IDAHO DEPARTMENT OF FISH AND GAME

Steven M. Huffaker, Director

Project W-170-R-27

Progress Report

UPLAND GAME

Study II, Job 1

April 1, 2002 to March 31, 2003

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STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	1-7	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

STATEWIDE

SUMMARY

During the report period, staff continued to follow the 1991-1995 Upland Game Species Management Plan. The plan will be revised, as needed, and will not be rewritten in the near future. This plan has three general objectives:

- Increase efforts at improving habitat for upland game species, particularly through the Department's Habitat Improvement Program (HIP)
- Increase hunting opportunity for underutilized species
- Simplify regulations to minimize confusion for the hunting public

Upland game population trends are monitored through harvest surveys, August roadside counts, August helicopter flush counts, rooster crow counts, hunter check stations, and wing barrel harvest data. Each region collects data from a combination of methods based on regional bird densities and sampling constraints. Statewide, telephone surveys assess overall hunter activity and harvest of upland game species. From 1996 to 2000, telephone surveys estimated statewide rather than regional trends (except turkey) due to budget constraints. However, a separate telephone survey was conducted in 2000, 2001, and 2002 for sage grouse and sharp-tailed grouse to improve sample size for these two species being considered for listing under the Federal Endangered Species Act. Also, starting in 2001, telephone surveys were expanded to collect regional data for all upland game species.

Statewide, upland game bird population trends varied in 2002. Chukar and sage grouse harvest increased in 2002. Forest grouse harvest in 2002 was similar to harvest in 2001. However, pheasant, gray partridge, sharp-tailed grouse, and quail harvest declined substantially from 2001 and were below their five-year averages. Wild turkey harvest increased in 2002 and was above the five-year average.

PHEASANT

Abstract

Pheasant management has intensified since the decline of pheasant populations during the 1980s. As of 31 March 2002, over 3,517 HIP upland bird projects covering about 76,817 acres had been started in Idaho. Special Pheasant Management Areas have been designated in several regions. These areas were established to attempt to concentrate most pheasant management into smaller areas that will allow closer monitoring of the impacts of this program.

Season Framework

See Appendix A for the 2002 pheasant season framework. The bag and possession limit for most areas remained three and six statewide. However, the bag and possession limit for pheasant hunting on Wildlife Management Areas (WMAs) where pheasants were stocked increased from two and four, respectively, to three and six. The number of pheasants allowed per WMA pheasant permit remained at six and the cost of the permit remained $21.50 for 2002.

Population Surveys

Surveys were expanded in 1990 to include more August roadside routes. Overall, the number of pheasants observed per mile decreased in Idaho compared to 2001.

Harvest Characteristics

In a statewide telephone survey, approximately 24,634 hunters harvested 58,575 pheasants in 2002 (Table 1). Birds harvested per day was 0.51, down from 0.61 in 2001 (Table 2). The region with the greatest hunter activity was the Southwest Region with nearly 10,500 hunters taking about 27,010 pheasants.

Climatic Conditions

Snowfall during the winter of 2002 was average in most of the state but below average in the eastern part of the state. Temperatures and precipitation during the nesting season were moderate and dry. In most cases, these conditions improve nest success and brood survival. However, these conditions also favor an early and steady alfalfa harvest that can be detrimental to pheasants in areas like the Magic Valley where alfalfa is a major agricultural product. Summer precipitation was below normal and drought conditions existed throughout the state.

Habitat Conditions

Habitat conditions continue to be marginal in many areas, with intensive farming activities leaving little winter cover or food. Swathing of alfalfa continues to destroy many nests, especially in the Magic Valley Region. The U.S. Department of Agriculture (USDA) declared several Idaho counties as agricultural disaster areas due to losses caused by drought. Several counties received emergency approval to graze Conservation Reserve Program (CRP) lands in

southeastern Idaho. Other areas were impacted by wildfire throughout the summer. Pheasant habitat (primarily agricultural) did not suffer significant losses directly from wildfire, but dry vegetative cover was intentionally removed throughout the summer to reduce the threat of fire around housing developments and agricultural fields. The greatest loss of upland game bird habitat from wildfire occurred in sagebrush grasslands and forested habitats.

Depredations

Pheasants continue to cause depredations in a few areas, primarily on sprouting cornfields in the Southwest Region. Low population levels make this problem minimal.

Trapping and Transplanting

No activities during this study period.

Management Studies

No activities during this study period.

Management Implications

Pheasant populations continue to fluctuate below historical levels in Idaho. Stable populations exist in areas where CRP lands complement other available nesting and brood rearing habitat in the Clearwater, Southwest, and Southeast regions. There is an increasing concern regarding predator numbers and their impacts to upland game species. To alleviate some of these concerns, the Department employed private trappers to trap and remove predators during the nesting season on WMAs where upland game and waterfowl production is a primary management objective.

QUAIL

Abstract

Quail populations continued to be good in many areas. However, statewide harvest in 2002 decreased from 2001. HIP efforts have benefited quail in areas of the Clearwater and Southwest regions. Mountain quail are rare and the hunting season has been closed since 1984.

Season Framework

The season framework (102 days) was unchanged in 2002. The bag limit was unchanged at ten per day (Appendix A).

Population Surveys

Quail are counted incidental to other species during the August brood routes. No other surveys are done. No surveys to locate remnant populations of mountain quail occurred in 2002.

Harvest Characteristics

The statewide quail harvest estimate from the telephone survey fell from 119,600 in 2001 to 88,607 in 2002 (Table 1). The total number of quail hunters was up slightly from 12,000 in 2001 to 12,308 in 2002. The number of birds taken per hunter fell from 10.0 in 2001 to 7.2 in 2002 (Table 3). The Southwest Region had the highest level of quail harvest with 7,613 hunters taking about 61,000 birds.

Quail were checked at stations incidental to other activities.

Climatic Conditions

Snowfall during the winter of 2002 was average in most parts of Idaho that have quail. Temperatures and precipitation during the nesting season were moderate and dry. Summer 2002 precipitation was below normal and drought conditions existed throughout the state.

Habitat Conditions

In general, the amount of riparian and agricultural habitat suitable for quail appears stable. The production and harvest of quail was down in 2002. Mountain quail have suffered a long-term decline for reasons that are still unclear.

Trapping and Transplanting

No activities during this study period.

Management Studies

Mountain quail continue to decline in Idaho. In 1992, a graduate research study was initiated to investigate the reasons for the declines observed during the last 20 years. A petition to list mountain quail as endangered under the Federal Endangered Species Act was submitted in 2001. Work is planned for spring 2003 to survey more areas for mountain quail.

Management Implications

Habitat improvement for quail will continue to be part of the HIP program. A greater emphasis on riparian buffers and shrub plantings will help improve existing habitat. Financial incentives for these practices are being strengthened through the Continuous Conservation Reserve Program.

FOREST GROUSE

Abstract

Forest grouse continue to be an important resource for upland game bird hunters in Idaho. Forest grouse harvest was about the same in 2002 (147,700) when compared to 2001 (149,400). Forest grouse management activities continue to be minimal.

Season Framework

The 2002 season framework was unchanged (Appendix A) with a 122-day season from 1 September to 31 December. This season framework has remained unchanged since 1990. Bag and possession limits were four and eight.

Population Surveys

There were no forest grouse population surveys conducted in Idaho during 2002.

Harvest Characteristics

In a telephone survey, the statewide harvest estimate for forest grouse decreased from 149,400 in 2001 to 147,700 in 2002 (Table 1). The number of forest grouse taken per day was 0.74, which was below recent years (Table 4). The number of birds per hunter was 4.41, which was similar to 2001. The Southwest Region had the largest number of hunters (8,945); however, Clearwater Region hunters harvested more forest grouse (40,972).

Wing data were collected incidental to check stations run for other species. Wings were also collected at wing barrels. The number of blue and ruffed grouse wings collected in the regions has increased considerably in recent years and need analysis.

Climatic Conditions

Snowfall last winter was average or below average during the winter of 2002. Temperatures and precipitation during the nesting season were moderate and dry. Summer precipitation was below normal and drought conditions existed throughout the state.

Habitat Characteristics

The Department continues to provide input to landowners statewide on how to improve forest grouse habitat. In 2000, the HIP program was expanded to include projects for all upland game bird species. Food plots and riparian enhancements are two practices that benefit forest grouse when practices are located in forested areas.

Trapping and Transplanting

No activities during this study period.

Management Studies

No activities during this study period.

Management Implications

With current staffing and operating resources, little additional management work on forest grouse is planned. Weather, particularly spring nesting weather, will continue to dictate population trends, since habitat is relatively stable for these species.

SAGE GROUSE

Abstract

Sage grouse populations were similar to 2000, but continued to be below pre-1985 levels. Extensive lek routes are run by the Department to monitor populations in specific areas and their response to local weather and habitat conditions. Wildfire has caused a significant loss of sage grouse habitat. Invasion by, and spread of, cheatgrass and medusahead in sagebrush steppe has increased the wildfire frequency. Frequent wildfires are preventing the reestablishment of sagebrush in burned areas, especially in southwest and south-central Idaho. Season regulations were liberalized and standardized from 1990-1995 but changed drastically in 1996. Hunter participation has decreased by about 50% over the last decade and by about 70% in the last 20 years. The Department initiated a statewide management effort in 1996 to provide statewide leadership in conserving Idaho's sage grouse populations.

Season Framework

The season framework was altered in 1996 to provide three different types of seasons: liberal, conservative, and closed. Research is underway to evaluate whether these frameworks impacted sage grouse population trends. The season framework changed in 2002 (Appendix A). Birch Creek Valley and the Big Desert areas that were previously closed (1995-2001) to sage grouse hunting were reopened. Research suggested that the closed season did not have any measurable effect on sage grouse populations as measured by the number of sage grouse counted on lek routes. The hunting season was closed in 2002 in the Curlew Grasslands area due to low populations.

Population Surveys

Lek routes have been expanded and standardized during the last few years. This was done to provide data that is more robust to year-to-year variation in attendance at a single lek and bird distribution. The need for more and better data is being driven by declines in this bird during the last decade and data needs for the new sage grouse management effort.

Harvest Characteristics

Starting in 2000, sage grouse hunters were required to purchase a sage grouse hunting validation. This requirement provided a means of collecting better harvest estimates from a sample of sage grouse hunters through a telephone survey. In 2002, 5,772 hunters harvested 7,576 sage grouse. Harvest in 2002 was very similar to 2001 but remained below the five-year average of about 8,800 (Table 1), though the long-term trend must be viewed with caution since survey

methodology changed during the period. The number of sage grouse harvested per day remained similar to recent years. The Magic Valley Region accounted for 41% of the statewide sage grouse harvest and 46% of the sage grouse hunters in 2002.

Numerous check stations are run in the state to gather information on reproductive success in different areas. In general, the sample size has decreased at these check stations in recent years due to shortened seasons and reduced hunter participation.

Climatic Conditions

Snowfall during the winter of 2002 was below average in most of the state with sage grouse. Temperatures and precipitation during the nesting season were moderate and dry. Summer precipitation was below normal and drought conditions existed throughout the state during the summer of 2002.

Habitat Characteristics

Habitat management continues to be a major issue for the Department throughout the state. Several other western states are also concerned about sage grouse declines that have occurred throughout the West over the last ten to 15 years.

Trapping and Transplanting

Inactive except for trapping related to research projects.

Management Studies

A single statewide dataset for historic sage grouse lek information was created. This data will be made available to all state and federal agencies involved in sage grouse surveys and habitat work. Management projects continued statewide to locate critical sage grouse habitats. Major research projects continued in the Upper Snake Region and Owyhee County to investigate the causes of mortality of juvenile sage grouse and impacts of habitat loss. A study to evaluate the effectiveness of predator control to increase sage grouse numbers was continued in 2002.

Management Implications

Sage grouse are a good indicator of sagebrush habitat health. Monitoring and research on this species will continue to expand during the next reporting period. In August 1997, the Idaho Fish and Game Commission adopted a long-term management plan. Five local working groups in different parts of the state are meeting to help determine the needs of local sage grouse populations.

SHARP-TAILED GROUSE

Abstract

The largest remaining Columbian sharp-tailed grouse populations occur in eastern Idaho. Sharptails have received substantial benefits from CRP grassland habitat since the late 1980s. Harvest in 2002 declined considerably from the previous year and was below the ten-year average. The decline was largely due to low recruitment during 2000 and 2001. Transplant efforts continued during the study period. Since 1992, 741 sharp-tailed grouse have been translocated from areas in southeastern Idaho, including 358 to the Shoshone Basin area of the Magic Valley Region. In 1998, two active leks were documented near these release sites. In April 2002, 25 and 19 sharp-tailed grouse were trapped in Idaho and sent to Oregon and Nevada, respectively, to continue efforts to reestablish populations in these two states. Since 1992, a total of 156 birds have been sent to Oregon, 56 birds to Washington, and 196 birds to Nevada. Trap and transplant efforts will continue in 2003. A new release site has been identified in Twin Falls County, Idaho.

Season Framework

The 2002 season framework was a 31-day season (1-31 October) statewide (Appendix A). The bag and possession limits remained at two and four, respectively.

Population Surveys

Lek counts were conducted in the Upper Snake, Southeast, and Magic Valley regions. Lek counts were conducted in the Magic Valley Region and Washington County as BLM Challenge Cost-Share Projects. Number of sharp-tailed grouse attending leks was down statewide compared to 2001.

Harvest Characteristics

Beginning in 2000, sharp-tailed grouse hunters were required to purchase a sharp-tailed grouse hunting validation. This requirement provided a means of collecting better harvest estimates from a sample of sharp-tailed grouse hunters through a telephone survey. In 2002, 1,869 hunters harvested 3,521 sharp-tailed grouse (Table 6). The number of birds harvested per hunter (1.88) and birds harvested per day (0.69) was similar to the previous year's results. Overall, harvest decreased 14% from 2001 and was well below the five-year average.

Sharp-tailed grouse wings are collected by wing barrels and hunters checked incidental to other management activities. Wing barrels provide a large proportion of the wings collected. Wing data indicated that production was up in the Southeast Region and the Upper Snake Region. In both cases, chick production was still below the ten-year average.

Climatic Conditions

Snowfall during the winter of 2002 was below average in eastern Idaho. Temperatures and precipitation during the nesting season were moderate and dry except for rain in late May - early June. Overall, summer precipitation was below normal; however, rain did occur in late August.

Habitat Characteristics

The federal government's CRP program continues to provide good habitat for sharp-tailed grouse in Idaho. The majority of the 780,000 acres of CRP in Idaho are within Idaho's sharp-tailed grouse range.

Trapping and Transplanting

Since 1992, the Department has been trapping Columbian sharp-tailed grouse in southeastern Idaho for transplant to suitable habitats. In 1992, 33 birds were trapped and translocated to northeastern Oregon. Releases have taken place annually since that initial attempt. In April 2002, 25 and 19 sharp-tailed grouse were sent to Oregon and Nevada, respectively.

In Idaho, 358 sharptails were trapped and translocated to Shoshone Basin between 1992 and 2002. Shoshone Basin is located in southern Twin Falls County and is historical sharp-tailed grouse range. The first active lek from these releases was documented in early 1995 and another lek was found in 1997. Trapping on the leks has documented that about half of the males on the leks in 1998 were unbanded, indicating that there has been substantial reproduction by transplanted hens. Transplants into other suitable but unoccupied habitat in Idaho will be attempted as funds and transplant stock allow.

Management Studies

Monitoring of the Shoshone Basin transplant birds was not conducted during the report period. However, monitoring will be conducted during 2003.

Management Implications

Idaho has a unique resource in its Columbian sharp-tailed grouse populations. The Department will continue its efforts to transplant sharptails into areas identified as potential sharp-tailed grouse habitat to expand their distribution in Idaho.

CHUKAR PARTRIDGE

Abstract

Chukar partridge harvest in Idaho increased in 2002. Survey work is limited, with helicopter index flights conducted in the Clearwater and Southwest regions. HIP projects have improved several thousand acres of chukar habitat, especially on BLM lands, in recent years.

Season Framework

Beginning in 2000, the season framework increased to a 122-day season statewide with a calendar closing of 15 January and it remained unchanged in 2002 (Appendix A). This season runs concurrent with the gray partridge season. Previously, there was an 88-day chukar season in eastern Idaho and a 119-day season in western Idaho. The bag and possession limit for 2002 remained at eight and 16, respectively.

Population Surveys

Chukar surveys were conducted by helicopter in the Clearwater (Snake and Salmon River) and Southwest regions (Brownlee Reservoir) during late August 2002. The number of chukar observed per square mile was below average in the Clearwater Region and above average in the Southwest Region.

Harvest Characteristics

In 2002, the statewide chukar harvest estimate of 109,040 was up from 89,300 in 2001 (Table 1). Approximately 15,400 hunters averaged 1.53 birds/day and 7.07 birds per season (Table 7). The Southwest Region has the highest overall harvest of this gamebird with 8,907 hunters taking about 78,170 birds.

Although some chukar hunters are contacted at Department game check stations, very little chukar data is collected. Several hundred wings were collected at Andrus WMA in the Southwest Region and these data need to be analyzed and included in this report in the future.

Climatic Conditions

Snowfall last winter was average or below average in Idaho's chukar range during the winter of 2002. Temperatures and precipitation during the nesting season were moderate to wet. Summer precipitation was average in the Clearwater and Southwest Regions.

Habitat Characteristics

Habitat characteristics were good during the report period, with good nesting conditions during the summer of 2002 and a mild winter in 2002-2003.

Trapping and Transplanting

No activities during this study period.

Management Studies

No activities during this study period.

Management Implications

Overall, chukar harvest estimates have been increasing since 1997. This trend is indicative of change, primarily in the Southwest Region where most of the statewide harvest occurs. Chukar populations in the Clearwater have not increased during the same period. Factors influencing these populations are not well understood.

GRAY PARTRIDGE

Abstract

Field observations suggested that populations increased significantly in 1999. However, this fluctuation appeared short-lived because harvest estimates and field observations for 2000 indicated an overall decline from 1999. HIP efforts and CRP will continue to improve gray partridge habitat statewide.

Season Framework

Beginning in 2000, the season framework increased to a 122-day season statewide and it remained unchanged in 2002 (Appendix A). This season ran concurrent with the chukar season. The previous season was an 88-day season in eastern Idaho and a 119-day season in western Idaho. The bag and possession limit in 2002 was eight and 16, respectively.

Population Surveys

Gray partridge observations are recorded during the August roadside survey routes. Trend data indicated a decrease in the Clearwater Region and no change in the Southwest and Magic Valley regions. However, brood routes do not sample nonagricultural habitat used by gray partridge in Idaho and may not reflect statewide gray partridge population trends.

Harvest Characteristics

The statewide harvest estimate for gray partridge decreased dramatically in 2002 from 41,800 in 2001 to 26,644 in 2002 (Table 1). Approximately 7,830 hunters averaged 0.67 birds per day or 3.40 birds per season (Table 7).

Gray partridge are checked incidental to other management activities at check stations in the Magic Valley and Upper Snake regions. In the Magic Valley, number of birds checked per 100 hunters decreased from 5.3 in 2001 to 2.8 in 2002. In the Upper Snake Region, this value also decreased in 2002.

Climatic Conditions

Snowfall during the winter of 2002 was average or below average. Temperatures and precipitation during the nesting season were moderate and dry except the northern portion of

Idaho had wet and cool conditions. Summer precipitation was below normal and drought conditions existed throughout the state.

Habitat Characteristics

HIP activities continue to improve gray partridge habitat in many parts of the state, especially in areas with large acreage of CRP.

Trapping and Transplanting

No activities during this study period.

Management Studies

No activities during this study period.

Management Implications

Gray partridge will continue to be a species with relatively little active management. HIP activities will continue to enhance habitat primarily in agricultural areas.

WILD TURKEY

Abstract

Wild turkey populations have expanded dramatically in Idaho during the past decade. Most of the suitable habitat has been stocked and the overall population growth has stabilized. The late spring/fall general season turkey tag replaced the second spring and fall general season turkey tags. The season bag limit for fall was increased to two turkeys. Harvest in 2002 increased from the previous year and was the second highest on record. Trapping efforts continued but were hampered by mild winter conditions.

Season Framework

Spring general hunts were offered in the Panhandle, Clearwater, and Southwest regions during 2002 (Appendix A). Spring controlled hunts were offered in the Panhandle, Southwest, Magic Valley, Southeast, and Upper Snake regions. A fall general season was offered in the Panhandle, Clearwater, and Southeast regions. Fall controlled hunts were offered in the Clearwater and Southwest regions. The bag limit was two bearded turkeys/spring (one per day) and two turkeys (either sex) during the fall. A total of three turkeys per year could be harvested.

Population Surveys

No formal surveys were conducted, although all regions conduct informal surveys of wintering grounds to get some estimate of population numbers and distribution.

Harvest Characteristics

Overall, turkey harvest increased from 4,483 in 2001 to 5,068 in 2002 (Table 1). The telephone survey indicated 3,263 and 1,015 turkeys were harvested during general spring and general fall hunts, respectively. Spring controlled hunts harvested 426 turkeys. Fall controlled hunts harvested 364 turkeys. The total number of tags issued increased from 21,233 in 2001 to 24,417 in 2002. Statewide harvest is concentrated in the Panhandle, Clearwater, and Southwest regions (Tables 8 and 9).

No wild turkey check stations are conducted in Idaho.

Climatic Conditions

Snowfall last winter was average or below average in most of the state. Temperatures and precipitation during the nesting season were moderate and dry except for wet, cool weather in northern Idaho. Summer precipitation was normal in northern Idaho and drought conditions existed in southern Idaho.

Trapping and Transplanting

A total of 196 birds were trapped and translocated within Idaho during the winter of 2001-2002 (Table 10).

Management Studies

No activities during this study period.

Management Implications

Wild turkeys continue to be transplanted in large numbers into Idaho. Interest in hunting this species continues to grow. National Wild Turkey Federation (NWTF) chapters are now established in each region except for the Salmon and Upper Snake regions. Cooperative habitat projects have been developed with the U.S. Forest Service (USFS), NWTF, and cooperating private landowners.

MOURNING DOVE

Abstract

Mourning dove continues to be a popular early-season species for hunting. Populations remain relatively low because of habitat changes.

Season Framework

The 2002 season framework remained unchanged from 2001 (Appendix A).

Population Surveys

Coo-count surveys are conducted annually and data are provided to the U.S. Fish and Wildlife Service (USFWS) who monitor dove numbers nationwide. Overall, the number of doves heard per mile increased in most of the state (Table 11).

Harvest Characteristics

No data available.

Management Implications

Dove will continue to decline because of habitat conditions.

RABBITS AND HARES

Abstract

Rabbit and hare population trends are not monitored except by harvest estimates.

Season Framework

The season on pygmy rabbits was closed in 2002 due to concerns about low pygmy rabbit populations. Seasons for cottontails and snowshoe hares did not change from 2001 (Appendix A).

Harvest Characteristics

In a telephone survey, approximately 641 hunters harvested 6,735 rabbits statewide during 2002.

Management Implications

Cottontail and snowshoe hare will continue to be a species with no active management in Idaho. Research on pygmy rabbits is being conducted at the Idaho National Engineering and Environmental Laboratory (INEEL) in eastern Idaho.

CROWS

Abstract

Crows will continue to be a species with no active management.

Season Framework

No change from 2001 (Appendix A).

Harvest Characteristics

Insufficient data is collected from the telephone survey to allow an estimate of crow harvest and the survey was discontinued in 1994.

Management Implications

Crows will continue to be a species with no active management in Idaho.

Table 1. Estimated upland game bird harvest in Idaho as determined by random telephone survey of license buyers, 1993-present.

Year	Pheasant	Forest Grouse	Gray Partridge	Chukar	Quail	Sage Grouse	Sharp-tailed Grouse	Turkey
1993[a]	129,100	190,600	39,000	72,800	117,200	37,400	14,400	977
1994	115,400	283,100	34,800	88,800	118,500	38,500	8,200	1,339
1995	114,600	252,600	42,500	125,200	175,300	27,500	7,900	1,526
1996[a]	166,500	292,800	109,300	208,600	350,500	21,000	14,700	1,720
1997	63,300	43,853	32,100	37,300	87,200	16,000	10,300	2,703
1998	94,000	136,100	43,400	74,900	112,400	17,500	-	2,690
1999	110,100	80,600	103,100	96,800	114,900	4,700	12,400	5,458
2000	113,100	85,900	94,800	134,400	168,800	7,200	5,800	4,893
2001[a]	87,100	149,400	41,800	89,300	119,600	7,000	4,100	4,483
2002	58,575	147,694	26,644	109,040	88,607	7,576	3,521	5,068
5-yr avg.	92,575	119,939	61,949	100,888	120,861	8,795	6,455	4,518

[a] New telephone survey methodology.

Table 2. Season framework, estimated pheasant hunter numbers and harvest in Idaho, 1993-present.

Year	Season (days)[a]	Daily Bag[a,b]	Hunters	Harvest	Hunter Days	Birds/ Hunter	Birds/ Day
1993[c]	58	3	31,900	129,100	222,100	4.05	0.58
1994	58	3	25,600	115,400	161,200	4.53	0.72
1995	58	3	28,100	114,600	189,600	4.07	0.60
1996[c]	58	3	32,900	166,500	234,900	5.06	0.71
1997	58	3	32,900	63,300	108,700	1.92	0.58
1998	76	3	28,400	94,000	136,200	3.31	0.69
1999	77	3	23,700	110,100	150,700	4.65	0.73
2000	72	3	22,000	113,100	140,000	5.14	0.81
2001[c]	73	3	27,300	87,100	142,300	3.29	0.61
2002	74	3	24,634	58,575	115,403	2.38	0.51

[a] Season length and bag in southwestern Idaho (Area 3) where the majority of pheasant hunting occurs.
[b] Number of hens allowed in bag.
[c] New telephone survey methodology.

Table 3. Season framework, estimated quail hunter numbers and harvest in Idaho, 1993-present.

Year	Season (days)[a]	Daily Bag[a]	Hunters	Harvest	Hunter Days	Birds/ Hunter	Birds/ Day
1993[b]	104	10	15,400	117,200	63,900	7.61	1.83
1994	105	10	13,200	118,500	74,000	9.01	1.60
1995	106	10	15,500	175,300	101,800	11.39	1.72
1996[b]	116[c]	10	22,300	350,500	118,400	15.72	2.96
1997	103	10	12,000	87,200	49,600	7.27	1.76
1998	104	10	13,200	112,400	58,000	8.52	1.93
1999	105	10	10,100	114,900	57,500	11.38	2.00
2000	107	10	10,700	168,800	66,400	15.79	2.54
2001[b]	108	10	12,000	119,600	59,100	9.98	2.02
2002	102	10	12,308	88,607	51,071	7.20	1.73

[a] Season length and bag in Canyon County.
[b] New telephone survey methodology.
[c] Special 2-week extension 1/18-31/97.

Table 4. Season framework, estimated forest grouse hunter numbers and harvest in Idaho, 1993-present.

Year	Season (days)	Daily Bag	Hunters	Harvest	Hunter Days	Birds/ Hunter	Birds/ Day
1993[a]	122	4	55,800	190,600	357,100	3.42	0.53
1994	122	4	60,700	283,100	458,600	4.69	0.62
1995	122	4	61,800	252,600	464,500	4.07	0.54
1996[a]	122	4	60,000	292,800	420,600	4.88	0.70
1997	122	4	15,300	43,900	60,200	2.87	0.73
1998	122	4	39,400	136,100	160,600	3.45	0.85
1999	122	4	14,500	80,600	81,600	5.56	0.99
2000	122	4	14,200	86,000	73,500	6.07	1.17
2001[a]	122	4	31,900	149,400	181,700	4.69	0.82
2002	122	4	33,505	147,694	199,463	4.41	0.74

[a] New telephone survey methodology.

Table 5. Season framework, estimated sage grouse hunter numbers and harvest in Idaho, 1993-present.

Year	Season (days)[a]	Daily Bag[a]	Hunters	Harvest	Hunter Days	Birds/ Hunter	Birds/ Day
1993[b]	30	3	26,700	37,400	92,700	1.40	0.40
1994	30	3	17,900	38,500	67,500	2.16	0.57
1995	30	3	17,400	27,500	66,700	1.60	0.41
1996[b]	7	1	12,000	21,000	45,100	1.75	0.47
1997	7	1	5,700	16,000	18,400	2.81	0.87
1998	7	1	9,200	17,500	36,000	1.90	0.49
1999	7	1	3,500	4,700	7,900	1.34	0.60
2000	7	1	5,900	7,200	12,900	1.22	0.56
2001[b]	7	1	5,300	7,000	12,100	1.32	0.58
2002	7	1	5,772	7,576	12,992	1.31	0.58

[a] Season length and bag in Butte County. In 1996, seasons changed dramatically and season days are for Fremont County.
[b] New telephone survey methodology.

Table 6. Season framework, estimated sharp-tailed grouse hunter numbers and harvest in Idaho, 1993-present.

Year	Season (days)[a]	Daily Bag[a]	Hunters	Harvest	Hunter Days	Birds/ Hunter	Birds/ Day
1993[b]	16	2	5,100	7,200	19,600	1.43	0.37
1994	16	2	7,800	8,200	32,400	1.08	0.25
1995	16	2	7,900	7,900	40,300	1.04	0.20
1996[b]	16	2	7,000	14,700	31,900	2.10	0.46
1997	16	2	4,300	10,300	12,000	2.40	0.86
1998	16	2	-	-	-	-	-
1999	16	2	2,600	12,400	11,600	4.77	1.07
2000	31	2	2,800	5,800	7,700	2.06	0.75
2001[b]	31	2	2,200	4,100	6,000	1.83	0.67
2002	31	2	1,869	3,521	5,117	1.88	0.69

[a] Season length and bag in Fremont County.
[b] New telephone survey methodology.

Table 7. Season framework, estimated chukar and gray partridge hunter numbers and harvest in Idaho, 1993-present.

Year	Season (days)[a]	Daily Bag[a]	Hunters	Harvest	Hunter Days	Birds/ Hunter	Birds/ Day
Chukar							
1993[b]	104	8	16,500	72,800	81,900	4.41	0.89
1994	105	8	14,000	88,800	65,700	6.38	1.35
1995	106	8	16,900	125,200	95,500	7.47	1.31
1996[b]	102	8	18,500	208,600	140,500	11.28	1.49
1997	103	8	14,400	37,300	33,600	2.59	1.11
1998	119	8	14,000	74,900	51,600	5.35	1.45
1999	120	8	12,000	96,500	58,300	8.04	1.66
2000	122	8	9,800	134,400	85,600	13.72	1.57
2001[b]	123	8	13,800	89,300	61,600	6.46	1.45
2002	117	8	15,413	109,040	71,486	7.07	1.53
Gray							
1993[b]	104	8	13,600	39,000	65,100	2.87	0.60
1994	105	8	11,200	34,800	59,100	3.14	0.59
1995	106	8	12,400	42,500	67,000	3.44	0.63
1996[b]	102	8	17,400	109,300	118,000	6.28	0.93
1997	103	8	8,700	32,100	26,300	3.69	1.22
1998	119	8	9,500	43,400	39,600	4.57	1.10
1999	120	8	13,200	103,100	81,700	7.81	1.26
2000	122	8	12,400	94,800	81,000	7.62	1.17
2001[b]	123	8	10,900	41,800	58,100	3.83	0.72
2002	117	8	7,830	26,644	39,742	3.40	0.67

[a] Season length and bag in Canyon County.
[b] New telephone survey methodology.

Table 8. Estimated turkey harvest in Idaho, 1993-present.

	Region							Statewide
Year	1	2	3	4	5	6	Unknown	Total
1993	163	509	295	0	1	-	9	977
1994	265	777	246	-	6	-	45	1,339
1995	289	828	385	-	10	-	14	1,526
1996	413	779	494	-	15	-	19	1,720
1997	862	1,143	618	3	32	-	45	2,703
1998	689	1,189	711	-	101	-	-	2,690
1999	1,205	2,822	1,317	-	116	-	-	5,460
2000	890	2,288	1,450	-	265	-	-	4,893
2001	863	1,978	1,341	-	259	-	42	4,483
2002	1,257	2,243	1,221	6	234	2	105	5,068

Table 9. Season framework and estimated turkey harvest in Idaho, 1993-present.

	General Season Framework			General Season Harvest			Controlled Hunts			Total	Total
Year	Spring	Fall	Bag[a]	Spring	Fall	Total	Hunts	Permits	Harvest	Harvest	Tags Sold[b]
1993	4/12 - 5/9	-	1	750	-	750	14	405	153	903	2,303
1994	4/11 - 5/8	-	1	1,130	-	1,130	25	350[c]	209	1,339	3,066
1995	4/10 - 5/7	-	1	1,314	-	1,314	29	466	212	1,526	3,929
1996	4/8 - 5/12	-	1	1,476	-	1,476	25	574	244	1,720	4,940
1997	4/14 - 5/11	-	1	2,451	-	2,451	10	528	252	2,703	5,114
1998	4/15 - 5/14	-	2	2,324	-	2,324	12	658	337	2,661	6,436
1999	4/15 - 5/25	-	3	4,916	-	4,916	12	1,205	542	5,458	16,781
2000	4/15 - 5/25	10/1-31	3	4,054	201	4,255	12	1,183	638	4,893	18,173
2001	4/15 - 5/25	9/15-30	3	2,987	844	3,831	9	1,094	652	4,483	21,233
2002	4/15 - 5/25	9/15-10/31	3	3,263	1,015	4,278	13	1,567	790	5,068	23,367

[a] Bearded turkey only in spring hunts, either sex in fall hunts. Instituted a second spring tag in 1999 valid 5/10-25.
[b] Sportsman Package tags not included in total tags sold until 1998.
[c] One controlled hunt had unlimited permits; number of permits drawn unavailable.

Table 10. Turkey transplant history for Idaho, 1961-present.

Year	Sub-Species[a]	Release Site	Source	# of Birds Released
1961	M	Unit 18	Colorado	17
1962	M	Unit 18	Colorado	11
1963	M	Unit 14	Colorado	11
1965	M	Unit 11	Unit 18	10
1966	M	Units 11, 39	Unit 14	14
1967	M	Unit 22	-	19
1970	M	Unit 32	-	14
1971	M	Unit 8	Unit 6	15
1971	M	Boundary County	-	60[b]
1972	M	Unit 8	Unit 6	2
1972	M	Boundary County	-	24[b]
1973	M	Units 8, 11	Unit 6	6
1979	M	Unit 31	-	5
1980	M	Unit 18	South Dakota	10
1982	M	Units 11, 14	South Dakota	31
1982	R	Unit 11A	KS, OK, TX	51
1982	R	Units 22, 38, 53, SE Region	-	115
1982	M	Units 22, 25, 32	-	38
1983	R	Unit 11A	Oklahoma, Texas	18
1983	M, R	Units 28, 39, 55	-	84
1984	R	Units 40, 55, SE Region	-	65
1984	R	Unit 63A	Texas	32
1985	R	Unit 13	Texas	34
1985	E	Unit 10A	Pennsylvania	16
1985	R	Units 28, 40	-	7
1986	M	Unit 8	Unit 22	34
1986	R	Unit 11	North Dakota	14
1986	M	Unit 39	-	17
1986	R	Unit 40	-	14
1987	M	Unit 39	-	20
1988	M	Units 8, 11A, 13	Units 11 & 22	83
1988	M	Units 39, 54	-	45
1988	R	Unit 63A	Unit 32A	12
1989	M	Unit 11A	Unit 10A	18
1989	R	Unit 38	-	14
1990	M	Unit 14	Unit 8	16
1990	E	Unit 10A	North Dakota	17
1990	M	Units 22, 31, 39, SE Region	-	156
1991	M	Units 11, 11A, 14	Units 1, 8, 9, 11	113
1991	E, R	Units 8A, 10A	North Dakota	80
1991	M	Units 28, 36B	-	40
1992	M	Units 11	Unit 1	28
1992	M	Units 11, 14	North Dakota	48
1993	M	Units 10A, 11, 14	Units 1, 3, 8	93
1993	M	Units 11, 13	North Dakota	49
1993	M	Units 21A, 31, 32A, 36B, 39, SE Reg.	-	260
1993	R	Units 32, 38	-	58

Table 10. Continued.

Year	Sub-Species[a]	Release Site	Source	# of Birds Released
1994	M	Units 8, 11A, 14	Units 1, 8, 11A	90
1994	R	Units 38, 54	-	59
1994	M	Unit 32, SE Region	-	142
1995	M	Units 8, 11A, 14	Units 8, 11A	36
1995	M	Unit 33	-	57
1995	R	Unit 54	-	14
1996	M	Units 8, 11	British Columbia	63
1996	M	Units 11, 15	Units 8, 10A, 11A	54
1996	R	Units 38, 54	-	28
1997	M	Units 8A, 11, 13, 15, 18	Idaho	261
1997	R	Unit 32	-	35
1997	M	Units 31, 33	-	105
1998	M	Units 14, 18, 20, 32A, 33	Units 8, 10A, 11, 15	121
1998	M	Units 31, 32, 39	-	53
1998	R	Units 32, 54	-	92
1999	M	Units 15, 23	Unit 10A	64
1999	R	Units 32, 54	-	62
1999	M	Units 28, 37, 39, 50	-	140
1999	U	SE Region	-	15
2000	M	Units 11, 13, 14, 15, 18, 63A	Idaho	332
2000	U	SE Region	-	50
2001	M	Units 15, 63A	Idaho	436
2001	R	Unit 54	California	41
2001	U	Unit 71	-	136
2002	M	Units 10A, 11, 14, 15, 63A, 67, 69	Idaho	227
2003	H	Units 11, 63A, 67, 69	Idaho	196
Total				4,847

[a] E = Eastern; H = Hybrid; M = Merriam's; R = Rio Grande; U = Unknown.
[b] Approximate number of game farm birds released in Boundary County by private citizens.

Table 11. Mourning dove coo-count survey results for Idaho, 1993-present.

Year	Region 1	Region 2	Region 3	Region 4	Region 5	Region 7
1993						
Routes (Miles) Counted	-	2	(580)	28 (575)	3	(20)
Doves/Mile	-	0.2	0.3	1.8	0.7	0.05
1994						
Routes (Miles) Counted	3 (60)	2	(560)	28 (575)	3	(20)
Doves/Mile	0.22	0.3	4.6	3.3	0.9	0.05
1995						
Routes (Miles) Counted	3 (60)	2	(480)	28 (575)	3	(20)
Doves/Mile	0.1	0.1	2.2	1.8	0.6	0.1
1996						
Routes (Miles) Counted	3 (60)	1	(260)	28 (575)	3	(0)
Doves/Mile	0.3	0.02	2.3	2.2	0.4	-
1997						
Routes (Miles) Counted	3 (60)	1	(660)	28 (575)	3	(20)
Doves/Mile	0.3	0.15	2.2	2.2	0.7	0.0
1998						
Routes (Miles) Counted	3 (60)	1	(640)	28 (575)	3	(0)
Doves/Mile	0.23	0.3	1.6	2.4	0.5	-
1999						
Routes (Miles) Counted	3 (60)	1	(540)	28 (575)	3	(20)
Doves/Mile	0.4	0.15	3.9	3.7	0.5	0.0
2000						
Routes (Miles) Counted	3 (60)	1	(540)	28 (575)	3	(20)[a]
Doves/Mile	0.33	0.15	3.3	1.3	0.4	0.0
2001						
Routes (Miles) Counted	3 (60)	1	(620)	28 (575)	3	(20)
Doves/Mile	0.17	0.1	3.2	2.2	0.2	0.15
2002						
Routes (Miles) Counted	2 (40)	2	(600)	28 (575)	3	(20)
Doves/Mile	0.33	0.13	2.4	2.5	1.1	0.3

[a] Route relocated.

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	1	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

PANHANDLE REGION

PHEASANT

Abstract

For many years, the Department released game farm birds in the spring prior to nesting and released cocks prior to the season opener to bolster declining wild populations and hunter success rates. Fewer and fewer landowners were willing to allow hunter trespass if pheasants were released on their property. Consequently, the Department's Coeur d'Alene River WMA near Harrison ended up being the only place available to release birds. In 1981, the region recommended that all pheasant releases be discontinued and the program was eliminated effective the fall of 1982.

Harvest Characteristics

Most pheasant hunting in the Panhandle Region occurs in the Palouse country around Worley, Plummer, and Tensed. Remnant wild populations still occur and provide fair hunting for those people who have permission to hunt on private land. Telephone survey information since 1996 has been collected at the statewide level only. Region-specific information on pheasant harvest from 1986 through 1995 is contained in the 1996 report. Table 1 reports telephone survey results for pheasant hunter numbers and harvest at the regional level for 2002.

Management Implications

The quality and quantity of pheasant habitat in the Panhandle Region has declined to a low point due to modern, clean farming techniques and monoculture crops. Large complexes of seed-bluegrass fields are burned annually, severely limiting habitat. The Department no longer supplements the wild population nor releases birds directly for harvest. There is growing public sentiment against the large-scale field burning in the Palouse. If burning becomes severely restricted in the future, pheasant cover will improve, and additional grain farming could substantially improve pheasant populations.

FOREST GROUSE

Abstract

Few hunters take the time to hunt primarily for grouse. All three species of forest grouse are usually taken incidental to other activities, and usually in conjunction with driving down the road.

Harvest Characteristics

Telephone survey information since 1996 has been collected at the statewide level only. Region-specific information on grouse harvest from 1986 through 1995 is contained in the 1996 report. Table 1 reports telephone survey results for forest grouse hunter numbers and harvest at the regional level for 2002.

Climatic Conditions

Wet, cold, spring weather in northern Idaho is the rule rather than the exception. Adverse spring weather can limit the production and survival of forest grouse young for several years at a time. A general slowing of logging during the past two decades has likely been detrimental to grouse populations in the Panhandle, particularly for ruffed and blue grouse.

Management Implications

Grouse populations in the Panhandle are driven by large-scale influences on early seral stages. Logging and wild fire are both less prevalent now than they were 40 years ago. On a proximate scale, grouse abundance is heavily influenced by spring weather, much as it is in other portions of their range. Hunting is a negligible influence on grouse populations, and season changes do not need to be adjusted to influence grouse populations.

GRAY PARTRIDGE

Abstract

Gray partridges in North Idaho are associated with agricultural lands near Worley, Plummer, Harrison, and Post Falls. Widespread burning of crop residues in August and September eliminates most potential food and cover patches that would help gray partridge to survive the winter months. Intensive farming also contributes to fewer gray partridge by eliminating permanent cover patches, annual weeds that serve as food sources, wind breaks, fence rows, and riparian zones.

Harvest Characteristics

Partridge hunting effort in the Panhandle Region is very low. A few hunters are checked on the Rathdrum Prairie and the rolling hill country near Worley and Plummer. Historic harvest information obtained from the statewide telephone survey is believed to reflect, almost entirely,

Panhandle Region hunters hunting in other regions. Table 1 reports telephone survey results for gray partridge hunter numbers and harvest at the regional level for 2002.

Management Implications

Gray partridge are taken largely incidental to pheasant hunting. Seasons should be set to match those in adjacent portions of the state where gray partridge are taken more commonly.

WILD TURKEY

Harvest Characteristics

The 2002 turkey seasons in the Panhandle consisted of a controlled hunt (525 permits) beginning 15 April followed by a general hunt starting on 1 May, with the harvest of a second bird allowed after 10 May. All spring harvest ended on 25 May and was restricted to bearded birds. A fall general season allowing the harvest of any turkey ran from 15 September through 31 October.

Turkey hunter numbers have grown very rapidly in the Panhandle. From just 187 hunters in 1991, hunter numbers peaked at 4,187 in 1999. There were 2,264 turkey hunters in the Panhandle during the 2002 spring and fall hunts combined (Table 2).

Success rates have averaged 15.4 hunter days per bird from the first general hunt in 1994, through 1999. Data from the 2002 general spring season (11.4 hunter days/bird) indicates that the days required to harvest a bird continues to improve, probably a function of more turkeys in combination with improved efficiency of hunters (Table 2).

There were only 421 applications (resident and non-resident combined) for the 525 available spring controlled hunt permits for the 2002 season (Table 3). Left-over permits were sold over-the-counter, first-come-first-served.

Trapping and Transplanting

Trapping and removal of turkeys typically occurs in the winter months to alleviate damage problems to fields, buildings, and equipment where turkeys congregate in large numbers. The winter of 2002-2003 was very mild with little snow accumulation and few complaints about excessive numbers of turkeys. A total of 128 turkeys were trapped in Boundary County and transported to the Department's Upper Snake Region for release.

Management Implications

By delaying the general spring season until 1 May for the past few years, we allowed greater dispersal of gobblers from winter flocks to woodlands, in an attempt to reduce landowner/hunter conflicts, hunter/hunter conflicts, and to ensure breeding is complete before heavy disturbance by hunters began. Recent requests from hunters to eliminate the spring controlled hunt (primarily because of the cost) and the fact that there is no longer a large demand for the spring controlled

hunt permits (left-over tags available for the first time in 2002), indicates we may need to address this management strategy in the future.

MOURNING DOVE

Population Surveys

Mourning doves are common in the Panhandle Region and in some areas are locally numerous. Most mourning doves are found during the summer around agricultural lands near Worley, Plummer, Harrison, Post Falls, and Bonners Ferry.

In May 2002, two call-count surveys were completed in the Panhandle Region (Table 4). One route was in Kootenai County, and one in Shoshone County. A third route that is conducted in Boundary County is no longer reported in this document. The number of mourning doves heard per mile has increased slightly during the past 14 years. Route replacement during 1993 precludes direct comparison of subsequent data route with that prior to 1993.

Harvest Characteristics

In North Idaho, most mourning doves leave before the season opens. The season opener usually coincides with the first cool evening temperatures of late August. Also, for most of the grain and grass seed, farmers burn their fields after harvest annually. Starting in mid-August and ending in late September, most cover and food patches are consumed by fire.

Idaho has had a very liberal mourning dove season and bag limit in the past. However, due to the declining trend in the mourning dove breeding population throughout the west, the hunting season was shortened by one month in 1987 and the bag and possession limits reduced from 15 and 30 to ten and 20, respectively.

Mourning dove hunting effort in the Panhandle Region is very low. A few hunters are checked on opening day on Harrison Flats and near Athol on the edge of the Rathdrum Prairie. Telephone survey information beginning in 1996 has been collected at the statewide level only.

Management Implications

Widespread burning of crop residues practiced by area farmers coupled with the first cool evening temperatures of late August usually combine to move mourning doves south out of the region before the hunting season opens.

Table 1. Estimated pheasant, forest grouse, and gray partridge harvest in the Panhandle Region, 2001-present.

Species/Year	Hunters	Birds	Days	Birds/ Hunter	Birds/ Hunter Day
Pheasant					
2001	354	421	2,379	1.2	0.2
2002	1,122	4,240	7,116	3.8	0.6
Forest Grouse					
2001	4,473	19,727	35,964	4.4	0.5
2002	5,799	29,688	48,516	5.1	0.6
Gray Partridge					
2001	99	20	196	0.2	0.1
2002	132	83	498	0.6	0.2

Table 2. Estimated turkey harvest in the Panhandle Region, 1993-present.

Hunt	Number of Hunts	Permits Available	Hunters	Birds Taken	Days/ Bird	Total Days Hunted
1993						
Controlled	12	395	219	155	7.5	1,165
General	0	-	0	0	0	0
1994						
Controlled	23	457	409	206	5.9	1,223
General	1	-	256	77	10.0	769
1995						
Controlled	23	436	417	203	5.5	1,117
General	1	-	557	86	23.9	2,057
1996						
Controlled	17	435	444	221	6.3	1,402
General	1	-	1,043	192	19.1	3,671
1997						
Controlled	2	450	398	216	4.9	1,059
General	1	-	2,223	643	13.4	8,632
1998						
Controlled	2	450	389	225	5.7	1,287
General	1	-	1,534	464	10.7	4,972
1999[a]						
Controlled Spring	2	525	479	284	6.0	1,680
General Spring	1	-	3,503	815	15.4	12,537
Controlled Fall	1	400	205	106	4.0	424
2000						
Controlled Spring	2	525	464	232	6.2	1,431
General Spring	1	-	3,140	799	14.0	11,206
Controlled Fall	1	500	131	81	2.2	175
2001						
Controlled Spring	1	525	475	232	9.1	2,113
General Spring	1	-	1,490	363	15.2	5,503
General Fall	1	-	456[b]	268	4.5	1,208
2002						
Controlled Spring	1	525	567[c]	426	7.2	3,100
General Spring	1	-	1,173	379	11.4	4,350
Late Spring/Fall[b]	1	-	524	110	17.8	1,968

[a] Multiple bird bag limits and fall seasons began in 1999.
[b] The general late spring/fall tag allowed harvest after May 1 in the spring season or in the fall.
[c] Incorrect number due to survey error; to be corrected at a later date.

Table 3. Drawing odds for the spring turkey controlled hunt (9001) in the Panhandle Region, 2000-present.

Year	Permits	First Choice Applications	Drawing Odds
2000	525	688	1:1.3
2001	525	630	1:1.2
2002	525	421	1:0.8

Table 4. Mourning dove coo-count survey results in the Panhandle Region, 1994-present.

Year	Routes (Miles) Counted	Doves Heard	Doves Seen	Doves Heard/Mile	Doves Seen/Mile
1994	3 (60)	13	8	0.22	0.13
1995	3 (60)	6	4	0.10	0.07
1996	3 (60)	18	19	0.30	0.32
1997	3 (60)	18	19	0.30	0.32
1998	3 (60)	14	4	0.23	0.07
1999	3 (60)	24	9	0.40	0.15
2000	3 (60)	20	9	0.33	0.15
2001	3 (60)	10	9	0.17	0.15
2002	2 (40)	13	7	0.33	0.18

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	2	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

CLEARWATER REGION

PHEASANT

Population Surveys

In 1990, 11 brood routes were established in the Clearwater Region, with the primary emphasis directed at better monitoring pheasant population trends in the region. Forty-six pheasants were observed on these routes in 2002 (Table 1). The results are a decrease from last year and lower than the previous five-year mean of 81. Other species recorded on the routes included quail, gray partridge, doves, cottontail rabbits, and a variety of raptors.

Harvest Characteristics

A telephone survey for upland game hunters was conducted in 2002 for the second time since budgetary constraints resulted in the discontinuation of this survey in 1996. The survey estimated that 3,713 hunters harvested 7,159 pheasants in 2002 (Table 2). Brood survey results indicate increased production that, along with a season extension of two weeks that began in 1996, should have improved harvest opportunities.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

Populations in north Idaho have been at reduced levels since 1983. An abundance of fields of small grains and adjacent idle uplands provides adequate nesting cover for pheasants in the Clearwater Region. The population's limiting factor is inadequate winter cover and/or inadequate winter food adjacent to winter cover. Development of scattered, permanent wintering

areas that can provide adequate food and cover in those portions of the region where they are lacking would allow pheasant populations to increase.

The Department began working with the U.S. Soil Conservation Service and the U.S. Agricultural Stabilization and Conservation Service regarding the CRP program in 1986 and has continued this cooperation since that time. This program has great potential to increase upland game populations in the future. The Clearwater Region will continue to place high priority on its involvement with this program.

In 1987, the Department also initiated a statewide HIP for upland game directed primarily towards pheasants, quail, gray partridge, and chukar partridge. This program, in conjunction with CRP, has great potential to positively affect upland game populations, particularly pheasants.

BOBWHITE QUAIL

Reporting on this species is not applicable for the Clearwater Region.

CALIFORNIA QUAIL

Population Surveys

No reliable population surveys are currently conducted for California quail in the Clearwater Region.

Harvest Characteristics

Telephone survey data estimated that 1,983 hunters harvested 12,994 quail in 2002 (Table 3). This is a 12% decline from 2001. This is only the second time estimates have been generated since 1995 due to budgetary constraints.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

Availability of quail habitat probably will not change dramatically in the next few years. California quail continue to be a lightly hunted species in the region, and management will continue to be directed at maximizing hunting opportunity through liberal, standardized seasons and bag limits.

MOUNTAIN QUAIL

Abstract

Populations of mountain quail are limited to a few scattered sites ranging from Lewiston to Riggins, primarily adjacent to the Salmon River. A final project report from a mountain quail research project has been completed and is available for review.

Population Surveys

The season on mountain quail was closed in 1984 because of concern for declining populations. Mountain quail population fluctuations are difficult to monitor, but it is generally believed that they have declined during the past 20 years due to unknown causes. These declines are probably the result of subtle habitat changes unfavorable to mountain quail.

A graduate student research project on mountain quail was initiated in 1991. The focus of the project shifted from spring/summer habitat use and seasonal movements to fall/winter emphasis in 1994. The project has now been completed.

FOREST GROUSE

Population Surveys

Random brood counts and drumming route counts were discontinued in 1988. Presently, none of these surveys are conducted to monitor population trends or predict fall harvest.

Harvest Characteristics

Collections of random field check harvest data were discontinued in 1988. Regional telephone harvest survey information on forest grouse has been variable (Table 4). Harvest information was not collected at the regional level from 1995 to 2000 due to budgetary constraints. Telephone survey data estimated that 5,927 hunters harvested 26,970 forest grouse in 2001. Estimates for 2002 (7,342 hunters; 40,972 grouse) were considerably greater than the previous year.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

The limited amount of data currently collected on forest grouse and the lack of standard techniques for collecting it precludes its effective use for management purposes. There are few

avid forest grouse hunters in the Clearwater Region. Most grouse are currently harvested incidentally to hunting for other species, and many are taken from or immediately adjacent to forest roads during the opening weeks of big game seasons. Therefore, many areas of the region are seldom hunted.

SHARP-TAILED GROUSE

Population Characteristics

Substantial populations of Columbian sharp-tailed grouse were found in this area during the early 1920s but were believed to have been eliminated by the mid-1930s. Factors contributing to the decline and eventual loss of the species from the area were over-hunting, overgrazing by livestock, and intensified agricultural practices resulting in habitat destruction.

Harvest Characteristics

There has been no hunting season for sharp-tailed grouse in the Clearwater Region for several decades.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Trapping and Transplanting

A total of 82 sharp-tailed grouse were transplanted in the Clearwater Region during 1987 and 1988 from birds captured in the Southeast and Upper Snake regions. Due to the small number of birds and the difficulty in monitoring, limited information on the success of these transplant efforts is available.

Management Implications

It is extremely difficult to reestablish populations of sharp-tailed grouse by transplanting relatively small numbers of birds in the spring. Future efforts may require increased sample sizes and more extensive monitoring.

CHUKAR PARTRIDGE

Population Surveys

No distribution surveys are conducted in the Clearwater Region. In general, the majority of the chukars within the region are located along the breaks of the Snake, Salmon, and Clearwater Rivers.

A chukar ecology project in Unit 11 was conducted from spring 1995 to 1997. Radio-marked chukars along the breaks of the Salmon and Snake rivers were monitored to define habitat use, movements, distribution patterns, nesting chronology and success, and overall mortality causes and rates. A final report was completed in 1998.

Production

Random brood routes and counts are no longer conducted.

Since 1985, the breaks of the Snake River have been surveyed annually from Tenmile Creek upstream to Corral Creek by helicopter (Table 5). Since 1991, the Salmon River breaks from White Bird to Maloney Creek have also been surveyed annually. Although it is difficult to make a final determination, it appears that helicopter surveys may be a reliable index to determine trends in fall chukar populations. Although other factors are apparently involved when predicting fall harvest, general trends appear predictable based on the surveys. Compared to the 2001 aerial survey results, the number of chukar partridge observed in 2002 decreased along the Snake River (-67%) and the Salmon River breaks (-51%).

Harvest Characteristics

A summary of the Clearwater Region chukar harvest from the telephone survey is provided in Table 6. Fluctuating harvest rates over the past several years apparently reflect stochastic variables, possibly weather impact on productivity. Harvest information was not collected at the regional level from 1995 to 2000 due to budgetary constraints. Telephone survey data estimated that 1,775 hunters harvested 9,871 chukars in 2001. Hunter numbers (2,012) and harvest (14,192) in 2002 were higher than the previous year by 13% and 44%, respectively.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

Annual chukar partridge populations, like most upland game, are greatly influenced by weather conditions during the nesting and brood-rearing seasons. Current season lengths and bag and possession limits apparently do not need to be reduced for chukar partridge during periods of population lows. Upland game density-dependent hunting pressure is well documented in pheasant and quail populations (George et al. 1980; Vance and Ellis 1972; Kabat and Thompson 1963; Gallizoilli and Swank 1958; Bennitt 1951), and it is likely no different for chukar partridge.

GRAY PARTRIDGE

Population Surveys

No standardized population surveys are currently conducted for gray partridge in the Clearwater Region. However, gray partridge counted incidentally in 2002 on the 11 Clearwater Region pheasant brood routes indicate a decrease of 61% from the 2001 survey.

Harvest Characteristics

Harvest information on gray partridge has varied (Table 7). Harvest information was not collected at the regional level from 1995 to 2000 due to budgetary constraints. This year it was estimated that 1,421 hunters harvested 7,860 gray partridge. These values indicate fewer hunters (-17%), but greater harvest (+41%) than in 2001.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

Favorable weather during early summer will allow populations to remain at current levels. No adjustments in season length or bag and possession limits apparently are necessary to accomplish population increases during or following population lows caused by adverse nesting and/or winter weather conditions.

WILD TURKEY

Population Surveys

The Department does not have a reliable survey method for estimating turkey numbers. However, population status and trend can be inferred to a limited degree from harvest trend, turkey distribution, and general impressions of bird numbers from year to year. This information suggests that turkey numbers are stable and the distribution of turkeys is widespread throughout the region.

A turkey research project was conducted in Unit 11 in the early 1990s. Among the more interesting findings were the long-distance seasonal movements of turkeys between Cottonwood and Waha, exceptionally high productivity among young birds, and relatively low hunting-related mortality. Nesting and roosting habitat do not appear to be limiting in this area.

Harvest Characteristics

Turkey harvest estimates have been calculated on a management unit basis since 1983. Regional turkey harvest had increased until 1999, and was a function of expanding turkey distribution and numbers, and increasing hunter effort. Turkey harvest in the Clearwater Region fell from the high of 2,822 in 1999 to 1,788 for the 2002 spring season (Table 8). A general and controlled fall turkey-hunting season was available in 2002. Telephone surveys estimated fall harvest at 455 birds.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Winter Feeding

Landowners in some areas traditionally feed flocks of wintering birds. Feeding is often associated with livestock feedlots. Because of average to below average winter weather severity in most recent years, it has not been necessary to initiate any Department-sponsored feeding operations. However, feed was sometimes supplied upon request to private individuals who had large numbers of turkeys on their property or if turkeys were negatively impacting livestock operations or in areas with significant snowfall and corresponding lack of natural winter feed.

Trapping and Transplanting

Trapping efforts are now focused on sites where turkeys have become a nuisance on private property by contaminating livestock feed or by damaging agricultural crops as they begin to emerge. Three turkey transplants within the Clearwater Region (33 birds), were completed in 2003 (Table 9). One site within the region was supplemented with birds. Temporary personnel time was in part funded by a donation from the NWTF. Additional sites in the region will be evaluated for future releases of turkeys.

Management Implications

The aggressive trap and transplant program in combination with expansion of existing flocks should result in a continued increase in numbers and distribution of turkeys in the Clearwater Region. Consequently, hunting opportunities have been liberalized. The present hunting season structure does not appear to adversely impact the expansion of populations.

MOURNING DOVE

Population Surveys

There are only two coo count routes conducted in the Clearwater Region. By themselves they do not provide an accurate index to dove production or population trend (Table 10). When those results are incorporated with the results from all other routes in the state, an accurate index to statewide dove production may be achieved.

Harvest Characteristics

The annual harvest of mourning doves in the Clearwater Region is dependent upon the progress of the fall migration. In most years, a majority of the migrating doves have passed southward out of the Clearwater Region prior to opening day, influencing hunter opportunity. Regional harvest information on mourning doves has varied (Table 10). Telephone survey data have not been collected at the regional level since 1995 due to budgetary constraints.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

No trapping, banding, or research of doves has been conducted in the Clearwater Region for several years. Dove management in the Clearwater Region consists of permitting an annual hunting season as liberal as the federal season framework allows and conducting the annual coo counts on routes located within the region. In 1987, the federal season framework reduced the maximum allowable season length to 30 days and maximum daily bag and possession limits to ten and 20, respectively. Idaho's hunting season regulations since then have reflected those changes.

COTTONTAIL RABBIT

Abstract

There is no reliable measure of cottontail production or population trend in the region, and it is not known what effect weather has on production. Lack of adequate brush for winter cover adjacent to adequate food is probably limiting for cottontails on much of the unforested upland areas in the Clearwater Region.

Harvest Characteristics

Cottontail harvest appears to be well under minimum sustainable levels. Harvest information was not collected at the regional level from 1995 to 2000 due to budgetary constraints. Reported harvest in 2002 was 29 region-wide with only an estimated 37 hunters participating. This was a significant decline from 2001 in harvest (-81%) and hunters (-97%).

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

Management direction for cottontail rabbits in the Clearwater Region has been and will continue to be to provide maximum hunter opportunity through liberal seasons and bag limits. Cottontails are lightly hunted, and liberal seasons and regulations apparently do not adversely impact cottontail numbers.

SNOWSHOE HARE

Population Surveys

There is no measure of populations, production, or trends in the region. Hare populations may be cyclic in nature and dependent upon forage availability, disease, and other density-dependent factors. Populations appear scattered and localized, with spruce-fir forest in young age classes as dominant cover in preferred habitat.

Harvest Characteristics

Harvest levels are likely below sustainable levels. Harvest data are not available for 2002; however, harvest levels have probably continued to be relatively insignificant.

Climatic Conditions

Weather conditions in 2002-2003 were considered normal. Overall snow pack was 97% of average (October through March) with most snow accumulations occurring in March with little snow in lower elevations. Weather conditions in the spring were wet and cool at times, followed by a moist summer. This appears to have limited production and survival of upland game species.

Management Implications

Management direction of snowshoe hares in the Clearwater Region has been and will continue to be to provide maximum hunter opportunity through liberal seasons and bag limits. Management direction to promote hare hunting would probably have little effect on hare populations.

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Table 1. Pheasant population characteristics and production in the Clearwater Region, 1993-present.

Year	Routes/Miles Counted	Birds per Mile	% Unsuccessful Females	Juv:100 Adult Females	N[a]	Average Brood Size
1993	11 (220)	0.2	33	667	35	5.8
1994	11 (220)	0.8	13	508	165	6.1
1995	11 (220)	<0.1	100	0	1	0.0
1996	11 (220)	0.1	33	100	27	5.5
1997	11 (220)	0.3	0	771	61	7.7
1998	11 (220)	0.4	33	456	93	6.1
1999	11 (220)	0.2	40	385	41	5.4
2000	11 (220)	0.4	37	321	95	5.1
2001	11 (220)	0.5	43	478	119	6.1
2002	11 (220)	0.2	23	388	46	5.0

[a] Sample size.

Table 2. Estimated pheasant harvest in the Clearwater Region[a], 1993-present.

Year	Hunters	Birds	Days	Birds/ Hunter	Birds/ Hunter Day
1993	4,638	15,245	27,892	3.3	0.5
1994	4,533	16,313	25,547	3.6	0.6
1995	3,330	10,235	18,135	3.1	0.6
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	3,021	13,092	16,146	4.3	0.8
2002	3,713	7,159	12,768	1.9	0.6

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 3. Estimated quail harvest in the Clearwater Region[a], 1993-present.

Year	Hunters	Birds	Total Hunter Days	Birds/Hunter Day
1993	3,000	21,213	18,121	1.2
1994	3,203	21,520	18,130	1.2
1995	2,051	14,358	11,332	1.3
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	1,904	14,790	8,551	1.7
2002	1,983	12,994	8,396	1.5

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 4. Estimated forest grouse harvest in the Clearwater Region[a], 1993-present.

Year	Hunters	Birds	Total Hunter Days	Birds/Hunter Day
1993	11,782	55,692	89,243	0.6
1994	14,796	70,255	117,135	0.6
1995	12,692	54,993	94,736	0.6
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	5,927	26,970	34,684	0.8
2002	7,342	40,972	54,342	0.8

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 5. Summary of helicopter surveys of chukar partridge conducted in Management Unit 11, 1993-present.

Area	Year	Number of Birds	Number of Groups	Groups/ Sq. Mile	Birds/ Sq. Mile	Birds/ Group
Salmon River breaks	1993	537	90	7.6	45.1	6.0
	1994	680	91	7.6	57.1	7.5
	1995	157	47	3.4	13.2	3.3
	1996	561	51	4.3	47.1	11.0
	1997	544	56	4.7	45.7	9.7
	1998	1,084	108	9.1	91.1	10.0
	1999	1,055	88	7.4	89.0	11.5
	2000	756	60	5.0	64.0	12.6
	2001	1,192	94	7.9	100.0	12.7
	2002	583	80	6.7	49.0	7.3
Snake River breaks	1993	307	35	2.2	19.0	8.8
	1994	638	49	3.0	39.4	13.0
	1995	137	23	1.4	8.5	6.0
	1996	829	39	2.4	51.2	21.3
	1997	1,124	82	5.1	69.4	13.7
	1998	1,159	91	5.6	71.5	12.7
	1999	956	83	5.1	59.0	12.0
	2000	481	40	2.5	30.0	12.0
	2001	875	81	5.0	55.0	10.8
	2002	286	34	2.1	17.6	8.4

Table 6. Estimated chukar partridge harvest in the Clearwater Region[a], 1993-present.

Year	Hunters	Birds	Total Hunter Days	Birds/Hunter Day
1993	2,628	14,441	11,936	1.2
1994	2,791	17,531	13,635	1.3
1995	2,518	14,256	12,266	1.2
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	1,775	9,871	6,324	1.6
2002	2,012	14,192	10,143	1.4

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 7. Estimated gray partridge harvest in the Clearwater Region[a], 1993-present.

Year	Hunters	Birds	Total Hunter Days	Birds/Hunter Day
1993	2,505	8,658	13,668	0.6
1994	2,585	8,803	14,796	0.6
1995	1,767	6,905	9,281	0.7
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	1,714	5,586	7,622	0.7
2002	1,421	7,860	7,562	1.0

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 8. Estimated turkey harvest in the Clearwater Region by Unit, 1993-present.

Year	Unit[a]													Total	Total Hunter Days
	8	8A	10	10A	11	11A	12	13	14	15	16	17	18		
1993	59	88	-	127	137	39	-	0	-	20	29	-	10	509	9,491
1994	90	192	-	372	83	141	-	0	13	0	26	-	0	949	14,573
1995	57	114	-	286	100	57	-	0	86	57	57	-	14	828	15,000
1996	47	116	-	280	94	91	22	0	35	69	25	-	0	779	11,000
1997	40	123	-	385	189	182	13	41	27	51	92	-	0	1,143	12,813
1998	65	194	-	444	134	157	42	23	55	0	55	-	18	1,189	13,160
1999	251	435	-	1,059	257	278	101	58	28	154	187	-	14	2,822	24,975
2000[b]	123	461	-	822	141	264	22	30	76	76	163	-	30	2,288	26,205
2001[c]	190	343	38	615	111	205	53	25	66	109	149	6	69	1,978	20,512
2002[b]	177	230	110	497	153	205	34	21	55	119	132	6	49	2,243	20,004

[a] Units having no data were not open to hunting during those years.
[b] Fall turkey harvest added to total, unit of harvest and hunter days was not asked in survey.
[c] Fall general wild turkey harvest included.

Table 9. Turkey transplant history[a] for the Clearwater Region, 1993-present.

Year	Sub-Species[b]	Release Site Drainage - Unit	Source - Unit	M	F	Total	New or Supplemental Release
1993	M	White Bird Cr-14	Grouse Cr-1	6	24	30	S
	M	Hamilton Cr-13	North Dakota	4	20	24	S
	M	Rock Cr-11	North Dakota	3	22	25	N
	M	Orofino Cr-10A	Big Bear Cr-8	6	20	26	S
	M	Rock Cr-11	Big Bear Cr-8	3	0	3	N
	M	Wapshilla Cr-11	Blue Cr-3	4	8	12	S
	M	Whiskey Cr-10A	Grouse Cr-1	6	6	12	S
	M	Whiskey Cr-10A	Blue Cr-3	2	8	10	S
1994	M	Pickle Canyon-11A	Big Bear Cr-8	5	12	17	N
	M	Pickle Canyon-11A	Little Canyon-11A	5	0	5	N
	M	Allison Cr-14	Big Bear Cr-8	6	4	10	N
	M	Allison Cr-14	Big Bear Cr-8	0	11	11	N
	M	Allison Cr-14	Maas G-1	0	8	8	N
	M	Allison Cr-14	Houcks Spur-1	4	0	4	N
	M	Flannigan Cr-8	Maas G-1	1	2	3	N
	M	Flannigan Cr-8	Houcks Spur-1	4	24	28	N
	M	Flannigan Cr-8	Little Canyon-11A	4	0	4	N
1995	M	5-Mile Cr-11A	Big Bear Cr-8	6	0	6	S
	M	Flat Cr-8	Big Bear Cr-8	6	0	6	N
	M	Allison Cr-14	Crow Bench-11A	1	18	19	S
	M	Allison Cr-14	Cottonwood Cr-11A	5	0	5	S
1996	M	Deep Cr-8	Port Hill, B.C.	12	18	30	N
	M	Boulder Cr-8	Port Hill, B.C.	3	5	8	S
	M	Eagle Cr-11	Port Hill, B.C.	6	19	25	N
	M	Grave Cr-11	Orofino-10A	1	5	6	N
	M	Deer Cr-11	Big Bear Cr-8	10	28	38	N
	M	Blanco Cr-15	Jacks Cr-11A	4	6	10	N
1997	M	Squaw Cr-18	Armiger-10A	8	27	35	N
	M	Castle Cr-15	Armiger-10A	8	21	29	N
	M	Rice Cr-13	Panhandle Region	10	24	34	N
	M	Nora Cr-8A	Panhandle Region	10	33	43	N
	M	Billy Cr-11	Crow Bench-10A	10	27	37	N
	M	Cottonwood Cr-11	Big Bear Cr-8	8	27	35	N
	M	Dough Cr-11	Armiger-10A	6	19	25	N
	M	Blanco Cr-15	Mt Idaho-15	10	13	23	S
1998	M	MF Payette-33	Packard-8	6	24	30	N
	M	Papoose Cr-18	Lathrop-10A	6	29	35	N
	M	Allison Ranch-20	Mt Idaho-15	5	20	25	N
	M	Allison Cr-14	Duman-11	5	9	14	S
	M	Little Weiser-32W	Duman-11	6	11	17	S
	M	California	Duman, et al-11	6	26	32	NA
1999	M	Schwartz Cr-15	Bott Ranch-10A	3	21	24	N
	M	Rapid River-23	Busta-10A	12	28	40	N
	M	California	Bott Ranch-10A	3	24	27	NA

Table 9. Continued.

Year	Sub-Species[b]	Release Site Drainage - Unit	Source - Unit	M	F	Total	New or Supplemental Release
2000	M	Rapid River-18	Bott Ranch-10A	4	14	18	S
	M	Rice Cr-13	Groom, et al-11A	6	28	34	S
	M	Divide Cr-13	Bott, et al-10A	1	24	25	S
	M	Getta Cr-13	Gray, et al-10A	8	40	48	S
	M	Big Canyon Cr-13	Bott, et al-10A	6	14	20	S
	M	Wolf Cr-13	Duclercque-10A	6	11	17	S
	M	Hi-Range Cr-13	Gray, et al-10A	3	20	23	S
	M	Slate Cr-14	Gray-10A	2	23	25	S
	M	Red River-15	Duclercque-10A	1	22	23	S
	M	Billy Cr-11	Bott Ranch-10A	1	7	8	S
2001	M	Snake River-63A	Thompson-8	5	20	25	N
	M	Red River-15	Busta-10A	14	6	20	S
2002	M	Bob Smith Canyon Robber's Roost-71	Bott-10A	2	21	23	N
	M	Bob Smith Canyon Robber's Roost-71	Wilcox-10A	10	0	10	N
	M	Bob Smith Canyon Robber's Roost-71	Gray-10A	5	17	22	N
	M	Binninger-10A	Gray-10A	0	1	1	S
	M	Craig Mtn-11	Gray-10A	0	3	3	S
	M	Slate & Squaw Cr-14	Crabtree-15			29	S
	M	Main Snake below confluence-63A	Grandi-8	2	4	6	N
	M	Main Snake below confluence-63A	Jackson-10A	4	11	15	N
	M	Main Snake below confluence-63A	Crabtree-15	1	24	25	N
	M	Castle Cr-15	Lucas-15	0	14	14	S
	M	Eagle Cr-11	Lucas-15	0	13	13	S
2003	H	Eagle Cr-11	Harris-8A	0	10	10	S
	H	Eagle Cr-11	Weidner-11A	3	20	23	S

[a] For complete history, see 2002 Upland Game PR report (W-170-R-26).
[b] E = Eastern; M = Merriam's; R = Rio Grande; H = Hybrid.

Table 10. Mourning dove coo-count survey results and estimated harvest in the Clearwater Region, 1993-present.

	Coo-Count Routes		Telephone Survey[a]			
Year	Routes Counted	Doves Heard/Mile	Hunters	Birds	Hunter Days	Birds/ Hunter Day
1993	2	0.20	773	3,587	3,123	1.1
1994	2	0.30	1,161	8,765	3,989	2.2
1995	2	0.10	792	4,062	3,229	1.3
1996[b]	1	0.02	-	-	-	-
1997[b]	1	0.15	-	-	-	-
1998[b]	1	0.30	-	-	-	-
1999[b]	1	0.15	-	-	-	-
2000[b]	1	0.15	-	-	-	-
2001[c]	1	0.10	-	-	-	-
2002	2	0.13	-	-	-	-

[a] Telephone survey data at the regional level were not collected after 1995.
[b] Route 1150 not surveyed.
[c] Route 0730 not surveyed

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	3	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

SOUTHWEST REGION

PHEASANT

Population Surveys

No winter sex ratio counts were conducted.

The average young per brood in 2002 based on survey routes was 4.4. This was less than the 5.9 young/brood counted the previous year, and less than the previous five-year average of 5.5. The 0.3 birds observed per mile was half as many observed in 2001 (0.6), and less than the previous five-year average (0.5) (Table 1). Three survey routes (1B, 3A, 3B) were discontinued in 2002 because of residential development along a significant portion of the routes.

Harvest Characteristics

A telephone survey for upland game hunters was conducted in 2002. The survey estimated 10,425 hunters harvested 27,010 birds in the Southwest Region during fall 2002, for an average of 0.6 birds/day. Participation and harvest decreased 11% and 31% respectively from 2001 (Table 2).

Two check stations, Star and Freezeout Hill, are typically operated in the Southwest Region to monitor pheasant hunting success during opening weekend. Because of road construction, only the Freezeout Hill check station was operated in 2002. As a result, the total number of hunters checked decreased from 168 in 2001 to 52 in 2002. The number of birds checked decreased from 91 birds in 2001 to 18 birds in 2002. Number of birds harvested per hunter day decreased to 0.4 and the number of hours hunted per bird harvested increased to 7.6 (Table 2).

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Habitat Conditions

Long-term population trends are down, primarily due to major changes in farming practices and development of agricultural lands. In Canyon and Owyhee counties, farmers are not raising high-moisture corn that is normally harvested in late fall. Fall plowing of all fields has become the normal operating procedure, thereby limiting winter food and cover for pheasants. These practices have not become common in Gem County, which has the highest densities of fall pheasants. If this trend in farming practices continues, we can expect further reductions in long-term populations.

Depredations

Some pheasant depredations occur every spring on wheat, barley, and corn. Sweet corn is the major problem. Cracker shells and M99s are provided to landowners to alleviate the problem.

Stocking

Adult roosters were purchased from a contractor and released on Department lands in the Southwest Region. A total of 9,484 pheasants were released on Fort Boise WMA, C. J. Strike WMA, Payette River WMA, and Montour WMA during the 2002 season. These birds added significantly to hunter opportunity on these four heavily hunted public management areas.

Management Implications

Pheasant populations are largely dependent upon winter habitats, nesting habitats, and spring weather conditions during nesting and brood-rearing time. Weather conditions will have a larger influence on the pheasant population while the habitat quality remains low. Habitat quality and quantity needs to be improved to moderate the effect of weather conditions. Uncontrollable weather factors will be the major influence on recruitment of birds into the fall populations until habitat conditions improve.

The Southwest Region has seen significant decreases in wintering habitat due to changes in farming practices and development of agricultural lands into home sites. The probability that populations will decrease is high, since any added mortality factors will cause further declines in pheasant numbers.

Summary

Pheasant populations continue to decline with the loss of habitat. Associated with the decline in pheasant population, the number of hunters and harvest is down.

BOBWHITE AND CALIFORNIA QUAIL

Population Surveys

No brood surveys were run during 2002.

Harvest Characteristics

Telephone survey data estimated that 7,613 hunters harvested 61,026 birds. In comparison, 7,718 hunters harvested about 84,977 quail in 2001 (Table 3).

A few birds are checked incidental to other activities. No check stations are run specifically for quail.

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Management Implications

California quail populations are fairly stable over the long term but experience short-term population fluctuations, depending upon the severity of winter weather and the amount of cold, wet weather during the nesting season. Populations are currently in good condition.

Summary

Quail populations are at a stable level in the Southwest Region. Harvest has remained stable over the last several years.

FOREST GROUSE

Population Surveys

Drumming counts or other spring population indices were not conducted in the region during the last reporting period.

Harvest Characteristics

Telephone survey data estimated that 8,954 hunters harvested 34,672 forest grouse in the Southwest Region in 2002. In 2001, 34,251 birds were taken by 7,008 hunters (Table 4).

A few birds are checked incidental to other activities. No check stations are run specifically for forest grouse.

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Management Implications

Forest grouse populations are dependent on good nesting and brood-rearing conditions. There is concern that insect damage to evergreen species may have a negative impact on blue grouse populations. We have emphasized good forest grouse habitat management procedures to the

Bureau of Land Management (BLM) and the USFS when reviewing timber sales and livestock management plans.

SAGE GROUSE

Population Surveys

No sage grouse brood routes were conducted in the Southwest Region in 2002. Thirty-seven leks were monitored in the Region during March-May 2002. An estimated 638 sage grouse were observed on 37 leks.

Harvest Characteristics

Telephone survey data estimated that 1,135 hunters pursued sage grouse in the Southwest Region and harvested an estimated 1,499 birds. Participation and harvest decreased 24% and 17% respectively from the previous year (Table 5). From 1991 to 1995, the sage grouse harvest averaged 2,200 sage grouse by 4,300 hunters.

Check stations were operated opening weekend at Bruneau and Mud Flat during the 2002 season. The total number of birds checked was 293. More birds were checked this year than the previous year (179 in 2001). Although the number of hours required to harvest a bird dropped in 2002, the number of birds per hunter also decreased (Table 5).

Sage grouse wings were collected at check stations and wing barrels for age analysis (Table 6).

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Management Implications

Sage grouse populations are largely dependent upon spring weather conditions during nesting and brood rearing. Recruitment of birds into the fall will be governed by uncontrollable weather factors until habitat quality and quantity is improved to moderate the effect of weather conditions.

Regional personnel continue to work closely with the BLM to reduce impacts of present and proposed land management practices on sage grouse habitat. Regional staff are currently conducting a challenge cost share project with BLM on sage grouse seasonal distribution on the Owyhee Front. Results of the study will be used by BLM to prioritize wildfire suppression efforts based on key seasonal habitat use by sage grouse.

Summary

Survey information suggests sage grouse populations are currently stable.

SHARP-TAILED GROUSE

Population Surveys

No sharp-tailed grouse dancing grounds or brood routes were run by regional personnel in 2002.

Trends in sharp-tailed grouse populations are unknown in the Southwest Region. Monitoring of remnant flocks and their corresponding leks was most recently conducted in 2000 by BLM personnel and indicate a small but stable number of birds attending leks in recent years.

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Habitat Conditions

Due to habitat loss, sharp-tailed grouse populations in the Southwest Region have been reduced to remnant flocks in Washington, Adams, and Payette counties. Research on sharp-tailed grouse distribution, habitat use, and population size in Washington County was completed by the Department and the BLM in 1985. The Department has not participated in research on sharp-tailed grouse habitat in the Southwest Region since 1985.

Management Implications

The Southwest Region has encouraged land management agencies to protect sharp-tailed grouse habitat when planning land management activities. In addition, the region has entered into a cooperative agreement with the BLM and The Nature Conservancy (TNC) to manage sharp-tailed grouse populations and habitat in Washington County. An area of critical habitat for sharp-tailed grouse comprised of approximately 7,000 acres of BLM and TNC lands will be managed for sharp-tailed grouse by the cooperators. The Department will provide increased enforcement patrols and take over monitoring of sharp-tailed grouse dancing grounds on the Hixon Sharp-tailed Grouse Preserve, and additional leks in other portions of the region will be surveyed for possible inclusion into the monitoring program.

Populations are far below long-term levels due to habitat losses. The sharp-tailed grouse have increased because of CRP improvements to habitat and good climatic conditions. It is not likely that populations will reach harvestable levels during this planning period.

Summary

Sharp-tailed grouse populations are remaining stable, but are very limited. Significant increases in occupied habitat need to be accomplished.

CHUKAR PARTRIDGE

Population Surveys

Helicopter aerial surveys have been conducted in late August or early September along a portion of Brownlee and Lucky Peak Reservoirs since 1984 to monitor chukar population trends (Tables 7 & 8). The number of birds observed was less than observed in 2001, but chukar group size was larger. Chukar counts are above the ten-year average(Tables 7 & 8).

Harvest Characteristics

Telephone survey data estimated that 8,907 hunters pursued chukar in the Southwest Region and harvested an estimated 78,171 birds. Participation and harvest increased 12% and 28% respectively from 2001 (Table 9). From 1991 to 1995, the chukar harvest averaged 50,000 by 8,000 hunters.

A few birds are checked incidental to other activities. No check stations are run specifically for chukar.

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Management Implications

Chukar populations are largely dependent upon spring weather conditions during nesting and brood rearing. Recruitment of birds into the fall will be governed by uncontrollable weather factors until habitat quantity and quality is improved to moderate the effect of weather conditions.

Summary

The chukar population is below its historic highs, but good populations still exist. Habitat needs to be improved and the amount of high quality habitat needs to be increased.

GRAY PARTRIDGE

Population Surveys

No trend surveys are conducted for gray partridge in the Southwest Region.

Harvest Characteristics

Telephone survey data estimated that 2,816 hunters pursued gray partridge in the Southwest Region and harvested an estimated 10,895 birds. Participation and harvest decreased 18% and 34% respectively from 2001 (Table 10).

A few birds are checked incidental to other activities. No check stations are run specifically for gray partridge.

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Management Implications

Gray partridge populations are largely dependent upon spring weather conditions during nesting and brood rearing. Recruitment of birds into the fall will be governed by uncontrollable weather factors until habitat quantity and quality is improved to moderate the effect of weather conditions.

Summary

The gray partridge population is well below its historic highs, but the basic core population is still present. The habitat needs to be improved and the amount of high quality habitat needs to be increased.

WILD TURKEY

Population Surveys

No trend surveys are in place to monitor turkey populations in the Southwest Region.

Harvest Characteristics

Two controlled hunts were held for turkey in the Southwest Region in 2002. One in the spring and another in the fall. The general harvest estimates remained stable in 2002 (Table 11).

No check stations are run during the turkey season. No check stations are run specifically for turkey.

Climatic Conditions

The winter of 2002-2003 was characterized by below average precipitation and snow cover. There were no indications that snow cover had a detrimental impact on wintering turkeys.

Trapping and Transplanting

Thirty-eight turkeys were trapped from within Boise city limits in the Southwest Region in 2002 and transplanted in the Upper Snake Region (Table 12).

Management Implications

Regional personnel have supported enhancement of turkey habitat by plantings of food plots specifically for wild turkey on USFS lands. Additionally, Regional personnel have provided input into land use plans on the importance of turkey habitat, and by habitat improvement projects on Department-owned lands.

Turkey depredation complaints were received from several subdivisions near Boise. The increasing turkey populations are damaging gardens, power lines, and specialty crops, and fouling wintering concentration areas. A combination of trapping and transplanting plus attracting to new feeding areas has helped alleviate some of the problems in past years.

Turkey numbers have increased, and in some areas of the Region, they are dependent upon supplemental feed to survive the winter. During winter 2002-2003, Department personnel, in cooperation with members of the Idaho and local chapters of the NWTF, distributed approximately 22 tons of donated grain to sustain these turkeys. Public demand for turkey feed has become intense, even in moderate to mild winters.

Summary

Wild turkey numbers continue to increase in the Southwest Region.

MOURNING DOVE

Harvest Characteristics

There are no regional harvest estimates for 2002. From 1991 to 1995, the dove harvest averaged 46,000 birds by 4,500 hunters (Table 13).

Climatic Conditions

Spring weather conditions were mild and favorable for nesting in 2002.

Population Surveys

Regional personnel participate in the USFWS annual mourning dove coo call count routes in May each year. In 2002, regional personnel counted mourning doves while conducting pheasant brood routes. Approximately 2.4 mourning doves per mile were counted in 2002 (Table 13).

RABBITS AND HARES

Population Surveys

No surveys or other efforts are made to estimate rabbit and hare populations in the Southwest Region.

Harvest Characteristics

Estimates from the telephone harvest survey indicate 285 hunters harvested 4,921 cottontail rabbits in 2002 compared to 4,029 cottontails harvested by 993 hunters in 2001.

Climatic Conditions

Spring weather conditions appeared favorable for production of rabbits and hares in 2002.

Management Implications

Hunting has little, if any, effect on populations. Seasons have been set with liberal bag limits and season lengths. No active data collection programs exist for rabbit or hare production or population estimates. The harvest of rabbits and hares is very small and has no impact on the populations.

Table 1. Pheasant population characteristics and production in the Southwest Region, 1993-present.

Year	Miles Counted	Birds per Mile	% Unsuccessful Females	Juv:100 Adult Females	N[a]	Average Brood Size
1993	580	0.3	39	611	200	6.1
1994	580	1.6	24	481	959	6.9
1995	480	0.5	40	398	246	4.5
1996	260	0.8	17	624	215	6.2
1997	660	0.4	25	360	290	4.8
1998	640	0.6	25	358	371	4.8
1999	540	0.6	17	396	315	4.8
2000	540	0.5	22	575	246	7.4
2001	620	0.6	29	423	342	5.9
2002	600	0.3	59	436	180	4.4

[a] Sample size.

Table 2. Estimated pheasant harvest in the Southwest Region, 1993-present.

	Check Station				Telephone Survey[a]		
Year	Hunters	Birds	Birds/ Hunter	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993	250	114	0.4	7.0	15,700	68,200	0.6
1994	198	128	0.6	4.7	12,600	57,100	0.7
1995	293	576	0.6	3.1	16,000	70,300	0.6
1996	156	471	0.7	4.5	-	-	-
1997	258	109	0.4	8.1	-	-	-
1998	143	86	0.6	5.3	-	-	-
1999	197	92	0.5	6.0	-	-	-
2000	357	135	0.4	7.1	-	-	-
2001	168	91	0.5	6.2	11,685	38,994	0.6
2002[b]	59	18	0.4	7.6	10,425	27,010	0.6

[a] Telephone survey data at the regional level were not collected from 1996-2000.

[b] Due to road construction at the Star check station, only the check station at Freezeout Hill was operated in 2002.

Table 3. Quail[a] population characteristics and estimated harvest in the Southwest Region, 1993-present.

	Brood Routes		Telephone Survey[b]		
Year	Miles Counted	Birds/Mile	Hunters	Birds	Birds/ Hunter Day
1993	580	0.3	10,400	86,100	1.3
1994	560	1.2	8,500	86,500	1.7
1995	480	0.9	11,500	143,800	1.8
1996	260	2.2	-	-	-
1997	660	1.0	-	-	-
1998	640	2.1	-	-	-
1999	540	2.1	-	-	-
2000	540	2.0	-	-	-
2001	620	2.8	7,718	84,977	2.2
2002	600	4.3	7,613	61,026	2.1

[a] Almost entirely California quail.
[b] Telephone survey data at the regional level were not collected from 1996-2000.

Table 4. Estimated forest grouse harvest in the Southwest Region[a], 1993-present.

Year	Hunters	Birds	Birds/ Hunter Day
1993	10,400	30,100	2.9
1994	9,000	31,700	0.6
1995	13,500	43,800	0.6
1996	-	-	-
1997	-	-	-
1998	-	-	-
1999	-	-	-
2000	-	-	-
2001	7,008	34,251	1.0
2002	8,945	34,672	0.8

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 5. Estimated sage grouse harvest in the Southwest Region, 1993-present.

		Check Station				Telephone Survey[a]		
Year	Bag and Possession Limits	Hunters	Birds	Birds/ Hunter Day[b]	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993[c]	3/6	74	58	0.8	6.3	3,200	11,100	1.9
1994[c]	3/6	99	109	1.1	3.8	3,400	6,400	0.6
1995[c]	3/6	71	62	0.9	4.2	4,300	6,700	0.5
1996[c]	2/4[d]	44	29	0.7	6.0	-	-	-
1997[c]	2/4[d]	34	36	0.9	3.7	-	-	-
1998[c]	2/4[d]	23	23	1.0	3.8	-	-	-
1999[c]	2/4[d]	21	18	1.0	4.4	-	-	-
2000	2/4[d]	365	312	0.9	6.5	997	1,848	0.6
2001[e]	2/4[d]	150	179	1.2	5.5	858	1,240	0.7
2002[e]	2/4[d]	285	293	1.0	5.0	1,135	1,499	0.7

[a] Telephone survey data at the regional level were not collected from 1996-1999.
[b] Total birds checked over total hunters.
[c] Bruneau check station open on opening day only.
[d] Part of area was a 1/2 sage grouse bag/possession limit.
[e] Only the Bruneau and Mud Flat check stations were operated in 2001 and 2002.

Table 6. Sage grouse production in the Southwest Region based on wing collections, 1993-present.

Year	Juv:100 Females	Juv:100 Adults	% Unsuccessful Females
1993	197	129	53
1994	277	207	69
1995	145	98	46
1996	185	107	51
1997	123	78	54
1998	130	101	75
1999	300	192	56
2000	127	85	67
2001	145	110	38
2002	295	201	86
10-year average	192	131	60

Table 7. Chukar partridge aerial survey results along Brownlee Reservoir in the Southwest Region[a], 1993-present.

Year	Chukars Observed	Chukar Groups	Groups per Square Mile	Chukars per Square Mile	Chukars per Group
1993	211	24	2.0	17.6	8.8
1994	1,056	65	5.4	88.0	16.2
1995	952	88	7.3	79.3	10.8
1996	949	90	7.5	79.1	10.5
1997	881	79	6.6	73.4	11.2
1998	1,131	125	10.4	109.3	10.5
1999	1,330	101	8.4	110.8	13.2
2000	1,488	104	8.7	124.0	14.3
2001	1,724	127	10.6	143.7	13.6
2002	1,488	92	7.7	124.0	16.1
10-year average	1,121	90	7.5	94.9	12.5

[a] The survey area is 12 square miles.

Table 8. Chukar partridge aerial survey results on Lucky Peak Reservoir in the Southwest Region[a], 1993-present.

Year	Chukars Observed	Chukar Groups	Groups per Square Mile	Chukars per Square Mile	Chukars per Group
1993	84	10	1.2	7.1	7.4
1994	190	13	1.5	19.0	14.6
1995	212	18	1.8	21.2	11.8
1996	-	-	-	-	-
1997	314	29	2.9	31.4	10.8
1998	193	26	2.6	19.3	7.4
1999	-	-	-	-	-
2000	241	21	2.1	24.1	11.5
2001	-	-	-	-	-
2002	218	18	1.8	21.8	12.1

[a] The survey area is ten square miles.

Table 9. Estimated chukar partridge harvest in the Southwest Region, 1993-present.

Year	Bag and Possession Limits	Check Station[a]				Telephone Survey[b]		
		Hunters	Birds	Birds/ Hunter	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993	8/16	5	2	0.4	7.5	8,500	48,100	5.1
1994	8/16	14	17	1.2	4.6	7,500	59,400	1.6
1995	8/16	7	9	1.3	2.9	10,700	96,700	1.5
1996	8/16	24	15	0.6	2.0	-	-	-
1997	8/16	9	15	1.7	2.4	-	-	-
1998	8/16	4	0	-	-	-	-	-
1999	8/16	5	0	-	-	-	-	-
2000	8/16	374	271	0.7	7.0	-	-	-
2001	8/16	36	69	1.9	1.9	7,988	61,201	1.6
2002	8/16	70	114	1.6	2.8	8,907	78,171	1.8

[a] Opening weekend harvest data only.
[b] Telephone survey data at the regional level were not collected from 1996-2000.

Table 10. Gray partridge population characteristics and estimated harvest in the Southwest Region, 1993-present.

Year	Production			Telephone Survey[a]		
	Miles Counted	Birds/ Mile	Birds Counted	Hunters	Birds	Birds/ Hunter Day
1993	580	0.1	29	4,900	12,700	2.6
1994	560	0.1	20	4,300	11,000	0.4
1995	580	0.1	43	5,800	19,100	0.6
1996	260	0.1	9	-	-	-
1997	660	0.1	67	-	-	-
1998	640	0.1	42	-	-	-
1999	540	0.2	125	-	-	-
2000	540	0.2	96	-	-	-
2001	620	0.1	60	3,452	16,451	0.8
2002	600	0.1	79	2,816	10,895	0.8

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 11. Estimated turkey harvest in the Southwest Region, 1993-present.

Hunt	Number of Hunts	Permits Available	Hunters	Birds Taken	Days/ Bird	Total Days Hunted
1993						
Controlled	0	-	-	-	-	-
General	-	-	1,491	235	20.4	4,784
1994						
Controlled	0	-	-	-	-	-
General	-	-	1,730	269	20.1	5,396
1995						
Controlled	0	-	-	-	-	-
General	-	-	2,671	385	21.9	8,428
1996						
Controlled	1	15	13	10	9.2	92
General	-	-	2,682	494	19.0	9,397
1997						
Controlled	1	15	10	8	11.5	92
General	-	-	3,064	610	13.4	8,164
1998						
Controlled	1	30	24	11	10.4	114
General	-	-	3,420	700	14.4	10,100
1999						
Controlled	1	75	75	38	5.7	217
General	-	-	5,300	1,280	14.4	18,424
2000						
Controlled	1	75	75	32	9.9	318
General	-	-	6,401	1,276	15.3	19,555
2001						
Controlled Spring	1	75	71	38	8.4	319
General Spring	-	-	5,680	988	18.4	18,140
Controlled Fall	1	750	403	315	3.0	948
2002						
Controlled Spring	1	70	66	32	8.6	275
General Spring	-	-	5,737	910	19.8	18,055
Controlled Fall	1	750	623	281	5.6	1,560

Table 12. Turkey transplant history for the Southwest Region, 1966-present.

Year	Subspecies[a]	Release Site - Unit	Number of Birds Released	New or Supplemental Release
1966	M	SF Boise River-39	12	N
1967	M	Wildhorse River-22	19	N
1970	M	Payette River at Banks-32	14	N
1979	M	Pine Creek-31	5	N
1982	R	Fort Boise WMA-38	24	N
1982	M	SF Salmon River-25	18	N
1982	M	Payette River at Banks-32	15	S
1982	M	Hornet Creek-22	4	S
1982	M	Fruitvale-22	1	S
1982	R	Kennedy WMA-38	16	N
1982	R	Goodrich Creek-22	19	N
1983	M	SF Boise River-39	15	S
1983	M	MF Boise River-39	15	N
1983	M	Cottonwood Creek-39	14	N
1984	R	Boulder Creek-40	27	N
1985	R	Boulder Creek-40	2	S
1986	M	Dead Dog Creek-39	17	N
1986	R	C.J. Strike WMA-40	14	N
1987	M	Porter Creek-39	10	N
1987	M	Harris Creek-39	10	N
1988	M	Harris Creek-39	10	S
1988	M	Porter Creek-39	7	S
1988	M	Eagleson Summit-39	11	N
1989	R	Boise River at Caldwell-38	14	N
1990	M	Cottonwood Creek-31	25	N
1990	M	Dukes Creek-22	28	N
1990	M	Indian Creek-22	28	N
1990	M	WF Brownlee Creek-31	28	N
1990	M	Hornet Creek-22	13	S
1990	M	Stack Rock-39	20	N
1993	M	Robie Creek-39	22	S
1993	M	Thorn Creek-39	24	N
1993	M	Wilderness Ranch-39	29	S
1993	M	Corral Creek-39	25	N
1993	M	Ola-32A	22	N
1993	M	Squaw Creek-32A	46	N
1993	M	Sturgill Creek-31	37	N
1993	R	Payette River-32	5	S
1993	R	Boise River-38	26	N
1993	R	Boise River-38	27	N

Table 12. Continued.

Year	Subspecies[a]	Release Site - Unit	Number of Birds Released	New or Supplemental Release
1994	R	Boise River-38	24	N
1994	R	Boise River-38	29	N
1994	M	Ola-32	22	S
1994	M	Squaw Creek-32	24	S
1995	M	Alder Creek-33	27	N
1995	M	MF Payette River-33	30	N
1996	R	Payette River WMA-38	20	N
1997	R	Payette River WMA-32	18	N
1997	R	Payette River WMA-32	17	N
1997	M	Bunch Creek-33	18	N
1997	M	MF Payette River-33	33	S
1997	M	Keithly Creek-31	27	N
1997	M	Dennett Creek-33	27	N
1998	M	Little Weiser River-32	17	N
1998	M	Mann Creek-31	19	S
1998	M	SF Boise River-39	17	S
1998	R	Payette River WMA-32	17	N
1998	R	Payette River WMA-32	20	S
1999	R	Letha-32	24	N
1999	R	Payette River-32	26	N
1999	M	SF Boise River-39	17	S
2000	M	Snake River at Archer-64	27	N
2002	M	Blackfoot River-69	38	N

[a] M = Merriam's; R = Rio Grande.

Table 13. Mourning dove coo-count survey results and estimated harvest in the Southwest Region, 1993-present.

	Coo-Count Routes[a]		Telephone Survey[b]		
Year	Miles Counted	Doves/Mile	Hunters	Birds	Birds/ Hunter Day
1993	580	0.3	7,100	73,200	2.1
1994	560	4.6	6,100	70,700	2.4
1995	480	2.2	7,200	66,100	2.3
1996	260	2.3	-	-	-
1997	660	2.2	-	-	-
1998	640	1.6	-	-	-
1999	540	3.9	-	-	-
2000	540	3.3	-	-	-
2001	620	3.2	-	-	-
2002	600	2.4	-	-	-

[a] Data collected during pheasant brood route counts.
[b] Telephone survey data at the regional level were not collected after 1996.

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	4	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

MAGIC VALLEY REGION

PHEASANT

Abstract

Alfalfa harvest in May and early June continues to contribute to poor pheasant nest success. August roadside surveys yielded 0.12 pheasants/mile (PPM) in 2002 which was among the lowest ever recorded and well below the 1992-2001 mean of 0.27 PPM. In 2002, harvest declined 40% from 2001 and was only 22% of the estimated harvest in 1985. In the long-term, pheasant populations are expected to remain low given current farming practices. Occasional short-term increases will occur during years when the first alfalfa harvest is delayed by rain, allowing increased nesting success.

Population Surveys

August roadside surveys are used to monitor pheasant population trends and forecast hunting seasons. Using data from 1976-1996, the PPM index was positively and significantly correlated ($r = 0.90$, $df = 19$, $P < .001$) with harvest estimated by telephone survey sampling.

The 2002 PPM index of 0.12 was similar to 2001, among the lowest ever recorded, and well below the 1992-2001 mean of 0.27 PPM (Table 1). Alfalfa harvest began in mid-May in the western portion of the region and proceeded uninterrupted by precipitation, resulting in poor nest success for pheasants.

Roadside survey data typically reflect higher pheasant densities in the western portion of the Magic Valley Region than the eastern portion. From 1993-2002, the PPM index averaged 0.30 on western routes (Jerome, west Twin Falls, west Lincoln, Gooding, and Elmore counties) and 0.13 on eastern routes (Minidoka, Cassia, east Twin Falls, and east Lincoln counties). However, in 2001 and 2002 routes, western routes declined to about the same level as eastern routes and no differences in the PPM index was evident.

No data were collected for estimating age ratios in October or hatching chronology.

No winter sex ratio data was collected during the 2002-2003 reporting period.

Harvest Characteristics

A telephone survey was conducted to estimate 2002 pheasant harvest parameters. Both pheasant hunters and pheasant harvest have declined precipitously in the region since the mid-1980s. In 2002, harvest declined 40% from 2001 (Table 2).

Stocking

Pheasant stocking to provide "put-and-take" hunting opportunity occurred on BLM/BOR tracts in Minidoka County (840 pheasants) and at Niagara Springs WMA (930 pheasants). Additionally, 50 pheasants were stocked at Niagara Springs WMA for the youth-only pheasant season.

Research

Pheasant research has been ongoing in the region since 1990. Research results are presented in a separate report.

Management Implications

Pheasant populations in the Magic Valley declined dramatically during the early to mid-1980s following a series of severe winters. Pheasant numbers have remained depressed because of a shortage of winter habitat and lack of undisturbed nesting cover. Current farming practices are not compatible with supporting the higher density of pheasants that occurred in the Magic Valley during the 1950s and 1960s. The widespread use of sprinkler irrigation has resulted in larger field sizes, less linear habitat (fence rows and ditches), and fewer uncultivated weedy areas, reducing the quality and quantity of winter and nesting habitat. In addition, the number of acres of farmland planted to alfalfa has increased to support the needs of the area's growing dairy industry. The increase in alfalfa acres has had negative effects on pheasants because alfalfa is harvested earlier (mid- to late May instead of early June) and more frequently (4-5 cuttings instead of 3) now than it was 15 years ago. The result is that fewer pheasants can nest successfully in alfalfa, which is usually the best nesting cover available.

In the long term, the status of pheasant populations will be closely related to agricultural practices and their effect on habitat. Occasional short-term increases will occur during years when the first alfalfa harvest is delayed by rain, allowing increased nesting success. The current trend in intensive clean farming practices is expected to continue and further declines in pheasant habitat quantity and quality will follow. The Magic Valley Region will continue to give priority to habitat improvement (HIP, Pheasant's Forever, BLM/IDFG Cooperative Wildlife Program) in pheasant recovery efforts. Providing adequate nesting habitat is currently viewed as the weak link in our habitat recovery efforts.

QUAIL

Abstract

No population surveys were conducted specifically for quail in 2002. Harvest data collected by telephone survey and check stations in 2001 indicate a substantial reduction in harvest to a level lower than the ten-year average.

Population Surveys

During August roadside surveys, only seven of the 28 survey routes sampled quail habitat, resulting in poor predictive capabilities from survey data (Table 3).

Harvest Characteristics

The estimated quail harvest in 2002 (4,001 birds) was substantially lower than in 2001 but similar to the harvest levels in 1993 and 1994 (Table 3).

The index of quail harvested per 100 hunters interviewed at check stations in 2002 was well below the ten-year average and only 15% of the 2001 level (Table 4).

Trapping and Transplanting

Thirty-eight California quail captured in southwestern Idaho were released at the Big Cottonwood WMA in January 1996 to reestablish a quail population there. No releases have been made since then. A fall population of approximately 50-75 quail has been observed annually on the WMA since the initial release and are providing hunting opportunity. Suitable habitat is limited and no future releases are planned.

Management Implications

California quail in the Magic Valley Region are associated primarily with the Snake River and its tributaries west of Highway 93. Opportunities to enhance habitat will be pursued through HIP, and through riparian improvement opportunities with BLM, whenever possible. Increased residential development along the Snake River is a serious threat to quail habitat. Increased attention to zoning and development plans may help slow the loss of habitat.

FOREST GROUSE

Abstract

No population surveys were conducted. Telephone survey data and check station data suggest that harvest in 2002 was above the long-term average for both blue and ruffed grouse. Ruffed grouse were abundant in the South Hills (Twin Falls County) and the number of hunter-harvested ruffed grouse in 2001 and 2002 reached the highest levels ever recorded.

Population Surveys

No surveys were conducted during the 2002-2003 reporting period. Observations by hunters and agency personnel indicate that the distribution of ruffed grouse in the South Hills has expanded to include most of the available habitat since their introduction during 1987-1989. A small sample of ruffed grouse wings (N = 27), collected primarily from South Hills hunters, indicated a ratio of 1.45 young/adult.

Harvest Characteristics

Telephone survey data suggest that forest grouse harvest declined slightly from 2001 but remained above the long-term average. Data suggest that forest grouse has increased in popularity since the 1980s. Over 3,000 hunters pursued forest grouse in 2002 (Table 5) compared to 450-800 hunters from 1985-1990.

At 2001 and 2002 check stations, the number of ruffed grouse checked (primarily from the South Hills, Twin Falls County) increased to the highest levels ever recorded. The number of blue grouse checked increased substantially in 2002 after declining to a very low level in 2001 (Table 4).

Management Implications

Blue and ruffed grouse harvest will be monitored at sage grouse and big game check stations. Ruffed grouse drumming routes, established in Unit 54 to monitor status of the introduced grouse population, have been discontinued.

SAGE GROUSE

Abstract

Sage grouse populations in the Magic Valley Region remained relatively stable during the reporting period. The number of males counted on leks in 2002 decreased by 4% from 2001 levels. Sage grouse production in 2002, measured from wing collections, was 1.99 juveniles/adult hen; similar to the 1965-2001 average of 2.01 juveniles/adult hen. At opening weekend check stations, harvest was unchanged from 2001 and was only 32% of the average harvest of 1,707 grouse from 1965-2001. The long-term decline in sage grouse populations has resulted from substantial loss and fragmentation of habitat from large range fires and the effects on habitat of successive years of drought during the late 1980s and early 1990s.

Population Surveys

The Magic Valley Region conducts lek routes annually to monitor sage grouse population trends. In 2002, the number of males observed on 12 comparable routes decreased slightly (4%) from 2001 levels. The number of males counted was 52% higher than was documented in 1994 when sage grouse numbers had declined to a low level. Lek data suggest that sage grouse populations in the region increased from 1995 through 1999 and have declined slightly since then (Figure 1).

Sage grouse wings (N = 661) were collected at ten check stations and with wing barrels located at Shoshone Basin, Lily Grade, Browns Bench, and Kimama. Estimated sage grouse production in 2002 (Table 6) was 1.99 juveniles/adult hen, 24% higher than in 2001 and similar to the 1965-2001 mean of 2.01 juveniles/adult hen. Sage grouse production in the Magic Valley Region has been below average (<2.01 young/adult hen) 12 of the last 15 years.

Sage grouse brood routes are not conducted in the Magic Valley Region.

Harvest Characteristics

Beginning in 2000, hunters were required to purchase a sage and sharp-tailed grouse validation for their license to hunt those species. This validation and resulting list of hunters has allowed good estimates of sage grouse harvest. In the Magic Valley Region in 2002, 2,667 hunters harvested 3,066 sage grouse with a success rate of 0.5 birds per day. The Magic Valley Region accounted for 41% of the statewide sage grouse harvest and 46% of the sage grouse hunters in 2002 (Table 7).

Ten check stations are operated annually during opening weekend. Check station data reflect a reduction in hunter participation and harvest in recent years because of declines in sage grouse populations and the implementation of more restrictive hunting seasons. In 2002, opening weekend harvest was unchanged from 2001, and was only 32% of the average harvest of 1,707 grouse from 1965-2001. Hunter success has remained relatively unchanged the past three years at 0.5 birds per hunter and was lower than the 1965-2001 average of 0.7 birds/hunter. The effort expended to harvest a grouse in 2002 (8.4 hours/bird) was greater than the 1965-2001 average of 6.7 hours/bird (Table 7).

Wing barrels were placed at Lily Grade, Browns Bench, Shoshone Basin, and Kimama following check stations to increase the wing sample from harvested birds.

Climatic, Habitat Conditions

Hatching and early brood rearing conditions from mid-May to mid-June were generally favorable. Conditions were dry except for some very infrequent, localized showers. Average minimum temperatures were average or above and should not have been an issue for survival of sage grouse chicks. Dry conditions persisted throughout the summer and fall resulting in degraded late brood-rearing habitat.

Rain showers occurred throughout the region 3-4 days prior to opening day. Hunting conditions were very good on opening weekend. Mornings were mostly clear and cool with temperatures reaching the mid 70's in the afternoon.

Management Implications

Sage grouse populations in the region declined precipitously from 1987 to 1994. Numbers then increased steadily from 1995-1999 before declining slightly from 2000-2002. Habitat loss and fragmentation are the primary cause of long-term sage grouse declines. Fires have consumed

more than a million acres of sagebrush-dominated habitat in south-central Idaho during the past 15 years. Combined with drought conditions, these fires have had catastrophic effects on sage grouse nesting, brood-rearing, and winter habitat. The increase in sage grouse numbers from 1995-1999 can be attributed to recovery of sagebrush in burned areas and the return of normal precipitation regimes. Reversing the long-term downward trend in sage grouse numbers is contingent on further reestablishment of sagebrush in burned areas. Regional personnel will continue to review and comment on BLM and USFS land treatment projects affecting sage grouse habitat.

Implementation of the Idaho Sage Grouse Management Plan will remain a priority in the upcoming year. The Magic Valley Region will continue to participate in two local working groups that are addressing sage grouse management issues in the Shoshone Basin and the Three Creek areas. A new local working group on the north side of Magic Valley Region may be formed if there is sufficient interest from other agencies, sportsmen, and agricultural interests.

SHARP-TAILED GROUSE

Abstract

Sharp-tailed grouse populations in the Magic Valley Region declined in 2001 and 2002 but populations remain strong as a result of abundant habitat provided by lands enrolled in the CRP program. Lek counts and harvest data suggest a decline in grouse numbers in 2001 and 2002. Monitoring the reintroduced sharp-tail population in Shoshone Basin continued.

Population Surveys

Sharp-tailed grouse leks were surveyed on established lek routes and in conjunction with trapping efforts. In Power, Oneida, and Cassia counties, a comparison of 26 comparable leks shows a mean lek size of 13.9 birds/lek in 2000, 9.8 birds/lek in 2001, and 8.2 birds/lek in 2002, suggesting a decline in populations.

Harvest Characteristics

Sharp-tailed grouse harvest in the Magic Valley Region is primarily from Oneida and Power counties (Greater Curlew area), although an increasing number of grouse are being harvested from eastern Cassia County. The estimated sharp-tailed grouse harvest for the Greater Curlew area has decreased by 51% from 2,004 birds in 2000 to 986 birds in 2002 reflecting the decline in grouse numbers.

Trapping and Transplanting

From 1991-2002, 741 Columbian sharp-tailed grouse (431 males, 310 females) were trapped in the Curlew, Rockland, Arbon, Malad, and Pocatello valleys and translocated to the Shoshone Basin area of Twin Falls County (358 birds), and to sites in Wallowa County, Oregon (156 birds), Okanagan County, Washington (56 birds), and Elko County, Nevada (196 birds). During April 2002, 19 birds were trapped in the Curlew area for release in Nevada and

approximately 25 birds were trapped at Sand Creek WMA for reintroduction efforts in Oregon. Trap and transplant efforts will continue in 2003. A new reintroduction area in southwest Twin Falls County has been identified for releases.

The newly reintroduced sharp-tailed grouse population in Twin Falls County appears to be doing well based on reported observations by the public and agency personnel. Observations have been made in the Cherry Springs, Indian Springs, Hopper Gulch, Nat Soo Pah, Pine Tit, Parker Spring, and Lost Creek areas and suggest the population has expanded to over 200 mi^2. Only four active leks were documented in 2002 but others undoubtedly exist.

Management Implications

Columbian sharp-tailed grouse numbers are currently strong as a result of the abundant habitat provided by the CRP program. Databases of sharp-tailed grouse leks have been completed in both the Southeast and Magic Valley Regions, which will facilitate the tracking of lek activity and attendance. Current sharp-tailed grouse population levels justify liberal hunting opportunity. The popularity of sharp-tailed grouse hunting has increased in recent years as both resident and nonresident hunters learn about southeast Idaho's healthy grouse populations. Results of the grouse reintroduction efforts in Shoshone Basin are encouraging. Monitoring of the new grouse population will continue during the 2003-2004 reporting period.

CHUKAR PARTRIDGE

Abstract

No chukar surveys were conducted in the region; however, telephone survey and check station data indicated good hunting and higher than average chukar populations.

Population Surveys

No surveys for chukar populations were conducted in the Magic Valley Region during the 2002-2003 reporting period.

A small sample of chukar wings (N = 81) was collected at opening weekend check stations to provide an index to the current year's production. Most of the wings collected were from the Bennett Hills. Production estimated from the wings was 2.4 young/adult.

Harvest Characteristics

Chukar harvest was estimated to be 6,966 birds, similar to 2001 and higher than the 1987-1996 average of 3,721 birds. Reports from chukar hunters suggest that chukar abundance and hunting in 2002 was some of the best in the past 20 years (Table 8).

Chukar harvest and population trend is monitored at ten opening weekend sage grouse check stations. Chukar partridge checked per 100 hunters in 2002 (8.5) was slightly lower than in 2001 (10.1) but was well above the 1993-2002 mean of 5.3 (Table 4).

Management Implications

No specific chukar population surveys will be undertaken in the region. Riparian habitat improvement in chukar areas will be encouraged, whenever possible, to benefit populations.

GRAY PARTRIDGE

Abstract

Roadside survey and opening weekend check station data suggested average numbers of gray partridge in intensively farmed areas and higher densities of birds where sagebrush and/or CRP lands were an important part of the habitat.

Population Surveys

Roadside survey data suggest little change in gray partridge numbers from 1997-2002 (Table 9); however, these routes do not adequately sample uncultivated partridge habitat and thus do not provide data adequate to predict fall population status.

Harvest Characteristics

Telephone survey data suggest a 73% decline in gray partridge harvest from 2001 (Table 9.) Estimated harvest from 1985-1996 ranged from 1,900 birds to 22,000 birds demonstrating the extreme population fluctuations observed in this species.

Partridge harvest and population trend is monitored at ten opening weekend check stations. The numbers of gray partridge checked per 100 hunters in 1999-2001 were the highest during the past 18 years. In 2002, success declined to 2.8 partridge/100 hunters and was below the long-term average of 3.7 partridge/100 hunters (Table 4).

Management Implications

August roadside surveys and opening weekend check stations will continue to be used to monitor the status of gray partridge populations in the region. From 1997-2002, roadside survey data suggests relatively stable numbers of partridge, but the number of birds checked on opening weekend in 1999-2001 increased to well above the long-term average. One possible explanation for the disagreement in these two indices is that roadside routes sample primarily farmland habitats while opening weekend check stations sample sagebrush-dominated habitats. Weather-related factors have a substantial effect on short-term population fluctuations, but improving habitat remains the key to sustaining healthy populations in the long term. The Magic Valley Region will continue to give priority to habitat enhancement (HIP, Cooperative Wildlife Program, Pheasants Forever) for gray partridge management.

WILD TURKEY

Abstract

The Magic Valley Region has limited opportunities to establish wild turkey populations. Efforts have been undertaken to establish a small population at the Big Cottonwood WMA. One hundred fifty-two Rio Grande turkeys have been released at Big Cottonwood WMA since 1988 and have dispersed into available habitat on the Sawtooth National Forest. In 2002, two 3-permit hunts were authorized on the Big Cottonwood turkey population.

Trapping and Transplanting

From 1988-2001, 152 Rio Grande turkeys were released at the Big Cottonwood WMA (Table 10). Sightings indicate that some birds have dispersed away from the WMA onto the Sawtooth National Forest. Observations of poults during summer near the WMA indicate that some production is occurring. The goal is to develop a self-sustaining population of 100-200 turkeys that will support some hunting opportunity.

Harvest Characteristics

In 2002, two 3-permit hunts were authorized on the Big Cottonwood turkey population. One of the hunts was for youth hunters only. All six hunters were successful (Table 11).

Management Implications

Opportunities to establish self-sustaining turkey populations in the Magic Valley Region are limited without supplemental winter feeding. Releases in Units 53 and 55 have failed to establish populations. Turkeys near Pine and Featherville in Unit 43 have essentially disappeared because of the severity of winters and lack of a winter food source. A small population has been established at the Big Cottonwood WMA (Unit 54) and food plots planted to supplement their winter diet.

MOURNING DOVE

Abstract

Doves observed on roadside routes indicate dove abundance in August 2002 (2.5 doves/mi.) was similar to the 1992-2001 mean of 2.3 doves/mi.

Population Surveys

Department personnel, in cooperation with the USFWS, collect data on four call-count routes in the Magic Valley Region.

On August 2002 roadside surveys, the number of doves observed (2.5 doves/mi.) was similar to the 1992-2001 mean of 2.3 doves/mi. (Table 12).

Harvest Characteristics

A telephone survey of hunters has not been conducted since 1996 (Table 12).

Management Implications

Roadside survey data suggest that as many as 50% of the doves have migrated out of the Magic Valley area by the opening of the hunting season on 1 September. The onset of cooler weather, usually in early September, triggers movement of the remaining doves. Spring coo-count routes and August roadside surveys will be continued to monitor dove trends and abundance.

RABBITS AND HARES

Population Surveys

Cottontail rabbits are counted on the 28 roadside surveys conducted each August in the Magic Valley Region. Twelve cottontails were observed on 2002 routes while only four cottontails were observed each year from 1999-2001.

Harvest Characteristics

Cottontails are typically passed up by hunters on opening weekend. Four cottontails were checked in 2002, five cottontails were checked in 2001, and none were checked in 2000 (Table 4).

Management Implications

Habitat projects implemented for pheasants, gray partridge, and quail through the HIP program and BLM/IDFG Cooperative Wildlife Management Program will benefit rabbits.

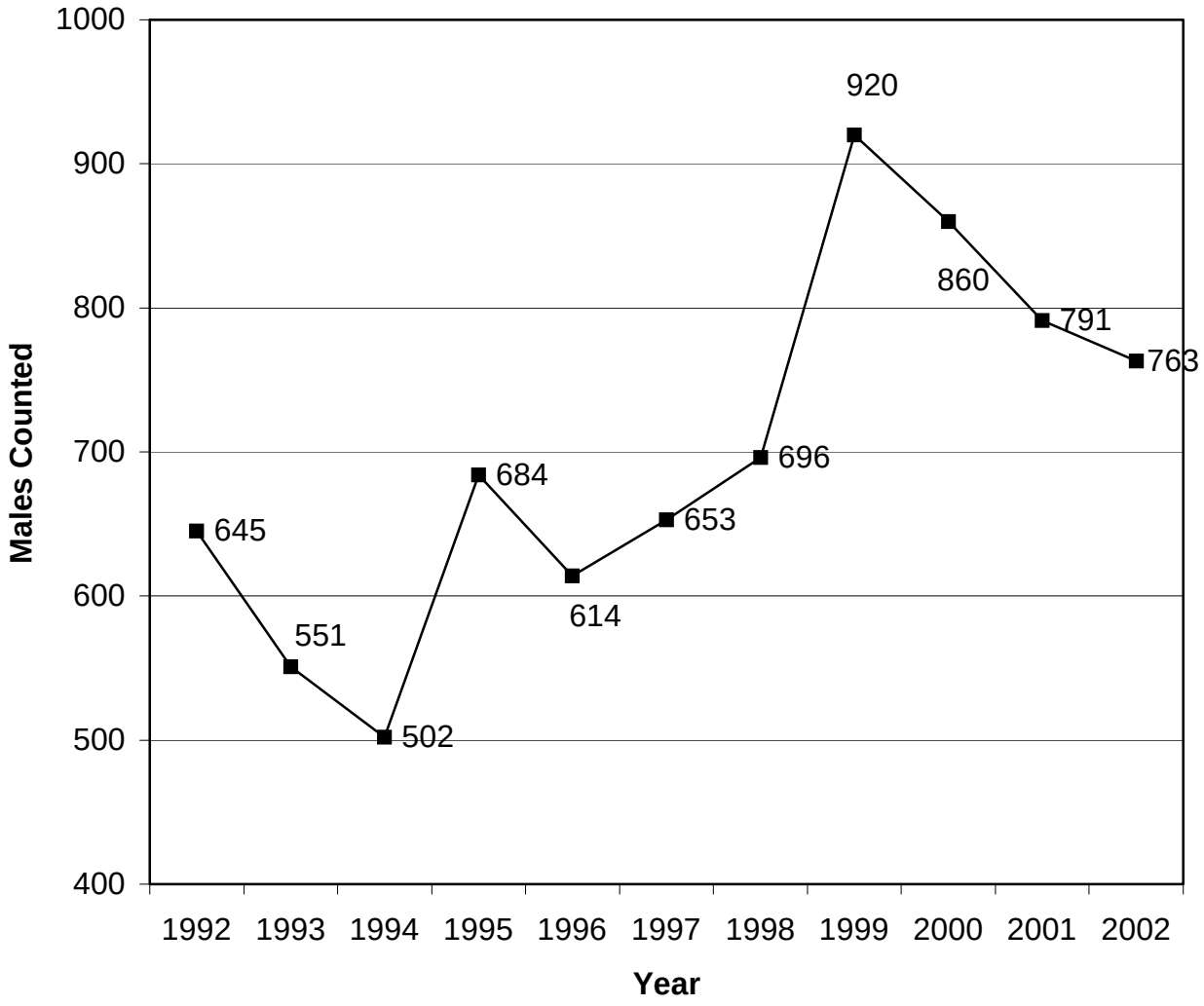


Figure 1. Total male sage grouse counted on 12 comparable lek routes in the Magic Valley Region, 1992-present.

Table 1. Pheasant population characteristics and production in the Magic Valley Region, 1993-present.

	Winter Sex Ratio		Brood Routes					
			Routes/		%	Juv:100	Brood Size	
Year	Hens Per Cock	N[a]	Miles Counted	Birds/ Mile	Unsuccessful Females	Adult Females	N[a]	Average
1993	1.3	455	28/575	0.22	35	465	8	6.9
1994	2.0	757	28/575	0.56	14	727	16	5.9
1995	1.9	1,483	28/575	0.13	33	683	8	4.8
1996	2.0	741	28/575	0.41	17	555	21	5.8
1997	-	-	28/575	0.12	22	611	7	5.6
1998	-	-	28/575	0.19	17	741	10	6.0
1999	1.4	271	28/575	0.27	13	870	13	6.9
2000	-	-	28/575	0.20	45	380	11	4.8
2001	2.7	214	28/575	0.14	20	530	8	6.6
2002	-	-	28/575	0.12	27	427	8	4.5
10-yr. Avg.	1.9	654	28/575	0.24	24	599	11	5.8

[a] Sample size.

Table 2. Estimated pheasant harvest in the Magic Valley Region[a], 1993-present.

Year	Hunters	Birds	Birds/Hunter Day
1993	5,071	24,769	0.7
1994	3,802	24,629	1.0
1995	4,975	20,289	0.6
1996	7,200	17,551	0.6
1997	-	-	-
1998	-	-	-
1999	-	-	-
2000	-	-	-
2001	5,491	19,368	0.6
2002	4,621	11,677	0.5

[a] Telephone survey data at the regional level were not collected from 1997-2000.

Table 3. California quail population characteristics and estimated harvest in the Magic Valley Region, 1993-present.

	Brood Routes		Telephone Survey[a]		
Year	Routes/Miles Counted	Birds/Mile	Hunters	Birds	Birds/ Hunter Day
1993	28 (575)	0.21	1,113	5,195	1.6
1994	28 (575)	0.18	955	5,300	1.3
1995	28 (575)	0.14	1,198	14,215	1.7
1996	28 (575)	0.08	1,642	19,003	2.3
1997	28 (575)	0.08	-	-	-
1998	28 (575)	0.13	-	-	-
1999	28 (575)	0.19	-	-	-
2000	28 (575)	0.04	-	-	-
2001	28 (575)	0.02	1,444	13,345	1.8
2002	28 (575)	0.23	1,250	4,001	1.1

[a] Telephone survey data at the regional level were not collected from 1997-2000.

Table 4. Trend of upland game species harvested per 100 hunters checked at stations on opening weekend of the grouse, quail, and partridge season in the Magic Valley Region, 1993-present.

Year	Sage Grouse	Blue Grouse	Ruffed Grouse	Chukar Partridge	Gray Partridge	Mourning Dove	CA Quail	Cottontail and Pygmy Rabbit	Number Hunters
1993	42.1	0.4	0.00	0.3	0.2	2.7	0.87	0.00	1,731
1994	72.7	1.1	0.25	1.1	2.0	0.8	4.30	0.00	1,629
1995	35.5	0.6	0.24	1.4	2.2	2.3	1.18	0.00	1,269
1996	55.3	0.8	0.51	6.9	3.7	0.1	6.27	0.10	989
1997	38.7	0.7	0.00	3.6	2.1	1.5	0.38	0.10	1,048
1998	53.0	1.2	0.00	5.1	3.4	0.5	0.00	0.00	938
1999	59.0	2.7	0.00	7.1	7.4	0.5	1.25	0.54	1,121
2000	50.2	2.2	0.30	8.5	7.9	2.6	1.68	0.00	1,011
2001	56.8	0.2	1.35	10.1	5.3	2.2	2.98	0.45	1,108
2002	49.0	1.9	1.18	8.5	2.8	0.7	0.45	0.36	1,103
10-yr. Avg.	51.2	1.2	0.38	5.3	3.7	1.4	1.94	0.16	1,195

Table 5. Estimated forest grouse harvest in the Magic Valley Region[a], 1993-present.

Year	Hunters	Birds	Birds/Hunter Day
1993	2,814	4,329	0.4
1994	1,910	5,544	0.7
1995	1,990	5,138	0.5
1996	1,408	5,631	1.0
1997	-	-	-
1998	-	-	-
1999	-	-	-
2000	-	-	-
2001	2,847	10,001	0.8
2002	3,083	8,470	0.6

[a] Telephone survey data at the regional level were not collected from 1997-2000.

Table 6. Sage grouse production in the Magic Valley Region based on wing collections, 1993-present.

Year	Juv:100 Females	Juv:100 Adults	% Unsuccessful Females
1993	147	107	50
1994	323	213	76
1995	136	82	60
1996	159	104	61
1997	165	103	65
1998	205	138	65
1999	178	110	60
2000	121	76	68
2001	160	96	78
2002	199	138	71
10-year average	179	117	65

Table 7. Estimated sage grouse harvest in the Magic Valley Region, 1993-present.

		Check Station				Telephone Survey[a]		
Year	Bag and Possession Limit	Hunters	Birds	Birds/ Hunter	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993	3/6	1,709	729	0.4	11.3	5,288	6,672	0.4
1994	3/6	1,587	1,185	0.7	6.2	4,177	11,331	0.9
1995	3/6	1,313	520	0.4	11.1	4,285	8,062	0.6
1996	1/2, 2/4	936	548	0.6	6.5	6,615	8,269	2.8
1997	1/2, 2/4	1,012	408	0.4	11.9	-	-	-
1998	1/2, 2/4	896	497	0.5	7.2	-	-	-
1999	1/2, 2/4	1,048	661	0.6	6.2	-	-	-
2000	1/2, 2/4	957	507	0.5	7.9	2,513	3,280	0.6
2001	1/2, 2/4	874	479	0.5	8.0	2,440	3,138	0.6
2002	1/2, 2/4	1029	540	0.5	8.4	2,677	3,066	0.5

[a] Telephone survey data at the regional level were not collected from 1997-1999.

Table 8. Estimated chukar partridge harvest in the Magic Valley Region[a], 1993-present.

Year	Bag and Possession Limit	Hunters	Birds	Birds/Hunter Day
1993	8/16	1,763	4,360	0.6
1994	8/16	1,105	3,371	0.9
1995	8/16	1,584	5,788	0.9
1996	8/16	1,408	7,273	1.2
1997	8/16	-	-	-
1998	8/16	-	-	-
1999	8/16	-	-	-
2000	8/16	-	-	-
2001	8/16	2,207	7,250	0.8
2002	8/16	1,753	6,966	1.1

[a] Telephone survey data at the regional level were not collected from 1997-2000.

Table 9. Gray partridge population characteristics and estimated harvest in the Magic Valley Region, 1993-present.

	Production					Telephone Survey			
Year	Routes/ Miles Counted	Birds/ Mile	Birds Counted	Brood Size	N[a]	Bag and Possession Limit	Hunters	Birds	Birds/ Hunter Day
1993	28 (575)	0.13	71	8.4	17	8/16	1,886	6,741	0.9
1994	28 (575)	0.21	112	11.2	10	8/16	1,555	5,188	0.7
1995	28 (575)	0.08	45	11.2	4	8/16	2,092	8,834	0.8
1996	28 (575)	0.41	244	14.6	16	8/16	3,050	22,053	1.1
1997	28 (575)	0.11	62	10.2	6	8/16	-	-	-
1998	28 (575)	0.15	83	11.9	7	8/16	-	-	-
1999	28 (575)	0.11	63	12.2	5	8/16	-	-	-
2000	28 (575)	0.15	86	7.1	8	8/16	-	-	-
2001	28 (575)	0.10	54	7.7	8	8/16	2,751	10,133	0.6
2002	28 (575)	0.09	49	9.4	5	8/16	1,162	2,753	0.6

[a] Sample size.

Table 10. Turkey transplant history for the Magic Valley Region, 1982-present.

Year	Sub-Species[a]	Release Site - Unit	Number of Birds Released	New or Supplemental Release
1982	R	Niagara Springs-53	20	N
1983	R, M	Almo-55	19	N
1984	R	Almo-55	10	S
1988	R	Big Cottonwood-54	17	N
1994	R	Big Cottonwood-54	6	S
1995	R	Big Cottonwood-54	14	S
1996	R	Big Cottonwood-54	8	S
1998	R	Big Cottonwood-54	55	S
1999	R	Big Cottonwood-54	12	S
2001	R	Big Cottonwood-54	40	S

[a] M = Merriam's; R = Rio Grande.

Table 11. Estimated turkey harvest in the Magic Valley Region, 1993-present.

Hunt	Number of Hunts	Permits Available	Hunters	Birds Taken	Days/ Bird	Total Days Hunted
1993						
General	-	-	10	0	-	118
1994						
General	-	-	-	-	-	-
1995						
General	-	-	-	-	-	-
1996						
General	-	-	-	-	-	-
1997						
Controlled (youth)	1	3	3	3	-	-
1998						
Controlled (youth)	Canceled	-	-	-	-	-
2002						
Controlled	1	3	3	3	1.7	5
Controlled (youth)	1	3	3	3	2.7	8

Table 12. Mourning dove coo-count survey results and estimated harvest in the Magic Valley Region, 1993-present.

	Coo-Count Routes		Telephone Survey[a]		
Year	Routes (Miles) Counted	Doves/Mile	Hunters	Birds	Birds/ Hunter Day
1993	28 (575)	1.8	3,680	33,644	1.7
1994	28 (575)	3.3	2,266	26,633	3.2
1995	28 (575)	1.8	2,802	26,238	2.3
1996	28 (575)	2.2	3,262	47,091	2.6
1997	28 (575)	2.2	-	-	-
1998	28 (575)	2.4	-	-	-
1999	28 (575)	3.7	-	-	-
2000	28 (575)	1.3	-	-	-
2001	28 (575)	2.2	-	-	-
2002	28 (575)	2.5	-	-	-

[a] Telephone survey data at the regional level were not collected after 1996.

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	5	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

SOUTHEAST REGION

PHEASANT

Abstract

Subjective evaluation of pheasant numbers indicates relatively stable populations in parts of the Southeast Region, and gradual increases in others. Hunter check stations were operated at two locations on opening weekend. A telephone harvest survey to provide estimates of total regional harvest, effort, and participation was conducted.

Population Surveys

No population surveys have been conducted in the region since 1996. Brood routes provided limited sample sizes in 1999 (Table 1) and have not been conducted since due to low numbers of birds seen.

Harvest Characteristics

A slight decrease in hunter numbers and in birds harvested was seen at the American Falls and Tilden Bridge check stations in 2002 compared to 2001. Birds harvested per hunter day remain stable while hours expended per bird increased by 0.8 hours compared to the previous year.

A regional telephone harvest survey was conducted in 2002. In the Southeast Region, 2,536 hunters took 5,183 birds (Table 2), down from an estimated 4,201 hunters and 8,342 birds in 2001.

Analysis of trend information from both check station and telephone survey data in recent years suggests pheasant populations have remained at levels lower than those of ten to 20 years ago.

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast

Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Stocking

There were 3,000 fully-grown game farm cocks released on the Sterling WMA during fall 2002. Game farm birds have been released on the WMA historically to provide hunters with additional opportunity. Bag limit for pheasants on the WMA was increased from two to three birds in order to better utilize planted birds and to be consistent with limits in other areas. Hunters hunting on WMAs where game farm pheasants were released were required to obtain a WMA pheasant permit.

Management Implications

Declining habitat quality due to changes in farming practices has resulted in a decline in pheasant numbers in the Southeast Region from levels of ten to 20 years ago. Until the quantity and quality of available habitat increases, pheasant numbers will likely remain below historical levels. The USDA's CRP program enrolled over 400,000 acres in the Southeast Region during 1985-1995 (25% have potential as pheasant habitat), but its effect on pheasant production is unclear at this time. The CRP program was extended for another ten years beginning in 1997. During the initial 1997 enrollment period, 288,978 acres in the Southeast Region were accepted. It is currently unknown what impact a decrease in CRP acreage in the Southeast Region will have on pheasant populations. The Department's HIP program, begun in 1987, is also contributing toward increasing available cover and forage locally by capitalizing on private land development.

Research

A research project to evaluate effects of intensive habitat management and predator removal on pheasants was initiated in 1995 within selected Bingham County sites (Connelly et. al. 1995). That program was moved to south-central and southwest Idaho in 1998.

FOREST GROUSE

Abstract

A regional telephone harvest survey was conducted to estimate harvest and hunter effort. Those estimates and wing barrel data suggested decreased blue grouse and ruffed grouse harvests.

Population Surveys

Data on age characteristics of forest grouse populations are collected in the Southeast Region from voluntary wing drop barrels placed during hunting season. Fourteen wing barrels were placed throughout the region during 2002. Wide variations in numbers of wings collected make it difficult to draw conclusions about individual year's harvest or populations based on this data.

A total of 67 blue grouse wings were collected in 2002, a 341% decrease from 2001 (Table 3). The ration of juveniles:100 adults increased from 97 in 2001 to 200 in 2002, slightly higher than the ten-year average.

A total of 265 ruffed grouse wings were collected in 2002, 286% fewer than in 2001 (Table 3). The ratio of juveniles:100 adults increased from 188 in 2001 to 265 in 2002, higher than the ten-year average.

Harvest Characteristics

In recent years, harvest data on forest grouse has been collected from two sources, the telephone survey and voluntary wing drop barrels. Telephone survey data provides information on numbers of hunters, birds harvested, and hunter success. Wing barrels provide more immediate feedback to managers, and information on sex and age of birds harvested.

A telephone harvest survey was conducted in 2002. In the Southeast Region, hunter numbers and harvest declined significantly from 2001; 2,902 hunters took 8,810 birds (Table 4).

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Management Implications

Management of forest grouse consists largely of data collection and analysis of impacts to habitat. Indications from harvest and production data over the last 15 years suggest a trend in more hunters harvesting a greater number of birds. Populations of forest grouse can vary widely from year to year, based on annual production.

SAGE GROUSE

Abstract

Estimates of sage grouse production in 2002 indicated an increase throughout southeast Idaho compared to 2001 levels; however, sample sizes were very small. Male grouse counted on leks was lower than in 2001 on most routes. A regional telephone survey was conducted to estimate harvest and hunter effort.

Population Surveys

Lek count routes in recent years have included four leks in Bingham and Power counties, 16 leks in Oneida County, 35 leks in Butte and Blaine counties, and three leks each in Bear Lake and

Caribou counties (Tables 5, 6, and 7). The numbers of birds on most leks are lower than the levels of the 1980s.

Reproductive information for sage grouse was derived from wing collections at wing barrels and a hunter check station. Due to a closure of hunting on the Big Desert from 1996 to 2002, no wings were collected from that area (Table 8) during that period. Following the reopening of that area in 2002, 96 wings were collected.

Due to the closure to hunting of the Curlew Grasslands in 2002, no wings were collected. Wings collected from Caribou County were included in the Bear Lake data set.

A total of 104 sage grouse wings were collected in 2002 (Table 9). The overall ratio of juveniles:100 adults was 225. It is difficult to relate this level of production to recent years since, from 1996 to 2001, nearly all wings were collected in the Curlew Valley (Tables 10 and 11); in 2002, nearly all wings were from the Big Desert. This ratio of juveniles:adults is higher than that recorded in most years from both the areas from the mid-1980s through the mid-1990s.

Harvest Characteristics

A hunter check station was operated at American Falls on the opening weekend of the season in 2002. Hunting effort appeared to be very low compared to the years before the season was closed in 1996. Bag and possession limits and season length were significantly reduced from earlier years.

A regional telephone harvest survey was conducted in 2002. In the Southeast Region, 430 hunters reported taking 422 birds (Table 12).

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Management Studies

Thirty-three sage grouse were radio-collared in the Greater Curlew Area during spring 2002. Birds were monitored through the nesting, brood-rearing season and into the winter months, primarily to identify areas of use during those periods. Monitoring was continued through spring 2002, although no additional birds were marked.

Management Implications

Production of sage grouse appeared to increase; however, sample sizes were small. Hunter harvest, success, and/or lek count data suggest populations at low levels. A continuing decline in

lek counts in the Curlew Valley led to a recommendation to close the area to hunting in 2002. Persistent drought during the late 1980s and early 1990s and long-term declines in habitat quantity/quality may partially explain the downward trend of populations over the years.

An advisory group consisting of representatives of several interest groups and government agencies was formed during 1998 to examine the status and trend of sage grouse and their habitat in the greater Curlew Valley area, and to offer suggestions for future management.

SHARP-TAILED GROUSE

Abstract

Age ratio data of wings indicated an increase in sharp-tailed grouse production during 2002 compared to 2001. The ratio of juveniles:100 adults were near the most recent ten-year average. Two of the five established lek routes in the region were checked in 2002. A regional telephone harvest survey was conducted.

Population Surveys

Wing barrels placed throughout the region provide the majority of wings collected. Data analysis of sharp-tailed grouse wings (N = 155) indicated an increase in the ratio of juveniles:100 adults (118:100) from 2001 levels (Table 13). The 2002 ratio was slightly higher than the previous ten-year average of 110.

Two of five established lek routes in the region were surveyed during 2003 (Table 14).

Harvest Characteristics

A regional telephone harvest survey was conducted to estimate hunter effort and harvest in 2002. In the Southeast Region, 1,175 hunters took 2,201 birds (Tables 15, 16, and 17).

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Management Implications

Currently, the single most important factor affecting sharp-tailed grouse populations in the Southeast Region is believed to be the CRP program. During 1985 to 1997, over 400,000 acres of cropland have been planted with various grass/forb mixtures within present sharp-tailed grouse range. During the 1997 reenrollment period, 288,978 acres were accepted for another ten

years. Much of this acreage lies within sharp-tailed grouse range. Recent harvest data suggest a substantial increase in populations has occurred in the last decade.

Trapping and Transplanting

See Magic Valley Region section.

GRAY PARTRIDGE

Abstract

No data were collected on gray partridge populations. A regional telephone harvest survey was conducted.

Population Surveys

Some gray partridge wings are collected in voluntary hunter wing barrels; however, sample sizes are generally small, and have not been analyzed for several years in the Southeast Region.

Harvest Characteristics

Harvest information on gray partridge in the past was collected via the telephone survey. Estimates vary widely from year to year, due primarily to small sample sizes from the region. A regional telephone harvest survey was conducted during 2002. In the Southeast Region, 984 hunters took 2,293 birds (Table 18).

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Management Implications

Management of these populations will be incidental to other upland game bird species. The CRP program has had a positive effect on habitat suitability and presumably gray partridge populations. The telephone harvest data and incidental reports suggest a stable or increasing population over the past decade.

CHUKAR PARTRIDGE

Abstract

Limited data were collected on chukar partridge populations. A regional telephone harvest survey was conducted.

Population Surveys

Few, if any, chukar partridge wings are collected in voluntary hunter wing barrels. Chukars are occasionally sighted incidental to deer and elk surveys during winter. Little suitable habitat and restricted populations exist within the Southeast Region. Areas known to support limited chukar populations at present are the northeast corner of Unit 70 near Pocatello; the Blackrock area in Unit 71; and several portions of Unit 73 near Malad, including east of Interstate Highway 15 and the Samaria Mountains. Private, unauthorized releases of pen-raised chukars are frequent occurrences. Survival of those birds is believed to be extremely low, with no evidence of self-supporting populations resulting.

Harvest Characteristics

Harvest information on chukar partridge in past years has been collected via the telephone survey. Estimates vary widely from year to year, due primarily to small sample sizes from the region. A regional telephone harvest survey was conducted during 2002. In the Southeast Region, 230 hunters took 193 birds (Table 18).

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Management Implications

Management of these populations will be incidental to other upland game bird species. The main source of information on status of populations is currently incidental sightings and reports. Lack of suitable habitat will continue to limit populations.

WILD TURKEY

Abstract

Six controlled hunts with a total of 205 permits resulted in an estimated 2003 spring harvest of 69 turkeys. No harvest estimate of general fall harvest is available. Hunter success varies annually. No ground surveys were conducted.

Population Surveys

Winter distribution surveys were conducted along the Snake River during the winters of 1987-1988, 1988-1989, and 1992-1993. These surveys indicated that good quality turkey habitat was limited and that populations had not continued to grow at rates documented earlier, following the initial introduction. Comments from local landowners during the surveys and declining hunter

success rates indicated that a decrease in total population size probably occurred after 1984, with little or no recovery to date. No surveys were conducted in that area during 2002. Even under good snow conditions, surveys provide limited useful data.

Incidental reports indicate increasing numbers and expanded range of turkeys in Franklin County, due in part to unauthorized releases of turkeys of unknown origin. Turkeys have been sighted in parts of Units 73, 74, 75, and 78, in addition to the release areas in Unit 77.

Harvest Characteristics

Following introductions of wild turkeys from South Dakota, three consecutive spring hunts with five permits each were initiated in Franklin County in 1995, and increased to 20 permits in 1999. In 2000, permits were increased to 30 for each hunt, and a general fall either-sex hunt was initiated. The hunt area was also expanded to include all of Units 73, 74, 75, and 77. The permit level was increased to 50 per hunt in 2002.

Three consecutive spring hunts (68A-1, 68A-2, 68A-3) with 15 permits each were conducted along the Snake River in Unit 68A in 2003. The 2003 spring harvest, as estimated by the telephone harvest survey, showed a total of 69 birds taken in the region (Table 20).

No harvest estimate is available for the fall general hunt (Table 21).

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Trapping and Transplanting

Wild turkeys have been transplanted into three general areas in the Southeast Region during the last two decades - the Snake River bottoms upstream from American Falls Reservoir, along the Bear River in Franklin County, and in Unit 71, southeast of Pocatello.

During the winter of 2002, 136 turkeys were released at three different locations in Unit 71 (Table 19). Thirty adult females were radio-collared to document survival and movement. As of April 2003, 15 of those birds remained alive. Some movement has taken place; however, most of the surviving birds have remained in the general area of their release. Reproduction has been documented.

Management Implications

The telephone survey of hunters and incidental field reports provide the data on populations in the Southeast Region. To obtain additional information, increased emphasis has been placed on landowner input and sportsmen contacts.

MOURNING DOVE

Abstract

Results from mourning dove coo counts in 2002 were higher than the previous five-year average. No regional telephone harvest survey was conducted.

Population Surveys

Wing barrels provide only a limited amount of data on mourning doves. Sample sizes are generally too small for analysis.

Coo counts are conducted on three established routes in the Southeast Region, in conjunction with the USFWS. Routes are located in Oneida, Caribou, and Bear Lake counties (Table 22).

Harvest Characteristics

Harvest information on mourning doves is collected via the USFWS harvest survey (HIP). No regional telephone harvest survey has been conducted since 1995.

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Management Implications

Management decisions rely heavily on population and harvest statistics collected nationwide by the USFWS.

RABBITS AND HARES

Abstract

No population surveys are conducted for rabbits or hares in the Southeast Region. A regional telephone survey of rabbit hunters was conducted during 2002.

Population Surveys

No population surveys were conducted in 2002.

Harvest Characteristics

Harvest information for the region has been based on the telephone survey. Sample size tends to be small and estimates of participation and harvest are widely variable. A regional telephone survey was conducted during 2002. In the Southeast Region, 29 hunters reported taking 146 rabbits (Table 23).

Climatic Conditions

Environmental conditions during the critical months of nesting were good during spring 2002. Drought conditions persisted with precipitation for the 2002-2003 winter below normal. Snowpack measurements averaged 50-70% of the 30-year mean for most of the Southeast Region. Summer conditions were dry, with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Management Implications

In the past, limited data on rabbits and hares have been collected in the Southeast Region. It is unlikely that this situation will change; however, continued efforts will be made to consider the habitat requirements of rabbits and hares in land use management.

LITERATURE CITED

Connelly, J. W., S. Antrim, G. Nohrenberg, and K. P. Reese. 1995. Upland game ecology. Job Progress Report. W-160-R-22. Idaho Department of Fish and Game, Boise, Idaho.

Table 1. Pheasant population characteristics and production in the Southeast Region, 1993-1999.

		Brood Routes[a]						
	Winter Sex		Routes/ Miles	Birds per	% Unsuccessful	Juv:100 Adult	Brood Size	
Year	Ratio[b]	N[c]	Counted	Mile	Females	Females	N	Average
1993	1.5	10	10 (200)	0.01	0	500	1	5.0
1994	1.5	10	10 (200)	0.01	0	0	0	0.0
1995	-	-	8 (160)	0.06	0	500	2	5.0
1996	-	-	10 (200)	0.11	0	566	3	5.7
1997	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-
1999	-	-	-	-	50	250	2	5.0

[a] Brood routes have not been conducted since 1999 due to low numbers of birds seen.
[b] Hens per cock.
[c] Sample size for winter sex ratio determination.

Table 2. Estimated pheasant harvest in the Southeast Region, 1993-present.

	Check Station[a]				Telephone Survey[b]		
Year	Hunters	Birds	Birds/ Hunter	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993	232	76	0.3	11.6	2,628	11,967	0.6
1994	232	91	0.4	8.6	2,884	10,245	0.7
1995	240	107	0.5	8.1	2,092	9,402	0.6
1996	308	177	0.6	6.1	-	-	-
1997	282	102	0.4	9.8	-	-	-
1998	300	162	0.5	7.9	-	-	-
1999	284	176	0.6	5.8	-	-	-
2000	250	137	0.6	7.1	-	-	-
2001	290	147	0.5	5.9	4,201	8,342	0.5
2002	233	116	0.5	6.7	2,536	5,183	0.3

[a] Check stations were operated on opening weekend only at American Falls and Tilden Bridge.
[b] Telephone survey data at the regional level were not collected from 1996-2000.

Table 3. Forest grouse production in the Southeast Region based on wing collection, 1993-present.

	Blue Grouse				Ruffed Grouse	
Year	N[a]	Juv:100 Adult Females	Juv:100 Adults	% Unsuccessful Females	N[a]	Juv:100 Adults
1993	45	520	137	-	29	93
1994	64	717	205	-	340	227
1995	52	-	117	-	97	64
1996	157	915	313	-	461	271
1997	36	-	227	-	162	195
1998	64	-	-	-	238	170
1999	86	-	129	-	245	175
2000	151	-	184	-	537	220
2001	229	-	97	-	760	188
2002	67	-	200	-	265	225
10-year average	95	-	172	-	313	183

[a] Sample size.

Table 4. Estimated forest grouse harvest in the Southeast Region[a], 1993-present.

Year	Hunters	Birds	Birds/Hunter Day
1993	6,927	18,275	0.6
1994	4,664	22,363	0.7
1995	3,232	11,860	0.6
1996	-	-	-
1997	-	-	-
1998	-	-	-
1999	-	-	-
2000	-	-	-
2001	4,646	19,783	0.9
2002	2,902	8,810	0.7

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 5. Maximum number of male sage grouse counted on lek routes in Bingham, Power, and Oneida counties in the Southeast Region, 1993-present.

Year	Herriott Lake	Jugalard Lake	Rock Lake	Mosby Well #2	Curlew Route[a]	Rockland Route[b]
1993	18	24	39	-	-	-
1994	-	-	-	-	-	-
1995	41	0	49	0	-	-
1996	5	0	49	-	16	13
1997	0	0	23	0	22	6
1998	15	0	17	0	11	17
1999	8	0	12	0	30	59
2000	45	0	8	0	22	99
2001	46	0	6	0	13	54
2002	25	0	5	0	6	63

[a] South 13, North 13, Baker, Little Rock Spring, Ketchum, Huffman Springs, West Huffman.
[b] Marble, Exchange, Smith/Pett, South Funk, North Funk, East Jacobson, West Jacobson, North Huffman, West Strong.

Table 6. Maximum number of male sage grouse counted on leks in Bear Lake and Caribou counties in the Southeast Region, 1993-present.

Year	Bloomington Bottoms	Bloomington Mine	Sheep Creek	Trail Creek	Slug Creek #1	Slug Creek #2
1993	-	-	-	20	8	5
1994	-	-	-	13	6	10
1995	-	-	-	8	1	0
1996	-	-	-	6	0	0
1997	-	-	-	6	2	3
1998	-	-	-	12	3	4
1999	67	29	-	8	4	2
2000	15	27	45	10	0	0
2001	10	23	63	15	0	0
2002	8	15	38	15	0	0

Table 7. Maximum number of male sage grouse counted on lek routes in Butte and Blaine counties in the Southeast Region, 1993-present.

Year	Route #1[a]	Route #2[b]	Route #3[c]	Route #4[d]	Route #5[e]	Fingers Butte[f]
1993	31	6	30	12	42	-
1994	20	29	53	8	55	-
1995	61	10	47	11	54	-
1996	54	13	71	4	22	-
1997	54	14	67	2	19	-
1998	79	15	62	1	19	73
1999	107	-	20	-	15	59
2000	149	-	38	-	58	158
2001	126	-	53	-	62	193
2002	148	-	67	-	68	142

[a] Frenchman's, Detmer's Dugout, Watertank, Quaking Aspen Airstrip, Detmer's, West Big Lake, Big Lake.
[b] East Big Lake, McCarty, Big Lake, Dugout, Rocky Lake.
[c] Sunset Lake, Ryegrass, Prairie, South Crossroads, Crossroads, South Big Lake.
[d] Reynolds, Lava Bluff, Osborne, Pitfall, Wakkinen, Firebomb, Turnaround, Weather Station.
[e] Rattlesnake, Cox's Well, South Cox's Well, East Cox's Well, Silvertank, Antelope Lake, Houghland's Well, South Antelope Lake, Hill #1, Hill #2.
[f] Six Mile, Wildhorse Butte, Cir. Water Tank, 3 Red Tanks, Pratt Lake, Pratt Lake S., Coyote Waterhole, Smith Trough #2, Finger's Well Res., Smith Round Tank.

Table 8. Sage grouse production in the Power/Bingham (Big Desert) unit of the Southeast Region based on wing collections, 1993-present.

Year[a]	N[b]	Juv:100 Females[c]	Juv:100 Adults[d]	N[e]	% Unsuccessful Females[c]
1993	77	162	103	19	47
1994	307	291	198	60	80
1995	240	85	56	109	60
2002	96	431	-	16	62

[a] Harvest closed from 1996 through 2001.
[b] Sample size for total wings collected.
[c] Females = adults + yearlings.
[d] Adults = adults + yearlings.
[e] Sample size for total adult and yearling female wings collected.

Table 9. Sage grouse production in the Southeast Region based on wing collections, 1993-present. Big Desert harvest season closed from 1996 through 2001.

Year	N[a]	Juv:100 Females[b]	Juv:100 Adults[c]	N[d]	% Unsuccessful Females[b]
1993	163	190	126	30	53
1994	454	305	199	173	79
1995	279	90	60	126	58
1996	46	375	188	-	100
1997	51	186	104	-	14
1998	30	140	88	-	60
1999	37	114	76	-	43
2000	34	80	55	-	67
2001	12	175	140	4	75
2002	104	379	225	19	68
10-year average	121	203	-	126	62

[a] Sample size for total wings collected.
[b] Females = adults + yearlings.
[c] Adults = adults + yearlings.
[d] Sample size for total adult and yearling female wings collected.

Table 10. Sage grouse production in the Holbrook (Curlew) unit of the Southeast Region based on wing collections, 1992-2001. Harvest closed in 2002.

Year	N[a]	Juv:100 Females[b]	Juv:100 Adults[c]	N[d]	% Unsuccessful Females[b]
1992	135	127	82	48	85
1993	60	138	94	8	63
1994	112	380	211	14	64
1995	20	70	47	10	40
1996	28	229	133	-	100
1997	30	200	114	-	0
1998	22	143	83	-	71
1999	18	275	157	-	50
2000	25	67	47	-	58
2001	9	100	80	4	75
10-year average	46	173	105	-	61

[a] Sample size for total wings collected.
[b] Females = adults + yearlings.
[c] Adults = adults + yearlings.
[d] Sample size for total adult and yearling female wings collected.

Table 11. Sage grouse production in the Bear Lake unit of the Southeast Region based on wing collections, 1993-present.

Year	N[a]	Juv:100 Females[b]	Juv:100 Adults[c]	N[d]	% Unsuccessful Females[b]
1993	26	767	767	8	33
1994	35	244	169	5	80
1995	19	186	144	7	43
1996	18	1,400	350	-	100
1997	14	200	133	-	25
1998	8	133	100	-	33
1999	19	50	36	-	40
2000	9	133	80	-	100
2001	3	-	-	-	-
2002	8	-	60	3	100
10-year average	26	366	210	-	59

[a] Sample size for total wings collected.
[b] Females = adults + yearlings.
[c] Adults = adults + yearlings.
[d] Sample size for total adult and yearling female wings collected.

Table 12. Estimated sage grouse harvest in the Southeast Region, 1993-present.

		Check Station				Telephone Survey[a]		
Year	Bag and Possession Limit	Hunters	Birds	Birds/ Hunter	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993	3/6	112	13	0.1	40.7	3,123	4,332	0.4
1994	3/6	167	109	0.6	7.6	2,528	4,401	0.5
1995	3/6	122	35	0.3	15.5	1,462	2,559	0.5
1996[b]	1/2	-	-	-	-	-	-	-
1997[b]	1/2	-	-	-	-	-	-	-
1998[b]	1/2	-	-	-	-	-	-	-
1999[b]	1/2	-	-	-	-	-	-	-
2000[b]	1/2	-	-	-	-	743	669	0.4
2001[b]	1/2	-	-	-	-	551	489	0.3
2002[b]	1/2	37	11	0.3	13.1	430	422	0.4

[a] Telephone survey data at the regional level were not collected from 1996-1999.
[b] From 1996-2001, the Big Desert was closed to harvest. The Curlew Grassland was closed to harvest in 2002.

Table 13. Sharp-tailed grouse production in the Southeast Region[a] based on wing collections, 1993-present.

Year	Juv:100 Adults	N[b]
1993	110	187
1994	173	289
1995	58	190
1996	126	224
1997	163	227
1998	130	379
1999	75	429
2000	59	399
2001	84	182
2002	118	155
10-year average	110	251

[a] Includes data from Malad City Area and Pocatello Creek.
[b] Sample size.

Table 14. Maximum number of sharp-tailed grouse counted on lek routes[a] in Oneida, Power, and Bannock counties in the Southeast Region, 1995-present.

Year	Arbon Route[a]	Curlew Route[b]	Pocatello Valley Route[c]	Rockland Route[d]	Downey Route[e]
1995	92	23	78	50	-
1996	43	46	31	53	84
1997	36	57	46	24	68
1998	-	40	46	-	72
1999	-	-	108	-	102
2000	-	-	76	-	60
2001	-	-	64	-	42
2002	-	-	49	-	42

[a] Symantha's, Ag, Howe, Cow, 1994.
[b] Duffin, Vanderhoff, Hill, Bowen, N-13.
[c] Thorpe, Davis, Jensen, N. Peterson, Peterson, Marble.
[d] No Name, Roy, Benson, Quiet, Daryl.
[e] 1B021, 1B026, 1B027, 1B028, 1B033, 1B036, 1B039

Table 15. Estimated sharp-tailed grouse harvest in the Southeast Region[a], 1994-present.

Year	Hunters	Birds	Birds/Hunter Day
1994	2,042	4,570	0.6
1995	1,706	3,899	0.6
1996	-	-	-
1997	-	-	-
1998	-	-	-
1999	-	-	-
2000	1,799	3,716	0.8
2001	1,419	2,714	0.7
2002	1,175	2,201	0.7

[a] Telephone survey data at the regional level were not collected from 1996-1999.

Table 16. Estimated sharp-tailed grouse harvest in the Greater Curlew Area of the Southeast Region, 2000-present.

Year	Hunters	Days	Birds	Birds/Hunter Day
2000	887	2,443	2,004	0.8
2001	656	1,706	1,337	0.8
2002	473	1,288	986	0.7

Table 17. Estimated sharp-tailed grouse harvest outside the Greater Curlew Area of the Southeast Region, 2000-present.

Year	Hunters	Total Days Hunted	Birds Taken	Birds/Hunter Day
2000	912	2,336	1,712	0.7
2001	763	2,130	1,377	0.6
2002	702	1,771	1,215	0.7

Table 18. Estimated gray and chukar partridge harvest in the Southeast Region[a], 1993-present.

	Gray Partridge			Chukar Partridge		
Year	Hunters	Birds	Birds/ Hunter Day	Hunters	Birds	Birds/ Hunter Day
1993	1,946	6,308	0.7	835	2,010	0.6
1994	1,180	4,814	0.9	656	1,592	0.6
1995	1,076	3,737	0.7	568	1,442	0.5
1996	-	-	-	-	-	-
1997	-	-	-	-	-	-
1998	-	-	-	-	-	-
1999	-	-	-	-	-	-
2000	-	-	-	-	-	-
2001	1,376	3,798	0.6	247	952	0.7
2002	984	2,293	0.3	230	193	0.3

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 19. Turkey transplant history for the Southeast Region, 1982-present.

Year	Sub-Species[a]	Release Site	Number of Birds Released	New or Supplemental Release
1982	R	Snake River	36	N
1984	R	Snake River	28	N
1990	M	Snake River	14	S
1993	M	Bear River	20	N
1994	M	Snake River	64	S
1994	M	Bear River	32	S
1999	U	Deep Creek, Bear River	15	S
2000	U	Oneida Narrows	50	S
2001	U	Unit 71	136	N

[a] M = Merriam's; R = Rio Grande; U = Unknown.

Table 20. Estimated controlled hunt turkey harvest in the Southeast Region[a], 1993-present.

Year	Number of Hunts	Permits Available	Hunters	Days	Birds	Days/ Bird
1993	2	10	10	45	1	45.0
1994	2	20	20	72	6	12.0
1995	6	30	30	100	6	16.7
1996	6	30	30	100	15	6.7
1997	6	60	44	110	32	3.4
1998	8	175	154	-	86	-
1999	8	205	178	581	116	5.0
2000	6	135	113	349	64	5.5
2001	6	135	133	445	67	6.6
2002	6	205	168	605	69	8.8

[a] No data for Hunt 68A-3.

Table 21. Estimated fall general hunt turkey harvest in the Southeast Region, 2000-present.

Year	Hunters	Days	Birds	Birds/Hunter Day
2000	382	1,168	159	7.3
2001	493	1,276	190	6.7
2002	-	-	-	-

Table 22. Mourning dove coo-count survey results and estimated harvest in the Southeast Region, 1993-present.

	Coo-Count Routes		Telephone Survey[a]		
Year	Routes Counted	Doves Heard/Mile	Hunters	Birds	Birds/ Hunter Day
1993	3	0.7	2,628	25,326	2.2
1994	3	0.9	2,060	16,313	2.7
1995	3	0.6	1,848	15,150	2.1
1996	3	0.4	-	-	-
1997	3	0.7	-	-	-
1998	3	0.5	-	-	-
1999	3	0.5	-	-	-
2000	3	0.4	-	-	-
2001	3	0.2	-	-	-
2002	3	1.1	-	-	-

[a] Telephone survey data at the regional level were not collected after 1995.

Table 23. Estimated cottontail rabbit harvest in the Southeast Region, 2001-present.

Year	Hunters	Harvest	Days	Rabbits/Hunter Day
2001	686	3,080	2,666	1.2
2002	29	146	58	2.5

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	6	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

UPPER SNAKE REGION

PHEASANT

Population Surveys

General observations suggest pheasant populations remain extremely low in the region. Two pheasant rooster crowing routes were established in 1996 (Table 1). One route was within the Region's special pheasant habitat management area (Lewisville-Menan area) and the other route was in the Labelle area. Initially, these routes were established to evaluate pheasant population response to habitat projects in the special pheasant habitat management area with the Labelle route used as a control. In 2000, management direction changed and pheasants were released into the Lewisville-Menan area. Pheasants were released in the Lewisville study site again in 2001. With the change in management direction, the data could no longer be used to monitor the effects of habitat improvement on pheasant populations. Therefore, the routes were not counted in 2002. Methodology followed Trautman (1982 pp. 70-71). Routes were counted three times at approximately weekly intervals from 45 minutes before sunrise to 30 minutes after sunrise. Each route had 20 stops approximately one mile apart. At each stop, the number of rooster pheasants heard crowing during a two-minute listening period were recorded. Table 1 presents the average number of crows heard per stop for the peak count.

Harvest Characteristics

No check stations were operated on either Saturday or Sunday of the opening weekend of pheasant season 2002 (Table 2).

The statewide telephone survey provided data on pheasant harvest and hunting effort from 1983 through 1996. No telephone survey was conducted for the 1997, 1998, 1999 or 2000 seasons. A survey conducted for the 2002 season provided an estimate of 719 hunters harvesting 1,718 pheasants from the Upper Snake Region (Table 2). This is a reduction of over 30% in both hunter numbers and harvest from the 2001 estimate.

Habitat Conditions

Pheasants are distributed at low densities on and around agricultural land in the Upper Snake Region. Pheasant habitat is marginal due to periodic severe winters and agricultural practices inconsistent with quality pheasant habitat. There are patches of habitat supporting a few pheasants scattered throughout the area, including Howe, Monteview, Mud Lake WMA, Market Lake WMA, and the agricultural lands associated with the Snake River Plain. Habitat is primarily restricted to fence rows, irrigation ditches, riparian areas, and waste areas. A common practice is to burn these patches of cover in the spring prior to nest initiation. Hence, available nesting cover occurs as widely dispersed small patches of residual cover, hay fields, and fall-seeded small grain.

One food plot of standing barley totaling four acres was planted in Jefferson County through the Department's HIP program during this reporting period. Two corn food plots totaling six acres were planted in Bonneville County by Pheasant's Forever and five corn food plots were planted by private individuals in Bonneville and Jefferson counties with technical support and equipment assistance from the Department. The Department's tree planter was also loaned out to private individuals in Jefferson, Madison, and Bonneville counties to plant over 20 windbreaks.

Habitat projects were done on the WMAs in the Region for pheasants. At Market Lake, 19 acres of wheat and 14 acres of corn were planted and left standing for pheasant food and cover. At Deer Parks Wildlife Mitigation Unit, 15 acres of wheat and 35 acres of corn were planted and left standing for pheasants and other wildlife.

Stocking

Eight hundred eighty-eight game farm pheasant cocks were released at Mud Lake WMA, 890 at Market Lake WMA, and 602 at Cartier WMA during the 2002 hunting season. An additional 50 game farm cock pheasants were released at Market Lake WMA for the special pheasant youth hunt 5-6 October 2002. Hunters hunting on WMAs where game farm pheasants were released were again required to obtain a WMA pheasant permit in 2002. A sample of WMA pheasant permit buyers was used to obtain an estimate of hunter participation and pheasant harvest of pen-reared pheasants on WMAs. The sample hunters were first sent a mail-out survey followed by a telephone survey of non-respondents. The estimates indicated 271 adult hunters and 34 junior hunters harvested 615 pheasants at Mud Lake WMA, 425 adult hunters and 119 junior hunters harvested 1,013 pheasants at Market Lake WMA and 224 adult hunters and 32 junior hunters harvested 790 pheasants at Cartier Slough WMA. The harvest estimates appear high because they indicate more pheasants were harvested than were released and it was not believed that there were enough wild pheasants on and near the WMAs to account for this difference. The harvest estimate also exceeds the 1,718 pheasants reported harvested in the Region (Table 2).

Management Implications

Pheasant habitat quantity and quality in the Region has diminished since the 1950s and 1960s due to changing agriculture practices. Loss of habitat combined with periodic severe winters and low recruitment restrict pheasant numbers in the Upper Snake Region. Although some winter

habitat improvement projects have been implemented in the Region, little has been done to improve nesting habitat.

Pheasant populations have been low since the early 1980s. Harsh winters in 1983-1984 and 1984-1985 seemed to start the decline. Although several winters since then have been unusually mild, populations have not recovered. Low recruitment, winter mortality, and limited habitat are the most likely factors holding densities to low levels. Research needs to be done in the Upper Snake Region to identify what can be done to increase recruitment.

FOREST GROUSE

Population Surveys

Forest grouse populations are not intensively sampled in the Upper Snake Region because populations are patchy in distribution, making it difficult to efficiently obtain adequate sample sizes from enough areas to be meaningful.

Wings were examined to estimate forest grouse production. Eleven ruffed grouse wings were collected at check stations, wing barrels, or turned in to the Department during the 2002 season. Examination of these gave a young:adult ratio of 83:100 ruffed grouse. However this sample size is too small to provide meaningful information throughout the Region.

Harvest Characteristics

Harvest information has been collected from the statewide survey and from check stations operated during the opening weekend of the sage grouse season (Table 3). Forest grouse checked at check stations are taken in conjunction with sage grouse hunting. Drastic reductions in sage grouse hunting opportunity occurred beginning in 1996. Consequently, 2002 hunter numbers were again only a fraction of historical levels. Data from opening weekend sage grouse check stations indicate that some hunters shifted their attention to forest grouse when the sage grouse season was restricted in 1996. Forty-eight blue grouse and 12 ruffed grouse were checked at sage grouse check stations in 2002. Check station data have been used to calculate an index of forest grouse per 100 hunters checked on the opening weekend of sage grouse season. The number of forest grouse in the bag of sage grouse hunters provides a rough index to their abundance in or near areas inhabited by sage grouse. The number of forest grouse per 100 hunters in 2002 was above the ten-year average. Statewide survey harvest data for the Region are presented in Table 3. No statewide survey was conducted for the 1997, 1998, 1999 or 2000 seasons. A statewide survey conducted for the 2002 season estimated 2,745 hunters harvested 17,200 forest grouse in the Region. These estimates are 25% below the 2001 estimates.

Climatic Conditions

Spring weather conditions during 2002 were warm and dry. Precipitation was below average from March through early May. A precipitation event in late May-early June resulted in good green-up; summer precipitation was below normal, but another precipitation event in late August

again resulted in good green-up. These conditions should have resulted in good chick survival. Wing data was too limited to get an estimate on chick survival.

Management Implications

The forest grouse hunter participation and harvest estimates have fluctuated widely in the past ten years. The number of birds checked has varied between eight and 60 with a mean of 30. Both the check station and statewide survey data indicate that forest grouse numbers fluctuate; however, the two data sets do not correspond in annual fluctuations.

SAGE GROUSE

Distribution Surveys

Sage grouse are distributed throughout the Upper Snake Region in sagebrush grasslands. In 1994, the region set up a schedule to begin conducting lek distribution surveys. However, that schedule could not be maintained while continuing to count lek routes for sage and sharp-tailed grouse. Therefore, since 1998, the region has encouraged other agencies to count some of the lek routes and also conduct ground searches for additional leks. This effort has resulted in additional leks being located in the Big Lost valley, Medicine Lodge area, the INEEL, and the Sand Creek desert.

Population Trend

Seventeen lek routes were counted in 2002. Three of these routes were new in 1995, two were new in 1997, and two were new in 1998. The upper Big Lost was not counted in 2002. Of the nine traditional routes, three had more grouse than 2001, but overall the number of grouse counted per route was down from 2001 (Table 4). The number of grouse counted on routes fluctuates from year to year due to previous year's production and other factors relative to counting. Most routes are showing an increase in grouse since the early 1990s, but are still below the 1970s and 1980s levels.

Production

The juvenile to adult female ratio is determined from hunter-harvested sage grouse wings. These data indicate good production in 2002 (Table 5); however, sample size since 1996 has been inadequate to get a good estimate of production.

Seasons

The sage grouse season was changed in 1996 from what had existed the previous five years. From 1996 through 2001, the season has remained the same. Beginning in 1990, the sage grouse season was 30 days long with a three-sage grouse bag limit and six-sage grouse possession limit. In 1996, three different season structures occurred in the region. Area 1: Bonneville County west of Interstate 15, Butte County south of Highways 20/26 and 22/33 and east of the Arco-Minidoka Road, the entire Birch Creek drainage, Clark County within the Birch Creek Drainage,

Jefferson County west of Interstate 15 and south of State Highway 33, and Lemhi County within the Birch Creek drainage were closed to all sage grouse hunting; Area 2: Bonneville County east of Interstate 15, Clark County EXCEPT that portion within the Birch Creek drainage, Fremont County, Jefferson County east of Interstate 15 and that part north of State Highway 33 and west of Interstate 15, Madison County, and Teton County had a seven-day season with a one-sage grouse bag and two-sage grouse possession limit; and Area 3: Butte County south of Highway 20/26 and west of the Arco-Minidoka Road, Butte County north of Highway 20/26 and State Highway 33 not within the Birch Creek drainage, and Custer County EXCEPT that portion within the Salmon River drainage upstream from and including Valley Creek had a 23-day season with a two-sage grouse bag and four-sage grouse possession limit. In 2002, the areas closed to sage grouse hunting (except for the INEEL) were placed in Area 2 and reopened with a seven-day season and one-sage grouse bag and two-sage grouse possession limit.

The reasons for the 1996 season changes were to 1) implement research to evaluate whether hunting mortality is compensatory or additive, 2) evaluate the effects of habitat fragmentation on recruitment, 3) identify causes for low recruitment, and 4) address public concern about declining sage grouse numbers. Research results suggested the season closure had no measurable effect on sage grouse lek numbers.

Harvest Characteristics

Three check stations monitor harvest characteristics. Wing barrels in the Tex Creek area have not collected an adequate sample from this harvest area. Check station data since 1995 reflects the reduced bag/possession limits with fewer hunters afield and fewer grouse harvested on opening weekend (Table 6). Birds per hunter day and hours per bird harvested decreased a little in 2002 relative to 2001, indicating better hunting conditions in 2002 compared to 2001.

Starting in 2000, sage grouse and/or sharp-tailed grouse hunters were required to purchase a validation on their hunting license. A sample of these hunters was sent a questionnaire and maps of harvest areas asking if they hunted for sage grouse and if they did, where they hunted, how many grouse they harvested, and how many days they hunted. A sample of non-respondents was called and asked the same questions. From these responses, an estimate of hunter numbers and harvest was obtained for each harvest area. These estimates indicate more hunters harvested more grouse per hunter day in 2002 than 2001 (Table 6). These estimates are not comparable with the telephone surveys done before 1996.

Climatic Conditions

The spring weather conditions in 2002 were warmer and dryer than normal through the first half of May. A precipitation event in late May-early June resulted in good green-up and probably adequate insect production. The summer was dry, but another precipitation event in late August again resulted in good green-up. This weather pattern provided for good nesting and brood rearing conditions. These conditions are reflected in the good chick recruitment in 2002 (Table 5).

Habitat Conditions

Sage grouse habitat continues to be lost to agriculture, wildfire, and prescribed fire throughout the Region. Wildfires were not a significant problem in 2002. Extensive acreage of sagebrush has been lost to wildfires on and around the INEEL since the summer of 1996. Reduced numbers of sage grouse resulting from these habitat losses are expected to occur for the next several years.

Management Studies

A research project was initiated in August 1997 to identify and evaluate causes of juvenile sage grouse mortality. Information gained from this research will be published in a separate research progress report.

Management Implications

Sage grouse populations fluctuate from year to year relative to weather conditions and, over longer time, from habitat alterations. Harvest is dependent upon hunting conditions on opening weekend, bag and possession limits, season length, and grouse populations. The BLM, USFS, and INEEL have assisted the Department in conducting lek surveys in recent years. Long-term monitoring trends show population declines throughout the Region. Both quantity and quality of habitat have declined due to agriculture encroachment, sagebrush manipulation, loss of wetlands, and livestock grazing. Regional personnel are actively involved with other agencies and private landowners in planning sagebrush manipulation projects to minimize impacts to sage grouse habitat; however, continued population declines indicate more needs to be done to reduce sagebrush conversion and fragmentation and to improve grazing management.

A local working group of federal and state agency personnel, sportsmen, ranchers, and landowners from the Upper Snake Region was formed in November 1998 to address sage grouse declines. Initially, fifty to sixty members met on a bi-monthly or monthly basis, but this number has dwindled to 15 to 20 over the past three years. During the past year, the members have developed a draft management plan and are in the final stages of finalizing this plan.

SHARP-TAILED GROUSE

Population Surveys

Two sharp-tailed grouse lek routes are surveyed in the Upper Snake Region (Table 7). The number of grouse attending leks in 2002 was down considerably from 2001 and also down slightly from the ten-year average. This was expected because the two previous years wing data suggested low recruitment (Table 8).

Harvest Characteristics

Trends in harvest of sharp-tailed grouse have historically been monitored through the Red Road check station on opening weekend of the sage and sharp-tailed grouse seasons (Table 9).

However, in 1998, the sharp-tail opener was delayed by two weeks to 1 October. Consequently, no check station-derived harvest data was obtained on sharp-tailed grouse in 1998 or 1999. Since 2000, a check station has been operated on the Sand Creek Road on opening day to obtain some harvest information. Check station hunter numbers prior to 2000 also include sage grouse hunters, but only sharp-tailed grouse hunters since 2000.

Starting in 2000, sage grouse and/or sharp-tailed grouse hunters were required to purchase a validation on their hunting license. A sample of these hunters was sent a questionnaire and maps of harvest areas asking if they hunted for sharp-tailed grouse and if they did, where they hunted, how many grouse they harvested, and how many days they hunted. A sample of non-respondents was called and asked the same questions. From these responses, an estimate of hunter numbers and harvest was obtained for each harvest area. These estimates indicate fewer hunters and fewer grouse harvested in 2002 than 2001, but the birds/hunter day remained the same (Table 9). These estimates are not comparable with the telephone surveys done before 1996.

Production

Wings were collected at wing barrels from the Sand Creek and Tex Creek areas throughout the season and a check station was operated on Sand Creek road on opening day of sharp-tail season. Analysis of wings indicated that 2002 production was much improved from the previous two years (Table 8), but still 16% below the ten-year average.

Climatic Conditions

Weather conditions during the 2002 production season were generally warm and dry except for precipitation events in late May-early June and late August. Both of these events caused good green-up of herbaceous vegetation and probably good insect numbers as well. These conditions are most likely responsible for the improved production during 2002 (Table 8).

Habitat Conditions

Lands enrolled in the CRP program in Bonneville, Bingham, Teton, Madison, and Fremont counties provide some benefits to sharp-tailed grouse. Increased distribution of sharp-tailed grouse is being documented during the lek season and winter in areas enrolled in CRP, especially in Fremont, Madison, and Teton counties.

Lek Surveys

Four wildlife technicians were hired to conduct a sharp-tailed grouse lek survey in Unit 69 (Bonneville and Bingham counties, north of the Blackfoot River) in March and April 2002. Since most of this area is private land, landowners were first contacted and permission requested to search the lands for leks. Much of this land has been enrolled in the federal CRP program. The survey indicated that sharp-tailed grouse are present and well distributed in Unit 69.

Approximately 145,858 acres in ten townships was surveyed and 56 new sharp-tailed grouse leks identified. The dominant land use in which grouse were observed was land enrolled in the CRP program, but leks were always found in close proximity to native shrub communities. The dominant shrub community adjacent to identified leks consisted of big sagebrush with chokecherry and aspen on north facing slopes and in draws. The average number of grouse observed on a lek was 6.42 with a maximum of 24 and a minimum of three. Areas heavily grazed by cattle accounted for fewer leks while areas not heavily grazed by cattle had more leks.

A final report with lek locations was prepared. Landowners were re-contacted after the survey and provided a copy of the report if they wanted.

Management Implications

Sharp-tailed grouse production and/or recruitment was very low from 1992 through 1994. Unfavorable weather conditions may have been responsible. Drought conditions prevailed throughout the spring and summer in 1992, while 1993 and 1994 were abnormally cool and wet. Production, based on wing analysis, improved markedly from 1995 through 1998, but has been low again since then. These fluctuations may also be the result of small sample size or weather related. Birds attending leks on the Sand Creek and Grassy routes in 2002 decreased from 2001 and were below the ten-year average.

Additions to Department-owned parcels of habitat are being sought for the Sand Creek and Tex Creek WMAs. Lands enrolled in CRP provide additional habitat.

CHUKAR PARTRIDGE

Population Surveys

No production data were collected during this reporting period.

Harvest Characteristics

Table 10 presents the chukar harvest through opening weekend check stations (check stations are operated primarily for sage grouse hunters) for the past ten years. A statewide survey was not conducted for the 1997, 1998, 1999 or 2000 seasons. Statewide survey estimates for the Region for 2002 indicate a substantial increase in hunters and chukars harvest in 2002 relative to 2001.

Management Implications

Chukar partridge are not numerous in the Upper Snake Region. Habitat is limited by snow depth, duration of snow cover, and potentially water availability. Chukar have been more numerous and widely distributed in the past, but severe winters have reduced populations and restricted distribution to the most favorable sites. Remnant populations occur in the lower Big Lost, lower Little Lost, and lower Birch Creek valleys. These populations are well established but are susceptible to periodic weather-related declines.

Although operated primarily to check sage grouse hunters, opening weekend check stations also provide minimal trend information on chukar harvest (Table 10). Results indicate fewer birds checked in 2002 than in 2001 and similar to the ten-year average, but still relatively few chukars are harvested in the Upper Snake Region. In mid-September, birds are often well dispersed and difficult to find.

GRAY PARTRIDGE

Population Surveys

No population trend data were collected for this reporting period.

Harvest Characteristics

Harvest information is gathered from check stations operated at Sage Junction, Highway 20, and Red Road during opening weekend of the sage grouse season and through a statewide combined mail-out and telephone survey. Table 11 shows the trend in gray partridge checked in the Upper Snake Region with four partridge checked in 2002. It should be noted that there has been a reduction in hunter participation since 1996 as a result of restricted sage grouse hunting opportunity in the region. Statewide survey estimates for 2002 indicate a similar number of hunters harvested 38% fewer partridge in 2002 than they did in 2001 (Table 11).

Habitat Conditions

Gray partridge are distributed at lower elevations throughout the Upper Snake Region, but densities are relatively low. In drier years, the birds concentrate around moist areas and hay fields, but have a more general distribution in years with normal precipitation. Nesting occurs in and around hay or grain fields. Although gray partridge are capable of surviving winter conditions better than chukar partridge, severe winters cause increased mortality.

Management Implications

Habitat improvement projects sponsored through the HIP program and Pheasants Forever indirectly benefit gray partridge. Cost-share seeding of grass/forb mixtures provided by the CRP program also benefits gray partridge in some locations.

WILD TURKEY

Population Surveys

There were no population surveys conducted in 2002. However, birds were observed along the lower South Fork Snake River and adjacent tributaries and habitat, the lower Henrys Fork, the lower Falls River, and the Snake River upstream of Roberts.

Harvest Characteristics

Ten permits were offered in a controlled hunt in Unit 50 in spring 2001. The harvest estimate was two turkeys (Table 12).

Climatic Conditions

The 2002-2003 winter was characterized with mild temperatures and below normal snow. Spring nesting conditions should have provided good nesting conditions.

Habitat Conditions

Turkey habitat in the Region may be marginal for winter foraging, but no studies have been done to evaluate habitat quality.

Trapping and Transplanting

Three releases of 163 turkeys were made during the 2002-2003 winter (Table 13). One release was on the lower Blackfoot River, Unit 69, another near Cartier Slough WMA, Unit 63A, and another in the Swan Valley area, Unit 67. These releases supplemented the 416 turkeys during the 2001-2002 winter and 91 released in 2000-2001 (670 total). Thirty-eight turkeys were received from the Southwest Region and 125 from the Panhandle Region in 2002-2003.

Management Implications

Fifty-nine turkeys (Merriam's) were released on the Big Lost River below Mackay in February and March 1999. The first hunt on this population was offered in the spring of 2002.

A total of 670 turkeys (Merriam's subspecies) have been released in Units 63A, 67, and 69 since the 2000-2001 winter. Several of the Unit 63A releases were in the same general vicinity as the turkeys released during 1984 and 1988. The previous transplants were numerically small (12-16) and involved the Rio Grande subspecies. The previous transplants were unsuccessful in establishing a population and some evidence indicated that inadequate winter food was the primary limiting factor.

Research is needed on the ecology, recruitment, habitat needs, and movements of the introduced river bottom turkeys in southeast Idaho. Some of the previously introduced populations have shown similar trends of not establishing viable populations or increasing for a few years and then becoming extinct.

MOURNING DOVE

Population Characteristics

Data from dove coo count routes are reported directly to the USFWS.

Harvest Characteristics

Two doves were checked at the Red Road check station on the opening weekend of the 2002 sage grouse season. No harvest survey has been conducted since the 1996 dove season.

Management Implications

The mourning dove is one of the most common nesting game birds in the Upper Snake Region. However, in many years the majority of birds have left the area prior to the season opening on 1 September.

Management efforts are aimed at reducing sportsmen/landowner conflicts, and improving habitat indirectly through HIP windbreaks, guzzlers, and CRP plantings. We will continue to take advantage of harvest opportunities as allowed by federal regulations.

RABBITS AND HARES

Abstract

Starting in 2002, the pigmy rabbit season closed leaving only cottontail rabbit and snowshoe hare available to hunters.

Rabbits are a low priority species in the Upper Snake Region. A statewide survey conducted for rabbits estimated no hunters hunting rabbits in the Upper Snake Region during 2002. The reason for this lack of hunting activity is unknown, but the closure of the pigmy rabbit season may be a partial reason. In addition to the recreational opportunity provided by hunting, rabbits also serve as a prey base for predators. No production or population information is collected on rabbit or hare populations.

LITERATURE CITED

Trautman, Carl G. 1982. History, ecology and management of the ring-necked pheasant in South Dakota. Bulletin No. 7. South Dakota Department of Game, Fish and Parks, Pierre, South Dakota, USA.

Table 1. Peak pheasant crow count comparison trend for the Lewisville and Labelle routes in the Upper Snake Region, 1996-present.

	Average Number of Calls/Stop	
Year	Lewisville	Labelle
1996	0.5	0.5
1997	1.2	0.4
1998	1.0	0.5
1999	1.2	0.5
2000	1.1[a]	0.1
2001	1.8[b]	0.1
2002[c]	-	-

[a] 152 game farm and 49 wild pheasants released on study site prior to survey.
[b] 550 game farm and 25 wild pheasants released on study site prior to survey.
[c] Survey not conducted.

Table 2. Estimated pheasant harvest in the Upper Snake Region, 1993-present.

	Check Station				Telephone Survey[a]		
Year	Hunters	Birds	Birds/ Hunter	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993	8	0	0.0	-	588	928	0.4
1994	3	0	0.0	-	356	487	0.3
1995	2	0	0.0	-	487	487	0.3
1996	0	0	0.0	-	450	0	0.0
1997	7	0	0.0	-	-	-	-
1998	2	0	0.0	-	-	-	-
1999	2	0	0.0	-	-	-	-
2000[b]	4	0	0.0	-	-	-	-
2001[b]	1	2	2.0	1.3	1,125	2,573	0.5
2002[c]	-	-	-	-	719	1,718	0.6

[a] Telephone survey data at the regional level were not collected from 1997-2000.
[b] Check station operated only on Sunday of opening weekend.
[c] No check station operated on either the opening Saturday or Sunday.

Table 3. Estimated forest grouse harvest in the Upper Snake Region, 1993-present.

	Check Station					Telephone Survey[a]		
		Number of Grouse			Forest Grouse/100			Birds/ Hunter
Year	Hunters	Blue	Ruffed	Total	Hunters	Hunters	Birds	Day
1993	1,565	4	4	8	0.5	4,639	12,029	0.6
1994	1,634	14	12	26	1.6	4,027	16,239	0.8
1995	1,133	20	0	20	1.9	3,432	11,474	0.5
1996	432	24	2	26	7.1	1,642	4,927	0.6
1997	455	15	5	20	4.4	-	-	-
1998	524	47	3	50	9.5	-	-	-
1999	526	37	4	41	7.8	-	-	-
2000	573	23	5	28	4.9	-	-	-
2001	611	13	7	20	3.3	3,675	23,213	1.1
2002	742	48	12	60	8.1	2,745	17,200	1.1

[a] Data from Bonneville, Butte, Clark, Fremont, Jefferson, Madison, and Teton counties. Telephone survey data at the regional level were not collected from 1997-2000.

Table 4. Male sage grouse counted on Upper Snake Region lek routes, 1993-present.

Route	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	10-year average
L. Birch Cr.	18	29	18	6	16	25	37	30	28	61	27
Red Road	34	53	40	69	74	52	168	153	106	111	86
Jacoby	49	71	77	90	67	159	125	104	115	82	94
Med. Lodge	25	67	50	35	32	96	129	159	165	101	86
Little Lost	57	57	79	48	77	67	131	157	115	109	90
Lidy	100	80	62	26	72	71	110	210	149	180	106
Plano	144	79	106	48	106	131	80	122	104	84	100
U. Birch Cr.	0	0	4	8	13	11	17	19	22	12	11
Crooked Cr.	58	120	105	61	120	112	132	181	138	135	116
Market Lake	-	-	-	-	26	31	30	19	10	11	21
Sheep Station[a]			83	88	131	110	162	213	284	153	153
Table Butte[b]					70	185	129	165	174	74	133
Stibal Road[b]					57	96	143	116	138	61	102
INEEL[a]			18	15	26	58	117	70	89	148	68
Tractor Flat[a]			75	54	77	103	113	135	125	110	99
L. Big Lost[c]						62	74	50	67	81	67
Antelope Cr.[c]						31	24	29	31	35	30
U. Big Lost[d]									51	-	-
Totals	485	556	717	548	964	1,400	1,721	1,932	1,911	1,548	1,178
Average per route counted	54	62	60	46	64	82	101	114	106	91	78

[a] New routes established in 1995.
[b] New routes established in 1997.
[c] New routes established in 1998.
[d] New route established in 2001.

Table 5. Sage grouse production in the Upper Snake Region based on wing collections, 1993-present.

Year	Juveniles:100 Females	Juveniles:100 Adults
1993	224	150
1994	200	136
1995	138	106
1996[a]	673	246
1997[a]	212	164
1998[a]	281	178
1999[a]	209	130
2000[a]	171	127
2001[a]	188	136
2002[a]	276	213
10-year average	257	159

[a] Inadequate sample sizes.

Table 6. Estimated sage grouse harvest in the Upper Snake Region, 1993-present.

		Check Station				Telephone Survey[a]		
Year	Bag and Possession Limit	Hunters	Birds	Birds/ Hunter	Hours/ Bird	Hunters	Birds	Birds/ Hunter Day
1993[b]	3/6	1,565	889	0.6	8.7	6,586	10,979	0.6
1994[b]	3/6	1,634	1,131	0.7	7.2	3,765	8,728	0.8
1995[b]	3/6	1,133	492	0.4	10.7	3,148	5,422	0.6
1996[c]	1/2, 2/4	432	202	0.5	7.6	1,543	2,536	0.6
1997[c,d]	1/2, 2/4	455	248	0.6	7.3	-	-	-
1998[c,d]	1/2, 2/4	524	336	0.6	6.5	-	-	-
1999[c,d]	1/2, 2/4	526	424	0.8	4.5	-	-	-
2000[c,d]	1/2, 2/4	573	387	0.7	5.6	1,672	2,221	0.6
2001[c,d]	1/2, 2/4	611	367	0.6	6.5	1,777	2,147	0.6
2002[c,e]	1/2, 2/4	742	610	0.8	4.3	1,877	2,532	1.6

[a] Telephone survey data at the regional level were not collected from 1997-1999.
[b] Season extended from 16 to 30 days.
[c] Numbers do not include sharptail hunters because the sharptail season opened later (1 October) than the sage grouse season.
[d] Season closed in area 1; 7-day season in area 2, bag-possession limits 1/2; 23-day season in area 3, bag-possession limits 2/4.
[e] Area 1 reopened and renumbered area 2 with a 7-day season, bag-possession limits 1/2; 23-day season in area 3, bag-possession limits 2/4.

Table 7. Sharp-tailed grouse counted on Upper Snake Region lek routes, 1993-present.

	Route - Maximum Count	
Year	Sand Creek	Grassy
1993	17	5
1994	24	5
1995	18	4
1996	22	4
1997	5	3
1998	39	13
1999	32	32
2000	43	28
2001	41	33
2002	29	21
10-year average	27	15

Table 8. Sharp-tailed grouse production in the Upper Snake Region based on wing collections, 1993-present.

Year	Juveniles:100 Adults	N[a]
1993	39	38
1994	103	59
1995	285	50
1996	242	65
1997	338	92
1998	221	77
1999	176	243
2000	68	89
2001	61	134
2002	140	113
10-year average	167	96

[a] Sample size.

Table 9. Estimated sharp-tailed grouse harvest in the Upper Snake Region, 1993-present.

	Check Station				Telephone Survey[a]		
Year	Hunters	Birds	Birds/ Hunter	Hours/ Bird[b]	Hunters	Birds	Birds/ Hunter Day
1993	537	8	0.01	23.2	2,041	1,856	0.2
1994	496	22	0.04	7.9	1,423	1,723	0.4
1995	406	28	0.07	11.7	1,239	1,076	0.3
1996	199	6	0.03	9.3	1,543	1,433	0.3
1997	213	33	0.15	7.2	-	-	-
1998[c]	-	-	-	-	-	-	-
1999[c]	-	-	-	-	-	-	-
2000[d]	39	19	0.49	6.4	1,019	2,107	1.4
2001[e]	23	15	0.65	5.5	891	1,344	1.6
2002[f]	4	0	-	-	793	1,295	1.6

[a] Telephone survey data at the regional level were not collected from 1997-1999.
[b] All species (not just sharp-tailed grouse) 1993 through 1997.
[c] No check station data collected because the sharptail season opened later (1 October) than the sage grouse season.
[d] Check station operated 1 October from 0930 to 1430.
[e] Check station operated 1 October from 0930 to 1800.
[f] Check station operated 1 October from 0830 to 1630.

Table 10. Estimated chukar partridge harvest in the Upper Snake Region, 1993-present.

	Check Station[a]			Telephone Survey[b]			
Year	Hunters	Birds	Birds/ Hunter	Hunters	Birds	Days	Birds/ Hunter Day
1993	1,565	0	0.000	-	-	-	-
1994	1,634	9	0.005	-	-	-	-
1995	1,133	13	0.011	-	-	-	-
1996	432	9	0.021	-	-	-	-
1997	455	10	0.022	-	-	-	-
1998	524	19	0.036	-	-	-	-
1999	526	6	0.011	-	-	-	-
2000	573	15	0.026	-	-	-	-
2001	611	24	0.039	213	383	752	0.5
2002	742	15	0.020	331	662	1,045	0.6

[a] Check stations at Sage Junction, Red Road, and Highway 20 on opening weekend of sage grouse season.
[b] Telephone survey data at the regional level were not collected from 1993-2000.

Table 11. Estimated gray partridge harvest in the Upper Snake Region, 1993-present.

	Check Station[a]			Telephone Survey[b]			
Year	Hunters	Birds	Birds/ Hunter	Hunters	Birds	Days	Birds/ Hunter Day
1993	1,565	7	0.004	-	-	-	-
1994	1,634	13	0.008	-	-	-	-
1995	1,133	2	0.002	-	-	-	-
1996	432	7	0.016	-	-	-	-
1997	455	11	0.024	-	-	-	-
1998	524	7	0.013	-	-	-	-
1999	526	26	0.049	-	-	-	-
2000	573	12	0.021	-	-	-	-
2001	611	1	0.002	825	2,319	2,516	0.9
2002	742	4	0.005	840	1,443	2,079	0.7

[a] Check stations at Sage Junction, Red Road, and Highway 20 on opening weekend of sage grouse season.
[b] Telephone survey data at the regional level were not collected from 1993-2000.

Table 12. Estimated controlled hunt turkey harvest in the Upper Snake Region, 2002.

Year	Number of Hunts	Permits Available	Hunters	Days	Birds	Days/ Bird
2002	1	10	-	-	2	-

Table 13. Turkey transplant history for the Upper Snake Region, 1984-present.

Year	Sub-Species[a]	Release Site - Unit	Source	Number of Birds Released
1984	R	Archer - 63A	Texas	16
1984	R	Deer Parks - 63A	Texas	16
1988	R	Deer Parks - 63A	Council, Idaho	12
1999	M	Big Lost River - 50	Idaho	59
2000	M	Archer - 63A	Panhandle, Clearwater Regions	46
2000	M	Deer Parks - 63A	Southwest Region, ID	45
2001	M	Units 63A, 67	Panhandle, Clearwater Regions	416
2002	M	Units 63A, 67, 69	Panhandle, Southwest Regions	163

[a] M = Merriam's; R = Rio Grande.

PROGRESS REPORT
SURVEYS AND INVENTORIES

STATE:	Idaho	**JOB TITLE:**	Upland Game Surveys and Inventories
PROJECT:	W-170-R-27		
SUBPROJECT:	7	**STUDY NAME:**	Upland Game and Waterfowl Population Status and Trends
STUDY:	II		
JOB:	1		

PERIOD COVERED: April 1, 2002 to March 31, 2003

SALMON REGION

PHEASANT

Abstract

Small populations of pheasants exist in limited but stable habitats in the Salmon Region. Hunting pressure and harvest are relatively light.

Population Surveys

No production data were collected during this reporting period. Pheasant populations in Custer and Lemhi counties are restricted to small areas along major river bottoms. The limited populations have not been systematically surveyed in the past.

Harvest Characteristics

In addition to low overall numbers, pheasants exist primarily on private lands with limited public hunting access, so harvest rates are low (Table 1).

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Pheasant habitat in Custer and Lemhi counties exists along the lower Lemhi and Pahsimeroi rivers and main Salmon River near Challis and Salmon. The habitat complex consists primarily of riparian areas, cattails, hay meadows, and cattle pastures. Cereal cropland is uncommon. This habitat complex has been stable from year to year and relatively unaffected by annual weather variations or changes in grain commodity markets. Rural residential housing has been increasing, resulting in increased land clearing, more feral pets, and less hunting opportunity.

Management Implications

Pheasants in the Salmon Region occur in limited geographic areas with declining habitat conditions and they receive light hunting pressure. Although opportunities exist for minor habitat improvements, overall pheasant distribution and numbers are not likely to significantly improve in the foreseeable future. Habitat available for pheasants and areas open to hunting will decrease concomitant with continued housing development. Harvest is currently limited by restricted access to private land, which is also unlikely to increase.

QUAIL

Abstract

The small, exotic Gambel's quail population near Salmon appears to be at carrying capacity, indicating harvest could be initiated at a level near annual production.

Population Surveys

No production data were collected during this reporting period.

Harvest Characteristics

Hunting season is closed.

Climatic Conditions

Rainfall during summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Little is known of Gambel's quail habitat in the region. However, there do not appear to be any major land use changes occurring that threaten current quail habitat conditions.

Management Implications

A small, introduced population of Gambel's quail exists in isolated pockets within a few miles of Salmon. Little is known about this unhunted population. A few broods are usually reported each year; the population appears stable. Although limited in distribution, the population could likely support harvest. Opportunity and harvest would be primarily limited to access to private property. Although biologically justified, establishing a season on this population of exotic game birds may meet with public resistance because of its relatively small size and concerns of local people, many who feed quail on their property.

FOREST GROUSE

Abstract

Forest grouse populations, hunter effort, and harvest are primarily controlled by weather conditions during nesting and brood rearing. Minimal effort is therefore expended on production, habitat, or harvest data collection.

Population Surveys

No systematic surveys such as established brood routes or drumming counts are maintained for forest grouse species. Information on forest grouse production has been obtained in the past from incidental brood counts made by Department personnel. However, sample sizes were small, and effort expended and areas sampled varied considerably between personnel and years. Because resulting data had little management value, incidental brood counts were discontinued in 1988.

Harvest Characteristics

As a group, forest grouse account for more hunters, more hunter days, and more birds harvested than any other upland game species (Table 2).

Check Stations

No check stations are maintained specifically for forest grouse. A few birds are checked incidentally in the field and at big game check stations.

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well

above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Although forest grouse habitat may be altered by natural (fire, forest diseases) or human-related (logging, mining, and grazing) forces, the scale of such changes in the Salmon Region is generally not large enough to significantly impact overall grouse populations. However, large-scale wild fires during summer 2000 that set back succession in large areas of units 27 and 28 may lead to future increases in forest grouse populations.

Management Implications

Forest grouse populations in the Salmon Region are primarily controlled by weather conditions rather than by short-term habitat changes or hunter harvest. Beginning in 1986, hunting season length was increased from 72 to 100 days. Despite this increase, forest grouse harvest declined from 1985 to 1986. After the mild winter and spring of 1987, harvest in 1987 increased by 50%, suggesting a substantial population increase apparently unaffected by the 1986 increase in season length.

Given that populations are relatively unaffected by harvest, management strategies should emphasize maximum recreational opportunity and minimal data collection efforts.

SAGE GROUSE

Abstract

Sage grouse lek counts and harvest were down in 1992, and continued a downward trend through 1996. Harvest has apparently remained low, but little effort has been allocated toward local hunter contacts. Several leks showed an increase in number of birds in attendance from 1997 through 2002.

Population Surveys

Salmon Region personnel have significantly increased sage grouse lek data collection efforts in recent years, increasing number of leks visited from one in 1979 through 1981 to a peak of 21 leks in 1988. Data from individual leks or groups of leks show variability in terms of maximum male sage grouse attendance (Table 3). However, several leks showed an increase in number of birds in attendance from 1997 through 2002. In general, spring lek counts in and of themselves are apparently not good indicators of fall harvest in Salmon Region.

Ten radio collars were attached to sage grouse at leks in the upper Lemhi River valley in spring 1997. Data collected on four female and six male sage grouse revealed high mortality rates in yearlings and adults. This may, however, be an artifact of small sample size. Female home ranges were smaller than male home ranges. Two females left their winter ranges after a severe winter storm in January; one migrated 39 km to Lemhi, Idaho, and the other 80 km to the northern edge of the Snake River Plain. Both females showed high lek fidelity and successfully nested in spring 1998.

During late April and early May 2002, 15 sage grouse (13 male, two female) were captured in several areas in the Salmon Region. Most birds were captured in Lemhi Valley; additional capture sites included Pahsimeroi Valley and Hat Creek/Deer Creek drainages. All birds were equipped with radio transmitters and leg bands. The project was part of a challenge cost-share agreement with the BLM and the primary goal was to identify areas used by sage grouse during winter. Two birds died before winter and two could not be located. No radio-marked birds were harvested by hunters. Birds were located several times during winter and some demonstrated relatively long movements. Winter weather conditions were relatively mild, suggesting birds could use a wide range of locations that may not be suitable under more normal or severe winter conditions. Most birds wintered in the general vicinity of leks where they were captured and returned to the same leks in March 2003.

As part of the same cost-share agreement, approximately ten hours of helicopter survey time were allocated to searching for undocumented sage grouse leks in several suitable habitat areas in the Salmon Region. We identified four previously unknown lek sites as well as several satellite leks.

Sage grouse production in the Salmon Region is highly variable depending upon spring weather conditions (Table 4). No sage grouse brood route counts have been conducted since 1988.

Harvest Characteristics

Hunter days and harvest reached a recent low in 1997 (Table 5).

Some hunters and birds from the Salmon Region are checked through the Howe and Sage Junction check stations. In addition, some roving field checks are made of sage grouse hunters during opening weekends (Table 6). Data from both types of field checks and from telephone surveys are somewhat correlated. Only 11 hunters were contacted in the Salmon Region in 2001, all in the upper Lemhi Valley.

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as

measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Documented loss of sage grouse habitat in the Salmon Region has been minimal in recent years. Habitat losses that do occur generally are caused by sagebrush conversion on private lands, via desert land entry on public lands, conifer encroachment into sagebrush habitats, or via wildfire.

Management Implications

The Lemhi and Pahsimeroi valleys are the most productive sage grouse areas in the region. The Lemhi Valley summer population is comprised of resident grouse and birds that migrate from wintering/breeding areas in lower Birch Creek to summer range in Lemhi Valley (Canaille, J. W. 1982). We do not know if a similar condition exists in the Pahsimeroi Valley.

During 1986 and 1987, 196 sage grouse were translocated into the Sawtooth Valley where populations had declined but there was no apparent significant habitat loss. Reproduction was documented among these birds. No further translocations are planned for this area. Isolated reports of sage grouse were received during the summers of 1994 and 1996, and fall 1997, but the Sawtooth population does not appear to be thriving.

Sage grouse production is strongly dependent upon spring weather. Cold and wet conditions during hatching and brooding can significantly decrease production. Most sage grouse nesting habitat throughout the Salmon Region can be subject to severe spring weather. This is a normal phenomenon for relatively high elevation sage grouse range. A 1- to 2-year decline in productivity (indicated by harvest and lek counts) due to weather is not necessarily indicative of a declining population. Harvest management has little direct impact on populations.

CHUKAR PARTRIDGE

Abstract

Chukar numbers and hunting pressure are strongly weather dependent. Some potential still exists for habitat enhancement by fencing selected riparian brood-rearing areas and reducing acreage occupied by noxious weeds.

Population Surveys

No production data were collected during this reporting period. Anecdotally, chukars were likely most heavily impacted by cool, wet weather during peak hatching. Casual observations included a large proportion of chukar pairs in early summer when broods should have been evident. Large numbers of very young broods were observed in late summer, indicating renesting was common.

Harvest Characteristics

Chukar harvest and hunter participation varies dramatically from year to year depending upon weather conditions and real or perceived availability of birds (Table 7).

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Chukar habitats in the Salmon Region are generally stable. However, some areas may be threatened by invasion of spotted knapweed (*Centaurea maculosa*) and other noxious weeds. Other habitats may be created or altered by wildfire. In areas where water may be limiting, Department personnel have cooperated with the BLM and USFS to install guzzlers, primarily directed at other wildlife species but probably providing water for chukars as well.

The drought years of 1988-1994 may have exacerbated problems with domestic livestock grazing in riparian areas used by chukar for brood rearing. The Department is continuing to work on cooperative agreements to fence such sites on public lands.

Management Implications

Chukar populations in the Salmon Region are primarily weather dependent. Hunting pressure varies dramatically depending upon chukar population levels. However, hunting has little, if any, direct impact on chukar populations.

Management direction should be to offer maximum recreational opportunity with minimal population monitoring efforts. Some habitat enhancement may be possible by fencing livestock out of selected riparian areas and working cooperatively with land management agencies to control noxious weeds.

GRAY PARTRIDGE

Abstract

Gray partridge rank third with regard to harvest among the Salmon Region's upland game birds. Due to limited, scattered habitat, gray partridge are not expected to significantly increase.

Population Surveys

No production data were collected during this reporting period.

Harvest Characteristics

Gray partridge represent a minor portion of upland game hunter effort and bag in the Salmon Region (Table 8).

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Although widely distributed, gray partridge habitat is not abundant in the Salmon Region. Nor is it likely to significantly increase because most agricultural lands are marginal for cereal crops and are better suited for livestock pasture or hay meadows.

Management Implications

Information on distribution and population level of gray partridge in the Salmon Region is minimal. Hunter effort and harvest are moderate, but may be increasing. Extensive efforts to collect more data are probably not justified.

WILD TURKEY

Abstract

Small populations of turkeys may be established near Challis and south of Salmon but they are not yet hunted. Between 1991 and 1999, 139 wild turkeys were released in the Salmon Region to augment existing groups and in novel areas. However, habitat limitations may not allow for huntable populations.

Population Surveys

Small populations of wild turkeys exist along Lemhi and Salmon rivers near Salmon and Challis. However, no systematic trend counts or brood route counts are conducted.

Harvest Characteristics

No hunting is authorized in the Salmon Region.

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Potential wild turkey winter habitat exists in deciduous river bottoms along the Salmon River in the vicinity of Salmon, Challis, and North Fork. These habitat pockets may support small populations, but winter habitat (including landowner tolerance) appears limiting in the Salmon Region. Virtually all winter habitat is privately owned.

Trapping and Transplanting

No activities occurred during the study period. Between 1991 and 1999, 139 wild turkeys were released in the Salmon Region to augment existing groups and in novel areas (Table 9).

Management Implications

Current population levels cannot yet sustain recreational harvest. Available winter habitat and environmental conditions will likely limit wild turkey populations to low levels.

MOURNING DOVE

Abstract

Mourning doves breed in moderate numbers in the Salmon Region but are usually only lightly harvested here due to migration timing.

Population Surveys

The Salmon Region contains a breeding population of mourning doves. The only population information is obtained from a call count in the southern portion of the Lemhi Valley. During 1985, 1986, and 1987, a total of four mourning doves were seen or heard along the route (Table 11). In 1988, the southern half of the route was relocated three miles to the east. The 1988 count on the old route was one mourning dove call and on the new route, the count was

four calls plus nine birds seen. However, ≤3 birds were seen or heard annually from 1989 to 2001. Beginning in 2000, the western portion (approximately seven miles) of the route on Highway 28 was relocated to the north and east. The new section follows the Lemhi Back Road from Leadore to Eightmile Creek.

Harvest Characteristics

During years in which mourning doves delay their migration slightly, Salmon Region hunters are able to harvest moderate numbers of birds. In most years, harvest is low. Due to small sample sizes, telephone survey harvest data are imprecise at the county level.

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Mourning doves are common but not abundant throughout the region, indicating that perhaps suitable habitat is limited. Most dove use is located in riparian willow habitats associated with cattle ranching operations; these habitats are relatively stable.

Management Implications

The extended season (60 days) from 1983 to 1986 had little effect on harvest because many doves move out of the area soon after the 1 September opening date. Similarly, the 30-day season initiated in 1987 due to a general decline in mourning dove numbers in the western United States probably did not affect harvest in our area.

RABBITS AND HARES

Abstract

Rabbits and hares receive little emphasis from sportsmen or wildlife managers in the Salmon Region.

Population Surveys

No production data were collected during this reporting period.

Harvest Characteristics

The Salmon Region contains huntable populations of both cottontails and pygmy rabbits. However, harvest seasons for pygmy rabbits were closed in 2002. Rabbits and hares appear to be of only incidental interest to sportsmen. Harvest apparently varies greatly from year to year, depending upon rabbit populations (Table 11).

Climatic Conditions

Rainfall during the summer months in 2002 was above average, with cool, wet weather during peak hatch periods for some species. Vegetative growth generally appeared above average, particularly at higher elevations. Winter conditions were quite mild with temperatures well above normal and snow accumulation at lower elevations well below average. Animals, therefore, entered winter in average to above average body condition, then encountered a mild winter, which should have produced relatively high overwinter survival. Snowpack (as measured at higher elevations) was slightly above average by late winter. Onset of spring weather and associated plant phenology was apparently delayed by approximately 1-2 weeks. Water-year precipitation has been near average.

Habitat Conditions

Little is known of habitat conditions across the region. There may be a slight downward trend as overall range conditions improve and sagebrush is converted to grassland.

Management Implications

Rabbits and hares are generally of low interest to sportsmen; recreational opportunity still greatly exceeds demand. Very little management data is collected nor is it anticipated this effort will increase.

LITERATURE CITED

Canaille, J. W. 1982.

Table 1. Estimated pheasant harvest in the Salmon Region[a], 1993-present.

Year	Hunters	Birds	Days	Birds/ Hunter	Birds/ Hunter Day
1993	340	804	1,422	2.4	0.6
1994	225	1,555	1,180	6.9	1.3
1995	223	223	569	1.0	0.4
1996	-	-	-	-	-
1997	-	-	-	-	-
1998	-	-	-	-	-
1999	-	-	-	-	-
2000	-	-	-	-	-
2001	206	365	875	1.8	0.4
2002	445	686	980	1.5	0.7

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 2. Estimated forest grouse harvest in the Salmon Region[a], 1993-present.

Year	Hunters	Days	Birds	Birds/Hunter Day
1993	2,350	12,864	5,566	0.4
1994	3,184	21,277	11,557	0.5
1995	3,574	20,775	12,834	0.6
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	2,171	11,304	10,914	1.0
2002	1,941	7,544	6,636	0.9

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 3. Male sage grouse counted on North Lemhi lek routes in the Salmon Region, 1993-present.

Year	North Lemhi Lek L-3	All North Lemhi Leks L-3 to L-5
1993	0	0
1994	-	0
1995	-	0
1996	-	0
1997	14	17
1998	16	16
1999	0	0
2000	0	0
2001	0	18
2002	15	48

Table 4. Sage grouse production in the Salmon Region based on wing collections, 1993-present.

Year	Juv:100 Females	Juv:100 Adults	% Unsuccessful Females
1993	149	100	56
1994	133	83	57
1995	78	40	-
1996	320	155	47
1997	257	189	43
1998	520	347	60
1999	325	173	63
2000	149	100	51
2001	218	117	55
2002	229	114	67
10-year average	238	142	55

Table 5. Estimated sage grouse harvest in the Salmon Region, 1993-present.

Year	Bag and Possession Limit	Check Station[a] Hunters	Check Station[a] Birds	Check Station[a] Birds/ Hunter	Check Station[a] Hours/ Bird	Telephone Survey[b] Hunters	Telephone Survey[b] Birds	Telephone Survey[b] Birds/ Hunter Day
1993	3/6	84	48	0.6	13.1	1,670	2,620	0.6
1994	3/6	74	64	0.9	7.1	1,236	4,327	0.9
1995	3/6	79	25	0.3	23.9	1,117	2,132	0.4
1996	2/4	68	31	0.5	9.2	-	-	-
1997	2/4	42	19	0.5	11.1	-	-	-
1998	2/4	62	29	0.5	7.5	-	-	-
1999	2/4	56	50	0.9	4.1	-	-	-
2000	2/4	-	-	-	-	526	788	1.5
2001	2/4	-	-	-	-	440	571	1.3
2002	2/4	63	60	1.0	6.4	-	-	-

[a] Howe and Sage Junction check stations.
[b] Telephone survey data at the regional level were not collected from 1996-1999 or in 2002.

Table 6. Opening weekend field checks of sage grouse hunters in the Salmon Region, 1994-present.

Area/Year	Hunters	Birds	Birds/Hunter	Hours/Bird
Lemhi				
1994	59	58	1.0	4.6
1995	18	12	0.7	5.2
1996	-	-	-	-
1997	6	0	0.0	-
1998	18	11	1.6	7.2
1999	19	22	1.2	3.5
2000	-	-	-	-
2001	11	5	0.5	13.2
2002	-	-	-	-
Pahsimeroi				
1994	19	8	0.4	8.0
1995	2	1	0.5	6.0
1996	-	-	-	-
1997	13	5	0.4	4.4
1998	2	4	2.0	3.5
1999	-	-	-	-
2000	-	-	-	-
2001	-	-	-	-
2002	-	-	-	-

Table 7. Estimated chukar partridge harvest in the Salmon Region[a], 1993-present.

Year	Hunters	Days	Birds	Birds/Hunter Day
1993	495	3,216	1,886	0.6
1994	862	3,765	4,027	1.1
1995	812	4,346	3,980	0.9
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	927	4,236	6,847	1.6
2002	1,276	4,282	7,080	1.7

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 8. Estimated gray partridge harvest in the Salmon Region[a], 1993-present.

Year	Hunters	Days	Birds	Birds/Hunter Day
1993	278	1,051	278	0.3
1994	318	1,704	1,292	0.8
1995	426	1,868	508	0.3
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	283	1,418	1,209	0.9
2002	322	1,057	966	0.9

[a] Telephone survey data at the regional level were not collected from 1996-2000.

Table 9. Turkey transplant history for the Salmon Region, 1983-present.

Year	Sub-Species[b]	Release Site - Unit	M	F	Total	New or Supplemental Release
1983	R	Shoup Bridge area - 28	0	16	16	N
1983	M	Shoup Bridge area - 28	2	3	5	S
1985	R	Shoup Bridge area - 28	5	0	5	S
1991	M	Shoup Bridge area - 28	3	12	15	S
1991	M	Salmon River - 36B	4	21	25	N
1993	M	Fourth of July Creek drainage - 21A	13	12	25	N
1993	M	Salmon River - 36B	6	4	10	S
1999	M	Salmon River - 37	-	-	50	N
1999	M	Salmon River - 28	-	-	14	N

[a] M = Merriam's; R = Rio Grande.

Table 10. Mourning dove coo-count survey results and estimated harvest in the Salmon Region, 1993-present.

	Coo-Count Routes		Telephone Survey[a]		
Year	Miles Counted	Doves/Mile	Hunters	Birds	Birds/ Hunter Day
1993	20	0.05	186	3,092	3.1
1994	20	0.05	150	1,274	2.4
1995	20	0.10	223	833	1.0
1996	0	-	-	-	-
1997	20	0.00	-	-	-
1998	0	-	-	-	-
1999	20	0.00	-	-	-
2000[b]	20	0.00	-	-	-
2001	20	0.15	-	-	-
2002	20	0.30	-	-	-

[a] Telephone survey data at the regional level were not collected after 1995.
[b] Route relocated.

Table 11. Estimated cottontail rabbit harvest in the Salmon Region[a], 1993-present.

Year	Hunters	Days	Rabbits	Rabbits/Hunter Day
1993	928	6,679	18,894	2.8
1994	880	4,851	23,150	4.8
1995	670	4,833	4,366	0.9
1996	-	-	-	-
1997	-	-	-	-
1998	-	-	-	-
1999	-	-	-	-
2000	-	-	-	-
2001	114	161	321	2.0
2002	29	58	58	1.0

[a] Telephone survey data at the regional level were not collected from 1996-2000.

APPENDIX A

Idaho Department of Fish & Game

Upland Game Seasons & Rules

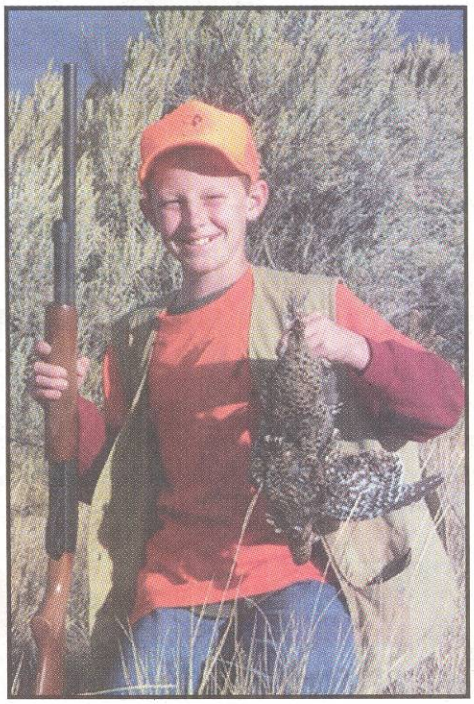


photo by Tony Apa

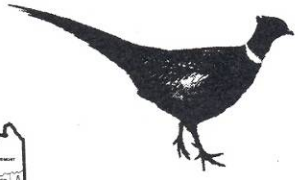
REGULATIONS 2002-2003

Upland Game Seasons

Including: Upland Game Birds, Mourning Doves, Furbearers, Rabbits and Hares, Crows, Predators, Unprotected Species and Falconry.

Also: Controlled Hunts for Sandhill Cranes and September Seasons for Canada Geese.

PHEASANTS - ALL VARIETIES



AREA 1

Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone Counties.

Seasons
2002 — October 12 through December 31
2003 — October 11 through December 31

Daily Bag Limit .....3 cocks
Possession Limit After First Day of Season . 6 cocks

AREA 2

Bannock, Bear Lake, Bingham, Bonneville, Butte, Caribou, Cassia, Clark, Custer, Franklin, Fremont, Jefferson, Lemhi, Madison, Minidoka, Oneida, Power, and Teton counties.

Seasons
Area 2 seasons begin at noon on opening day and are as follows:
2002 — October 19 through November 30
2003 — October 18 through November 30

Daily Bag Limit .....3 cocks
Possession Limit After First Day of Season ..6 cocks

AREA 3

Ada, Adams, Blaine, Boise, Camas, Canyon, Elmore, Gem, Gooding, Jerome, Lincoln, Owyhee, Payette, Twin Falls, Valley, and Washington Counties (including all islands in the Snake River except Patch and Porter Islands).

Seasons
Area 3 seasons begin at noon on opening day and are as follows:
2002 — October 19 through December 31
2003 — October 18 through December 31

Patch and Porter Islands: Seasons begin on the dates shown above. Closing dates will correspond with those set by the Oregon Fish and Game Commission. Check with Southwest Region Office, (208) 465-8465, or see Oregon small game regulations.

Daily Bag Limit .....3 cocks
Possession Limit After First Day of Season ....6 cocks

YOUTH PHEASANT SEASON

The Youth Pheasant Season opens on the first weekend of October. In Areas 2 and 3 the season begins at noon. It is open statewide and lasts 2 days. It is open for all licensed hunters 15 years of age or younger. All youth hunters must be accompanied by an adult 18 years or older. The daily bag limit is 3 cocks, and the possession limit after the first day of the season is 6 cocks.

** One adult may take more than one youth hunter.*

WMA PHEASANT PERMIT

Hunting for pheasants on the 9 WMAs requires a WMA pheasant permit.

Recording harvest: The Department releases pheasants at 9 Wildlife management Areas (WMAs) in Southern Idaho. Any person 17 years old or older must have a valid WMA Pheasant Permit in possession while hunting pheasants at the following WMAs:

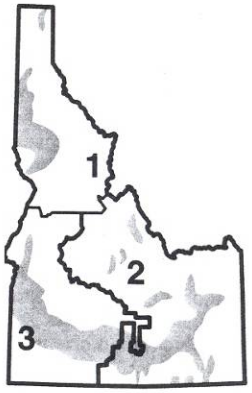
Area	Location Code	Area	Location Code
Fort Boise	01	Market Lake	06
Payette River	02	Mud Lake	07
Montour	03	Cartier Slough	08
C.J. Strike	04	Niagara Springs	09
Sterling	05		

Permit Validation: When a pheasant is reduced to possession, the hunter must immediately:

A. Enter in the space provided, the month and day the pheasant was taken.

B. Enter in the space provided, the location code (listed above) of the WMA where the pheasant was taken.

C. It is not necessary to remove the notch from the permit for each pheasant taken.



Distribution and Habitat Use: Shaded area(s) show general distribution of this species. The ring-necked pheasant is widely distributed in agricultural areas. Important habitat needs are grassy areas or other dense nesting cover at least 18 inches high, permanent cover that provides protection from winter weather, and abundant water and food (especially grain). Pheasants are common in this type of habitat along the Snake River Plain from the Oregon border to central Idaho. They are present in lower densities in agricultural habitats below 5,000 feet in eastern Idaho and below 4,000 feet in northern Idaho from Benewah County south to Whitebird.

FOREST GROUSE -

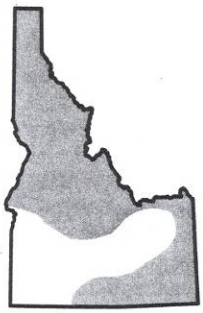
Blue, Ruffed, and Spruce

ENTIRE STATE

OPEN

Seasons
2002 — September 1 through December 31
2003 — September 1 through December 31

Daily Bag Limit ..... **4 of any kind**
Possession Limit After
First Day of Season ..... **8 of any kind**



Distribution and Habitat Use: Shaded area(s) show general distribution of these species. Idaho's three species of forest grouse are all native to the state. In northern Idaho, ruffed grouse are the most common forest grouse. Good populations are also found in the mountains of central and eastern Idaho and southeastern Idaho west to the Sublett Mountains. Riparian habitats and other moist mountain brush areas are commonly used by these birds. Blue grouse are more common than other grouse in most southern Idaho mountains. They favor high elevation sagebrush and mountain shrub areas for nesting, springs and stream banks for rearing young and rely heavily on Douglas fir for fall and winter food and cover. The sparsely-distributed spruce grouse are found in dense conifer forests, generally from the Salmon and Payette river drainages north.

BOBWHITE & CALIFORNIA QUAIL

(No season on Gambel's and Mountain Quail)

AREA 1
Bannock, Bear Lake, Bingham, Bonneville, Butte, Caribou, Clark, Custer, Franklin, Fremont, Jefferson, Lemhi, Madison, Oneida, Power, and Teton Counties; CLOSED.

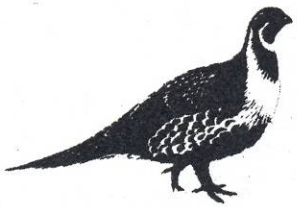
AREA 2
Ada, Adams, Benewah, Blaine, Boise, Bonner, Boundary, Camas, Canyon, Cassia, Clearwater, Elmore, Gem, Gooding, Idaho, Jerome, Kootenai, Latah, Lewis, Lincoln, Minidoka, Nez Perce, Owyhee, Payette, Shoshone, Twin Falls, Valley, and Washington Counties.

Seasons
2002 — September 21 through December 31
2003 — September 20 through December 31

Daily Bag Limit ..... **10 of any kind**
Possession Limit After
First Day of Season ..... **20 of any kind**

Distribution and Habitat Use: Shaded area(s) show general distribution of these species. There are three introduced and one native species of quail in Idaho. The California (valley) quail, which occurs from Twin Falls west to the Oregon border and north to the Palouse Prairie, is the most common. Good populations live along rivers, streams and other areas of abundant water and brushy cover below about 3,500 feet elevation. The bobwhite quail was introduced to Idaho in the 1880s and still exists in small, scattered populations in agricultural areas of the Boise Valley. The Gambel's quail was introduced near Salmon in 1917, and a small population still exists there. The season is closed on Gambel's quail. The mountain quail, a native bird, exists in small, scattered populations in dense mountain brush fields usually associated with riparian areas. It is rare in the mountains from Boise to Bennett Mountain, the Owyhee Mountains, and along the Little Salmon River, Main Salmon and lower Snake River. The season is closed on mountain quail.

SAGE GROUSE



***Note:** Twin Falls County and most of Cassia County are closed to the hunting of sharp-tailed grouse. Be sure of your target!*

AREA 1

Ada, Adams, Benewah, Blaine County within the Salmon River drainage, Boise, Bonner, Boundary, Canyon, Cassia County south of Interstate 86 and east of Interstate 84, Clearwater, Custer County within the Salmon River drainage upstream from and including Valley Creek, Elmore County EXCEPT that portion south and east of US Highway 20 and north of Interstate 84, Gem, Idaho, Kootenai, Latah, Lewis, Nez Perce, Oneida County north and east of Interstate 84, Payette, Power County south of Interstate 86, Shoshone, Valley, and Washington Counties; CLOSED.

AREA 2

Bannock, Bear Lake, Bingham, Blaine County east of the Arco-Minidoka road, Bonneville, Butte County south of US Highways 20/26 and 22/33 and the entire Birch Creek drainage, Caribou, Cassia EXCEPT that portion south of Interstate 86 and east of Interstate 84, Clark, Franklin, Fremont, Jefferson, Lemhi County within the Birch Creek drainage, Madison, Oneida EXCEPT that portion north and east of Interstate 84, Owyhee County north of the Juniper Mountain/Mud Flat/Poison Creek roads and Highway 78 to Grandview and the Snake River, Owyhee County east of the Bruneau River, Power County north of Interstate 86, Twin Falls and Teton Counties.

Seasons
2002 — September 21 through September 27
2003 — September 20 through September 26

Daily Bag Limit 1
Possession Limit After First Day of Season 2

AREA 3

Blaine County EXCEPT that part within the Salmon River drainage and that part east of the Arco-Minidoka Road, that part of Butte County north of US Highway 20/26 and State Highway 22/33 not within the Birch Creek drainage, and that part west of the Arco-Minidoka Road, Camas, Custer County EXCEPT that portion within the Salmon river drainage upstream from and including Valley Creek, Elmore County south and east of US Highway 20 and north of Interstate 84, Gooding, Jerome, Lemhi County EXCEPT that portion within the Birch Creek drainage, Lincoln, Minidoka, Owyhee County south of the Juniper Mountain/Mud Flat/Poison Creek roads and Highway 78 to Grandview and the Snake River and west of the Bruneau River.

Seasons
2002 — September 21 through October 13
2003 — September 20 through October 12

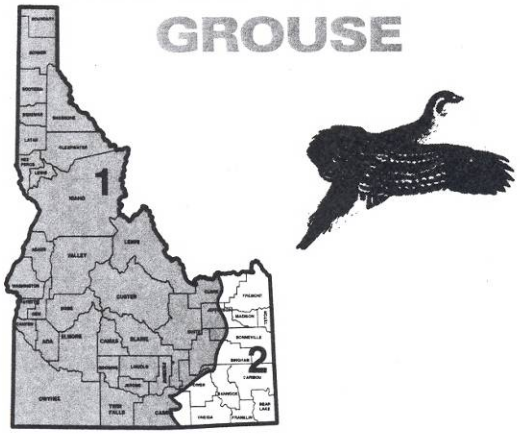
Daily Bag Limit 2
Possession Limit After First Day of Season 4

Sage/Sharp-tailed Grouse Permit Validation: Any person hunting sage or sharp-tailed grouse must have in possession their hunting license with a sage/sharp-tailed grouse permit validation. See pages 3-4.

Vehicle restriction in Twin Falls County and Owyhee County: See page 8.

Distribution and Habitat Use: Shaded area(s) show general distribution of this species. This native grouse is widely distributed in areas with large blocks of sagebrush habitat throughout southern Idaho. Sagebrush is a crucial winter food for sage grouse and also provides them with nesting and roosting cover during the rest of the year. Wet places, including agricultural lands, are important feeding areas for hens with chicks and are heavily used by sage grouse during the fall in dry years.

SHARP-TAILED GROUSE



AREA 1

Ada, Adams, Bannock County west of Interstate 15 and north of Interstate 86, Benewah, Bingham County west of Interstate 15, Blaine, Boise, Bonner, Bonneville County west of Interstate 15, Boundary, Butte, Camas, Canyon, Cassia County west of Interstate 84 north of the Malta-Sublett Road and west of the Malta-Strevell Road, Clark County west of Interstate 15, Clearwater, Custer, Elmore, Gem, Gooding, Idaho, Jefferson County west of Interstate 15, Jerome, Kootenai, Latah, Lemhi, Lewis, Lincoln, Minidoka, Nez Perce, Owyhee, Payette, Power County north of Interstate 86, Shoshone, Twin Falls, Valley, and Washington counties; CLOSED.

AREA 2

Bingham and Clark counties east of Interstate 15, Franklin, Fremont, Jefferson County east of Interstate 15, Madison, and Teton counties, Bonneville County east of Interstate 15, Bannock County east of Interstate 15 and south of Interstate 86, Bear Lake, Caribou, Cassia County east of Interstate 84 and that portion west of Interstate 84 south of the Malta-Sublett Road and east of the Malta-Strevell Road, Franklin, Oneida, and Power County south of Interstate 86.

Seasons
2002 — October 1 through October 31
2003 — October 1 through October 31

Daily Bag Limit **2**
Possession Limit After First Day of Season **4**

Sage/Sharp-tailed Grouse Permit Validation: Any person hunting sage or sharp-tailed grouse must have in possession their license with a sage/sharp-tailed grouse permit validation. See page 3-4.

Distribution and Habitat Use: Shaded area(s) show general distribution of this species. Columbian sharp-tailed grouse were once distributed in grassland/mountain brush habitats throughout southern and western Idaho north to the Palouse Prairie. Habitat changes due to agricultural development and livestock grazing, and human development, among other factors, have reduced this grouse's range to areas mostly in southeastern Idaho. Agricultural lands enrolled in the Conservation Reserve Program are currently providing important habitat for this species and have led to increased populations since 1986. Good populations still exist from Fremont County south to Utah in grasslands associated with chokecherry, sagebrush, hawthorn, serviceberry, bitterbrush and other brushy cover. The season is closed on a small remnant population north of Weiser and a transplanted population in Shoshone Basin, south of Twin Falls.

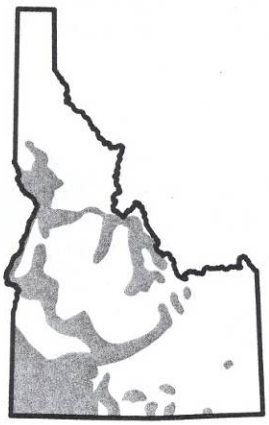
Note: *Sharp-tailed grouse have recently been introduced into historical range south of Twin Falls. The area remains closed to hunting for sharptails to protect this population.*

CHUKAR & GRAY PARTRIDGE

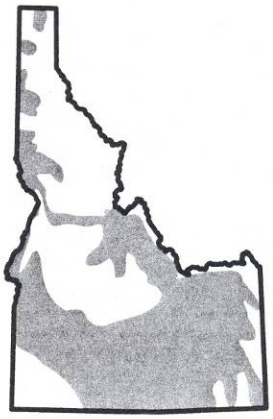
ENTIRE STATE
OPEN

Seasons
2002 — September 21 through January 15, 2003
2003 — September 20 through January 15, 2004

Daily Bag Limit..... 8 Chukar and 8 Gray Partridge
Possession Limit After First Day of Season ..... 16 Chukar & 16 Gray Partridge
Vehicle restriction in Twin Falls County and Owyhee County: See Page 8.



Chukar Partridge
Distribution and Habitat Use: Shaded area(s) show general distribution of chukar partridge. This species was introduced into Idaho from Asia. They are common in suitable habitat along the Salmon, Snake and Boise rivers, and along other river drainages of southern and central Idaho up to an elevation of about 5,000 feet. Chukar habitat consists of steep, rocky canyons with grassy and brushy vegetation.



Gray Partridge
Distribution and Habitat Use: Gray partridge, another introduced species, are most common in agricultural regions, but can also be found in sagebrush/grassland areas. They are hardy birds able to withstand severe winter weather if adequate food is available. Gray partridge are widely distributed, but are most common in the state's agricultural valleys.

Turkey Seasons

GENERAL HUNT SEASONS

- **April 15, 2003 through May 25, 2003.** General Spring Hunt in Game Management Units 1, 2 (Except Farragut State Park and Farragut WMA) & Units 3, 4, 4A, 5, 6, 8, 8A, 10, 10A, 11, 11A, 12, 13, 14, 15, 16, 17, 18, 22, 23, 24, 31, 32 (except that portion in Payette County), 32A, 33, 39.
- **September 15, 2003 through October 31, 2003.** General Fall Hunt in Game Management Units 1, 2 (Except Farragut State Park and Farragut WMA), 3, 4, 4A, 5, 6, 73, 74, 75, 77.
- **September 15, 2003 through October 9, 2003.** General Fall Hunt in Game Management Units 8, 8A, 10A, 11, 11A, 12, 13, 14, 15, 16, 17, 18.
- **November 21, 2003 through December 10, 2003.** General Fall Hunt in Game Management Units 8, 8A, 10A.
- **September 15, 2003 through October 4, 2003.** General Fall Hunt in Game Management Units 22, 23, 24, 31, 32, 32A, 33, 39.

BAG AND POSSESSION LIMITS

The daily bag limit is one bearded turkey per day in the spring and one turkey (either sex) per day in the fall. No more than 2 turkeys may be taken per year. No more than 2 bearded turkeys may be taken per spring. No more than 1 turkey (either sex) per fall.

- **The "Late Spring/Fall General Turkey Tag" is the only tag available in 2003 for fall turkey hunting. Hunters that do not harvest a turkey in the spring with this tag will be able to hunt turkeys in the fall (*see page 10 and NOTE below*).**

2002 REGIONAL TURKEY HARVEST

REGION	SPRING	FALL	TOTAL HARVEST
Panhandle	806	451	1,257
Clearwater	1,788	455	2,243
Southwest	942	279	1,221
Southeast	69	323	392
Success	28%	42%	30%

Information in this brochure summarizes the rules and is the official proclamation of the Idaho Fish and Game Commission for the taking of turkeys. The official rules are available from the Division of Statewide Administrative Rules, Department of Administration, Statehouse Mail, Boise, ID 83720, and may be reviewed in some libraries. Maps are for general reference only.

CONTROLLED HUNT SEASONS

USE THESE NUMBERS ON YOUR CONTROLLED HUNT APPLICATION

WILD TURKEY CONTROLLED HUNT AREA DESCRIPTIONS

SPRING HUNTS

Hunt No.	
9001	**Hunt Area 938-1:** All of Unit 38 and that portion of Unit 32 in Payette County. **ACCESS IS LIMITED** **April 15 - May 25 75 Permits**
9002	**Hunt Area 950-1:** All of Unit 50, 51, 58, 59, 59A, 60, 60A, 61, 62, 62A, 63, 63A, 64, 65, 66, 67,69. *(Turkeys may be found in portions of units 50, 60, 60A, 62, 63A, 64, 66, 67, 69)* **April 15 - May 25 100 Permits*** **On BLM land, human activity is not allowed (including hunting) within 400 meters of active bald eagle nests. For specific access information on BLM land, please call the BLM office at 208-524-7500.*
9003	**Hunt Area 954-1:** All of Unit 54. **YOUTH HUNT (15 or younger on 1/1/03)** **April 12- April 25 4 Permits**
9004	**Hunt Area 954-2:** All of Unit 54. **April 26 - May 9 4 Permits**
9005	**Hunt Area 954-3:** All of Unit 54. **May 10 - May 23 4 Permits**
9006	**Hunt Area 968A-1:** All of Unit 68A. **April 15 - April 21 15 Permits**
9007	**Hunt Area 968A-2:** All of Unit 68A. **April 22 - April 30 15 Permits**
9008	**Hunt Area 968A-3:** All of Unit 68A. **May 1 - May 14 15 permits**
9009	**Hunt Area 977-1:** All of Units 73, 74, 75 and 77. **April 15 - April 21 50 permits**
9010	**Hunt Area 977-2:** All of Units 73, 74, 75 and 77. **April 22 - April 30 50 permits**
9011	**Hunt Area 977-3:** All of Units 73, 74, 75 and 77. **May 1 - May 14 50 permits**

***NOTE:** The Spring General turkey tag is valid for any spring general hunt. The Late Spring/Fall General turkey tag is valid for any spring general hunt during May 1 to May 25, and during any fall general hunt. Spring controlled turkey tags are valid only for specific areas and seasons as designated by hunt number.*

Costs associated with this publication are available from IDFG in accordance with section 60-202, Idaho Code. 12-02/75,000/41918

IDAHO FISH AND GAME
2003 MOURNING DOVE SEASON AND LIMITS

2003 Season: September 1 - September 30
Daily Bag Limit: 10
Possession Limit: 20 (after first day)

✓Federal Migratory Game Bird Harvest Information Program Validation—REQUIRED
✓Nontoxic Shot—NOT REQUIRED

OFFICIAL SHOOTING HOURS FOR MOURNING DOVES DURING SEPTEMBER

(One-half hour before sunrise to sunset)

The tables below have been adjusted to actual shooting times. No further adjustment is necessary.

September	Benewah, Bonner, Boundary, Clearwater, Kootenai, Latah, Lewis, that portion of Idaho County north of the Salmon River, Nez Perce and Shoshone counties.		Blaine, Butte, Camas, Cassia, Custer, Gooding, Jerome, Lemhi, Lincoln, Minidoka, and Twin Falls counties.		Bannock, Bear Lake, Bingham, Bonneville, Caribou, Clark, Franklin, Fremont, Jefferson, Madison, Oneida, Power and Teton counties.		Ada, Adams, Boise, Canyon, Elmore, Gem, that portion of Idaho County south of theSalmon River, Owyhee, Payette, Valley, and Washington counties.	
	Begin (AM)	End (PM)	Begin (AM)	End (PM)	Begin (AM)	End (PM)	Begin (AM)	End (PM)
1	5:38	7:31	6:31	8:13	6:25	8:05	6:38	8:21
2	5:39	7:29	6:32	8:12	6:26	8:04	6:39	8:19
3	5:41	7:27	6:33	8:10	6:27	8:02	6:40	8:17
4	5:42	7:25	6:34	8:08	6:28	8:00	6:42	8:15
5	5:43	7:23	6:35	8:07	6:29	7:59	6:43	8:14
6	5:45	7:21	6:36	8:05	6:30	7:57	6:44	8:12
7	5:46	7:19	6:37	8:03	6:31	7:55	6:45	8:10
8	5:48	7:17	6:38	8:01	6:32	7:53	6:46	8:08
9	5:49	7:15	6:39	8:00	6:33	7:52	6:47	8:06
10	5:50	7:13	6:40	7:58	6:34	7:50	6:48	8:05
11	5:52	7:11	6:41	7:56	6:35	7:48	6:49	8:03
12	5:53	7:09	6:42	7:54	6:36	7:46	6:50	8:01
13	5:54	7:07	6:43	7:52	6:37	7:44	6:52	7:59
14	5:56	7:05	6:45	7:51	6:29	7:43	6:53	7:57
15	5:57	7:03	6:46	7:49	6:40	7:41	6:54	7:56
16	5:58	7:01	6:47	7:47	6:41	7:39	6:55	7:54
17	6:00	6:59	6:48	7:45	6:42	7:37	6:56	7:52
18	6:01	6:57	6:49	7:43	6:43	7:35	6:57	7:50
19	6:02	6:55	6:50	7:41	6:44	7:34	6:58	7:48
20	6:04	6:53	6:52	7:39	6:45	7:32	6:59	7:46
21	6:05	6:51	6:53	7:37	6:46	7:30	7:01	7:45
22	6:06	6:49	6:54	7:36	6:47	7:28	7:02	7:43
23	6:07	6:47	6:55	7:35	6:48	7:26	7:03	7:41
24	6:08	6:45	6:56	7:33	6:49	7:25	7:04	7:39
25	6:09	6:42	6:58	7:31	6:50	7:24	7:05	7:37
26	6:11	6:40	6:59	7:29	6:52	7:22	7:06	7:35
27	6:12	6:38	7:00	7:27	6:53	7:20	7:08	7:34
28	6:13	6:35	7:02	7:25	6:54	7:18	7:09	7:32
29	6:14	6:33	7:03	7:23	6:55	7:16	7:10	7:30
30	6:15	6:31	7:04	7:21	6:56	7:14	7:11	7:28

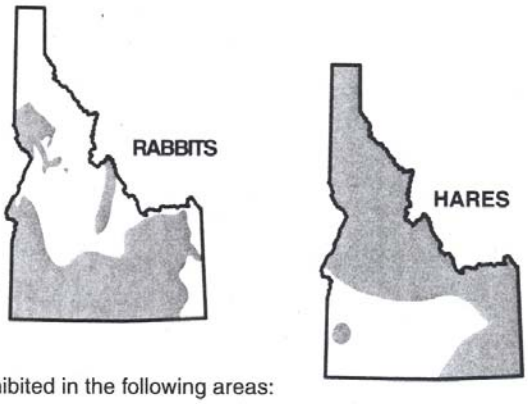
UPLAND GAME ANIMALS — COTTONTAIL RABBITS AND SNOWSHOE HARES

UNLAWFUL METHODS OF TAKE

No person shall take upland game animals:

- From one-half hour after sunset to one-half hour before sunrise.
- With a trap, snare, net, or shotgun using shotgun shells exceeding three and one-half (3 1/2) inches in length.
- From boats or other craft having a motor attached UNLESS the motor is completely shut off and forward progress has ceased, or the boat is drifting naturally, or it is propelled only by paddle, oars, or pole, or it is beached, moored, or resting at anchor.
- By the use or aid of any electronic call.

Shaded areas show general distribution of these species.



AREAS CLOSED TO HUNTING

Hunting, killing, or molesting upland game animals is prohibited in the following areas:

- Craters of the Moon National Monument in Blaine and Butte counties.
- Harriman State Park Wildlife Refuge in Fremont County.
- Nez Perce National Historical Park in Clearwater, Idaho and Nez Perce Counties.
- That portion of Ada County within Veterans Memorial Park and the area between State Highway 21 and the New York Canal from the New York Canal Diversion Dam downstream to the Boise City limits.
- Yellowstone National Park in Fremont County.
- On any of those portions of federal refuges, State game preserves, State wildlife management areas, bird preserves, bird refuges, and bird sanctuaries for which bird hunting closures have been declared by legislative or Commission action.

SEASONS, BAG AND POSSESSION LIMITS - STATEWIDE			
SPECIES	**SEASON**	**DAILY BAG LIMITS**	**POSSESION LIMIT** (After 1st day of season)
COTTONTAIL RABBITS	2002: SEP 1, 2002–FEB 28, 2003 2003: SEP 1, 2003–FEB 29, 2004	8	16
PYGMY RABBITS	**SEASON CLOSED**		
SNOWSHOE HARES	2002: SEP 1, 2002–MARCH 31, 2003 2003: SEP 1, 2003–MARCH 31, 2004	8	16

AMERICAN CROWS

No person shall take American crows:

- From one-half hour after sunset to one-half hour before sunrise.
- With trap, snare, net, rifle, pistol or a shotgun using shells exceeding three and one-half (3 1/2) inches maximum length.
- From boats or other craft having a motor attached UNLESS the motor is completely shut off and forward progress has ceased, or the boat is drifting naturally or it is propelled only by paddle, oars, or pole, or it is beached, moored, or resting at anchor.

AREAS CLOSED TO HUNTING

Areas closed to hunting of upland game birds are also closed to hunting of American crows. See page 8.

SEASONS, BAG AND POSSESSION LIMITS - STATEWIDE		
SPECIES	**SEASON**	**DAILY BAG AND POSSESION LIMITS**
AMERICAN CROW	2002: OCT 1, 2002–JAN 31, 2003 2003: OCT 1, 2003–JAN 31, 2004	NO LIMITS

FALCONRY

GENERAL INFORMATION

Birds of Prey or Raptors: All falcons, hawks, owls and eagles.
Falconry: The sport of taking quarry by means of a trained bird of prey.

Species from the following families may be used for falconry:

- Accipitridae (except the bald eagle).
- Falconidae.
- Strigidae (Great horned owl only).

Hunting season: Upland game birds and upland game animals may be taken by falconry during firearms seasons established for those species. During these seasons, falconers may take regular bag and possession limits. During extended falconry seasons, special limits apply.

Migratory game birds may be taken by falconry during firearms seasons established for those species. However, during firearms seasons and extended falconry seasons, special bag and possession limits apply.

Falconers are now required to have state permits for raptor captive breeding, falconry, falconry capture (nonresidents only), falconry in-state transfer, and falconry meet (nonresidents only). Contact your local IDFG office for more information.

There are special requirements regarding the capture, possession, transfer and use of birds of prey in Idaho. Complete rules are available from: IDFG, P.O. Box 25, Boise, ID 83707.

SPECIAL RESTRICTIONS ON HUNTING WITH BIRDS OF PREY

Anytime a hunting bird of prey kills quarry that may not be taken under established rules, seasons, bag limts, or license requirements, the falconer must leave the dead quarry where it lies. EXCEPT that the bird of prey may feed upon the quarry before leaving the kill site.

No person may carry a firearm or be accompanied by any person carrying a firearm while hunting by falconry.

Submitted by:

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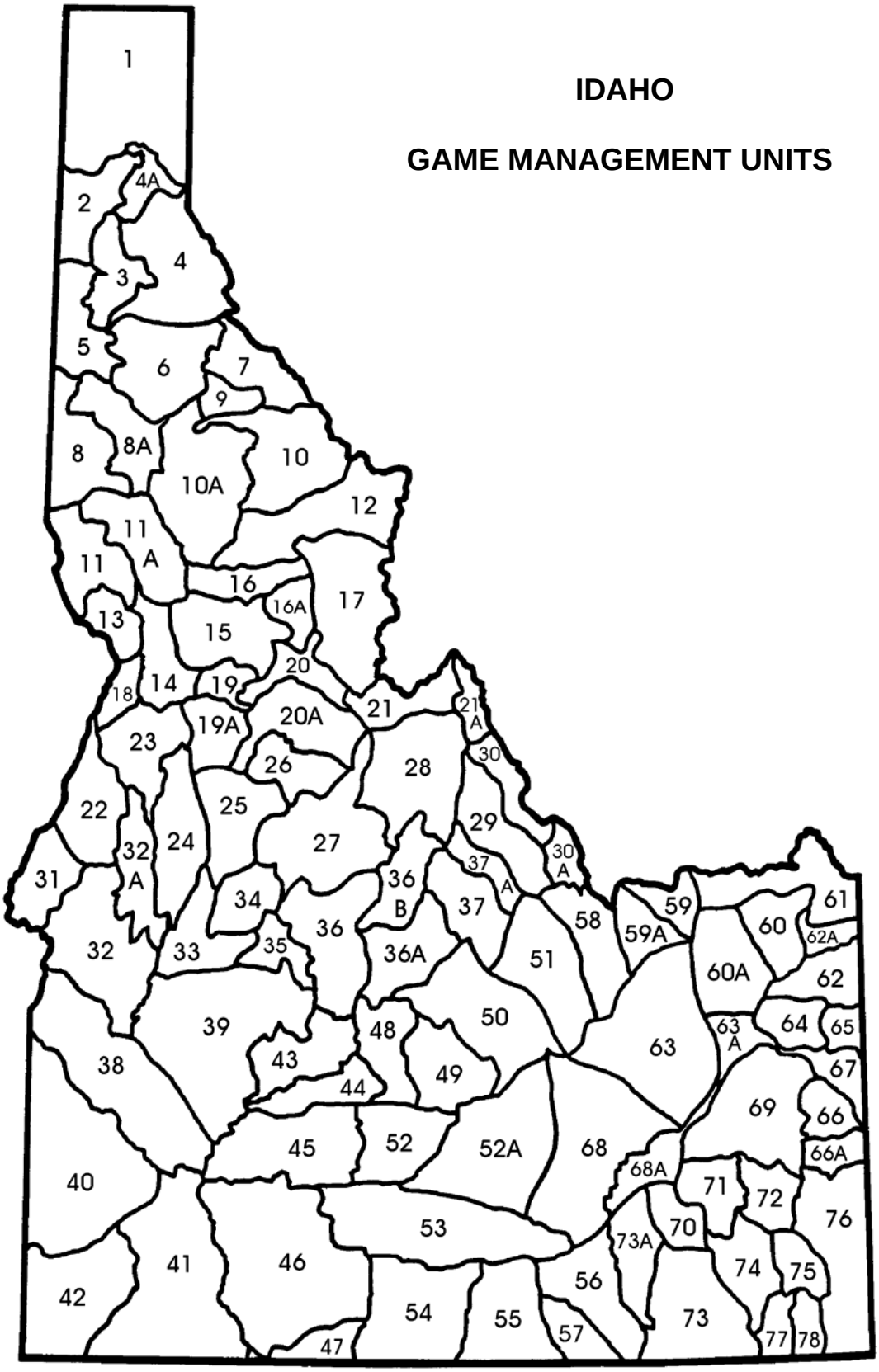
Approved by: IDAHO DEPARTMENT OF FISH AND GAME

Dale E. Toweill
Wildlife Program Coordinator
Federal Aid Coordinator

James W. Unsworth, Chief
Bureau of Wildlife

IDAHO

GAME MANAGEMENT UNITS



FEDERAL AID IN WILDLIFE RESTORATION

The Federal Aid in Wildlife Restoration Program consists of funds from a 10% to 11% manufacturer's excise tax collected from the sale of handguns, sporting rifles, shotguns, ammunition, and archery equipment. The Federal Aid program then allots the funds back to states through a formula based on each state's geographic area and the number of paid hunting license holders in the state. The Idaho Department of Fish and Game uses the funds to help restore, conserve, manage, and enhance wild birds and mammals for the public benefit. These funds are also used to educate hunters to develop the skills, knowledge, and attitudes necessary to be responsible, ethical hunters. Seventy-five percent of the funds for this project are from Federal Aid. The other 25% comes from license-generated funds.