastern Montana and snowpacks remained heavy in the 183- to 244-decameter elevations where normally no snow remains at this time of year.

Eastern Montana had a delayed season resulting in delays in agricultural operations, similar to that in western North and South Dakota.

Planting of spring wheat on 11 May was only 19% completed, compared with 46% last year and a normal rate of 61%.

The habitat in stratum 41 was better than the 1975 May water count indicated. This could relate to a difference in recording procedures by the observer. Another factor is change in direction of flight as occurred along the United States-Canada border from 1974 to 1975. Most water areas were judged to be permanent in 1975 in stratum 41.

Breeding Populations (Table B-9)

The survey began on 16 May and was completed 28 May 1975. The total duck potential was 67% above 1974, and was 8% above the average. The increases from 1974 were noted to be mallards 141%, wigeons 44%, green-winged teal 143%, shovelers 54%, and pintails 122%, giving a total increase of 75% for dabbling ducks. Gadwalls (+5%) and blue-winged teal (no change) were the only dabblers to show little or no increase from 1974. The dabbler index increased 7% from the average. Diving ducks showed increases in canvasbacks (56%) and scaup (5%) for a no-change from 1974 and 36% above the average. Other ducks indicated an overall increase of 17% from 1974 and a decrease of 34% from the average.

Canada geese showed an 8% increase from 1974 and 35% above the average. Coots decreased 38% from 1974 and 46% from the average. Overall, the grand total is 61% above 1974 and 6% above the 1965-74 average.

The lone-drake index this year of 52.8 is 25% below the long-term average of 74.1.

Summer Weather and Habitat Conditions

The period through April and July 1975 was wet in Montana with above normal amounts of precipitation. The first half of July was hot with the western portion of stratum 41 receiving significant moisture. Snowpacks were still heavy for this time of year in the mountains and the Yellowstone River was close to flood stage.

July pond numbers were 52% above 1974 and 39% above the 1966-74 average. July pond numbers were 30% below May pond numbers. Water areas in general looked excellent, but some of the smaller areas had heavy vegetative growth and made it extremely difficult to spot singles, pairs, and broods.

Production (Table B-9)

The 1975 duck brood index for Montana was 33% above 1974 but still 21% below the average. Average brood size was 11% larger than 1974 and 12% better than average.

The 1975 late-nesting index was 37% below 1974 and 12% below average for all ducks. Mallards were 11% below 1974 and 36% above the average. All other dabbling ducks were below 1974 and the average. Large flocks of mixed species and sexes were observed on many water areas indicating little attempt at renesting.

Washington

Data supplied by Richard Parker,
Washington Department of Game

Weather and Water Conditions

Above average snowpack for the 1974-75 winter, combined with a good carryover of pothole numbers from the fall of 1974, resulted in an increase in the number of potholes in eastern Washington during spring 1975. A cool spring with better than average precipitation resulted in a May transect count of 296 potholes for 1975. This was 5% above the May 1974 count of 281 potholes and 53% above the 10-year average of 193 potholes for May. Additional precipitation during June, combined with cool weather, produced excellent waterfowl habitat conditions in eastern Washington.

Breeding Population (Table B-10)

Duck breeding potential for 1975 was 24% above the 1963-73 average and 42% above the 1974 index. Dabblers responded to the favorable water conditions and a total of 140,270 were counted, which was 17% above the 1963-73 average and 38% above the 1974 index. Mallards increased 26% above the 1974 index, but were still 16% below the 10-year average. Diving ducks were 66% above the long-term average and 53% above the 1974 index.

Production (Table B-11)

The production index for ducks statewide was not available because of late data returns from key eastern Washington transects. However, a production index for western Washington was available. Dabbler production in western Washington was 32% above the 1974 index, but 14% below the 1970-74 average. Mallards showed an increase of 88% above 1974, but were still 3% below the 1970-74 average. Wood ducks (*Aix sponsa*) were 21% below the 5-year average and 8% below 1974.

The production index for Canada geese was not calculated due to lack of data.

Colorado

Data supplied by Michael R. Szymczak,
Colorado Division of Wildlife

Weather and Habitat Conditions

Water conditions were considered good for duck production in all areas except the San Luis Valley. Spring rains filled most small marshes and drainage basins in the South Platte and Cache la Poudre valleys. A heavy snowpack in addition to a considerable amount of spring moisture insured good production and brood survival in North Park, although the hatch was later than normal. Although there was a very heavy snowpack in the mountains to the west, the San Luis Valley was very dry during the waterfowl production period for the 2nd consecutive year. The retarded runoff in northwest Colorado caused flooding that had a negative effect on goose production in that area. A heavy freeze coupled with a snowfall during the peak of egg laying in north central Colorado caused considerable nest abandonment.

Breeding Populations (Tables B-12 through B-18)

The number of estimated duck breeding pairs in Colorado's nesting areas reached a record high 78,345, which was nearly 6,000 pairs higher than the previous record set in 1968. The 1975 total was 22% above the 1974 level and 38% above the long-term average. Major increases above 1974 levels were recorded in North Park and the South Platte Valley. Numbers in the Cache la Poudre Valley continued at a high level, nearly double the long-term average. The majority of the increase in North Park was composed of green-winged teal, a phenomenon that also occurred in 1969 and may be related to retarded dissipation of the snowpack in the mountains surrounding North Park. The South Platte increase was mainly composed of shovelers and redheads.

Although the total estimated breeding population in 1975 reached a record high in Colorado, the mallard population dropped to a very low level. Only 24% of the estimated breeding population was composed of mallards compared with a long-term average of 55%.

The total number of geese (1,549) observed in Moffat County, Colorado, is essentially the same as was observed in 1973. However, in 1975 estimates for the Green River increased about 200 birds over the 1973 total while Yampa estimates declined by about the same number. The total number of geese observed in Moffat County in 1975 was 33% above the long-term average and estimated gosling production was up 25%.

In north central Colorado, gosling production was up 17% above the 1974 level but down 24% from the 1969-74 average. A major increase in production occurred in the Denver area, whereas minor increases over the 1974 level were recorded in the other trend areas. The total number of geese observed on north central Colorado was 23% above the 1974 level but 30% below the 1969-74 average.

Wisconsin

Data supplied by William Wheeler,
Harry Libby, and Joseph Haug,
Wisconsin Department of Natural Resources

Aerial and ground surveys for breeding waterfowl

populations and habitat conditions were conducted in Wisconsin during May 1973, 1974, and 1975. These surveys were reactivated as an essential management tool which will enable resource managers to make recommendations for harvest regulations based on current information. These surveys will eventually provide the Department of Natural Resources with a means of documenting long-term population and habitat trends in Wisconsin.

Statewide Survey (Table B-19)

Fifty-five transects (each 48.4 kilometers long and 0.4 kilometer wide) were randomly selected within three regions of Wisconsin. The three regions (Southeast Central, Northern High Density, and Northern Low Density) were selected on the basis of geographic similarities in breeding duck density, as determined by 1965-70 aerial surveys.

The Department of Natural Resources' two-engine Cessna "Skymaster" aircraft was used on the surveys. Surveys were conducted between 0700 and 1300 h.

Results of the air counts were checked by ground censusing 16- to 24-kilometer segments of some of the aerial transect routes. Along these selected segments, local game management personnel searched all wetlands for breeding waterfowl.

Ratios between air and ground counts of breeding ducks were used to adjust the aerial data for ducks present but missed by the aerial crew.

Survey results were separated to identify mallards and blue-winged teal as individual species, whereas all other species were combined as one group.

Total breeding duck population estimates for the three regions in 1975 indicated a 29% increase from 1974. Population increases in the Southeast Central and Northern High Density regions offset a 37% decline in the Northern Low Density region. For the 2nd year in a row, population estimates in the Northern Low Region have shown a decrease. Populations of both mallards and blue-winged teal continue to show a decline in this region over the 3-year period.

The single most significant change in the 1975 aerial survey was the decline of black ducks. The actual number of black ducks observed from the air declined from 1,225 in 1973 to 329 in 1974 and to zero in 1975.

Types I, II, and VI wetlands have also shown a decline (65%) during this period, and this decline in wetland numbers may contribute directly to the decline in waterfowl numbers in this region. Permanent wetland types III through VIII remained stable over the 3-year period. Those wetlands which are seasonal in nature and dependent upon varying precipitation rates (Types I, II, and VI) fluctuated throughout the 3-year period. The most noteworthy fact related to the waterfowl resource is that drainage ditches increased significantly statewide over the 3-year period. Ditching poses the greatest threat to Types I, II, and VI wetlands. When one considers that 30% of all ducks observed were on Types I and II wetlands, the magnitude of the potential loss of waterfowl habitat through ditching becomes apparent.

Scattered Wetlands Study Area Surveys (William Wheeler, Wetland Research)

Breeding duck population estimates were determined on the Scattered Wetlands Study Area for the same 3-year period that was covered by statewide aerial transects (1973-75). Surveys included ground counts on a 10% random sample of quarter-section plots and aerial transects flown by helicopter covering 10% of the total area.

May mallard surveys for all 3 years indicated a breeding population of 0.8 pair per square kilometer annually or no apparent change from year to year. Total mallard numbers fluctuated less than 10% from year to year when using either the helicopter or random plot data.

Blue-winged teal populations decreased annually for the past 2 years. The number of pairs per square kilometer were 2.46, 2.30, and 1.68 in 1973, 1974, and 1975, respectively. The number of blue-winged teal was extremely high in 1973 and the 30% decline from 1974 to 1975 may have brought populations back to normal levels for the area.

Aerial surveys indicated Type I wetlands diminished greatly with 588, 483, and 86 tallied in 1973, 1974, and 1975, respectively, on transect routes. The extremely wet conditions of 1973 and the associated increase in temporary wetlands attracted much greater numbers of blue-winged teal, but seemed to have little effect on mallards. These wet situations of 1973, however, brought on a rash of ditching which increased the number of ditches on transects by 58% during the following 2 years.

Iowa

Data supplied by Richard A. Bishop, Iowa Conservation Commission

Weather and Habitat Conditions

Spring moisture was above average with May ponds up 19% over 1974 and the highest index since 1966. Early summer rains insured adequate water until most broods were on the wing. Temperatures were below normal; ice left the marshes 10 days late. The entire breeding chronology was delayed 10-12 days.

Breeding Populations (Table B-20)

Aerial surveys were flown 13 and 15 May. Breeding pairs of mallards and blue-winged teal increased 120% and 17%, respectively, from 1974.

These data suggest a breeding population of 7,150 pairs of mallards and 25,159 pairs of blue-winged teal. These estimates are based on an index of waterfowl numbers occupying the prime nesting range in north-central and northwest Iowa.

Total duck numbers increased slightly from 1974. Species observed on the transects other than teal and mallards were wood ducks, gadwalls, shovelers, redheads, scaup, and Canada geese.

Research studies in north-central Iowa showed fewer unproductive hens, indicating slightly better production than in 1974. Although ideal water conditions existed, limited nesting cover precluded the chance of having good production in Iowa.

These data provide a good index to populations but should not be used as the exact magnitude of the breeding population.

Nebraska

Data supplied by John T. Sweet,
Nebraska Game and Parks Commission

Weather and Habitat Conditions

The 1975 May water index was 22.3% below that of 1974. The Sandhills breeding area was very dry at the time of the survey. Spring was cool and dry for the most part through May.

The rainwater basin was generally dry at survey time; the water index was 28.5% below that of 1974.

Breeding Populations (Table B-21)

The 1975 calculated breeding duck index for the Sandhills production area was 62,648 birds, according to results of the aerial survey flown 13 through 17 May 1975. The index is 7.1% below that of 1974. Ten species were identified. Mallards, blue-winged teal, gadwalls, and shovelers made up 72.2% of the total species composition.

The breeding duck index for the rainwater basin production area was 14,385, a decrease of 8.1% from 1974. The aerial survey was flown 20 and 21 May 1975. Six species of ducks were observed; mallards, blue-winged teal, and gadwalls made up 92.5% of the total species composition.

Waterfowl Harvest Surveys

Data supplied by Michael F. Sorensen, Samuel M. Carney,
and
Lonnie D. Schroeder,
U.S. Fish and Wildlife Service

This report provides estimates of waterfowl hunting activity and harvest during the 1974 season and compares them with estimates for the 1973 season. Estimates for both years were derived from information obtained from three sources: (1) the Postal Service's report of duck stamp sales; (2) the U.S. Fish and Wildlife Service's Questionnaire Survey of Waterfowl Hunters; and (3) the Service's Waterfowl Parts Collection Survey.

Procedures

An explanation of procedures employed in estimating hunter harvest and activity may be found in *Special Scientific Report—Wildlife* No. 138. Similar sample selection, stratification procedures, and computations subsequently have been followed. Major adjustments to data include those for activity by hunters less than 16 years old, who are not surveyed because they are not required to purchase duck stamps (Table C-1), and those used to compensate for memory and prestige biases (Table C-2).

Administrative Reports

Data in this report are based on final duck stamp sales information. In the Administrative Report "Waterfowl Harvest and Hunter Activity in the United States During the 1974 Hunting Season" (10 July 1975), preliminary estimates based on duck stamp sales through the 3rd quarter of fiscal year 1975 were made available for the annual waterfowl regulations meetings in early August 1975. Age and sex composition are not included herein, but were presented in the Administrative Report "Age and Sex Composition of Ducks and Geese Harvested in the 1974 Hunting Season in Comparison with Prior Years" (3 July 1975).

Results

Bias-adjusted estimates of the total U.S. harvest of ducks (by species), coots, and unretrieved kill are presented in Table C-3. Similar estimates relating to geese are in Table C-4. Detailed state-level estimates of the duck, goose, and coot harvest; migratory waterfowl hunting-stamp sales; and hunter activity and success may be found in Tables C-5 through C-9. These results include hunter activity and harvest during regular and special seasons combined. For States having a September teal season, the proportion of the total duck harvest that occurred after the September season is shown in Table C-10. Estimates are presented as derived to assure agreement between totals and their component parts. This does not imply precision to the last hunter, duck, or day.

The following is a resume of 1974 hunter activity and harvest success by flyway, showing degree of change from 1973.

Atlantic Flyway

Duck stamp sales totaled 448,847 (+3%); 1,733,139 ducks (+12%), 106,051 coots (+14%), and 338,753 geese (-3%) were harvested during 2,835,708 hunter-days (+7%). Those persons buying duck stamps for hunting averaged 6.2 days afield (+4%) and retrieved an average of 3.8 ducks (+9%) and 0.8 goose (-6%) each. Estimates for the Atlantic Flyway are recorded in Table C-5.

Mississippi Flyway

Duck stamp sales totaled 892,017 (+8%); 5,165,824 ducks (+12%), 488,083 coots (+39%), and 463,504 geese (+11%) were harvested during 6,606,377 hunter-days (+12%). Those persons buying duck stamps for hunting averaged 7.0 days afield (+4%) and retrieved an average of 5.6 ducks (+5%) and 0.5 goose (+3%) each. Estimates for the Mississippi Flyway are recorded in Table C-6.

Central Flyway

Duck stamp sales totaled 426,135 (+3%); 2,238,182 ducks (-8%), 98,121 coots (+16%), and 419,090 geese (-12%) were harvested during 2,913,841 hunter-days (+1%). Those persons buying duck stamps for hunting averaged 6.4 days afield (-3%) and retrieved an average of 5.0 ducks (-11%) and 1.0 goose (-14%) each. Estimates for the Central Flyway are recorded in Table C-7.

Pacific Flyway

Duck stamp sales totaled 396,860 (+3%); 3,598,385 ducks (+12%), 223,746 coots (+52%), and 293,909 geese (-17%) were harvested during 2,908,854 hunter-days (-1%). Those persons buying duck stamps for hunting averaged 6.9 days afield (-2%) and retrieved an average of 8.9 ducks (+11%) and 0.7 goose (-17%) each. Estimates for the Pacific Flyway are recorded in Table C-8.

Alaska

Duck stamp sales totaled 16,018 (-6%); 61,214 ducks (-35%), 285 coots (-58%), and 10,425 geese (-16%) were harvested during 55,105 hunter-days (-36%). Those persons buying duck stamps for hunting averaged 3.2 days afield (-32%) and retrieved an average of 3.7 ducks (-31%) and 0.6 goose (-10%) each. Estimates for Alaska are recorded in Table C-9.

United States

Duck stamp sales totaled 2,179,877 (+5%); 12,796,744 ducks (+8%), 916,286 coots (+35%), and 1,525,681 geese (-5%) were harvested during 15,337,885 hunter-days (+6%). Those persons buying duck stamps for hunting averaged 6.7 days afield (+1%) and retrieved an average of 5.7 ducks (+3%) and 0.7 goose (-9%) each. Estimates for the United States are recorded in Table C-9.

APPENDIX

Table A-1. Summary - 1975 Mid-winter Waterfowl Survey, Pacific Flyway.

	Area										
Species	Washington	Oregon	California	Nevada	Utah	Arizona	Idaho	West Montana	West Colorado	West New Mex.	West Wyoming
Dabblers											
Black duck											
Mallard	359,068	136,893	529,541	11,555	27,050	2,030	193,698	38,492	1,342	11,978	11,363
Mottled duck											
Gadwall	424	1,351	24,688	1,305	181	40	2,192	44	9	14	217
Wigeon	72,225	76,942	525,388	565	424	40	3,342	87	10		455
Green-winged teal	16,851	30,837	154,226	3,915	5,222	980	232	190	74		138
Blue-winged teal											
Cinnamon teal	1		1,094								
Shoveler	1,898	1,767	619,920	320	8,472	50					
Pintail	28,540	124,784	3,115,781	3,065	1,928	1,555	2,026	30	10	1	4
Subtotal	479,007	372,574	4,970,638	20,725	43,277	4,695	201,490	38,843	1,445	11,993	12,177
Divers											
Redhead	76	539	879	425	16		9,821	1,454			
Canvasback	2,249	4,889	68,468	1,020	50	210	427	360			
Scaup	24,988	2,817	34,889	55	15	7	704	17		437	61
Ring-necked duck	603	885	1,324	175	2	35	200	160	8		
Goldeneye	20,833	615	1,851	195	543	10	8,503	2,297	1,054	162	70
Bufflehead	13,686	4,978	7,877	325	8		126	5			
Ruddy duck	1,148	8,281	54,252	1,495	28	55	402				
Oldsquaw	431	1									
Scoter	52,655	656	33,126								
Subtotal	116,669	23,661	202,666	3,690	662	317	20,183	4,293	1,062	599	131
Mergansers	4,575	2,203	3,951	1,255	1,031	1,000	4,751	549	221	122	218
Miscellaneous and Unidentified	7,312	5,565	17,386	200	3,365	328	6,599	6,601	572	385	2,015
Total ducks	607,563	404,003	5,194,641	25,870	48,335	6,340	233,023	50,286	3,300	13,099	14,541
Geese											
Snow and blue	10,851	1,223	433,895	405		3		3			
Ross' geese[a]											
White-front geese		4,901	67,639								
Canada geese	24,357	39,261	36,163	4,730	2,054	1,770	19,243	3,052	547	2,174	179
Cackling geese		2,244	38,550								
Black brant	6,163	1,507	480								
Total geese	131,473	94,500	594,669	5,135	2,054	1,773	19,243	3,055	547	2,174	179
Whistling swans	1,324	6,451	45,987	316	130		100	39			
Trumpeter swans	96	15		10			505	181	39		
Coots	28,741	30,680	390,196	8,660	6,540	3,140	7,325	1,613	1		
Total waterfowl	769,197	535,649	6,225,493	39,991	57,059	11,253	260,196	55,174	3,948	14,836	15,096

[a]Included in Snow geese.

Table A-2. Summary - 1975 Mid-winter Waterfowl Survey, Central Flyway. (TR = Trace)

Species	Area										1975 Total
	Colorado (eastern)	Kansas	Montana (eastern)	Nebraska	New Mexico (eastern)	North Dakota	Oklahoma	South Dakota	Texas	Wyoming	
Dabblers											
Black duck											
Mallard	281,570	402,310	4,160	227,280	53,160	4,520	174,940	130,500	541,190	20,540	1,876,160
Mottled duck									43,000		43,000
Gadwall			130	250	11,980		340		314,750		327,450
Wigeon			400	510	19,390		3,410		190,310		214,010
Green-winged teal			20	20	22,840		1,920	TR	1,019,980		1,044,770
Blue-winged teal									40,260		40,260
Cinnamon teal					490				20		510
Shoveler					7,270		5		51,620		58,890
Pintail	400		50		29,190	TR	250		1,689,390		1,719,290
Subtotal	281,970	402,310	40,760	228,050	144,310	4,520	180,860	130,500	3,890,520	20,540	5,324,340
Divers											
Redhead					260		250	TR	438,290		438,800
Canvasback				50	740		30	TR	25,810		26,630
Scaup				600	250		230	TR	189,750		190,830
Ring-neck duck					100		50		840		990
Goldeneye			7,680	720	10	TR	910	510	30	190	10,050
Bufflehead			100	300	200		50	20	7,730		8,400
Ruddy duck					230				3,000		3,230
Subtotal			7,780	1,670	1,790	TR	1,510	530	665,450	190	678,920
Mergansers		40,740	260	17,570	8,910	140	2,390	660	2,420	30	73,120
Miscellaneous and Unidentified			90		17,130		1,100		5,140		23,400
Total ducks	281,970	443,050	48,880	247,280	172,140	4,660	185,860	131,710	4,563,530	20,760	6,099,800
Geese											
Snow and blue geese[a]		84,600		1,500	26,100		1,000	TR	568,300		681,500
Ross' geese[a]											
White-fronted geese[a]		2,580					220		36,710		39,500
Canada geese[a]	104,200	34,400	7,200	11,700	11,100	60	74,930	49,200	90,200	5,800	389,330
Total geese	104,200	121,580	7,200	13,200	37,200	60	76,140	49,200	695,210	5,800	1,110,330
Whistling swans		1		2				4			7
Trumpeter swans								129			129
Coots		30			8,630		4,560	TR	127,560		140,780
Total waterfowl[b]	386,170	564,660	56,080	260,480	217,970	5,260	266,560	181,040	5,386,290	26,560	7,351,000
Percent change from 1974	+ 27	+ 43	- 12	+ 130	- 9	+ 75	- 48	- 10	+ 65	- 43	+ 43
Percent distribution	5	8	TR	4	3	TR	4	2	73	TR	

[a]All estimates of geese from mid-December surveys.
[b]All estimates rounded.

Table A-3. 1975 Mid-winter Waterfowl Survey, Mississippi Flyway. (TR = trace)

Species	Area							
	Minnesota	Wisconsin	Michigan	Illinois	Indiana	Ohio	Iowa	Missouri
Dabblers								
Mallard	11,300	8,700	10,700	223,500	53,000	39,700	66,100	320,200
Black Duck	400	1,100	3,600	14,200	9,800	41,000	100	900
Mottled Duck								
Gadwall		100	300		200			1,600
Wigeon			TR	2,400	300	100		800
Green-winged teal			TR	700	100			100
Blue-winged teal								
Shoveler			TR					1,100
Pintail			TR	100	200	100	300	6,000
Subtotal	11,700	9,900	14,600	240,900	63,600	80,900	66,500	330,700
Divers								
Redhead			900			200	300	100
Canvasback			6,400	18,300	100	1,500	300	200
Scaup		2,900	18,000	700	600	3,700	6,000	4,400
Ring-necked ducks				500	2,400		TR	4,300
Goldeneye	400	3,200	3,400	10,800	700	3,700	200	600
Bufflehead			200	200	200	100		200
Ruddy duck					100			100
Subtotal	400	6,100	28,900	30,500	4,100	9,200	6,800	9,900
Miscellaneous								
Eider and Scoter			TR					
Oldsquaw		5,400	1,400					
Merganser	TR	500	800	6,300	500	5,500	100	3,600
Subtotal		5,900	2,200	6,300	500	5,500	100	3,600
Unidentified			3,100				100	600
Total ducks	12,100	21,900	48,800	277,700	68,200	95,600	73,500	344,800
Geese								
Blue and Snow geese				7,500	200		9,000	30,100
White-fronted geese								
Canada geese	35,400	3,600	14,800	254,700	10,800	15,000	200	196,100
Total geese	35,400	3,600	14,800	262,200	11,000	15,000	9,200	226,200
Swans	TR		TR		TR		TR	
Coots	TR	1,200	200	100	1,600	1,000		200
Total waterfowl	47,500	26,700	63,800	540,000	80,800	111,600	82,700	571,200

Table A-3. (continued)

Species	Area						Flyway Totals
	Arkansas	Mississippi[b]	Louisiana[b]	Alabama	Kentucky	Tennessee	
Dabblers							
Mallard	1,064,600	504,700	305,500	30,000	36,100	186,500	2,860,600
Black duck	800	300		7,200	2,300	34,300	116,000
Mottled duck			61,000				61,000
Gadwall	17,700	2,800	666,300	4,500		26,400	719,900
Wigeon	15,800	29,400	163,100	6,700	200	19,900	238,700
Green-winged teal	17,400	1,600	652,100	3,800	100	1,500	677,400
Blue-winged teal	100	100	217,000			TR	217,200
Shoveler	300	3,100	192,800	2,600		1,800	201,700
Pintail	121,400	28,400	342,500	3,100	100	5,700	507,900
Subtotal	1,238,100	570,400	2,600,300	57,900	38,800	276,100	5,600,400
Divers							
Redhead	100	TR	1,000	200		100	2,900
Canvasback	5,200	300	29,800	1,800	200	600	64,700
Scaup	5,700	10,200	173,100	2,200	100	3,200	230,800
Ring-necked duck	10,000	1,400	66,600	2,200	200	7,100	94,700
Goldeneye	200			300	TR	100	23,600
Bufflehead	400	100		500	TR	200	2,100
Ruddy duck	2,600	6,600	1,000	100		100	10,600
Subtotal	24,200	18,600	271,500	7,300	500	11,400	429,400
Miscellaneous							
Eider and Scoter		TR					TR
Oldsquaw		TR					6,800
Merganser	TR	TR	8,000	700		1,100	27,100
Subtotal	TR	TR	8,000	700		1,100	33,900
Unidentified[a]	12,400	4,000	2,700	6,000	200	6,100	35,200
Total Ducks	1,274,700	593,000	2,882,500	71,900	39,500	294,700	6,098,900
Geese							
Blue and Snow geese	4,300	100	384,400	900	4,500	500	441,500
White-fronted geese			40,400				40,400
Canada geese	1,900	3,600	1,000	27,700	21,100	63,700	649,600
Total geese	6,200	3,700	425,800	28,600	25,600	64,200	1,131,500
Swans							TR
Coots	4,800	7,300	1,400,500	26,800	700	12,800	1,457,200
Total waterfowl	1,285,700	604,000	4,708,800	127,300	65,800	371,700	8,687,600

[a]Includes wood ducks.
[b]Survey not completed in portions of State.

Table A-4. 1975 Mid-winter Waterfowl Survey, Atlantic Flyway. (TR = Trace)

Atlantic Flyway	Mallard	Black duck	Mottled duck	Gadwall	Wigeon
Maine	351	30,770	---	---	---
New Hampshire	---	784	---	---	---
Vermont	17	159	---	---	---
Massachusetts	1,170	15,979	---	---	100
Connecticut	418	2,579	---	12	40
Rhode Island	88	1,364	---	---	40
New York	6,274	19,026	---	10	610
New Jersey	19,800	81,910	---	1,200	3,170
Pennsylvania	17,332	6,314	---	105	150
Delaware	6,035	9,355	---	820	375
Maryland	14,600	18,800	---	300	2,000
Virginia	13,400	17,100	---	5,400	5,000
West Virginia	973	590	---	14	5
North Carolina	15,700	23,400	---	2,700	36,700
South Carolina	62,200	9,700	---	4,600	9,100
Georgia	1,400	400	---	1,600	500
Florida	1,200	600	400	300	15,800
Total Atlantic Flyway	160,958	238,830	400	17,061	73,590
Total last year	156,300	246,700	400	15,700	57,800
Percent change	+ 3.0	- 3.2	---	+ 8.7	+27.3
Long-term average	191,085	292,919	1,110	19,938	86,479
Percent change	-15.8	-18.5	-64.0	+14.4	-14.9

Atlantic Flyway	Green winged teal	Blue winged teal	Shoveler	Pintail	Tree duck
Maine	---	---	---	---	---
New Hampshire	---	---	---	---	---
Vermont	---	---	---	---	---
Massachusetts	65	---	---	---	---
Connecticut	---	---	---	8	---
Rhode Island	---	---	---	---	---
New York	210	---	126	26	---
New Jersey	3,100	---	1,000	2,200	---
Pennsylvania	30	---	52	25	---
Delaware	1,870	---	730	1,785	---
Maryland	1,400	200	200	200	---
Virginia	5,700	TR	1,500	4,200	---
West Virginia	---	---	---	2	---
North Carolina	12,200	---	1,000	31,800	---
South Carolina	20,800	1,800	2,700	20,300	---
Georgia	500	100	200	100	---
Florida					
Total Atlantic Flyway	50,675	5,900	10,508	72,246	TR
Total last year	53,200	8,400	10,000	70,800	---
Percent change	- 4.7	-29.8	+ 5.1	+ 2.0	---
Long-term average	68,199	10,245	17,172	127,265	---
Percent change	-25.7	-42.4	-38.8	-43.2	---

Table A-4. (continued)

Atlantic Flyway	Total dabblers 1975	Redhead	Canvasback
Maine	31,121	---	---
New Hampshire	784	---	---
Vermont	176	---	2,280
Massachusetts	17,314	---	160
Connecticut	3,057	---	15
Rhode Island	1,492	---	---
New York	26,282	7,985	8,935
New Jersey	112,380	200	12,200
Pennsylvania	24,008	56	8,419
Delaware	20,970	---	1,420
Maryland	37,700	2,200	54,000
Virginia	52,300	---	6,100
West Virginia	1,584	---	1
North Carolina	123,500	6,700	19,800
South Carolina	131,200	TR	700
Georgia	4,800	---	800
Florida	41,500	91,100	3,000
Total Atlantic Flyway	630,168	108,241	117,830

Atlantic Flyway	Scaup	Ring-necked duck	Goldeneye	Bufflehead	Ruddy duck
Maine	4,313	---	12,525	5,157	---
New Hampshire	---	---	79	28	---
Vermont	1,030	---	986	---	---
Massachusetts	18,460	---	7,440	3,076	---
Connecticut	7,100	---	240	44	---
Rhode Island	33,565	---	1,923	50	---
New York	74,312	---	2,451	2,707	80
New Jersey	100,150	100	4,310	12,260	8,050
Pennsylvania	15	62	253	653	10
Delaware	210	10	55	555	7,560
Maryland	92,300	---	11,300	14,300	25,500
Virginia	1,300	---	2,300	4,000	4,000
West Virginia	20	7	144	22	---
North Carolina	8,700	8,700	TR	3,000	9,300
South Carolina	1,100	8,300	100	300	1,600
Georgia	9,600	1,200	---	200	---
Florida	294,000	30,300	200	1,000	2,700
Total Atlantic Flyway	646,175	48,679	44,306	47,352	58,800

Table A-4. (continued)

Atlantic Flyway	Total divers 1975	Eider	Scoter
Maine	21,995	38,854	3,832
New Hampshire	107	18	23
Vermont	4,296	---	---
Massachusetts	29,258	46,805	9,320
Connecticut	7,400	---	777
Rhode Island	35,538	---	1,035
New York	96,470	---	1,618
New Jersey	137,270	---	3,800
Pennsylvania	9,468	---	---
Delaware	9,810	---	10
Maryland	199,600	---	2,500
Virginia	17,700	---	600
West Virginia	194	---	---
North Carolina	56,200	---	---
South Carolina	12,100	---	300
Georgia	11,800	---	5,200
Florida	422,300	---	---
Total Atlantic Flyway	1,071,383	85,677	28,349

Atlantic Flyway	Oldsquaw	Total sea ducks 1975	Merganser
Maine	2,164	44,850	2,304
New Hampshire	---	41	14
Vermont	---	---	36
Massachusetts	192	56,317	2,243
Connecticut	60	171	767
Rhode Island	---	1,035	2,389
New York	910	2,528	22,092
New Jersey	2,340	6,140	4,000
Pennsylvania	---	---	75
Delaware	---	---	285
Maryland	6,300	8,800	600
Virginia	TR	600	700
West Virginia	---	---	52
North Carolina	---	---	7,100
South Carolina	---	300	500
Georgia	---	5,200	500
Florida	---	---	1,400
Total Atlantic Flyway	11,966	125,992	45,057

Table A-4. (continued)

Atlantic Flyway	Whistling swan	Mute swan	Total swans 1975
Maine	---	---	---
New Hampshire	---	---	---
Vermont	---	---	---
Massachusetts	---	313	313
Connecticut	---	495	495
Rhode Island	---	477	477
New York	2	720	722
New Jersey	570	588	1,158
Pennsylvania	322	---	322
Delaware	395	26	421
Maryland	36,400	24	36,424
Virginia	2,000	---	2,000
West Virginia	---	---	---
North Carolina	26,900	---	26,900
South Carolina	TR	---	TR
Georgia	TR	---	TR
Florida	---	---	---
Total Atlantic Flyway	66,589	2,643	69,232
Total Last Year	64,200	1,900	66,100
Percent Change	+ 3.7	+39.1	+ 4.7
Long-term Average	58,894	1,699[a]	
Percent Change	+13.1	+55.6	

[a] 7-year average

Atlantic Flyway	Coots 1975
Maine	---
New Hampshire	---
Vermont	---
Massachusetts	---
Connecticut	---
Rhode Island	---
New York	1,425
New Jersey	550
Pennsylvania	718
Delaware	615
Maryland	400
Virginia	5,000
West Virginia	7
North Carolina	96,900
South Carolina	20,400
Georgia	10,000
Florida	169,900
Total Atlantic Flyway	305,915

Table A-4. (continued)

Atlantic Flyway	Miscellaneous and unidentified	Total ducks 1975
Maine	4,154	104,424
New Hampshire	80	1,026
Vermont	31	4,539
Massachusetts	105	105,237
Connecticut	15	11,410
Rhode Island	--	40,454
New York	--	147,372
New Jersey	--	259,790
Pennsylvania	34	33,585
Delaware	--	31,075
Maryland	1,400	248,100
Virginia	100	71,400
West Virginia	108	1,938
North Carolina	1,300	188,100
South Carolina	24,800	168,900
Georgia	1,600	23,900
Florida	800	466,000
Total Atlantic Flyway	34,527	1,907,127

Atlantic Flyway	Snow goose	Blue goose	Canada goose	Brant	Total geese 1975
Maine	---	---	903	---	903
New Hampshire	---	---	647	---	647
Vermont	---	---	4	---	4
Massachusetts	---	---	14,205	523	14,728
Connecticut	---	---	1,510	40	1,550
Rhode Island	4	---	1,845	---	1,849
New York	---	---	9,244	24,055	33,289
New Jersey	28,300	30	10,860	55,200	94,390
Pennsylvania	15	12	71,085	---	71,112
Delaware	3,405	---	38,750	500	42,655
Maryland	6,000	400	551,600	---	558,000
Virginia	12,400	100	36,500	7,700	56,700
West Virginia	---	---	553	---	553
North Carolina	20,100	400	66,100	400	87,000
South Carolina	TR	100	13,800	---	13,900
Georgia	---	---	200	---	200
Florida	100	---	1,500	---	1,600
Total Atlantic Flyway	70,324	1,042	819,306	88,408	979,080

Table A-5. Winter Survey in Mexico, 1975.[a]

Species	East Coast			Central and Interior Highlands[a]			West Coast		
	1975	1970	% change	1975	1970	% change	1975	1970	% change
Dabblers									
Tree duck	51,035	54,713	- 7	--	25	--	10,655	2,940	+262
Mallard	20	25	- 20	2,140	3,470	- 39	--	--	--
Mexican duck	2,110	1,836	+ 15	14,255	11,390	+ 25	--	--	--
Gadwall	24,155	51,478	- 53	7,455	15,800	- 53	4,220	6,500	- 35
American wigeon	95,800	71,884	+ 33	8,210	23,180	- 65	87,840	51,885	+ 69
Green-winged teal	12,890	23,383	- 45	32,640	17,270	+ 89	194,030	116,560	+ 66
Blue-winged teal	256,205	176,351	+ 45	11,198	8,135	+ 38	76,150	16,000	+376
Shoveler	29,005	67,261	- 57	18,058	61,015	- 70	191,555	97,475	+ 97
Pintail	57,415	90,236	- 37	102,525	36,730	+179	1,047,980	410,160	+156
Subtotal	528,635	537,167	- 2	196,481	177,015	+ 11	1,612,430	701,520	+130
Divers									
Redhead	75,050	13,295	+464	155	825	- 81	66,400	49,260	+ 35
Canvasback	2,075	4,889	- 58	1,020	1,950	- 48	1,260	40	+3050
Scaup	39,620	36,417	+ 9	30	305	- 90	169,140	27,085	+624
Ring-necked duck	16,615	107,247	- 85	10	--	--	--	--	--
Goldeneye	--	--	--	--	--	--	--	50	--
Bufflehead	130	1,205	- 89	10	330	- 97	5,850	940	+622
Ruddy duck	5,690	9,725	- 42	455	4,400	- 90	8,200	5,770	+ 42
Subtotal	139,180	172,778	- 19	1,680	7,810	- 79	250,850	83,145	+202
Miscellaneous									
Mergansers	455	125	+264	35	50	- 30	7,270	2,200	+230
Scoters	--	--	--	--	--	--	1,380	3,340	- 59
Unidentified	--	--	--	35,526	--	--	--	--	--
Subtotal	455	125	+264	35,561	50	--	8,650	5,540	+ 56
Total ducks	668,270	710,070	- 6	233,722	184,875	+ 26	1,871,930	790,205	+137
Coots	619,965	473,173	+ 31	31,002	40,560	- 24	135,560	135,100	NC
Geese									
Canada geese	6,950	3,285	+112	--	--	--	20	--	--
White-fronted geese	29,300	13,854	+111	16,782	4,225	+297	1,950	2,486	- 22
Blue and snow geese	29,970	1,887	+1488	26,472	34,831	- 24	140	31	+352
Brant	--	--	--	--	--	--	115,340	131,595	- 12
Total geese	66,220	19,026	+248	43,254	39,056	+ 11	117,450	134,112	- 12
Total waterfowl	1,354,455	1,202,269	+ 12	307,978	264,491	+ 16	2,124,940	1,059,417	+100
Whistling swan	1	--	--	9	--	--	--	--	--
Sandhill cranes	5	120	- 96	11,113	1,180	+842	30	--	--
Brown pelicans	472	211	+124	--	--	--	--	--	--

[a]1970 data is adjusted to those areas covered in 1975.

Table B-1. Alaska--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)				Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974[a] average	% change from average	1975	% change from 1974	1965-1974 average	% change from average
May Ponds	not applicable				July Ponds	not applicable		
					Duck Brood Index	not applicable		
					Avg. Brood Size	not applicable		
	Breeding Population Estimates				Late-nesting indexes			
Ducks:								
Dabblers:								
Mallard	111.1	-53	188.3	-41	not applicable			
Black Duck	0.0	n.c.	0.0	n.c.				
Gadwall	1.5	-82	1.5	n.c.				
American Wigeon	313.5	-51	451.8	-31				
Green-winged Teal	116.8	-74	280.2	-58				
Blue-winged Teal	0.0	n.c.	1.5	-100				
Northern Shoveler	43.4	-71	75.8	-43				
Pintail	899.8	-29	1,126.4	-20				
Subtotal	1,486.1	-46	2,125.5	-30				
Divers:								
Redhead	0.1	n.c.	0.3	-67				
Canvasback	38.4	-52	79.7	-52				
Scaup	1,175.4	+4	1,122.6	+5				
Ring-necked	0.0	n.c.	0.0	n.c.				
American Goldeneye	147.1	+15	130.3	+13				
Bufflehead	63.1	-32	64.5	-2				
Subtotal	1,424.1	-1	1,397.4	+2				
Miscellaneous:								
Oldsquaw	543.0	-27	547.4	-1				
Eider	20.4	-12	34.9	-42				
Scoter	321.0	-25	377.2	-15				
Ruddy Duck	0.0	n.c.	0.0	n.c.				
Merganser	7.6	+58	4.6	+65				
Subtotal	892.0	-26	964.1	-7				
TOTAL DUCKS	3,802.2	-30	4,487.0	-15				
Coots:								
American Coot	0.0	n.c.	0.0	n.c.				
GRAND TOTAL	3,802.2	-30	4,487.0	-15				

[a]Averages added in for Strata 7 and 12 in years not flown.

Table B-2. Northern Alberta and the Northwest Territories--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974 average	% change from average		1975	% change from 1974	1965-1974 average	% change from average
May Ponds	not applicable				July Ponds	not applicable			
					Duck Brood Index				
					Avg. Brood Size				
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:						not applicable			
Mallard	1,145.1	+8	1,135.6	+1					
Black Duck	0.0	n.c.	0.0	n.c.					
Gadwall	11.2	-39	22.3	-50					
American Wigeon	655.6	+12	740.9	-12					
Green-winged Teal	722.9	+52	715.4	+1					
Blue-winged Teal	321.2	+125	124.9	+157					
Northern Shoveler	152.5	-10	160.7	-5					
Pintail	631.3	+20	412.2	+53					
Subtotal	3,639.8	+22	3,312.0	+10					
Divers:									
Redhead	29.4	+42	33.5	-12					
Canvasback	71.7	+133	63.4	+13					
Scaup	4,208.4	+15	3,772.5	+12					
Ring-necked	136.4	+103	128.1	+6					
American Goldeneye	55.5	-75	133.1	-58					
Bufflehead	484.7	+4	429.2	+13					
Subtotal	4,986.1	+12	4,559.8	+9					
Miscellaneous:									
Oldsquaw	640.2	-10	919.0	-30					
Eider	0.0	n.c.	0.0	n.c.					
Scoter	721.5	-28	804.2	-10					
Ruddy Duck	40.0	+178	33.7	+19					
Merganser	53.8	+65	88.3	-39					
Subtotal	1,455.5	-18	1,845.2	-21					
TOTAL DUCKS	10,081.4	+10	9,717.0	+4					
Coots:									
American Coot	96.7	+44	124.5	-22					
GRAND TOTAL	10,178.1	+10	9,841.5	+3					

Table B-3. Northern Saskatchewan and Northern Manitoba--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)				Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974 average	% change from average	1975[a]	% change from 1974	1965-1974 average	% change from average
May Ponds	not applicable				July Ponds Duck Brood Index Avg. Brood Size	not applicable		
	Breeding Population Estimates				Late-nesting indexes			
Ducks:								
Dabblers:								
Mallard	624.5	+17	1,008.4	-38	Survey Incomplete for 1975			
Black Duck	1.5		6.6	-77				
Gadwall	26.6	+13	72.6	-63				
American Wigeon	184.9	+3	310.0	-40				
Green-winged Teal	241.0	-15	250.8	-4				
Blue-winged Teal	170.1	+199	305.1	-44				
Northern Shoveler	47.5	+173	55.0	-14				
Pintail	73.0	+121	89.0	-18				
Subtotal	1,369.1	+21	2,097.5	-35				
Divers:								
Redhead	32.4	+234	75.4	-57				
Canvasback	27.6	+214	54.4	-49				
Scaup	1,001.6	-11	814.2	-23				
Ring-necked	299.8	+62	330.6	-9				
American Goldeneye	138.7	-28	165.2	-16				
Bufflehead	145.6	-11	143.4	+2				
Subtotal	1,645.7	-3	1,583.2	+4				
Miscellaneous:								
Oldsquaw	0.0	n.c.	0.0	n.c.				
Eider	0.0	n.c.	0.0	n.c.				
Scoter	56.8	+18	55.7	+2				
Ruddy Duck	4.1	-63	30.4	-87				
Merganser	445.6	+104	213.1	+109				
Subtotal	506.5	+82	299.2	+69				
TOTAL DUCKS	3,521.3	+14	3,979.9	-12				
Coots:								
American Coot	117.5	+155	260.0	-55				
GRAND TOTAL	3,638.8	+16	4,239.9	-14				

[a]Strata 21 and 24 not flown in 1975.

Table B-4. Southern Alberta--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974 average	% change from average		1975	% change from 1974	1965-1974 average	% change from average
May Ponds	893.2	-40	777.0	+15	July Ponds	504.0	-42	546.4	-8
					Duck Brood Index	112.3	-18	121.6	-8
					Avg. Brood Size	4.585	-19	5.736	-20
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	1,398.4	-11	1,457.4	-4		30.8	+67	15.1	+104
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	303.6	-39	385.4	-21		18.0	+50	7.4	+143
American Wigeon	384.4	-25	435.7	-12		14.4	-2	4.6	+213
Green-winged Teal	230.8	-43	254.8	-9		9.4	+34	5.8	+62
Blue-winged Teal	1,108.2	-8	621.8	+78		12.9	+21	6.5	+98
Northern Shoveler	550.4	-6	435.6	+26		17.8	+456	5.0	+256
Pintail	1,553.1	-27	1,368.2	+14		13.5	+44	8.2	+65
Subtotal	5,528.9	-20	4,958.9	+11		116.8	+55	52.6	+122
Divers:									
Redhead	269.7	+74	113.6	+137		1.7	-35	1.6	+6
Canvasback	78.9	-21	73.1	+8		0.7	-30	0.7	n.c.
Scaup	383.5	+4	352.8	+9		31.2	+54	12.5	+150
Ring-necked	8.3	+73	5.4	+54		1.1		0.4	+175
American Goldeneye	17.4	-13	11.0	+58		0.4		0.2	+100
Bufflehead	52.6	+116	38.8	+36		0.0	-100	0.1	-100
Subtotal	810.4	+20	594.7	+36		35.1	+45	15.5	+126
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	8.7	-9	20.6	-58		0.0	-100	0.5	-100
Ruddy Duck	180.7	+98	77.2	+134		7.7	+22	5.6	+38
Merganser	10.4		2.6	+300		0.0	-100	0.1	-100
Subtotal	199.8	+98	100.4	+99		7.7	+12	6.2	+24
TOTAL DUCKS	6,539.1	-15	5,654.0	+16		159.6	+50	74.3	+115
Coots:									
American Coot	966.7	-9	590.9	+64					
GRAND TOTAL	7,505.8	-14	6,244.9	+20					

Table B-5. Southern Saskatchewan--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974 average	% change from average		1975	% change from 1974	1965-1974 average	% change from average
May Ponds	2,974.5	-4	1,975.2	+51	July Ponds	1,540.8	+2	977.3	+58
					Duck Brood Index	148.2	n.c.	121.4	+22
					Avg. Brood Size	4.703	-7	5.314	-11
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	2,443.1	+17	2,282.7	+7		91.9	+8	55.6	+65
Black Duck	1.1		0.1	+1000		0.0	n.c.	0.0	n.c.
Gadwall	753.5	+20	559.6	+35		36.7	-10	21.2	+73
American Wigeon	817.5	+9	788.3	+4		14.7	+52	12.9	+14
Green-winged Teal	311.0	+2	320.0	-3		10.6	+430	7.2	+47
Blue-winged Teal	2,622.8	+72	1,512.0	+73		24.6	-18	21.3	+15
Northern Shoveler	730.3	+4	701.6	+4		18.9	+29	9.1	+108
Pintail	2,050.3	-6	1,680.7	+22		29.4	+7	22.3	+32
Subtotal	9,729.6	+19	7,845.0	+24		226.8	+8	149.6	+52
Divers:									
Redhead	288.6	+61	169.8	+70		16.1	+127	4.1	+293
Canvasback	305.7	+68	165.7	+84		5.1	+19	3.0	+70
Scaup	622.1	+65	253.8	+145		20.4	+33	10.8	+89
Ring-necked	62.1	+26	15.9	+291		2.5	-40	0.9	+178
American Goldeneye	18.4	+17	15.1	+22		0.0	n.c.	0.3	-100
Bufflehead	62.0	+130	32.7	+90		4.4	+76	1.6	+175
Subtotal	1,358.9	+64	653.0	+108		48.5	+45	20.7	+134
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	8.6	+219	4.6	+87		2.6		0.1	+2500
Ruddy Duck	114.8	-12	86.6	+33		24.2	-15	12.0	+102
Merganser	4.7	+1467	1.3	+262		0.0	n.c.	0.1	-100
Subtotal	128.1	-4	92.5	+38		26.8	-6	12.2	+120
TOTAL DUCKS	11,216.6	+23	8,590.5	+31		302.1	+11	182.5	+66
Coots:									
American Coot	2,354.8	+8	1,251.6	+88					
GRAND TOTAL	13,571.4	+20	9,842.1	+38					

Table B- 6. Southern Manitoba--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974 average	% change from average		1975	% change from 1974	1965-1974 average	% change from average
May Ponds	718.7	-27	729.6	-1	July Ponds	365.1	-2	336.4	+9
					Duck Brood Index	27.8	+43	24.4	+14
					Avg. Brood Size	6.063	+22	5.337	+14
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	348.4	+8	327.4	+6		13.1	n.c.	11.3	+16
Black Duck	0.0	n.c.	0.4	-100		0.0	n.c.	0.0	n.c.
Gadwall	44.7	+3	90.6	-51		0.8	-58	1.3	-38
American Wigeon	31.4	-37	58.4	-46		2.3	+360	2.3	n.c.
Green-winged Teal	66.4	-40	100.3	-34		0.5	-58	0.8	-38
Blue-winged Teal	361.0	-47	589.4	-39		4.3	-22	4.2	+2
Northern Shoveler	51.2	-48	108.7	-53		0.0	-100	1.0	-100
Pintail	216.2	-28	167.7	+29		2.1	+62	1.2	+75
Subtotal	1,119.3	-31	1,442.9	-22		23.1	-3	22.1	+5
Divers:									
Redhead	102.2	+36	80.7	+27		0.7	+133	1.1	-36
Canvasback	134.3	+292	56.9	+136		0.0	-100	0.7	-100
Scaup	160.1	+10	96.9	+65		0.7	-74	2.2	-68
Ring-necked	18.7	+55	7.9	+137		1.0	+100	0.2	+400
American Goldeneye	38.2	+183	12.5	+206		0.3		0.1	+200
Bufflehead	18.3	-12	15.5	+18		0.0	-100	0.2	-100
Subtotal	471.8	+56	270.4	+74		2.7	-56	4.5	-40
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	2.0	+43	0.8	+150		0.0	n.c.	0.0	n.c.
Ruddy Duck	97.7	-10	118.6	-18		7.4	+9	4.8	+54
Merganser	9.6	-10	3.0	+220		0.0	n.c.	0.1	-100
Subtotal	109.3	-10	122.4	-11		7.4	+9	4.9	+51
TOTAL DUCKS	1,700.4	-16	1,835.7	-7		33.2	-10	31.5	+5
Coots:									
American Coot	565.9	-39	478.3	+18					
GRAND TOTAL	2,266.3	-23	2,314.0	-2					

Table B- 7. North Dakota--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974° average	% change from average		1975	% change from 1974	1967-1974 average	% change from average
May Ponds	682.5	-3	543.1	+26	July Ponds	467.7	+84	346.8	+35
					Duck Brood Index	41.3	+21	43.3	-5
					Avg. Brood Size	5.618	-3	5.779	-3
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	566.6	+25	582.3	-3		33.1	+280	14.6	+127
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	330.2	+70	313.8	+5		31.4	+86	11.8	+166
American Wigeon	303.4	+81	93.7	+224		1.1	-15	1.0	+10
Green-winged Teal	95.3	-5	63.8	+49		0.0	-100	1.1	-100
Blue-winged Teal	1,126.7	-8	976.3	+15		29.8	+164	8.6	+247
Northern Shoveler	225.2	+6	291.3	-23		0.8		0.2	+300
Pintail	455.7	-5	582.3	-22		3.1	+288	2.0	+55
Subtotal	3,103.1	+10	2,903.5	+7		99.3	+153	39.3	+153
Divers:									
Redhead	215.6	+51	144.3	+49		3.4	+467	1.2	+183
Canvasback	33.8	-20	40.2	-16		0.2		0.0	
Scaup	86.1	+122	31.1	+177		0.3	-67	0.5	-40
Ring-necked	8.0	+105	5.5	+45		0.0	n.c.	0.0	n.c.
American Goldeneye	0.0	n.c.	0.3	-100		0.0	n.c.	0.1	-100
Bufflehead	0.0	n.c.	0.5	-100		0.0	n.c.	0.0	n.c.
Subtotal	343.5	+51	221.9	+55		3.9	+160	1.8	+117
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Ruddy Duck	133.8	-66	128.6	+4		8.4	+75	5.5	+53
Merganser	0.0	-100	0.4	-100		0.0	n.c.	0.0	n.c.
Subtotal	133.8	-66	129.0	+4		8.4	+75	5.5	+53
TOTAL DUCKS	3,580.4	+4	3,254.4	+10		111.6	+145	46.6	
Coots:									
American Coot	1,039.4	+13	678.1	+53					
GRAND TOTAL	4,619.8	+6	3,932.5	+17					

°Average included for Stratum 43 in 1965 and 1966.

Table B-8. South Dakota--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974 average	% change from average		1975	% change from 1974	1965-1974 average	% change from average
May Ponds	361.8	+39	362.4	n.c.	July Ponds	225.5	+39	251.2	-10
					Duck Brood Index	21.1	+12	31.0	-32
					Avg. Brood Size	4.984	+5	5.298	-6
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	354.2	+29	414.4	-15		12.3	-10	14.8	-17
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	126.4	+60	171.5	-26		8.0	-29	8.6	-7
American Wigeon	48.9	+123	76.1	-36		1.5	-40	1.9	-21
Green-winged Teal	81.7	+105	39.2	+108		0.2	-80	0.6	-67
Blue-winged Teal	538.7	+32	725.2	-26		7.5	+14	6.6	+14
Northern Shoveler	92.9	+75	155.6	-40		0.0	-100	0.7	-100
Pintail	218.2	+122	272.8	-20		1.5	-57	2.3	-35
Subtotal	1,461.0	+50	1,854.8	-21		31.0	-20	35.5	-13
Divers:									
Redhead	32.9	+26	52.0	-37		0.5	+150	0.5	n.c.
Canvasback	4.8	+14	8.9	-46		0.0	n.c.	0.1	-100
Scaup	18.4	+10	29.1	-37		0.0	n.c.	0.2	-100
Ring-necked	0.0	n.c.	2.2	-100		0.0	n.c.	0.0	n.c.
American Goldeneye	0.0	n.c.	0.1	-100		0.0	n.c.	0.0	n.c.
Bufflehead	0.0	-100	0.3	-100		0.0	n.c.	0.0	n.c.
Subtotal	56.1	+18	92.6	-39		0.5	+150	0.8	-38
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.1	-100
Ruddy Duck	229.0	+305	39.4	+481		2.7	+69	2.3	+17
Merganser	0.0	n.c.	0.1	-100		0.0	n.c.	0.0	n.c.
Subtotal	229.0	+305	39.5	+480		2.7	+69	2.4	+12
TOTAL DUCKS	1,746.1	+62	1,986.9	-12		34.2	-15	38.7	-12
Coots:									
American Coot	152.9	+125	258.6	-41					
GRAND TOTAL	1,899.0	+66	2,245.5	-15					

Table B-9. Montana--1975 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1975	% change from 1974	1965-1974 average	% change from average		1975	% change from 1974	1966-1974° average	% change from average
May Ponds	322.0	+2	232.0	+39	July Ponds	229.6	+52	165.7	+39
					Duck Brood Index	40.7	+33	51.6	-21
					Avg. Brood Size	5.720	+11	5.116	+12
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	478.4	+141	417.5	+15		10.6	-11	7.8	+36
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	72.9	+5	100.7	-28		0.4	-71	1.4	-71
American Wigeon	110.6	+44	179.2	-38		2.4	-63	4.3	-44
Green-winged Teal	151.6	+143	69.9	+117		0.7		0.4	+75
Blue-winged Teal	188.4	n.c.	155.9	+21		1.4	-22	1.4	n.c.
Northern Shoveler	100.3	+54	77.5	+29		0.1	-75	0.8	-88
Pintail	259.2	+122	271.6	-5		1.3	-50	2.1	-38
Subtotal	1,361.4	+75	1,272.3	+7		16.9	-31	18.2	-7
Divers:									
Redhead	2.5	-29	10.4	-76		0.4		0.0	
Canvasback	2.5	+56	5.0	-50		0.0	n.c.	0.4	-100
Scaup	81.4	+5	43.9	+85		0.5	-78	1.1	-55
Ring-necked	0.0	-100	2.0	-100		0.0	n.c.	0.1	-100
American Goldeneye	0.0	n.c.	1.5	-100		0.0	n.c.	0.1	-100
Bufflehead	0.4	-75	1.0	-60		0.0	n.c.	0.0	n.c.
Subtotal	86.8	n.c.	63.8	+36		0.9	-61	1.7	-47
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Ruddy Duck	9.3	+43	14.5	-36		0.1	-94	0.4	-75
Merganser	0.9	-59	0.9	n.c.		0.0	n.c.	0.1	-100
Subtotal	10.2	+17	15.4	-34		0.1	-94	0.5	-80
TOTAL DUCKS	1,458.4	+67	1,351.5	+8		17.9	-37	20.4	-12
Coots:									
American Coot	31.7	-38	58.7	-46					
GRAND TOTAL	1,490.1	+61	1,410.2	+6					

°1971 not included in average.

Table B-10. Western Washington -- Duck and Coot Breeding Population Indexes by Species and Stratum.

Species	Western Washington	Stratum: Potholes	Stratum: Irrigation	Stratum: Highlands[a]	Total: 1975	Total: 1974	1964-73 average	Percent change: From average	Percent change: From 1974
Dabblers									
Mallard	8,750	20,900	11,200	7,620	48,470	38,450	56,590	-16	+26
Gadwall	20	6,180	430	130	6,760	3,210	5,130	+52	+111
Wigeon		12,670	700	840	14,210	7,660	11,930	+19	+86
Green-winged teal	480	7,390	470	680	9,020	2,960	4,700	+92	+205
Blue-winged and Cinnamon teal	2,610	27,040	7,500	2,050	39,200	28,110	28,120	+39	+39
Shoveler	170	6,710	360	40	7,280	6,390	5,180	+41	+14
Pintail		9,030	70	520	9,620	7,180	5,990	+61	+34
Wood duck	4,390	330	900	90	5,710	7,810	7,010	-19	-27
Subtotal	16,420	90,250	21,630	11,970	140,270	101,770	120,040	+17	+38
Divers									
Redhead		14,210	2,020	1,740	17,970	12,450	10,350	+74	+44
Canvasback		380			380	220	220	+73	+73
Scaup		7,960	70	130	8,160	6,340	8,370	- 3	+29
Ring-necked duck		4,710		2,000	6,710	2,410	2,360	+184	+17
Goldeneye		560		2,170	2,730	1,550	2,450	+11	+76
Bufflehead		590		40	630	50	910	-26	+1160
Ruddy duck		15,950	940	2,040	18,930	13,030	8,470	+123	+45
Subtotal		44,360	3,030	8,120	55,510	36,300	33,380	+66	+53
Mergansers									
American merganser		40	200		240	260	260	- 8	- 8
Hooded merganser	280			90	370	180	1,870	-80	+106
Subtotal	280	40	200	90	610	440	2,130	-71	+39
Unidentified		590	250		840	30	100	+740	+2700
Total ducks	16,700	135,240	25,110	20,180	197,230	138,440	159,650	+24	+42
Coot	2,960	37,440	1,340	9,010	50,750	22,990	25,750	+97	+121
Total waterfowl	19,660	172,680	26,450	29,190	247,980	161,430	185,400	+34	+54

[a]The indexes for palouse-type streams are included with those of the northeastern highlands.

Table B-11. Western Washington -- Waterfowl Production Indexes.

Species	1975	1974	1970-74 average	Percent change From average	Percent change From 1974
Dabblers					
Mallard	48,340	25,730	50,030	- 3	+88
Gadwall	20				
Wigeon		410	250		
Green-winged teal	620	1,010	1,320	-53	-39
Blue-winged and Cinnamon teal	4,760	7,090	8,740	-46	-33
Shoveler	420	1,220	830	-49	-66
Pintail		440	600		
Wood duck	15,800	17,250	19,980	-21	- 8
Mergansers					
Hooded Merganser	770				
Coots	2,960	5,030	4,580	-35	-41

Table B-12. Summary of Colorado's Duck Breeding Ground Population Estimates In Selected Areas, 1975.

Area	Total estimated breeding pairs			Percent change	
	1975	1974	Long term average[a]	From 1974	From long-term average
San Luis Valley	26,801	29,694	27,323	- 9.7	- 1.9
North Park[b]	27,134	16,657	15,739	+62.9	+72.4
South Platte Valley	14,152	8,457	6,264	+67.3	+125.9
Cache la Poudre Valley	6,732	5,173	3,361	+30.1	+100.3
Yampa Valley	2,354	2,834	2,803	-16.9	-16.0
Brown's Park	1,172[c]	1,128	1,172	--	--
Totals	78,345	64,484	56,662	+21.5	+38.3

[a]San Luis Valley and North Park averages are based on results of 1964 through 1974 and 1968 through 1974 surveys, respectively, because of changes in survey methods utilized before to those dates. Figures for other areas are 21-year averages.
[b]Aerial counts corrected by species from visibility ratios obtained in the San Luis Valley.
[c]No count made in 1975. Figure presented is average of 1971-74 period.

Table B-13. Species Composition of Colorado's 1975 Duck Breeding Pair Population.

Species	Number of breeding pairs			Percent species composition		
	1975	1974	1975-74 average	1975	1974	1954-74 average
Mallard	19,090	28,427	27,690	24.4	44.1	54.7
Blue-winged and Cinnamon teal	15,078	11,441	5,238	19.2	17.7	10.4
Gadwall	3,984	8,464	5,396	5.1	13.1	10.7
Pintail	5,213	4,344	3,560	6.7	6.7	7.0
Green-winged teal	8.859	565	2,147	11.3	.9	4.2
Shoveler	8,005	3,918	2,378	10.2	6.1	4.7
American wigeon	4,868	1,087	884	6.2	1.7	1.7
Redhead	8,048	716	1,978	10.3	1.1	3.9
Other divers	5,200	1,076	1,346	6.6	8.6	2.7
Totals	78,345	64,484	50,536			

Table B-14. Number of Canada Geese Observed and Estimated Production, Moffat County, Colorado, 1975.

Area	Nesting pairs	Non-nesting birds	Total adults	Estimated no. of goslings	Total birds
Yampa					
Craig-Juniper Springs	16	89	121	53	174
Juniper-Cross Mountains	16	54	86	86	172
Lily Park	10	27	47	8	55
Subtotal	42	170	254	147	401
Green River[b]					
Brown's Park	53	166	272	176	448
Dinosaur National Monument	26	248	300	106	406
Subtotal	79	414	572	282	854
Little Snake River	19	188	226	68	294
Totals	140	772	1,052	497	1,549

[a]Calculated using average brood size observed and number of successful nests.
[b]Data supplied by F. Neil Folks, Utah State Division of Wildlife Resources.

Table B-15. Total Canada Geese Observed, Moffat County, Colorado, 1975.

Area	Number of geese counted			Percent change	
	1975	1974	1956-1974 average	From 1974	From 1956-74 average
Yampa River[a]	401	--	424	--	- 5.4
Green River					
Brown's Park	448	326	156	+37.4	+187.1
Dinosaur National Monument[a,b]	406	--	334	--	+ 21.6
Little Snake River[a,c]	294	--	247	--	+ 19.0
Totals	1,549	--	1,161	--	+ 33.4

[a]Surveys not conducted in these areas during 1974.
[b]Not included in survey until 1970.
[c]Not included in survey until 1962.

Table B-16. Estimated Number of Canada Goose Goslings, Moffat County, Colorado, 1975.

Area	Number of goslings			Percent change	
	1975	1974	1956-1974 average	From 1974	From 1956-74 average
Yampa River[a]	147	--	136	--	+ 8.1
Green River					
Brown's Park	176	119	62	+47.9	+ 183.9
Dinosaur National Monument[a,b]	106	--	120	--	- 11.7
Little Snake River[a,c]	68	--	79	--	- 13.9
Totals	497	--	397	--	+ 25.2

[a]Surveys not conducted in these areas during 1974.
[b]Not included in survey until 1970.
cNot included in survey until 1962.

Table B-17. Number of Canada Goose Goslings Produced in North-Central Colorado Production Trend Areas, 1975.

Area	Number of goslings			Percent change	
	1975	1974	1969-1974 average	From 1974	From 1969-1974
Wellington	207	187	268	+ 9.7	-22.8
Fort Collins	234	229	274	+ 2.1	-14.6
Loveland	103	90	85	+14.4	+21.2
Boulder	217	206	237	+ 4.4	- 8.4
Denver	288	185	280	+55.7	+ 2.9
Totals	1,049	897	1,379	+16.9	-23.9

Table B-18. Number of Canada Geese Observed in North-Central Colorado Production Trend Areas, 1975.

Area	Number of geese			Percent change	
	1975	1974	1969-1974 average	From 1974	From 1969-1974
Wellington	570	635	812	-10.2	-29.8
Fort Collins	667	477	717	+39.8	- 6.9
Loveland	318	239	204	+33.0	+55.9
Boulder	466	365	676	+27.7	-31.1
Denver	1,328	1,004	1,299	+32.2	- 2.2
Totals	3,349	2,720	3,711	+23.1	-30.4

Table B-19. Breeding Duck Population Estimates in Wisconsin. Data Represent Expanded Aerial Counts, Adjusted for Ducks Missed by Aerial Crew.

Species	Numbers of breeding ducks											
Mallard	45,600	48,100	77,900	12,600	26,000	20,000	36,800	23,500	12,800	94,900	97,500 (+3%)	110,700 (+14%)
Blue-winged teal	101,600	143,200	213,100	19,300	9,700	18,100	65,600	12,000	7,200	186,500	164,800 (-12%)	238,400 (+45%)
Other[a]	68,800	46,400	41,000	0	8,700	20,000	18,700	3,000	4,100	87,500	58,000 (-34%)	65,100 (+12%)
Total	216,000	237,700	332,000	31,900	44,400	58,100	121,100	38,500	24,100	368,900	320,300	414,200
Percent Change 1973 to 1974			+10			+39			-68			-13
Percent Change 1974 to 1975			+40			+31			-37			+29

[a]Included are wood duck, black duck, shoveler, pintail, green-winged teal, gadwall, wigeon, ringed-necked duck, redhead, ruddy duck and hooded, red-breasted, and common mergansers.

Table B-20. May Aerial Breeding Pair Survey of Iowa.

Year	Potholes and small water area index	Mallard pairs	Blue-winged teal pairs
1966	95	5,960	41,250
1967	97	7,080	25,200
1968	26	10,440	55,200
1969	116	8,080	37,800
1970	84	8,320	26,400
1971	87	6,980	32,839
1972	135	4,357	17,734
1973	135	5,807	22,877
1974	134	3,250	21,504
1975	159	7,150	25,159
Percent change from 1974 to 1975	+ 19	+ 120	+ 17
Percent change from 9-year average	+ 67	+ 4	- 19

Table B-21. Nebraska 1975 Breeding Ground Survey Results.

Species	1975 sandhills total	Percent change	Percent composition	1975 rainwater total	Percent change	Precent composition	Total[a]
Mallard	14,761	- 24.4	23.6	7,480	+ 49.6	52.0	22,241
Blue-winged teal	9,505	- 46.2	15.2	2,662	- 57.8	18.5	12,167
Pintail	3,791	- 7.3	6.0	86	- 94.5	0.6	3,877
Gadwall	11,718	+ 19.2	18.7	3,165	+545.9	22.0	14,883
Shoveler	9,194	- 29.4	14.7	906	- 38.4	6.3	10,100
Wood duck	289	--	0.5	--	--	--	289
Redhead	1,328	+117.3	2.1	86	- 64.2	0.6	1,414
Canvasback	519	+112.7	0.8	--	--	--	519
Scaup	1,328	+196.4	2.1	--	--	--	1,328
Ruddy duck	10,215	+439.6	16.3	--	--	--	10,215
Totals	62,648	- 7.1	100.0	14,385	- 8.0	100.0	77,033

[a]Based on data from aerial surveys.

APPENDIX C. WATERFOWL HARVEST SURVEY TABLES.

Table C-1. Factors Used to Adjust Survey Statistics to Include the Activities of Junior Hunters.

Estimate	Junior hunter adjustment factors			
	Atlantic Flyway	Mississippi Flyway	Central Flyway	Pacific Flyway and Alaska
Ducks bagged (including sea ducks)	1.03621	1.04655	1.06055	1.04985
Geese bagged	1.02402	1.03369	1.04110	1.04508
Coots bagged	1.08302	1.09034	1.10147	1.09415
Days hunted	1.05174	1.07003	1.08559	1.08708
Ducks lost	1.03641	1.05699	1.07053	1.06152
Geese lost	1.01573	1.03738	1.07067	1.07411
Coots lost	1.08247	1.10282	1.10400	1.10685

Table C-2. Factors Used to Adjust Survey Statistics for Memory and Prestige Bias.

Estimate	Memory and prestige response bias factors			
	Atlantic Flyway	Mississippi Flyway	Central Flyway	Pacific Flyway and Alaska
Ducks bagged (including sea ducks)	0.86925	0.77656	0.73902	0.78952
Geese bagged	0.80428	0.84800	0.86838	0.85159
Coots bagged	0.60692	0.63668	0.78878	0.59248

Table C-3. Total Retrieved (by species) and Unretrieved Duck and Coot Kill in the United States During the 1973 and 1974 Hunting Seasons (retrieved kill estimates adjusted for response bias; all estimates include kill by junior hunters).

	Season	Atlantic Flyway	Mississippi Flyway	Central Flyway	Pacific Flyway	Alaska	United States total
Retrieved duck kill							
Mallard	1973	341,754	1,655,519	982,914	1,153,002	25,091	4,158,280
	1974	393,593	2,177,371	794,196	1,133,249	16,953	4,515,362
	% change	+ 15	+ 32	- 19	- 2	- 32	+ 9
Domestic mallard	1973	7,487	8,907	228	1,508	0	18,130
	1974	9,636	8,449	0	3,823	0	21,908
	% change	+ 29	- 5	--	+154	0	+ 21
Black duck	1973	252,856	117,524	774	0	0	371,154
	1974	288,492	97,234	950	0	0	386,676
	% change	+ 14	- 17	+ 23	0	0	+ 4
Black X mallard	1973	5,481	6,551	147	0	0	12,179
	1974	12,083	5,402	270	0	0	17,755
	% change	+120	- 18	+ 84	0	0	+ 46
Mottled duck	1973	17,094	36,217	42,819	0	0	96,130
	1974	14,382	43,247	65,988	0	0	123,617
	% change	- 16	+ 19	+ 54	0	0	+ 29
Gadwall	1973	21,573	212,665	195,109	88,517	463	518,327
	1974	27,453	257,675	250,768	127,073	455	663,424
	% change	+ 27	+ 21	+ 29	+ 44	- 2	+ 28
American wigeon	1973	41,927	199,093	144,541	319,437	15,209	720,207
	1974	67,808	195,761	154,408	334,537	11,321	763,835
	% change	+ 62	- 7	+ 7	+ 5	- 26	+ 6
Green-winged teal	1973	108,606	346,255	319,802	418,317	12,198	1,205,178
	1974	137,996	332,485	268,349	483,926	9,444	1,232,200
	% change	+ 27	- 4	- 16	+ 16	- 23	+ 2

Table C-3. (continued)

	Season	Atlantic Flyway	Mississippi Flyway	Central Flyway	Pacific Flyway	Alaska	United States total
Blue-winged and cinnamon teal	1973	84,802	503,623	229,287	120,205	386	938,303
	1974	54,169	414,879	196,178	99,945	114	765,285
	% change	- 36	- 18	- 14	- 17	- 70	- 18
Northern shoveler	1973	10,239	66,382	66,499	156,144	4,401	303,665
	1974	16,078	84,143	106,953	237,983	2,105	447,262
	% change	+ 57	+ 27	+ 61	+ 52	- 52	+ 47
Pintail	1973	28,248	143,613	150,907	720,692	27,639	1,071,099
	1974	36,480	109,286	166,124	945,036	10,013	1,266,939
	% change	+ 29	- 24	+ 10	+ 31	- 64	+ 18
Wood duck	1973	271,820	461,515	41,616	40,164	0	815,115
	1974	279,474	624,634	34,204	32,261	0	970,573
	% change	+ 3	+ 35	- 18	- 20	0	+ 19
Redhead	1973	1,636	18,593	25,221	28,253	0	73,703
	1974	793	28,874	37,436	27,548	0	94,651
	% change	- 52	+ 55	+ 48	- 2	0	+ 28
Canvasback	1973	214	14,252	8,208	22,089	154	44,917
	1974	533	15,765	20,810	35,817	569	73,494
	% change	+149	+ 11	+154	+ 62	+269	+ 64
Greater scaup	1973	46,729	34,320	1,195	19,296	2,239	103,779
	1974	29,148	25,965	1,707	10,712	1,707	69,239
	% change	- 38	- 24	+ 43	- 44	- 24	- 33
Lesser scaup	1973	38,161	426,799	144,368	34,682	1,776	645,786
	1974	34,874	336,605	63,637	23,765	2,048	460,929
	% change	- 9	- 21	- 56	- 31	+ 15	- 29
Ring-necked duck	1973	85,509	192,539	45,033	19,733	695	343,509
	1974	123,738	246,499	49,527	23,194	626	443,584
	% change	+ 45	+ 28	+ 10	+ 18	- 10	+ 29

Table C-3. (continued)

	Season	Atlantic Flyway	Mississippi Flyway	Central Flyway	Pacific Flyway	Alaska	United States total
Goldeneye	1973	21,095	27,724	5,250	20,087	1,621	75,777
	1974	14,005	32,953	5,236	20,634	2,617	75,445
	% change	- 34	+ 19	TR	+ 3	+ 61	TR
Bufflehead	1973	39,403	44,678	10,557	20,003	1,698	116,339
	1974	44,637	57,237	7,883	17,744	2,446	129,947
	% change	+ 13	+ 28	- 25	- 11	+ 44	+ 12
Ruddy duck	1973	12,667	23,105	9,108	24,039	0	68,919
	1974	9,768	15,379	5,636	33,726	0	64,509
	% change	- 23	- 33	- 38	+ 40	0	- 6
Oldsquaw	1973	11,031	6,166	0	0	0	17,197
	1974	13,608	446	205	0	57	14,316
	% change	+ 23	- 93	++	0	++	- 17
Eiders	1973	16,296	103	0	0	0	16,399
	1974	22,299	223	0	0	0	22,522
	% change	+ 37	+117	0	0	0	+ 37
Scoters	1973	55,151	3,934	302	1,502	77	61,966
	1974	69,421	12,910	143	1,201	228	83,903
	% change	+ 26	+228	- 53	- 20	+196	+ 35
Hooded merganser	1973	15,965	27,092	2,397	1,613	0	47,067
	1974	16,804	30,389	4,578	1,911	0	53,682
	% change	+ 5	+ 12	+ 19	+ 18	0	+ 14
Other merganser	1973	11,360	16,417	5,535	5,594	386	39,292
	1974	13,541	10,561	1,221	3,124	114	28,561
	% change	+ 19	- 36	- 78	- 44	- 70	- 27
Other ducks	1973	2,177	655	3,677	833	386	7,728
	1974	2,323	1,444	1,773	1,171	398	7,109
	% change	+ 7	+120	- 52	+ 41	+ 3	- 8
Total	1973	1,549,283	4,594,248	2,435,497	3,215,714	94,419	11,889,161
	1974	1,733,139	5,165,824	2,238,182	3,598,385	61,214	12,796,744
	% change	+ 12	+ 12	- 8	+ 12	- 35	+ 8

Table C-3. (continued)

	Season	Atlantic Flyway	Mississippi Flyway	Central Flyway	Pacific Flyway	Alaska	United States total
Unretrieved duck kill	1973	391,585	1,062,692	512,231	620,659	16,209	2,603,376
	1974	405,488	1,190,047	512,347	636,886	8,750	2,753,518
	% change	+ 4	+ 12	TR	+ 3	- 46	+ 6
Total duck kill	1973	1,940,868	5,656,940	2,947,728	3,836,373	110,628	14,492,537
	1974	2,138,627	6,355,871	2,750,529	4,235,271	69,964	15,550,262
	% change	+ 10	+ 12	- 7	+ 10	- 37	+ 7
Retrieved coot kill	1973	93,078	351,457	84,579	147,369	683	677,166
	1974	106,951	488,083	98,121	223,746	285	916,286
	% change	+ 14	+ 39	+ 16	+ 52	- 58	+ 35
Unretrieved coot kill	1973	26,605	93,067	29,849	48,401	108	198,030
	1974	29,686	120,941	35,454	80,332	83	266,496
	% change	+ 12	+ 30	+ 19	+ 66	- 23	+ 35
Total coot kill	1973	119,683	444,524	114,428	195,770	791	875,196
	1974	135,737	609,024	133,575	304,078	368	1,182,782
	% change	+ 13	+ 37	+ 17	+ 55	- 53	+ 35

Table C-4. Total Retrieved (by species) and Unretrieved Goose Kill in the United States During the 1973 and 1974 Hunting Seasons (retrieved kill estimates adjusted for response bias; all estimates include kill by junior hunters).

	Season	Atlantic Flyway	Mississippi Flyway	Central Flyway	Pacific Flyway	Alaska	United States total
Retrieved goose kill							
Canada goose	1973	348,644	225,288	177,405	182,838	10,514	944,689
	1974	338,516	283,271	136,565	187,650	8,069	954,071
	% change	- 3	+ 26	- 23	+ 3	- 23	+ 1
Snow goose	1973	0	56,879	165,479	115,100	412	337,870
	1974	0	64,025	171,483	52,606	236	288,350
	% change	0	+ 13	+ 4	- 54	- 43	- 15
Blue goose	1973	0	98,197	79,624	0	0	177,821
	1974	0	105,945	75,277	0	0	181,222
	% change	0	+ 8	- 5	0	0	+ 2
White-fronted goose	1973	0	38,105	51,095	47,161	1,031	137,392
	1974	0	10,263	35,578	41,287	353	87,481
	% change	0	- 73	- 30	- 12	- 66	- 36
Brant	1973	288	0	0	3,317	0	3,605
	1974	237	0	0	3,951	1,001	5,189
	% change	- 18	0	0	+ 19	++	+ 44
Others and unknown	1973	0	0	0	4,405	412	4,817
	1974	0	0	187	8,414	766	9,367
	% change	0	0	++	+ 91	+ 86	+ 94
Total	1973	348,932	418,469	473,603	352,823	12,369	1,606,196
	1974	338,753	463,504	419,090	293,903	10,425	1,525,681
	% change	- 3	+ 11	- 12	- 17	- 16	- 5
Unretrieved kill	1973	41,280	62,723	76,454	55,705	1,990	238,152
	1974	38,396	68,849	63,914	45,507	1,426	218,092
	% change	- 7	+ 10	- 16	- 18	- 28	- 8
Total goose kill	1973	390,212	481,192	550,057	408,528	14,359	1,844,348
	1974	377,149	532,353	483,004	339,416	11,851	1,743,773
	% change	- 3	+ 11	- 12	- 17	- 17	- 5

TABLE C-5. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS.

	CONNECTICUT		DELAWARE		FLORIDA		GEORGIA	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	27.78%	28.72%	36.29%	31.31%	0.67%	1.15%	23.52%	13.86%
DOMESTIC MALLARD	1.08	0.34	0.55	0.51	0.00	0.05	0.00	0.00
BLACK DUCK	22.01	30.23	25.21	25.51	0.78	0.55	3.63	5.20
BLACK X MALLARD	0.36	0.84	0.83	1.52	0.00	0.00	0.19	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	8.78	7.19	0.00	0.00
GADWALL	0.00	0.67	1.94	3.54	0.45	0.35	0.77	0.99
AMERICAN WIGEON	1.80	1.51	2.49	4.04	2.57	3.94	1.91	0.50
GREEN-WINGED TEAL	11.91	8.06	17.17	23.49	6.72	5.79	3.82	9.16
BLUE-WINGED/CINNAMON TEAL	0.00	0.17	0.00	0.00	19.62	14.27	0.00	0.25
NORTHERN SHOVELER	0.00	0.17	0.83	3.03	0.84	1.20	0.38	0.50
PINTAIL	0.00	0.50	1.94	3.28	1.74	1.30	0.38	0.50
WOOD DUCK	10.46	7.05	5.26	2.02	12.65	8.98	61.19	63.61
REDHEAD	0.00	0.00	0.00	0.00	0.17	0.10	0.38	0.00
CANVASBACK	0.00	0.00	0.00	0.00	0.06	0.05	0.00	0.00
GREATER SCAUP	11.91	6.38	0.83	0.00	0.62	0.05	0.00	0.00
LESSER SCALP	1.44	0.67	1.66	0.76	9.61	7.09	0.19	1.24
RING-NECKED DUCK	1.44	0.17	0.28	0.51	30.11	43.71	1.15	2.72
GOLDENEYES	0.72	1.18	0.28	0.25	0.28	0.00	0.00	0.00
BUFFLEHEAD	2.89	2.35	1.94	0.25	0.62	0.20	0.00	0.00
RUDDY DUCK	0.00	0.00	0.83	0.00	1.01	0.75	0.00	0.00
OLDSQUAW	1.08	0.47	0.00	0.00	0.00	0.00	0.00	0.00
EIDERS	0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	4.29	8.67	1.11	0.00	0.00	0.00	0.00	0.00
HOODED MERGANSERS	0.00	0.50	0.55	0.00	1.74	1.85	2.49	1.49
OTHER MERGANSERS	0.72	1.34	0.00	0.00	0.78	0.50	0.00	0.00
OTHER DUCKS	0.00	0.00	0.00	0.00	1.01	0.95	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	39,418	38,325	46,907	44,713	206,404	200,147	54,712	66,196
PERCENT CHANGE		-3%		-5%		-3%		+21%
SEASONAL DUCK HARVEST PER ADULT HUNTER	2.88	2.65	3.55	3.25	7.13	7.48	4.36	4.91
PERCENT CHANGE		-8%		-8%		+5%		+13%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
SNOW GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	2,801	4,625 +65%	55,921	40,319 -28%	1,421	1,143 -20%	1,067	1,630 +53%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.21	0.32 +56%	4.28	2.97 -31%	0.05	0.04 -14%	0.09	0.12 +42%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	338	656 +94%	894	1,180 +32%	36,267	42,245 +16%	1,515	3,467 +129%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.02	0.04 +79%	0.07	0.08 +26%	1.20	1.51 +26%	0.12	0.25 +114%
TOTAL HUNTER DAYS PERCENT CHANGE	73,477	77,815 +6%	107,216	113,666 +6%	175,251	155,633 -11%	60,702	72,609 +20%
DAYS PER ADULT HUNTER PERCENT CHANGE	5.28	5.28 0%	7.99	8.15 +2%	5.96	5.73 -4%	4.76	5.31 +11%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	13,673	14,543 +6%	13,066	13,778 +5%	28,615	26,385 -8%	12,177	13,207 +8%
PERCENT SOLD TO NON-HUNTERS	3.24%	6.13%	2.30%	3.75%	2.31%	2.08%	0.51%	1.54%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	13,230	14,027 +6%	12,765	13,261 +4%	27,954	25,836 -8%	12,115	13,004 +7%
PERCENT ACTIVE ADULT HUNTERS PERCENT SUCCESSFUL ADULT HUNTERS	83.0% 56.3%	78.9% 49.6%	89.8% 77.2%	87.3% 70.5%	83.8% 67.8%	82.4% 65.9%	82.8% 66.0%	84.2% 62.1%
SAMPLE SIZES								
DUCK WINGS	322	599	361	396	1,787	2,004	523	404
GOOSE TAILS	18	24	523	444	2	0	0	0
QUESTIONNAIRES	650	672	452	339	922	1,079	463	529

TABLE C-5. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	MAINE		MARYLAND[a]		MASSACHUSETTS		NEW HAMPSHIRE	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	5.18%	7.39%	30.45%	39.86%	17.76%	15.23%	20.07%	10.67%
DOMESTIC MALLARD	0.13	0.18	0.58	2.27	0.18	0.38	1.08	0.26
BLACK DUCK	34.60	36.88	22.87	22.68	30.68	32.63	37.34	38.27
BLACK X MALLARD	0.45	0.72	0.29	0.97	0.27	1.53	0.65	1.30
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	0.00	0.09	1.31	1.78	0.27	0.27	0.00	0.00
AMERICAN WIGEON	0.13	0.36	2.33	4.05	0.81	0.38	0.22	0.52
GREEN-WINGED TEAL	9.98	12.99	5.39	5.02	5.11	6.82	6.48	5.21
BLUE-WINGED/CINNAMON TEAL	7.52	3.07	0.29	0.65	0.18	0.82	1.51	2.86
NORTHERN SHOVELER	0.07	0.00	1.75	0.32	0.09	0.00	0.00	0.00
PINTAIL	0.39	0.45	3.64	2.43	0.09	0.22	0.43	1.82
WOOD DUCK	8.81	9.11	2.33	3.24	9.42	8.73	22.02	22.39
REDHEAD	0.00	0.00	0.00	0.00	0.00	0.05	0.00	0.00
CANVASBACK	0.00	0.00	0.00	0.32	0.00	0.00	0.00	0.00
GREATER SCAUP	0.19	0.00	4.81	0.49	1.44	0.98	0.86	0.78
LESSER SCAUP	0.13	0.09	2.48	0.97	0.36	0.22	0.43	0.52
RING-NECKED DUCK	1.10	2.44	0.29	0.65	0.09	0.27	0.86	2.34
GOLDENEYES	2.46	1.44	3.06	0.49	1.97	1.47	0.00	0.78
BUFFLEHEAD	2.66	3.43	3.50	3.89	3.77	2.89	1.51	3.65
RUDDY DUCK	0.00	0.00	1.02	0.32	0.00	0.05	0.00	0.00
OLDSQUAW	1.93	1.50	1.69	3.63	0.48	0.29	0.39	1.04
EIDERS	6.53	10.33	0.00	0.00	10.66	8.38	0.00	1.04
SCOTERS	16.76	6.82	9.88	4.18	13.76	16.46	5.07	3.15
HOODED MERGANSERS	0.71	0.18	1.46	0.97	0.81	0.22	1.08	2.08
OTHER MERGANSERS	0.26	0.45	0.58	0.65	1.79	1.69	0.00	1.30
OTHER DUCKS	0.00	0.09	0.00	0.16	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	85,563	105,656	104,355	106,180	98,213	130,943	26,770	38,122
PERCENT CHANGE		+24%		+2%		+33%		+42%
SEASONAL DUCK HARVEST PER ADULT HUNTER	4.96	5.76	2.58	2.65	3.87	5.06	2.71	3.43
PERCENT CHANGE		+16%		-11%		+31%		+27%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
SNOW GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	768	2,214	167,556	165,238	4,662	5,125	1,137	1,557
PERCENT CHANGE		+188%		-1%		+10%		+37%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.04	0.12	4.84	4.17	0.18	0.20	0.12	0.14
PERCENT CHANGE		+165%		-14%		+8%		+22%
COOT HARVEST (RETRIEVED KILL)	3,146	2,670	786	701	3,519	1,613	250	573
PERCENT CHANGE		-15%		-11%		-54%		+129%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.17	0.14	0.02	0.02	0.13	0.06	0.02	0.05
PERCENT CHANGE		-20%		-19%		-55%		+104%
TOTAL HUNTER DAYS	96,035	113,531	273,633	315,168	183,714	230,333	65,006	81,543
PERCENT CHANGE		+18%		+15%		+25%		+25%
DAYS PER ADULT HUNTER	5.44	6.64	7.69	7.75	7.06	8.69	6.47	7.22
PERCENT CHANGE		+11%		+1%		+23%		+11%
TOTAL DUCK STAMPS SOLD	16,923	18,200	33,756	38,001	25,407	26,001	9,608	10,878
PERCENT CHANGE		+8%		+13%		+2%		+13%
PERCENT SOLD TO NON-HUNTERS	0.77%	1.73%	3.16%	2.49%	2.62%	3.02%	0.60%	1.23%
TOTAL ADULT HUNTERS (POTENTIAL)	16,793	17,885	33,824	38,679	24,741	25,216	9,550	10,744
PERCENT CHANGE		+7%		+14%		+2%		+13%
PERCENT ACTIVE ADULT HUNTERS	85.5%	85.7%	87.5%	86.9%	85.7%	89.2%	87.5%	86.2%
PERCENT SUCCESSFUL ADULT HUNTERS	67.6%	67.4%	73.3%	69.6%	59.0%	66.3%	55.4%	60.2%
SAMPLE SIZES								
DUCK WINGS	1,324	1,004	703	597	942	1,459	452	369
GOOSE TAILS	13	20	1,366	1,554	57	70	27	11
QUESTIONNAIRES	729	578	1,496	1,334	1,148	845	435	533

TABLE C-5. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	NEW JERSEY		NEW YORK		NORTH CAROLINA[a]		PENNSYLVANIA	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	17.21%	25.52%	35.25%	37.28%	13.19%	9.39%	48.22%	50.83%
DOMESTIC MALLARD	0.36	0.45	0.41	0.46	0.00	1.09	2.47	0.69
BLACK DUCK	32.61	25.03	11.68	16.55	7.50	6.03	12.35	10.84
BLACK X MALLARD	0.36	0.61	0.41	1.20	0.00	0.30	0.69	0.83
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	1.46	2.67	1.29	0.86	1.80	2.87	0.30	0.62
AMERICAN WIGEON	1.33	2.67	1.77	3.61	6.00	12.25	1.68	1.31
GREEN-WINGED TEAL	5.54	10.65	6.18	5.44	10.05	8.10	4.05	6.08
BLUE-WINGED/CINNAMON TEAL	1.46	2.07	8.76	2.35	3.00	2.87	1.48	1.80
NORTHERN SHOVELER	0.49	1.46	0.34	0.34	1.55	1.88	0.10	0.21
PINTAIL	0.97	3.40	1.56	1.95	4.20	6.62	0.49	0.90
WOOD DUCK	8.36	8.63	18.95	10.42	27.74	26.09	22.23	16.78
REDHEAD	0.24	0.00	0.07	0.06	0.45	0.10	0.00	0.00
CANVASBACK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GREATER SCAUP	12.36	6.44	2.59	3.15	0.60	0.49	0.10	0.97
LESSER SCAUP	4.00	1.94	0.82	1.32	1.05	2.47	1.05	0.97
RING-NECKED DUCK	0.85	0.24	0.61	0.86	11.24	7.71	0.75	0.90
GOLDENEYES	0.49	0.45	1.83	1.37	0.60	0.00	0.10	0.83
BUFFLEHEAD	6.18	4.66	2.11	2.58	5.25	2.87	0.40	1.87
RUDDY DUCK	2.06	0.12	0.07	0.12	0.60	2.27	1.68	0.83
OLDSQUAW	2.06	0.73	0.18	1.84	0.60	0.00	0.20	0.21
EIDERS	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.12	0.73	3.65	6.20	0.15	4.25	0.10	1.87
HOODED MERGANSERS	0.73	0.61	0.27	0.63	1.50	1.09	1.09	0.41
OTHER MERGANSERS	0.36	0.61	0.75	0.97	2.55	1.29	0.40	0.28
OTHER DUCKS	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	145,080	150,576	303,451	275,515	52,656	134,010	101,765	153,105
PERCENT CHANGE		+4%		-9%		+45%		+50%
SEASONAL DUCK HARVEST PER ADULT HUNTER	4.12	4.23	2.90	2.88	3.71	4.59	1.56	2.17
PERCENT CHANGE		+3%		0%		+24%		+39%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	100.00%	100.00%	99.31%	100.00%	100.00%	100.00%	100.00%
SNOW GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.69	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	20,031	22,866 +14%	42,967	34,336 -20%	8,674	9,003 +4%	21,463	20,161 -6%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.58	0.65 +13%	0.42	0.36 -13%	0.35	0.31 -11%	0.33	0.29 -13%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	4,068	4,048 0%	3,859	6,650 +72%	10,758	12,068 +12%	2,597	7,175 +176%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.11	0.11 -2%	0.03	0.07 +89%	0.41	0.40 -4%	0.04	0.10 +155%
TOTAL HUNTER DAYS PERCENT CHANGE	212,598	239,805 +13%	626,285	546,487 -13%	153,629	199,682 +30%	299,228	316,367 +6%
DAYS PER ADULT HUNTER PERCENT CHANGE	5.94	6.61 +11%	5.88	5.62 -5%	6.06	6.73 +11%	4.52	4.42 -2%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	35,225	36,050 +2%	104,871	95,716 -9%	24,392	28,982 +19%	63,842	69,111 +8%
PERCENT SOLD TO NON-HUNTERS	3.46%	4.45%	3.48%	3.38%	1.50%	3.07%	1.45%	1.53%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	34,006	34,464 +1%	101,221	92,481 -9%	24,104	28,204 +17%	62,916	68,054 +8%
PERCENT ACTIVE ADULT HUNTERS	84.6%	84.8%	80.5%	79.5%	87.9%	85.6%	85.4%	86.6%
PERCENT SUCCESSFUL ADULT HUNTERS	62.2%	60.7%	54.1%	49.9%	64.5%	64.2%	52.1%	60.4%
SAMPLE SIZES								
DUCK WINGS	825	823	1,480	1,654	667	1,012	1,012	1,448
GOOSE TAILS	34	55	193	145	64	58	115	177
QUESTIONNAIRES	1,092	985	3,173	2,700	928	1,010	1,366	1,521

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL

6/26/76

TABLE G-5. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	RHODE ISLAND		SOUTH CAROLINA		VERMONT		VIRGINIA[a]	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	17.43%	19.03%	14.56%	12.88%	19.26%	17.45%	23.57%	23.49%
DOMESTIC MALLARD	0.00	0.35	0.64	0.00	0.15	1.23	0.68	0.85
BLACK DUCK	35.46	25.94	7.35	3.68	24.59	26.29	12.72	12.41
BLACK X MALLARD	0.60	1.73	0.43	0.11	0.74	0.25	0.51	0.36
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	0.30	0.00	3.21	2.27	0.30	0.00	6.49	7.80
AMERICAN WIGEON	1.20	0.69	3.00	4.22	0.44	0.98	12.47	13.48
GREEN-WINGED TEAL	6.31	7.96	7.82	6.06	9.48	13.27	6.75	10.99
BLUE-WINGED/CINNAMON TEAL	1.50	0.00	1.35	1.41	5.04	1.72	0.09	0.36
NORTHERN SHOVELER	0.00	0.00	1.18	2.17	0.00	0.25	1.20	2.75
PINTAIL	0.30	1.04	3.85	1.52	0.89	0.74	4.70	4.70
WOOD DUCK	6.91	8.30	49.85	49.78	18.96	19.90	7.26	5.14
REDHEAD	0.00	0.00	0.00	0.11	0.30	0.25	0.00	0.00
CANVASBACK	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.09
GREATER SCAUP	10.52	11.42	0.11	0.33	2.67	0.49	3.59	1.33
LESSER SCAUP	2.40	3.11	0.75	2.81	1.19	0.49	3.16	1.95
RING-NECKED DUCK	0.30	0.00	3.64	9.09	4.15	2.95	1.28	2.48
GOLDENEYES	2.10	1.73	0.00	0.00	9.33	5.90	2.31	0.80
BUFFLEHEAD	3.31	2.77	0.00	0.65	0.74	3.44	4.70	5.41
RUDDY DUCK	0.00	0.00	0.21	0.43	0.00	0.00	3.42	2.48
OLDSQUAW	0.00	0.00	0.21	0.00	0.15	0.25	2.05	0.62
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	9.86	5.57	0.00	0.00	0.89	2.70	0.51	0.80
HOODED MERGANSERS	0.00	0.35	1.39	2.49	0.74	1.23	1.54	1.15
OTHER MERGANSERS	1.50	10.03	0.11	0.00	0.00	0.25	1.03	0.53
OTHER DUCKS	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	11,063	17,745	91,819	127,487	35,764	38,118	101,752	100,285
PERCENT CHANGE		+60%		+39%		+7%		-1%
SEASONAL DUCK HARVEST PER ADULT HUNTER	3.03	4.76	4.87	6.01	4.04	4.28	5.16	4.82
PERCENT CHANGE		+57%		+23%		+6%		-7%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	98.23%	100.00%
SNOW GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	1.77	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	1,269	1,575 +24%	1,359	1,243 -9%	1,251	2,107 +68%	16,267	25,372 +56%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.35	0.43 +22%	0.07	0.06 -19%	0.14	0.24 +67%	0.84	1.23 +48%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	310	37 -88%	6,184	8,063 +30%	456	68 -85%	18,088	14,446 -20%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.08	0.01 -89%	0.31	0.36 +16%	0.05	0.01 -86%	0.88	0.66 -24%
TOTAL HUNTER DAYS PERCENT CHANGE	24,560	33,703 +37%	125,938	145,381 +15%	51,804	58,415 +13%	123,949	126,312 +2%
DAYS PER ADULT HUNTER PERCENT CHANGE	6.61	8.90 +35%	6.58	6.75 +3%	5.76	6.46 +12%	6.19	5.98 -3%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	3,598	3,688 +3%	18,346	20,744 +13%	8,720	8,762 0%	18,970	19,771 +4%
PERCENT SOLD TO NON-HUNTERS	1.80%	2.33%	0.86%	1.25%	1.99%	1.92%	2.68%	2.51%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	3,533	3,602 +2%	18,188	20,485 +13%	8,546	8,594 +1%	19,030	20,088 +6%
PERCENT ACTIVE ADULT HUNTERS	79.7%	85.1%	85.8%	86.3%	86.8%	87.5%	83.9%	84.3%
PERCENT SUCCESSFUL ADULT HUNTERS	55.5%	58.1%	67.6%	65.2%	67.0%	63.4%	68.4%	66.6%
SAMPLE SIZES								
DUCK WINGS	317	295	934	924	675	407	1,171	1,128
GOOSE TAILS	20	27	1	1	46	15	113	117
QUESTIONNAIRES	191	239	545	661	374	359	1,104	910

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL 6/28/76

TABLE C-5. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	WEST VIRGINIA		ATLANTIC FLYWAY TOTAL	
	1973	1974	1973	1974
DUCK SPECIES COMPOSITION				
MALLARD	30.46%	24.75%	22.06%	22.71%
DOMESTIC MALLARD	0.00	1.01	0.48	0.56
BLACK DUCK	11.92	12.63	16.32	16.65
BLACK X MALLARD	0.00	0.00	0.35	0.70
MOTTLED DUCK	0.00	0.00	1.10	0.83
GADWALL	0.00	0.00	1.39	1.58
AMERICAN WIGEON	0.00	0.51	2.71	3.91
GREEN-WINGED TEAL	1.33	4.55	7.01	7.96
BLUE-WINGED/CINNAMON TEAL	1.33	5.56	5.47	3.13
NORTHERN SHOVELER	0.00	0.00	0.66	0.93
PINTAIL	0.00	0.00	1.82	2.11
WOOD DUCK	50.99	49.50	17.55	16.13
REDHEAD	0.00	0.00	0.11	0.05
CANVASBACK	0.00	0.00	0.01	0.03
GREATER SCAUP	0.66	0.00	3.02	1.68
LESSER SCAUP	0.00	0.51	2.46	2.01
RING-NECKED DUCK	0.00	0.00	5.52	7.14
GOLDENEYES	0.66	0.51	1.36	0.81
BUFFLEHEAD	0.66	0.00	2.54	2.58
RUDDY DUCK	0.00	0.00	0.82	0.56
OLDSQUAW	0.00	0.00	0.71	0.79
EIDERS	0.00	0.00	1.05	1.29
SCOTERS	0.00	0.00	3.56	4.01
HOODED MERGANSERS	1.99	0.51	1.03	0.97
OTHER MERGANSERS	0.00	0.00	0.73	0.78
OTHER DUCKS	0.00	0.00	0.14	0.13
TOTAL	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	3,547	5,356	1,549,283	1,733,139
PERCENT CHANGE		+51%		+12%
SEASONAL DUCK HARVEST PER ADULT HUNTER	1.87	2.85	3.53	3.84
PERCENT CHANGE		+52%		+9%
GOOSE SPECIES COMPOSITION				
CANADA GOOSE	100.00%	100.00%	99.92%	99.93%
SNOW GOOSE	0.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.08	0.07
OTHER GEESE	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	218	233 -27%	348,932	338,753 -3%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.17	0.13 -26%	0.80	0.76 -6%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	43	387 +800%	93,078	106,051 +14%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.02	0.20 +795%	0.20	0.22 +10%
TOTAL HUNTER DAYS PERCENT CHANGE	5,881	9,258 +57%	2,658,946	2,835,708 +7%
DAYS PER ADULT HUNTER PERCENT CHANGE	3.06	4.66 +55%	5.96	6.18 +4%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	1,871	1,910 +2%	434,850	448,847 +3%
PERCENT SOLD TO NON-HUNTERS	2.23%	5.09%	2.42%	2.76%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	1,829	1,813 -1%	424,345	436,457 +3%
PERCENT ACTIVE ADULT HUNTERS	76.1%	80.5%	84.3%	84.3%
PERCENT SUCCESSFUL ADULT HUNTERS	48.9%	55.8%	60.9%	60.7%
SAMPLE SIZES				
DUCK WINGS	151	198	13,646	14,721
GOOSE TAILS	3	0	2,595	2,718
QUESTIONNAIRES	128	152	15,328	14,554

[a]Washington, D.C., hunters and harvest allocated to Maryland, North Carolina, and Virginia.

TABLE C-6. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS.

	ALABAMA		ARKANSAS		ILLINOIS		INDIANA	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	29.07%	24.31%	69.23%	76.24%	50.03%	58.70%	47.21%	38.86%
DOMESTIC MALLARD	0.38	0.00	0.00	0.05	0.19	0.21	0.17	0.18
BLACK DUCK	4.85	2.45	0.97	0.58	2.04	2.40	7.92	8.43
BLACK X MALLARD	0.25	0.00	0.16	0.05	0.09	0.07	0.34	0.55
MOTTLED DUCK	0.00	0.79	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	8.77	10.18	6.79	5.21	2.28	1.71	0.67	4.77
AMERICAN WIGEON	3.51	3.77	1.70	2.37	4.65	3.08	2.87	3.67
GREEN-WINGED TEAL	4.08	5.69	4.27	2.47	6.37	6.85	4.33	3.52
BLUE-WINGED/CINNAMON TEAL	3.08	3.62	0.90	1.47	7.46	1.78	5.90	7.90
NORTHERN SHOVELER	1.25	0.75	0.49	0.89	0.70	0.48	0.34	0.37
PINTAIL	6.26	2.45	0.49	1.05	3.07	1.30	1.01	0.73
WOOD DUCK	19.17	33.17	8.24	5.84	15.41	13.63	21.48	18.55
REDHEAD	0.63	0.19	0.16	0.21	0.37	0.34	0.51	0.55
CANVASBACK	0.50	0.38	0.32	0.26	0.33	0.07	0.00	0.73
GREATER SCAUP	0.63	0.19	0.08	0.05	0.47	0.27	0.00	0.55
LESSER SCAUP	8.64	4.90	2.18	1.16	2.23	4.73	1.01	1.10
RING-NECKED DUCK	4.89	4.15	1.70	1.37	2.09	2.81	1.18	4.40
GOLDENEYES	1.00	0.57	0.32	0.00	0.19	0.21	1.69	2.38
BUFFLEHEAD	0.75	0.38	0.49	0.21	0.84	0.27	0.84	1.47
RUDDY DUCK	0.38	0.38	0.73	0.42	0.42	0.07	0.34	0.00
OLDSQUAW	0.63	0.00	0.00	0.00	0.00	0.00	0.17	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.00
HOODED MERGANSERS	0.88	1.70	0.73	0.11	0.56	0.82	1.86	0.73
OTHER MERGANSERS	0.25	0.00	0.08	0.00	0.23	0.07	0.17	0.37
OTHER DUCKS	0.13	0.00	0.00	0.00	0.00	0.07	0.00	0.18
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	73,853	57,533	447,683	556,004	336,191	290,507	78,294	93,870
PERCENT CHANGE		-22%		+24%		-14%		+20%
SEASONAL DUCK HARVEST PER ADULT HUNTER	5.54	4.41	9.18	9.93	4.23	3.57	2.98	3.46
PERCENT CHANGE		-20%		+8%		-16%		+16%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	55.56%	80.00%	0.00%	0.00%	85.06%	88.53%	80.00%	100.00%
SNOW GOOSE	22.22	6.67	0.00	0.00	1.15	1.64	13.33	0.00
BLUE GOOSE	0.00	13.33	50.00	100.00	13.22	9.84	6.67	0.00
WHITE-FRONTED GOOSE	22.22	0.00	50.00	0.00	0.58	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	1,669	1,213	6,064	2,538	34,529	51,868	4,283	7,623
PERCENT CHANGE		-27%		-58%		+50%		+78%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.13	0.09	0.13	0.05	0.44	0.65	0.17	0.29
PERCENT CHANGE		-26%		-63%		+47%		+73%
COOT HARVEST (RETRIEVED KILL)	6,052	9,159	8,530	12,439	19,650	18,476	2,631	9,052
PERCENT CHANGE		+51%		+58%		-6%		+244%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.44	0.67	0.17	0.23	0.24	0.22	0.10	0.32
PERCENT CHANGE		+55%		+37%		-8%		+234%
TOTAL HUNTER DAYS	80,529	78,462	398,748	496,912	594,272	575,373	139,093	173,536
PERCENT CHANGE		-3%		+25%		-3%		+25%
DAYS PER ADULT HUNTER	5.90	5.89	8.00	8.66	7.32	6.92	5.18	6.26
PERCENT CHANGE		0%		+8%		-5%		+21%
TOTAL DUCK STAMPS SOLD	12,759	12,537	46,924	53,882	77,699	80,002	25,398	26,280
PERCENT CHANGE		-2%		+15%		+3%		+3%
PERCENT SOLD TO NON-HUNTERS	0.09%	0.62%	0.73%	0.67%	2.28%	2.87%	1.25%	1.43%
TOTAL ADULT HUNTERS (POTENTIAL)	12,748	12,459	46,581	53,521	75,927	77,706	25,081	25,904
PERCENT CHANGE		-2%		+15%		+2%		+3%
PERCENT ACTIVE ADULT HUNTERS	82.6%	83.1%	81.8%	85.6%	82.5%	81.7%	82.8%	83.2%
PERCENT SUCCESSFUL ADULT HUNTERS	61.1%	60.8%	65.4%	75.3%	58.2%	58.6%	56.6%	55.3%
SAMPLE SIZES								
DUCK WINGS	842	575	1,248	1,893	2,222	1,460	767	640
GOOSE TAILS	9	15	2	5	174	183	30	8
QUESTIONNAIRES	721	645	785	1,054	3,013	2,296	829	749

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL

6/28/76

TABLE C-6. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	IOWA		KENTUCKY		LOUISIANA		MICHIGAN	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	46.02%	44.06%	54.71%	64.16%	10.89%	15.42%	41.38%	39.52%
DOMESTIC MALLARD	0.22	0.20	0.79	0.00	0.07	0.00	0.37	0.37
BLACK DUCK	0.71	0.30	22.51	12.99	0.40	0.18	4.40	5.05
BLACK X MALLARD	0.00	0.00	1.05	0.26	0.03	0.00	0.33	0.32
MOTTLED DUCK	0.00	0.00	0.00	0.00	2.89	3.62	0.00	0.00
GADWALL	3.39	3.16	0.79	2.08	9.82	13.36	0.29	0.16
AMERICAN WIGEON	5.81	3.69	1.31	3.64	6.62	5.77	1.69	1.54
GREEN-WINGED TEAL	9.03	10.21	0.52	1.30	12.47	9.55	4.48	4.73
BLUE-WINGED/CINNAMON TEAL	8.58	11.17	0.00	0.52	17.91	16.17	4.99	2.39
NORTHERN SHOVELER	1.32	0.66	0.26	0.00	3.36	5.49	0.26	0.16
PINTAIL	3.17	1.21	0.79	1.82	5.55	5.24	1.17	1.12
WOOD DUCK	15.06	19.91	6.02	9.87	5.80	6.52	11.04	10.64
REDHEAD	0.71	0.35	0.52	0.00	0.13	0.36	0.59	1.22
CANVASBACK	0.44	0.30	0.00	0.78	0.47	0.21	0.11	0.48
GREATER SCAUP	0.09	0.15	0.00	0.00	0.17	0.11	4.99	3.67
LESSER SCAUP	2.16	1.97	2.36	0.78	20.31	13.07	10.24	11.70
RING-NECKED DUCK	1.85	1.42	0.79	0.26	1.88	3.42	4.15	4.26
GOLDENEYES	0.22	0.20	1.57	0.78	0.07	0.21	1.58	2.93
BUFFLEHEAD	0.18	0.46	3.14	0.26	0.10	0.07	3.56	6.12
RUDDY DUCK	0.31	0.20	0.00	0.00	0.17	0.11	0.92	1.17
OLDSQUAW	0.00	0.00	1.31	0.00	0.00	0.00	0.66	0.11
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
SCOTERS	0.00	0.05	0.00	0.00	0.00	0.00	0.77	1.65
HOODED MERGANSERS	0.31	0.10	1.05	0.26	0.37	0.61	0.84	0.43
OTHER MERGANSERS	0.04	0.20	0.52	0.26	0.47	0.50	0.40	0.21
OTHER DUCKS	0.00	0.00	0.00	0.00	0.03	0.04	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	201,092	231,620	31,732	46,726	1,247,556	1,160,398	350,858	418,575
PERCENT CHANGE		+15%		+47%		-7%		+19%
SEASONAL DUCK HARVEST PER ADULT HUNTER	3.38	3.73	2.88	3.69	12.04	10.83	3.26	3.93
PERCENT CHANGE		+10%		+28%		-10%		+20%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	26.48%	15.87%	100.00%	99.03%	0.00%	0.00%	89.09%	89.39%
SNOW GOOSE	36.06	41.87	0.00	0.00	21.13	8.89	0.61	0.76
BLUE GOOSE	35.78	41.66	0.00	0.97	49.30	72.22	10.30	9.85
WHITE-FRONTED GOOSE	1.69	0.57	0.00	0.00	29.56	18.89	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	39,249	40,703	13,645	11,160	109,534	51,140	23,495	28,184
PERCENT CHANGE		+4%		-18%		-53%		+20%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.67	0.66	1.25	0.89	1.07	0.48	0.22	0.27
PERCENT CHANGE		-1%		-29%		-55%		+21%
COOT HARVEST (RETRIEVED KILL)	8,585	10,464	750	1,309	178,770	241,694	17,915	26,357
PERCENT CHANGE		+22%		+75%		+35%		+47%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.14	0.16	0.07	0.10	1.66	2.16	0.16	0.24
PERCENT CHANGE		+17%		+52%		+31%		+48%
TOTAL HUNTER DAYS	429,223	482,208	77,317	84,499	831,706	792,020	629,465	680,164
PERCENT CHANGE		+12%		+9%		-5%		+8%
DAYS PER ADULT HUNTER	7.06	7.60	6.85	6.53	7.85	7.23	5.73	6.24
PERCENT CHANGE		+8%		-5%		-8%		+9%
TOTAL DUCK STAMPS SOLD	57,196	60,446	10,576	12,112	99,511	103,168	103,886	104,805
PERCENT CHANGE		+6%		+15%		+4%		+1%
PERCENT SOLD TO NON-HUNTERS	0.68%	1.94%	0.29%	0.14%	0.49%	0.72%	1.11%	2.73%
TOTAL ADULT HUNTERS (POTENTIAL)	56,807	59,273	10,545	12,095	99,023	102,425	102,733	101,944
PERCENT CHANGE		+4%		+15%		+3%		-1%
PERCENT ACTIVE ADULT HUNTERS	85.8%	87.0%	85.6%	86.3%	83.9%	84.3%	84.6%	86.6%
PERCENT SUCCESSFUL ADULT HUNTERS	66.9%	67.0%	61.9%	63.2%	76.0%	73.9%	59.8%	65.2%
SAMPLE SIZES								
DUCK WINGS	2,271	1,979	382	385	2,894	2,932	2,726	1,880
GOOSE TAILS	355	523	54	103	71	90	165	132
QUESTIONNAIRES	2,177	2,337	464	509	2,095	2,140	2,835	1,724

TABLE C-6. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	MINNESOTA		MISSISSIPPI		MISSOURI		OHIO	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	27.66%	32.84%	51.84%	60.99%	62.36%	65.02%	39.83%	32.69%
DOMESTIC MALLARD	0.16	0.17	0.18	0.09	0.00	0.00	0.64	0.57
BLACK DUCK	0.51	0.31	1.62	0.71	0.56	0.41	11.02	6.96
BLACK X MALLARD	0.04	0.07	0.09	0.00	0.00	0.10	0.40	0.67
MOTTLED DUCK	0.00	0.00	0.09	0.36	0.00	0.00	0.00	0.00
GADWALL	1.41	1.13	6.66	5.16	3.45	3.07	0.80	1.33
AMERICAN WIGEON	5.16	4.52	2.25	1.78	3.29	2.72	1.12	3.81
GREEN-WINGED TEAL	7.79	7.75	4.21	4.82	4.67	4.18	5.27	5.29
BLUE-WINGED/CINNAMON TEAL	14.83	10.05	2.03	1.28	4.86	6.80	5.70	5.93
NORTHERN SHOVELER	0.74	0.41	1.08	0.36	2.24	1.94	0.24	0.29
PINTAIL	2.19	1.47	2.07	1.69	6.09	0.92	1.20	1.62
WOOD DUCK	10.49	15.53	11.95	13.58	5.35	6.56	18.15	22.55
REDHEAD	0.08	0.69	0.27	0.00	0.08	0.61	0.96	0.95
CANVASBACK	0.04	0.38	0.36	0.27	0.00	0.31	0.48	0.48
GREATER SCAUP	0.39	0.24	0.27	0.00	0.08	0.41	1.20	0.57
LESSER SCAUP	9.59	7.13	7.38	3.20	3.05	3.58	3.59	4.29
RING-NECKED DUCK	14.83	13.23	5.04	4.00	3.21	2.05	1.44	4.77
GOLDENEYES	1.02	1.13	0.18	0.00	0.08	0.10	0.80	0.38
BUFFLEHEAD	1.64	1.61	0.18	0.36	0.16	0.31	1.44	3.34
RUDDY DUCK	0.86	0.45	0.45	0.09	0.08	0.00	1.52	0.76
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00
SCOTERS	0.04	0.17	0.00	0.00	0.00	0.00	0.64	0.67
HOODED MERGANSERS	0.47	0.55	1.44	0.80	0.16	0.61	0.88	1.43
OTHER MERGANSERS	0.08	0.10	0.27	0.09	0.24	0.31	2.24	0.57
OTHER DUCKS	0.00	0.07	0.09	0.00	0.00	0.00	0.00	0.10
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	615,188	798,805	158,535	225,676	188,966	256,664	128,460	117,150
PERCENT CHANGE		+30%		+42%		+36%		-9%
SEASONAL DUCK HARVEST PER ADULT HUNTER	4.73	5.26	6.48	8.69	3.44	4.28	3.39	2.91
PERCENT CHANGE		+11%		+34%		+24%		-14%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	70.49%	45.50%	0.00%	33.33%	66.67%	66.67%	96.28%	95.60%
SNOW GOOSE	13.12	27.01	50.00	0.00	18.67	19.93	1.06	1.10
BLUE GOOSE	16.39	27.01	0.00	66.67	14.40	13.40	2.66	3.30
WHITE-FRONTED GOOSE	0.00	0.47	50.00	0.00	0.27	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	42,007	77,515 +85%	2,584	3,782 +46%	56,641	84,561 +49%	13,272	10,496 -21%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.33	0.52 +59%	0.11	0.15 +37%	1.04	1.43 +37%	0.36	0.26 -26%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	38,485	49,471 +29%	4,209	7,072 +68%	8,768	5,629 -36%	6,159	11,400 +85%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.28	0.31 +10%	0.17	0.26 +58%	0.15	0.09 -41%	0.16	0.27 +74%
TOTAL HUNTER DAYS PERCENT CHANGE	774,911	987,252 +27%	144,841	181,804 +26%	308,508	426,326 +38%	262,283	288,056 +10%
DAYS PER ADULT HUNTER PERCENT CHANGE	5.83	6.36 +9%	5.79	6.85 +18%	5.49	6.95 +27%	6.77	7.00 +3%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	125,654	146,074 +16%	23,462	25,037 +7%	53,209	58,377 +10%	36,994	40,064 +8%
PERCENT SOLD TO NON-HUNTERS	1.12%	0.68%	0.38%	0.91%	1.22%	1.76%	2.11%	3.96%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	124,247	145,081 +17%	23,373	24,809 +6%	52,560	57,350 +9%	36,213	38,477 +6%
PERCENT ACTIVE ADULT HUNTERS	89.0%	91.3%	83.1%	84.8%	87.0%	86.9%	87.1%	87.5%
PERCENT SUCCESSFUL ADULT HUNTERS	73.1%	78.5%	66.4%	71.8%	69.0%	70.7%	62.4%	61.0%
SAMPLE SIZES								
DUCK WINGS	2,556	2,917	1,139	1,178	1,347	1,031	1,385	1,076
GOOSE TAILS	61	211	2	3	375	291	188	91
QUESTIONNAIRES	3,104	2,459	886	913	1,678	1,714	1,512	1,484

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL

6/28/76

TABLE C-6. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	TENNESSEE		WISCONSIN		MISSISSIPPI FLYWAY TOTAL	
	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION						
MALLARD	54.08%	60.24%	36.09%	45.05%	36.04%	42.15%
DOMESTIC MALLARD	0.64	0.15	0.30	0.42	0.19	0.16
BLACK DUCK	14.75	7.00	2.52	2.47	2.56	1.88
BLACK X MALLARD	0.32	0.30	0.30	0.08	0.14	0.11
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.79	0.84
GADWALL	2.86	4.87	0.74	1.01	4.63	4.99
AMERICAN WIGEON	2.23	2.43	4.40	4.07	4.33	3.79
GREEN-WINGED TEAL	2.39	1.37	6.71	6.79	7.54	6.44
BLUE-WINGED/CINNAMON TEAL	2.18	1.28	18.26	8.84	10.96	8.03
NORTHERN SHOVELER	0.00	0.15	0.84	0.21	1.45	1.63
PINTAIL	3.18	1.52	1.71	0.71	3.13	2.12
WOOD DUCK	4.45	7.76	14.10	19.41	10.05	12.09
REDHEAD	0.64	0.91	1.04	0.84	0.41	0.56
CANVASBACK	0.32	0.61	0.40	0.17	0.31	0.31
GREATER SCAUP	0.95	0.46	1.07	0.38	0.75	0.50
LESSER SCAUP	3.98	2.28	3.53	3.48	9.29	6.52
RING-NECKED DUCK	1.75	6.09	4.00	3.35	4.19	4.77
GOLDENEYES	1.11	0.15	0.91	0.63	0.60	0.64
BUFFLEHEAD	0.80	1.37	1.78	0.63	0.97	1.11
RUDDY DUCK	0.80	0.00	0.40	0.21	0.50	0.30
OLDSQUAW	0.80	0.00	0.10	0.00	0.13	0.01
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.03	0.55	0.09	0.25
HOODED MERGANSERS	0.95	1.07	0.50	0.67	0.59	0.59
OTHER MERGANSERS	0.80	0.00	0.27	0.04	0.36	0.20
OTHER DUCKS	0.00	0.00	0.00	0.00	0.01	0.03
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	228,324	263,067	507,516	648,829	4,594,248	5,165,824
PERCENT CHANGE		+15%		+28%		+12%
SEASONAL DUCK HARVEST PER ADULT HUNTER	6.91	7.28	4.02	4.67	5.37	5.62
PERCENT CHANGE		+5%		+16%		+5%
GOOSE SPECIES COMPOSITION						
CANADA GOOSE	90.91%	94.12%	93.15%	89.33%	53.84%	61.12%
SNOW GOOSE	0.00	0.00	0.93	3.96	13.59	13.31
BLUE GOOSE	9.09	5.88	5.88	6.71	23.47	22.86
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	9.11	2.21
BRANT	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	7,986	9,786	63,511	82,591	418,469	463,504
PERCENT CHANGE		+23%		+30%		+11%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.25	0.27	0.51	0.60	0.50	0.51
PERCENT CHANGE		+12%		+18%		+3%
COOT HARVEST (RETRIEVED KILL)	6,958	8,428	43,995	76,083	351,457	488,033
PERCENT CHANGE		+21%		+73%		+39%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.20	0.22	0.34	0.53	0.39	0.51
PERCENT CHANGE		+11%		+57%		+29%
TOTAL HUNTER DAYS	261,976	291,594	974,707	1,068,031	5,907,579	6,606,377
PERCENT CHANGE		+11%		+10%		+12%
DAYS PER ADULT HUNTER	7.76	7.89	7.56	7.51	6.75	7.03
PERCENT CHANGE		+2%		-1%		+4%
TOTAL DUCK STAMPS SOLD	32,119	34,844	121,524	134,389	826,911	892,017
PERCENT CHANGE		+8%		+11%		+8%
PERCENT SOLD TO NON-HUNTERS	1.75%	0.90%	0.78%	1.10%	1.08%	1.52%
TOTAL ADULT HUNTERS (POTENTIAL)	31,557	34,530	120,576	132,911	817,971	878,485
PERCENT CHANGE		+9%		+10%		+7%
PERCENT ACTIVE ADULT HUNTERS	86.3%	85.4%	87.7%	90.1%	85.6%	87.0%
PERCENT SUCCESSFUL ADULT HUNTERS	59.9%	65.8%	72.0%	75.9%	67.1%	70.2%
SAMPLE SIZES						
DUCK WINGS	622	662	2,979	2,386	23,380	20,994
GOOSE TAILS	11	17	323	328	1,820	2,000
QUESTIONNAIRES	806	798	2,197	2,538	23,102	21,360

TABLE C-7. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE CENTRAL FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS.

	COLORADO[a]		KANSAS		MONTANA[a]		NEBRASKA	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	60.15%	52.91%	41.31%	42.28%	76.77%	68.20%	47.48%	57.54%
DOMESTIC MALLARD	0.00	0.00	0.00	0.00	0.22	0.00	0.00	0.00
BLACK DUCK	0.00	0.00	0.04	0.00	0.00	0.00	0.08	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	3.89	7.72	5.13	11.86	2.88	7.03	6.94	8.60
AMERICAN WIGEON	7.33	6.28	6.10	4.51	2.43	4.28	5.74	5.59
GREEN-WINGED TEAL	10.29	10.65	13.95	14.11	4.43	7.95	15.59	9.72
BLUE-WINGED/CINNAMON TEAL	7.58	11.05	14.14	8.97	2.43	6.42	11.39	6.82
NORTHERN SHOVELER	2.48	1.55	1.99	2.92	1.77	3.06	1.75	1.90
PINTAIL	3.74	5.70	7.56	3.45	1.11	1.22	2.95	1.34
WOOD DUCK	0.05	0.10	2.26	1.59	0.00	0.00	0.87	1.01
REDHEAD	0.91	1.64	1.37	3.45	0.00	0.31	0.96	1.45
CANVASBACK	0.05	0.15	0.04	0.60	0.00	0.00	0.13	0.56
GREATER SCAUP	0.05	0.00	0.04	0.13	0.00	0.00	0.17	0.00
LESSER SCAUP	1.26	0.10	3.80	2.25	1.55	0.31	3.41	2.35
RING-NECKED DUCK	0.30	0.15	1.24	2.78	0.66	0.31	1.54	0.89
GOLDENEYES	0.56	0.77	0.18	0.33	3.32	0.31	0.04	0.45
BUFFLEHEAD	0.66	0.58	0.44	0.13	0.00	0.00	0.46	1.68
RUDDY DUCK	0.15	0.19	0.22	0.27	0.66	0.31	0.17	0.00
OLDSQUAW	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.00	0.00	0.31	0.00	0.00
HOODED MERGANSERS	0.00	0.15	0.09	0.07	0.00	0.00	0.04	0.00
OTHER MERGANSERS	0.51	0.00	0.09	0.20	1.77	0.00	0.29	0.11
OTHER DUCKS	0.05	0.00	0.00	0.07	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	146,984	103,976	352,437	305,595	34,810	29,300	310,234	128,563
PERCENT CHANGE		-29%		-12%		-16%		-59%
SEASONAL DUCK HARVEST PER ADULT HUNTER	3.58	2.54	5.69	4.58	4.01	3.56	5.79	2.54
PERCENT CHANGE		-29%		-19%		-11%		-56%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	98.96%	100.00%	62.60%	29.10%	95.29%	98.98%	46.24%	30.91%
SNOW GOOSE	1.04	0.00	17.07	41.39	0.00	0.00	31.18	32.73
BLUE GOOSE	0.00	0.00	10.98	18.03	0.00	0.00	19.36	32.73
WHITE-FRONTED GOOSE	0.00	0.00	9.35	11.48	4.71	1.02	3.23	3.64
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	25,700	18,020 -30%	38,852	39,622 +2%	4,438	4,831 +9%	37,346	28,385 -24%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.64	0.45 -30%	0.64	0.60 -7%	0.52	0.60 +15%	0.71	0.57 -19%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	3,088	3,088 0%	14,667	16,225 +11%	926	1,406 +52%	7,844	5,841 -26%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.07	0.07 +1%	0.23	0.23 +1%	0.10	0.17 +60%	0.14	0.11 -21%
TOTAL HUNTER DAYS PERCENT CHANGE	249,241	293,645 +18%	447,257	463,561 +4%	44,264	37,366 -16%	409,573	333,976 -18%
DAYS PER ADULT HUNTER PERCENT CHANGE	5.54	7.01 +18%	7.06	6.70 -5%	4.99	4.44 -11%	7.47	6.46 -14%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	39,046	39,062 0%	58,805	64,440 +10%	8,216	7,930 -3%	50,839	48,195 -5%
PERCENT SOLD TO NON-HUNTERS	0.96%	1.17%	0.70%	1.16%	0.44%	2.23%	0.62%	1.13%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	38,071	38,065 0%	58,393	63,692 +9%	8,180	7,753 -5%	50,524	47,650 -6%
PERCENT ACTIVE ADULT HUNTERS	82.0%	83.2%	81.0%	79.2%	77.0%	73.5%	64.6%	81.0%
PERCENT SUCCESSFUL ADULT HUNTERS	59.7%	54.6%	66.5%	61.8%	61.0%	61.7%	69.7%	55.8%
SAMPLE SIZES								
DUCK WINGS	1,904	981	2,186	1,609	452	327	2,405	895
GOOSE TAILS	288	175	246	244	85	98	186	110
QUESTIONNAIRES	2,153	1,824	2,428	2,250	583	328	2,065	2,045

TABLE C-7. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE CENTRAL FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS--CONTINUED.

	NEW MEXICO[a]		NORTH DAKOTA		OKLAHOMA		SOUTH DAKOTA	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	32.68%	36.66%	52.17%	52.91%	48.05%	46.64%	61.58%	43.50%
DOMESTIC MALLARD	0.00	0.00	0.00	0.00	0.06	0.00	0.00	0.00
BLACK DUCK	0.00	0.00	0.07	0.08	0.00	0.13	0.07	0.11
BLACK X MALLARD	0.00	0.00	0.07	0.08	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	14.67	8.69	11.05	11.54	5.85	10.11	10.13	10.06
AMERICAN WIGEON	12.99	9.96	8.16	2.63	5.08	6.99	3.31	8.85
GREEN-WINGED TEAL	15.23	12.10	5.59	6.82	11.25	10.24	7.32	10.82
BLUE-WINGED/CINNAMON TEAL	5.57	7.41	9.47	7.98	3.70	4.75	6.40	12.46
NORTHERN SHOVELER	1.47	10.55	1.71	3.25	0.96	2.81	1.69	1.86
PINTAIL	10.69	8.90	7.57	10.30	3.40	2.18	3.45	2.30
WOOD DUCK	0.00	0.42	0.46	0.78	4.30	3.37	0.21	0.77
REDHEAD	1.89	1.70	0.40	0.93	1.73	3.62	1.48	2.30
CANVASBACK	1.26	0.64	0.13	0.54	0.84	1.81	0.14	0.87
GREATER SCAUP	0.00	0.00	0.07	0.00	0.13	0.06	0.00	0.00
LESSER SCAUP	1.26	0.00	2.30	0.78	9.25	2.43	1.55	2.51
RING-NECKED DUCK	0.84	0.42	0.46	0.93	3.98	3.87	1.13	1.64
GOLDENEYES	0.00	1.06	0.07	0.00	0.26	0.06	0.07	0.44
BUFFLEHEAD	0.63	0.85	0.20	0.08	0.26	0.31	0.42	0.77
RUDDY DUCK	0.00	0.21	0.00	0.16	0.06	0.44	0.84	0.44
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.00	0.13	0.00	0.00	0.00
HOODED MERGANSERS	0.00	0.00	0.00	0.23	0.06	0.13	0.00	0.33
OTHER MERGANSERS	0.21	0.00	0.00	0.00	0.64	0.06	0.21	0.00
OTHER DUCKS	0.63	0.21	0.07	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	16,336	41,736	223,237	348,112	235,300	181,031	303,698	144,737
PERCENT CHANGE		+155%		+56%		-23%		-52%
SEASONAL DUCK HARVEST PER ADULT HUNTER	2.96	6.19	4.28	6.00	7.08	5.07	6.38	3.31
PERCENT CHANGE		+109%		+40%		-28%		-48%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	51.43%	89.29%	25.67%	21.55%	90.40%	64.22%	43.04%	50.91%
SNOW GOOSE	48.57	10.71	46.00	56.60	3.20	22.94	38.52	30.30
BLUE GOOSE	0.00	0.00	21.83	20.18	2.40	9.17	15.19	17.88
WHITE-FRONTED GOOSE	0.00	0.00	6.50	1.52	4.00	3.67	2.85	0.91
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.15	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	1,865	874	102,352	123,321	10,371	10,463	63,487	57,001
PERCENT CHANGE		-54%		+20%		+1%		-10%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.35	0.13	2.00	2.17	0.32	0.30	1.36	1.33
PERCENT CHANGE		-62%		+8%		-6%		-2%
DUCK HARVEST (RETRIEVED KILL)	875	1,764	7,854	13,904	14,529	8,053	9,162	12,364
PERCENT CHANGE		+102%		+77%		-45%		+35%
SEASONAL DUCK HARVEST PER ADULT HUNTER	0.15	0.25	0.15	0.23	0.42	0.22	0.19	0.27
PERCENT CHANGE		+65%		+59%		-48%		+47%
TOTAL HUNTER DAYS	31,092	41,723	356,196	414,470	257,321	241,794	376,067	303,783
PERCENT CHANGE		+34%		+16%		-6%		-19%
DAYS PER ADULT HUNTER	5.50	6.04	6.68	6.98	7.57	6.61	7.71	6.79
PERCENT CHANGE		+10%		+5%		-13%		-12%
TOTAL DUCK STAMPS SOLD	5,311	6,474	49,153	54,917	31,456	34,019	45,471	41,476
PERCENT CHANGE		+22%		+12%		+8%		-9%
PERCENT SOLD TO NON-HUNTERS	2.02%	1.77%	0.13%	0.41%	0.39%	0.99%	1.23%	0.58%
TOTAL ADULT HUNTERS (POTENTIAL)	5,204	6,359	49,129	54,692	31,333	33,682	44,912	41,235
PERCENT CHANGE		+22%		+11%		+7%		-8%
PERCENT ACTIVE ADULT HUNTERS	82.5%	86.8%	86.4%	89.1%	82.0%	82.3%	85.3%	84.1%
PERCENT SUCCESSFUL ADULT HUNTERS	65.8%	68.5%	73.4%	79.5%	65.4%	64.0%	74.4%	70.2%
SAMPLE SIZES								
DUCK WINGS	478	494	1,520	1,291	1,607	1,696	1,421	915
GOOSE TAILS	35	28	600	659	125	109	632	330
QUESTIONNAIRES	375	442	1,021	1,256	933	979	1,414	1,073

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL 6/28/76

TABLE C-7. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE CENTRAL FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS --CONTINUED.

	TEXAS		WYOMING[a]		CENTRAL FLYWAY TOTAL	
	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION						
MALLARD	16.49%	16.03%	70.94%	73.02%	40.34%	35.48%
DOMESTIC MALLARD	0.00	0.00	0.00	0.00	0.01	0.00
BLACK DUCK	0.00	0.03	0.00	0.00	0.03	0.04
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.01	0.01
MOTTLED DUCK	5.50	7.14	0.00	0.00	1.76	2.95
GADWALL	9.60	12.41	6.82	5.48	8.01	11.20
AMERICAN WIGEON	6.37	9.21	4.87	5.68	5.53	6.90
GREEN-WINGED TEAL	18.07	14.57	4.87	4.06	13.15	11.99
BLUE-WINGED/CINNAMON TEAL	10.46	9.50	3.25	3.65	9.44	8.77
NORTHERN SHOVELER	4.84	7.47	1.79	1.42	2.73	4.78
PINTAIL	9.14	10.81	2.60	2.23	6.15	7.42
ECCO DUCK	2.45	1.52	0.00	0.20	1.71	1.53
REDHEAD	0.76	0.96	1.14	0.81	1.04	1.67
CANVASBACK	0.60	1.22	0.16	0.41	0.34	0.93
GREATER SCAUP	0.00	0.13	0.00	0.00	0.05	0.08
LESSER SCAUP	11.03	4.61	0.81	0.41	5.53	2.84
RING-NECKED DUCK	2.72	2.88	0.33	0.20	1.85	2.21
GOLDENEYES	0.10	0.13	2.27	1.42	0.22	0.23
BUFFLEHEAD	0.53	0.26	0.16	0.20	0.43	0.35
RUDDY DUCK	0.60	0.26	0.00	0.41	0.37	0.25
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.01
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.20	0.01	0.01
HOODED MERGANSERS	0.23	0.29	0.00	0.00	0.10	0.21
OTHER MERGANSERS	0.10	0.03	0.00	0.20	0.23	0.05
OTHER DUCKS	0.43	0.16	0.00	0.00	0.15	0.08
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	779,071	924,902	34,591	26,226	2,436,698	2,238,182
PERCENT CHANGE		+19%		-24%		-8%
SEASONAL DUCK HARVEST PER ADULT HUNTER	6.35	7.21	5.00	3.69	5.62	5.01
PERCENT CHANGE		+14%		-26%		-11%
GOOSE SPECIES COMPOSITION						
CANADA GOOSE	20.76%	21.30%	95.24%	100.00%	37.46%	32.59%
SNOW GOOSE	39.79	41.67	4.76	0.00	34.54	40.92
BLUE GOOSE	19.38	16.50	0.00	0.00	16.81	17.96
WHITE-FRONTED GOOSE	20.07	20.14	0.00	0.00	10.79	8.49
BRANT	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.04
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	185,206	134,942 -27%	3,926	1,631 -58%	473,603	419,090 -12%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	1.54	1.07 -30%	0.58	0.23 -59%	1.11	0.96 -14%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	25,225	33,515 +34%	409	1,563 +282%	84,579	98,121 +16%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.20	0.26 +29%	0.06	0.21 +272%	0.19	0.21 +12%
TOTAL HUNTER DAYS PERCENT CHANGE	698,833	766,714 +10%	46,937	34,809 -26%	2,916,781	2,931,841 +1%
DAYS PER ADULT HUNTER PERCENT CHANGE	5.56	5.64 +5%	6.62	4.79 -28%	6.58	6.41 -3%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	117,446	122,819 +5%	6,537	6,803 +4%	412,320	426,135 +3%
PERCENT SOLD TO NON-HUNTERS	1.47%	1.54%	0.11%	1.59%	0.90%	1.14%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	115,720	120,928 +5%	6,530	6,695 +3%	408,596	421,291 +3%
PERCENT ACTIVE ADULT HUNTERS	81.2%	80.9%	84.0%	81.2%	82.8%	82.3%
PERCENT SUCCESSFUL ADULT HUNTERS	67.0%	66.7%	70.5%	65.9%	67.9%	65.3%
SAMPLE SIZES						
DUCK WINGS	3,289	3,345	616	493	15,878	12,046
GOOSE TAILS	578	432	42	37	2,817	2,222
QUESTIONNAIRES	1,769	2,797	461	484	13,202	13,478

[a]Includes only that portion of the State lying within the Central Flyway.

TABLE C-8. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE PACIFIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS.

	ARIZONA		CALIFORNIA		COLORADO [a]		IDAHO	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	19.25%	9.71%	16.26%	14.02%	86.89%	71.25%	79.83%	78.09%
DOMESTIC MALLARD	0.00	0.14	0.03	0.03	0.55	0.00	0.00	0.06
BLACK DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	2.55	5.29	2.40	3.05	1.91	1.72	1.07	2.00
AMERICAN WIGEON	4.91	7.71	9.79	9.72	3.63	7.13	5.10	5.71
GREEN-WINGED TEAL	22.59	17.14	16.61	17.17	2.73	7.86	3.96	4.42
BLUE-WINGED/CINNAMON TEAL	9.43	17.57	6.42	3.41	0.55	3.69	0.23	0.77
NORTHERN SHOVELER	3.54	6.43	7.07	9.14	0.55	0.25	0.84	0.35
PINTAIL	23.38	23.29	32.71	37.60	1.37	1.23	5.18	4.18
WOOD DUCK	0.00	0.29	2.17	0.99	0.27	0.25	0.15	1.53
REDHEAD	3.34	2.71	0.52	0.48	0.00	0.00	0.76	0.35
CANVASBACK	1.18	0.86	0.86	1.30	0.00	0.00	0.08	0.29
GREATER SCAUP	0.20	0.00	0.96	0.37	0.00	0.00	0.00	0.00
LESSER SCALP	0.79	0.86	1.21	0.60	0.27	0.25	0.53	0.18
RING-NECKED DUCK	2.75	2.29	0.82	0.56	0.00	1.97	0.15	0.35
GOLDENEYES	0.20	0.14	0.32	0.15	0.27	2.46	1.29	1.30
BUFFLEHEAD	1.18	0.57	0.49	0.36	0.00	0.98	0.53	0.12
RUDDY DUCK	3.93	3.00	1.14	0.98	0.27	0.00	0.00	0.06
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.20	0.00	0.05	0.00	0.27	0.00	0.00	0.00
HOODED MERGANSERS	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.24
OTHER MERGANSERS	0.39	0.86	0.08	0.03	0.27	0.98	0.30	0.00
OTHER DUCKS	0.20	1.14	0.05	0.01	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	40,806	84,811	1,451,525	1,911,985	21,925	24,019	261,139	309,773
PERCENT CHANGE		+108%		+32%		+10%		+19%
SEASONAL DUCK HARVEST PER ADULT HUNTER	3.52	6.09	9.73	12.87	5.06	5.07	7.65	8.66
PERCENT CHANGE		+73%		+32%		0%		+13%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	93.33%	100.00%	30.68%	41.55%	100.00%	80.00%	97.02%	100.00%
SNOW GOOSE	6.67	0.00	46.89	29.13	0.00	20.00	2.99	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	19.60	23.50	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.95	0.97	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	1.89	4.85	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	1,379	1,757	226,286	173,334	565	514	12,262	13,856
PERCENT CHANGE		+27%		-23%		-48%		+13%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.12	0.13	1.52	1.17	0.23	0.11	0.36	0.39
PERCENT CHANGE		+7%		-23%		-52%		+8%
DUCK HARVEST (RETRIEVED KILL)	8,354	4,245	100,868	154,773	373	439	3,646	6,354
PERCENT CHANGE		-49%		+53%		+18%		+74%
SEASONAL DUCK HARVEST PER ADULT HUNTER	0.69	0.29	0.65	1.00	0.08	0.09	0.10	0.17
PERCENT CHANGE		-58%		+54%		+7%		+67%
TOTAL HUNTER DAYS	53,727	79,835	1,174,246	1,167,109	22,977	25,093	270,607	251,556
PERCENT CHANGE		+49%		-1%		+9%		-7%
DAYS PER ADULT HUNTER	4.48	5.54	7.60	7.59	5.12	5.12	7.66	6.79
PERCENT CHANGE		+24%		0%		0%		-11%
TOTAL DUCK STAMPS SOLD	11,059	13,474	144,582	149,548	4,167	4,562	32,810	34,377
PERCENT CHANGE		+22%		+3%		+9%		+5%
PERCENT SOLD TO NON-HUNTERS	0.17%	1.55%	1.70%	5.36%	0.96%	1.17%	0.91%	0.86%
TOTAL ADULT HUNTERS (POTENTIAL)	11,040	13,265	142,124	141,532	4,127	4,505	32,511	34,081
PERCENT CHANGE		+20%		0%		+9%		+5%
PERCENT ACTIVE ADULT HUNTERS	71.2%	83.0%	86.1%	86.7%	80.0%	81.4%	81.5%	82.4%
PERCENT SUCCESSFUL ADULT HUNTERS	52.3%	63.5%	72.7%	75.4%	63.7%	65.7%	65.8%	66.2%
SAMPLE SIZES								
DUCK WINGS	509	700	5,953	9,455	366	407	1,314	1,698
GOOSE TAILS	15	20	740	515	7	14	67	81
QUESTIONNAIRES	391	584	3,039	2,448	277	245	1,028	1,169

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL

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TABLE C-8. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE PACIFIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS—CONTINUED.

	MONTANA[a]		NEVADA		NEW MEXICO[a]		OREGON	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	70.59%	67.44%	29.19%	25.26%	42.65%	23.57%	42.44%	44.21%
DOMESTIC MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.26	0.42
BLACK DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	1.71	4.10	7.06	12.11	2.94	15.29	2.50	4.91
AMERICAN WIGEON	7.49	6.15	7.59	7.55	10.78	15.29	15.44	15.02
GREEN-WINGED TEAL	5.24	6.41	18.86	13.41	27.45	15.92	10.38	6.60
BLUE-WINGED/CINNAMON TEAL	0.54	2.69	2.53	4.43	0.49	4.14	0.26	0.14
NORTHERN SHOVELER	1.07	1.54	4.74	8.85	0.49	1.59	3.09	2.66
PINTAIL	6.63	4.74	22.45	17.19	7.84	3.50	17.15	19.93
WOOD DUCK	0.64	0.39	0.21	0.26	0.00	0.00	1.77	1.75
REDHEAD	0.43	1.15	2.63	2.08	0.00	1.27	0.72	0.42
CANVASBACK	0.21	0.64	0.74	1.69	0.49	2.23	0.52	0.35
GREATER SCAUP	0.21	0.13	0.11	0.00	0.00	0.00	0.79	0.49
LESSER SCAUP	1.71	1.41	1.05	0.13	1.47	1.59	0.85	0.63
RING-NECKED DUCK	0.54	0.64	0.42	0.52	2.94	0.64	0.66	1.40
GOLDENEYES	2.03	1.67	0.00	0.91	0.98	3.50	0.79	0.07
BUFFLEHEAD	0.11	0.51	0.21	1.69	0.49	5.73	1.25	0.70
RUDDY DUCK	0.21	0.00	1.58	3.65	0.00	3.50	0.33	0.14
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.00	0.00	0.32	0.13	0.07
HOODED MERGANSERS	0.11	0.26	0.21	0.13	0.00	0.00	0.07	0.07
OTHER MERGANSERS	0.54	0.13	0.42	0.13	0.49	1.91	0.20	0.07
OTHER DUCKS	0.00	0.00	0.00	0.00	0.49	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	55,353	103,766	87,150	80,569	4,201	6,670	340,515	290,572
PERCENT CHANGE		+9%		-8%		+59%		-15%
SEASONAL DUCK HARVEST PER ADULT HUNTER	4.80	5.08	6.05	6.63	4.42	6.33	6.42	5.44
PERCENT CHANGE		+6%		+10%		+43%		-15%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	81.58%	90.36%	74.14%	94.12%	100.00%	100.00%	88.73%	98.00%
SNOW GOOSE	18.42	9.64	13.79	5.88	0.00	0.00	8.33	1.33
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	12.07	0.00	0.00	0.00	2.94	0.67
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	9,449	5,245 -44%	14,526	6,612 -54%	1E3	7 -96%	32,090	35,635 +11%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.48	0.26 -46%	1.01	0.55 -46%	0.19	0.01 -97%	0.61	0.67 +10%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	1,129	2,970 +163%	4,146	4,443 +7%	36	135 +275%	10,038	25,706 +156%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.05	0.14 +155%	0.28	0.35 +27%	0.04	0.12 +242%	0.18	0.46 +154%
TOTAL HUNTER DAYS PERCENT CHANGE	133,765	115,295 -14%	104,853	58,322 -44%	4,893	6,538 +34%	331,533	362,454 +9%
DAYS PER ADULT HUNTER PERCENT CHANGE	6.50	5.45 -16%	7.02	4.64 -34%	4.97	5.99 +21%	6.04	6.56 +9%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	19,013	19,852 +5%	13,732	11,714 -15%	925	1,022 +10%	50,986	51,290 +1%
PERCENT SOLD TO NON-HUNTERS	0.44%	2.23%	0.00%	1.21%	2.02%	1.77%	0.91%	0.83%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	18,929	19,448 +3%	13,732	11,572 -16%	906	1,004 +11%	50,522	50,864 +1%
PERCENT ACTIVE ADULT HUNTERS PERCENT SUCCESSFUL ADULT HUNTERS	77.8% 62.8%	80.6% 64.5%	81.8% 66.9%	80.7% 66.5%	76.9% 63.6%	82.9% 75.2%	80.0% 63.1%	80.5% 61.5%
SAMPLE SIZES								
DUCK WINGS	935	780	949	768	204	314	1,522	1,425
GOOSE TAILS	76	83	58	34	0	0	204	150
QUESTIONNAIRES	681	796	957	462	94	100	2,541	2,121

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL

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TABLE C-8. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE PACIFIC FLYWAY DURING THE 1973 AND 1974 HUNTING SEASONS --CONTINUED.

	UTAH		WASHINGTON		WYOMING[a]		PACIFIC FLYWAY TOTAL	
	1973	1974	1973	1974	1973	1974	1973	1974
DUCK SPECIES COMPOSITION								
MALLARD	26.83%	22.92%	61.62%	63.74%	72.32%	57.26%	35.84%	31.49%
DOMESTIC MALLARD	0.00	0.00	0.00	0.35	0.00	0.40	0.05	0.11
BLACK DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	8.86	8.11	0.28	0.75	5.36	4.03	2.75	3.53
AMERICAN WIGEON	5.90	5.22	13.15	10.35	9.82	7.26	9.54	9.30
GREEN-WINGED TEAL	15.38	16.99	8.13	7.58	3.57	7.66	13.01	13.45
BLUE-WINGED/CINNAMON TEAL	5.18	2.84	0.11	0.06	1.79	7.66	3.74	2.78
NORTHERN SHOVELER	7.20	10.75	1.62	1.62	0.00	2.02	4.86	6.61
PINTAIL	23.46	24.90	10.08	8.62	3.57	3.23	22.42	26.26
WOOD DUCK	0.05	0.10	0.22	0.46	0.00	0.00	1.25	0.90
REDHEAD	3.31	1.88	0.11	1.10	0.00	0.00	0.88	0.77
CANVASBACK	0.98	1.57	0.28	0.29	0.00	0.00	0.69	1.00
GREATER SCAUP	0.05	0.05	0.39	0.41	0.00	0.00	0.60	0.30
LESSER SCALP	1.14	0.71	1.06	1.10	0.00	0.40	1.08	0.66
RING-NECKED DUCK	0.31	0.51	0.33	0.46	0.95	0.40	0.61	0.65
GOLDENEYES	0.05	0.25	1.28	1.85	0.00	6.05	0.63	0.57
BUFFLEHEAD	0.36	0.41	0.95	0.87	0.00	1.21	0.62	0.49
RUDDY DUCK	0.62	2.55	0.17	0.17	0.00	0.00	0.75	0.94
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.05	0.05	0.00	0.17	0.00	0.00	0.05	0.03
HOODED MERGANSERS	0.00	0.00	0.11	0.00	0.00	0.00	0.05	0.05
OTHER MERGANSERS	0.26	0.15	0.11	0.06	2.68	2.42	0.17	0.09
OTHER DUCKS	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.03
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	348,873	301,230	553,004	474,571	9,982	10,419	3,214,513	3,598,385
PERCENT CHANGE		-14%		-14%		+4%		+12%
SEASONAL DUCK HARVEST PER ADULT HUNTER	9.37	7.51	7.36	6.55	5.55	4.91	8.00	8.89
PERCENT CHANGE		-20%		-11%		-11%		+11%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	83.15%	100.00%	97.14%	90.91%	100.00%	100.00%	51.82%	63.85%
SNOW GOOSE	15.04	0.00	0.00	1.82	0.00	0.00	32.62	17.90
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.85	0.00	0.00	0.91	0.00	0.00	13.37	14.05
BRANT	0.00	0.00	2.86	6.36	0.00	0.00	0.54	1.34	
OTHER GEESE	0.85	0.00	0.00	0.00	0.00	0.00	1.25	2.86
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	14,056	20,759	41,181	35,649	422	501	352,623	293,905
PERCENT CHANGE		+48%		-13%		+19%		-17%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.38	0.52	0.55	0.49	0.24	0.24	0.88	0.73
PERCENT CHANGE		+37%		-10%		0%		-17%
COOT HARVEST (RETRIEVED KILL)	10,466	11,354	8,104	13,149	209	138	147,369	223,746
PERCENT CHANGE		+9%		+62%		-34%		+52%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.27	0.27	0.10	0.17	0.11	0.06	0.35	0.53
PERCENT CHANGE		+1%		+69%		-44%		+51%
TOTAL HUNTER DAYS	267,870	286,813	539,783	544,931	7,820	10,905	2,932,074	2,908,854
PERCENT CHANGE		0%		+1%		+39%		-1%
DAYS PER ADULT HUNTER	7.46	6.91	6.94	7.26	4.20	4.97	7.05	6.94
PERCENT CHANGE		-7%		+5%		+18%		-2%
TOTAL DUCK STAMPS SOLD	35,665	38,575	72,502	70,353	1,715	2,053	387,156	396,860
PERCENT CHANGE		+8%		-3%		+20%		+3%
PERCENT SOLD TO NON-HUNTERS	0.53%	0.59%	1.25%	1.87%	0.11%	1.59%	1.16%	2.86%
TOTAL ADULT HUNTERS (POTENTIAL)	35,476	38,193	71,556	69,037	1,713	2,020	382,676	385,525
PERCENT CHANGE		+8%		-4%		+18%		+1%
PERCENT ACTIVE ADULT HUNTERS	89.4%	88.6%	81.6%	82.5%	81.9%	82.4%	83.3%	84.2%
PERCENT SUCCESSFUL ADULT HUNTERS	70.3%	73.0%	64.7%	63.5%	71.8%	70.2%	68.4%	69.0%
SAMPLE SIZES								
DUCK WINGS	1,931	1,972	1,795	1,729	112	248	15,590	19,496
GOOSE TAILS	113	102	105	110	32	35	1,417	1,144
QUESTIONNAIRES	1,593	1,425	2,392	1,572	153	173	13,146	11,095

[a]Includes only that portion of the State lying within the Pacific Flyway.

TABLE C-9. PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN ALASKA AND FOR THE ENTIRE UNITED STATES DURING THE 1973 AND 1974 HUNTING SEASONS.

	ALASKA		UNITED STATES TOTAL	
	1973	1974	1973	1974
DUCK SPECIES COMPOSITION				
MALLARD	26.57%	27.70%	34.97%	35.29%
DOMESTIC MALLARD	0.00	0.00	0.15	0.17
BLACK DUCK	0.00	0.00	3.12	3.02
BLACK X MALLARD	0.00	0.00	0.10	0.14
MOTTLED DUCK	0.00	0.00	0.81	0.97
GADWALL	0.49	0.74	4.36	5.18
AMERICAN WIGEON	16.11	18.49	6.06	5.97
GREEN-WINGED TEAL	12.92	15.43	10.14	9.63
BLUE-WINGED/CINNAMON TEAL	0.41	0.19	7.90	5.98
NORTHERN SHOVELER	4.66	3.44	2.55	3.50
PINTAIL	29.27	18.36	9.01	9.90
WOOD DUCK	0.00	0.00	6.86	7.59
REDHEAD	0.00	0.00	0.62	0.74
CANVASBACK	0.16	0.93	0.38	0.57
GREATER SCAUP	2.37	2.79	0.87	0.54
LESSER SCAUP	1.88	3.35	5.43	3.60
RING-NECKED DUCK	0.74	1.02	2.89	3.47
GOLDENEYES	1.72	4.28	0.64	0.59
BUFFLEHEAD	1.80	4.00	0.98	1.02
RUDDY DUCK	0.00	0.00	0.58	0.50
OLDSQUAW	0.00	0.09	0.15	0.11
EIDERS	0.00	0.00	0.14	0.18
SCOTERS	0.08	0.37	0.51	0.66
HOODED MERGANSERS	0.00	0.00	0.40	0.42
OTHER MERGANSERS	0.41	0.19	0.33	0.22
OTHER DUCKS	0.41	0.65	0.07	0.06
TOTAL	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	94,419	61,214	11,889,161	12,756,744
PERCENT CHANGE		-35%		+8%
SEASONAL DUCK HARVEST PER ADULT HUNTER	5.33	3.68	5.53	5.71
PERCENT CHANGE		-31%		+3%
GOOSE SPECIES COMPOSITION				
CANADA GOOSE	85.00%	77.40%	58.82%	62.53%
SNOW GOOSE	3.33	2.26	21.04	16.90
BLUE GOOSE	0.00	0.00	11.07	11.88
WHITE-FRONTED GOOSE	8.33	3.39	8.55	5.73
BRANT	0.00	9.61	0.22	0.34
OTHER GEESE	3.33	7.35	0.30	0.61
TOTAL	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	12,369	10,425 -16%	1,606,196	1,525,681 -5%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.70	0.63 -10%	0.76	0.69 -9%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	683	285 -58%	677,166	916,286 +35%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.04	0.02 -57%	0.30	0.39 +30%
TOTAL HUNTER DAYS PERCENT CHANGE	86,077	55,105 -36%	14,501,457	15,337,885 +6%
DAYS PER ADULT HUNTER PERCENT CHANGE	4.69	3.20 -32%	6.59	6.69 +1%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	17,068	16,018 -6%	2,078,305	2,175,877 +5%
PERCENT SOLD TO NON-HUNTERS	1.14%	0.55%	1.34%	1.94%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	16,873	15,866 -6%	2,050,461	2,137,624 +4%
PERCENT ACTIVE ADULT HUNTERS	72.8%	64.6%	84.2%	84.8%
PERCENT SUCCESSFUL ADULT HUNTERS	58.7%	46.8%	66.2%	66.9%
SAMPLE SIZES				
DUCK WINGS	1,223	1,076	69,717	68,333
GOOSE TAILS	60	177	8,709	8,261
QUESTIONNAIRES	1,290	1,341	66,068	61,828

Table C-10. Proportions of the Total Duck Harvest Occurring after the September Teal Season in Certain States During 1971, 1972, 1973, and 1974.

Flyway State	Proportion in regular season 1971	1972	1973	1974
Atlantic				
Maine	.9566	.9335	--	--
Mississippi				
Alabama	.9631	.9624	.9670	.9762
Arkansas	.9907	.9856	.9814	.9853
Illinois	.9335	.9625	.8864	--
Indiana	.9210	.9249	.8857	.9440
Louisiana	.9114	.9008	.9009	.9206
Mississippi	.9880	.9902	.9552	.9905
Missouri	.9271	.9314	.9222	.9334
Ohio	.9381	.9438	.9166	.9530
Tennessee	.9695	.9846	.9713	.9872
Central				
Colorado	.9507	.9728	.9273	.9212
Kansas	.9071	.9285	.8833	.8943
New Mexico	.9439	.9710	.9442	.8992
Oklahoma	.9547	.9491	.9112	.9559
Texas	.9589	.9566	.9380	.9361

WATERFOWL STATUS REPORT, 1976

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Waterfowl Status Report, 1976

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This report contains information from the 1975-76 midwinter waterfowl survey, the 1976 waterfowl breeding population and production surveys, and the waterfowl harvest surveys for the 1975-76 hunting season. This information was provided by the U.S. Fish and Wildlife Service, the Canadian Wildlife Service, and various cooperating State wildlife conservation agencies. Winter surveys are composed of the midwinter survey reports submitted from each of the four flyways and the midwinter survey covering a portion of the west coast of Mexico. The breeding ground surveys section is composed of many individual reports that provide breeding population and production estimates for most waterfowl species within a major portion of their breeding range. The waterfowl harvest survey provides estimates of waterfowl hunting activity and success. Information from surveys of the wintering and breeding populations of waterfowl, coupled with data from the annual harvest survey, are instrumental in developing annual hunting regulations for waterfowl.

Credit has been given to each individual or organization that submitted a report. Although some of the narrative statements have been condensed and a few tables deleted or condensed if they contain data presented elsewhere in this report, the essential information from each report has been retained. The breeding grounds survey strata (Fig. 1) for areas surveyed by Fish and Wildlife Service crews were renumbered in 1974.

Winter Survey

A comprehensive survey of North American waterfowl on their wintering grounds is attempted each January by Fish and Wildlife Service personnel, assisted in the United States by State conservation departments and private individuals, in Canada by the Canadian Wildlife Service, and in Mexico by the Direccion General de la Fauna Silvestre.

The U.S. winter survey was initiated in 1933 and for 14 years was the only source of extensive inventory data relating to waterfowl distribution and abundance. With the development of spring breeding ground surveys, commencing in 1947, less emphasis was placed on the winter survey. It continues, however, to furnish valuable information, such as:

- It provides the only direct means of monitoring the status of species not covered adequately by the spring surveys, such as the black duck (*Anas rubripes*) and brant (*Branta bernicla*).
- Winter survey data complement data from the spring surveys for important but less abundant species such as the redhead (*Aythya americana*) and canvasback (*A. valisineria*).
- It helps define the distribution and species composition of wintering flocks. Long-term data give insight into changes in migration patterns and wintering areas.
- Data are frequently used in land acquisition and refuge decisions. It can be argued that waterfowl use is a good indicator of the value of an area.
- Survey data support continuing research efforts by providing an indication of waterfowl distribution and relative abundance.
- Winter survey data are often used in the preparation of environmental impact assessments.

The Mexican winter surveys began in the early 1950's and were run annually through 1965, with the exception of 1957. From 1965 through the present, complete surveys have been attempted only once every 5th year. Only black brant (*Branta bernicla nigricans*) habitat on the west coast has been surveyed every year.

Survey coverage for 1976 included all major wintering areas in the United States and the west coast of Mexico. Winter survey data appear in tables A-1, A-2, and A-3.

The following are summaries of survey reports from the various flyways and Mexico.

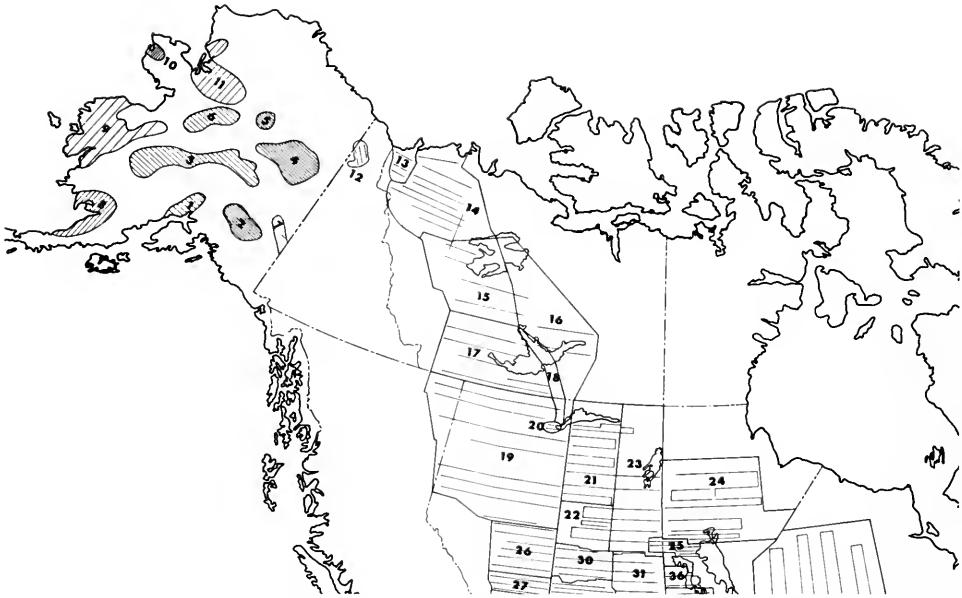

Fig. 1. Transects and strata for aerial waterfowl breeding population and production surveys.

Pacific Flyway

Data supplied by John E. Chattin,
U.S. Fish and Wildlife Service

The winter survey began 5 January 1976 and was completed within a week with only minimal delays. No operational or severe weather problems were encountered and coverage was essentially comparable with previous years.

Participation was also similar to prior years and included 36 Service, 105 State, and 21 other personnel. Thirty-two aircraft flew 194 h over 30,064 kilometers. Additional coverage included 70 automobiles which traveled a total of 10,355 kilometers.

Survey data appear in Table A-1a. Total waterfowl numbers showed a very slight increase over last year. Dabbling duck counts were essentially unchanged from both 1975 and the 1966-75 mean. Mallards (*Anas platyrhynchos*) increased slightly from last year, but remained 25% below the mean. Pintail (*A. acuta*) counts were the same as last year and 29% above the mean.

Diver counts were up 36% from those of last year, which brings them back close to the 10-year mean.

The goose index increased 11% from 1975 and 17% from the mean. Black brant counts were up 23% from last year, but remain 25% below the mean.

Observed numbers of whistling swans (*Cygnus columbianus*) remained essentially unchanged from 1975 and the 1966-75 mean, while those of trumpeter swans (*C. buccinator*) continued their gradual increase.

Central Flyway

Data supplied by Harvey W. Miller,
U.S. Fish and Wildlife Service

Surveys of geese in the Central Flyway were conducted from 15 through 19 December 1975, while ducks and swans were surveyed from 5 through 12 January 1976. The weather was unusually cold in much of the flyway before and during the survey, and habitat conditions were altered by drought, particularly in Texas, Oklahoma, and eastern New Mexico. There were no reports, however, that major

shifts in the distribution of waterfowl had resulted from these extremes.

Participation in the survey effort included 54 Federal and 169 State personnel. Twenty-five aircraft flew 291 h, covering over 34,516 kilometers. An additional 24,839 kilometers were traveled by 148 automobiles. This total effort was just slightly less than that of 1975.

Total waterfowl tallied were essentially unchanged from 1975 results (Table A-1b). The dabbling duck index was down 12% from last year, but up 26% from the 1966-75 mean. The mallard index was roughly equal to the 10-year mean, while that of the pintail exceeded it by 53%.

The diving duck count was slightly up from last year, but showed a 92% increase over the 10-year mean. Most of this increase was due to the counts of redhead and scaup (*Aythya marila* and *A. affinis*), which showed increases of 91 and 168%, respectively. The ring-necked duck (*A. collaris*) count was 53% above that of last year, but still 71% below the mean. A significant decrease was noted in the canvasback index, which was 64% below that of last year, and 20% below the 10-year mean.

Counts were up in all three species of geese in the flyway this year, from 31 to 50% above last year, and 39 to 44% above the 1966-75 mean. There was also the usual trace of Ross' geese (*Anser rossii*) this year, with nine birds counted.

Observed numbers of swans remained about the same as last year, and coots (*Fulica americana*) tallied were up 51% in the same period.

Mississippi Flyway

Data supplied by Kenneth E. Gamble,
U.S. Fish and Wildlife Service

Survey weather was unusually cold in this flyway also, with snow and ice cover in many areas. Survey completion was delayed in some northern States, and coverage was incomplete in Arkansas and Louisiana.

Participation included 454 personnel, who traveled a total of 66,910 kilometers. This coverage represents an increase of 8% over the previous year. Equipment used on the survey included 50 aircraft, 343 automobiles, and 32 boats.

Reports from participants indicated that birds were more concentrated than usual over most of the flyway, due to extensive ice cover in the North, and dry conditions in the South. The resulting increase in visibility may at least partially explain the increased numbers of waterfowl observed—especially among the dabbling ducks.

Data in Table A-1c reflect dramatic increases in counts of mallards, gadwalls (*Anas strepera*), wigeons (*A. americana*), green-winged teal (*A. crecca carolinensis*), and shovelers (*A. clypeata*), in comparison to those of both 1975 and the 1966-75 mean. Increases of lesser magnitude were noted for black ducks, mottled ducks (*A. fulvigula*), and blue-winged teal (*A. discors*), while pintails tallied remained essentially unchanged from 1975, and 29% below the 10-year mean. Total dabbler counts were 56% above those of 1975, and 34% above the mean.

Total diving ducks counted were also increased from the previous year (+104%), but were down 13% from the 10-year mean. Redhead coverage was not comparable with that of 1975, but remained 23% below the mean. As can be seen from the tabulated data, counts of canvasbacks, goldeneyes (*Bucephala clangula*), and buffleheads (*B. albeola*) increased from both 1975 and the mean. Tallies of ring-necked ducks and ruddy ducks (*Oxyura jamaicensis*) both declined in the same periods, and those of scaup nearly tripled since 1975, but remained 15% below the mean.

All goose counts increased compared to 1975 and mean figures, and total geese were 25% above 1975 and 29% above the 10-year mean.

Atlantic Flyway

Data supplied by Warren W. Blandin,
U.S. Fish and Wildlife Service

The Atlantic Flyway experienced weather conditions similar to those of the Mississippi Flyway, with generally cold weather and extensive ice cover prevailing. Some survey delays were noted due to inclement weather, extending completion date to 23 January 1976.

Participation included 44 Federal, 58 State, and 8 other personnel. Equipment included 31 aircraft, 34 automobiles, and 13 boats, with a total of 56,227 kilometers traveled. This is 11% fewer kilometers covered than in 1975.

The total dabbling duck count in the Atlantic Flyway fell below the 1966-75 mean for the 4th consecutive year, but showed a 19% increase from that of last year (Table A-1d). Once again, the apparent increase may be due in part to increased visibility of flocks concentrated by extensive ice cover in northern areas.

One exception to the general increase from 1975 was the shoveler, counts of which decreased 17% in that period, and 47% from the 10-year mean.

Significant decreases from the 10-year means were noted among counts of green-winged teal (-28%), blue-winged teal (-28%), and pintails (-25%). The only significant increase noted was in the gadwall total, which was up 27% from the mean.

Total diving duck counts this year were 30% below

those of 1975 and 29% below the 10-year mean. Scaup counts contributed the most to this apparent decline, with a 53% decrease from last year. Observed numbers of ruddy ducks were also down considerably, as were those of redheads. Redhead figures are subject to question, however, as Florida biologists feel they may have missed a large portion of their birds due to dispersal and rough water conditions. The increase in observed numbers of canvasbacks this year is encouraging, though not large enough to be highly significant.

Good numbers of geese were observed this year, consistent with all three other flyways. A dramatic 66% increase was noted in observed numbers of snow geese (*Anser caerulescens*). This is an 80% increase from the 10-year mean. Another high arctic nester, the Atlantic brant (*Branta bernicla hrota*), showed similar evidence of success this year, although its 44% increase from 1975 counts left it still 3% below the 1966-75 mean.

Whistling swan numbers appear to be continuing their upward trend, according to results of this survey, which showed an increase in observed numbers of 18% from 1975 and 19% from the mean.

Mexico

Data supplied by James F. Voelzer and
K. Duane Norman,
U.S. Fish and Wildlife Service

The winter survey of Mexico's West Coast and Baja, California, was conducted this year during the period from 14-24 January 1976, with excellent survey conditions prevailing. The crew consisted of two Fish and Wildlife Service biologists, and one biologist from the Mexican Direccion General de la Fauna Silvestre.

As usual, all major black brant wintering areas were covered in the survey. It should be emphasized that the major thrust of this survey was on brant. All other waterfowl species were counted incidentally, and while this data is useful for establishing trends, it is incomplete and should be treated as such.

According to the crew, both natural and man-made habitat changes were relatively insignificant over the past year, leaving conditions similar to those of 1975. The one noted exception to this was the Colorado River Delta, which had abundant water for the first time in many years.

Results of the brant survey this year (Table A-3) showed a minor decrease in observed numbers of 3% from 1975, and 14% from the 1966-75 mean. This unexpectedly low count seems to indicate an exception to the excellent breeding season experienced by other high arctic breeders. A partial explanation might be offered, however, by the difficult census conditions resulting from wide dispersal of brant into small groups of 3 to 3,000 in their areas this year.

Total observed numbers of dabbling ducks dropped 19% from 1975, but were 97% above the 10-year mean. Worthy of mention is the appearance of over 2,000 mallards, for the first time in the history of the survey. Virtually all of these were in the Colorado River Delta, and in the opinion of the crew, the unusually wet conditions there drew some birds from the Imperial Valley of California.

Total diving duck counts this year decreased 37% from 1975 but were still 70% above the 10-year mean. As in the previous surveys, the vast majority of these were scaup (96,776) and redheads (50,620).

Observed numbers of white-fronted (*Anser albifrons*) and Canada geese (*Branta canadensis*) were similar to those of 1975 and the 10-year mean, but snow goose counts were up to 470 this year, which is a 236% increase from 1975, and 158% from the mean.

Breeding Ground Survey

Aerial surveys of waterfowl breeding populations and production were developed in the late 1940's by the U.S. Fish and Wildlife Service to monitor the status of habitat and waterfowl, primarily ducks, over a large portion of their breeding grounds in North America. Annual information in this regard is essential for effective management of this resource. Currently, waterfowl population and habitat changes are surveyed over about 3.4 million square kilometers of breeding habitat within portions of Alaska, British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, the Northwest Territories, the Dakotas, and Minnesota.

In addition to the Service's annual breeding ground survey, a number of States conduct a similar survey. State reports that have been submitted to the Service are incorporated herein.

Beginning in 1973, the Waterfowl Status Report reflects only the current year's data for Service-conducted surveys. Breeding population survey tables also have been changed to reflect adjustment for visibility bias. All reports before 1973 reflect unadjusted figures. The historical production survey data (1955-71) are available in *Special Scientific Report—Wildlife* No. 160 (1972). Data for the 1972-75 production surveys are presented in the respective years' status reports. The procedures followed in conducting the breeding ground surveys are established in the Service's standard operating procedures for aerial waterfowl breeding ground population and habitat surveys (1977).

Alaska and the Yukon Territory

Data supplied by James G. King and John Sarvis,
U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

A slightly early spring breakup and favorable

weather over most of the area allowed optimum survey timing this year. Flooding was confined to the mouth of the Yukon, and the lower Innoko, and did not greatly affect nesting. Otherwise, water levels were normal across Alaska and the Yukon. Oil development and pipelines have not yet significantly affected Alaskan waterfowl habitat. Some damage to goose habitat may, however, have resulted from uncontrolled oil exploration on the North Slope by the U.S. Navy.

Breeding Populations (Table B-1)

The survey was conducted during the period from 20 May through 14 June 1976. The 1976 breeding population index increased 22% over that of 1975, and was still 3% above the 1966-75 mean. The total dabbling duck index was 31% above 1975, but 8% below the mean. Notable increases from 1975 were indicated for mallards (+38%), green-winged teal (+76%), shoveler (+112%), and pintail (+28%). All these species still remained at or below the 10-year mean, however, except the shoveler, which increased 20%.

The combined diving duck index was up 26% from both 1975 and the 1966-75 mean. Significant changes were seen in scaup (+27% from 1975 and +30% from the mean) and bufflehead (+86% from 1975 and +81% from the mean).

In the miscellaneous category, oldsquaw (*Clangula hyemalis*) estimates were down (-8% from 1975 and -12% from the mean) as were those of eiders (*Somateria* spp.) (-14% and -42%, respectively). The scoter (*Melanitta* spp. and *Oidemia nigra*) index, however, increased 17% from 1975 and 1% from the 10-year mean.

Northern Alberta, Northeastern British Columbia, and the Northwest Territories

Data supplied by Morton M. Smith, Lonnie D. Schroeder, K. Duane Norman, and John Koerner, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Spring was considered normal to a week or more early in the survey area. Most shallow water areas were ice-free as the survey proceeded north, and there was no evidence of waterfowl delayed by an "ice line." Water levels were low in the Athabasca Delta area and in some of the middle areas of the Northwest Territories.

Breeding Populations (Table B-2)

According to survey results, both total ducks and mallards were at an all-time low for the survey area this year.

Results of the survey compared to 1975 and the 1966-75 mean for the more abundant species are as follows: mallard (-49% and -49%), American wigeon (-18% and -25%), green-winged teal (-55% and -54%), pintail (-37% and -2%), scaup (-25% and -18%), bufflehead (-17% and -8%), oldsquaw (-10% and -35%), scoter (-7% and -14%), and total ducks (-27% and -24%). These represent an all-time low for both mallards and total ducks. In spite of crew changes and absence of air-ground checks, the crew feels that there has definitely been a real decrease in duck breeding populations in the survey area this year.

Northern Saskatchewan, Northern Manitoba, and the Saskatchewan River Delta

Data supplied by Arthur R. Brazda and Richard A. Gimby, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Unusually heavy snowfall this year resulted in high water levels throughout the survey area, with undoubtedly some associated nest destruction. Cold, wet spring weather retarded vegetative growth by at least 2 weeks. Periods of inclement weather were of brief duration, however, and probably did not markedly delay breeding activities.

Breeding Populations (Table B-3)

Survey results indicated an increase in most of the major duck species this year. The dabbling duck index was 62% higher than 1975, and 6% higher than the 1966-75 mean. Diving ducks were up just slightly (+6% from 1975 and +7% from the mean). The total duck index increased 20% from 1975 and 5% from the mean. Changes in the indices of the more abundant duck species from 1975 and the 1966-75 mean are as follows: mallard (+67% and +4%), American wigeon (+38% and -17%), green-winged teal (+72% and +60%), blue-winged teal (+125% and +25%), scaup (-33% and -21%), ring-necked duck (+14% and +1%), American goldeneye (+180% and +130%), and merganser (*Mergus* spp.; -57% and -18%).

Summer Weather and Habitat Conditions

April, May, and June were warm and dry, which were conducive to good nesting success. These conditions, however, coupled with a mild, snowless winter produced low water levels and dry habitat conditions until heavy rainfall reversed the trend in late June and early July. Habitat conditions were good to excellent at the conclusion of the survey.

Production

Survey coverage this year was incomplete but included strata 22, 23, 24, and 25. Only strata 22, 23, and 25 were completed in 1975 and the following comparisons are based on these three strata only.

The 1976 duck brood index decreased 10% from 1975, and 30% from the 1966-75 mean. Average brood

size decreased 19% and 9%, respectively. The late-nesting index (a rough measure of renesting) increased 38% from 1975 and 33% from the 10-year mean. The late-nesting index for mallards was 25% above 1975 and 87% above the mean. For all dabblers, the index increased 38% from 1975 and 33% from the mean. This index for divers was 34.5% below that of 1975, but still 40% above the mean. For all ducks combined it was 15% below 1975 and 49% above the 10-year mean. In the opinion of the survey crew, the value of the late-nesting index as a measure of the renesting effort for the area north of the lower regions of strata 22 and 24 is questionable.

Southern Alberta

Data supplied by K. Duane Norman and John W. Koerner, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

The winter of 1975-76 in southern Alberta was similar to the preceding year—dry and mild. Temperatures in the fall were near normal, but the period from January through May was abnormally warm. The precipitation pattern was a bit more complex, but generally resulted in dry to very dry conditions in the lower three strata, but good to excellent water levels in stratum 26. Overall, the pond index showed a 7% decrease from 1975, and an 8% increase from the 1966-75 mean.

Breeding Populations (Table B-4)

The survey was conducted from 7 through 24 May 1976. The total duck breeding population estimate for 1976 was 8% below 1975 and 1% above the 1966-75 mean. The total dabbler breeding population estimate was 15% below 1975 and 10% below the mean. Pintails accounted for the greatest portion of this decrease (down 387,000 or 27% from the mean). Other species showing significant decreases from the 10-year average were shovelers (-27%), American wigeon (-20%), and gadwall (-12%). The mallard estimate remained essentially unchanged (+4% from 1975 and -4% from the mean), while estimates of green-winged and blue-winged teal increased 18% and 22%, respectively. Total diver estimates were up 54% from 1975 and 101% from the 10-year mean. Dramatic increases in scaup and redhead estimates accounted for most of this change, and even canvasbacks increased 58% from the 1975 estimate and 72% from the mean. The American coot estimate was a slight 4% above last year's, but remained 59% over the 10-year mean.

The combined lone-drake index was only 9% below the long-term average, indicating a properly timed survey. Compared with 1975 lone-drake indices, the 1976 mallard index was slightly lower, the pintail index slightly higher, and the canvasback index much higher.

Summer Weather and Habitat Conditions

May was dry and mild in the grasslands of southern Alberta, but rainy in the parklands. June was cloudy and cool throughout, but with insufficient moisture to maintain water levels. July was warm and dry except in some areas of the parklands. These conditions resulted in disappearance of nearly all temporary water and much of the permanent water in strata 29, 28, and 27, although stratum 26, the most northern stratum, retained good to excellent water levels. The July pond index was 25% below that of 1975 and the 10-year mean.

Production (Table B-4)

The survey was conducted from 4 through 11 July 1976. The duck brood index was 6% above 1975 and 4% below the 1966-75 average. The average brood size was 16% larger than that of 1975, but slightly smaller (-4%) than the 10-year mean. The late-nesting index for all ducks combined was 9% above that of 1975, and 109% above the mean. The index for total dabblers was the same as 1975, but 95% above the 10-year mean, and for divers it was 49% above 1975, and 195% above the mean.

Southern Saskatchewan

Data supplied by Rossalius C. Hanson and James L. Nelson, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Mild temperatures prevailed in southern Saskatchewan during the winter and spring of 1975-76, but precipitation varied according to location. Heavy snowfall and resultant runoff left excellent conditions in the southeast (stratum 35). South-central Saskatchewan also received adequate water, resulting in fair to good conditions there. Elsewhere in the Province water levels were quite low, especially in the western portion, where conditions ranged from fair to poor. Pond counts for the entire survey area were 27% below those of 1975, but still 4% above the 1966-75 average.

Breeding Populations (Table B-5)

The survey was conducted from 3 to 19 May 1976. The total duck population estimate was essentially unchanged from that of 1975, but still 20% above the 1966-75 mean. The dabbler index was unchanged from 1975 and 18% above the mean. Species with significant changes included the mallard (+23% and +24%), gadwall (-5% and +22%), American wigeon (-19% and -16%), blue-winged teal (-32% and +6%),

and pintail (+24% and +40%). The diver index was down 16% from 1975, but still 53% greater than the 1966-75 mean.

The scaup index decreased considerably from 1975 (-21%) but was still 63% above the 10-year mean. Redhead and canvasback indices also maintained large increases over the 10-year mean. The ruddy duck index was 18% lower than in 1975, but remained unchanged from the mean.

Summer Weather and Habitat Condition

A dry windy May in southern Saskatchewan fortunately was followed by many scattered showers and some widespread rain in June and July which partially alleviated the very dry conditions. This badly needed moisture probably helped the renesting effort somewhat. Total July pond counts were down 10% from 1975, but were up 33% from the 1966-75 mean. Vegetation responded well to these late rains, and resulted in good nesting and brood cover, as well as excellent crop recovery.

Production (Table B-5)

The survey was conducted between 2 and 17 July 1976. For the first time in several years, conditions were favorable for a good early hatch, and many class III broods were seen during the survey—especially the mallard, pintail, and canvasback. The late-nesting index also was up from 1975 for most species, except mallard, American wigeon, pintail, redhead, and bufflehead. The overall duck brood index was up 16% from 1975, and 31% from the 1966-75 mean, although the average brood size dropped 4% from 1975 and 13% from the mean. The forecast was for moderate increases in all dabbler species except American wigeon, and an increase in canvasback. Due to contradictory data on the redhead, no prognostication was made for that species.

Southern Manitoba

Date supplied by Douglas S. Benning and
James R. Goldsberry,
U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Fall and winter precipitation were well above normal in southern Manitoba with greatest amounts received in the southwest corner of the Province. Spring weather, however, was warm and quite dry, rapidly removing moisture from upland areas. The wet fall prevented farmers from turning under burning stubble, so stubble fields were in abundance for upland nesters at the season's outset. As drying progressed, however, the fields could be worked, and destruction of many early nests probably resulted. High water levels in ponds, along with dry uplands, allowing close farming, contributed to a scarcity of peripheral nesting cover. Overwater nesters, however, found an abundance of emergent vegetation due to the early spring. Total pond counts were up 12% from both 1975 and the 1966-75 mean.

Breeding Populations (Table B-6)

The survey in southern Manitoba was conducted from 6 through 20 May 1976. The total duck breeding population estimate was 40% above that of 1975, and 31% above the 1966-75 mean. All dabbler species were up substantially from the previous year. Compared with the 10-year mean, the mallard estimate was up 62%, blue-winged teal up 18%, shoveler up 56%, and the pintail was up 41%. The gadwall estimate was up 64% from 1975, but was still 18% below the mean. The wigeon estimate was just slightly above that of 1975, but 39% below the mean. Total dabbler estimates were up 62% from those of 1975, and 29% above the 10-year mean. The most spectacular increase among the diver estimates was that of the scaup, which was 30% above the 1975 estimate, and 101% above the 1966-75 mean. The canvasback estimate decreased 17% from 1975, but still showed an increase of 84% from the mean. The redhead estimate decreased 18% from 1975, which made it equal the 10-year mean. The total diver figure remained unchanged from 1975 but surpassed the mean by 67%. Ruddy duck estimates decreased from 1975 by 9%, and from the mean by 23%. The coot, however, the opportunist who is considered by many to be an indicator of good habitat conditions, showed an increase of 66% over the 1975 population estimate, and 89% over the 10-year mean.

Summer Weather and Habitat Conditions

Above-normal precipitation in June fortunately halted the drying trend experienced by southern Manitoba in April and May. Water levels in July were normal to above normal, and overwater nesting and emergent brood cover was in abundance. Intensive agriculture, however, left upland nesting cover in short supply. The overall pond index was 7% above that of 1975, and 18% above the 1966-75 mean.

Production (Table B-6)

The brood index this year increased 11% over that of 1975, and 25% from the 1966-75 mean. The average brood size was 5.13, which was down only 5% from the mean. The late-nesting index, however, was down considerably on nearly all species. Compared to 1975 and the 10-year mean, the index for total dabblers was down 63% and 61%, respectively, for total divers down 48% and 65%, and the total duck figure was down 54% and 51%. The only ducks which showed increases were

the green-winged teal and the American goldeneye. The production forecast, which uses brood density, late-nesting index, July pond density, and average brood size, indicated production for 1976 slightly below that of 1975, and well below that of the reference period, 1956-62.

Montana

Data supplied by James F. Voelzer, Larry Mallard, Joel Miller, and Don Kudrna, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

An early spring following a winter of slightly below normal precipitation provided arriving waterfowl with near normal water levels and good nesting habitat. Although precipitation was not as good as in 1975, it ranged from 5 centimeters above normal around Billings to near normal in the Cut Bank area. The rainfall gradient also decreased from southwest to northeast. The poorest areas for water levels were southwest of Havre and east through northeast of Malta, where runoff and rainfall were insufficient for good nesting conditions. The overall pond index for Montana was 26% below that of 1975, but only 1% below the 1966-75 mean.

Breeding Populations (Table B-7)

The survey in Montana was conducted from 10 through 21 May 1976. The total duck breeding population estimate was 12% below that of 1975, and 4% below the 1966-75 mean. Dabbler estimates in general decreased 11% from 1975, and 3% from the mean. The mallard estimate showed no change from 1975, and was up 16% from the mean. The survey crew feels that this estimate of 480,300 was probably in error due to an unrealistic visibility rate. The true figure was probably closer to 400,000. Changes from 1975 and 1966-75 mean figures for other dabblers are as follows: gadwall, -24% and -37%; American wigeon, -10% and -45%; green-winged teal, -74% and -51%; blue-winged teal, +10% and +38%; northern shoveler, +1% and +27%; and pintail, -13% and -12%. The crew felt that all these figures are probably accurate except the green-winged teal estimate. In their opinion, their estimate was on the low side, due to low visibility of the species and uneven dispersal over the area, resulting in sampling errors. The total diver estimate was 21% below that of 1975, but about equal to the 1966-75 mean. The redhead estimate was 196% above 1975, and 24% below the mean. The scaup estimate was 52% below 1975, and 20% below the mean. The canvasback estimate showed an incredible increase of 680% from 1975 and 306% from the 10-year mean. The crew felt that this also was in error, and that at least part of the discrepancy was due to a migrant flock unexpectedly encountered on transect. The coot estimate was 333% above 1975 and 133% above the mean. The lone-drake index of 70.4 indicated that the nesting season was well advanced by the time the survey was conducted.

Summer Weather and Habitat Conditions

A series of frontal systems, often accompanied by thunderstorms, crossed the survey area in June and July. These systems brought rain and occasional high winds to much of Montana. Water quality and habitat conditions were much improved as a result of these summer rains. Pond counts in July were 3% below those of 1975 but 29% above the 1966-75 mean.

Production (Table B-7)

The production survey was conducted from 8 through 16 July 1976. The brood index of 45,200 was 11% above that of 1975, and 10% below the 1966-75 mean. The average brood size decreased a slight 6% from 1975, but remained 4% above the mean. The late-nesting index for total ducks was 11% above 1975, with no appreciable change from the 10-year mean. The mallard index was down 21% from 1975, which put it very close to the mean. The gadwall, northern shoveler, and pintail indices were all up considerably from both 1975 and the 10-year mean, while those of the American wigeon, green-winged teal, and blue-winged teal showed a decrease. The redhead index dropped 50% from 1975 but was still 100% above the mean. There was no change in the canvasback index from either reference period, but the scaup index increased 60% from 1975, bringing it to 20% below the mean. Ground survey results indicated that with the improved quality of nesting habitat, last-nesting attempts should be largely successful.

North and South Dakota

Data supplied by Edgar Ferguson and Gerald Pospichal, U.S. Fish and Wildlife Service

Spring Weather and Habitat Conditions

Water conditions varied from excellent to poor in North and South Dakota. Excellent conditions prevailed in the northwest portion of North Dakota, but with minor exceptions the remainder of the survey area was quite dry. Total precipitation in North Dakota was average to slightly above average, while in South Dakota it was well below average. In North Dakota, total pond counts decreased 6% from 1975, but increased 11% from the 1966-75 mean. In South Dakota, however, ponds decreased 31% from 1975 and 33% from the mean. Both vegetation and ducks got an early start in 1976, with the mild spring weather.

Breeding Populations (Tables B-8 and B-9)

The survey in North and South Dakota was conducted from 5 through 20 May 1976. In North Dakota all species of ducks showed a decrease this year, and the total duck index was down 45% from 1975, and 40% from the 1966-75 mean. Among the dabblers, the mallard estimate had the smallest decline from 1975 estimates (-19%), but was still 23% below the mean. The American wigeon decreased 26% from 1975 but was still 84% above the mean. All other dabbler estimates were over 50% down from the previous year, and 40 to 60% below 10-year mean figures. Likewise, all divers showed decreases from 1975, but estimates of scaup, ring-necked ducks, and buffleheads were still above the mean figures. The coot index was down 72% from 1975 and 59% from the 10-year mean.

Estimates of most species of ducks were down in South Dakota as well, but not as drastically as in North Dakota. The total duck estimate was down 21% from that of 1975, and 31% from the 1966-75 mean. The mallard index was down only 6% from 1975 and 20% from the mean. Other dabblers showed greater decreases, with the exception of the American wigeon, which was up 252% from the 1975 index and 113% from the mean. Among divers, the scaup index was up 211% from that of 1975 and 101% from the mean. Otherwise, diver estimates were significantly low when compared with both references. Coot estimates were up 17% from 1975 and down 30% from the mean, which was not as bad as in North Dakota, although this species is ordinarily much less abundant in South Dakota.

Summer Weather and Habitat Conditions

The two western strata in North Dakota retained water levels slightly better than the long-term average. The remainder of the survey area was very dry. North Dakota had some rain in June, but too little to improve habitat conditions. Pond counts decreased in North Dakota by 23% from 1975, with no change from the 1967-75 mean. In South Dakota, ponds decreased 10% from 1975, and 20% from the mean.

Production (Tables B-8 and B-9)

The survey was conducted from 3 through 15 July 1976. The North Dakota brood index was 31% below that of 1975, and 34% below the 1966-75 mean. This index for South Dakota was even worse, -48% below 1975 and 66% below the mean. This is the lowest production estimate on record for South Dakota. The average brood size did not change significantly in North Dakota from either reference period, and for South Dakota it decreased 5% from 1975 and 10% from the 10-year mean. The late nesting indices were also down drastically in both States. In North Dakota, the index for total ducks was down 75% from 1975, and 48% from the 1967-75 mean, while in South Dakota it was down 58% from 1975, and 63% from the 1966-75 mean. The late-nesting index for the Northern shoveler showed a large increase in North Dakota, and that of the pintail was up significantly in both States. Otherwise, decreases and "no change" conditions were the rule. All in all, production prospects for the two States in 1976 looked extremely poor.

Minnesota

Data supplied by Robert L. Jessen,
Minnesota Department of Natural Resources

Weather and Habitat Conditions

The spring of 1976 was below average in runoff and the pond estimate dropped to 110,000 from the 1975 estimate of 206,000. A mild spring resulted in early vegetation growth. The survey was advanced to match the early spring. Early spring precipitation records do not adequately represent the cumulative drought effect.

Breeding Population (Tables B-10 through B-13)

The survey was conducted from 5 through 18 May 1976. The breeding duck index corrected for visibility was 676,000. Most of the 62% increase over the 1975 index resulted from the impressive blue-winged teal estimate of 387,000. This number is more than double the average teal estimate from 1968 to 1975. Drought in Wisconsin, Iowa, the Dakotas, and much of Minnesota appears to have concentrated blue-winged teal in the lake region of Minnesota.

California

Data supplied by J. Ledonne, H. George,
B. Deuel, and D. Hinz,
California Department of Fish and Game

Weather and Habitat Conditions

Habitat conditions in northeastern California were the driest seen in recent years. There was less water available for nesting birds than in the dry year of 1968. The permanent water impoundments and marshes were very low from lack of runoff. The temporary water areas that produced waterfowl in 1975 were dry as a result of the dry winter and spring.

The Central Valley experienced the second driest winter on record and total precipitation was only about one-third of normal. The first real winter storm did not occur until the 1st week of March. Record high temperatures occurred during January and February 1976 throughout the Central Valley. Probably because of the warm weather and poor habitat conditions, the

spring migration was earlier than normal. Since this area is mostly composed of artificial and regulated water impoundments such as rice fields, grasslands, and pastures, the effects of weather and rain influence waterfowl production indirectly as they affect farming operations. Rice field preparations were on schedule this year, with an estimated 161,943 ha planted, which is down from the record crop of 212,550 ha harvested in 1975.

Breeding Populations and Production Indices (Tables B-14 through B-20)

Survey flights in the Central Valley were conducted on 18 and 19 May, while northeastern California was surveyed from 1 through 5 June 1974.

Inspection of data in Table B-18 indicates decreases in both nesting pairs and fall population indices from those of 1975 for nearly all species. The nesting pair index and fall population index for dabbling ducks decreased 29% and 25% from 1975, respectively, while both parameters of diving ducks decreased 45% during the same period. The total duck nesting pair index decreased 30%, while the fall population index fell 27%, compared with 1975. These indices for Canada geese dropped 26% and 23%, respectively, during the period, while both indices for coots decreased 35%.

Colorado

Data supplied by M. R. Szymczak and S. F. Steinert, Colorado Division of Wildlife

Weather and Habitat Conditions

Water conditions were considered below average for duck production in all survey areas. The San Luis Valley was very dry for the 3rd consecutive year, although water in the north end of the Valley showed some improvement over 1975. As a result of a dry winter, water conditions were poor in both North Park and the Yampa Valley, with very little additional runoff predicted for the remainder of the spring and summer. Surveys of the Cache la Poudre and South Platte Valley areas were conducted prior to the initiation of the irrigation season. Water conditions in the Poudre and Platte valleys, although poor during the early spring nesting season, should improve for the late-nesting and brood-rearing period. The small and steady runoff in northwest Colorado kept flooding loss of goose nests in Moffat County to a minimum. A generally mild spring with no severe storms provided excellent conditions for goose production in north central Colorado.

Breeding Population and Production (Tables B-21 through B-27)

Surveys were conducted between 10 May and 30 June 1976. The number of estimated duck breeding pairs in Colorado's production trend areas declined in 1976 from the record high 1975 level. The total of 71,021 is 9% below the 1975 level, but 21% above the long-term average (Table B-21). The number of estimated nesting pairs increased in the San Luis and Cache la Poudre valleys. Major numerical declines were recorded in both North Park and the South Platte Valley (Table B-21). Over 60% of the San Luis Valley breeding population in 1976 is composed of shovelers and green-winged teal. Normally green-winged teal are not prominent in the San Luis Valley breeding population. In North Park, no green-winged teal were observed on aerial transects; therefore, the population, which was estimated to be over 7,000 in North Park in 1975, was nonexistent in 1976. Obviously the reliability of estimating green-winged teal populations using these methods is suspect.

The proportion of the estimated breeding population composed of mallards remained at about 24% (Table B-22). Because of the large estimated breeding population of shovelers in the San Luis Valley, that species was numerically the largest breeding population in Colorado in 1976.

A total of 1,561 Canada geese were observed in Moffat County in northwest Colorado in 1976 (Table B-23). The total is essentially the same as was recorded in 1975 (Table B-24). Total birds observed on the Yampa River increased substantially over the 1975 level as a result of an increase in both gosling production (Table B-25) and number of adults. Gosling production in 1976 declined below 1975 levels on the Green River (Table B-25) as did the number of adults. Gosling production in 1976 increased over the 1975 level on the Little Snake River (Table B-25), but the number of adults observed declined. Overall, in northwest Colorado in 1976 the production increased, but the size of the total population remained comparable to 1975 levels.

In north central Colorado in 1976 gosling production increased over 1975 levels on all trend areas except Boulder (Table B-26). Yet the total number of geese observed declined (Table B-27), indicating a reduction in the number of adult geese observed. Production in 1976 is 14% above the 1969-75 average, but the total number of geese is down 20%.

Nebraska

Data supplied by John T. Sweet, Nebraska Game and Parks Commission

Weather and Habitat Conditions

The 1976 May water index was 5.9% below that of 1975. The spring remained cool and dry except for a few localized rains. Surveys were not conducted in the

rainwater basin production area in 1976 because of the drought conditions and resulting lack of water areas.

Breeding Populations (Table B-28)

The total breeding population index for the Sandhill production area in 1976 was 87,171, which represents a significant increase of 41% from that of 1975. The dabbling duck subtotal increased 49%, and the diver index increased 11%. Increases were noted in all individual species indices except those of gadwall and scaup, which declined by 22% and 11%, respectively. Blue-winged teal showed the most dramatic increase (+176%), and comprised over 30% of the total breeding ducks counted.

Wisconsin

Data supplied by J. C. Haug, H. J. Libby III, and B. Moss, Wisconsin Department of Natural Resources

Weather and Habitat Conditions (Table B-29)

Wetland density did not change drastically between 1975 and 1976 (Table B-29). In the Northern high-duck-density areas, and to a lesser extent in the Southeast-Central area there was, however, a slight decrease in temporary water areas. As in the past, Types I through V wetlands were the areas most used by Wisconsin's breeding waterfowl. Ditching remains an item of concern in the Southeast-Central region of the State.

Breeding Populations and Production (Table B-30)

The total breeding duck population estimate for the three regions in 1976 was 276,400, which is a 33% decrease from the 1975 estimate. The three major categories of mallards, blue-winged teal, and other ducks all showed significant declines in this period (changes of ±20% or greater are considered significant).

The Southeast-Central Region had the greatest decrease (48%), the Northern High Region experienced an insignificant change (-4%), and the Northern Low Region increased markedly (+205%).

All three species categories experienced decreases in the Southeast-Central Region: mallards (-36%), blue-winged teal (-46%), and other species (-84%). The Northern High Region had decreases in mallards (-34%) and other species (-37%), whereas blue-winged teal increased (+64%). The Northern Low Region also had a decrease in mallards (-16%), but showed increases in blue-winged teal (+54%) and other species (+568%). The investigators feel that it is more important to note the overall State decline in ducks, and the large decline in the high density Southeast-Central Region rather than the great increase found in the Northern Low Region. This is because the Northern Low Region is an area of low duck densities, and large-scale percentage changes can result from relatively small changes in duck numbers.

In 1976, 15 black ducks were observed from the air in the Northern High and Northern Low regions. When expanded to a population index, these sightings indicate a statewide population of 2,100 black ducks. This is in contrast to 1975, when no black ducks were observed from the air.

A factor of prime concern is that mallard populations seem to be declining in all three survey regions. This large-scale and widespread decline in mallards is cause for concern and indicates that management actions are necessary to reverse this undesirable trend.

Waterfowl Harvest Surveys

Data supplied by Samuel M. Carney, Lonnie D. Schroeder, and Michael F. Sorensen, U.S. Fish and Wildlife Service

This report provides estimates of waterfowl hunting activity and harvest during the 1975 season and compares them with estimates for the 1974 season. Estimates for both years were derived from information obtained from three sources: (1) the Postal Service's report of duck stamp sales, (2) the U.S. Fish and Wildlife Service's Questionnaire Survey of waterfowl hunters, and (3) the Service's Waterfowl Parts Collection Survey.

Procedures

An explanation of procedures employed in estimating hunter harvest and activity may be found in *Special Scientific Report—Wildlife* No. 138. Similar sample selection, stratification procedures, and computations subsequently have been followed. Major adjustments to data include those for activity by hunters less than 16 years old, who are not surveyed because they are not required to purchase duck stamps (Table C-1), and those used to compensate for memory and prestige biases (Table C-2).

Administrative Reports

Data in this report are based on final duck stamp sales information. In the Administrative Report "Waterfowl Harvest and Hunter Activity in the United States During the 1975 Hunting Season" (6 July 1976), preliminary estimates based on duck stamp sales through the 3rd quarter of fiscal year 1976 were made available for the annual waterfowl regulations meetings in early August, 1976. Age and sex composition are not included herein, but were presented in the Administrative Report "Age and Sex Composition of Ducks and Geese Harvested in the 1975 Hunting Season in Comparison with Prior Years" (12 July 1976).

Results

Bias-adjusted estimates of the total U.S. harvest of ducks (by species), coots, and unretrieved kill are presented in Table C-3. Similar estimates relating to geese are in Table C-4. Detailed State-level estimates of the duck, goose, and coot harvest; migratory waterfowl hunting-stamp sales; and hunter activity and success may be found in Tables C-5 through C-9. These results include hunter activity and harvest during regular and special seasons combined. Estimates are presented as derived to assure agreement between totals and their component parts. This does not imply precision to the last hunter, duck, or day.

The following is a resume of 1975 hunter activity and harvest success by flyway, showing degree of change from 1974:

Atlantic Flyway.—Duck stamp sales totaled 441,800 (-2%), and 1,861,000 ducks (+7%), 165,600 coots (+56%), and 395,500 geese (+17%) were harvested during 2,854,900 hunter-days (+1%). Those persons buying duck stamps for hunting averaged 6.4 days afield (+3%) and bagged an average of 4.2 ducks (+10%) and 0.9 goose (+20%) each. The three most commonly harvested duck species were mallards (22%), wood ducks (17%), and black ducks (14%). Estimates for the Atlantic Flyway are recorded in Table C-5.

Mississippi Flyway.—Duck stamp sales totaled 916,700 (+3%), and 6,589,000 ducks (+28%), 645,000 coots (+32%), and 516,300 geese (+11%) were harvested during 7,178,600 hunter-days (+9%). Those persons buying duck stamps for hunting averaged 7.5 days afield (+6%) and bagged an average of 7.0 ducks (+25%) and 0.6 goose (+9%) each. The three most commonly harvested duck species were mallards (38%), wood ducks (12%), and blue-winged teal (11%). Estimates for the Mississippi Flyway are recorded in Table C-6.

Central Flyway.—Duck stamp sales totaled 430,600 (+1%), and 2,931,600 ducks (+31%), 86,500 coots (-12%), and 583,200 geese (+39%) were harvested during 3,195,400 hunter-days (+9%). Those persons buying duck stamps for hunting averaged 6.9 days afield (+8%) and bagged an average of 6.5 ducks (+29%) and 1.3 geese (+37%) each. The three most commonly harvested duck species were mallards (32%), green-winged teal (18%), and pintail (10%). Estimates for the Central Flyway are recorded in Table C-7.

Pacific Flyway.—Duck stamp sales totaled 400,900 (+1%), and 4,030,900 ducks (+12%), 189,100 coots (-15%), and 321,800 geese (+9%) were harvested during 3,085,900 hunter-days (+6%). Those persons buying duck stamps for hunting averaged 7.3 days afield (+4%) and bagged an average of 9.8 ducks (+10%) and 0.8 goose (+8%) each. The three most commonly harvested duck species were mallards (28%), pintails (26%), and green-winged teal (16%). Estimates for the Pacific Flyway are recorded in Table C-8.

Alaska.—Duck stamp sales totaled 16,300 (+2%), and 70,600 ducks (+15%), 800 coots (+189%), and 11,600 geese (+11%) were harvested during 62,300 hunter-days (+13%). Those persons buying duck stamps for hunting averaged 3.7 days afield (+17%) and bagged an average of 4.4 ducks (+19%), and 0.7 goose (+15%) each. The three most commonly harvested duck species were pintails (24%), mallards (23%), and American wigeon (18%). Estimates for Alaska are recorded in Table C-9.

United States.—Duck stamp sales totaled 2,206,400 (+1%), and 15,483,000 ducks (+21%), 1,087,000 coots (+19%), and 1,828,300 geese (+20%) were harvested during 16,377,100 hunter-days (+7%). Those persons buying duck stamps for hunting averaged 7.1 days afield (+6%) and bagged an average of 6.8 ducks (+20%) and 0.8 goose (+19%) each. The five most commonly harvested duck species were mallards (32%), green-winged teal (12%), pintail (10%), wood ducks (8%), and blue-winged or cinnamon teal (7%). Estimates for the United States are recorded in Table C-9.

APPENDIX

APPENDIX A. WATERFOWL WINTER SURVEY TABLES

Table A-1a. Winter Waterfowl Survey, Pacific Flyway, January 1976.

Species	1976	1975	Percent change from 1975	1966-75 average	Percent change from 1966-75 average
Dabblers					
Mallard	1,400,823	1,323,010	+ 6	1,869,036	- 25
Gadwall	23,153	30,465	- 24	32,057	- 28
Baldpate	575,205	679,478	- 15	752,518	- 24
Green-winged teal	223,821	212,665	+ 5	271,809	- 18
Blue-winged teal	38	0	-	85[a]	-
Cinnamon teal	495	1,095	- 55	3,100[a]	- 84
Shoveler	627,278	632,427	- 1	440,623	+ 42
Pintail	3,327,730	3,277,724	+ 2	2,586,246	+ 29
Wood duck	1,946	12,099	-	4,633[b]	-
Subtotal	6,180,489	6,168,963	0	5,958,489	+ 4
Divers					
Redhead	15,796	13,210	+ 20	10,647	+ 48
Canvasback	83,261	77,673	+ 7	63,042	+ 32
Scaup	116,836	64,665	+ 81	97,335	+ 20
Ring-necked duck	4,568	3,392	+ 35	4,925	- 7
Goldeneye	41,902	36,133	+ 16	43,674	- 4
Bufflehead	20,945	27,005	- 22	31,082	- 33
Ruddy duck	107,568	65,661	+ 64	113,291	- 5
Subtotal	390,876	287,739	+ 36	363,995	+ 7
Miscellaneous					
Scoter	96,801	86,437	+ 12	107,445[a]	- 10
Oldsquaw/harlequin	287	442	- 54	522	- 45
Merganser	33,260	19,876	+ 67	25,268[a]	+ 32
Subtotal	130,348	106,755	+ 22	133,235	- 2
Unidentified	25,470	38,211	- 50	50,044[a]	- 49
Total ducks	6,727,183	6,601,668	+ 2	6,505,125	+ 3
Geese					
Blue and snow goose	486,608	446,400		381,900[c]	+ 27
Ross' goose	28,225	21,790	+ 30	24,822[c]	+ 14
White-fronted goose	81,098	72,540	+ 12	105,929	- 23
Greater Canada goose	218,214	133,530	+ 63	124,808	+ 75
Lesser Canada goose	101,958	153,408	- 34	78,442[a]	+ 30
Cackling goose	51,250	40,794	+ 26	85,157	- 40
Total geese	939,128	846,794	+ 11	801,058	+ 17

Table A-1a. Continued.

Species	1976	1975	Percent change from 1975	1966-75 average	Percent change from 1966-75 average
Brant					
Black brant	9,989	8,150	+ 23	13,359	- 25
Swans					
Whistling swan	51,350	54,347	- 6	56,670	- 9
Trumpeter swan	936	846	+ 11	665	+ 41
Total swans	52,286	55,193	- 5	57,335	- 9
Coots					
American coot	445,653	476,896	- 7	546,597	- 19
Grand total	8,174,239	7,988,579	+ 2	7,997,454	+ 2

[a] 1968 data not included in average.
[b] 1969-1972 data not included in average.
[c] 1967, 1968, 1970, and 1971 data not included in average.

Table A-1b. Winter Waterfowl Survey, Central Flyway, January 1976.

Species	1976	1975	Percent change from 1975	1966-75 average	Percent change from 1966-75 average
Dabblers					
Mallard	2,067,640	1,876,160	+ 10	2,172,330	- 5
Black duck	75	0	--	45	--
Mottled duck	44,670	43,000	+ 4	29,170	+ 53
Gadwall	321,890	327,450	- 2	153,140	+110
Baldpate	228,970	214,010	+ 7	175,060	+ 31
Green-winged teal	668,700	1,044,770	- 36	306,570	+118
Blue-winged teal	73,610	40,260	+ 83	13,270	+455
Cinnamon teal	35	510	--	70	--
Shoveler	29,390	58,890	- 50	67,710	- 57
Pintail	1,258,300	1,719,290	- 27	821,950	+ 53
Subtotal	4,693,280	5,324,340	- 12	3,739,315	+ 26
Divers					
Redhead	530,000	438,800	+ 21	277,480	+ 91
Canvasback	9,510	26,630	- 64	11,940	- 20
Scaup	169,050	190,830	- 11	62,990	+168
Ring-necked duck	1,515	990	+ 53	5,220	- 71
Goldeneye	7,010	10,050	- 30	9,120	- 23
Bufflehead	9,510	8,400	+ 13	5,420	+ 75
Ruddy duck	3,520	3,230	+ 9	8,880	- 60
Subtotal	730,115	678,930	+ 8	381,050	+ 92
Miscellaneous					
Mergansers	69,335	73,120	- 5	68,890	+ 1
Unidentified	21,915	23,460	- 7	30,730	- 29
Total ducks	5,514,645	6,099,850	- 10	4,219,985	+ 31
Geese					
Blue and snow goose	893,885	681,500	+ 31	619,900	+ 44
Ross' goose	9	0	--	15	--
White-fronted goose	54,790	39,500	+ 39	39,540	+ 39
Canada goose	585,180	389,325	+ 50	419,340	+ 40
Total geese	1,533,864	1,110,325	+ 38	1,078,795	+ 42
Swans					
Whistling swan	7	7	0	--	--
Trumpeter swan	140	129	+ 9	--	--
Total swans	147	136	+ 8	--	--
Coots					
American coot	211,950	140,780	+ 51	--	--
Grand total	7,260,606	7,351,091	- 1	5,298,780	+ 37

Table A-1c. Winter Waterfowl Survey, Mississippi Flyway, January 1976.

Species	1976	1975	Percent change from 1975	1966-75 average	Percent change from 1966-75 average
Dabblers					
Mallard	3,945,400	2,860,000	+ 38	3,054,550	+ 29
Black duck	152,400	116,000	+ 31	138,100	+ 10
Mottled duck	67,100	61,000	+ 10	54,990	+ 22
Gadwall	1,660,300	719,900	+131	877,170	+ 89
Baldpate	707,300	238,700	+196	431,000	+ 64
Green-winged teal	1,091,800	677,400	+ 61	831,760	+ 34
Blue-winged teal	217,400	217,700	0	147,940	+ 47
Shoveler	349,600	201,700	+ 73	228,300	+ 53
Pintail	525,500	507,900	+ 3	737,170	- 29
Subtotal	8,716,800	5,600,400	+ 56	6,482,980	+ 34
Divers					
Redhead	22,900	2,900[a]		29,890	- 23
Canvasback	75,800	64,700	+ 17	42,670	+ 78
Scaup	658,300	230,800	+185	770,520	- 15
Ring-necked duck	70,300	94,700	- 26	109,290	- 36
Goldeneye	41,700	23,600	+ 77	27,250	+ 53
Bufflehead	3,900	2,100	+ 86	3,740	+ 4
Ruddy duck	4,900	10,600	- 54	28,070	- 83
Subtotal	877,800	429,400	+104	1,011,430	- 13
Miscellaneous					
Scoter and Eider	TR	0	--	0	--
Oldsquaw	4,900	6,800	- 28	2,260	+117
Merganser	34,100	27,100	+ 26	41,830	- 18
Subtotal	39,000	33,900	+ 15		
Unidentified[b]	56,200	35,200	+ 60	32,910	+ 71
Total ducks	9,689,800	6,098,900	+ 59	7,546,890	+ 28
Geese					
Blue and snow goose	691,600	441,500	+ 57	502,080	+ 38
White-fronted goose	53,400	40,400	+ 32	39,950	+ 34
Canada goose	665,300	649,600	+ 2	553,730	+ 20
Total geese	1,410,300	1,131,500	+ 25	1,095,760	+ 29
Coots					
American coot	1,892,900	1,457,200	+ 30	927,080	+104
Grand total	12,993,000	8,687,600	+ 50	9,569,730	+ 36

[a] Not comparable coverage.
[b] Includes wood duck.

Table A-1d. Winter Waterfowl Survey, Atlantic Flyway, January 1976.

Species	1976	1975	Percent change from 1975	1966-75 average	Percent change from 1966-75 average
Dabblers					
Mallard	200,201	160,958	+ 24	193,570	+ 3
Black duck	276,851	238,830	+ 16	287,164	- 4
Mottled duck	400	400	0	1,110	- 64
Gadwall	24,860	17,061	+ 46	19,588	+ 27
American Wigeon	91,023	73,590	+ 24	86,362	+ 5
Green-winged teal	48,860	50,675	- 4	67,995	- 28
Blue-winged teal	7,350	5,900	+ 25	10,151	- 28
Shoveler	8,742	10,508	- 17	16,647	- 47
Pintail	92,491	72,246	+ 28	123,273	- 25
Tree duck	400	TR	-	100[a]	+300
Subtotal	751,178	630,168	+ 19	805,960	- 7
Divers					
Redhead	91,410	108,241	- 16	136,293	- 33
Canvasback	149,177	117,830	+ 27	124,792	+ 20
Scaup	303,096	646,175	- 53	534,493	- 43
Ring-necked duck	50,593	48,679	+ 4	82,391	- 39
Goldeneye	62,705	44,306	+ 42	62,940	0
Bufflehead	63,439	47,352	+ 34	48,913	+ 30
Ruddy duck	29,493	58,800	- 50	49,186	- 40
Subtotal	749,913	1,071,383	- 30	1,039,008	- 29
Miscellaneous					
Eider	65,908	85,667	- 23	71,442[b]	- 8
Scoter	59,801	28,349	+111	89,943[b]	- 34
Oldsquaw	13,215	11,966	+ 10	11,256	+ 17
Merganser	45,855	45,057	+ 2	45,050	+ 2
Subtotal	184,779	171,039	+ 8	217,691	+ 15
Unidentified	26,606	34,527	- 23	36,930	- 28
Total ducks	1,712,476	1,907,117	- 10	2,099,589	- 18
Geese					
Snow goose	116,984	70,324	+ 66	64,889	+ 80
Blue goose	4,276	1,042	+310	1,177	+263
Canada goose	784,513	819,306	- 4	690,529	+ 14
Total geese	905,773	890,672	+ 2	756,595	+ 20

Table A-1d. Continued.

Species	1976	1975	Percent change from 1975	1966-75 average	Percent change from 1966-75 average
Brant					
Atlantic brant	127,003	88,408	+ 44	131,095	- 3
Swans					
Whistling swan	78,646	66,589	+ 18	66,218	+ 19
Mute swan	2,622	2,643	- 1	1,790[c]	+ 46
Total swans	81,268	69,232	+ 17	68,008	+ 19
Coots	441,819	305,915	+ 44	376,421	+ 17
Grand total	3,268,339	3,261,344	0	3,431,708	- 5

[a] 5-year average.
[b] 8-year average - total sea ducks long-term average data is for 1966-75.
[c] 6-year average.

Table A-2. Winter Survey, January 1976--Waterfowl by State and Flyway (nearest hundred; TR = Trace).

State	Ducks	Geese	Brant	Swans	Coots	Total
Pacific Flyway						
Washington	919,600	108,600	7,500	1,600	44,200	1,081,500
Oregon	442,900	143,300	1,800	6,000	24,700	618,700
Idaho	294,100	24,100	0	700	5,500	324,400
Nevada	50,700	6,400	0	2,700	16,100	75,900
California	4,884,500	647,900	700	40,700	339,100	5,912,900
Utah	63,900	2,600	0	400	5,500	72,400
Arizona	3,300	1,600	0	0	2,800	7,700
Montana	31,000	2,800	0	200	7,700	41,700
Wyoming	1,100	200	0	TR	0	1,300
Colorado	23,300	1,500	0	0	0	24,800
New Mexico	12,800	200	0	0	0	13,000
Mexico[a]	1,486,500	2,500	112,100	0	162,500	1,763,600
Flyway total	8,213,700	941,700	122,100	52,300	608,100	9,937,900
Central Flyway						
Montana	31,700	900	0	0	0	32,600
Wyoming	34,700	4,700	0	0	0	39,400
North Dakota	4,500	TR	0	0	0	4,500
South Dakota	56,500	51,800	0	100	0	108,400
Nebraska	324,900	52,000	0	0	0	376,900
Colorado	276,700	134,500	0	0	0	411,200
Kansas	619,300	68,700	0	TR	TR	688,000
Oklahoma	343,500	100,100	0	0	15,900	459,500
New Mexico	124,100	67,800	0	0	0	191,900
Texas	3,547,000	1,053,500	0	TR	196,000	4,796,500
Flyway total	5,362,900	1,534,000	0	100	211,900	7,108,900
Mississippi Flyway						
Minnesota	29,300	25,600	0	TR	TR	54,900
Wisconsin	28,500	34,000	0	0	1,800	64,300
Michigan	49,600	33,500	0	0	100	83,200
Iowa	148,300	58,700	0	0	0	207,000
Missouri	465,800	403,400	0	0	10,700	879,900
Illinois	793,600	234,200	0	TR	1,200	1,029,000
Indiana	58,400	9,000	0	0	500	67,900
Ohio	42,800	16,300	0	0	0	59,100
Arkansas[a]	1,132,800	2,200	0	0	12,600	1,147,600
Mississippi[b]	810,900	4,200	0	0	8,600	823,700
Louisiana[c]	5,515,100	490,000	0	0	1,825,000	7,830,100
Alabama	112,800	29,000	0	0	12,600	154,400
Kentucky	49,200	20,800	0	0	1,400	71,400
Tennessee	452,700	49,400	0	TR	18,400	520,500
Flyway total	9,689,800	1,410,300	0	TR	1,892,900	12,993,000

Table A-2. Continued.

State	Ducks	Geese	Brant	Swans	Coots	Total
Atlantic Flyway						
Maine	63,000	600	0	0	0	63,600
New Hampshire	2,800	500	0	0	0	3,300
Vermont	5,000	0	0	0	0	5,000
Massachusetts	106,300	13,600	1,100	300	0	121,300
Connecticut	29,100	6,000	0	700	0	35,800
Rhode Island	24,300	1,800	0	200	0	26,300
New York	126,900	11,400	17,000	700	2,700	158,700
New Jersey	300,600	41,100	99,000	1,000	1,400	443,100
Pennsylvania	30,300	38,400	0	600	500	69,800
Delaware	49,500	66,400	1,100	400	200	117,600
Maryland	158,700	495,700	1,600	28,500	3,300	687,800
Virginia	101,200	89,600	6,900	7,100	33,000	237,800
West Virginia	2,200	300	0	0	TR	2,500
North Carolina	300,500	121,100	200	41,700	215,600	679,100
South Carolina	187,100	16,700	0	0	16,200	220,000
Georgia	35,300	1,100	TR	0	9,900	46,300
Florida	189,700	1,500	0	0	159,000	350,200
Flyway total	1,712,500	905,800	126,900	81,200	441,800	3,268,200

[a] See table A-3.
[b] Survey not completed in these States.
[c] Includes areas not covered in 1975.

Table A-3. Winter Waterfowl Survey, West Coast of Mexico, January 1976.

Species	1976	1975	Percent change from 1975	1966-75 average	Percent change from 1966-75 average
Dabblers					
Mallard	2,027	0	--	3	--
Gadwall	15,540	4,220	+268	5,954	+161
Baldpate	275,110	87,840	+213	47,441	+480
Green-winged teal	173,870	194,030	- 10	82,257	+111
Blue-winged teal and cinnamon teal	93,660	76,150	+ 23	27,168	+245
Shoveler	54,590	191,555	- 72	68,903	- 21
Pintail	686,821	1,047,980	- 34	428,803	+ 60
Black-bellied tree duck	7,700	4,360	+ 77	4,374	+ 76
Fulvous tree duck	1,380	6,295	- 78	1,768	- 22
Subtotal	1,310,698	1,612,430	- 19	666,671	+ 97
Divers					
Redhead	50,620	66,400	- 24	33,544	+ 51
Canvasback	450	1,260	- 64	1,455	- 69
Scaup	96,776	169,140	- 43	39,165	+147
Ring-necked duck	60	0	--	0	--
Goldeneye	0	0	--	691	--
Bufflehead	8,593	5,850	+ 47	11,160	- 23
Ruddy duck	875	8,200	- 89	6,491	- 87
Subtotal	157,374	250,850	- 37	92,506	+ 70
Miscellaneous					
Scoter	10,487	1,380	+660	1,436	+630
Merganser	8,649	7,270	+ 19	3,659	+136
Subtotal	19,136	8,650	+121	5,095	+276
Total ducks	1,487,208	1,871,930	- 21	764,272	+ 95
Geese					
Snow goose	470	140	+236	182	+158
White-fronted goose	1,973	1,950	+ 1	1,975	0
Canada goose	25	20	--	6	--
Subtotal	2,468	2,110	+ 17	2,163	+ 14
Brant					
Black brant	112,056	115,340	- 3	129,712	- 14
Coots					
American coot	162,460	135,560	+ 20	53,807	+202

APPENDIX B. WATERFOWL BREEDING GROUND SURVEY TABLES.

Table B-1. Alaska--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)				Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975[a] average	% change from average	1976	% change from 1975	1966-1975 average	% change from average
May Ponds	not applicable				July Ponds	not applicable		
					Duck Brood Index	not applicable		
					Avg. Brood Size	not applicable		
	Breeding Population Estimates				Late-nesting indexes			
Ducks:								
Dabblers:								
Mallard	153.6	+38	183.3	-16				
Black Duck	0.0	n.c.	0.0	n.c.	not applicable			
Gadwall	.9	-40	1.6	-44				
American Wigeon	344.3	+10	454.8	-24				
Green-winged Teal	205.0	+76	270.7	-24				
Blue-winged Teal	0.0	n.c.	1.5	-100				
Northern Shoveler	92.2	+112	77.0	+20				
Pintail	1,153.7	+28	1,135.1	+2				
Subtotal	1,949.7	+31	2,124.0	-8				
Divers:								
Redhead	0.1	n.c.	0.1	n.c.				
Canvasback	47.9	+25	76.9	-38				
Scaup	1,494.8	+27	1,146.0	+30				
Ring-necked	0.0	n.c.	0.0	n.c.				
American Goldeneye	133.8	-9	138.2	-3				
Bufflehead	117.4	+86	64.9	+81				
Subtotal	1,794.0	+26	1,426.1	+26				
Miscellaneous:								
Oldsquaw	497.8	-8	562.9	-12				
Eider	17.8	-14	30.2	-42				
Scoter	376.2	+17	373.1	+1				
Ruddy Duck	0.0	n.c.	0.0	n.c.				
Merganser	3.1	-59	5.0	-38				
Subtotal	894.9	n.c.	971.2	-8				
TOTAL DUCKS	4,638.6	+22	4,521.3	+3				
Coots:								
American Coot	0.0	n.c.	0.0	n.c.				
GRAND TOTAL	4,638.6	+22	4,521.3	+3				

[a]Average added in for Strata 7 and 12 in years not flown.

Table B- 2. Northern Alberta and the Northwest Territories--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)				Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975 average	% change from average	1976	% change from 1975	1966-1975 average	% change from average
May Ponds	not applicable				July Ponds	not applicable		
					Duck Brood Index	not applicable		
					Avg. Brood Size	not applicable		
	Breeding Population Estimates				Late-nesting indexes			
Ducks:								
Dabblers:								
Mallard	581.0	-49	1,149.3	-49	not applicable			
Black Duck	0.5		0.0					
Gadwall	12.8	+14	21.8	-41				
American Wigeon	538.5	-18	716.5	-25				
Green-winged Teal	324.0	-55	706.9	-54				
Blue-winged Teal	165.8	-48	130.6	+27				
Northern Shoveler	110.8	-27	155.2	-29				
Pintail	395.6	-37	402.3	-2				
Subtotal	2,129.0	-42	3,282.6	-35				
Divers:								
Redhead	17.4	-41	35.2	-51				
Canvasback	37.7	-47	66.4	-43				
Scaup	3,170.1	-25	3,878.7	-18				
Ring-necked	74.3	-46	116.9	-36				
American Goldeneye	110.9	+100	84.0	+32				
Bufflehead	404.4	-17	440.2	-8				
Subtotal	3,814.8	-23	4,621.4	-17				
Miscellaneous:								
Oldsquaw	574.1	-10	878.3	-35				
Eider	0.0	n.c.	0.0	n.c.				
Scoter	673.2	-7	783.2	-14				
Ruddy Duck	2.2	-94	35.3	-94				
Merganser	133.6	+148	74.6	+79				
Subtotal	1,383.1	-5	1,771.4	-22				
TOTAL DUCKS	7,326.9	-27	9,675.4	-24				
Coots:								
American Coot	32.5	-33	66.2	-51				
GRAND TOTAL	7,359.4	-27	9,741.6	-24				

Table B- 3. Northern Saskatchewan and Northern Manitoba--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)				Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975 average	% change from average	1976[a]	% change from 1975	1966-1975 average	% change from average
May Ponds	not applicable				July Ponds	not applicable		
					Duck Brood Index			
					Avg. Brood Size			
	Breeding Population Estimates				Late-nesting indexes			
Ducks:								
Dabblers:								
Mallard	1,045.6	+67	1,000.1	+4	not applicable			
Black duck	3.5	+133	5.9	-41				
Gadwall	23.5	-12	68.7	-66				
American Wigeon	255.3	+38	306.5	-17				
Green-winged Teal	414.7	+72	258.3	+60				
Blue-winged Teal	382.8	+125	305.5	+25				
Northern Shoveler	20.7	-56	51.8	-60				
Pintail	71.7	-2	91.2	-21				
Subtotal	2,217.8	+62	2,088.0	+6				
Divers:								
Redhead	34.6	+7	68.9	-50				
Canvasback	36.9	+34	49.9	-26				
Scaup	672.9	-33	851.3	-21				
Ring-necked	341.0	+14	337.3	+1				
American Goldeneye	388.2	+180	168.7	+130				
Bufflehead	271.5	+86	154.2	+76				
Subtotal	1,745.1	+6	1,630.3	+7				
Miscellaneous:								
Oldsquaw	2.4		0.0					
Eider	0.0	n.c.	0.0	n.c.				
Scoter	74.3	+31	59.7	+24				
Ruddy Duck	7.1	+73	28.0	-75				
Merganser	191.6	-57	234.9	-18				
Subtotal	275.4	-46	322.6	-15				
TOTAL DUCKS	4,238.3	+20	4,040.9	+5				
Coots:								
American Coot	75.7	+29	125.3	-40				
GRAND TOTAL	4,314.0	+20	4,166.2	+4				

[a]Strata 21 not flown in 1976.

Table B- 4. Southern Alberta--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975 average	% change from average		1976	% change from 1975	1966-1975 average	% change from average
May Ponds	830.3	-7	768.0	+8	July Ponds	378.1	-25	507.3	-25
					Duck Brood Index	118.8	+6	123.2	-4
					Avg. Brood Size	5.334	+16	5.574	-4
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	1,453.5	+4	1,507.8	-4		33.7	+9	16.9	+99
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	347.7	+14	395.7	-12		9.1	-49	8.4	+8
American Wigeon	355.6	-7	442.0	-20		7.4	-49	5.5	+35
Green-winged Teal	315.5	+37	267.7	+18		12.6	+34	6.7	+88
Blue-winged Teal	833.2	-25	683.2	+22		30.7	+138	7.0	+339
Northern Shoveler	337.5	-39	463.1	-27		6.2	-65	5.9	+5
Pintail	1,058.8	-32	1,445.8	-27		15.5	+15	8.8	+76
Subtotal	4,701.8	-15	5,205.3	-10		115.2	-1	59.2	+95
Divers:									
Redhead	379.3	+41	132.6	+186		2.4	+41	1.6	+50
Canvasback	124.8	+58	72.7	+72		3.1	+343	.8	+288
Scaup	666.5	+74	360.6	+85		44.9	+44	14.5	+210
Ring-necked	4.4	-46	5.9	-24		.6	-45	.5	+20
American Goldeneye	31.9	+83	12.6	+153		.4	n.c.	.2	+100
Bufflehead	44.3	-16	37.4	+18		.9		.1	+800
Subtotal	1,251.2	+54	621.8	+101		52.3	+49	17.7	+195
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	29.0	+233	19.5	+49		1.2		.5	+140
Ruddy Duck	32.9	-82	86.2	-62		5.0	-35	5.8	-14
Merganser	0.0	-100	3.1	-100		.2		.1	+100
Subtotal	61.9	-69	108.8	-43		6.4	-17	6.4	n.c.
TOTAL DUCKS	6,014.9	-8	5,935.9	+1		173.9	+9	83.3	+109
Coots:									
American Coot	505.4	+4	317.8	+59					
GRAND TOTAL	6,520.3	-7	6,253.7	+4					

Table B-5. Southern Saskatchewan --1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975 average	% change from average		1976	% change from 1975	1966-1975 average	% change from average
May Ponds	2,177.4	-27	2,102.6	+4	July Ponds	1,382.1	-10	1,039.8	+33
					Duck Brood Index	172.5	+16	131.6	+31
					Avg. Brood Size	4.528	-4	5.194	-13
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	3,005.2	+23	2,416.6	+24		69.4	-24	60.2	+15
Black Duck	0.0	-100	.2	-100		0.0	n.c.	0.0	n.c.
Gadwall	715.8	-5	584.3	+22		49.5	+35	22.9	+116
American Wigeon	662.7	-19	792.6	-16		11.9	-19	13.4	-11
Green-winged Teal	318.5	+2	338.4	-6		14.0	+32	8.0	+75
Blue-winged Teal	1,774.9	-32	1,667.3	+6		34.7	+41	22.1	+57
Northern Shoveler	818.9	+12	743.8	+10		28.9	+53	10.1	+186
Pintail	2,538.6	+24	1,814.1	+40		27.5	-6	24.6	+12
Subtotal	9,834.6	+1	8,357.3	+18		235.9	+4	161.3	+46
Divers:									
Redhead	268.4	-7	189.6	+42		14.6	-9	5.4	+170
Canvasback	280.7	-8	185.1	+52		5.3	+4	3.4	+56
Scaup	491.2	-21	300.5	+63		24.3	+19	12.4	+96
Ring-necked	48.9	-95	19.5	-84		3.3	+32	1.1	+200
American Goldeneye	18.0	-2	15.9	+13		0.0	n.c.	.3	-100
Bufflehead	33.4	-46	35.5	-6		3.9	-11	1.9	+105
Subtotal	1,140.6	-16	746.1	+53		51.4	+6	24.5	+110
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	1.3	-85	4.4	-70		0.0	-100	.3	-100
Ruddy Duck	94.5	-18	93.2	+1		29.1	+20	14.0	+108
Merganser	3.4	-28	1.4	+143		0.0	n.c.	.1	-100
Subtotal	99.2	-22	99.0	n.c.		29.1	+9	14.4	+102
TOTAL DUCKS	11,074.4	-1	9,202.4	+20		316.4	+5	200.2	+58
Coots:									
American Coot	1,494.8	+27	718.1	+108					
GRAND TOTAL	12,569.2	+1	9,920.5	+27					

Table B-6. Southern Manitoba--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975 average	% change from average		1976	% change from 1975	1966-1975 average	% change from average
May Ponds	802.8	+12	716.4	+12	July Ponds	392.2	+7	331.0	+18
					Duck Brood Index	30.8	+11	24.6	+25
					Avg. Brood Size	5.132	-15	5.386	-5
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	535.9	+54	331.8	+62		4.7	-64	11.3	-58
Black Duck	0.0	n.c.	.3	-100		0.0	n.c.	0.0	n.c.
Gadwall	73.3	+64	89.0	-18		.5	-38	1.3	-62
American Wigeon	33.8	+8	55.1	-39		.2	-91	1.9	-89
Green-winged Teal	111.1	+67	103.6	+7		1.1	+120	.8	+38
Blue-winged Teal	654.7	+81	556.0	+18		.3	-93	4.4	-93
Northern Shoveler	157.9	+208	101.2	+56		.5		.9	-44
Pintail	249.6	+15	176.4	+41		1.3	-38	1.4	-7
Subtotal	1,816.3	+62	1,413.4	+29		8.6	-63	22.0	-61
Divers:									
Redhead	83.2	-18	83.3	n.c.		0.1	-86	1.0	-90
Canvasback	110.8	-17	60.2	+84		.4		.6	-33
Scaup	208.8	+30	103.7	+101		.2	-71	1.9	-89
Ring-necked	19.0	+2	8.7	+18		.2	-80	.3	-33
American Goldeneye	34.5	-9	15.0	+131		.5	+67	.1	+400
Bufflehead	22.5	+23	15.4	+46		0.0	n.c.	.2	-100
Subtotal	478.8	+1	286.3	+67		1.4	-48	4.1	-65
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	2.4	+20	.9	+167		0.0	n.c.	0.0	n.c.
Ruddy Duck	88.7	-9	115.5	-23		5.1	-31	5.0	+2
Merganser	3.0	-69	3.4	-12		0.0	n.c.	0.0	n.c.
Subtotal	94.1	-14	119.8	-22		5.1	-31	5.0	+2
TOTAL DUCKS	2,389.2	+40	1,819.5	+31		15.1	-54	31.1	-51
Coots:									
American Coot	470.5	+66	249.0	+89					
GRAND TOTAL	2,859.7	+44	2,068.5	+38					

Table B- 7. Montana--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975 average	% change from average		1976	% change from 1975	1966-1975[a] average	% change from average
May Ponds	237.9	-26	240.9	-1	July Ponds	222.7	-3	172.8	+29
					Duck Brood Index	45.2	+11	50.4	-10
					Avg. Brood Size	5.380	-6	5.183	+4
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	480.3	n.c.	415.2	+16		8.4	-21	8.2	+2
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	55.3	-24	88.1	-37		3.2	+700	1.3	+146
American Wigeon	99.6	-10	181.0	-45		1.7	-29	4.1	-58
Green-winged Teal	38.7	-74	78.6	-51		0.0	-100	.4	-100
Blue-winged Teal	207.1	+10	150.3	+38		.7	-50	1.4	-50
Northern Shoveler	102.2	+1	80.6	+27		.9	+800	.7	+28
Pintail	226.1	-13	255.5	-12		2.8	+115	2.0	+40
Subtotal	1,209.3	-11	1,249.3	-3		17.7	+5	18.1	-2
Divers:									
Redhead	7.4	+196	9.7	-24		.2	-50	.1	+100
Canvasback	19.5	+680	4.8	+306		.4		.4	n.c.
Scaup	39.1	-52	49.0	-20		.8	+60	1.0	-20
Ring-necked	1.7		1.6	+6		0.0	n.c.	.1	-100
American Goldeneye	0.0	n.c.	1.5	-100		0.0	n.c.	.1	-100
Bufflehead	.6	+50	.9	-33		0.0	n.c.	0.0	n.c.
Subtotal	68.3	-21	67.5	+1		1.4	+56	1.7	-18
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Ruddy Duck	6.7	-28	15.4	-56		.8	+700	.4	+100
Merganser	.5	-44	.9	-44		0.0	n.c.	.1	-100
Subtotal	7.2	-29	16.3	-56		.8	+700	.5	+60
TOTAL DUCKS	1,284.8	-12	1,333.1	-4		19.9	+11	20.3	-2
Coots:									
American Coot	68.4	+333	29.3	+133					
GRAND TOTAL	1,353.2	-8	1,362.4	-1					

[a]1971 not included in average.

Table B-8. North Dakota--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975[a] average	% change from average		1976	% change from 1975	1967-1975 average	% change from average
May Ponds	638.7	-6	573.4	+11	July Ponds	361.3	-23	360.2	n.c.
					Duck Brood Index	28.3	-31	43.1	-34
					Avg. Brood Size	5.661	+1	5.751	-2
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	459.1	-19	593.4	-23		9.7	-71	16.6	-42
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	161.1	-51	303.3	-47		4.1	-87	14.0	-71
American Wigeon	224.6	-26	122.2	+84		.9	-18	1.0	-10
Green-winged Teal	43.7	-54	72.1	-39		.4		1.0	-60
Blue-winged Teal	515.5	-54	996.1	-48		1.4	-95	11.0	-87
Northern Shoveler	109.2	-52	274.9	-60		1.1	+38	.3	+267
Pintail	208.6	-54	577.5	-64		3.9	+26	2.1	+86
Subtotal	1,721.8	-44	2,939.5	-41		21.5	-78	46.0	-53
Divers:									
Redhead	146.0	-32	152.3	-4		.5	-85	1.4	-64
Canvasback	15.3	-55	41.4	-63		0.0	-100	.1	-100
Scaup	63.5	-26	38.7	+64		0.0	-100	.5	-100
Ring-necked	7.6	-5	6.3	+21		0.0	n.c.	0.0	n.c.
American Goldeneye	0.0	n.c.	.3	-100		0.0	n.c.	.1	-100
Bufflehead	.6		.5	+20		0.0	n.c.	0.0	n.c.
Subtotal	233.0	-32	239.5	-3		.5	-87	2.1	-76
Miscellaneous:									
Oldsqyaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Ruddy Duck	22.7	-83	139.9	-84		5.9	-30	5.8	+2
Merganser	0.0	n.c.	.4	-100		0.0	n.c.	0.0	n.c.
Subtotal	22.7	-83	140.3	-84		5.9	-30	5.8	+2
TOTAL DUCKS	1,977.5	-45	3,319.3	-40		27.9	-75	53.9	-48
Coots:									
American Coot	144.8	-72	356.7	-59					
GRAND TOTAL	2,122,3	-48	3,676.0	-42					

[a]Average included for Stratum 43 in 1966.

Table B- 9. South Dakota--1976 waterfowl breeding ground survey results.

	Waterfowl Breeding Pair Survey (numbers in thousands)					Waterfowl Production Survey (numbers in thousands)			
	1976	% change from 1975	1966-1975 average	% change from average		1976	% change from 1975	1966-1975 average	% change from average
May Ponds	249.7	-31	374.8	-33	July Ponds	202.8	-10	253.3	-20
					Duck Brood Index	10.9	-48	32.2	-66
					Avg. Brood Size	4.752	-5	5.296	-10
	Breeding Population Estimates					Late-nesting indexes			
Ducks:									
Dabblers:									
Mallard	331.6	-6	415.1	-20		5.5	-55	15.0	-63
Black Duck	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Gadwall	85.4	-32	163.3	-48		3.0	-62	8.3	-64
American Wigeon	172.3	+252	81.0	+113		1.2	-20	2.1	-43
Green-winged Teal	52.0	-36	47.4	+10		.2	n.c.	.6	-67
Blue-winged Teal	484.9	-10	703.4	-31		1.1	-85	6.3	-82
Northern Shoveler	68.3	-26	152.9	-55		0.0	n.c.	.7	-100
Pintail	111.7	-49	280.8	-60		2.9	+93	2.5	+16
Subtotal	1,306.2	-11	1,843.9	-29		13.9	-55	35.5	-61
Divers:									
Redhead	9.0	-73	48.8	-82		0.0	-100	.5	-100
Canvasback	3.6	-25	9.1	-60		.3		.1	+200
Scaup	57.2	+211	28.5	+101		0.0	n.c.	.2	-100
Ring-necked	1.8		2.2	-18		0.0	n.c.	0.0	n.c.
American Goldeneye	0.0	n.c.	.1	-100		0.0	n.c.	0.0	n.c.
Bufflehead	0.0	n.c.	.3	-100		0.0	n.c.	0.0	n.c.
Subtotal	71.6	+28	89.0	-20		.3	-40	.8	-62
Miscellaneous:									
Oldsquaw	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Eider	0.0	n.c.	0.0	n.c.		0.0	n.c.	0.0	n.c.
Scoter	0.0	n.c.	0.0	n.c.		0.0	n.c.	.1	-100
Ruddy Duck	6.2	-97	61.9	-90		0.0	-100	2.4	-100
Merganser	0.0	n.c.	.1	-100		0.0	n.c.	0.0	n.c.
Subtotal	6.2	-97	62.0	-90		0.0	-100	2.5	-100
TOTAL DUCKS	1,384.0	-21	1,994.9	-31		14.2	-58	38.8	-63
Coots:									
American Coot	89.8	+17	129.2	-30					
GRAND TOTAL	1,473.8	-19	2,124.1	-31					

Table B-10. Minnesota Waterfowl Breeding Population Estimates by Species and Stratum for 1976. Estimates are Expanded for Coverage but Not for Visibility.

Species	Stratum[a] I	II	III	IV	State total
Dabblers					
Mallard	12,736	21,678	35,948	13,707	84,069
Black duck	0	0	0	0	0
Gadwall	56	382	531	0	969
American wigeon	112	0	885	1,903	2,900
Green-winged teal	0	127	0	0	127
Blue-winged teal	14,536	20,148	55,339	3,093	93,116
Northern shoveler	393	765	10,979	95	12,232
Pintail	56	382	1,239	0	1,677
Wood duck	2,586	3,315	6,640	0	12,541
Subtotal	30,475	46,797	111,561	18,798	207,631
Divers					
Redhead	1,405	892	1,593	0	3,890
Canvasback	393	0	177	0	570
Ring-necked duck	1,855	892	1,770	380	4,897
Common goldeneye	0	127	531	285	943
Bufflehead	0	0	177	523	700
Ruddy duck	393	0	796	0	1,189
Merganser	0	0	0	0	0
Scaup	4,414	3,379	14,963	1,523	24,279
Subtotal	8,460	5,290	20,007	2,711	36,468
Total ducks	38,935	52,087	131,568	21,509	244,099
Other					
Coots	9,109	3,443	40,375	95	53,022
Canada geese	731	573	3,718	952	5,974
TOTAL	48,775	56,103	175,661	22,556	303,095

[a] The strata given here represent the following: high density of lare basins; medium density of lare basins; low density of lare basins; and Roseau and Red Lake bag region in northwestern Minnesota.

Table B-11. Minnesota--estimated number of breeding ducks in the spring of 1976.

Species	Unadjusted population index	Visibility	Adjusted population index	Percentage change from 1975
Mallard	84,069	55%	152,000	+ 4
Blue-winged teal	93,116	24%	387,000	+137
Ring-necked duck	4,897	55%	9,000	- 40
Total	244,099	36%	676,000	+ 62

Table B-12. Breeding Population Estimates for Ducks in Minnesota in Recent Years Based on Aerial Censuses Corrected for Visibility.

Year	Mallard	Blue-winged teal	All ducks
1968	110,000	160,000	390,000
1969	101,000	162,000	369,000
1970	111,000	153,000	316,000
1971	96,000	153,000	331,000
1972	69,000	100,000	258,000
1973	104,000[a]	136,000[a]	423,000[b]
1974	98,000[a]	112,000[a]	404,000[b]
1975	146,000	163,000	417,000
1976	152,000	387,000	676,000

[a] Procedural changes in manipulation of data initiated in 1975 have been used for revision of raw data in these years. Values represented here differ slightly from previous years.

[b] Total duck figures do not reflect the changes noted in footnote a.

Table B-13. Minnesota--Success of Mallard Nesting in the Spring of 1976 as indicated by Status of Drakes in Early June with Comparisons to Previous Years.

Year	Total drakes tallied	Percentage of drakes		
		paired	single	flocked
1969	507	3.8	6.9	89.3
1970	253	3.6	6.3	90.1
1971[a]	318	5.7	11.0	83.3
1972	404	4.0	4.5	91.8
1973	449	1.7	7.2	91.6
1974	316	4.7	15.2	80.1
1975	410	3.4	6.8	89.8
1976	225	3.5	7.5	89.0

[a] Approximately half of the drakes with hens were observed this year in a localized area of southwestern Otter Tail County having a recent history of heavy thunder shower activity.

Table B-14. California--Estimated Total Nesting Pairs and Fall Population Indices in the Sacramento Valley,[a] 1973-1976.

Species	Estimated total nesting pairs				Fall population indices			
	1973	1974	1975	1976	1973	1974	1975	1976
Dabblers								
Mallard	27,010	25,270	39,320	26,520	112,800	105,510	164,220	110,760
Gadwall	440	490	800	440	2,200	2,410	4,000	2,200
Cinnamon teal	1,920	1,560	4,240	2,200	7,170	5,830	15,830	8,220
Northern shoveler	40	0	120	0	180	0	540	0
Pintail	2,120	800	720	480	8,160	3,080	2,780	1,850
Subtotal	31,530	28,120	45,200	29,640	130,510	116,830	187,370	123,030
Divers								
Cavasback	0	0	160	0	0	0	720	0
Redhead	120	600	600	160	540	2,680	2,680	720
Scaup	0	0	40	0	0	0	180	0
Ruddy duck	0	80	1,000	240	0	360	4,470	1,150
Subtotal	120	680	1,800	400	540	3,040	8,050	1,870
Miscellaneous	1	40	40	40	0	180	180	180
Total ducks	31,650	28,840	47,040	30,080	131,050	120,050	195,600	125,080
Coot	18,650	9,460	37,440	22,440	85,910	43,580	172,510	103,400

[a] Area--6,216 km^2; Type--Agricultural land including 151,882 ha of rice plus managed refuges and gun clubs; Coverage--2-1/2% of aerial transect; Remarks--The number of breeding pairs of ducks and the fall population showed a decrease of 36%, while coots showed a 40% decrease.

Table B-15. California--Estimated Total Nesting Pairs and Fall Population Indices for the Suisun Marsh,[a] 1973-1976.

Species	Estimated total nesting pairs				Fall population indices			
	1973	1974	1975	1976	1973	1974	1975	1976
Dabblers								
Mallard	1,520	1,370	3,220	1,370	6,300	5,700	13,380	5,700
Gadwall	420	360	620	160	2,060	1,810	3,460	800
Cinnamon teal	380	270	630	240	1,390	1,000	2,330	900
Northern shoveler	60	120	140	60	240	540	600	260
Pintail	120	100	160	60	450	360	620	220
Subtotal	2,500	2,220	4,770	1,890	10,440	9,410	20,390	7,880
Divers								
Redhead	20	0	0	0	60	0	0	0
Ruddy duck	60	0	60	0	240	0	60	0
Subtotal	80	0	60	0	300	0	60	0
Miscellaneous	0	0	30	0	0	0	120	0
Total ducks	2,580	2,220	4,860	1,890	10,740	9,410	20,570	7,880
Coot	1,770	40	2,860	560	8,150	190	13,180	2,580

[a] Area--363 km^2; Type--Natural tidal marsh, gun clubs, and agricultural land; Coverage--7.5% aerial transect; Remarks--The number of breeding pairs and the fall population of ducks showed a decrease of 61%. Coots decreased 80%.

Table B-16. California--Estimated Total Nesting Pairs and Fall Population Indicies for the North San Joaquin Valley (Grasslands),[a] 1973-1976.

Species	Estimated total nesting pairs				Fall population indices			
	1973	1974	1975	1976	1973	1974	1975	1976
Dabblers								
Mallard	2,040	2,090	2,130	1,470	6,630	6,780	6,910	6,090
Gadwall	780	1,020	1,040	710	2,420	3,210	3,250	2,230
Cinnamon teal	970	1,310	1,650	820	3,020	4,110	5,180	2,550
Northern shoveler	310	220	190	120	970	670	590	360
Pintail	660	290	270	120	2,070	890	840	350
Subtotal	4,760	4,930	5,280	3,240	15,110	15,660	16,770	11,580
Divers								
Redhead	40	70	160	80	130	200	500	240
Ruddy duck	350	120	330	140	960	310	890	390
Subtotal	390	190	490	220	1,090	510	1,390	630
Miscellaneous	10	10	30	0	30	30	60	0
Total ducks	5,160	5,130	5,800	3,460	16,230	16,200	18,220	12,210
Coot	3,430	2,130	7,380	2,890	18,680	11,610	42,720	15,730

[a] Area--389 km^2; Type--Gun clubs and flooded pasture lands; Coverage--25% aerial transect; Remarks--Breeding pairs of ducks decreased 40% and the fall population decreased 33%, whereas coots decreased over 60%.

Table B-17. California--Estimated Total Nesting Pairs and Fall Population Indices for the South Joaquin Valley,[a] 1973-1976.

Species	Estimated total nesting pairs				Fall population indices			
	1973	1974	1975	1976	1973	1974	1975	1976
Dabblers								
Mallard	1,440	1,090	1,010	830	3,960	3,090	2,800	2,290
Gadwall	100	150	170	60	290	430	460	150
Cinnamon teal	1,130	480	470	180	2,650	1,380	1,290	470
Northern shoveler	380	60	90	20	850	150	250	40
Pintail	1,310	140	130	90	3,510	420	340	250
Subtotal	4,360	1,920	1,870	1,180	11,260	5,470	5,140	3,200
Divers								
Redhead	20	50	0	0	50	140	0	0
Ruddy duck	300	40	40	0	680	110	110	0
Subtotal	320	90	40	0	730	250	110	0
Miscellaneous	40	10	50	0	60	20	120	0
Total ducks	4,720	2,020	1,960	1,180	12,050	5,740	5,370	3,200
Coot	3,070	820	1,210	1,620	12,790	4,410	6,590	8,760

[a] Area--approximately 596 km^2; Type--rice land, pasture, and managed refuges; Coverage--aerial and ground, variable (10% to complete coverage); Remarks--duck pairs and the fall population were down 40%. Coot pairs were up 34% and the fall population showed an 18% increase over last year.

Table B-18. California--Estimated Total Nesting Pairs and Fall Population Indices for Northeastern California,[a] 1973-1976.

Species	Estimated total nesting pairs				Fall population indices			
	1973	1974	1975	1976	1973	1974	1975	1976
Dabblers								
Mallard	4,710	4,250	4,350	4,710	30,430	27,620	28,280	30,610
Gadwall	1,240	1,290	850	1,020	9,720	10,140	6,640	8,030
Cinnamon teal	1,150	1,070	1,190	970	7,480	6,900	7,720	6,280
Northern shoveler	140	210	190	140	840	1,290	1,160	870
Pintail	2,090	1,400	1,430	900	12,010	8,030	8,180	5,160
Subtotal	9,330	8,220	8,010	7,740	60,480	53,980	51,980	50,950
Divers								
Canvasback	10	20	10	70	60	80	60	320
Redhead	380	490	650	340	2,620	3,340	4,470	2,310
Scaup	70	50	90	70	440	310	540	410
Ruddy duck	60	110	130	110	320	610	720	620
Subtotal	520	670	880	590	3,440	4,340	5,790	3,660
Miscellaneous	150	210	200	110	750	1,020	970	550
Total ducks	10,000	9,100	9,090	8,440	64,670	59,340	58,740	55,160
Canada goose	1,000	650	680	510	22,070[b]	21,550[c]	19,660[d]	15,330[e]
Coot	1,370	990	1,120	1,160	8,180	5,910	6,710	6,950

[a] Area--not determined; Type--natural marshes, lakes, and artificial impoundments; Coverage--aerial, complete.
[b] Includes 16,150 nonbreeders.
[c] Includes 17,550 nonbreeders.
[d] Includes 16,090 nonbreeders.
[e] Includes 12,130 nonbreeders; Remarks--Canada geese showed a 25% decrease in breeding pairs and a decrease of 22% in the overall fall population index. Duck pairs and fall population were down 7% from 1975, whereas coots showed an increase of 4%.

Table B-19. California--Estimated Total Nesting Pairs and Fall Population Indices for the Klamath Basin,[a] 1973-1976.

Species	Estimated total nesting pairs				Fall population indices			
	1973	1974	1975	1976	1973	1974	1975	1976
Dabblers								
Mallard	580	1,120	1,770	2,050	4,090	7,740	11,230	13,130
Gadwall	730	1,610	1,750	1,540	5,940	14,440	13,890	10,570
Cinnamon teal	770	2,810	2,200	3,660	6,210	22,050	14,470	23,790
Northern shoveler	460	500	520	110	3,630	4,010	4,070	680
Pintail	200	300	450	100	1,400	2,020	2,860	670
Subtotal	2,740	6,340	6,690	7,460	21,270	50,260	46,520	48,840
Divers								
Canvasback	40	60	40	60	300	350	250	300
Redhead	270	940	570	1,050	2,180	7,640	3,610	6,230
Scaup	80	40	40	80	630	300	250	470
Ruddy duck	390	1,460	1,820	740	2,960	10,690	12,460	4,290
Subtotal	780	2,500	2,470	1,930	6,070	18,980	16,570	11,290
Miscellaneous	10	10	40	80	40	60	190	490
Total ducks	3,530	8,850	9,200	9,470	27,380	69,300	63,280	60,620
Canada goose	770	520	570	420	4,960[b]	3,880[c]	3,140[d]	3,250[e]
Coot	870	4,440	2,550	5,400	5,380	25,140	16,750	26,350

[a] Area--14,170 ha of water and marsh plus surrounding agricultural lands (includes Tule Lake, Clear Lake, and Lower Klamath refuges); Type--great basin, natural and managed marsh area; Coverage--ground and aerial.

[b] Includes 1,010 nonbreeders.

[c] Includes 610 nonbreeders.

[d] Includes 390 nonbreeders.

[e] Includes 1,320 nonbreeders; Remarks--pairs of geese were down 26% while the fall population showed a 4% increase. Breeding pairs of ducks were up 3% while the fall population index was down 4%. Coot pairs increased 117% and the fall population index was up 51%.

Table B-20. California--Estimated Total Nesting Pairs and Fall Population Indices for the Entire State,[a] 1973-1976.

Species	Estimated total nesting pairs				Fall population indices			
	1973	1974	1975	1976	1973	1974	1975	1976
Dabblers								
Mallard	37,300	35,190	51,800	36,950	164,210	156,440	226,820	168,580
Gadwall	3,710	4,920	5,230	3,930	22,630	32,440	31,700	23,980
Cinnamon teal	6,320	7,500	10,380	8,070	27,920	41,270	46,820	42,210
Northern shoveler	1,390	1,110	1,250	450	6,710	6,660	7,210	2,210
Pintail	6,500	3,030	3,160	1,750	27,600	14,800	15,620	8,500
Subtotal	55,220	51,750	71,820	51,150	249,070	251,610	328,170	45,480
Divers								
Canvasback	50	50	210	130	360	430	1,030	620
Redhead	850	2,150	1,980	1,630	5,580	14,000	11,260	9,500
Scaup	150	90	170	150	1,070	610	970	880
Ruddy duck	1,160	1,810	3,380	1,230	5,160	12,080	18,710	6,450
Subtotal	2,210	4,130	5,740	3,140	12,170	27,120	31,970	17,450
Miscellaneous	210	280	390	230	880	1,310	1,640	1,220
Total ducks	57,640	56,160	77,950	54,520	262,120	280,040	361,780	264,150
Canada goose	1,770	1,170	1,250	930	27,030	25,430	22,800	18,580
Coot	29,160	17,880	52,560	34,070	139,090	90,840	258,460	163,770

[a] A comparative summary of nesting pairs of waterfowl for the past four seasons, together with final fall population including young plus resident adults is shown in this table. These figures for each year have been derived from the preceding tables. In almost all cases the figures shown for "nesting pairs" are more accurate than those indicating "fall population indices." Remarks--the accumulated data indicate: (1) nesting pairs of Canada geese decreased 26% while a decrease of 23% occurred in the fall population index; (2) ducks showed a decrease of 30% in nesting pairs and a 27% decrease was noted in the fall population index; and (3) nesting pairs and fall population index of coots were down 35%.

Table B-21. Colorado--Summary of Duck Breeding Population Estimates in Selected Areas, 1976.

Area	Total estimated breeding pairs			Percent change	
	1975	1976	Long-term average[a]	From 1975	From long-term average
San Luis Valley	26,801	34,759	27,280	+29.7	+27.4
North Park[b]	27,134	16,535	17,163	-39.1	- 3.7
South Platte Valley	14,152	10,062	6,623	-28.9	+51.9
Cache la Poudre Valley	6,732	6,927	3,514	+ 2.9	+97.1
Yampa Valley	2,354	2,145	2,783	- 8.9	-22.9
Brown's Park	--[c]	593	1,172	--	-49.4
Total	78,345	71,021	58,535	- 9.3	+21.3

[a] San Luis Valley and North Park averages are based on results of 1964 through 1975 and 1968 through 1975 surveys, respectively, because of changes in survey methods utilized prior to those dates. Figures for other areas are 22-year averages except Brown's Park, which is an average of 1971-1974 survey results.
[b] Aerial counts corrected by species from visibility ratios obtained in the San Luis Valley.
[c] No count made in 1975.

Table B-22. Colorado--Species Composition of 1976 Duck Breeding Pair Population.

Species	Number of breeding pairs			Percent species composition		
	1975	1976	1954-75 average[a]	1975	1976	1954-75 average
Mallard	19,090	17,324	27,299	24.4	24.4	52.6
Blue-winged and Cinnamon teal	15,078	7,432	5,685	19.2	10.5	11.0
Gadwall	3,984	4,205	5,332	5.1	5.9	10.3
Pintail	5,213	2,980	3,635	6.7	4.2	7.0
Green-winged teal	8,859	9,136	2,452	11.3	12.9	4.7
Shoveler	8,005	21,145	2,634	10.2	29.8	5.1
American wigeon	4,868	2,750	1,065	6.2	3.9	2.1
Redhead	8,048	3,623	2,254	10.3	5.1	4.3
Other divers	5,200	2,426	1,521	6.6	3.4	2.9
Total	78,345	71,021	51,877			

[a] Species composition computed from data from all areas for the 20-year period regardless of changes in survey method.

Table B-23. Colorado--Number of Canada Geese Observed, and Estimated Production in Moffat County, 1976.

Area	Nesting pairs	Non-nesting birds	Total adults	Estimated No. goslings[a]	Total birds
Yampa					
Craig-Juniper Springs	22	132	176	87	263
Juniper Springs-Cross Mountain	32	101	165	122	287
Lilly Park	13	66	92	48	140
Subtotal	67	299	433	257	690
Green River					
Brown's Park	36	200	272	133	405
Dinosaur National Monument	22	63	107	104	211
Subtotal	58	263	379	237	616
Little Snake River	22	120	164	91	255
Total	147	682	976	585	1,561

[a] Calculated using average brood size observed and number of successful nests.

Table B-24. Colorado--Total Canada Geese Observed, Moffat County, 1976.

Area	1975	1976	1956-1975 average	Percent change From 1975	Percent change From 1956-1975 average
Yampa River	401	690	423	+ 72.1	+ 63.1
Green River Brown's Park	448	405	171	- 9.6	+136.8
Dinosaur National Monument[a]	406	211	348	- 48.0	- 39.4
Little Snake River[b]	294	255	251	- 13.3	+ 1.6
Total	1,549	1,561	1,193	+ 0.1	+ 30.8

[a] Not surveyed until 1970.
[b] Not surveyed until 1962.

Table B-25. Colorado--Estimated Number of Canada goose goslings, Moffat County, 1976.

Area	1975	1976	1956-1975 average	Percent change From 1975	Percent change From 1956-1975 average
Yampa River	147	257	137	+ 74.8	+ 87.6
Green River Brown's Park	176	133	67	- 24.4	+ 98.5
Dinosaur National Monument[a]	106	104	117	- 1.9	- 11.1
Little Snake River[b]	68	91	78	+ 33.8	+ 16.7
Total	497	585	399	+ 17.7	+ 46.6

[a] Not surveyed until 1970.
[b] Not surveyed until 1962.

Table B-26. Colorado--Number of Canada Goose Goslings Produced in North Central Colorado Production Trend Areas, 1976.

Area	Number of goslings			Percent change	
	1975	1976	1969-1975 average	From 1975	From 1969-1975
Wellington	207	278	259	+ 34.3	+ 7.3
Ft. Collins	234	401	268	+ 71.4	+ 49.6
Loveland	103	144	86	+ 39.8	+ 67.4
Boulder	217	162	234	- 25.3	- 30.8
Denver	288	304	281	+ 5.6	+ 8.2
Total	1,049	1,289	1,128	+ 22.9	+ 14.3

Table B-27. Colorado--Number of Canada Geese Observed in North Central Colorado Production Trend Areas, 1976.

Area	Number of goslings			Percent change	
	1975	1976	1969-1975 average	From 1975	From 1969-1975
Wellington	570	555	777	- 2.6	- 28.6
Ft. Collins	667	653	710	- 2.1	- 8.0
Loveland	318	291	220	- 8.5	+ 32.2
Boulder	466	430	646	- 7.7	- 33.4
Denver	1,328	995	1,303	- 25.1	- 23.6
Total	3,349	2,924	3,656	- 12.7	- 20.0

Table B-28. Nebraska--Duck Breeding Population and Species Composition in Sandhills Production Area in 1975 and 1976.

Species	1975 population	1976 population	Percent 1976 population	Percent change from 1975
Dabblers				
Mallard	14,761	20,103	23.1	+ 36
Blue-winged teal	9,505	26,251	30.1	+176
Green-winged teal	0	79	0.1	--
Pintail	3,791	6,451	7.4	+ 70
Gadwall	11,718	9,125	10.5	- 22
Northern shoveler	9,194	10,761	12.3	+ 17
American wigeon	0	79	0.1	--
Subtotal	48,969	72,849	83.6	+ 49
Divers				
Redhead	1,328	1,978	2.3	+ 49
Scaup	1,328	1,187	1,3	- 11
Ruddy duck	10,215	11,157	12.8	+ 9
Subtotal	12,871	14,322	16.4	+ 11
Total	61,840	87,171	100.0	+ 41

Table 29. Wisconsin--Wetland densities by Region, 1975-1976.

	Wetlands recorded per square kilometer					
	SE/central		Northern high		Northern low	
Wetland type[a]	1975	1976	1975	1976	1975	1976
I, II, VI	1.3	1.2	0.9	0.7	0.3	0.4
III	0.4	0.5	0.3	0.3	0.2	0.2
IV,V	0.7	0.9	1.2	1.3	0.4	0.5
VII, VIII	0.3	0.3	0.3	0.3	0.3	0.3
Streams	0.5	0.4	0.5	0.4	0.8	0.7
Ditches	0.7	0.6	0.1	0.1	0.2	0.1

[a] Based on a classification system devised by March, Martz, and Hunt of the Wisconsin Department of Natural Resources.

Table B-30. Wisconsin--Adjusted Breeding Duck Population Estimate for 1975, 1976, and the 1965-70 Average.

Species	Number of breeding ducks								1965-70 average
	SE/central		Northern high		Northern low		All regions		
	1975	1976	1975	1976	1975	1976	1975	1976	
Mallard	77,900	49,500	20,000	13,300	12,800	10,800	110,700	73,600 (- 34%)	124,400
Blue-winged teal	213,100	115,500	18,100	29,600	7,200	11,100	238,400	156,200 (- 34%)	89,000
Other[a]	41,000	6,500	20,000	12,700	4,100	27,400	65,100	46,600 (- 28%)	52,600
Total	332,000	171,500	58,100	55,600	24,100	49,300	414,200	276,400	266,000
Percent change 1975 to 1976		- 48		- 4		+205		- 33	

[a] Included are wood duck, black duck, northern shoveler, pintail, ring-necked duck, redhead, green-winged teal, gadwall, American wigeon, ruddy duck, and hooded merganser.

APPENDIX C. WATERFOWL HARVEST SURVEY TABLES.

Table C-1. Factors Used to Adjust Survey Statistics to Include the Activities of Junior Hunters.

	Junior hunter adjustment factors			
Estimate	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway and Alaska
Ducks bagged (including sea ducks)	1.03621	1.04655	1.06055	1.04985
Geese bagged	1.02402	1.03369	1.04110	1.04508
Coots bagged	1.08302	1.09034	1.10147	1.09415
Days hunted	1.05174	1.07003	1.08559	1.08708
Ducks lost	1.03641	1.05699	1.07053	1.06152
Geese lost	1.01573	1.03738	1.07067	1.07411
Coots lost	1.08247	1.10282	1.10400	1.10685

Table C-2. Factors Used to Adjust Survey Statistics for Memory and Prestige Bias.

	Memory and prestige response bias factors			
Estimate	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway and Alaska
Ducks bagged (including sea ducks)	0.86925	0.77656	0.73902	0.78952
Geese bagged	0.80428	0.84800	0.86838	0.85159
Coots bagged	0.60692	0.63668	0.78878	0.59248

Table C-3. Total Retrieved (by species) and Unretrieved Duck and Coot Kill in the United States During the 1974 and 1975 Hunting Seasons (retrieved kill estimates adjusted for response bias; all estimates include kill by junior hunters).

	Season	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway	Alaska	United States total
Retrieved duck kill							
Mallard	1974	393,593	2,177,371	794,196	1,133,249	16,953	4,515,362
	1975	413,400	2,522,525	924,083	1,138,685	16,544	5,015,237
	% change	+ 5	+ 16	+ 16	0	- 2	+ 11
Domestic mallard	1974	9,636	8,449	0	3,823	0	21,908
	1975	7,275	5,587	0	3,209	0	16,071
	% change	- 25	- 34	0	- 16	0	- 27
Black duck	1974	288,492	97,234	950	0	0	386,676
	1975	267,986	93,840	938	0	0	362,764
	% change	- 7	- 3	- 1	0	0	- 6
Black x mallard	1974	12,083	5,402	270	0	0	17,755
	1975	13,601	4,892	0	0	0	18,493
	% change	+ 13	- 9	--	0	0	+ 4
Mottled duck	1974	14,382	43,247	65,988	0	0	123,617
	1975	13,071	33,937	79,328	0	0	126,336
	% change	- 9	- 22	+ 20	0	0	+ 2
Gadwall	1974	27,453	257,675	250,768	127,073	455	663,424
	1975	36,392	360,647	285,781	128,844	392	812,056
	% change	+ 33	+ 40	+ 14	+ 1	- 14	+ 22
American wigeon	1974	67,808	195,761	154,408	334,537	11,321	763,835
	1975	88,421	242,078	183,691	424,218	12,530	950,938
	% change	+ 30	+ 24	+ 19	+ 27	+ 11	+ 24
Green-winged teal	1974	137,996	332,485	268,349	483,926	9,444	1,232,200
	1975	130,813	615,492	535,506	626,010	10,425	1,918,246
	% change	- 5	+ 85	+100	+ 29	+ 10	+ 56
Blue-winged and cinnamon teal	1974	54,169	414,879	196,178	99,945	114	765,285
	1975	63,910	706,749	249,255	94,037	0	1,113,951
	% change	+ 18	+ 70	+ 27	- 6	--	+ 46

Table C-3. Continued.

	Season	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway	Alaska	United States total
Northern shoveler	1974	16,078	84,143	106,953	237,983	2,105	447,262
	1975	18,900	113,311	108,157	302,586	4,063	547,017
	% change	+ 18	+ 35	+ 1	+ 27	+ 93	+ 22
Pintail	1974	36,480	109,286	166,124	945,036	10,013	1,266,939
	1975	44,121	195,277	292,991	1,036,450	16,984	1,585,823
	% change	+ 21	+ 79	+ 76	+ 10	+ 70	+ 25
Wood duck	1974	279,474	624,634	34,204	32,261	0	970,573
	1975	311,513	814,787	47,840	31,905	0	1,206,045
	% change	+ 11	+ 30	+ 40	- 1	0	+ 24
Redhead	1974	793[a]	28,874	37,436	27,548	0	94,651
	1975	3,318[b]	49,255	61,504	43,883	49	158,009
	% change	+318	+ 71	+ 64	+ 59	++	+ 67
Canvasback	1974	533[a]	15,765	20,810	35,817	569	73,494
	1975	1,585[b]	31,084	18,903	47,308	245	99,125
	% change	+197	+ 97	- 9	+ 32	- 57	+ 35
Greater scaup	1974	29,148	25,965	1,707	10,712	1,707	69,239
	1975	55,840	21,273	1,696	11,540	2,300	92,649
	% change	+ 92	- 18	- 1	+ 8	+ 35	+ 34
Lesser scaup	1974	34,874	336,605	63,637	23,765	2,048	460,929
	1975	31,816	250,334	52,775	25,881	2,007	362,813
	% change	- 9	- 26	- 17	+ 9	- 2	- 21
Ring-necked duck	1974	123,738	246,499	49,527	23,194	626	443,584
	1975	127,337	353,915	56,537	35,209	441	572,439
	% change	+ 3	+ 43	+ 14	+ 52	- 30	+ 29
Goldeneye	1974	14,005	32,953	5,236	20,634	2,617	75,445
	1975	16,038	37,453	7,922	20,662	1,762	83,837
	% change	+ 15	+ 14	+ 51	0	- 33	+ 11
Bufflehead	1974	44,637	57,237	7,883	17,744	2,446	129,947
	1975	47,280	55,759	9,699	23,171	1,517	137,426
	% change	+ 6	- 3	+ 23	+ 31	- 38	+ 6

Table C-3. Continued.

	Season	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway	Alaska	United States total
Ruddy duck	1974	9,768	15,379	5,636	33,726	0	64,509
	1975	16,243	22,513	8,214	29,046	0	76,016
	% change	+ 66	+ 46	+ 46	- 14	0	+ 18
Oldsquaw	1974	13,608	446	205	0	57	14,316
	1975	23,517	1,593	107	232	49	25,498
	% change	+ 73	+257	- 48	++	- 14	+ 78
Eiders	1974	22,299	223	0	0	0	22,522
	1975	14,955	0	0	0	0	14,955
	% change	- 33	--	0	0	0	- 34
Scoters	1974	69,421	12,910	143	1,201	228	83,903
	1975	78,958	8,772	119	471	1,126	89,446
	% change	+ 14	- 32	- 17	- 61	+394	+ 7
Hooded merganser	1974	16,804	30,389	4,578	1,911	0	53,682
	1975	19,877	27,379	2,352	1,462	0	51,070
	% change	+ 18	- 10	- 49	- 23	0	- 5
Other merganser	1974	13,541	10,561	1,221	3,124	114	28,561
	1975	13,679	20,229	3,749	5,149	98	42,904
	% change	+ 1	+ 92	+207	+ 65	- 14	+ 50
Other ducks	1974	2,323	1,444	1,773	1,171	398	7,109
	1975	1,108	1,328	477	910	49	3,872
	% change	- 52	- 8	- 73	- 22	- 88	- 46
Total	1974	1,733,139	5,165,824	2,238,182	3,598,385	61,214	12,796,744
	1975	1,860,956	6,589,015	2,931,626	4,030,870	70,580	15,483,047
	% change	+ 7	+ 28	+ 31	+ 12	+ 15	+ 21
Unretrieved duck kill	1974	405,488	1,190,047	512,347	636,886	8,750	2,753,518
	1975	418,031	1,413,234	578,140	717,466	11,982	3,138,853
	% change	+ 3	+ 19	+ 13	+ 13	+ 37	+ 14
Total duck kill	1974	2,138,627	6,355,871	2,750,529	4,235,271	69,964	15,550,262
	1975	2,278,987	8,002,249	3,509,766	4,748,336	82,562	18,621,900
	% change	+ 7	+ 26	+ 28	+ 12	+ 18	+ 20

Table C-3. Continued.

	Season	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway	Alaska	United States total
Retrieved coot kill	1974	106,051	488,083	98,121	223,746	285	916,286
	1975	165,635	644,954	86,474	189,116	824	1,087,003
	% change	+ 56	+ 32	- 11	- 15	+189	+ 19
Unretrieved coot kill	1974	29,686	120,941	35,454	80,332	83	266,496
	1975	43,286	158,180	37,694	75,267	178	314,605
	% change	+ 46	+ 31	+ 6	- 6	+114	+ 18
Total coot kill	1974	135,737	609,204	133,575	304,078	368	1,182,782
	1975	208,921	803,134	124,168	264,383	1,002	1,401,608
	% change	+ 54	+ 32	- 7	- 13	+172	+ 19

[a] Season closed.
[b] Season closed except in Florida.

Table C-4. Total Retrieved (by species) and Unretrieved Goose Kill in the United Sttes During the 1974 and 1975 Hunting Seasons (retrieved kill estimates adjusted for response bias; all estimates include kill by junior hunters).

	Season	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway	Alaska	United States total
Retrieved goose kill							
Canada goose[a]	1974	338,516	283,271	136,565	187,650	8,069	954,071
	1975	351,773	317,743	177,326	182,186	9,681	1,038,709
	% change	+ 4	+ 12	+ 30	- 3	+ 20	+ 9
Snow goose	1974	0[b]	64,025	171,483	52,606	236	288,350
	1975	10,227	63,149	238,209	90,896	0	402,481
	% change	++	- 1	+ 39	+ 73	--	+ 40
Blue goose	1974	0[b]	105,945	75,277	0	0	181,222
	1975	107	106,763	118,407	1,359	0	226,636
	% change	++	+ 1	+ 57	++	0	+ 25
White-fronted goose	1974	0	10,263	35,578	41,287	353	87,481
	1975	0	28,645	49,085	37,330	1,255	116,315
	% change	0	+179	+ 38	- 10	+256	+ 33
Brant	1974	237[b]	0	0	3,951	1,001	5,189
	1975	33,407	0	0	3,011	269	36,687
	% change	++	0	0	- 24	- 73	+607
Others and unknown	1974	0	0	187[c]	8,414[c]	766[d]	9,367
	1975	0	0	151[c]	6,999[c]	359[d]	7,509
	% change	0	0	- 19	- 17	- 53	- 20
Total	1974	338,753	463,504	419,090	293,909	10,425	1,525,681
	1975	395,514	516,300	583,179	321,782	11,564	1,828,339
	% change	+ 17	+ 11	+ 39	+ 9	+ 11	+ 20

Table C-4. Continued.

	Season	Atlantic flyway	Mississippi flyway	Central flyway	Pacific flyway	Alaska	United States total
Unretrieved kill	1974	38,396	68,849	63,914	45,507	1,426	218,092
	1975	42,371	63,847	82,236	47,513	1,696	237,663
	% change	+ 10	- 7	+ 29	+ 4	+ 19	+ 9
Total goose kill	1974	377,149	532,353	483,004	339,416	11,851	1,743,773
	1975	437,885	580,147	665,415	369,295	13,260	2,066,002
	% change	+ 16	+ 9	+ 38	+ 9	+ 12	+ 18

[a] Includes all subspecies.
[b] Season closed.
[c] Ross' goose.
[d] Emperor goose.

TABLE C-5 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS.

	CONNECTICUT		DELAWARE		FLORIDA		GEORGIA	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	28.72%	25.01%	31.41%	31.84%	1.15%	1.30%	13.86%	14.91%
DOMESTIC MALLARD	0.34	3.20	0.51	0.16	0.05	0.45	0.00	0.00
BLACK DUCK	30.23	25.88	25.51	20.16	0.55	0.45	5.30	2.76
BLACK X MALLARD	0.84	2.91	1.52	0.80	0.00	0.05	0.30	0.25
MOTTLED DUCK	0.00	0.00	0.00	0.00	7.19	6.25	0.00	0.00
GADWALL	0.67	0.15	3.54	2.24	0.35	0.45	0.99	0.75
AMERICAN WIGEON	1.51	0.87	4.04	2.40	3.94	5.70	0.50	2.26
GREEN-WINGED TEAL	8.06	6.40	23.49	18.24	5.79	5.55	9.16	6.02
BLUE-WINGED/CINNAMON TEAL	0.17	0.44	0.00	0.00	14.27	14.35	0.25	2.01
NORTHERN SHOVELER	0.17	0.00	3.03	3.68	1.20	2.90	0.50	0.75
PINTAIL	0.50	0.44	3.28	3.36	1.30	2.60	0.50	1.00
WOOD DUCK	7.05	11.20	2.02	0.80	8.98	9.75	63.61	59.90
REDHEAD	0.00	0.15	0.00	0.00	0.10	1.15	0.00	0.13
CANVASBACK	0.00	0.00	0.00	0.16	0.05	0.35	0.00	0.00
GREATER SCAUP	6.38	7.42	0.00	6.24	0.05	0.35	0.00	0.00
LESSER SCAUP	0.67	1.16	0.76	1.12	7.09	4.35	1.24	0.38
RING-NECKED DUCK	0.17	0.44	0.51	0.64	43.71	38.55	2.72	7.39
GOLDENEYES	1.13	0.58	0.25	0.80	0.00	0.05	0.00	0.00
BUFFLEHEAD	2.35	3.93	0.25	0.80	0.20	0.45	0.00	0.00
RUDDY DUCK	0.00	0.00	0.00	1.92	0.75	0.15	0.00	0.25
OLDSQUAW	0.47	0.00	0.00	1.28	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	8.67	8.97	0.00	1.12	0.00	0.05	0.00	0.00
HOODED MERGANSERS	0.50	0.58	0.00	0.64	1.85	2.80	1.49	1.25
OTHER MERGANSERS	1.34	0.29	0.00	1.60	0.50	0.95	0.00	0.00
OTHER DUCKS	0.00	0.00	0.00	0.00	0.95	0.50	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	38,325	49,457	44,713	55,981	200,147	209,124	66,196	75,239
PERCENT CHANGE		+29%		+25%		+4%		+14%
SEASONAL DUCK HARVEST PER ADULT HUNTER	2.65	3.24	3.25	4.17	7.48	8.19	4.91	5.78
PERCENT CHANGE		+22%		+28%		+10%		+18%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	100.00%	100.00%	96.26%	100.00%	100.00%	100.00%	100.00%
SNOW GOOSE	0.00	0.00	0.00	1.55	0.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	3.09	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	4,625	5,387	40,319	41,484	1,143	2,354	1,630	1,035
PERCENT CHANGE		+16%		+3%		+106%		-37%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.32	0.36	2.97	3.13	0.04	0.09	0.12	0.08
PERCENT CHANGE		+10%		+5%		+116%		-34%
COOT HARVEST (RETRIEVED KILL)	656	1,395	1,180	2,275	42,245	43,679	3,467	4,312
PERCENT CHANGE		+113%		+93%		+3%		+24%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.04	0.09	0.08	0.16	1.51	1.64	0.25	0.32
PERCENT CHANGE		+102%		+98%		+8%		+29%
TOTAL HUNTER DAYS	77,815	92,149	113,666	107,048	155,633	159,177	72,609	72,117
PERCENT CHANGE		+18%		-6%		+2%		-1%
DAYS PER ADULT HUNTER	5.28	5.92	8.15	7.86	5.73	6.14	5.31	5.45
PERCENT CHANGE		+12%		-4%		+7%		+3%
TOTAL DUCK STAMPS SOLD	14,943	15,403	13,778	13,238	26,385	25,582	13,207	13,143
PERCENT CHANGE		+3%		-4%		-3%		0%
PERCENT SOLD TO NON-HUNTERS	6.13%	3.93%	3.75%	2.22%	2.08%	3.69%	1.54%	4.34%
TOTAL ADULT HUNTERS (POTENTIAL)	14,027	14,798	13,261	12,944	25,836	24,638	13,004	12,573
PERCENT CHANGE		+5%		-2%		-5%		-3%
PERCENT ACTIVE ADULT HUNTERS	78.9%	79.5%	87.3%	88.2%	82.4%	85.5%	84.2%	86.5%
PERCENT SUCCESSFUL ADULT HUNTERS	49.6%	50.3%	70.5%	71.5%	65.9%	71.8%	62.1%	68.4%
SAMPLE SIZES								
DUCK WINGS	599	658	396	625	2,004	2,000	404	798
GOOSE TAILS	24	53	444	388	0	0	0	0
QUESTIONNAIRES	672	782	339	551	1,079	1,119	529	448

TABLE C-5 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS --CONTINUED

	MAINE		MARYLAND[a]		MASSACHUSETTS		NEW HAMPSHIRE	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	7.39%	4.85%	39.86%	32.84%	15.23%	17.15%	10.67%	14.13%
DOMESTIC MALLARD	0.18	0.21	2.27	0.88	0.38	0.13	0.26	0.00
BLACK DUCK	36.88	37.13	22.66	20.27	32.69	30.41	38.27	35.18
BLACK X MALLARD	0.72	0.62	0.97	0.88	1.53	1.47	1.30	1.50
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	0.09	0.00	1.78	2.92	0.27	0.27	0.00	0.30
AMERICAN WIGEON	0.36	0.21	4.05	4.29	0.38	1.14	0.52	0.00
GREEN-WINGED TEAL	12.99	11.14	5.02	4.87	6.82	5.96	5.21	3.31
BLUE-WINGED/CINNAMON TEAL	3.07	2.99	0.65	0.78	0.82	0.60	2.86	1.80
NORTHERN SHOVELER	0.00	0.00	0.32	0.88	0.00	0.13	0.00	0.00
PINTAIL	0.45	0.52	2.43	2.24	0.22	0.40	1.82	0.30
WOOD DUCK	9.11	6.19	3.24	2.34	8.73	9.44	22.39	27.66
REDHEAD	0.00	0.00	0.00	0.10	0.05	0.00	0.00	0.00
CANVASBACK	0.00	0.00	0.32	0.00	0.00	0.07	0.00	0.00
GREATER SCAUP	0.00	0.62	0.49	7.02	0.98	2.14	0.78	0.30
LESSER SCAUP	0.09	0.41	0.97	1.07	0.22	0.54	0.52	0.30
RING-NECKED DUCK	2.44	2.68	0.65	0.10	0.27	0.60	2.34	2.41
GOLDENEYES	1.44	2.48	0.49	2.63	1.47	1.21	0.78	0.30
BUFFLEHEAD	3.43	4.33	3.89	3.02	2.89	5.02	3.65	1.80
RUDDY DUCK	0.00	0.41	0.32	0.68	0.05	0.40	0.00	0.00
OLDSQUAW	1.50	0.51	3.63	6.87	0.29	0.52	1.04	0.00
EIDERS	10.33	11.56	0.00	0.00	8.38	5.65	1.04	0.00
SCOTERS	8.83	11.73	4.18	4.06	16.46	14.00	3.15	2.89
HOODED MERGANSERS	0.18	0.83	0.97	0.49	0.22	0.47	2.08	3.31
OTHER MERGANSERS	0.45	0.62	0.65	0.59	1.69	2.01	1.30	4.51
OTHER DUCKS	0.09	0.00	0.16	0.20	0.00	0.07	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	105,896	83,809	106,180	164,050	130,943	93,160	38,132	29,496
PERCENT CHANGE		-21%		+55%		-29%		-23%
SEASONAL DUCK HARVEST PER ADULT HUNTER	5.76	4.58	2.65	4.12	5.06	3.75	3.43	2.67
PERCENT CHANGE		-20%		+55%		-26%		-22%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	100.00%	100.00%	98.70%	100.00%	80.65%	100.00%	100.00%
SNOW GOOSE	0.00	0.00	0.00	0.96	0.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.28	0.00	19.36	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	2,214	979 -56%	165,238	189,706 +15%	5,125	8,391 +64%	1,557	1,451 -7%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.12	0.05 -55%	4.17	4.82 +15%	0.20	0.34 +71%	0.14	0.13 -6%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	2,670	3,817 +43%	701	3,418 +388%	1,613	2,867 +78%	573	232 -60%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.14	0.20 +43%	0.02	0.08 +382%	0.06	0.11 +86%	0.05	0.02 -59%
TOTAL HUNTER DAYS PERCENT CHANGE	113,531	108,834 -4%	315,168	333,398 +6%	230,333	178,153 -23%	81,543	75,463 -7%
DAYS PER ADULT HUNTER PERCENT CHANGE	6.04	5.81 -4%	7.75	8.25 +6%	8.69	7.01 -19%	7.22	6.72 -7%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	18,200	18,152 0%	38,001	39,509 +4%	26,001	25,298 -3%	10,878	11,198 +3%
PERCENT SOLD TO NON-HUNTERS	1.73%	1.86%	2.49%	5.78%	3.02%	4.54%	1.23%	4.59%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	17,885	17,814 0%	38,679	38,448 -1%	25,216	24,149 -4%	10,744	10,684 -1%
PERCENT ACTIVE ADULT HUNTERS	85.7%	83.6%	86.9%	86.8%	89.2%	85.1%	86.2%	87.3%
PERCENT SUCCESSFUL ADULT HUNTERS	67.4%	62.4%	69.6%	72.6%	66.3%	58.6%	60.2%	57.5%
SAMPLE SIZES								
DUCK WINGS	1,004	879	597	949	1,459	1,349	369	327
GOOSE TAILS	20	8	1,554	1,765	70	93	11	8
QUESTIONNAIRES	578	813	1,334	1,819	845	1,184	533	362

TABLE C-5 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS--CONTINUED

	NEW JERSEY		NEW YORK		NORTH CAROLINA[a]		PENNSYLVANIA	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	25.52%	24.84%	37.28%	33.36%	9.39%	11.67%	50.83%	49.32%
DOMESTIC MALLARD	0.49	0.37	0.46	0.23	1.09	0.11	0.69	0.97
BLACK DUCK	25.03	25.40	16.55	13.05	6.03	5.50	10.84	9.49
BLACK X MALLARD	0.61	0.93	1.20	1.10	0.30	0.00	0.83	0.64
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	2.67	1.12	0.86	1.61	2.87	4.60	0.62	0.97
AMERICAN WIGEON	2.67	5.88	3.61	2.39	12.25	16.27	1.31	1.85
GREEN-WINGED TEAL	10.69	9.80	5.44	5.47	8.10	8.98	6.08	3.38
BLUE-WINGED/CINNAMON TEAL	2.07	1.49	2.35	4.00	2.87	2.36	1.80	1.77
NORTHERN SHOVELER	1.46	1.03	0.34	0.32	1.88	1.68	0.21	0.24
PINTAIL	3.40	7.94	1.95	0.83	6.62	4.27	0.90	0.24
WOOD DUCK	8.63	5.60	10.42	16.41	26.09	23.12	16.78	17.78
REDHEAD	0.00	0.00	0.06	0.09	0.10	0.00	0.00	0.00
CANVASBACK	0.00	0.00	0.00	0.00	0.00	0.11	0.00	0.00
GREATER SCAUP	6.44	5.70	3.15	5.01	0.49	0.79	0.97	0.89
LESSER SCAUP	1.94	1.49	1.32	1.52	2.47	2.25	0.97	1.53
RING-NECKED DUCK	0.24	0.28	0.86	0.92	7.71	7.74	0.90	0.97
GOLDENEYES	0.49	0.56	1.37	0.74	0.00	0.00	0.83	0.32
BUFFLEHEAD	4.86	2.43	2.98	1.56	2.87	3.48	1.87	2.98
RUDDY DUCK	0.12	0.37	0.12	0.00	2.27	3.37	0.83	1.69
OLDSQUAW	0.73	0.93	1.84	1.27	0.00	0.00	0.21	2.82
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.73	2.43	6.20	8.66	4.25	2.25	1.87	1.21
HOODED MERGANSERS	0.61	0.56	0.63	0.78	1.09	1.12	0.41	0.89
OTHER MERGANSERS	0.61	0.84	0.97	0.69	1.29	0.34	0.28	0.08
OTHER DUCKS	0.00	0.00	0.00	0.20	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	150,976	143,049	275,519	351,464	134,010	138,216	153,109	126,124
PERCENT CHANGE		-5%		+28%		+3%		-18%
SEASONAL DUCK HARVEST PER ADULT HUNTER	4.23	4.13	2.88	3.90	4.59	5.08	2.17	1.78
PERCENT CHANGE		-2%		+35%		+11%		-18%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	34.36%	99.31%	82.18%	100.00%	85.48%	100.00%	97.62%
SNOW GOOSE	0.00	6.75	0.00	0.00	0.00	14.52	0.00	1.59
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	58.90	0.69	17.82	0.00	0.00	0.00	0.79
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	22,868	33,393	34,336	36,072	9,003	14,092	20,161	29,250
PERCENT CHANGE		+46%		+5%		+57%		+45%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.65	0.98	0.36	0.40	0.31	0.52	0.29	0.42
PERCENT CHANGE		+50%		+11%		+68%		+44%
COOT HARVEST (RETRIEVED KILL)	4,048	5,291	6,650	10,191	12,068	36,174	7,179	11,890
PERCENT CHANGE		+31%		+53%		+200%		+66%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.11	0.15	0.07	0.11	0.40	1.27	0.10	0.16
PERCENT CHANGE		+35%		+64%		+222%		+65%
TOTAL HUNTER DAYS	239,805	224,622	546,487	569,022	199,682	180,385	316,367	368,222
PERCENT CHANGE		-6%		+4%		-10%		+16%
DAYS PER ADULT HUNTER	6.61	6.39	5.62	6.20	6.73	6.53	4.42	5.11
PERCENT CHANGE		-3%		+10%		-3%		+16%
TOTAL DUCK STAMPS SOLD	36,090	35,205	95,716	90,214	28,982	26,765	69,111	70,877
PERCENT CHANGE		-2%		-6%		-9%		+3%
PERCENT SOLD TO NON-HUNTERS	4.45%	5.04%	3.38%	3.29%	3.07%	2.16%	1.53%	3.36%
TOTAL ADULT HUNTERS (POTENTIAL)	34,484	33,431	92,481	87,246	28,204	26,271	68,054	68,496
PERCENT CHANGE		3%		-6%		-7%		+1%
PERCENT ACTIVE ADULT HUNTERS	84.8%	84.6%	79.5%	79.7%	85.6%	87.1%	86.6%	83.0%
PERCENT SUCCESSFUL ADULT HUNTERS	60.7%	62.5%	49.9%	54.8%	64.2%	69.3%	60.4%	53.0%
SAMPLE SIZES								
DUCK WINGS	823	1,071	1,654	2,054	1,012	891	1,448	1,243
GOOSE TAILS	55	163	145	202	58	124	177	126
QUESTIONNAIRES	985	1,486	2,700	1,260	1,010	1,082	1,521	1,222

TABLE C-5 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS--CONTINUED

	RHODE ISLAND		SOUTH CAROLINA		VERMONT		VIRGINIA[a]	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	19.03%	8.42%	12.88%	14.52%	17.45%	16.81%	23.49%	21.76%
DOMESTIC MALLARD	0.35	0.00	0.00	0.00	1.23	0.29	0.89	0.08
BLACK DUCK	25.94	23.18	3.68	3.15	26.29	22.32	12.41	13.56
BLACK X MALLARD	1.73	0.32	0.11	0.56	0.25	0.29	0.36	0.46
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	0.00	0.00	2.27	2.59	0.00	0.29	7.80	6.13
AMERICAN WIGEON	0.69	1.27	4.22	5.92	0.98	1.16	13.48	9.89
GREEN-WINGED TEAL	7.96	6.19	6.06	6.75	13.27	13.62	10.99	8.58
BLUE-WINGED/CINNAMON TEAL	0.00	0.16	1.41	1.85	1.72	5.51	0.36	0.46
NORTHERN SHOVELER	0.00	0.00	2.17	1.48	0.25	0.00	2.75	0.92
PINTAIL	1.04	0.32	1.52	2.50	0.74	0.00	4.70	5.06
WOOD DUCK	8.30	7.15	49.78	49.40	19.90	28.12	5.14	5.82
REDHEAD	0.00	0.16	0.11	0.09	0.25	0.00	0.00	0.08
CANVASBACK	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.38
GREATER SCAUP	11.42	20.01	0.33	0.56	0.49	1.16	1.33	1.23
LESSER SCAUP	3.11	7.78	2.81	1.76	0.49	1.16	1.95	1.38
RING-NECKED DUCK	0.00	0.16	9.09	5.18	2.95	4.35	2.48	8.74
GOLDENEYES	1.73	0.79	0.00	0.09	5.90	1.16	0.80	2.15
BUFFLEHEAD	2.77	0.64	0.65	1.76	3.44	1.45	5.41	6.67
RUDDY DUCK	0.00	0.16	0.43	0.19	0.00	0.29	2.48	3.37
OLDSQUAW	0.00	0.45	0.00	0.00	0.25	0.58	0.62	0.69
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	5.57	21.59	0.00	0.00	2.70	1.45	0.80	0.84
HOODED MERGANSERS	0.35	0.00	2.49	1.39	1.23	0.00	1.15	0.92
OTHER MERGANSERS	10.03	1.27	0.00	0.28	0.25	0.00	0.53	0.84
OTHER DUCKS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	17,745	14,679	127,487	142,284	38,118	34,972	100,285	142,371
PERCENT CHANGE		-17%		+12%		-8%		+42%
SEASONAL DUCK HARVEST PER ADULT HUNTER	4.76	4.09	6.01	6.67	4.28	3.97	4.82	7.10
PERCENT CHANGE		-14%		+11%		-7%		+47%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	100.00%	100.00%	100.00%	100.00%	90.00%	100.00%	73.83%
SNOW GOOSE	0.00	0.00	0.00	0.00	0.00	10.00	0.00	11.41
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.77
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	1,579	1,379	1,243	3,708	2,107	1,864	25,372	24,615
PERCENT CHANGE		-13%		+198%		-12%		-3%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.43	0.39	0.06	0.18	0.24	0.21	1.23	1.24
PERCENT CHANGE		-10%		+198%		-10%		+1%
COOT HARVEST (RETRIEVED KILL)	37	599	8,063	11,777	68	928	14,446	26,380
PERCENT CHANGE		+1519%		+46%		+1265%		+83%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.01	0.16	0.36	0.53	0.01	0.10	0.66	1.26
PERCENT CHANGE		+1647%		+45%		+1323%		+89%
TOTAL HUNTER DAYS	33,703	27,552	145,381	155,392	58,415	57,243	126,312	136,087
PERCENT CHANGE		-18%		+7%		-2%		+8%
DAYS PER ADULT HUNTER	8.90	7.51	6.75	7.17	6.46	6.40	5.98	6.68
PERCENT CHANGE		-16%		+6%		-1%		+12%
TOTAL DUCK STAMPS SOLD	3,688	3,553	20,744	21,029	8,762	8,851	19,771	19,670
PERCENT CHANGE		-4%		+1%		+1%		-1%
PERCENT SOLD TO NON-HUNTERS	2.33%	1.84%	1.25%	2.07%	1.92%	3.85%	2.51%	4.66%
TOTAL ADULT HUNTERS (POTENTIAL)	3,602	3,488	20,485	20,594	8,594	8,510	20,088	19,365
PERCENT CHANGE		-3%		+1%		-1%		-4%
PERCENT ACTIVE ADULT HUNTERS	85.1%	81.2%	86.3%	89.1%	87.5%	84.6%	84.3%	85.3%
PERCENT SUCCESSFUL ADULT HUNTERS	58.1%	54.4%	65.2%	71.2%	63.4%	53.9%	66.6%	72.2%
SAMPLE SIZES								
DUCK WINGS	295	541	924	1,081	407	346	1,128	1,305
GOOSE TAILS	27	44	1	0	15	9	117	149
QUESTIONNAIRES	239	312	661	813	359	286	910	1,175

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL

6/21/77

TABLE C-5 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE ATLANTIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS --CONTINUED

	WEST VIRGINIA		ATLANTIC FLYWAY TOTAL	
	1974	1975	1974	1975
DUCK SPECIES COMPOSITION				
MALLARD	24.75%	17.45%	22.71%	22.21%
DOMESTIC MALLARD	1.01	0.00	0.56	0.39
BLACK DUCK	12.63	11.49	16.65	14.40
BLACK X MALLARD	0.00	0.43	0.70	0.73
MOTTLED DUCK	0.00	0.00	0.83	0.70
GADWALL	0.00	0.43	1.58	1.96
AMERICAN WIGEON	0.51	0.43	3.91	4.75
GREEN-WINGED TEAL	4.55	0.43	7.96	7.03
BLUE-WINGED/CINNAMON TEAL	5.56	5.11	3.13	3.43
NORTHERN SHOVELER	0.00	0.00	0.93	1.02
PINTAIL	0.00	0.00	2.11	2.37
WOOD DUCK	49.50	61.28	16.13	16.74
REDHEAD	0.00	0.00	0.05	0.18
CANVASBACK	0.00	0.00	0.03	0.09
GREATER SCAUP	0.00	0.00	1.68	3.00
LESSER SCAUP	0.51	0.43	2.01	1.71
RING-NECKED DUCK	0.00	0.00	7.14	6.84
GOLDENEYES	0.51	1.28	0.81	0.86
BUFFLEHEAD	0.00	0.43	2.58	2.54
RUDDY DUCK	0.00	0.00	0.56	0.87
OLDSQUAW	0.00	0.43	0.79	1.26
EIDERS	0.00	0.00	1.29	0.80
SCOTERS	0.00	0.00	4.01	4.24
HOODED MERGANSERS	0.51	0.43	0.97	1.07
OTHER MERGANSERS	0.00	0.00	0.78	0.74
OTHER DUCKS	0.00	0.00	0.13	0.06
TOTAL	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	5,358	7,466	1,733,139	1,860,956
PERCENT CHANGE		+39%		+7%
SEASONAL DUCK HARVEST PER ADULT HUNTER	2.85	3.70	3.84	4.23
PERCENT CHANGE		+30%		+10%
GOOSE SPECIES COMPOSITION				
CANADA GOOSE	100.00%	100.00%	99.93%	88.94%
SNOW GOOSE	0.00	0.00	0.00	2.59
BLUE GOOSE	0.00	0.00	0.00	0.03
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.07	8.45
OTHER GEESE	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	233	354	338,753	395,514
PERCENT CHANGE		+52%		+17%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.13	0.18	0.76	0.91
PERCENT CHANGE		+41%		+20%
COOT HARVEST (RETRIEVED KILL)	387	410	106,051	165,635
PERCENT CHANGE		+6%		+56%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.20	0.20	0.22	0.36
PERCENT CHANGE		-1%		+61%
TOTAL HUNTER DAYS	9,258	9,991	2,835,708	2,854,855
PERCENT CHANGE		+8%		+1%
DAYS PER ADULT HUNTER	4.86	4.88	6.18	6.38
PERCENT CHANGE		0%		+3%
TOTAL DUCK STAMPS SOLD	1,910	2,112	448,847	441,837
PERCENT CHANGE		+11%		-2%
PERCENT SOLD TO NON-HUNTERS	5.09%	7.84%	2.76%	3.72%
TOTAL ADULT HUNTERS (POTENTIAL)	1,813	1,946	436,457	425,395
PERCENT CHANGE		+7%		-3%
PERCENT ACTIVE ADULT HUNTERS	80.5%	81.9%	84.3%	84.0%
PERCENT SUCCESSFUL ADULT HUNTERS	55.8%	64.5%	60.7%	61.6%
SAMPLE SIZES				
DUCK WINGS	198	235	14,721	16,352
GOOSE TAILS	0	5	2,718	3,208
QUESTIONNAIRES	152	320	14,554	15,150

[a]Washington, D.C., hunters and harvest allocated to Maryland, North Carolina, and Virginia.

TABLE C-6 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS.

	ALABAMA		ARKANSAS		ILLINOIS		INDIANA	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	24.31%	23.07%	76.24%	73.63%	58.70%	48.72%	38.86%	37.29%
DOMESTIC MALLARD	0.00	0.00	0.05	0.00	0.21	0.13	0.18	0.12
BLACK DUCK	2.45	5.80	0.58	0.59	2.40	1.61	8.43	5.53
BLACK X MALLARD	0.00	0.11	0.05	0.00	0.07	0.09	0.55	0.12
MOTTLED DUCK	0.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	10.18	17.36	5.21	5.97	1.71	3.82	4.77	2.65
AMERICAN WIGEON	3.77	6.33	2.37	1.87	3.08	3.02	3.67	3.91
GREEN-WINGED TEAL	5.69	6.22	2.47	4.79	6.85	7.66	3.52	6.98
BLUE-WINGED/CINNAMON TEAL	3.62	4.88	1.47	0.91	1.78	7.72	7.90	7.39
NORTHERN SHOVELER	0.75	1.78	0.89	0.90	0.48	0.72	0.37	0.92
PINTAIL	2.45	1.07	1.05	1.29	1.30	1.74	0.73	0.92
WOOD DUCK	33.17	17.17	5.84	5.42	13.63	13.47	18.55	16.58
REDHEAD	0.19	1.29	0.21	0.12	0.34	0.72	0.55	1.73
CANVASBACK	0.38	0.54	0.26	0.27	0.07	0.04	0.73	3.57
GREATER SCAUP	0.19	0.00	0.05	0.04	0.27	0.26	0.55	0.46
LESSER SCAUP	4.90	2.25	1.16	0.66	4.73	4.21	1.10	1.61
RING-NECKED DUCK	4.15	8.37	1.37	2.61	2.81	4.50	4.40	4.95
GOLDENEYES	0.57	0.43	0.00	0.04	0.21	0.30	2.38	2.88
BUFFLEHEAD	0.38	1.29	0.21	0.23	0.27	0.43	1.47	1.38
RUDDY DUCK	0.38	0.54	0.42	0.47	0.07	0.26	0.00	0.12
OLDSQUAW	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.04	0.07	0.13	0.00	0.12
HOODED MERGANSERS	1.70	1.07	0.11	0.12	0.82	0.34	0.73	0.81
OTHER MERGANSERS	0.00	0.43	0.00	0.00	0.07	0.13	0.37	0.00
OTHER DUCKS	0.00	0.00	0.00	0.00	0.07	0.00	0.18	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	57,533	96,594	556,004	673,343	290,507	423,408	93,870	115,437
PERCENT CHANGE		+69%		+21%		+46%		+23%
SEASONAL DUCK HARVEST PER ADULT HUNTER	4.41	6.95	9.93	11.11	3.57	6.37	3.46	4.71
PERCENT CHANGE		+58%		+12%		+78%		+36%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	80.00%	92.31%	0.00%	36.36%	88.53%	92.73%	100.00%	96.55%
SNOW GOOSE	6.67	0.00	0.00	22.73	1.64	2.42	0.00	3.45
BLUE GOOSE	13.33	7.69	100.00	36.36	9.84	4.24	0.00	0.00
WHITE-FRONTED GOOSE	0.00	0.00	0.00	4.55	0.00	0.61	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	1,213	3,765 +210%	2,538	5,626 +122%	51,803	40,048 -23%	7,623	7,815 +3%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.09	0.27 +190%	0.05	0.09 +104%	0.65	0.61 -5%	0.29	0.32 +13%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	9,159	21,064 +130%	13,439	5,383 -56%	18,476	19,535 +6%	9,052	11,780 +30%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.67	1.45 +115%	0.23	0.09 -60%	0.22	0.28 +29%	0.32	0.46 +44%
TOTAL HUNTER DAYS PERCENT CHANGE	78,462	106,418 +36%	496,912	539,124 +8%	575,373	550,882 -4%	173,536	167,736 -3%
DAYS PER ADULT HUNTER PERCENT CHANGE	5.89	7.46 +27%	8.68	8.70 0%	6.92	8.11 +17%	6.26	6.69 +7%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	12,537	13,630 +9%	53,882	58,275 +8%	80,002	66,251 -17%	26,280	24,026 -9%
PERCENT SOLD TO NON-HUNTERS	0.62%	2.19%	0.67%	0.60%	2.87%	4.14%	1.43%	2.45%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	12,459	13,332 +7%	53,521	57,925 +8%	77,706	63,508 -18%	25,904	23,437 -10%
PERCENT ACTIVE ADULT HUNTERS	83.1%	87.8%	85.6%	88.6%	81.7%	84.3%	83.2%	85.2%
PERCENT SUCCESSFUL ADULT HUNTERS	60.8%	71.8%	75.3%	77.7%	58.6%	68.9%	55.3%	62.3%
SAMPLE SIZES								
DUCK WINGS	575	941	1,893	2,584	1,460	2,465	640	976
GOOSE TAILS	15	13	5	22	183	165	8	29
QUESTIONNAIRES	645	1,258	1,054	1,003	2,296	1,321	749	1,750

TABLE C-6 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY OURING THE 1974 AND 1975 HUNTING SEASONS--CONTINUED

	IOWA		KENTUCKY		LOUISIANA		MICHIGAN	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	44.06%	38.88%	64.16%	52.10%	15.42%	18.70%	39.52%	42.94%
DOMESTIC MALLARD	0.20	0.00	0.00	0.99	0.00	0.05	0.37	0.15
BLACK DUCK	0.30	0.14	12.99	10.74	0.18	0.05	5.05	3.42
BLACK X MALLARD	0.00	0.00	0.26	0.80	0.00	0.00	0.32	0.27
MOTTLED DUCK	0.00	0.00	0.00	0.00	3.62	1.94	0.00	0.00
GADWALL	3.18	2.40	2.08	12.13	13.36	11.45	0.16	0.72
AMERICAN WIGEON	3.69	3.51	3.64	2.19	5.77	5.10	1.54	2.05
GREEN-WINGED TEAL	10.21	11.92	1.30	1.39	9.55	16.50	4.73	5.67
BLUE-WINGED/CINNAMON TEAL	11.17	15.12	0.52	2.17	16.17	14.55	2.39	5.59
NORTHERN SHOVELER	0.66	0.66	0.00	0.00	5.49	4.93	0.16	0.19
PINTAIL	1.21	1.51	1.82	0.40	5.24	7.47	1.12	1.10
WOOD DUCK	19.91	19.48	9.87	4.38	6.52	10.17	10.64	9.62
REDHEAD	0.35	0.60	0.00	0.80	0.36	0.21	1.22	2.09
CANVASBACK	0.30	0.37	0.78	0.60	0.21	0.43	0.48	1.14
GREATER SCAUP	0.15	0.09	0.00	0.60	0.11	0.11	3.67	2.85
LESSER SCAUP	1.97	2.23	0.78	1.19	13.07	4.37	11.70	7.15
RING-NECKED DUCK	1.42	2.23	0.26	4.57	3.42	2.67	4.26	3.61
GOLDENEYES	0.20	0.06	0.78	1.79	0.21	0.02	2.93	4.11
BUFFLEHEAD	0.46	0.34	0.26	1.39	0.07	0.14	6.12	3.42
RUDDY DUCK	0.20	0.06	0.00	0.60	0.11	0.16	1.17	0.88
OLDSQUAW	0.00	0.03	0.00	0.00	0.00	0.00	0.11	0.11
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.00
SCOTERS	0.05	0.03	0.00	0.00	0.00	0.00	1.65	1.10
HOODED MERGANSERS	0.10	0.23	0.26	0.99	0.61	0.43	0.43	0.61
OTHER MERGANSERS	0.20	0.14	0.26	0.20	0.50	0.48	0.21	1.14
OTHER DUCKS	0.00	0.00	0.00	0.00	0.04	0.07	0.00	0.06
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	231,620	308,243	46,726	77,735	1,160,398	1,736,135	418,975	360,647
PERCENT CHANGE		+33%		+66%		+50%		-14%
SEASONAL DUCK HARVEST PER ADULT HUNTER	3.73	5.09	3.69	5.84	10.83	15.29	3.93	3.40
PERCENT CHANGE		+36%		+58%		+41%		-13%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	15.87%	25.06%	99.03%	100.00%	0.00%	0.00%	89.39%	98.67%
SNOW GOOSE	41.87	32.32	0.00	0.00	8.89	13.42	0.76	0.67
BLUE GOOSE	41.68	41.92	0.97	0.00	72.22	60.98	9.85	0.67
WHITE-FRONTED GOOSE	0.57	0.70	0.00	0.00	18.89	25.61	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	40,703	48,074	11,160	15,712	51,140	89,144	28,184	21,228
PERCENT CHANGE		+18%		+41%		+74%		-25%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.66	0.80	0.89	1.20	0.48	0.80	0.27	0.20
PERCENT CHANGE		+21%		+34%		+65%		-24%
COOT HARVEST (RETRIEVED KILL)	10,464	11,162	1,309	2,136	241,694	279,537	26,397	51,489
PERCENT CHANGE		+7%		+63%		+16%		+95%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.16	0.18	0.10	0.15	2.16	2.36	0.24	0.47
PERCENT CHANGE		+9%		+56%		+9%		+97%
TOTAL HUNTER DAYS	482,208	477,304	84,499	98,569	792,020	967,135	680,164	651,167
PERCENT CHANGE		-1%		+17%		+22%		-4%
DAYS PER ADULT HUNTER	7.60	7.72	6.53	7.25	7.23	8.33	6.24	6.00
PERCENT CHANGE		+1%		+11%		+15%		-4%
TOTAL DUCK STAMPS SOLD	60,446	58,791	12,112	13,066	103,168	110,006	104,805	103,893
PERCENT CHANGE		-3%		+8%		+7%		-1%
PERCENT SOLD TO NON-HUNTERS	1.94%	1.66%	0.14%	2.69%	0.72%	1.39%	2.73%	2.39%
TOTAL ADULT HUNTERS (POTENTIAL)	59,273	57,815	12,095	12,715	102,425	108,477	101,944	101,410
PERCENT CHANGE		-2%		+5%		+6%		-1%
PERCENT ACTIVE ADULT HUNTERS	87.0%	85.9%	86.3%	87.8%	84.3%	86.0%	86.6%	86.9%
PERCENT SUCCESSFUL ADULT HUNTERS	67.0%	69.7%	63.2%	70.1%	73.9%	79.1%	65.2%	61.9%
SAMPLE SIZES								
DUCK WINGS	1,979	3,506	385	497	2,932	4,693	1,880	2,629
GOOSE TAILS	523	427	103	30	90	82	132	146
QUESTIONNAIRES	2,337	1,255	509	403	2,140	4,279	1,724	1,409

TABLE C-6 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS --CONTINUED

	MINNESOTA		MISSISSIPPI		MISSOURI		OHIO	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	32.84%	27.56%	60.99%	67.29%	65.02%	51.66%	32.69%	34.87%
DOMESTIC MALLARD	0.17	0.03	0.09	0.00	0.00	0.12	0.57	0.22
BLACK DUCK	0.31	0.18	0.71	1.44	0.41	0.18	6.96	7.35
BLACK X MALLARD	0.07	0.00	0.00	0.06	0.10	0.06	0.67	0.56
MOTTLED DUCK	0.00	0.00	0.36	0.06	0.00	0.00	0.00	0.00
GADWALL	1.13	1.16	5.16	3.26	3.07	5.66	1.33	0.89
AMERICAN WIGEON	4.53	3.98	1.78	1.63	2.72	2.43	3.81	2.79
GREEN-WINGED TEAL	7.75	7.02	4.82	3.71	4.18	9.33	5.29	8.41
BLUE-WINGED/CINNAMON TEAL	10.05	15.81	1.28	1.21	6.80	7.44	5.93	8.71
NORTHERN SHOVELER	0.41	0.43	0.36	0.44	1.94	1.10	0.29	0.33
PINTAIL	1.47	1.66	1.69	0.56	0.92	1.89	1.62	1.23
WOOD DUCK	15.53	16.76	13.98	13.55	6.56	6.45	22.55	22.28
REDHEAD	0.69	1.31	0.00	0.13	0.61	0.85	0.95	1.23
CANVASBACK	0.38	0.48	0.27	0.06	0.31	0.06	0.48	0.67
GREATER SCAUP	0.24	0.28	0.00	0.19	0.41	0.06	0.57	0.45
LESSER SCAUP	7.13	5.29	3.20	1.00	3.58	6.94	4.29	3.90
RING-NECKED DUCK	13.23	14.37	4.00	4.01	2.05	4.56	4.77	1.23
GOLDENEYES	1.13	1.13	0.00	0.06	0.10	0.06	0.38	0.33
BUFFLEHEAD	1.61	1.74	0.36	0.19	0.31	0.30	3.34	1.23
RUDDY DUCK	0.45	0.35	0.09	0.00	0.00	0.12	0.76	1.00
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.17	0.15	0.00	0.00	0.00	0.12	0.67	0.11
HOODED MERGANSERS	0.55	0.28	0.80	1.07	0.61	0.49	1.43	0.56
OTHER MERGANSERS	0.10	0.05	0.09	0.06	0.31	0.06	0.57	1.67
OTHER DUCKS	0.07	0.00	0.00	0.00	0.00	0.00	0.10	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	798,805	1,018,760	225,676	327,491	256,664	355,754	117,150	145,707
PERCENT CHANGE		+28%		+45%		+39%		+24%
SEASONAL DUCK HARVEST PER ADULT HUNTER	5.26	6.05	8.69	10.32	4.28	5.80	2.91	3.51
PERCENT CHANGE		+15%		+19%		+36%		+21%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	45.50%	76.96%	33.33%	64.29%	66.67%	63.72%	95.60%	95.87%
SNOW GOOSE	27.01	12.17	0.00	14.29	19.93	18.80	1.10	0.83
BLUE GOOSE	27.01	7.39	66.67	21.43	13.40	15.41	3.30	3.31
WHITE-FRONTED GOOSE	0.47	3.48	0.00	0.00	0.00	2.07	0.00	0.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	77,919	79,289	3,782	6,369	84,561	107,414	10,496	12,196
PERCENT CHANGE		+2%		+68%		+27%		+16%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.52	0.48	0.15	0.20	1.43	1.77	0.26	0.30
PERCENT CHANGE		-8%		+38%		+24%		+12%
COOT HARVEST (RETRIEVED KILL)	49,471	77,530	7,072	11,765	5,629	10,404	11,400	17,787
PERCENT CHANGE		+57%		+66%		+85%		+56%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.31	0.44	0.26	0.36	0.09	0.16	0.27	0.41
PERCENT CHANGE		+41%		+36%		+81%		+51%
TOTAL HUNTER DAYS	987,392	1,180,810	181,804	255,373	426,326	521,227	288,056	296,004
PERCENT CHANGE		+20%		+40%		+22%		+3%
DAYS PER ADULT HUNTER	6.36	6.86	6.85	7.87	6.95	8.31	7.00	6.97
PERCENT CHANGE		+8%		+15%		+20%		0%
TOTAL DUCK STAMPS SOLD	146,074	163,716	25,037	30,618	58,377	59,105	40,064	41,819
PERCENT CHANGE		+12%		+22%		+1%		+4%
PERCENT SOLD TO NON-HUNTERS	0.68%	1.69%	0.91%	1.00%	1.76%	0.83%	3.96%	5.05%
TOTAL ADULT HUNTERS (POTENTIAL)	145,081	160,949	24,809	30,312	57,350	58,614	38,477	39,707
PERCENT CHANGE		+11%		+22%		+2%		+3%
PERCENT ACTIVE ADULT HUNTERS	91.3%	91.4%	84.8%	86.6%	86.9%	89.4%	87.5%	86.0%
PERCENT SUCCESSFUL ADULT HUNTERS	78.5%	79.3%	71.8%	77.3%	70.7%	77.4%	61.0%	62.5%
SAMPLE SIZES								
DUCK WINGS	2,917	3,973	1,178	1,621	1,031	1,800	1,076	985
GOOSE TAILS	211	230	3	14	291	532	91	121
QUESTIONNAIRES	2,459	2,303	913	878	1,714	1,327	1,484	1,426

TABLE C-6 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE MISSISSIPPI FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS --CONTINUED

	TENNESSEE		WISCONSIN		MISSISSIPPI FLYWAY TOTAL	
	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION						
MALLARD	60.24%	57.33%	45.05%	34.19%	42.15%	38.28%
DOMESTIC MALLARD	0.15	0.43	0.42	0.11	0.16	0.09
BLACK DUCK	7.00	8.25	2.47	1.64	1.88	1.42
BLACK X MALLARD	0.30	0.11	0.08	0.17	0.11	0.07
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.84	0.52
GADWALL	4.87	6.32	1.01	1.01	4.99	5.47
AMERICAN WIGEON	2.43	3.97	4.07	4.16	3.79	3.67
GREEN-WINGED TEAL	1.37	3.56	6.79	7.64	6.44	9.34
BLUE-WINGED/CINNAMON TEAL	1.28	1.38	8.84	17.73	8.03	10.73
NORTHERN SHOVELER	0.15	0.43	0.21	0.28	1.63	1.72
PINTAIL	1.52	0.75	0.71	1.32	2.12	2.96
WOOD DUCK	7.76	5.80	19.41	17.75	12.09	12.37
REDHEAD	0.91	0.54	0.84	1.23	0.56	0.75
CANVASBACK	0.61	1.29	0.17	0.26	0.31	0.47
GREATER SCAUP	0.46	0.11	0.38	0.26	0.50	0.32
LESSER SCAUP	2.28	1.93	3.48	3.17	6.52	3.80
RING-NECKED DUCK	6.09	4.72	3.35	6.15	4.77	5.36
GOLDENEYES	0.15	0.21	0.63	0.35	0.64	0.57
BUFFLEHEAD	1.37	1.29	0.63	1.19	1.11	0.85
RUDDY DUCK	0.00	0.54	0.21	0.00	0.30	0.34
OLDSQUAW	0.00	0.00	0.00	0.09	0.01	0.02
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.11	0.55	0.19	0.25	0.13
HOODED MERGANSERS	1.07	0.54	0.67	0.26	0.59	0.42
OTHER MERGANSERS	0.00	0.43	0.04	0.26	0.20	0.31
OTHER DUCKS	0.00	0.00	0.00	0.00	0.03	0.02
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	263,067	237,401	648,829	711,960	5,165,824	6,589,015
PERCENT CHANGE		-10%		+10%		+28%
SEASONAL DUCK HARVEST PER ADULT HUNTER	7.28	8.61	4.67	4.71	5.62	7.00
PERCENT CHANGE		+18%		+1%		+25%
GOOSE SPECIES COMPOSITION						
CANADA GOOSE	94.12%	93.15%	89.33%	92.31%	61.12%	61.54%
SNOW GOOSE	0.00	0.00	3.96	3.11	13.81	12.23
BLUE GOOSE	5.88	6.85	6.71	4.58	22.86	20.68
WHITE-FRONTED GOOSE	0.00	0.00	0.00	0.00	2.21	5.55
BRANT	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	9,786	10,911	82,591	68,709	463,504	516,300
PERCENT CHANGE		+11%		-17%		+11%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.27	0.40	0.60	0.46	0.51	0.56
PERCENT CHANGE		+46%		-23%		+9%
COOT HARVEST (RETRIEVED KILL)	8,438	5,914	76,083	118,968	488,083	644,954
PERCENT CHANGE		-30%		+56%		+32%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.22	0.21	0.53	0.76	0.51	0.66
PERCENT CHANGE		-8%		+44%		+29%
TOTAL HUNTER DAYS	291,594	237,053	1,068,031	1,129,847	6,606,377	7,178,649
PERCENT CHANGE		-19%		+6%		+9%
DAYS PER ADULT HUNTER	7.89	8.40	7.51	7.31	7.03	7.46
PERCENT CHANGE		+6%		-3%		+6%
TOTAL DUCK STAMPS SOLD	34,844	26,613	134,369	146,925	892,017	916,734
PERCENT CHANGE		-24%		+9%		+3%
PERCENT SOLD TO NON-HUNTERS	0.90%	0.95%	1.10%	1.66%	1.52%	1.93%
TOTAL ADULT HUNTERS (POTENTIAL)	34,530	26,360	132,911	144,486	878,485	899,047
PERCENT CHANGE		-24%		+9%		+2%
PERCENT ACTIVE ADULT HUNTERS	85.4%	89.6%	90.1%	89.8%	87.0%	88.1%
PERCENT SUCCESSFUL ADULT HUNTERS	65.8%	74.8%	75.9%	75.8%	70.2%	73.5%
SAMPLE SIZES						
DUCK WINGS	662	1,033	2,386	4,636	20,994	32,339
GOOSE TAILS	17	73	328	546	2,000	2,430
QUESTIONNAIRES	798	763	2,538	1,702	21,360	21,007

TABLE C-7 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE CENTRAL FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS.

	COLORADO[a]		KANSAS		MONTANA[a]		NEBRASKA	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	52.91%	61.87%	42.28%	38.55%	68.20%	72.46%	57.54%	45.25%
DOMESTIC MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	7.72	3.96	11.86	9.60	7.03	8.28	8.60	5.66
AMERICAN WIGEON	6.28	5.32	4.51	5.16	4.28	6.00	5.59	5.87
GREEN-WINGED TEAL	10.65	13.20	14.11	18.77	7.95	2.90	9.72	15.46
BLUE-WINGED/CINNAMON TEAL	11.05	7.43	8.97	11.42	6.42	2.48	6.82	12.40
NORTHERN SHOVELER	1.55	1.78	2.92	1.91	3.06	2.48	1.90	2.10
PINTAIL	5.70	2.79	3.45	2.50	1.22	1.86	1.34	3.02
WOOD DUCK	0.10	0.20	1.59	1.61	0.00	0.00	1.01	2.39
REDHEAD	1.84	1.01	3.45	3.05	0.31	0.41	1.45	1.84
CANVASBACK	0.19	0.15	0.60	0.63	0.00	0.00	0.56	0.34
GREATER SCAUP	0.00	0.00	0.13	0.04	0.00	0.00	0.00	0.00
LESSER SCAUP	0.10	0.46	2.25	2.66	0.31	1.24	2.35	2.81
RING-NECKED DUCK	0.19	0.30	2.78	2.75	0.31	0.21	0.89	1.51
GOLDENEYES	0.77	1.01	0.33	0.55	0.31	1.66	0.45	0.21
BUFFLEHEAD	0.58	0.15	0.13	0.34	0.00	0.00	1.68	0.63
RUDDY DUCK	0.19	0.05	0.27	0.34	0.31	0.00	0.00	0.42
OLDSQUAW	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.04
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.04	0.31	0.00	0.00	0.00
HOODED MERGANSERS	0.19	0.10	0.07	0.00	0.00	0.00	0.00	0.04
OTHER MERGANSERS	0.00	0.20	0.20	0.09	0.00	0.00	0.11	0.04
OTHER DUCKS	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	103,976	112,171	309,599	281,129	29,300	52,429	128,563	255,680
PERCENT CHANGE		+8%		-9%		+79%		+99%
SEASONAL DUCK HARVEST PER ADULT HUNTER	2.54	2.73	4.58	4.60	3.56	5.66	2.54	5.79
PERCENT CHANGE		+7%		0%		+59%		+128%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	98.95%	29.10%	55.95%	98.98%	86.84%	30.91%	40.52%
SNOW GOOSE	0.00	0.35	41.39	19.64	0.00	2.63	32.73	29.41
BLUE GOOSE	0.00	0.35	18.03	11.31	0.00	0.00	32.73	24.18
WHITE-FRONTED GOOSE	0.00	0.35	11.48	13.10	1.02	10.53	3.64	5.88
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL) PERCENT CHANGE	18,020	26,502 +47%	39,622	24,696 -38%	4,831	2,968 -39%	28,385	33,558 +18%
SEASONAL GOOSE HARVEST PER ADULT HUNTER PERCENT CHANGE	0.45	0.66 +46%	0.60	0.41 -31%	0.60	0.33 -45%	0.57	0.78 +35%
COOT HARVEST (RETRIEVED KILL) PERCENT CHANGE	3,086	2,819 -9%	16,225	7,763 -52%	1,406	1,843 +31%	5,841	4,186 -28%
SEASONAL COOT HARVEST PER ADULT HUNTER PERCENT CHANGE	0.07	0.07 -10%	0.23	0.12 -47%	0.17	0.19 +16%	0.11	0.09 -18%
TOTAL HUNTER DAYS PERCENT CHANGE	293,645	265,668 -10%	463,561	441,569 -5%	37,366	49,695 +33%	333,976	361,765 +8%
DAYS PER ADULT HUNTER PERCENT CHANGE	7.01	6.31 -10%	6.70	7.07 +5%	4.44	5.24 +18%	6.46	8.01 +24%
TOTAL DUCK STAMPS SOLD PERCENT CHANGE	39,062	39,079 0%	64,440	58,005 -10%	7,930	8,848 +12%	48,195	41,978 -13%
PERCENT SOLD TO NON-HUNTERS	1.17%	0.70%	1.16%	0.75%	2.23%	1.20%	1.13%	0.88%
TOTAL ADULT HUNTERS (POTENTIAL) PERCENT CHANGE	38,605	38,805 +1%	63,692	57,570 -10%	7,753	8,742 +13%	47,650	41,609 -13%
PERCENT ACTIVE ADULT HUNTERS PERCENT SUCCESSFUL ADULT HUNTERS	83.2% 54.6%	84.7% 57.7%	79.2% 61.8%	81.4% 62.2%	73.5% 61.7%	78.2% 68.2%	81.0% 55.8%	83.6% 68.8%
SAMPLE SIZES								
DUCK WINGS	981	1,888	1,609	2,551	327	483	895	2,387
GOOSE TAILS	175	286	244	168	98	38	110	153
QUESTIONNAIRES	1,824	1,373	2,250	1,059	328	356	2,045	916

TABLE C-7 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE CENTRAL FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS --CONTINUED

	NEW MEXICO[a]		NORTH DAKOTA		OKLAHOMA		SOUTH DAKOTA	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	36.86%	31.19%	52.91%	45.47%	46.64%	38.68%	43.50%	46.06%
DOMESTIC MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK DUCK	0.00	0.00	0.08	0.25	0.13	0.00	0.11	0.00
BLACK X MALLARD	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	8.69	10.85	11.54	14.33	10.11	13.01	10.06	10.29
AMERICAN WIGEON	9.96	9.79	2.63	5.78	6.99	5.70	8.85	8.37
GREEN-WINGED TEAL	12.10	19.20	6.82	4.95	10.24	18.57	10.82	10.48
BLUE-WINGED/CINNAMON TEAL	7.41	10.13	7.98	8.63	4.75	5.47	12.46	9.52
NORTHERN SHOVELER	10.59	5.14	3.25	4.28	2.81	1.72	1.86	2.02
PINTAIL	8.90	7.38	10.30	10.27	2.18	2.38	2.30	4.04
WOOD DUCK	0.42	0.30	0.78	0.29	3.37	3.63	0.77	0.96
REDHEAD	1.70	1.21	0.93	2.26	3.62	2.99	2.30	2.40
CANVASBACK	0.64	0.90	0.54	0.50	1.81	0.78	0.87	0.77
GREATER SCAUP	0.00	0.00	0.00	0.04	0.06	0.11	0.00	0.00
LESSER SCAUP	0.00	0.45	0.78	1.72	2.43	1.66	2.51	2.12
RING-NECKED DUCK	0.42	1.21	0.93	0.55	3.87	3.76	1.64	1.92
GOLDENEYES	1.06	0.30	0.00	0.00	0.06	0.50	0.44	0.29
BUFFLEHEAD	0.85	1.06	0.08	0.34	0.31	0.39	0.77	0.48
RUDDY DUCK	0.21	0.75	0.16	0.34	0.44	0.39	0.44	0.19
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HOODED MERGANSERS	0.00	0.00	0.23	0.00	0.13	0.17	0.33	0.00
OTHER MERGANSERS	0.00	0.45	0.00	0.00	0.06	0.11	0.00	0.00
OTHER DUCKS	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.10
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	41,736	53,712	348,112	372,380	181,031	259,836	144,737	201,353
PERCENT CHANGE		+29%		+7%		+44%		+39%
SEASONAL DUCK HARVEST PER ADULT HUNTER	6.19	7.00	6.00	5.98	5.07	7.11	3.31	4.64
PERCENT CHANGE		+13%		0%		+40%		+40%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	89.29%	36.92%	21.55%	20.14%	64.22%	70.73%	50.91%	38.63%
SNOW GOOSE	10.71	56.92	56.60	55.59	22.94	14.63	30.30	33.89
BLUE GOOSE	0.00	6.15	20.18	23.13	9.17	10.57	17.88	26.54
WHITE-FRONTED GOOSE	0.00	0.00	1.52	1.14	3.67	4.07	0.91	0.71
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OTHER GEESE	0.00	0.00	0.15[b]	0.00	0.00	0.00	0.00	0.24[b]
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	874	3,377	123,321	176,618	10,463	2,,948	57,001	63,782
PERCENT CHANGE		+286%		+43%		+119%		+12%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.13	0.45	2.17	2.89	0.30	0.64	1.33	1.50
PERCENT CHANGE		+239%		+33%		+115%		+13%
COOT HARVEST (RETRIEVED KILL)	1,764	2,542	13,904	14,137	8,053	7,233	12,364	9,539
PERCENT CHANGE		+44%		+2%		-10%		-23%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.25	0.32	0.23	0.22	0.22	0.19	0.27	0.21
PERCENT CHANGE		+27%		-6%		-12%		-22%
TOTAL HUNTER DAYS	41,723	58,673	414,470	495,138	241,794	280,902	303,783	335,567
PERCENT CHANGE		+41%		+19%		+16%		+1%
DAYS PER ADULT HUNTER	6.04	7.47	6.58	7.76	6.61	7.51	6.79	6.88
PERCENT CHANGE		+24%		+11%		+14%		+1%
TOTAL DUCK STAMPS SOLD	6,474	7,389	54,917	58,896	34,019	34,978	41,476	41,004
PERCENT CHANGE		+14%		+7%		+3%		-1%
PERCENT SOLD TO NON-HUNTERS	1.77%	2.07%	0.41%	0.15%	0.99%	1.48%	0.58%	0.24%
TOTAL ADULT HUNTERS (POTENTIAL)	6,359	7,236	54,692	58,808	33,682	34,460	41,235	40,906
PERCENT CHANGE		+14%		+8%		+2%		-1%
PERCENT ACTIVE ADULT HUNTERS	86.8%	90.4%	89.1%	90.6%	82.3%	83.7%	84.1%	84.9%
PERCENT SUCCESSFUL ADULT HUNTERS	68.5%	75.4%	79.5%	84.2%	64.0%	68.1%	70.2%	74.1%
SAMPLE SIZES								
DUCK WINGS	494	656	1,291	2,386	1,696	1,866	915	1,040
GOOSE TAILS	28	65	659	1,574	109	123	330	422
QUESTIONNAIRES	442	257	1,256	805	979	984	1,073	596

TABLE C-7 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE CENTRAL FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS --CONTINUED

	TEXAS		WYOMING[a]		CENTRAL FLYWAY TOTAL	
	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION						
MALLARD	16.03%	14.15%	73.02%	63.77%	35.48%	31.52%
DOMESTIC MALLARD	0.00	0.00	0.00	0.00	0.00	0.00
BLACK DUCK	0.03	0.00	0.00	0.00	0.04	0.03
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.01	0.00
MOTTLED DUCK	7.14	6.12	0.00	0.00	2.95	2.71
GADWALL	12.41	9.23	5.48	4.75	11.20	9.75
AMERICAN WIGEON	9.21	6.38	5.68	8.28	6.90	6.27
GREEN-WINGED TEAL	14.57	25.08	4.06	8.14	11.99	18.27
BLUE-WINGED/CINNAMON TEAL	9.50	7.94	3.65	4.07	8.77	8.50
NORTHERN SHOVELER	7.47	5.08	1.42	2.31	4.78	3.69
PINTAIL	10.81	16.70	2.23	2.44	7.42	9.99
WOOD DUCK	1.92	1.88	0.20	0.00	1.53	1.63
REDHEAD	0.96	1.92	0.81	0.54	1.67	2.10
CANVASBACK	1.22	0.77	0.41	0.54	0.93	0.65
GREATER SCAUP	0.13	0.09	0.00	0.00	0.08	0.06
LESSER SCAUP	4.61	1.66	0.41	0.41	2.84	1.80
RING-NECKED DUCK	2.88	2.17	0.20	0.27	2.21	1.93
GOLDENEYES	0.13	0.04	1.42	2.59	0.23	0.27
BUFFLEHEAD	0.26	0.24	0.20	0.14	0.35	0.33
RUDDY DUCK	0.26	0.22	0.41	0.54	0.25	0.28
OLDSQUAW	0.00	0.00	0.00	0.00	0.01	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.20	0.00	0.01	0.00
HOODED MERGANSERS	0.29	0.13	0.00	0.00	0.21	0.08
OTHER MERGANSERS	0.03	0.18	0.20	0.81	0.05	0.13
OTHER DUCKS	0.16	0.02	0.00	0.00	0.08	0.02
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	924,902	1,295,769	26,226	46,667	2,238,182	2,931,626
PERCENT CHANGE		+40%		+78%		+31%
SEASONAL DUCK HARVEST PER ADULT HUNTER	7.21	9.33	3.69	6.24	5.01	6.49
PERCENT CHANGE		+29%		+69%		+29%
GOOSE SPECIES COMPOSITION						
CANADA GOOSE	21.30%	18.20%	100.00%	100.00%	32.59%	30.41%
SNOW GOOSE	41.67	43.37	0.00	0.00	40.92	40.85
BLUE GOOSE	16.90	20.75	0.00	0.00	17.96	20.30
WHITE-FRONTED GOOSE	20.14	17.69	0.00	0.00	8.49	8.42
BRANT	0.00	0.00	0.00	0.00	0.00[b]	0.00[b]
OTHER GEESE	0.00	0.00	0.00	0.00	0.04	0.03
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	134,942	226,525	1,631	2,201	419,090	583,179
PERCENT CHANGE		+68%		+35%		+39%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	1.07	1.66	0.23	0.30	0.96	1.31
PERCENT CHANGE		+55%		+28%		+37%
COOT HARVEST (RETRIEVED KILL)	33,915	35,291	1,563	1,121	98,121	86,474
PERCENT CHANGE		+4%		-28%		-12%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.26	0.25	0.21	0.14	0.21	0.18
PERCENT CHANGE		-4%		-32%		-13%
TOTAL HUNTER DAYS	766,714	888,897	34,809	47,571	2,931,841	3,195,445
PERCENT CHANGE		+16%		+37%		+9%
DAYS PER ADULT HUNTER	5.84	6.25	4.79	6.22	6.41	6.91
PERCENT CHANGE		+7%		+30%		+8%
TOTAL DUCK STAMPS SOLD	122,819	133,307	6,803	7,134	426,135	430,618
PERCENT CHANGE		+9%		+5%		+1%
PERCENT SOLD TO NON-HUNTERS	1.54%	1.74%	1.59%	1.19%	1.14%	1.03%
TOTAL ADULT HUNTERS (POTENTIAL)	120,928	130,987	6,695	7,049	421,291	426,172
PERCENT CHANGE		+8%		+5%		+1%
PERCENT ACTIVE ADULT HUNTERS	80.9%	82.4%	81.2%	84.6%	82.3%	84.2%
PERCENT SUCCESSFUL ADULT HUNTERS	66.7%	71.9%	65.9%	71.0%	65.3%	70.5%
SAMPLE SIZES						
DUCK WINGS	3,345	4,966	493	737	12,046	18,960
GOOSE TAILS	432	588	37	29	2,222	3,446
QUESTIONNAIRES	2,797	6,961	484	369	13,478	13,676

[a] Includes only that portion of the State lying within the Central Flyway.
[b] Ross' geese.

TABLE C-8 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE PACIFIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS.

	ARIZONA		CALIFORNIA		COLORADO[a]		IDAHO	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	9.71%	8.45%	14.02%	14.12%	71.25%	75.57%	78.09%	72.26%
DOMESTIC MALLARD	0.14	0.00	0.03	0.08	0.00	0.50	0.06	0.00
BLACK DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	5.29	6.63	3.05	2.52	1.72	0.50	2.00	3.36
AMERICAN WIGEON	7.71	8.29	9.72	9.73	7.13	4.28	5.71	5.57
GREEN-WINGED TEAL	17.14	24.52	17.17	18.27	7.86	8.06	4.42	6.38
BLUE-WINGED/CINNAMON TEAL	17.57	10.03	3.41	2.71	3.69	1.76	0.77	1.34
NORTHERN SHOVELER	6.43	11.35	9.14	9.52	0.25	0.50	0.35	0.81
PINTAIL	23.29	14.83	37.60	37.96	1.23	2.52	4.18	5.57
WOOD DUCK	0.29	0.08	0.99	0.91	0.25	0.00	1.53	1.01
REDHEAD	2.71	3.89	0.48	0.30	0.00	0.50	0.35	0.87
CANVASBACK	0.86	1.66	1.30	1.44	0.00	0.00	0.29	0.13
GREATER SCAUP	0.00	0.00	0.37	0.13	0.00	0.00	0.00	0.13
LESSER SCAUP	0.86	1.08	0.60	0.31	0.25	0.00	0.18	0.27
RING-NECKED DUCK	2.29	2.82	0.56	0.75	1.97	1.51	0.35	0.27
GOLDENEYES	0.14	0.17	0.15	0.08	2.46	3.53	1.30	1.41
BUFFLEHEAD	0.57	1.24	0.36	0.40	0.98	0.50	0.12	0.07
RUDDY DUCK	3.00	4.64	0.98	0.70	0.00	0.25	0.06	0.07
OLDSQUAW	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HOODED MERGANSERS	0.00	0.00	0.03	0.01	0.00	0.00	0.24	0.07
OTHER MERGANSERS	0.86	0.17	0.03	0.04	0.98	0.00	0.00	0.40
OTHER DUCKS	1.14	0.08	0.01	0.04	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	84,811	77,147	1,911,985	1,959,298	24,019	24,275	309,773	304,423
PERCENT CHANGE		-9%		+2%		+1%		-2%
SEASONAL DUCK HARVEST PER ADULT HUNTER	6.09	6.39	12.87	13.51	5.07	5.03	8.66	8.34
PERCENT CHANGE		+5%		+5%		-1%		-4%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	83.33%	41.55%	34.02%	80.00%	100.00%	100.00%	100.00%
SNOW GOOSE	0.00	12.50	29.13	44.74	20.00	0.00	0.00	0.00
BLUE GOOSE	0.00	0.00	0.00	0.75	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	4.17	23.50	16.73	0.00	0.00	0.00	0.00
BRANT	0.00	0.00	0.97	0.00	0.00	0.00	0.00	0.00
OTHER GEESE[b]	0.00	0.00	4.85	3.76	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	1,757	2,050	173,334	180,811	514	721	13,856	16,412
PERCENT CHANGE		+17%		+4%		+40%		+18%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.13	0.17	1.17	1.25	0.11	0.15	0.39	0.45
PERCENT CHANGE		+34%		+7%		+38%		+16%
COOT HARVEST (RETRIEVED KILL)	4,245	3,071	154,773	128,604	439	487	6,354	8,350
PERCENT CHANGE		-28%		-17%		+11%		+31%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.29	0.24	1.00	0.85	0.09	0.10	0.17	0.22
PERCENT CHANGE		-16%		-15%		+9%		+29%
TOTAL HUNTER DAYS	79,835	63,230	1,167,109	1,149,987	25,093	28,566	251,556	275,101
PERCENT CHANGE		-21%		-1%		+14%		+9%
DAYS PER ADULT HUNTER	5.54	5.06	7.59	7.66	5.12	5.71	6.79	7.28
PERCENT CHANGE		-9%		+1%		+12%		+7%
TOTAL DUCK STAMPS SOLD	13,474	11,924	149,548	143,289	4,562	4,633	34,377	35,589
PERCENT CHANGE		-12%		-4%		+2%		+4%
PERCENT SOLD TO NON-HUNTERS	1.55%	3.50%	5.36%	3.56%	1.17%	0.70%	0.86%	2.29%
TOTAL ADULT HUNTERS (POTENTIAL)	13,265	11,507	141,532	138,188	4,509	4,601	34,081	34,774
PERCENT CHANGE		-13%		-2%		+2%		+2%
PERCENT ACTIVE ADULT HUNTERS	83.0%	79.2%	86.7%	87.1%	81.4%	81.6%	82.4%	84.2%
PERCENT SUCCESSFUL ADULT HUNTERS	63.5%	60.9%	75.4%	76.2%	65.7%	67.4%	66.2%	71.5%
SAMPLE SIZES								
DUCK WINGS	700	1,207	9,455	8,429	407	397	1,698	1,489
GOOSE TAILS	20	24	515	532	14	4	81	109
QUESTIONNAIRES	584	974	2,448	4,768	245	306	1,169	751

REGULAR AND SPECIAL SEASON --- BIAS REDUCED AT STATE LEVEL 6/21/77

TABLE C-8 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE PACIFIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS --CONTINUED

	MONTANA[a]		NEVADA		NEW MEXICO[a]		OREGON	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	67.44%	60.12%	25.26%	23.47%	23.57%	45.36%	44.21%	31.61%
DOMESTIC MALLARD	0.00	0.58	0.00	0.00	0.00	0.00	0.42	0.04
BLACK DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	4.10	3.89	12.11	6.36	15.29	2.19	4.91	2.36
AMERICAN WIGEON	6.15	7.20	7.55	8.63	15.29	3.28	15.02	18.63
GREEN-WINGED TEAL	6.41	7.69	13.41	17.84	15.92	19.67	6.60	12.95
BLUE-WINGED/CINNAMON TEAL	2.69	2.04	4.43	3.66	4.14	10.93	0.14	0.48
NORTHERN SHOVELER	1.54	2.53	8.85	7.09	1.59	1.09	2.60	3.84
PINTAIL	4.74	4.96	17.19	20.03	3.50	4.37	19.93	19.55
WOOD DUCK	0.39	0.68	0.26	0.44	0.00	0.00	1.75	1.84
REDHEAD	1.15	1.17	2.08	4.17	1.27	4.37	0.42	0.81
CANVASBACK	0.64	0.29	1.69	4.09	2.23	1.64	0.35	1.37
GREATER SCAUP	0.13	0.20	0.00	0.07	0.00	0.00	0.49	0.96
LESSER SCAUP	1.41	3.31	0.13	0.37	1.59	0.55	0.63	1.14
RING-NECKED DUCK	0.64	0.88	0.52	1.46	0.64	3.83	1.40	1.44
GOLDENEYES	1.67	3.21	0.91	0.72	3.50	0.00	0.07	0.15
BUFFLEHEAD	0.51	0.49	1.69	0.22	5.73	0.55	0.70	1.59
RUDDY DUCK	0.00	0.00	3.65	1.90	3.50	1.64	0.14	0.96
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.00	0.10	0.00	0.00	0.32	0.00	0.07	0.00
HOODED MERGANSERS	0.26	0.10	0.13	0.00	0.00	0.00	0.07	0.11
OTHER MERGANSERS	0.13	0.58	0.13	0.00	1.91	0.55	0.07	0.15
OTHER DUCKS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	103,766	127,822	80,569	127,571	6,670	4,509	290,572	455,708
PERCENT CHANGE		+23%		+58%		-32%		+57%
SEASONAL DUCK HARVEST PER ADULT HUNTER	5.08	5.87	6.63	8.93	6.33	4.30	5.44	7.96
PERCENT CHANGE		+16%		+35%		-32%		+46%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	90.36%	75.00%	94.12%	84.62%	100.00%	50.00%	98.00%	76.82%
SNOW GOOSE	9.64	22.22	5.88	15.39	0.00	0.00	1.33	10.73
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHITE-FRONTED GOOSE	0.00	2.78	0.00	0.00	0.00	0.00	0.67	9.00
BRANT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11
OTHER GEESE[b]	0.00	0.00	0.00	0.00	0.00	50.00	0.00	0.35
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	5,245	9,332	6,612	7,453	7	47	35,635	51,364
PERCENT CHANGE		+78%		+13%		+571%		+44%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.26	0.43	0.55	0.52	0.01	0.04	0.67	0.90
PERCENT CHANGE		+67%		-4%		+638%		+34%
COOT HARVEST (RETRIEVED KILL)	2,970	2,023	4,443	5,748	135	83	25,706	19,200
PERCENT CHANGE		-32%		+29%		-39%		-25%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.14	0.09	0.35	0.39	0.12	0.08	0.46	0.32
PERCENT CHANGE		-36%		+10%		-38%		-30%
TOTAL HUNTER DAYS	115,298	131,140	58,322	92,262	6,538	5,313	362,454	438,496
PERCENT CHANGE		+14%		+58%		-19%		+21%
DAYS PER ADULT HUNTER	5.45	5.82	4.64	6.24	5.99	4.89	6.56	7.40
PERCENT CHANGE		+7%		+35%		-18%		+13%
TOTAL DUCK STAMPS SOLD	19,892	20,991	11,714	13,856	1,022	1,020	51,290	55,569
PERCENT CHANGE		+6%		+18%		0%		+8%
PERCENT SOLD TO NON-HUNTERS	2.23%	1.20%	1.21%	1.80%	1.77%	2.07%	0.83%	1.88%
TOTAL ADULT HUNTERS (POTENTIAL)	19,448	20,739	11,572	13,607	1,004	999	50,864	54,524
PERCENT CHANGE		+7%		+18%		0%		+7%
PERCENT ACTIVE ADULT HUNTERS	80.6%	82.2%	80.7%	82.6%	82.9%	75.4%	80.5%	85.2%
PERCENT SUCCESSFUL ADULT HUNTERS	64.5%	66.1%	66.5%	70.3%	75.2%	52.3%	61.5%	70.3%
SAMPLE SIZES								
DUCK WINGS	780	1,028	768	1,368	314	183	1,425	2,711
GOOSE TAILS	83	72	34	26	0	2	150	28
QUESTIONNAIRES	796	1,120	462	868	100	221	2,121	1,507

TABLE C-8 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN THE PACIFIC FLYWAY DURING THE 1974 AND 1975 HUNTING SEASONS—CONTINUED

	UTAH		WASHINGTON		WYOMING[a]		PACIFIC FLYWAY TOTAL	
	1974	1975	1974	1975	1974	1975	1974	1975
DUCK SPECIES COMPOSITION								
MALLARD	22.92%	19.94%	63.74%	52.39%	57.26%	52.66%	31.49%	28.25%
DOMESTIC MALLARD	0.00	0.04	0.35	0.08	0.40	0.00	0.11	0.08
BLACK DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BLACK X MALLARD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MOTTLED DUCK	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GADWALL	8.11	7.65	0.75	1.35	4.03	12.77	3.53	3.20
AMERICAN WIGEON	5.22	6.63	10.35	14.37	7.26	8.51	9.30	10.52
GREEN-WINGED TEAL	16.99	17.51	7.58	11.92	7.66	4.26	13.45	15.53
BLUE-WINGED/CINNAMON TEAL	2.84	3.99	0.06	0.38	7.66	3.72	2.78	2.33
NORTHERN SHOVELER	10.75	15.55	1.62	2.07	2.02	1.60	6.61	7.51
PINTAIL	24.90	21.75	8.62	10.00	3.23	2.66	26.26	25.71
WOOD DUCK	0.10	0.11	0.46	0.11	0.00	0.00	0.90	0.79
REDHEAD	1.88	3.52	1.10	1.32	0.00	1.60	0.77	1.09
CANVASBACK	1.57	0.83	0.29	0.41	0.00	0.00	1.00	1.17
GREATER SCAUP	0.05	0.07	0.41	0.68	0.00	0.00	0.30	0.29
LESSER SCAUP	0.71	0.58	1.10	1.09	0.40	1.06	0.66	0.64
RING-NECKED DUCK	0.51	0.22	0.46	1.24	0.40	0.53	0.65	0.87
GOLDENEYES	0.25	0.11	1.85	1.35	6.05	9.04	0.57	0.51
BUFFLEHEAD	0.41	0.18	0.37	0.94	1.21	1.06	0.49	0.58
RUDDY DUCK	2.59	0.98	0.17	0.11	0.00	0.00	0.94	0.72
OLDSQUAW	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
EIDERS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCOTERS	0.05	0.04	0.17	0.04	0.00	0.00	0.03	0.01
HOODED MERGANSERS	0.00	0.00	0.00	0.08	0.00	0.00	0.05	0.04
OTHER MERGANSERS	0.15	0.29	0.06	0.08	2.42	0.53	0.09	0.13
OTHER DUCKS	0.00	0.04	0.00	0.00	0.00	0.00	0.03	0.02
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	301,230	411,167	474,571	526,490	10,419	12,460	3,598,385	4,030,870
PERCENT CHANGE		+36%		+11%		+20%		+12%
SEASONAL DUCK HARVEST PER ADULT HUNTER	7.51	9.95	6.55	7.03	4.91	5.53	8.89	9.80
PERCENT CHANGE		+32%		+7%		+14%		+10%
GOOSE SPECIES COMPOSITION								
CANADA GOOSE	100.00%	97.85%	90.91%	88.79%	100.00%	100.00%	63.85%	56.62%
SNOW GOOSE	0.00	2.15	1.82	1.87	0.00	0.00	17.90	28.25
BLUE GOOSE	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42
WHITE-FRONTED GOOSE	0.00	0.00	0.91	5.61	0.00	0.00	14.05	11.60
BRANT	0.00	0.00	6.36	3.74	0.00	0.00	1.34	0.94
OTHER GEESE[b]	0.00	0.00	0.00	0.00	0.00	0.00	2.86	2.18
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	20,799	14,680	35,649	37,743	501	1,169	293,909	321,782
PERCENT CHANGE		-29%		+6%		+133%		+9%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.52	0.36	0.49	0.51	0.24	0.53	0.73	0.79
PERCENT CHANGE		-31%		+2%		+122%		+8%
COOT HARVEST (RETRIEVED KILL)	11,394	13,702	13,149	7,712	138	136	223,746	189,116
PERCENT CHANGE		+20%		-41%		-1%		-15%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.27	0.32	0.17	0.10	0.06	0.06	0.53	0.44
PERCENT CHANGE		+16%		-43%		-8%		-17%
TOTAL HUNTER DAYS	286,813	337,636	544,931	550,975	10,905	13,146	2,908,854	3,085,852
PERCENT CHANGE		+18%		+1%		+21%		+6%
DAYS PER ADULT HUNTER	6.91	7.89	7.26	7.11	4.97	5.69	6.94	7.25
PERCENT CHANGE		+14%		-2%		+15%		+4%
TOTAL DUCK STAMPS SOLD	38,575	39,652	70,353	72,189	2,053	2,152	396,860	400,864
PERCENT CHANGE		+3%		+3%		+5%		+1%
PERCENT SOLD TO NON-HUNTERS	0.99%	0.72%	1.87%	1.20%	1.59%	1.19%	2.86%	2.27%
TOTAL ADULT HUNTERS (POTENTIAL)	38,193	39,367	69,037	71,323	2,020	2,126	385,525	391,755
PERCENT CHANGE		+3%		+3%		+5%		+2%
PERCENT ACTIVE ADULT HUNTERS	88.6%	88.8%	82.5%	82.6%	82.4%	81.1%	84.2%	85.2%
PERCENT SUCCESSFUL ADULT HUNTERS	73.0%	77.2%	63.5%	68.7%	70.2%	67.8%	69.0%	72.3%
SAMPLE SIZES								
DUCK WINGS	1,972	1,759	1,729	2,659	248	188	19,496	22,418
GOOSE TAILS	102	93	110	214	35	14	1,144	1,379
QUESTIONNAIRES	1,425	674	1,572	1,223	173	277	11,095	12,689

[a] Includes only that portion of the State lying within the Pacific Flyway.
[b] Ross' geese.

TABLE C-9 PERCENTAGE SPECIES COMPOSITION OF WATERFOWL HARVESTED, TOTAL NUMBERS HARVESTED, AND ADULT HUNTER STATISTICS IN ALASKA AND FOR THE ENTIRE UNITED STATES DURING THE 1974 AND 1975 HUNTING SEASONS.

	ALASKA		UNITED STATES TOTAL	
	1974	1975	1974	1975
DUCK SPECIES COMPOSITION				
MALLARD	27.70%	23.44%	35.29%	32.39%
DOMESTIC MALLARD	0.00	0.00	0.17	0.10
BLACK DUCK	0.00	0.00	3.02	2.34
BLACK X MALLARD	0.00	0.00	0.14	0.12
MOTTLED DUCK	0.00	0.00	0.97	0.82
GADWALL	0.74	0.56	5.18	5.25
AMERICAN WIGEON	18.49	17.75	5.97	6.14
GREEN-WINGED TEAL	15.43	14.77	9.63	12.39
BLUE-WINGED/CINNAMON TEAL	0.19	0.00	5.98	7.20
NORTHERN SHOVELER	3.44	5.76	3.50	3.53
PINTAIL	16.36	24.06	9.90	10.24
WOOD DUCK	0.00	0.00	7.59	7.79
REDHEAD	0.00	0.07	0.74	1.02
CANVASBACK	0.93	0.35	0.57	0.64
GREATER SCAUP	2.79	3.26	0.54	0.60
LESSER SCAUP	3.35	2.84	3.60	2.34
RING-NECKED DUCK	1.02	0.62	3.47	3.70
GOLDENEYES	4.28	2.50	0.59	0.54
BUFFLEHEAD	4.00	2.15	1.02	0.89
RUDDY DUCK	0.00	0.00	0.50	0.49
OLDSQUAW	0.09	0.07	0.11	0.17
EIDERS	0.00	0.00	0.18	0.10
SCOTERS	0.37	1.00	0.66	0.58
HOODED MERGANSERS	0.00	0.00	0.42	0.33
OTHER MERGANSERS	0.19	0.14	0.22	0.28
OTHER DUCKS	0.65	0.07	0.06	0.03
TOTAL	100.00	100.00	100.00	100.00
DUCK HARVEST (RETRIEVED KILL)	61,214	70,580	12,796,744	15,483,047
PERCENT CHANGE		+15%		+21%
SEASONAL DUCK HARVEST PER ADULT HUNTER	3.68	4.39	5.71	6.84
PERCENT CHANGE		+19%		+20%
GOOSE SPECIES COMPOSITION				
CANADA GOOSE	77.40%	83.72%	62.53%	56.81%
SNOW GOOSE	2.26	0.00	18.90	22.01
BLUE GOOSE	0.00	0.00	11.88	12.40
WHITE-FRONTED GOOSE	3.39	10.85	5.73	6.36
BRANT	9.61	2.33	0.34	2.01
OTHER GEESE[a]	7.35	3.10	0.61	0.41
TOTAL	100.00	100.00	100.00	100.00

GOOSE HARVEST (RETRIEVED KILL)	10,425	11,564	1,525,681	1,828,339
PERCENT CHANGE		+11%		+20%
SEASONAL GOOSE HARVEST PER ADULT HUNTER	0.63	0.72	0.69	0.82
PERCENT CHANGE		+15%		+19%
COOT HARVEST (RETRIEVED KILL)	285	824	916,286	1,087,003
PERCENT CHANGE		+189%		+19%
SEASONAL COOT HARVEST PER ADULT HUNTER	0.02	0.05	0.39	0.46
PERCENT CHANGE		+206%		+18%
TOTAL HUNTER DAYS	55,105	62,268	15,337,885	16,377,069
PERCENT CHANGE		+13%		+7%
DAYS PER ADULT HUNTER	3.20	3.74	6.69	7.07
PERCENT CHANGE		+17%		+6%
TOTAL DUCK STAMPS SOLD	16,018	16,310	2,179,877	2,206,363
PERCENT CHANGE		+2%		+1%
PERCENT SOLD TO NON-HUNTERS	0.95%	6.02%	1.94%	2.21%
TOTAL ADULT HUNTERS (POTENTIAL)	15,866	15,328	2,137,624	2,157,697
PERCENT CHANGE		-3%		+1%
PERCENT ACTIVE ADULT HUNTERS	64.6%	71.6%	84.8%	85.9%
PERCENT SUCCESSFUL ADULT HUNTERS	46.8%	54.9%	66.9%	70.2%
SAMPLE SIZES				
DUCK WINGS	1,076	1,442	68,333	91,511
GOOSE TAILS	177	129	8,261	10,592
QUESTIONNAIRES	1,341	1,054	61,828	63,646

[a]Ross' geese in Central and Pacific Flyways; Emperor geese in Alaska

Table C-10. Proportions of the Total Duck Harvest Occurring After the September Teal Season in Certain States During 1972, 1973, 1974, and 1975.

Flyway State	Proportion in regular season 1972	1973	1974	1975
Atlantic				
Maine	.9335	--	--	--
Mississippi				
Alabama	.9624	.9670	.9762	.9550
Arkansas	.9856	.9814	.9853	.9879
Illinois	.9625	.8864	--	.9426
Indiana	.9249	.8857	.9440	.9404
Kentucky	--	--	--	.9803
Louisiana	.9008	.9009	.9206	.9257
Mississippi	.9902	.9552	.9905	.9884
Missouri	.9314	.9222	.9334	.9254
Ohio	.9438	.9166	.9530	.9435
Tennessee	.9846	.9713	.9872	.9880
Central				
Colorado	.9728	.9273	.9212	.9262
Kansas	.9285	.8833	.8943	.8817
New Mexico	.9710	.9442	.8992	.8712
Oklahoma	.9491	.9112	.9559	.9463
Texas	.9566	.9380	.9361	.9419

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