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Cal Groen, Director

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Progress Report



UPLAND GAME

Study II, Job 1

July 1, 2009 to June 30, 2010

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**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>1-7</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED: <u>July 1, 2009 to June 30, 2010</u>			

STATEWIDE

Summary

The 1991-1995 Upland Game Species Management Plan was followed during this report period. It is necessary to develop an updated plan. Three general objectives of the current plan are to:

- Increase efforts to improve habitat for upland game species, particularly through the Idaho Department of Fish and Game (Department) 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, mourning dove coo counts, hunter check stations, and wing barrel harvest data. Each region collects data using various methods based on regional bird densities and sampling constraints. Statewide, telephone surveys assess overall hunter activity and harvest of upland game species. From 1996-2000, telephone surveys estimated statewide rather than regional trends (except turkey) due to budget constraints. A separate telephone survey has been conducted since 2000 for sage- and sharp-tailed grouse to improve sample size for these two species that have been considered for listing under the federal Endangered Species Act (ESA). Starting in 2001, telephone surveys were expanded to collect regional data for all upland game species.

In 2009, the estimated harvest of California quail, pheasants and rabbits was lower than 2008 estimates. However, the estimated harvest for all other upland game birds and snowshoe hares were up from 2008 estimates.

In 2009, approximately 40,100 resident hunting license buyers hunted upland game and approximately 5,300 non-resident hunting license buyers hunted upland game. This represents 18% of all resident hunting license buyers and 16% of all non-resident hunting license buyers.

Climatic Conditions

Idaho is an extremely geographically diverse state and weather patterns can vary dramatically. Snowfall during winter 2009-2010 was slightly below average to above average across the state. Precipitation during spring 2010 was average to above average, while temperatures ranged from cool to average. The regions in the southern portion of the state reported favorable nesting conditions.

Trapping and Translocation

No trapping or translocation activities took place during this study period for pheasant (*Phasianus colchicus*), California quail (*Callipepla californica*), forest grouse (*Tympanuchus phasianellus*), chukar (*Alectoris chukar*), or gray partridge (*Perdix perdix*). In the Magic Valley Region, 85 Columbian sharp-tailed grouse were trapped and translocated to sites in Idaho and Washington to augment or reestablish populations. A total of 75 wild turkeys (*Meleagris gallopavo merriami*) were trapped and translocated in Idaho during winter 2009-2010.

Management Studies

No management studies took place during this study period for upland game.

Pheasant

Abstract

Pheasant populations have declined substantially since the 1980s. Pheasant management has intensified since the decline of pheasant populations during the 1980s. During this reporting period, 73 HIP upland bird projects were implemented on 6,967 acres in Idaho. In 2001, the Pheasant and Quail Initiative was started in the Clearwater Region. The Initiative focuses HIP management in areas where opportunities exist to build on existing landscape-scale upland game bird habitat. The Department has three employees working in Natural Resources Conservation Service (NRCS) county offices as Farm Bill Coordinators. The Coordinators provide technical assistance to private landowners interested in improving fish and wildlife habitat by implementing Farm Bill conservation practices.

Season Framework

In 2009, bag and possession limits for pheasant (Appendix A) remained at three and six, respectively, statewide. The number of pheasants allowed per Wildlife Management Area (WMA) pheasant permit remained at six. The permit cost was \$23.75 for the 2009 season. The youth-only pheasant season was held during October 3-9.

Population Surveys

Roadside counts are conducted in the Clearwater, Magic Valley, and Southwest regions. The number of pheasants observed per mile increased in the Southwest Region, but declined in both the Clearwater and Magic Valley regions.

Harvest Characteristics

According to our statewide telephone survey, approximately 20,100 hunters harvested 67,600 pheasants in 2009 (Table 1). The estimated harvest was down from 98,400 in 2008. The average number of birds harvested per hunter day (Table 2) in 2009 (0.61) decreased from 2008 (0.81). The Southwest Region had the highest harvest where approximately 9,700 hunters harvested an estimated 32,000 pheasants.

In 2009, an estimated 4,000 adults (18 years of age or older) took approximately 5,200 youth (17 years of age or younger) pheasant hunting during the October 3-9 youth-only pheasant season. Adults and youth spent approximately 13,200 days in the field during the youth-only season.

Habitat Conditions

Pheasant habitat provided by farmland is being permanently lost to housing development around population centers in southern Idaho. Habitat has also declined with intensive farming activities, little winter cover or food remains. Early swathing of alfalfa continues to destroy many nests, especially in the Magic Valley Region. Weather and precipitation in 2008 provided favorable nesting and brood-rearing habitat across southern Idaho.

Depredations

Pheasants cause few depredations, primarily on sweet corn in the Southwest Region. Low population levels make this problem minimal.

Management Implications

Pheasant populations continue to fluctuate below historic levels in Idaho. Stable populations exist in areas where Conservation Reserve Program (CRP) lands complement other available nesting and brood-rearing habitat in the Clearwater, Southwest, Magic Valley, and Southeast regions. The State has an approved Conservation Reserve Enhancement Program (CREP) that may retire up to 100,000 acres of irrigated farmland in south-central and eastern Idaho. CREP lands will be planted to conservation cover that should benefit pheasants. The Department has three employees working in NRCS county offices as Farm Bill Coordinators. The Coordinators provide technical assistance to private landowners interested in improving fish and wildlife habitat by implementing Farm Bill conservation practices. Coordinators are working on CREP lands and other private lands to benefit pheasants.

Quail

Abstract

The estimated statewide quail harvest declined from 2008 to 2009. HIP efforts have increased to benefit quail in the Clearwater and Southwest regions. Mountain quail continue to be rare and the hunting season has been closed for them since 1984.

Season Framework

Beginning in 2006, the Magic Valley Region hunting season was extended from December 31 to January 31. The January 31 closing date in the Panhandle, Clearwater, and Southwest regions has remained unchanged. In 2009, bag and possession limits for quail remained at 10 and 20, respectively, statewide (Appendix A).

Population Surveys

Quail are counted during August brood routes in the Southwest and Magic Valley regions. The number of birds observed per mile of route decreased in the Southwest Region, but remained the same in the Magic Valley Region from 2008 to 2009. Numbers remained above the 2001-2008 average in the Magic Valley Region, but were well below the 10-year average in the Southwest Region.

Harvest Characteristics

The statewide quail harvest estimate from the telephone survey decreased from 93,500 in 2008 to 83,100 in 2009 (Table 1). The number of quail hunters in 2009 (10,100) decreased from 2008 (11,600). The number of birds taken per hunter remained virtually unchanged from 8.08 in 2008 to 8.25 in 2009 (Table 3). The Southwest Region had the highest level of quail harvest where approximately 7,300 hunters harvested about 65,600 quail.

Quail were checked at check stations incidental to other activities.

Habitat Conditions

In general, the amount of riparian and agricultural habitat suitable for quail appears stable. However, mountain quail have suffered a long-term decline for reasons that are unclear.

Management Studies

Mountain quail (*Oreotyx pictus*) continue to decline in Idaho, and a petition to list mountain quail as endangered under the ESA was submitted in 2001. In 1992, a graduate research study was initiated to investigate reasons for the declines observed during the past several decades. The focus of the project shifted from spring/summer habitat use and seasonal movements to fall/winter emphasis in 1994. The project generated several reports, two management plans, several popular articles, and a technical manuscript on the work. Results include information on seasonal habitat use and survival in Idaho as well as new habitat and population survey techniques. A summary of this work is provided in a 2004 Department report by Ann Moser and available at the Department office in Boise.

Details on current Mountain Quail research are available in the annual Department research progress report.

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 also available through the Continuous Conservation Reserve Program. The State has an approved CREP that may retire up to 100,000 acres of irrigated farmland in south-central and eastern Idaho. CREP lands will be planted to conservation cover that should benefit California quail.

Forest Grouse

Abstract

Forest grouse continue to be an important resource for upland game bird hunters in Idaho. Forest grouse harvest increased from 2008 to 2009. Management activities directed specifically toward forest grouse habitat is minimal. However, forest grouse habitat, especially ruffed grouse habitat, is being improved by aspen rejuvenation projects through the Department's Mule Deer Initiative (MDI).

Season Framework

The 2009 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, respectively.

Population Surveys

Forest grouse population surveys were not conducted in Idaho during 2009.

Harvest Characteristics

The telephone survey indicated forest grouse harvest (Table 1) increased from 2008 (68,900) to 2009 (93,200). In 2009, more hunters (23,300) pursued forest grouse (Table 4) than in 2008 (21,500). The Clearwater Region had the highest level of forest grouse harvest where approximately 4,200 hunters harvested about 22,400 forest grouse.

In 2009, harvest data via the telephone survey for forest grouse was collected by species: ruffed grouse, blue grouse, and spruce grouse. Individuals unable to identify forest grouse by species reported harvest as "unknown forest grouse." Ruffed grouse hunters (16,100 spent more days hunting (112,300) and harvested more birds (58,200) than blue grouse hunters (9,000 hunters, 54,200 days, and 23,000 birds harvested) or spruce grouse hunters (4,100 hunters, 28,200 days, and 5,900 birds harvested).

Wing data were collected incidental to check stations run for other species. Wings were also collected at wing barrels. An intensified wing barrel collection program was started in the Southwest Region in 2006.

Habitat Conditions

The Department provides information to landowners on how to improve forest grouse habitat. In 2000, the HIP program was expanded to include projects for all upland game bird species. Riparian enhancement is the main practice implemented to benefit forest grouse. The MDI is assisting private landowners in eastern Idaho to improve aspen stands for mule deer habitat. Aspen improvement projects will likely improve habitat for ruffed grouse as well.

Management Implications

With current staffing and operating resources, little additional management work on forest grouse has been planned.

Sage-grouse

Abstract

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. Wildfire frequency and the added fuel from the spread of cheatgrass and medusahead have had a negative impact on sage-grouse habitat. Frequent wildfires prevent 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 more than 50% since the early 1990s. In 1996, the Department initiated a statewide management effort to conserve sage-grouse populations in Idaho.

Season Framework

The season framework was altered in 1996 to provide three different types of seasons: liberal, conservative, and closed. In 2002, the season framework was modified. The 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 number of sage-grouse counted on lek routes. In 2009, there was a seven-day season with a one-bird daily bag limit in Zone 2, and a 23-day season with a two-bird daily bag limit in Zone 3.

Population Surveys

Lek routes have been expanded and standardized during the last few years. This was done to provide data that is more robust in regard to year-to-year variation in lek attendance and bird distribution.

Harvest Characteristics

Starting in 2000, sage-grouse hunters were required to purchase a sage-grouse hunting validation. This requirement provided a means to collect better harvest estimates from a sample of sage-grouse hunters through a telephone survey. Approximately 4,400 hunters (Table 1) harvested 7,200 sage-grouse (Table 5) in 2009.

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.

Habitat Conditions

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 10-15 years. Wildfire frequency and size in the sagebrush steppe has increased, especially during the drought years, 1997-2007.

Management Studies

A single statewide dataset was created for historic sage-grouse lek information. This data is 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.

Sage-grouse seasonal distribution and movement is being studied in several portions of Owyhee County. During spring 2008, radios were placed on eight male sage-grouse scattered across Owyhee County. During summer radios were placed on six hens near Riddle to document the impacts of West Nile virus. Study results may be used to prioritize habitat protection and improvement efforts based on key seasonal habitat used by sage-grouse. In addition, sage-grouse seasonal distribution, habitat use patterns, productivity, and survival rates are being studied in Washington County. Sage-grouse population in Washington County is unique because it is isolated from other sage-grouse populations and habitat, and the land is highly fragmented and primarily under private ownership.

Management Implications

Sage-grouse are a good indicator of sagebrush habitat health. In August 1997, the Idaho Fish and Game Commission adopted a long-term management plan. Ten local working groups (LWGs) in different parts of the state are meeting to help determine the needs of local sage-grouse populations. The state sage-grouse advisory committee has finished the Conservation Plan for the Greater Sage-grouse in Idaho and it can be found on the Department website at http://fishandgame.idaho.gov/cms/hunt/grouse/conserves_plan/. During 2010, the NRCS developed the Sage-grouse Initiative (SGI) to help private landowners voluntarily conserve sage-grouse populations and habitat on their working lands. In Idaho, the NRCS identified potential threats to sage-grouse and their habitat and determined specific conservation practices to reduce those threats. Technical and financial assistance through EQIP and WHIP is available for

implementing specific practices. The ultimate goal of the SGI is to help ensure sustainable use of good sagebrush habitat by both ranchers and wildlife such as sage-grouse.

Sharp-tailed Grouse

Abstract

The largest remaining Columbian sharp-tailed grouse (*Tympanuchus phasianellus columbianus*; CSTG) populations occur in eastern Idaho. CSTG have received substantial benefits from CRP grassland habitat since the late 1980s. Translocation efforts continued during this study period. The Idaho CSTG translocation program began in 1991 with the goal of reestablishing populations of this subspecies in Idaho and other western states where suitable habitat exists.

Season Framework

The 2009 season framework was unchanged (Appendix A) with a 31-day season from October 1-31. The bag and possession limits remained at two and four, respectively.

Population Surveys

Lek counts were conducted in the Upper Snake, Southeast, Magic Valley, and Southwest regions. Grouse wings are collected at wing barrels and from hunters checked incidental to other management activities. Wing barrels provide a large proportion of the wings collected. In 2009, the Upper Snake Region made a significant effort to improve the sample of wings collected from the Sand Creek and Tex Creek Wildlife Management Areas. Their efforts increased the sample size by 70% from 2008. Juvenile to adult ratios, obtained from wing data increased in both the Southeast and Upper Snake regions from 2008 to 2009.

Harvest Characteristics

Beginning in 2000, CSTG hunters were required to purchase a sage/sharp-tailed grouse hunting validation. This requirement provided a means to collect better harvest estimates from a sample of CSTG hunters through a telephone survey. In 2009, approximately 2,200 hunters harvested 5,600 sharp-tailed grouse (Table 1). The number of hunters and grouse harvested in 2009 were similar to those reported in 2008 (Table 6). Hunters hunted slightly fewer days (6,300 vs. 6,900) in 2009 than in 2008.

Habitat Conditions

The CRP program continues to provide habitat for CSTG in Idaho; however, the number of acres eligible for enrollment in the program has declined. The Department continues to plant forbs, legumes, and shrubs in existing CRP land in eastern and southeastern Idaho to improve upland game bird habitat and mule deer habitat through the HIP and MDI programs. Many of the MDI projects are in sharp-tailed grouse range and will improve grouse habitat. In addition, the CRP-SAFE program enrolled over 11,500 acres to benefit CSTG. In May 2010, IDFG requested and

received another 40,000 acres to enroll in CRP-SAFE. Efforts to maintain or increase habitat for CTSG in Idaho are ongoing.

Trapping and Translocation

Since 1991, the Department has trapped CSTG in southeastern Idaho for translocation to suitable habitats. In 1991, 33 birds were trapped and translocated to northeastern Oregon. Releases have taken place annually since that initial attempt. During 1991-2010, 1,341 CSTG (805 males, 536 females) were trapped in southeast Idaho for reintroduction projects in Idaho, Oregon, Washington, and Nevada. Six hundred six grouse were released in the Shoshone Basin and House Creek areas, Twin Falls County, Idaho, and 735 birds were provided to the other states.

Management Studies

During April 2010, one lek was documented in the House Creek area and two in Shoshone Basin. Grouse reports over the last 10 years encompass an area of over 200 mi². While it is suspected that additional leks exist, efforts to locate them have been unsuccessful.

Management Implications

Idaho has a unique resource in its Columbian sharp-tailed grouse populations. The Department will continue its efforts to translocate sharptails into areas identified as potential sharp-tailed grouse habitat to expand their distribution in Idaho. The Department is focusing more habitat development and improvement projects in eastern and southeastern Idaho for sharp-tailed grouse.

Chukar

Abstract

The chukar harvest in 2009 was the third lowest since 1997, but harvest has increased since the low in 2007. Survey work is limited to helicopter index flights conducted in the Clearwater and Southwest regions.

Season Framework

In 2000, a single season framework was applied statewide with a closing date of January 15. However, the season framework was split into three areas with closing dates of December 31, January 15, and January 31, for the 2004 and 2005 seasons. A closing date of January 31 was applied statewide for the 2006 season. The 2009 season framework was unchanged with a 135-day season from September 19 to January 31 (Appendix A). The chukar season runs concurrent with the gray partridge season. The bag and possession limits remained at eight and 16, respectively.

Population Surveys

Chukar surveys were conducted by helicopter along a portion of the Brownlee Reservoir in the Southwest Region during late August 2009. The total number of chukar observed (884) was 50% lower than the 10-year average, but 48% higher than the 2008 counts.

Harvest Characteristics

In 2009, approximately 8,700 hunters harvested an estimated 71,100 chukars (Table 1). Fewer hunters (Table 7) pursued chukars during 2009 (8,700) than in 2008 (9,300). Hunters hunted fewer days (45,900 vs. 57,500), but harvested more birds (71,100 vs. 59,400) in 2009 than in 2008. Southwest Region hunters (5,500) harvested overwhelmingly more chukars (46,600; 66% of statewide harvest) than any other region.

Habitat Conditions

In 2010, the regions in the southern portion of the state reported favorable nesting and brood-rearing habitat conditions across chukar range. Most chukar habitat occurs on public lands and is affected mostly by weather, livestock grazing, or wildfire.

Management Implications

Prior to 2007, chukar harvest estimates had increased since 1997. Annual chukar populations, like most upland game, are greatly influenced by weather conditions during nesting and brood-rearing seasons. Current season lengths and bag and possession limits apparently do not need to be reduced for chukar 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, Galliziolli and Swank 1958, Bennitt 1951). In fact, Robinson et al. (2009) report that hunter harvest accounted for only 8% of documented chukar mortality in Utah.

Gray Partridge

Abstract

The 2009 gray partridge harvest was the highest since 2006. HIP efforts and CRP will work to improve gray partridge habitat statewide. The Department has three employees working in NRCS county offices as Farm Bill Coordinators. The Coordinators provide technical assistance to private landowners interested in improving fish and wildlife habitat by implementing Farm Bill conservation practices.

Season Framework

In 2000, a single season framework was applied statewide with a closing date of January 15. However, the season framework was split into three areas with closing dates of December 31,

January 15, and January 31 for the 2004 and 2005 seasons. A closing date of January 31 was applied statewide for the 2006 season. The 2009 season framework was unchanged with a 135-day season from September 19 to January 31 (Appendix A). The chukar season runs concurrent with the gray partridge season. The bag and possession limits remained at eight and 16, respectively.

Population Surveys

Gray partridge observations are recorded during August roadside survey routes. However, brood routes do not sample non-agricultural habitat used by gray partridge in Idaho and may not reflect statewide gray partridge population trends.

Harvest Characteristics

In 2009, 6,500 hunters harvested an estimated 29,400 gray partridge (Table 1). More hunters (Table 8) pursued gray partridge during 2009 (6,500) than in 2008 (5,900). Hunters in the Southwest (2,800) Region harvested more gray partridge (11,200; 38% of statewide harvest) than any other region.

Habitat Conditions

Gray partridge habitat provided by farmland is being permanently lost to housing development around population centers in southern Idaho. However, there still remains habitat along the farmland-sagebrush steppe interface. HIP activities continue to improve gray partridge habitat in many parts of the state, especially in areas with large acreage of CRP.

In 2010, the regions in the southern portion of the state reported favorable nesting and brood-rearing habitat conditions across gray partridge range. A substantial portion of gray partridge habitat occurs on public lands and is affected mostly by weather, livestock grazing, or wildfire.

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. The State has an approved CREP that may retire up to 100,000 acres of irrigated farmland in south-central and eastern Idaho. CREP lands will be planted to conservation cover that should benefit gray partridge.

Wild Turkey

Abstract

In Idaho, most suitable wild turkey habitat has been stocked and populations seem to have stabilized during recent years. Harvest in 2009 was the third highest on record. Turkeys are trapped and translocated during winter to address nuisance and depredation concerns.

Season Framework

Spring general hunts were offered in the Panhandle, Clearwater, Southwest, and Southeast regions during 2009 (Appendix A). Spring controlled hunts were offered in the Southwest, Magic Valley, Southeast, Upper Snake, and Salmon regions. A fall general season was offered in the Panhandle, Clearwater, Southwest, and Southeast regions. An early, three-day general season youth-only hunt was offered in Game Management Units open to general season turkey hunting from April 11-14. In addition, up to three Special Unit Tags were issued for use in Game Management Unit (GMUs) 1, 2, 3, and 5 to curb the turkey population in the Panhandle Region. The bag limit was six turkeys during the year with no more than two bearded turkeys per spring (one per day) and five turkeys (either sex) during fall.

Population Surveys

No formal surveys were conducted.

Harvest Characteristics

Hunters harvested (Table 1) more turkeys in 2008 (6,100) than in 2007 (5,200). Telephone surveys indicated 3,265 and 2,434 turkeys were harvested during general spring and general fall hunts, respectively (Table 9). Hunters harvested 265 and 116 turkeys during spring and fall controlled hunts, respectively. Statewide harvest is concentrated in the Panhandle, Clearwater, and Southwest regions.

Check stations for wild turkey harvest are not conducted in Idaho.

Trapping and Translocation

A total of 75 turkeys were trapped and translocated in Idaho (Table 10) during winter 2009-2010.

Management Implications

Liberal hunting seasons, trap and translocate, kill permits, and habitat improvement projects were used to address turkey nuisance and depredation concerns. Interest in hunting this species continues to grow.

Mourning Dove

Abstract

Mourning doves (*Zenaida macroura*) continue to be a popular early-season species for hunting.

Season Framework

The 2009 season framework remained unchanged from 2008 (Appendix A). Bag and possession limits were 10 and 20, respectively.

Population Surveys

Call-count surveys (Table 11) are conducted annually and data are provided to the U.S. Fish and Wildlife Service (USFWS) who monitor dove numbers nationwide. The number of doves heard per mile fluctuated among regions.

Harvest Characteristics

Harvest information on mourning doves is collected via the USFWS harvest survey.

Trapping and Banding

Since 2003, Idaho (all regions except the Panhandle) has participated in a Pacific Flyway-wide effort to trap and band mourning doves. In 2009, 599 doves were banded (Table 12). Since 2003, 4,045 mourning doves have been banded in Idaho.

Management Implications

In 1987, the federal season framework reduced the maximum allowable season length to 30 days and maximum daily bag and possession limits to 10 and 20, respectively. The hunting season regulations in Idaho have since reflected those changes.

Rabbits and Hares

Abstract

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

Season Framework

The season on pygmy rabbits (*Brachylagus idahoensis*) was closed in 2002 due to concerns about low pygmy rabbit populations. Seasons for cottontail rabbits and snowshoe hares (*Lepus americanus*) remain unchanged from 2007 (Appendix A).

Harvest Characteristics

In 2008, approximately 2,800 hunters harvested 11,400 rabbits (Table 13). An estimated 570 hunters harvested approximately 430 snowshoe hares.

Management Implications

Cottontail and snowshoe hare will continue to be a species with no active management in Idaho. Recreational opportunity greatly exceeds demand.

American Crow

Season Framework

Unchanged from 2006 (Appendix A).

Harvest Characteristics

Insufficient data is collected from the telephone survey to allow an estimate of American crow (*Corvus brachyrhynchos*) harvest.

Management Implications

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

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Table 1. Estimated upland game bird harvest in Idaho as determined by random telephone survey of license buyers, 1987-present.

Year	Pheasant	Forest grouse	Gray partridge	Chukar	Quail	Sage-grouse	Sharp-tailed grouse	Turkey
1987	155,600	100,800	28,200	92,100	39,200	42,000	4,300	185
1988	111,900	107,500	25,000	68,100	55,100	39,600	3,500	238
1989	102,700	122,600	10,000	55,800	55,000	40,000	3,500	228
1990	148,700	98,500	31,200	72,200	70,400	55,800	9,800	291
1991	117,700	103,400	32,400	72,700	73,300	39,500	6,000	495
1992	132,400	112,100	27,800	54,600	91,100	29,900	9,300	487
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	58,600	147,700	26,600	109,000	88,600	7,600	3,500	5,068
2003	77,500	182,800	52,500	130,800	140,400			6,491
2004	69,300	134,100	26,700	110,800	124,100	8,100	4,800	5,384
2005	97,600	95,100	44,000	104,100	178,700	10,500	5,200	6,463
2006	99,300	129,800	55,000	108,900	157,200	12,500	6,900	5,610
2007	91,600	113,400	29,100	46,900	112,100	4,900	4,900	5,100
2008	98,400	68,900	16,800	59,400	93,500	7,700	5,000	5,200
2009	67,600	93,200	29,400	71,100	83,100	7,200	5,600	6,100
10-year average	86,000	120,000	41,700	96,500	126,600	8,100	5,100	5,500

^a New telephone survey methodology.

Table 2. Season framework, estimated pheasant hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) ^a	Daily bag ^a	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	44	4	78,500	374,100	455,100	4.77	0.82
1984	44	4	67,600	264,000	346,400	3.91	0.76
1985	44	4	57,000	237,800	336,100	4.17	0.71
1986	58	4	49,600	180,100	249,700	3.63	0.72
1987	58	4	41,300	155,600	220,700	3.77	0.71
1988	58	4	31,300	111,900	166,800	3.57	0.67
1989	58	4	28,500	102,700	160,500	3.61	0.64
1990	58	3	33,100	148,700	199,100	4.50	0.75
1991	58	3	30,900	117,700	183,900	3.81	0.64
1992	58	3	31,200	132,400	183,200	4.24	0.72
1993 ^b	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 ^b	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 ^b	73	3	27,300	87,100	142,300	3.29	0.61
2002	74	3	24,600	58,600	115,400	2.38	0.51
2003	75	3	24,500	77,500	125,500	3.16	0.62
2004	77	3	24,300	69,300	118,400	2.86	0.59
2005	78	3	24,300	97,600	138,700	4.02	0.70
2006	72	3	30,000	99,300	146,900	3.40	0.68
2007	73	3	25,200	91,600	134,900	3.64	0.68
2008	75	3	23,700	98,400	121,200	4.15	0.81
2009	76	3	20,100	67,600	110,100	3.36	0.61
10-year average			24,600	86,000	129,300	3.54	0.66

^a Season length and bag in southwestern Idaho where the majority of pheasant hunting occurs.

^b New telephone survey methodology.

Table 3. Season framework, estimated quail hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) ^a	Daily bag ^a	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	106	10	8,000	59,500	46,800	7.44	1.27
1984	108	10	6,400	47,000	42,800	7.34	1.10
1985	102	10	7,000	56,500	43,400	8.07	1.30
1986	103	10	5,900	39,200	26,300	6.64	1.49
1987	104	10	5,200	39,200	29,900	7.54	1.31
1988	106	10	6,300	55,100	34,700	8.75	1.59
1989	107	10	5,800	55,000	31,900	9.48	1.72
1990	108	10	7,400	70,500	44,600	9.53	1.58
1991	102	10	7,300	73,300	46,600	10.04	1.57
1992	103	10	8,000	91,100	45,300	11.39	2.01
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,c}	116	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	12,300	88,600	51,100	7.20	1.73
2003	103	10	11,700	140,400	59,500	12.00	2.36
2004	136	10	12,100	124,100	60,500	10.22	2.05
2005	137	10	11,000	178,700	74,600	16.22	2.40
2006	138	10	13,000	157,200	86,000	12.10	1.83
2007	139	10	11,700	112,100	66,100	9.61	1.70
2008	134	10	11,600	93,500	69,900	8.08	1.34
2009	135	10	10,100	83,100	49,800	8.25	1.67
10-year average			11,600	126,600	64,300	10.94	1.96

^a Season length and bag in Canyon County.

^b New telephone survey methodology.

^c Special 2-week extension 18-31 January 1997.

Table 4. Season framework, estimated forest grouse hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days)	Daily bag	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	72	4	22,700	110,000	135,800	4.85	0.81
1984	72	4	19,100	85,600	119,100	4.48	0.72
1985	72	4	18,200	73,400	103,900	4.03	0.71
1986	100	4	20,400	104,400	123,400	5.12	0.85
1987	93	4	18,400	100,800	98,800	5.48	1.02
1988	102	4	19,800	107,500	127,100	5.43	0.85
1989	101	4	22,100	122,600	167,600	5.55	0.73
1990	122	4	20,900	98,500	130,900	4.71	0.75
1991	122	4	21,600	103,400	132,500	4.79	0.78
1992	122	4	23,600	112,100	148,200	4.75	0.76
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	33,500	147,700	199,500	4.41	0.74
2003	122	4	33,600	182,800	193,000	5.44	0.95
2004	122	4	34,100	134,100	210,800	3.93	0.64
2005	122	4	24,400	95,100	144,800	3.90	0.66
2006	122	4	36,900	129,800	251,300	3.50	0.52
2007	122	4	25,400	113,400	212,200	4.46	0.53
2008	122	4	21,500	68,900	192,500	3.21	0.36
2009	122	4	23,300	93,200	207,800	4.00	0.45
10-year average			27,000	118,780	174,090	4.52	0.74

^a New telephone survey methodology.

Table 5. Season framework, estimated greater sage-grouse hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) ^a	Daily bag ^a	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	14	1 ^b	7,100	13,700	18,400	1.93	0.75
1984	14	1 ^b	5,300	11,700	15,400	2.21	0.76
1985	14	3 ^b	10,000	26,900	30,000	2.69	0.90
1986	23	3	11,200	37,900	35,700	3.38	1.06
1987	23	3	11,900	42,000	37,500	3.53	1.12
1988	23	3	12,300	39,600	44,000	3.22	0.90
1989	23	3	11,100	40,000	40,000	3.60	1.00
1990	30	3	13,800	55,800	49,400	4.04	1.13
1991	30	3	14,500	39,500	48,100	2.72	0.82
1992	30	3	13,200	29,900	42,700	2.27	0.70
1993 ^c	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 ^c	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 ^c	7	1	5,300	7,000	12,100	1.32	0.58
2002	7	1	5,800	7,600	13,000	1.31	0.58
2003 ^d	7	1					
2004	7	1	7,400	8,100	15,300	1.09	0.53
2005	7	1	6,800	10,500	14,700	1.56	0.72
2006	7	1	8,900	12,500	18,000	1.41	0.69
2007	7	1	4,700	4,940	9,800	1.04	0.50
2008	23	2	5,000	7,700	12,200	1.53	0.64
2009	23	2	4,400	7,200	9,700	1.64	0.74
10-year average			6,000	8,100	13,100	1.35	0.62

^a Season length and bag in Butte County until 1995. In 1996, seasons changed dramatically and season days are for Fremont County.

^b Aggregate bag with sharp-tailed grouse.

^c New telephone survey methodology.

^d Telephone survey data for 2003 is not available.

Table 6. Season framework, estimated sharp-tailed grouse hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) ^a	Daily bag ^a	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	14	1 ^b	600	900	18,400	1.50	0.05
1984	14	1 ^b	800	900	2,500	1.13	0.36
1985	14	3 ^b	800	2,000	3,900	2.50	0.51
1986	14	2	700	1,700	3,300	2.43	0.52
1987	14	2	1,100	4,300	3,100	3.91	1.39
1988	16	2	800	3,500	3,400	4.38	1.03
1989	16	2	1,200	3,500	4,400	2.92	0.80
1990	16	2	1,900	9,800	8,700	5.16	1.13
1991	16	2	1,900	6,000	6,700	3.16	0.90
1992	16	2	2,400	9,300	7,600	3.88	1.22
1993 ^c	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 ^c	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 ^c	31	2	2,200	4,100	6,000	1.83	0.67
2002	31	2	1,900	3,500	5,100	1.84	0.69
2003 ^d	31	2					
2004	31	2	2,300	4,800	6,100	2.08	0.79
2005	31	2	2,200	5,200	6,300	2.34	0.83
2006	31	2	3,000	6,900	8,300	2.30	0.82
2007	31	2	2,200	4,900	6,100	2.27	0.80
2008	31	2	2,300	5,000	6,900	2.19	0.72
2009	31	2	2,200	5,600	6,300	2.53	0.88
10-year average			2,300	5,100	6,500	2.16	0.77

^a Season length and bag in Fremont County.

^b Aggregate bag with sage-grouse.

^c New telephone survey methodology.

^d Telephone survey data for 2003 is not available.

Table 7. Season framework, estimated chukar hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) ^a	Daily bag ^a	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	106	8	11,600	44,700	45,900	3.85	0.97
1984	108	3	4,400	10,500	16,200	2.39	0.65
1985	102	3	7,200	30,800	28,000	4.28	1.10
1986	103	8	9,800	59,500	37,600	6.07	1.58
1987	104	8	12,100	92,100	60,400	7.61	1.53
1988	106	8	10,600	68,000	47,200	6.42	1.44
1989	107	8	8,800	55,800	42,300	6.34	1.32
1990	108	8	10,400	72,200	42,700	6.94	1.69
1991	102	8	10,900	72,700	48,100	6.67	1.51
1992	103	8	10,500	54,600	42,700	5.21	1.28
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	15,400	109,000	71,500	7.08	1.52
2003	118	8	16,600	130,800	76,400	7.88	1.71
2004	136	8	16,700	110,800	71,200	6.62	1.56
2005	137	8	12,600	104,100	61,000	8.29	1.71
2006	138	8	15,100	108,900	65,700	7.20	1.66
2007	139	8	11,300	46,900	44,900	4.17	1.05
2008	134	8	9,300	59,400	57,500	6.40	1.03
2009	135	8	8,700	71,100	45,900	8.16	1.55
10-year average			12,900	96,500	64,100	7.60	1.48

^a Season length and bag in Canyon County.

^b New telephone survey methodology.

Table 8. Season framework, estimated gray partridge hunter numbers, and harvest in Idaho, 1983-present.

Year	Season (days) ^a	Daily bag ^a	Hunters	Harvest	Hunter days	Birds per hunter	Birds per day
1983	106	8	11,300	59,500	72,100	5.27	0.83
1984	108	3	5,300	23,500	35,700	4.43	0.66
1985	102	3	4,800	16,800	26,200	3.50	0.64
1986	103	8	4,800	17,200	22,700	3.58	0.76
1987	104	8	5,700	28,200	28,700	4.95	0.98
1988	106	8	4,400	25,000	26,000	5.68	0.96
1989	107	8	2,900	10,000	15,000	3.45	0.67
1990	108	8	6,100	31,200	31,400	5.11	0.99
1991	102	8	6,400	32,400	34,800	5.06	0.93
1992	103	8	5,600	27,800	25,100	4.96	1.11
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	7,800	26,600	39,700	3.41	0.67
2003	118	8	10,500	52,500	48,700	5.00	1.08
2004	136	8	8,800	26,700	42,800	3.02	0.62
2005	137	8	9,100	44,000	54,000	4.88	1.00
2006	138	8	8,500	55,100	50,100	6.40	1.10
2007	139	8	6,600	29,100	36,000	4.44	0.81
2008	134	8	5,900	16,800	29,900	2.86	0.56
2009	135	8	6,500	29,400	45,800	4.49	0.64
10-year average			8,700	41,700	48,600	4.60	0.84

^a Season length and bag in Canyon County.

^b New telephone survey methodology.

Table 9. Season framework and estimated turkey harvest in Idaho, 1983-present.

Year	General season framework			General season harvest			Controlled hunts			Total harvest	Total tags sold ^b
	Spring	Fall	Bag ^a	Spring	Fall	Total	Hunts	Permits	Harvest		
1983	4/23-5/1		1	19		19				19	270
1984	4/25-5/10		1	17		17	4	70	26	43	312
1985	4/24-5/9		1	37		37	10	100	36	73	439
1986	4/14-5/11		1	88		88	24	150	52	140	571
1987	4/13-5/10		1	117		117	30	180	68	185	814
1988	4/11-5/8		1	153		153	28	232	85	238	1,395
1989	4/10-5/7		1	137		137	26	271	91	228	1,339
1990	4/9-5/6		1	185		185	17	226	106	291	1,436
1991	4/8-5/5		1	393		393	13	215	102	495	1,754
1992	4/13-5/10		1	532		532	14	310	130	662	2,020
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	24,417
2003	4/15-5/25	9/15-10/31	2	4,221	2,111	6,332	11	382	159	6,491	21,639
2004	4/15-5/25	9/15-10/31	3	2,770	2,180	4,950	15	434	183	5,384	25,763
2005	4/15-5/25	9/15-10/31	3	4,064	2,213	6,277	14	408	186	6,463	32,654
2006	4/15-5/25	9/15-12/31	3	3,663	1,797	5,460	14	540	150	5,610	31,089
2007	4/15-5/25	9/15-12/31	6 ^d	3,881	1,020	4,901	14	478	200	5,101	34,575
2008	4/15-5/25	9/15-12/31	6	2,783	2,080	4,863	19 ^e	953	379	5,242	32,500
2009	4/15-5/25	9/15-12/31	6	3,265	2,434	5,699	19	883	381	6,080	31,725
10-year average				3,500	1,600	5,100		792	370	5,500	27,400

^a Bearded turkey only in spring hunts, either sex in fall hunts. Instituted a second spring tag in 1999, valid 10-25 May.

^b Sportsman Package tags not included in total tags sold until 1998.

^c One controlled hunt had unlimited permits; number of permits drawn unavailable.

^d Special Unit Tags initiated in Fall 2007; three extra tags available in GMUs 1, 2, 3, and 5.

^e Three spring hunts and three fall hunts were added in 2008.

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

Year	Sub-species ^a	Release site	Source	Birds released
1961	M	GMU 18	Colorado	17
1962	M	GMU 18	Colorado	11
1963	M	GMU 14	Colorado	11
1965	M	GMU 11	GMU 18	10
1966	M	GMUs 11, 39	GMU 14	14
1967	M	GMU 22		19
1970	M	GMU 32		14
1971	M	GMU 8	GMU 6	15
	M	Boundary County		60 ^b
1972	M	GMU 8	GMU 6	2
	M	Boundary County		24 ^b
1973	M	GMUs 8, 11	GMU 6	6
1979	M	GMU 31		5
1980	M	GMU 18	South Dakota	10
1982	M	GMUs 11, 14	South Dakota	31
	R	GMU 11A	KS, OK, TX	51
	R	GMUs 22, 38, 53, SE Region		115
	M	GMUs 22, 25, 32		38
1983	R	GMU 11A	Oklahoma, Texas	18
	M, R	GMUs 28, 39, 55		84
1984	R	GMUs 40, 55, SE Region		65
	R	GMU 63A	Texas	32
1985	R	GMU 13	Texas	34
	E	GMU 10A	Pennsylvania	16
	R	GMUs 28, 40		7
1986	M	GMU 8	GMU 22	34
	R	GMU 11	North Dakota	14
	M	GMU 39		17
	R	GMU 40		14
1987	M	GMU 39		20
1988	M	GMUs 8, 11A, 13	GMUs 11 & 22	83
	M	GMUs 39, 54		45
	R	GMU 63A	GMU 32A	12
1989	M	GMU 11A	GMU 10A	18
	R	GMU 38		14
1990	M	GMU 14	GMU 8	16
	E	GMU 10A	North Dakota	17
	M	GMUs 22, 31, 39, SE Region		156
1991	M	GMUs 11, 11A, 14	GMUs 1, 8, 9, 11	113
	E, R	GMUs 8A, 10A	North Dakota	80
	M	GMUs 28, 36B		40
1992	M	GMUs 11	GMU 1	28
	M	GMUs 11, 14	North Dakota	48
1993	M	GMUs 10A, 11, 14	GMUs 1, 3, 8	93
	M	GMUs 11, 13	North Dakota	49
	M	GMUs 21A, 31, 32A, 36B, 39, SE Reg.		260
	R	GMUs 32, 38		58
1994	M	GMUs 8, 11A, 14	GMUs 1, 8, 11A	90
	R	GMUs 38, 54		59
	M	GMU 32, SE Region		142
1995	M	GMUs 8, 11A, 14	GMUs 8, 11A	36
	M	GMU 33		57

Table 10. Continued.

Year	Sub-species ^a	Release site	Source	Birds released
	R	GMU 54		14
1996	M	GMUs 8, 11	British Columbia	63
	M	GMUs 11, 15	GMUs 8, 10A, 11A	54
	R	GMUs 38, 54		28
1997	M	GMUs 8A, 11, 13, 15, 18	Idaho	261
	R	GMU 32		35
	M	GMUs 31, 33		105
1998	M	GMUs 14, 18, 20, 32A, 33	GMUs 8, 10A, 11, 15	121
	M	GMUs 31, 32, 39		53
	R	GMUs 32, 54		92
1999	M	GMUs 15, 23	GMU 10A	64
	R	GMUs 32, 54		62
	M	GMUs 28, 37, 39, 50		140
	U	SE Region		15
2000	M	GMUs 11, 13, 14, 15, 18, 63A	Idaho	332
	U	SE Region		50
2001	M	GMUs 15, 63A	Idaho	436
	R	GMU 54	California	41
	U	GMU 71		136
2002	M	GMUs 10A, 11, 14, 15, 63A, 67, 69	Idaho	227
2003	H	GMUs 11, 63A, 67, 69	GMUs 1, 39	196
2004	M	GMUs 5, 8A, 11, Nevada	Idaho	227
2005	M	GMUs 5, 11, 13, 15, 33, 39, 54, Nevada	GMUs 1, 3, 13, 54	227
2006	M	GMUs 1, 4A, 11, 39	GMU 1	220
2007	R	GMU 38 Little Banks Island	Washington	34
	M	GMU 39 Bender, Cottonwood, Willow	GMU 1	99
	R	GMU 54 Green Creek	GMU 54	17
	M	Utah	GMU1	24
	M	GMU 11 Benton Meadows, Eagle Creek	GMU 1	130
	H	GMU 15 Brown Creek	GMU 14	22
	M	GMU 1	GMU 1	45
2008	M	GMU 1	GMU 1	40
	H	GMU 11A	GMU 15	16
	H	GMU 15	GMU 11A	20
	H	GMU 15	GMU 15	14
	M	GMUs 22, 31 Andrus WMA	GMU 1	157
	R	GMU 32 Montour WMA	Oregon	32
	R	GMUs 32, 38	GMU 54	23
	R	GMU 54 Green Creek	GMU 54	64
	M	GMU 68A	GMU 1	82
2009	H	GMU 1	GMU 1	23
	H	GMU 31	GMU 1	156
	R	GMU 54	GMU 54	21
2010	H	GMU 31	GMU 1	75
Total				6,531

^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 call-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	6 (120)	5 (100)	3	(20)
Doves per mile		0.20	1.22	1.60	0.7	0.05
1994						
Routes (miles) counted	3 (60)	2	6 (120)	5 (100)	3	(20)
Doves per mile	0.22	0.30	1.61	1.93	0.9	0.05
1995						
Routes (miles) counted	3 (60)	2	5 (100)	5 (100)	3	(20)
Doves per mile	0.10	0.10	1.73	0.91	0.6	0.10
1996						
Routes (miles) counted	3 (60)	1 (20)	6 (120)	5 (100)	3 (60)	(0)
Doves per mile	0.30	0.02	2.51	1.48	0.4	
1997						
Routes (miles) counted	3 (60)	1 (20)	4 (80)	5 (100)	3 (60)	1 (20)
Doves per mile	0.30	0.15	0.89	1.62	0.7	0.00
1998						
Routes (miles) counted	3 (60)	1 (20)	5 (100)	5 (100)	3 (60)	(0)
Doves per mile	0.23	0.30	0.80	1.03	0.5	
1999						
Routes (miles) counted	3 (60)	1 (20)	6 (120)	4 (80)	3 (60)	1 (20)
Doves per mile	0.40	0.15	2.23	0.96	0.5	0.00
2000						
Routes (miles) counted	3 (60)	1 (20)	3 (60)	4 (80)	3 (60)	1 (20) ^a
Doves per mile	0.33	0.15	1.20	1.59	0.4	0.00
2001						
Routes (miles) counted	3 (60)	1 (20)	6 (120)	5 (100)	3 (60)	1 (20)
Doves per mile	0.17	0.10	1.66	1.33	0.2	0.15
2002						
Routes (miles) counted	2 (40)	2 (40)	6 (120)	5 (100)	3 (60)	1 (20)
Doves per mile	0.33	0.13	1.33	1.04	1.1	0.30
2003						
Routes (miles) counted	2 (40)	2 (40)	6 (120)	4 (80)	3 (60)	1 (20)
Doves per mile	0.43	0.05	1.69	0.73	0.6	0.35
2004						
Routes (miles) counted		2 (40)	6 (120)	5 (100)	3 (60)	1 (20)
Doves per mile		0.29	1.39	1.36	0.6	0.05
2005						
Routes (miles) counted	2 (40)	1 (20)	6 (120)	5 (100)	3 (60)	1 (20)
Doves per mile	1.80	0.40	1.10	1.36	0.6	0.60
2006						
Routes (miles) counted	2 (40)	2 (40)	6 (120)	5 (100)	3 (60)	1 (20)
Doves per mile	0.30	0.67	2.36	2.00	0.6	1.30
2007						
Routes (miles) counted	2 (40)	1(20)	6 (120)	5 (100)	3 (60)	1 (20)
Doves per mile	0.40	0.13	1.36	0.45	0.58	1.30
2008						
Routes (miles) counted	3 (60)	2(40)	6 (120)	5 (100)	3 (60)	1 (20)

Doves per mile	0.65	0.88	2.45	1.84	2.52	0.65
2009						
Routes (miles) counted	3 (60)	2(40)	6 (120) ^a	5 (100)	3 (60)	1 (20)
Doves per mile	0.15	0.30	2.27	1.61	3.12	1.15
2010						
Routes (miles) counted	2 (40)	2(40)	4 (80)	5 (100)	0 (00)	1 (20)
Doves per mile	0.78	0.55	2.44	2.23	-	0.05

^a Route relocated.

Table 12. Mourning doves banded in Idaho, 2003-present.

Year	Adult Male	Adult Female	Unknown	Hatch Year	Unknown	Total
2003	125	97	14	211	0	447
2004	313	124	49	371	0	857
2005	270	180	69	319	1	839
2006	352	106	23	270	3	754
2007	242	91	20	309	35	697
2008	274	115	34	216	9	648
2009	191	75	20	252	1	539
Total	1767	788	229	1948	49	4781

Table 13. Estimated cottontail rabbit and snowshoe hare harvest in Idaho, 2003-present.

Year	Cottontail rabbit		Snowshoe hare	
	Hunters	Cottontails harvested	Hunters	Hares harvested
2003	4,043	26,157	619	1,488
2004	4,460	27,500	1,100	2,000
2005	2,890	17,000	590	2,540
2006	3,800	20,900	730	600
2007	3,030	19,100	710	2,730
2008	2,800	11,400	600	400
2009	2,300	9,100	600	1,100
5-year average	3,000	15,500	650	1,500

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>1</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED: <u>July 1, 2009 to June 30, 2010</u>			

PANHANDLE REGION

Trapping and Translocation

No Department trapping or translocation took place in the Panhandle Region for pheasant, forest grouse, sage-grouse, sharp-tailed grouse, quail, chukar, gray partridge, mourning dove and wild turkey during the reporting period.

Pheasant

Abstract

For many years, the Department released game-farm birds in 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 fall 1982.

Harvest Characteristics

Most pheasant hunting in 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. A telephone survey of 2009 upland game hunters estimated that 666 hunters harvested 3,318 pheasants (Table 1). Because pheasant hunting effort is low, harvest estimates are imprecise and only general trends may be inferred from these data at the regional level. Analysis reveals a slight increase in both the number of pheasants harvested per hunter and per day since 1983.

Management Implications

The quality and quantity of pheasant habitat in 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 may improve, and additional grain farming could substantially improve pheasant populations.

Quail

Abstract

Quail in Panhandle Region are present at low population levels associated with agricultural lands, hay production and pasture areas, and urban interface areas where they often receive supplemental winter feeding. Population levels are low as a result of the area's annual snowfall and cool, wet springs that reduce chick survival but can fluctuate in years with minimal snow accumulation.

Harvest Characteristics

Quail hunting effort in Panhandle Region is very low. Harvest information obtained from the statewide telephone survey indicates an estimated 326 quail hunters harvested 2,936 quail during 2009 (Table 2). Because quail hunting effort is low, harvest estimates are imprecise and only general trends may be inferred from these data at the regional level.

Management Implications

As a result of a series of mild winters and higher quail populations, Panhandle Region was included with other parts of the state that offered a quail hunting season beginning in 2003. Low hunter participation and limited access to quail in the urban interface is not anticipated to negatively impact the Panhandle quail population or produce significant levels of harvest.

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

A telephone survey of 2009 upland game hunters estimated that 4,285 hunters harvested 18,537 forest grouse (Table 3). The trend in harvest indicates a decline in forest grouse hunting since 1983. Of the forest grouse harvested during 2009, approximately 83% were ruffed grouse, 10% blue/dusky grouse, and 5% spruce grouse (Table 4).

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 wildfire 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 partridge in Panhandle Region 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 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

Gray partridge hunting effort in 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. Harvest information obtained from the statewide telephone survey indicates an estimated 457 gray partridge hunters harvested 1,278 birds during 2009 (Table 5). Because gray partridge hunting effort is low, harvest estimates are imprecise and only general trends may be inferred from these data at the regional level.

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 2009 spring season success rate was 14.9 hunter days per bird (Table 6), an increase from most previous years. Hunters averaged 8.6 days to harvest a fall turkey in 2009.

Trapping and Translocation

Trapping and removal of turkeys typically occurs in the winter months to alleviate damage to fields, buildings, and equipment where turkeys congregate in large numbers. There were no wild turkeys trapped during the 2009-2010 winter.

Management Implications

A series of mild winters have allowed the growth and spread of turkey populations throughout northern Idaho. Efforts to curb the turkey population through issuance of three extra fall turkeys in the bag was apparently successful, increasing harvest, and delaying the time when birds moved into problem situations. There is a downward trend in the number of turkeys killed per hunter. Turkey populations appear to now be at more manageable levels.

Mourning Dove

Population Surveys

Mourning doves are common, in low numbers, in the Panhandle. Most mourning doves are found during summer around agricultural lands near Worley, Plummer, Harrison, Post Falls, and Bonners Ferry.

In May 2009, two call-count surveys were completed in Panhandle Region (Table 7). Both routes are in Kootenai County. Route replacement in recent years precludes direct comparison of subsequent route data with that prior to 2002.

Harvest Characteristics

In north Idaho, most mourning doves leave before the season opens. The season opener (1 Sep) 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.

Mourning dove hunting effort in 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. Harvest information on mourning doves is collected via the USFWS harvest survey. No regional telephone harvest survey has been conducted since 1995.

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 hunting season opens.

Snowshoe Hare

Background

Snowshoe hares are present throughout the coniferous forest in Panhandle Region. Hare densities are considered to be low compared to other, more traditional hare habitats at higher latitudes. Hare densities within Panhandle Region vary widely dependent upon habitat types and timber harvest.

Snowshoe hare hunting effort in Panhandle Region is very low. Harvest information obtained from the statewide telephone survey indicates an estimated 131 hunters harvested 524 hares during 2009 (Table 8). Because snowshoe hare hunting effort is low, harvest estimates are imprecise and only general trends may be inferred from these data at the regional level.

Management Implications

Low hunter participation and limited harvest is not anticipated to negatively impact the Panhandle snowshoe hare population.

American Crow

The American crow continues to be a species with minimal active management.

Table 1. Estimated pheasant harvest, Panhandle Region, 1983-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1983	2,205	3,616	5,806	1.6	0.8
1984	907	2,565	3,966	2.8	0.7
1985	633	1,053	2,814	1.7	0.4
1986	522	1,725	1,865	3.3	0.9
1987	630	1,454	2,151	2.3	0.7
1988	570	1,184	2,358	2.1	0.5
1989	447	785	1,305	1.8	0.6
1990	409	1,590	1,606	3.9	1.0
1991	513	1,430	2,281	2.8	0.6
1992	755	1,658	2,854	2.2	0.6
1993	1,175	3,371	5,597	2.9	0.6
1994	899	3,165	4,270	3.5	0.7
1995	853	2,376	5,097	2.8	0.5
2001	354	421	2,379	1.2	0.2
2002	1,122	4,240	7,116	3.8	0.6
2003	749	2,028	2,399	2.7	0.9
2004	854	4,325	3,096	5.1	1.4
2005	1,214	3,993	4,468	3.3	0.9
2006	577	1,078	1,720	1.9	0.6
2007	890	2,416	3,443	2.4	0.7
2008	685	1,890	3,028	2.8	0.8
2009	666	3,318	5,827	4.9	0.6
3-year avg.	747	2,541	4,099	3.4	0.7

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

Table 2. Estimated quail harvest, Panhandle Region, 2003-present.

Year	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
2003	123	707	370	5.8	1.9
2004	282	1627	1725	5.8	0.9
2005	241	861	830	3.6	1.0
2006	231	281	458	1.2	0.6
2007	321	484	1,326	1.5	0.4
2008	499	2,075	2,585	4.2	0.8
2009	326	2,936	2,572	9.0	1.1
3-year avg.	382	1,832	2,161	4.9	0.8

Table 3. Estimated forest grouse harvest, Panhandle Region, 1983-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1983	7,982	44,208	58,622	5.5	0.8
1984	7,432	41,867	54,597	5.6	0.8
1985	6,637	30,357	46,714	4.6	0.6
1986	7,194	35,138	55,203	4.9	0.6
1987	4,963	26,546	33,394	5.3	0.8
1988	5,710	34,504	46,580	6.0	0.8
1989	6,491	41,719	68,443	6.4	0.6
1990	6,088	45,665	60,079	7.5	0.8
1991	6,339	29,564	51,235	4.7	0.6
1992	5,440	29,088	46,949	5.3	0.6
1993	13,823	59,496	129,103	4.3	0.5
1994	20,509	118,877	196,623	5.8	0.6
1995	22,866	110,007	217,049	4.8	0.5
2001	4,473	19,727	35,964	4.4	0.5
2002	5,799	29,688	48,516	5.1	0.6
2003	5,918	30,746	45,273	5.2	0.7
2004	6,086	28,548	53,736	4.7	0.5
2005	6,016	27,888	40,880	4.6	0.7
2006	7,938	40,064	68,884	5.0	0.6
2007	4,847	16,715	33,465	3.4	0.5
2008	4,074	12,309	44,437	3.0	0.3
2009	4,285	18,537	41,014	4.3	0.5
3-year avg.	4,402	15,854	39,639	3.6	0.4

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

Table 4. Relative contribution of grouse species to the forest grouse harvest in the Panhandle Region, 2009.

Species	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
Ruffed grouse	3,472	15,365	27,112	4.4	0.6
Blue grouse	986	1,810	8,125	1.8	0.2
Spruce grouse	412	995	4,549	2.4	0.2
Unknown forest grouse	389	367	1,229	0.9	0.3
Combined	4,285	18,537	41,014	4.3	0.5

Table 5. Estimated gray partridge harvest, Panhandle Region, 1983-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1983	1,057	3,873	2,703	3.7	1.4
1984	305	629	1,097	2.1	0.6
1985	174	361	782	2.1	0.5
1986	83	546	266	6.6	2.0
1987	148	599	447	4.0	1.3
1988	109	221	341	2.0	0.6
1989	127	134	182	1.1	0.7
1990	149	416	503	2.8	0.8
1991	97	385	347	4.0	1.1
1992	185	1,006	894	5.4	1.1
1993	495	1,546	2,628	3.1	0.6
1994	450	1,704	2,341	3.8	0.7
1995	366	2,376	5,706	6.5	0.4
2001	99	20	196	0.2	0.1
2002	132	83	498	0.6	0.2
2003	198	506	566	2.6	0.9
2004	78	250	301	3.2	0.8
2005	524	922	1,887	1.8	0.5
2006	72	165	383	2.3	0.4
2007	40	232	126	5.8	1.8
2008	273	314	1,153	1.2	0.3
2009	457	3,289	6,303	7.2	0.5
3-year avg.	257	1,278	2,527	4.7	0.9

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

Table 6. Estimated turkey harvest, Panhandle Region, 1984-present.

Year Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1984						
Controlled	2	50	44	22	6.9	152
1985						
Controlled	2	50	39	21	8.0	167
1986						
Controlled	6	75	49	33	7.0	231
1987						
Controlled	6	75	57	37	6.1	227
1988						
Controlled	6	135	75	58	7.0	407
1989						
Controlled	6	180	118	74		
1990						
Controlled	6	180	147	97		
1991						
Controlled	9	195	187	99	5.2	518
1992						
Controlled	12	300	285	123	7.1	875
1993						
Controlled	12	395	219	155	7.5	1,165
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						

Year Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
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	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
2003						
Controlled	0					
General Spring	1		1,990	522	15.1	7,909
Late Spring	1		573	360	6.6	2,369
General Fall	1		1,053	495	8.5	4,204
2004						
General Spring ^c	1			815	12.3	9,995
General Fall	1		1,590	564	11.5	6,466
2005						
General Spring ^c	1		2,988	1,045	9.6	10,081
General Fall	1		1,477	616	8.2	5,058
2006						
General Spring ^c	1		2,998	934	10.7	10,000
General Fall	1		1,705	799	11.0	7,248
2007						
General Spring ^c	1		3,456	1,143	12.2	13,967
General Fall	1		2,663	1,409	6.0	8,488
2008						
General Spring ^c	1		2,653	723	12.1	8,720
General Fall	1		2,566	1,041	10.4	10,796
2009						
General Spring ^c	1		2,926	668	14.9	10,005
General Fall	1		2,394	1,217	8.6	10,526

^a Multiple bird bag limits and fall seasons began in 1999.

^b The general late spring/fall tag allowed harvest after 1 May in spring or fall seasons.

^c Includes regular and late spring hunter and harvest information.

Table 7. Mourning dove call-count survey results, 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
2003	2 (40)	17	8	0.43	0.20
2004	2 (40)	4	2	0.1	0.05
2005	2 (40)	3	2	1.8	0.05
2006	2 (40)	12	12	0.30	0.30
2007	2 (40)	16	15	0.40	0.38
2008	2 (40)	16	14	0.40	0.35
2009	1 (20)	3	0	0.15	0.00
2010	2 (40)	15	16	0.38	0.40
10-year average				0.31	0.25

Table 8. Estimated snowshoe hare harvest, Panhandle Region, 2003-present.

Year	Hunters	Hares harvested	Days hunted	Hares per hunter	Hares per hunter day
2003	56	59	142	1.0	0.4
2004	254	905	1,043	3.6	0.9
2005	87	48	126	0.6	0.4
2006	164	133	856	0.8	0.2
2007	96	155	692	1.6	0.2
2008	178	110	1,356	0.6	.01
2009	118	524	2,587	4.4	0.2
3-year average	131	263	1,545	2.2	0.2

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>2</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED:	<u>July 1, 2009 to June 30, 2010</u>		

CLEARWATER REGION

Climatic Conditions

The Clearwater Region experienced below average snowfall for the 2009-2010 water year. According to the United States Department of Agriculture Natural Resources Conservation Service, the snow water content for the Clearwater basin was 55% of normal as of 1 April. Data from SNOTEL sites indicates that snowpack varied from 53-59% of normal for the North Fork Clearwater, Lochsa, and Selway River watersheds. The dry trend of previous months continued through the end of March when high elevations received 1-3 inches of precipitation and up to 2 feet of snow. Stream flow forecasts were correspondingly low ranging from 50-61% of normal. The Lochsa and Selway rivers received the highest stream flow forecasts while the North Fork Clearwater River was forecast at only 50% of normal. Dworshak reservoir was 67% full, at 103% of average for March.

Cool spring temperatures in March, with above average precipitation in the form of rain, resulted in slow snowmelt. A cool spring with frequent showers, some producing considerable snowfall at higher elevations, may have negatively impacted the survival of upland broods this year.

Trapping and Translocation

No trapping or translocation took place in the Clearwater Region for pheasant, California quail, forest grouse, sharp-tailed grouse, chukar, or gray partridge during the reporting period. Turkeys were last translocated within the region in early 2008 in response to depredations (Table 9).

Pheasant

Population Surveys

In 1990, 11 brood routes were established in the Clearwater Region, with primary emphasis directed at better monitoring of pheasant population trends. A twelfth route was added in 2001. Only 1 rooster pheasant was observed on these routes in 2009, compared to 38 pheasants observed in 2008 (Table 1). The percentage of unsuccessful females for 2008 increased from 17% in 2007 to 28%, while the number of juveniles per 100 adult females remained the same at

400:100. There is no data for percentage of unsuccessful females or juveniles per 100 adult females for 2009, because no females were observed during the survey. Other species recorded on the routes included quail, gray partridge, doves, cottontail rabbits, and a variety of raptors.

Harvest Characteristics

A telephone survey estimated that 981 hunters harvested 1,483 pheasants in 2009 (Table 2). The number of hunters and birds harvested dropped significantly from 2008 when an estimated 1,568 hunters harvested 2,737 birds. The number of pheasants harvested per hunter-day dropped from 0.51 in 2008 to 0.36 in 2009, below the 3-year average of 0.47. Brood survey results indicate decreased production.

Management Implications

Pheasant 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. Limiting factors are 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 U.S. Soil Conservation Service and 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 program for upland game directed primarily toward pheasants, quail, gray partridge, and chukar. This program, in conjunction with CRP and the Department's Pheasant Initiative program, have great potential to positively affect upland game populations, particularly pheasants.

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 687 hunters harvested 4,547 quail in the Clearwater Region in 2009 compared to 2008 when 839 hunters harvested 3,004 quail (Table 3). These values represent a substantial decrease in harvest and hunter participation from 2007 when an estimated 1,392 hunters harvested 7,516 quail; 2008 was the lowest recorded regional harvest of quail in over 20 years.

Management Implications

Availability of quail habitat probably has not changed dramatically in the past few years nor is it expected to in the near future. The population appears to be strongly influenced by spring weather conditions. 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. The results of a mountain quail research project that was conducted from 1991-1996 are available for review. Mountain quail were transplanted into GMU 11 in spring 2005 and 2006 as part of a quail project initiated in 2004.

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 conducted from 1991-1996. Its focus shifted from spring/summer habitat use and seasonal movements to fall/winter emphasis in 1994. The project generated several reports, 2 management plans, several popular articles and a technical manuscript on the work. Results include information on seasonal habitat use and survival in Idaho as well as new habitat and population survey techniques. A summary of this work is provided in a 2004 IDFG report by Ann Moser and available at the Boise IDFG office.

Trapping and Translocation

Another mountain quail project was begun in spring 2004 in the Craig Mountain area. Mountain quail were transplanted into GMU 11 in spring 2005. Fifty of the 72 transplanted quail were fitted with radio transmitters. An additional 89 mountain quail (50 radio-equipped) from Oregon were transplanted onto Craig Mountain WMA in spring 2006. Survival was estimated at 22% for 2005 and 15% for 2006. The majority of known mortalities were caused by avian predators and mammals, 74% and 22% respectively.

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 1996-2000 due to budgetary constraints. Telephone survey data for the region estimated that 4,243 hunters harvested 22,362 forest grouse in 2009, up from 2008 when 3,280 hunters harvested 14,222 forest grouse.

Management Implications

The limited amount of data currently collected on forest grouse, and 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 lightly 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 sharp-tail grouse habitat destruction.

Harvest Characteristics

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

Management Implications

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

Chukar

Population Surveys

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

A chukar ecology project in GMU 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.

Since 1988, the breaks of the Snake River have been scheduled for annual surveys 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 scheduled to be surveyed annually. Helicopter surveys have been considered a useful index to determine trends in fall chukar hunting opportunities. Although other factors are apparently involved when predicting fall harvest, general trends appear predictable based on the surveys. No surveys were flown this reporting period due to the lack of a current helicopter vendor and price list.

Harvest Characteristics

Fluctuating harvest rates over the past several years likely reflect changes in productivity related to weather impacts. Telephone survey data estimated that 870 hunters harvested 5,263 chukars in 2009, compared to 2008 when 857 hunters harvested 2,337 chukars (Table 6).

Management Implications

Annual chukar populations, like most upland game, are greatly influenced by weather conditions during the nesting and brood-rearing seasons. Reductions in season lengths and bag and possession limits do not appear to be needed during periods of population lows.

Gray Partridge

Population Surveys

No standardized population surveys are currently conducted for gray partridge in the Clearwater Region. They are counted incidentally during pheasant brood routes.

Harvest Characteristics

Harvest information on gray partridge has varied (Table 7). For the 2009 season it was estimated that 480 hunters harvested 2,526 gray partridge, compared to 2008 when 498 hunters harvested only 681 gray partridge. Although the number of hunters remained roughly the same, harvest in 2009 increased 54% above the 3-year average.

Management Implications

Favorable weather during early summer will allow populations to remain at current levels. Adjustments in season length or bag and possession limits are apparently unnecessary 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 in spite of increases in harvest opportunities to address problem sites. Though at a slower pace, turkeys continue to expand their range into previously unoccupied habitat.

A turkey research project was conducted in GMU 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 GMU basis since 1983 (Table 8). Regional turkey harvest has steadily increased and has been a function of expanding turkey distribution and numbers and increasing hunter effort. General season spring and fall turkey hunting was available beginning in 2005. Turkey harvest in the Clearwater Region reached a new high of 2,932 turkeys in 2005. The fall harvest component was estimated at 979 birds with more than half taken during the late season on private property. Harvest in 2006 and 2007 was somewhat lower, but exceeded 2,500 birds. In 2008, harvest declined to 1,845 birds and then increased to 2,212 birds in 2009, compared to the ten-year average of 2,339 birds harvested.

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 occasionally 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. The more recent expansion of fall turkey hunting opportunities in the region has also reduced the necessity to respond to sites that were previously the focus for feeding/trapping efforts.

Trapping and Translocation

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. Fifty turkeys were translocated in the Clearwater Region in January 2008 to alleviate depredation issues (Table 9). Temporary personnel time was, in part, funded by a donation from the National Wild Turkey Federation. As translocation stock becomes available, those birds will be used to supplement areas with heavy hunting pressure or declining population trends.

Management Implications

Wild turkeys continue to expand their range within the Clearwater Region. More remote areas, once thought to be marginal habitat, now have at least a few turkeys present for at least a portion of the year. To respond to a growing level of complaints from private landowners that keep livestock in feedlots in winter, liberal seasons have been maintained or expanded, and birds have been trapped and transplanted to other areas in the region, to other Department regions, or to other states. The present hunting season structure does not appear to adversely impact the expansion of populations.

Mourning Dove

Population Surveys

There are only 2 mourning dove call-count routes conducted in the Clearwater Region. By themselves, the routes do not provide an accurate index to dove production or population trends (Table 10). However, when incorporated into the results from all other routes in the state, an accurate index to statewide dove production may be achieved.

Harvest Characteristics

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

Trapping and Banding

Clearwater Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 11). A delayed start and problems with trap-site selection resulted in no doves trapped in 2003. In 2004, a total of 63 doves were banded at 3 sites. All doves received a standard leg band; hatch-year doves also received a reward band. In 2005, a total of 100 doves were banded at 2 sites. Four individuals were recaptured during the course of the 2005 season (2 adult males and 2 hatch-year birds). Sixty-one doves were captured in 2006. In 2007, only 7 doves were captured and banded with standard leg bands. In 2008 and 2009, 27 and 33 doves were banded respectively.

Management Implications

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 call-counts on routes located within the region.

Cottontail Rabbit

Population Surveys

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 Clearwater Region.

Harvest Characteristics

Cottontail harvest appears to be well under minimum sustainable levels. In 2008 there were 200 hunters that harvested an estimated 171 rabbits, slightly up from 2007 when 95 hunters harvested 168 rabbits (Table 12). In 2009, there were an estimated 100 hunters that harvested 29 cottontails, although sample sizes were very small. Harvest was considerably lower than the 3-year average of 123 cottontails.

Management Implications

Management direction for cottontail rabbits in the Clearwater Region is 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. In 2009 and 2008 no snowshoe hares were harvested by an estimated 42 and 19 hunters respectively, while 11 snowshoe hares were harvested by an estimated 116 hunters in 2007 (Table 12). Few hunters appear to pursue hares and most harvest is incidental to other hunting activities.

Management Implications

Management direction of snowshoe hares in the Clearwater Region is to provide maximum hunter opportunity through liberal seasons and bag limits.

American Crow

The American crow will continue to be a species with no active management.

Table 1. Pheasant population characteristics and production, Clearwater Region, 1990-present.

Year	Routes (miles) counted	Birds per mile	Percent unsuccessful females	Juv:100 adult females	<i>n</i>	Average brood size
1990	11 (220)	0.7		153		
1991	11 (220)	0.3	13	550	56	6.0
1992	11 (220)	0.8	41	517	164	5.9
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 ^a	12 (240)	0.5	43	478	119	6.1
2002	12 (240)	0.2	23	388	46	5.0
2003	12 (240)	0.5	9	347	114	3.6
2004	12 (240)	0.8	32	763	187	6.0
2005	12 (240)	0.8	48	226	199	4.5
2006	12 (240)	0.2	33	383	49	8.2
2007	12 (240)	0.2	17	400	43	4.0
2008	12 (240)	0.2	28	400	38	5.6
2009	12 (240)	<0.1	ND	ND	1	ND
10-year average	12 (240)	0.4	37	371	89.1	4.8

^a New route added for Clearwater Pheasant Initiative in 2001.

Table 2. Estimated pheasant harvest, Clearwater Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	3,775	15,295	25,304	4.1	0.6
1986	4,022	13,689	20,089	3.4	0.7
1987	3,360	11,069	18,415	3.3	0.6
1988	2,041	5,312	11,314	2.6	0.5
1989	2,105	7,368	10,739	3.5	0.7
1990	2,299	14,928	17,440	6.5	0.9
1991	2,170	7,773	12,775	3.6	0.6
1992	2,400	9,644	17,009	4.0	0.6
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
2001	3,021	13,092	16,146	4.3	0.8
2002	3,713	7,159	12,768	1.9	0.6
2003	2,700	13,437	17,957	5.0	0.7
2004	2,368	9,844	13,674	4.2	0.7
2005	2,487	12,632	14,054	5.1	0.9
2006	2,593	8,813	13,626	3.4	0.7
2007	2,392	6,388	11,967	2.7	0.5
2008	1,568	2,737	5,395	1.7	0.5
2009	981	1,483	4,098	1.5	0.4
3-year avg.	1,647	3,536	7,115	2.0	0.5

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

Table 3. Estimated quail harvest, Clearwater Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	1,148	11,588	6,803	10.1	1.7
1986	808	7,190	4,845	8.9	1.5
1987	1,051	7,834	4,467	7.5	1.8
1988	1,032	7,744	5,165	7.5	1.5
1989	700	3,532	3,088	5.0	1.1
1990	1,341	15,509	10,907	11.6	1.4
1991	903	5,525	5,315	6.1	1.0
1992	1,398	10,092	6,163	7.2	1.6
1993	3,000	21,213	18,121	7.1	1.2
1994	3,203	21,520	18,130	6.7	1.2
1995	2,051	14,358	11,332	7.0	1.3
2001	1,904	14,790	8,551	7.8	1.7
2002	1,983	12,994	8,396	6.6	1.5
2003	1,941	29,152	12,808	15.0	2.3
2004	1,815	17,038	8,368	9.4	2.0
2005	1,545	14,120	9,777	9.1	1.4
2006	1,811	19,830	15,636	10.9	1.3
2007	1,392	7,516	4,846	5.4	1.5
2008	839	3,004	3,285	3.6	0.9
2009	687	4,547	4,282	6.6	1.1
3-year avg.	973	5,022	4,138	5.2	1.2

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

Table 4. Estimated forest grouse harvest, Clearwater Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	3,495	13,680	20,824	3.9	0.7
1986	4,296	21,701	28,141	5.1	0.8
1987	4,169	23,866	27,558	5.7	0.9
1988	3,493	18,590	25,834	5.3	0.7
1989	4,473	25,848	38,140	5.8	0.7
1990	4,385	23,086	27,901	5.3	0.8
1991	4,364	24,127	30,026	5.5	0.8
1992	4,117	16,638	26,851	4.0	0.6
1993	11,782	55,692	89,243	4.7	0.6
1994	14,796	70,255	117,135	4.7	0.6
1995	12,692	54,993	94,736	4.3	0.6
2001	5,927	26,970	34,684	4.6	0.8
2002	7,342	40,972	54,342	5.6	0.8
2003	5,510	34,661	34,342	6.3	1.0
2004	4,950	22,000	34,845	4.4	0.6
2005	4,675	20,735	29,990	4.4	0.7
2006	7,351	29,238	49,437	4.0	0.6
2007	5,140	24,533	40,784	4.8	0.6
2008	3,280	14,222	33,991	4.3	0.4
2009	4,243	22,362	50,190	5.3	0.4
3-year avg.	4,221	20,372	41,655	4.8	0.5

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

Table 5. Helicopter surveys of chukar in GMU 11, Clearwater Region, 1990-present.

Area	Year	Number of birds	Number of groups	Groups/sq. mile	Birds/sq. mile	Birds/group	
Salmon River breaks	1991	1,330	136	11.9	116.5	9.8	
	1992	1,230	155	13.0	103.5	7.9	
	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	
	2003 ^a						
	2004	1,722	144	12.1	144.7	11.9	
	2005	1,483	166	13.9	124.6	8.9	
	2006 ^b						
	2007 ^a						
2008 ^c							
2009 ^c							
Snake River Breaks	1990	1,245	100	7.9	97.8	12.5	
	1991	745	84	5.9	53.0	9.0	
	1992	867	100	6.2	53.5	9.0	
	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	
	2003 ^a						
	2004	797	60	3.7	49.2	13.2	
	2005	880	54	3.3	54.3	16.3	
	2006 ^b						
2007 ^a							
2008 ^c							
2009 ^c							

^a Surveys not flown due to fire-related concerns or conflicts.

^b Surveys not flown due to budget constraints.

^c Surveys not flown due to lack of current helicopter vendor and price list.

Table 6. Estimated chukar harvest, Clearwater Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	1,605	5,424	4,948	3.4	1.1
1986	1,500	7,244	6,049	4.8	1.2
1987	1,844	16,265	8,743	8.8	1.9
1988	1,609	11,139	8,743	6.9	1.3
1989	1,125	8,383	4,392	7.5	1.9
1990	1,532	11,045	7,671	7.2	1.4
1991	1,751	9,244	6,841	5.3	1.4
1992	1,794	9,720	5,208	5.4	1.9
1993	2,628	14,441	11,936	5.5	1.2
1994	2,791	17,531	13,635	6.3	1.3
1995	2,518	14,256	12,266	5.7	1.2
2001	1,775	9,871	6,324	5.6	1.6
2002	2,012	14,192	10,143	7.1	1.4
2003	1,806	11,663	8,292	6.5	1.4
2004	1,834	13,690	6,933	7.5	1.9
2005	1,450	13,115	6,025	9.1	2.2
2006	1,949	13,619	6,353	7.0	2.1
2007	826	6,721	3,937	8.1	1.7
2008	857	2,337	3,156	2.7	0.7
2009	870	5,263	2,520	6.0	2.1
3-year avg.	851	4,774	3,204	5.6	1.5

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

Table 7. Estimated gray partridge harvest, Clearwater Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	1,024	2,626	4,714	2.6	0.6
1986	968	3,169	3,749	3.3	0.8
1987	1,012	5,996	5,266	5.9	1.1
1988	847	3,255	4,165	3.8	0.8
1989	442	666	1,928	1.5	0.3
1990	1,139	5,911	6,479	5.2	0.9
1991	1,012	6,215	5,661	6.1	1.1
1992	784	3,091	2,954	3.9	1.0
1993	2,505	8,658	13,668	3.5	0.6
1994	2,585	8,803	14,796	3.4	0.6
1995	1,767	6,905	9,281	3.9	0.7
2001	1,714	5,586	7,622	3.3	0.7
2002	1,421	7,860	7,562	5.5	1.0
2003	1,309	13,646	8,859	10.4	1.5
2004	1,073	4,174	4,774	3.9	0.9
2005	1,210	7,730	9,314	6.4	0.8
2006	1,107	6,700	4,941	6.2	1.4
2007	568	1,703	2,487	3.0	0.7
2008	498	681	1,698	1.4	0.4
2009	480	2,526	2,289	5.3	1.1
3-year avg.	515	1,637	2,158	3.2	0.7

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

Table 8. Estimated turkey harvest by GMU, Clearwater Region, 1985-present.

Year	GMU ^a																Total hunter days	
	8	8A	10	10A	11	11A	12	13	14	15	16	16A	17	18	19	20		Total
1985				2	3	2		6	2					10			25	355
1986				3	8	3		3	3					5			25	300
1987				7	17	4		5	4					0			37	647
1988				13	39	22		4	2					2			82	1,073
1989	15			31	22	10		4	4					6			92	2,014
1990	15	10		31	38	10		13						1			118	1,980
1991	35	13		59	87	38		3						2			237	3,650
1992	21	18		42	37	34		5		0	0			24			181	3,651
1993	59	88		127	137	39		0		20	29			10			509	9,491
1994	90	192		372	83	141		0	13	0	26			0			917	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			1,187	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			1,979	20,512
2002 ^b	177	230	110	497	153	205	34	21	55	119	132		6	49			2,243	20,004
2003 ^c	217	328	120	798	165	280	47	63	140	84	196		0	84			2,522	23,598
2004 ^c	202	469	55	781	150	177	36	34	98	161	142		0	36			2,340	22,999
2005 ^c	278	493	7	920	242	415	49	30	101	111	183	13	0	77	13	0	2,932	26,089
2006 ^c	309	320	65	712	164	364	37	33	98	122	233	0	0	50	0	0	2,507	25,900
2007 ^c	233	343	21	766	239	170	43	42	99	210	284	0	0	68	0	0	2,519	20,225
2008 ^c	218	346	13	440	77	332	25	27	91	120	147	0	0	10	0	0	1,845	18,592
2009 ^c	355	306	43	565	119	263	14	37	72	91	297	0	0	51	0	0	2,212	22,644
10-year avg.	230	364	52	692	156	268	36	34	90	120	193	3	1	52	3	0	2,339	22,677

^a GMUs having no data were not open to hunting during those years.

^b Fall turkey harvest added to total; GMU of harvest and hunter days was not asked in survey.

^c Fall general wild turkey harvest included.

Table 9. Turkey translocation history, Clearwater Region, 1961-present.

Year	Sub-species ^a	Release site		Birds released			New or supplemental release
		Drainage-GMU	Source-GMU	M	F	Total	
1961	M	Deer Cr-18	Colorado	4	13	17	N
1962	M	Shingle Cr-18	Colorado	3	8	11	N
		Skookumchuck Cr-					
1963	M	14	Colorado	4	7	11	N
1965	M	Webb Cr-11	Shingle Cr-18	2	8	10	N
1966	M	Webb Cr-11	John Day Cr-14	2	0	2	S
1971	M	Potlatch R-8	St. Maries-6	4	11	15	N
1972	M	Potlatch R-8	St. Maries-6	2	0	2	S
1973	M	Potlatch R-8	St. Maries-6	2	0	2	S
	M	Webb Cr-11	St. Maries-6	4	0	4	S
1980	M	Deer Cr-18	South Dakota	3	7	10	S
1982	M	Capt John Cr-11	South Dakota	5	14	19	N
	M	Slate Cr-14	South Dakota	3	9	12	S
	R	Lawyers Cr-11A	Kansas, Texas	7	17	24	N
	R	Cottonwood Cr-11A	Texas	4	8	12	N
	R	Big Canyon Cr-11A	Oklahoma	4	11	15	N
1983	R	Big Canyon Cr-11A	Oklahoma, Texas	3	15	18	S
1985	R	Wolf Cr-13	Texas	4	30	34	N
	E	Canyon Cr-10A	Pennsylvania	6	10	16	N
1986	M	Bedrock Cr-8	Hornet Cr-22	4	14	18	N
	M	Pine Cr-8	Hornet Cr-22	4	12	16	N
	R	Deer Cr-11	North Dakota	4	10	14	N
			Cottonwood Butte-				
1988	M	Cottonwood Cr-13	11	4	21	25	N
			Hornet Cr-22,				
	M	Bear Cr-8	Capt John Cr-11	6	23	29	N
			Hornet Cr-22,				
	M	Six-Mile Cr-11A	Capt John Cr-11	11	18	29	N
1989	M	Lawyers Cr-11A	Woodland-10A	3	15	18	S
1990	M	John Day Cr-14	Big Bear Cr-8	6	10	16	N
	E	Jim Ford Cr-10A	North Dakota	9	8	17	N
1991	M	John Day Cr-14	Big Bear Cr-8	3	14	17	S
	M	Little Canyon-11A	Brush Cr-9	10	24	34	N
	M	Big Canyon Cr-11	Dawson Ridge-1	10	25	35	S
	E, R	Upper Fords Cr-10A	North Dakota	5	35	40	S
	E	Dicks Cr-8A	North Dakota	4	36	40	N
			Cottonwood Butte-				
	M	Slate Cr-14	11	6	21	27	S
1992	M	Lawyers Cr-11	Kootenai R-1	7	21	28	N
		Skookumchuck Cr-					
	M	14	North Dakota	10	21	31	S

Table 9 Continued.

Year	Sub-species ^a	Release site		Birds released			New or supplemental release
		Drainage-GMU	Source-GMU	M	F	Total	
		Cottonwood Butte-					
1993	M	11	North Dakota	7	10	17	S
	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
1994	M	Whiskey Cr-10A	Grouse Cr-1	6	6	12	S
	M	Whiskey Cr-10A	Blue Cr-3	2	8	10	S
	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
	M	5-Mile Cr-11A	Big Bear Cr-8	6	0	6	S
	1995	M	Flat Cr-8	Big Bear Cr-8	6	0	6
M		Allison Cr-14	Crow Bench-11A	1	18	19	S
M		Allison Cr-14	Cottonwood Cr-11A	5	0	5	S
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
M		Squaw Cr-18	Armiger-10A	8	27	35	N
1996	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
	M	MF Payette-33	Packard-8	6	24	30	N
1997	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

Table 9 Continued.

Year	Sub-species ^a	Release site Drainage-GMU	Source-GMU	Birds released			New or supplemental release
				M	F	Total	
1999	M	California	Duman, et al-11	6	26	32	NA
	M	Schwartz Cr-15	Bott Ranch-10A	3	21	24	N
	M	Rapid River-23	Busta-10A	12	28	40	N
2000	M	California	Bott Ranch-10A	3	24	27	NA
	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
M		Red River-15 Bob Smith Canyon	Busta-10A	14	6	20	S
2002	M	Robber's Roost-71 Bob Smith Canyon	Bott-10A	2	21	23	N
	M	Robber's Roost-71 Bob Smith Canyon	Wilcox-10A	10	0	10	N
	M	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
2003	M	Eagle Cr-11	Lucas-15	0	13	13	S
	H	Eagle Cr-11	Harris-8A	0	10	10	S
	H	Eagle Cr-11	Weidner-11A	3	20	23	S
2004	H	SE Idaho	Frei-11	10	21	31	S
	H	Billy Cr-11	Frei-11	12	1	13	S
	H	Nevada	Frei-11	15	7	22	N
	H	F.S. Road 1963-8A	Frei-11	0	16	16	N
	H	Eagle Cr-11	Weidner-10A	10	26	36	S
	H	Benton Meadows-11	Weidner-10A	3	32	35	S

Table 9 Continued.

Year	Sub-species ^a	Release site		Birds released			New or supplemental release
		Drainage-GMU	Source-GMU	M	F	Total	
2005	H	Billy Cr-11	Weidner-10A	7	8	15	S
	H	Nevada	Weidner-10A	3	10	13	N
	H	SE Idaho	Nicolls-10A	2	9	11	S
	H	Nevada	Nicolls-10A	6	12	18	N
	H	Castle Cr-15	Stover-13	4	14	18	S
	H	Rice Cr-13	Stover-13	5	24	29	S
	H	Earthquake Cr-15	Ross-15	4	47	51	S
	H	Hungry ridge-15	Ross-15	1	19	20	S
2006	H	Captain John Cr-11	Ross-15	0	8	8	S
	M	Eagle Cr-11	Moyie Springs-1	18	38	56	S
2007	H	Brown Cr-15	Deer Cr-14			22	S
	M	Benton Meadows-11	Boundary County-1	17	59	76	S
2008	M	Eagle Creek- 11	Boundary County-1	25	29	54	S
	H	Castle Creek-15	Sally Anne Rd-15	1	13	14	S
	H	Lawyer Canyon-11A	Sally Anne Rd-15	1	15	16	S
	H	Castle Creek-15	Nez Perce-11A	U	U	20	S

^a E = Eastern; M = Merriam's; R = Rio Grande; H = Hybrid.

Table 10. Mourning dove call-count survey results and estimated harvest, Clearwater Region, 1985-present.

Year	Call-count routes		Telephone survey ^a				
	Routes counted	Doves heard/mile	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
1985	2	0.30	493	3,754	1,087	7.6	3.5
1986	2	0.00	320	3,666	1,340	11.5	2.7
1987	2	0.03	327	4,468	973	13.7	4.6
1988 ^b	1	0.10	205	842	398	4.1	2.1
1989	2	0.20	220	758	341	3.4	2.2
1990 ^c	1	0.30	110	863	108	7.8	8.0
1991	2	0.10	324	3,971	1,098	12.3	3.6
1992	2	0.10	156	1,151	152	7.4	7.6
1993	2	0.20	773	3,587	3,123	4.6	1.1
1994	2	0.30	1,161	8,765	3,989	7.5	2.2
1995	2	0.10	792	4,062	3,229	5.1	1.3
1996 ^c	1	0.02					
1997 ^c	1	0.15					
1998 ^c	1	0.30					
1999 ^c	1	0.15					
2000 ^c	1	0.15					
2001 ^b	1	0.10					
2002	2	0.13					
2003	2	0.05					
2004	2	0.29					
2005 ^c	1	0.40					
2006	2	0.67					
2007 ^c	1	0.13					
2008	2	0.13					
2009	2	0.13					

^a Telephone survey data at the regional level were not collected after 1995; harvest is reported directly to the USFWS by hunters.

^b Route 0730 not surveyed.

^c Route 1150 not surveyed.

Table 11. Mourning doves banded in Clearwater Region, 2003-present.

Year	Adult			Hatch-year	Unknown	Total
	Male	Female	Unknown			
2003	0	0	0	0	0	0
2004	27	16	2	18	0	63
2005	33	19	4	44	0	100
2006	23	10	2	26	0	61
2007	1	4	1	1	0	7
2008	11	8	8	8	2	27
2009	12	3	0	18	0	33
Total	107	60	17	115	2	291

Table 12. Estimated cottontail rabbit and snowshoe hare harvest, Clearwater Region, 2003-present.

Year	Cottontail rabbit		Snowshoe hare	
	Hunters	Cottontails harvested	Hunters	Hares harvested
2003	287	605	67	126
2004	325	383	123	240
2005	82	691	110	149
2006	227	587	92	144
2007	95	168	116	11
2008	200	171	19	0
2009	100	29	42	0
3-year average	132	123	59	4

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>4</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED: <u>July 1, 2009 to June 30, 2010</u>			

SOUTHWEST REGION

Climatic Conditions

Precipitation during fall 2009 was normal, followed by average precipitation and snow cover during winter 2009-2010. Spring 2009 weather conditions were favorable for nesting for most upland bird species. Adequate spring rainfall translates to good upland bird production.

Trapping and Translocation

Seventy-five turkeys were trapped from Bonners Ferry and translocated to Andrus Wildlife Management Area during December 2009-January 2010.

Pheasant

Population Surveys

Average number of young per brood based on survey routes was 4.5, considerably lower than the 10-year average of 5.4. However, overall pheasant abundance was up as was total number of chicks per hen (Table 1).

Harvest Characteristics

A telephone survey of upland game hunters was conducted in 2009 (Table 2). An estimated 9,694 hunters harvested 31,972 birds in the Southwest Region during fall 2009 for an average of 0.6 bird/hunter-day. Hunter participation decreased 11% and hunter harvest decreased 35% compared to 2008. Birds per hunter-day was average.

No pheasant check stations were operated in the southwest region in 2009 (Table 2). Harvest information is available via the annual telephone survey.

Habitat Conditions

Long-term population trends are down, primarily due to conversion of agriculture to residential and commercial development. Fall plowing of all grain fields has become the normal operating procedure, thereby limiting winter food and cover for pheasants. Unless these farm practices are changed, further long-term reductions in wild populations are expected. We continue to work with landowners to enhance pheasant and other upland game habitat and production.

Depredations

Some pheasant depredations occur every spring on wheat, barley, and corn. Sweet corn is the primary corn damaged by pheasants. Cracker shells and salutes are provided to landowners to alleviate the problem.

Release of Pen-reared Pheasants

Adult roosters were purchased from a contractor and released on Department lands in Southwest Region. A total of 9,673 pheasants were released on Fort Boise, C. J. Strike, Payette River, and Montour WMAs from 18 October - 27 December 2009. These birds added significantly to hunter opportunity on these 4 heavily hunted WMAs.

Management Implications

Pheasant populations are largely dependent upon winter habitat, nesting habitat, 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 fall populations until habitat conditions improve.

Southwest Region has seen significant decreases in winter habitat due to changes in farming practices and development of agricultural lands into home sites. Pheasant populations will continue to decline with the loss of habitat. Associated with the decline in pheasant population and habitat, number of hunters and harvest is down from historic numbers.

Quail

Population Surveys

In 2009, regional wildlife staff observed 1.7 quail per mile along 520 miles of brood routes surveyed, which is a 26% decrease from last year, and 45% lower than the 10-year average (Table 3).

Harvest Characteristics

An estimated 7,815 hunters harvested 35,695 quail in 2009 (Table 3). Hunter participation decreased 5% compared to 2008, and quail harvest decreased 53%. Quail harvest in 2009 was the lowest recorded in over 20 years.

Management Implications

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

Forest Grouse

Population Surveys

No drumming counts or other spring population indices were conducted in the region during the reporting period.

Harvest Characteristics

An estimated 5,159 hunters harvested 18,411 forest grouse in the Southwest Region in 2009 (Table 4). Forest grouse harvest increased 21% compared to 2008, and was 3% higher than the 3-year average. Hunter participation decreased 20% compared to 2008.

A few birds are checked incidental to other activities. No check stations are run specifically for forest grouse. Wings from harvested grouse (502 dusky (blue) grouse, 103 ruffed grouse) were collected at 19 wing barrels distributed in GMUs 22, 31, 32, 32A, 33, and 39. Juvenile:adult female ratios of 261:100 and 177:100 were documented for blue grouse and ruffed grouse, respectively (Table 5).

Management Implications

Forest grouse populations are dependent on good nesting and brood-rearing conditions as well as type and severity of winter conditions. A cold, wet winter with soft snow is better for survival than wet winters with freezing and thawing events. 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 BLM and U.S. Forest Service (USFS) when reviewing timber sales and livestock management plans. Additionally, significant declines in aspen stands, a productive and highly favored habitat of grouse, are likely having a negative impact on forest grouse.

Sage-grouse

Population Surveys

We observed 481 male sage-grouse along 7 lek routes in Owyhee County during March-May 2010, a 16% increase compared to 2008 (Table 6). We also conducted aerial surveys and observed 833 birds on 53 leks (includes leks counted on ground lek routes) along the Bruneau Escarpment in conjunction with the Bureau of Land Management, a 27% increase compared to 2009.

Harvest Characteristics

One sage-grouse check station was operated on opening weekend (Mud Flat Road). One-hundred and nineteen hunters harvested 100 sage-grouse. This was a very slight increase in number of birds harvested compared to 2008 but 46% lower than the 10-year average. The number of birds per hunter day was the same as 2007-2008 (Table 7). Sage-grouse production was excellent in 2009 and well above the 10-year average. The number of juveniles per 100 females was 204, 7% higher than the 10-year average. The literature suggests that it takes 200 juveniles per 100 adults to sustain a population (Table 8).

Management Implications

Lek survey information suggests sage-grouse populations are down considerably compared to recent years in most of the region. Populations are largely dependent upon habitat conditions and spring weather conditions during nesting and brood rearing. Diseases such as West Nile virus, which sage-grouse are highly susceptible to, provide an additional stressor to sage-grouse population persistence. West Nile virus was detected in sage-grouse in Owyhee County during summer 2006. Recruitment of birds into fall will be governed by uncontrollable weather and disease factors.

We continue to work closely with BLM to reduce impacts of present and proposed land management practices on sage-grouse habitat. Currently, we are conducting a study on sage-grouse seasonal distribution and movements, and to document the impacts of West Nile virus on sage-grouse in several portions of Owyhee County. The study will be used to prioritize habitat protection and improvement efforts based on key seasonal habitat used by sage-grouse. During summer 2010, we plan to capture and mark up to 20 grouse scattered across Owyhee County. We are also continuing to document seasonal distribution, habitat use patterns, productivity, and survival rates as part of a long-term study in Washington County. Washington County is unique because it is isolated from other sage-grouse populations and habitat, and the land is highly fragmented and primarily under private ownership.

Sharp-tailed Grouse

Population Surveys

Sharp-tailed grouse lek counts have been conducted annually on the Hixon Sharptail Preserve in west-central Idaho since 1982. Counts of males on these leks decreased 49% compared to the peak in 2007, most likely due to extremely dry conditions during spring/summer 2007 (Table 9). Monitoring of remnant flocks and additional leks in the area was most recently conducted in 2000 by BLM personnel, and indicate a small but stable number of birds attending those leks in recent years. Additional lek routes in west-central Idaho will be conducted in the future to identify long-term trends on and off the Preserve.

Habitat Conditions

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

Management Implications

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 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 appear to be increasing because of CRP improvements, the creation of the Sharp-tailed Grouse Preserve, changes in land management practices, and good climatic conditions. It is not likely that populations will reach harvestable levels, mainly because of their isolation from other sharp-tailed grouse populations and the threat of human encroachment as ranches are broken up into smaller parcels. Additional improvements in occupied and adjacent habitats will ensure long-term stability of this isolated population.

Chukar

Population Surveys

Since 1984, helicopter surveys have been conducted in late August or early September along a portion of Brownlee and Lucky Peak Reservoirs to monitor chukar population trends. In 2009, 884 chukars were observed at Brownlee Reservoir. Chukar numbers were 50% lower in 2009

compared to the 10-year average, but increased 48% compared to 2008 counts (Table 10). Lucky Peak was not counted in 2009 (Table 11).

Harvest Characteristics

An estimated 5,521 hunters pursued chukar in Southwest Region and harvested an estimated 46,574 birds. Participation was the same as 2008 but harvest increased slightly (14%) compared to 2008 (Table 12). From 2001-2009, the annual chukar harvest averaged 59,743 by 7,528 hunters.

Management Implications

Chukar populations are largely dependent upon spring weather conditions during nesting and brood rearing. Recruitment of birds into fall will be governed by uncontrollable weather factors until habitat quantity and quality is improved to moderate the effect of weather conditions. Several large wildfires burned significant portions of chukar habitat along Brownlee Reservoir, primarily within the Rocking M Conservation Easement during 2005. Vegetation rehabilitation efforts by the Department and BLM will largely be dependent on precipitation, and success of these efforts may be unknown for several years. It is unlikely these fires will negatively impact local chukar populations or hunting opportunity.

Gray Partridge

Population Surveys

No Gray partridge were observed along 520 miles of pheasant brood survey routes in 2009 (Table 13). Because gray partridge are exceedingly sensitive to environmental factors, they exhibit extreme population fluctuations (peak, crash, slow, steady increase towards peak). Thus, gray partridge are typically much more difficult to survey than other upland species.

Harvest Characteristics

An estimated 2,767 hunters pursued gray partridge in Southwest Region and harvested an estimated 11,244 birds. Hunter numbers increased 31% and total number of birds harvested increased 139% compared to 2008 (Table 13).

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

Management Implications

Gray Partridge in southwest Idaho are typically associated with cereal grains adjacent to Conservation Reserve Program or sagebrush rangeland. Deep and/or hardened snow adversely affect gray partridge survival during winter, and the amount of precipitation in late spring and early summer influence gray partridge production. Below average precipitation is favorable for nesting and especially early brood rearing. Recruitment of birds into fall will be governed by

uncontrollable weather factors and the availability of suitable habitat (cereal grains and adequate cover). Gray partridge populations will continue to decline as agricultural fields are converted to sub-divisions.

Wild Turkey

Population Surveys

No trend surveys are in place to monitor turkey populations in Southwest Region. Anecdotal observations suggest a decline in turkey numbers in recent years in GMUs 33 and 39 but stable in GMUs 32 and 38.

Harvest Characteristics

Two controlled spring hunts were held for turkeys in Southwest Region in 2009, including a youth hunt. A general spring gobbler-only hunt was held in most GMUs in 2009. General fall hunts occurred in GMUs 31, 32, and 32A only. GMUs 33 and 39 were closed to fall turkey hunting beginning in 2006. Harvest estimates for 2009 spring controlled hunts show a 16% decrease in turkeys harvested compared to 2008. However, general spring harvest show a 31% increase compared to 2008. Hunter numbers were down 8% compared to 2008 (Table 14). No check stations were operated during this planning period.

Trapping and Translocation

Seventy-five Merriam's turkeys were trapped in northern Idaho and transplanted at Cecil Andrus Wildlife Management Area in January 2010 (Table 15).

Depredations

A few turkey depredation or nuisance complaints were received during winter 2008-2009. Most of the complaints came from private landowners who wanted turkeys on their property for many years until populations became large enough to cause some trouble.

In some areas of the region, turkeys are dependent upon supplemental feed to survive the winter. During winter 2009-2010, Department personnel, in cooperation with members of the Idaho and local chapters of NWTF, distributed approximately 10.5 tons of donated corn to sustain turkeys, primarily in the Cambridge, Council and Midvale areas. The amount of corn dispensed is up 4.5 tons compared to 2008-2009.

Management Implications

Turkey hunter numbers and harvest increased in 2009 compared to 2008. Regional personnel have supported enhancement of turkey habitat by plantings of food plots specifically for wild turkey on USFS lands and by completing habitat improvement projects on Department-owned lands. Additionally, regional personnel have provided input into land-use plans on the importance of turkey habitat.

Wild turkey populations appear down in several popular hunting destinations in Southwest Region, including Idaho City, Garden Valley, and areas adjacent to the Andrus WMA. General fall turkey hunting seasons in GMUs 33 and 39 have been closed since fall 2006 to minimize any negative impact fall hunting may have on local turkey populations.

Blood samples were collected from all turkeys transplanted in GMU 31. All Merriam's turkeys tested seropositive for *Mycoplasma synovia*. This bacteria has been linked to chronic respiratory disease and infectious sinusitis in turkeys and other wild birds. However, testing seropositive for a disease only means the turkeys are carriers of *Mycoplasma synovia* and will not necessarily die of infection.

Mourning Dove

Harvest Characteristics

Harvest information on mourning doves is collected via the USFWS harvest survey. No regional telephone harvest survey has been conducted since 1995 (Table 16).

Population Surveys

Regional personnel participate in the USFWS annual mourning dove call-count routes in May each year. In 2009, regional personnel also counted mourning doves while conducting pheasant brood routes. Approximately 4.8 mourning doves were counted per mile in 2009 (Table 16).

Trapping and Banding

Southwest Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 17). In 2003, 65 doves were banded at 2 sites. All doves received a standard leg band on the right leg, and for all odd-numbered bands, a gold band was placed on the opposite leg. In 2004, a total of 100 doves were banded at 3 sites. All doves received a standard leg band; hatch-year doves also received a reward band on the opposite leg. In 2005, 37 doves were banded at 2 sites. During 2006 and 2007, 70 and 182 doves were banded respectively at 3 locations. During 2009, 100 doves were banded in 4 locations. All doves received a standard leg band from 2005-2007. During 2008-2009, doves were banded with either a USFWS telephone call-in band or a web address band. After 2009 all bands will have web address only.

Rabbits and Hares

Population Surveys

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

Harvest Characteristics

Estimates from the telephone harvest survey indicate 732 hunters harvested 1,288 cottontail rabbits in 2009 compared to 2,744 cottontails harvested by 669 hunters in 2008 (Table 18). Twenty-six snowshoe hares were harvested by 92 hunters in 2009.

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.

American Crow

We do not actively monitor the American Crow population or harvest in the Southwest Region, though we do allow an annual harvest season with no bag or possession limit.

Table 1. Pheasant population characteristics and production, Southwest Region, 1980-present.

Year	Miles counted	Birds per mile	Percent unsuccessful females	Juv:100 adult females	<i>n</i>	Average brood size
1980	404	3.6	3	481	1,483	0.5
1981	402	4.4	7	427	1,799	5.4
1982	430	2.1	134 (?)	304	905	4.4
1983	298	3.1	15	383	941	4.6
1984	310	1.8	17	437	555	4.5
1985	278	2.8	16	653	784	7.7
1986	176	3.2	10	475	570	5.3
1987	178	2.7	13	415	446	4.8
1988	161	2.0	12	414	315	4.5
1989	176	2.0	2	497	414	4.9
1990	192	2.5	8	516	485	5.2
1991	600	0.7	34	505	397	4.0
1992	660	0.9	29	527	610	5.3
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
2003	540	0.4	79	546	153	5.7
2004	500	0.4	45	514	113	5.4
2005	460	1.2	40	540	232	5.4
2006	520	0.8	36	640	288	5.5
2007	460	0.8	38	356	268	4.8
2008	520	0.6	11	583	216	5.3
2009	520	0.6	13	657	309	4.5
10-year average	528	0.6	37	527	235	5.4

Table 2. Estimated pheasant harvest, Southwest Region, 1980-present.

Year	Check station				Telephone survey ^a		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1980	2,457	2,239	0.9	3.7			
1981	2,516	2,054	0.8	4.1			
1982	1,860	1,147	0.6	5.5			
1983	2,054	1,963	1.0	3.5	31,946	155,604	0.9
1984	1,723	1,342	0.8	4.6	28,979	132,487	0.8
1985	1,324	1,051	0.8	4.0	27,231	142,867	0.8
1986	1,718	1,412	0.8	4.1	25,218	119,326	0.8
1987	1,696	1,143	0.7	5.6	23,047	103,728	0.8
1988	1,245	569	0.5	7.0	17,016	64,302	0.7
1989	845	515	0.6	5.1	15,983	64,059	0.7
1990	962	739	0.8	4.2	16,309	74,302	0.7
1991	880	546	0.6	5.3	16,073	61,248	0.6
1992	693	488	0.7	4.5	15,800	68,600	0.7
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
2003 ^c	55	21	0.4	7.4	10,196	31,962	0.6
2004	95	38	0.4	6.5	9,029	24,623	0.6
2005 ^b	14	10	0.7	3.8	10,347	39,135	0.7
2006	106	83	0.8	3.5	10,540	25,211	0.9
2007	98	44	0.4	4.8	10,689	35,437	0.6
2008 ^b	60	29	0.5	5.5	10,832	48,775	1.0
2009	n/a				9,694	31,972	0.6
10-year average	129	62	0.5	5.8	10,382	33,680	0.7

^a Telephone survey data at the regional level were not collected from 1980-1982 and 1996-2000.

^b Freezeout Hill check station only.

^c Star check station only.

Table 3. Quail population characteristics and estimated harvest, Southwest Region, 1985-present.

Year	Brood routes ^a		Telephone survey ^b		
	Miles counted	Birds ^c per mile	Hunters	Birds harvested	Birds per hunter day
1985			4,854	37,776	1.2
1986			4,123	26,234	1.5
1987			3,677	27,476	1.2
1988			4,536	43,549	1.6
1989			4,523	47,418	1.8
1990			4,857	46,097	1.9
1991	600	1.5	5,478	58,352	1.7
1992	620	0.6	5,400	71,100	2.1
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
2003	540	2.5	8,467	105,749	2.4
2004	500	2.7	7,872	91,441	2.3
2005	460	5.4	8,082	145,761	2.6
2006	520	3.4	8,005	98,059	1.8
2007	460	3.9	8,442	88,067	1.7
2008	520	2.3	8,205	74,576	1.6
2009	520	1.7	7,815	35,695	1.8
10-year average	528	3.1	8,024	87,261	2.1

^a Brood routes were not conducted from 1985-1990.

^b Telephone survey data at the regional level were not collected from 1996-2000.

^c Almost entirely California quail.

Table 4. Estimated forest grouse harvest, Southwest Region, 1985-present.

Year ^a	Hunters	Birds harvested	Birds per hunter	Birds per hunter day
1985	3,524	12,441	3.5	0.8
1986	3,641	17,049	4.7	1.2
1987	4,145	18,406	4.4	1.1
1988	4,207	18,843	4.5	0.9
1989	4,846	25,699	5.3	1.0
1990	2,637	10,605	4.0	1.1
1991	2,365	10,636	4.5	1.0
1992	5,100	17,800	3.5	0.9
1993	10,400	30,100	2.9	2.9
1994	9,000	31,700	3.5	0.6
1995	13,500	43,800	3.2	0.6
2001	7,008	34,251	3.3	1.0
2002	8,945	34,672	5.5	0.8
2003	7,136	40,548	10.4	1.1
2004	9,415	36,312	3.4	0.7
2005	5,668	17,578	3.1	0.6
2006	10,435	29,056	2.8	0.5
2007	5,711	20,572	3.6	0.5
2008	6,372	14,666	2.3	0.4
2009	5,159	18,411	3.5	0.4
3-year avg.	5,747	17,883	3.1	0.4

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

Table 5. Forest grouse production in Southwest Region based on wing collection, 1988-present.

Year ^a	Blue Grouse			Ruffed Grouse	
	<i>n</i>	Juv:100 adult females	Juv:100 adults	<i>n</i>	Juv:100 adults
1988		52	120	36	100
1989		61	239	34	105
1990		126	107	24	60
1991		106	74	16	300
2001	165	362	177	157	166
2002	347	250	144	171	148
2003	356	297	168	130	128
2004	206	149	66	78	116
2005	157	242	141	81	119
2006	292	310	143	164	157
2007	409		186	141	227
2008	137		145	99	136
2009	502		261	103	177
3-year avg.	349	234	197	114	180

^a Wing barrel data were not collected from 1992-2000.

Table 6. Sage-grouse lek route data from selected routes, Southwest Region, 2003-present.

Route	2003	2004	2005	2006	2007	2008	2009	2010
Big Jack's Creek							28	39
Brown's Creek	24		28	32	31	9	14	12
Craig	104	101	108	99	35	18	39	49
Cow Creek	62				24	31	61	69
Monday Gulch	58	58	57	60	25	23	14	15
Midvale	69	62	74	62	35	23	23	35
Oreanna	79	73	93	83	54	55	40	63
Wickahoney West lek ^a	48	63	99	90	78	41	31	31
Rocky Knoll lek ^a	72	55	89	75	37	32	48	81
Rocky Knoll Route ^b					93	73	91	153
Roland Road	90	117	122	77	77	39	44	43
Sheep Creek	46	54	87	120	130	95	95	100
Soulen Center	58	49	72	94	38	21	22	30

^a Individual lek counts. Not associated with a route.

^b In 2007 Rocky Knoll Lek became part of a lek route. The individual high count on the lek was added to the table due to the long-term data set for this lek.

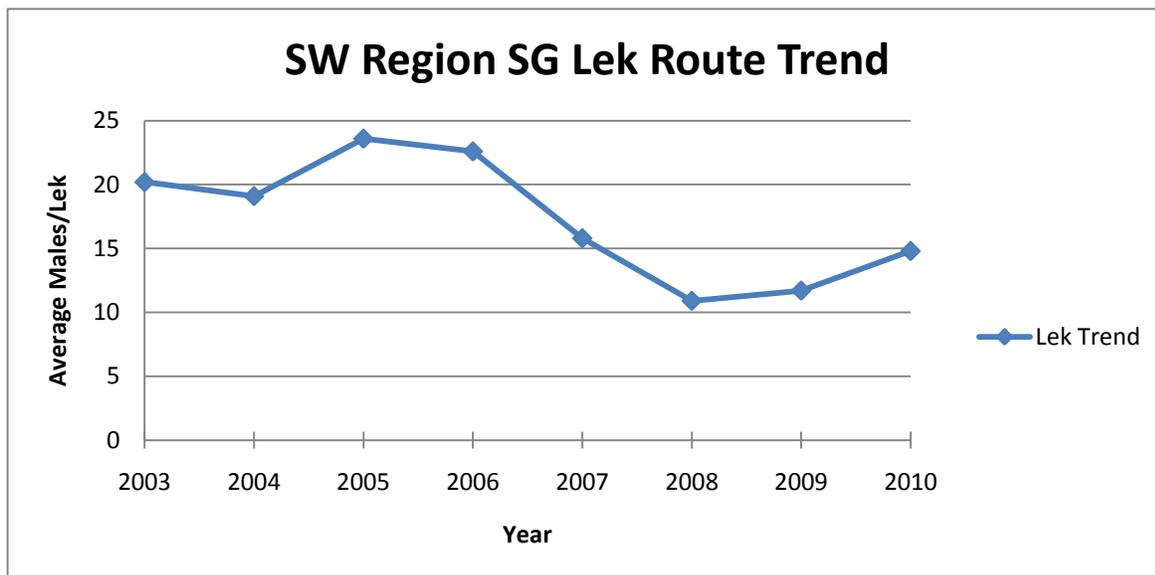


Figure 1. Average number of male sage-grouse per lek along 13 routes in Southwest Region.

Table 7. Estimated greater sage-grouse harvest, Southwest Region, 1980-present.

Year	Check station ^a				Telephone survey ^b		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1980	505	441	0.9	6.7			
1981	464	606	1.3	3.5			
1982	359	236	0.6	9.2			
1983	108	37	0.3	14.9	2,912	2,713	0.4
1984	47	31	0.7	5.2	504	901	0.6
1985	161	110	0.7	6.5	1,319	2,718	0.6
1986	245	330	1.3	4.3	608	1,253	0.6
1987	219	315	1.1	4.9	837	1,567	1.1
1988	329	284	0.9	5.7	1,830	4,532	0.7
1989	228	222	1.0	5.4	1,035	2,049	1.1
1990	476	883	1.9	3.3	1,217	4,320	1.5
1991	476	498	1.1	5.3	1,584	4,292	0.6
1992	599	412	0.7	7.7	1,500	4,200	0.7
1993	74	58	0.8	6.3	3,200	11,100	1.9
1994	99	109	1.1	3.8	3,400	6,400	0.6
1995	71	62	0.9	4.2	4,300	6,700	0.5
1996	44	29	0.7	6.0			
1997	34	36	0.9	3.7			
1998	23	23	1.0	3.8			
1999	21	18	1.0	4.4			
2000	365	312	0.9	6.5	997	1,848	0.6
2001	150	179	1.2	5.5	858	1,240	0.7
2002	285	293	1.0	5.0	1,135	1,499	0.7
2003	246	254	1.0	5.0			
2004	203	192	0.9	5.1	1,388	1,748	0.6
2005	232	308	1.3	5.0	1,016	1,373	0.8
2006 ^c							
2007	132	109	0.8	7.4	1,175	824	0.4
2008	137	96	0.8	7.9	898	897	0.8
2009	119	100	0.8	8.4			
10-year average	184	187	1.0	6.0	1,095	1,440	0.6

^a Walters Ferry and Bruneau check stations open on weekends in 1990. Bruneau check station open on opening day only from 1993-1999. Only Bruneau and Mud Flat check stations were operated from 2001-2008.

^b Telephone survey data at the regional level were not collected from 1980-1982 and 1996-1999. Telephone survey data for 2003 is not available.

^c Season was closed in 2006 due to West Nile Virus losses in sage-grouse.

Table 8. Greater sage-grouse production based on wing collections, Southwest Region, 1980-present.

Year	Juv:100 females	Juv:100 adults	Percent unsuccessful females
1980	106	62	65
1981	111	61	26
1982	83	57	59
1983	332	225	33
1984	145	111	40
1985	150	101	48
1986	195	133	29
1987	198	124	29
1988	165	109	35
1989	277	163	26
1990	211	153	20
1991	108	66	78
1992	83	56	84
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
2003	199	130	81
2004	246	168	
2005	221	164	70
2006 ^a			
2007	43	36	86
2008	106	73	70
2009	204	126	41
10-year avg.	189	129	66

^a Season was closed in 2006 due to West Nile Virus losses in sage-grouse.

Table 9. Trends in sharp-tailed grouse lek counts, Hixon Sharptail Preserve, Southwest Region, 1982-present.

Year	Lower	Middle	Upper	Fairchild	Totals
1982	15		12		27
1983	9	6	7		22
1984	12		9	2	23
1985	5	7	9		21
1986	15		15		30
1987	12	5	25	4	46
1988	10	9	23	10	52
1989	10	2	30	3	45
1990	12	9	25	0	46
1991	28	10	35	5	78
1992	19	9	13	1	42
1993	11	2	8		21
1994	12	1	18	1	32
1995	15	2	21	3	41
1996	21	1	15	5	42
1997	22	3	15	6	46
1998	21	2	23	14	60
1999	18	9	15	11	53
2000	24	0	19	16	59
2001	24	2	29	19	74
2002	19	10	17	17	63
2003	21	22	27	23	93
2004	34	18	31	15	98
2005	36	18	25	19	98
2006	47	24	51	33	155
2007	59	21	46	43	169
2008	27	8	19	7	61
2009	25	9	30	22	86

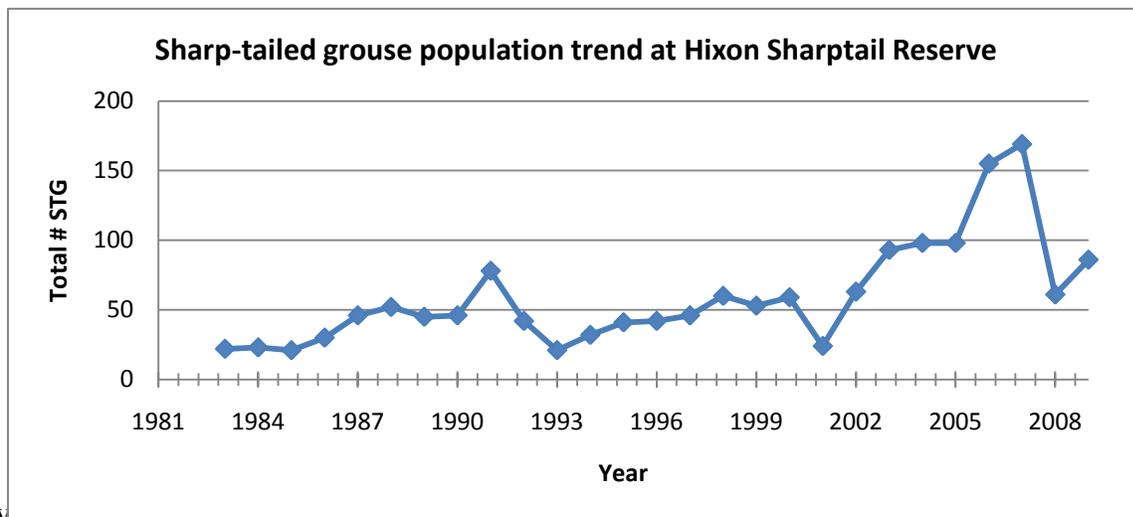


Table 10. Chukar aerial survey results along Brownlee Reservoir, Southwest Region, 1984-present.

Year ^a	Chukars observed	Chukar groups	Groups per square mile ^b	Chukars per square mile	Chukars per group
1984	597	45	3.8	49.8	13.3
1985	872	62	5.2	72.7	14.1
1986	1,686	94	7.8	140.5	17.9
1987	2,652	115	9.6	221.0	23.1
1988	-	-	-	-	-
1989	649	57	4.8	54.1	11.4
1990	1,313	77	6.4	109.4	17.1
1991	1,621	103	8.6	135.1	15.7
1992	930	89	7.4	77.5	10.5
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
2003	1,656	139	11.6	138.0	11.9
2004	1,855	102	8.5	154.6	18.2
2005	2,085	116	9.7	173.8	18.0
2006	858	139	11.6	71.5	6.2
2007	506	70	5.8	42.2	7.2
2008	453	61	5.1	37.8	7.4
2009	884	106	8.8	73.7	8.3
10-year avg.	1,300	106	8.8	108.0	12.1

^a Years with no data were not surveyed.

^b The survey area is 12 square miles.

Table 11. Chukar aerial survey results on Lucky Peak Reservoir, Southwest Region, 1984-present.

Year ^a	Chukars observed	Chukar groups	Groups per square mile ^b	Chukars per square mile	Chukars per group
1984	84	10	1.1	7.6	8.4
1985	132	10	1.2	11.0	13.2
1986	144	15	1.0	9.6	9.6
1987	409	33	3.3	40.9	12.4
1988					
1989					
1990					
1991	115	18	1.1	7.2	6.4
1992					
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
2003					
2004	362	31	3.1	36.2	11.7
2005					
2006	269	35	3.5	26.6	10.2
2007					
2008	176	17	1.7	17.6	10.6
2009					

^a Years with no data were not surveyed.

^b The survey area is 10 square miles.

Table 12. Estimated chukar harvest, Southwest Region, 1985-present.

Year	Check Station ^a				Telephone Survey ^b		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter day
1985	354	177	0.5	9.2	3,987	14,895	0.7
1986	402	238	1.2	6.3	6,505	46,299	1.9
1987	327	164	0.5	4.5	7,995	70,379	1.6
1988	316	168	0.5	11.5	6,957	49,687	1.7
1989	170	121	0.7	6.9	5,937	42,003	1.4
1990	257	420	1.6	2.4	5,793	49,954	1.9
1991	164	111	0.7	6.6	7,150	52,750	1.6
1992	136	72	<0.1	10.0	6,300	28,900	1.1
1993	5	2	0.4	7.5	8,500	48,100	5.1
1994	14	17	1.2	4.6	7,500	59,400	1.6
1995	7	9	1.3	2.9	10,700	96,700	1.5
1996	24	15	0.6	2.0			
1997	9	15	1.7	2.4			
1998	4	0					
1999	5	0					
2000	374	271	0.7	7.0			
2001	36	69	1.9	1.9	7,988	61,201	1.6
2002	70	114	1.6	2.8	8,907	78,171	1.8
2003	58	181	3.1	1.6	8,742	87,457	2.0
2004	44	97	3.1	1.7	9,335	71,238	1.7
2005					7,663	62,315	1.8
2006	70	161	2.3	2.9	8,003	64,071	1.7
2007	57	32	1.5	4.0	6,085	26,246	1.1
2008	57	171	3.0	2.4	5,511	40,412	1.4
2009	25	51	2.0	2.4	5,521	46,574	1.6
10-year average	88	127	2.1	2.9	7,528	59,743	1.6

^a Opening weekend harvest data only from Cecil Andrus WMA. Opening weekend harvest data only in 1990.

^b Telephone survey data at the regional level were not collected from 1996-2000.

Table 13. Gray partridge population characteristics and estimated harvest, Southwest Region, 1985-present.

Year	Production ^a			Telephone Survey ^b		
	Miles counted	Birds per mile	Birds counted	Hunters	Birds harvested	Birds per hunter day
1985				1,508	5,566	0.8
1986				1,610	6,645	0.7
1987				2,165	10,906	0.7
1988				1,809	11,951	1.1
1989				946	2,062	0.6
1990				1,835	9,648	1.0
1991	600	0.1	70	2,478	12,804	0.9
1992	660	0.1	55	1,800	6,600	0.9
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
2003	540	0.05	26	4,072	21,486	1.0
2004	500	0.2	122	2,891	13,826	0.6
2005	460	0.1	49	3,276	12,835	0.8
2006	520	0.2	96	3,182	18,704	1.0
2007	460	0.02	9	2,329	7,085	0.5
2008	520	0.0	0	1,921	4,364	0.4
2009	520	0.0	0	2,767	11,244	0.6
10-year average	528	0.1	54	2,967	12,988	0.7

^a Brood routes were not conducted from 1985-1990.

^b Telephone survey data at the regional level were not collected from 1996-2000.

Table 14. Estimated turkey harvest, Southwest Region, 1985-present.

Year Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1985						
Controlled	4	20	20	7	7.3	51
General			158	18	22.4	404
1986						
Controlled	6	30	30	12		
General			228	58	12.1	700
1987						
Controlled	6	30	30	12	7.1	85
General			352	78	14.3	1,119
1988						
Controlled	4	22	22			
General			518	72	24.4	1,757
1989						
Controlled	4	22	22	7		
General			280	39	27.7	1,079
1990						
Controlled	2	10	9	0		42
General			270	33	25.4	838
1991						
Controlled	2	10	9	4	7.0	28
General			596	61	26.0	1,587
1992						
Controlled	0					
General			736	93	23.7	2,200
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

Table 14. Continued.

Year Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
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
2003						
Controlled Spring	1	67	62	37	5.1	189
General Spring			5,797	1,230	15.4	18,961
General Fall			1,499	580	7.8	4,529
2004						
Controlled Spring	1	75	53	27		
General Spring			5,328	860	19.7	16,936
General Fall			1,742	602	8.6	5,214
2005 ^c						
Controlled Spring	2	85	74	64	3.4	215
General Spring			6,250	992	18.0	17,877
General Fall			1,388	394	10.1	3,991
2006 ^d						
Controlled Spring	2	115	162	51	10.0	509
General Spring			4,662	710	27.5	13,256
General Fall			453	131	8.0	1,057
2007						
Controlled Spring	2	115	182	40	6.25	250
General Spring			4,102	727	18.0	12,874
General Fall			461	167	10.6	1,774
2008						
Controlled Spring	2	135	116	82	3.61	425
General Spring			3,830	580	26.6	11,000
General Fall			123	35	9.4	332

Table 14. Continued.

Year Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
2009						
Controlled Spring	2	135	110	69	6.0	415
General Spring			4,167	763	16.7	12,777
General Fall			1,190	408	11.0	1,471

^a Controlled hunts were not offered from 1992-1995.

^b Fall hunt. All others are spring hunts.

^c Ten-permit controlled youth hunt added spring 2005.

^d GMU 33 and 39 were closed to fall hunting in 2006.

Table 15. Turkey translocation history for Southwest Region, 1966-present.

Year	Sub-species ^a	Release site-GMU	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
	M	SF Salmon River-25	18	N
	M	Payette River at Banks-32	15	S
	M	Hornet Creek-22	4	S
	M	Fruitvale-22	1	S
	R	Kennedy WMA-38	16	N
	R	Goodrich Creek-22	19	N
1983	M	SF Boise River-39	15	S
	M	MF Boise River-39	15	N
	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
	R	C.J. Strike WMA-40	14	N
1987	M	Porter Creek-39	10	N
	M	Harris Creek-39	10	N
1988	M	Harris Creek-39	10	S
	M	Porter Creek-39	7	S
	M	Eagleson Summit-39	11	N
1989	R	Boise River at Caldwell-38	14	N
1990	M	Cottonwood Creek-31	25	N
	M	Dukes Creek-22	28	N
	M	Indian Creek-22	28	N
	M	WF Brownlee Creek-31	28	N
	M	Hornet Creek-22	13	S
	M	Stack Rock-39	20	N
1993	M	Robie Creek-39	22	S
	M	Thorn Creek-39	24	N
	M	Wilderness Ranch-39	29	S
	M	Corral Creek-39	25	N
	M	Ola-32A	22	N
	M	Squaw Creek-32A	46	N
	M	Sturgill Creek-31	37	N
	R	Payette River-32	5	S
	R	Boise River-38	26	N
	R	Boise River-38	27	N
1994	R	Boise River-38	24	N
	R	Boise River-38	29	N
	M	Ola-32	22	S

Table 15. Continued.

Year	Sub-species ^a	Release site-GMU	Birds released	New or supplemental release
1995	M	Squaw Creek-32	24	S
	M	Alder Creek-33	27	N
	M	MF Payette River-34	30	N
1996	R	Payette River WMA-38	20	N
1997	R	Payette River WMA-32	18	N
	R	Payette River WMA-32	17	N
1998	M	Bunch Creek-33	18	N
	M	MF Payette River-34	33	S
	M	Keithly Creek-31	27	N
	M	Dennett Creek-33	27	N
	M	Little Weiser River-32	17	N
	M	Mann Creek-31	19	S
	M	SF Boise River-39	17	S
	R	Payette River WMA-32	17	N
	R	Payette River WMA-32	20	S
	R	Letha-32	24	N
1999	R	Payette River-32	26	N
	M	SF Boise River-39	17	S
	M	Garden Valley-33	32	S
2005	M	Bender Creek (Danskin Mts)-39	30	S
	M	Cottonwood Creek-39 (JAN)	60	S
	M	Willow Creek-39 (JAN)	25	S
	M	Bender Creek-39 (DEC)	19	S
	M	Cottonwood Creek-39 (DEC)	50	S
2006	M	Willow Creek-39 (DEC)	30	S
	R	Little Banks Island-38 (JAN)	34	S
2007	M	Andrus WMA – 31 (DEC)	157	S
2008	R	Montour – 32 (FEB)	32	S
2008	R	Weiser Bass Pond – 32 (FEB)	23	N
2009	M	Andrus WMA (JAN)	156	S
2010	M	Andrus WMA (JAN)	75	S

^a M = Merriam's, R = Rio Grande.

Table 16. Mourning dove late-summer observation survey results and estimated harvest, Southwest Region, 1985-present.

Year	Dove routes ^a		Telephone survey ^b		
	Miles counted	Doves observed/mile	Hunters	Birds harvested	Birds per hunter day
1985			4,326	44,746	2.6
1986			3,226	29,434	2.3
1987			2,635	26,675	2.5
1988			1,878	19,390	2.1
1989			2,490	19,295	2.0
1990			2,578	30,910	3.1
1991	600	4.5	2,410	25,733	2.4
1992	660	1.5	3,200	29,900	2.0
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			
2003	540	2.6			
2004	500	2.6			
2005	460	4.0			
2006	520	3.6			
2007	460	5.2			
2008	520	3.6			
2009	520	4.8			

^a Data collected during pheasant brood route counts. Counts were not taken from 1985-1990.

^b Telephone survey data at the regional level were not collected after 1995; harvest is reported directly to USFWS by hunters.

Table 17. Mourning doves banded in Southwest Region, 2003-present.

Year	Sex			Year			
	Male	Female	Unknown	Hatch-year	Adult	Unk	Total
2003	20	12	0	33	32	0	65
2004	31	10	10	49	51	0	100
2005	11	10	3	13	24	0	37
2006	18	8	5	33	31	6	70
2007	56	31	3	64	90	28	182
2008	61	41	67	50	118	1	169
2009	39	26	35	29	71	0	100
Total	236	138	123	271	417	35	723

Table 18. Estimated cottontail rabbit and snowshoe hare harvest, Southwest Region, 2003-present.

Year	Cottontail rabbit		Snowshoe hare	
	Hunters	Cottontails harvested	Hunters	Hares harvested
2003	1,137	4,094	25	17
2004	707	3,582	115	69
2005	874	4,528	58	48
2006	1,201	4,517	78	0
2007	1,192	8,445	188	120
2008	669	2,744	38	19
2009	732	1,288	92	26
3-year average	864	4,169	106	55

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>4</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED:	<u>July 1, 2009 to June 30, 2010</u>		

MAGIC VALLEY REGION

Climatic Conditions

Spring precipitation in the Magic Valley Region was generally above the long-term means and likely had beneficial effects on nesting and brood-rearing habitat quality. For example, April through June precipitation at the Burley Municipal Airport Weather Station was 5.23 inches in 2010 compared to a long-term mean of 3.16 inches (1948-2010).

Trapping and Translocation

No trapping or translocation took place in Magic Valley Region for pheasant, California quail, mountain quail, forest grouse, sage-grouse, chukar, or gray partridge during the reporting period. Seventy-five Columbian sharp-tailed grouse were trapped and translocated to sites in Idaho and Washington to augment or reestablish populations.

Pheasant

Abstract

Pheasant numbers have declined substantially in the Magic Valley during the past 35 years as evidenced by declines in harvest and pheasants observed/mi on August roadside surveys. The 2009 number of pheasants observed/mi (PPM) index was the lowest on record. Estimated harvest in 2009 was only 25% of the 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 have been conducted in the region since 1961 to monitor fall pheasant population trends and forecast hunting seasons. The PPM on routes has declined substantially averaging 3.36 PPM during the 1960s, 2.10 PPM during the 1970s, and 0.43 PPM from 1980-2009. The 2009 PPM index is the lowest on record (Table 1). Roadside survey data typically

reflect higher pheasant densities in the western portion of Magic Valley Region (Gooding, Twin Falls, Elmore, Owyhee, western Jerome, and western Lincoln counties) than the eastern portion (Cassia, Minidoka, eastern Jerome, and eastern Lincoln counties). In the eastern portion of the region, winters are typically more severe and habitat loss has been greater than in the western portion. In 2009, western routes averaged 0.15 PPM and eastern routes averaged 0.07 PPM.

Two new roadside surveys were added in Minidoka County to help monitor the effects of the Conservation Reserve Enhancement Program on upland bird populations.

Winter sex ratio data was not collected during the 2009-2010 reporting period.

Harvest Characteristics

Both pheasant hunters and pheasant harvest have declined precipitously in the region since the mid-1980s. In 2009, estimated harvest decreased by 21% from 2008 and was only 25% of the estimated harvest in 1985 (Table 2).

Release of Pen-reared Pheasants

Pheasant stocking to provide “put-and-take” hunting opportunity occurred on Bureau of Reclamation tracts in Minidoka County (400 pheasants) and at Niagara Springs WMA (1,450 pheasants). One hundred fifty of the pheasants stocked at Niagara Springs WMA were for the youth-only pheasant season.

At Niagara Springs WMA in 2009, an estimated 314 hunters harvested 769 stocked pheasants. These data suggest that 53% of the stocked pheasants were taken by hunters. At a purchase cost of \$14.25/bird or \$20,662, the released birds were returned to the bag at a cost of \$26.87/bird.

Management Studies

No management studies were conducted during the 2009-2010 reporting period.

Management Implications

Pheasant populations in 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 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 20 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 pursue habitat improvement efforts through the Department's Habitat Improvement Program (HIP), cooperative projects with Pheasants Forever, Farm Bill programs, and the Cooperative Wildlife Management Program. Providing adequate nesting habitat is currently viewed as the weak link in our habitat recovery efforts.

Quail

Population Surveys

Only 7 of 28 August roadside routes survey quail habitat, resulting in poor predictive capabilities from survey data. However, the mean of 0.25 quail observed/mi in 2008 and 2009 was higher than the 1990-2008 average of 0.17 quail observed/mi (Table 3).

Harvest Characteristics

Quail populations in the region exhibit dramatic annual fluctuations in response to weather conditions during the hatch. During 1985-2009, the estimated harvest has ranged from 1,375 birds in 1985 to 38,522 birds in 2006. The 2009 harvest declined by 28% from 2008 and was 46% lower than the 2001-2008 average (Table 3). At opening weekend check stations, success has ranged from a low of 0.00 birds checked/100 hunters in 1985 to a high of 6.27 birds checked/100 hunters in 1996. The number of quail checked/100 hunters in 2009 was the slightly lower than the previous 10-yr average (Table 4).

Management Implications

California quail in Magic Valley Region are associated primarily with Snake River and its tributaries west of U.S. Highway 93. Opportunities to enhance habitat will be pursued through HIP, and through riparian improvement opportunities with the Bureau of Land Management (BLM), whenever possible. Increased residential development along 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

Population Surveys

No surveys were conducted during the 2009-2010 reporting period.

Harvest Characteristics

Forest grouse hunting has increased in popularity since the 1980s. From 2001-2009, more than 2,500 hunters pursued forest grouse annually in the region compared to less than 1,000 hunters from 1985-1991. Estimated harvest of dusky, ruffed, and spruce grouse (forest grouse) in 2009 increased by 74% from 2008 but was 40% lower than the 2001-2008 mean of 7,619 grouse (Table 5).

At 2009 check stations, the number of ruffed grouse checked/100 hunters increased by 217% from 2008 and was 312% higher than the 1999-2008 mean. All of the ruffed grouse checked at 2009 check stations were from the South Hills (GMU 54). The South Hills population of ruffed grouse is the result of introduction efforts to the area during the 1980s. The number of dusky grouse checked also increased in 2009 (Table 4). Estimated dusky grouse harvest was 2,194 birds; an increase from 434 birds in 2008 and similar to the 2,136 birds taken in 2007.

Many forest grouse are taken incidental to other types of hunting and survey data for 2006-2008 show that many hunters do not know what species they have killed. During the 2006-2008 seasons, the number of spruce grouse reported killed in the Magic Valley Region ranged from 352-1,076 birds and averaged 712 birds. We believe this estimate is unrealistically high because spruce grouse may be found in only a small portion of the region near Galena Summit and probably in the upper South Fork Boise River drainage. We believe that most of the spruce grouse reported by hunters were probably dusky grouse and were misidentified by hunters. The harvest data suggest that approximately 23% of the forest grouse harvested are misidentified.

Management Implications

Dusky and ruffed grouse harvest will be monitored at sage-grouse and big game check stations. No population surveys are presently conducted for forest grouse but ruffed grouse drumming surveys may be considered in the future in conjunction with research efforts.

Sage-grouse

Abstract

Lek route data suggest sage-grouse populations in Magic Valley Region exhibited substantial declines in 2007 and 2008 after increasing from 1995-2006. The number of males counted on leks in 2010 was 52% lower than in 2006. Production indexed from hunter-harvested grouse was poor in 2007, 2008, and 2009 falling well below the 1965-2009 average of 1.95 juveniles/adult hen. Opening weekend check station data show a 54% decline in hunter participation since more restrictive hunting seasons were implemented in 1996. Opening weekend participation in 2009 declined to the lowest level on record. 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.

Population Surveys

Twenty two lek route surveys were conducted during 2010 to monitor sage-grouse population trends. Ten of the routes can be used to monitor population trends since 1987. Route data suggest that sage-grouse populations in the region declined precipitously from 1987 to 1994 (69%), increased from 1995-1999 and then declined slightly from 2000-2002 before increasing again from 2003-2006 (Figure 1). In 2007 and 2008, the number of males counted on 20 comparable routes declined by 46% from the 2006 level. The 2009 and 2010 surveys suggest the population had stabilized at a level similar to the late 1990s.

Most leks do not occur on annual routes and surveys are coordinated with federal agency personnel and volunteers. In 2010, more than 50 individuals participated in lek surveys including Department biologists, conservation officers, Reservists, BLM and USFS employees, and citizen volunteers. Survey efforts also included 6 mornings of helicopter surveys designed to assess the effect of the 2007 Murphy Complex Fire on sage-grouse and 2 mornings of helicopter surveys in North Magic Valley Sage-Grouse Planning Area. Male counts were obtained for 420 leks; approximately 43% of the leks identified in the region since 1950. During the past 5 years (2006-2010) 80% of the identified leks in the region have been surveyed and 389 have been classified as occupied (active during the past 5 years).

Wings from hunter-harvested sage-grouse were collected at 10 check stations and with wing barrels to index annual production. From 1962-2009 production has averaged 195 juveniles/100 adult females. From 2007-2009 production was well below average (Table 6).

Harvest Characteristics

Ten check stations are operated annually during opening weekend. Opening weekend participation declined substantially beginning in 1996 when more conservative seasons were implemented. The number of hunters checked declined 54% from a mean of 2,102 hunters from 1985-1995 to a mean of 897 hunters from 1996-2009. Opening weekend participation in 2009 declined to the lowest level on record (Table 7).

Opening weekend hunter success declined in 2007-2009 primarily as a result of a more restrictive 1-bird daily bag limit in the region. Success in 2009 was slightly higher than in 2007 and 2008. The effort required to harvest a grouse in 2009 was 7.2 hours, similar to the 2000-2008 average. According to the telephone harvest survey, hunter participation in 2009 declined by 5% from 2008 and estimated harvest increased by 32% (Table 7).

Management Implications

Lek route data suggest an increasing trend in sage-grouse populations in the region from 1994-2006. Despite good production in 2006 (2.16 juveniles/adult female in the harvest), displaying males counted on lek routes declined by 30% in 2007. The cause of the decline is uncertain but West Nile virus is a possible, but unproven, contributing factor.

Habitat loss and fragmentation are the primary cause of long-term sage-grouse declines. Fires have consumed more than 1.5 million acres of sagebrush-dominated habitat in south-central Idaho during the past 20 years. Combined with drought conditions, these fires have had catastrophic effects on sage-grouse nesting, brood-rearing, and winter habitats. Many areas have burned multiple times prohibiting the natural recovery of sagebrush. The increasing trend in sage-grouse numbers from 1995-2006 can be attributed to the recovery of sagebrush communities in some areas such as Thorn Creek, Shoshone Basin, and Kimama. In 2007, the Murphy Complex Fire burned more than 500,000 acres in the Jarbidge area setting back sage-grouse recovery efforts there. Reversing the long-term downward trend in sage-grouse numbers is contingent on further reestablishment of sagebrush habitat where it has been lost. Regional personnel will continue to review and comment on BLM and USFS land management programs affecting sage-grouse habitat.

Implementation of the *Conservation Plan for Greater Sage-grouse in Idaho* will be a priority in the upcoming reporting period for the Magic Valley Region. The region will continue to participate in the Shoshone Basin, Jarbidge, North Magic Valley, and South Magic Valley Local Working Groups.

Sharp-tailed Grouse

Population Surveys

Sharp-tailed grouse leks in Power, Oneida, and Cassia counties were surveyed in conjunction with trap and translocation efforts. Based on lek data, grouse numbers appear to have been relatively stable since 2000. Counts on 29 comparable leks were 377 birds in 2007, 370 birds in 2008, 356 birds in 2009, and 391 birds in 2010.

Harvest Characteristics

Sharp-tailed grouse harvest in Magic Valley Region is primarily from Oneida and Power counties (Greater Curlew area); although increasing numbers of grouse are being harvested from eastern Cassia County. Sharp-tailed grouse harvest data for the Magic Valley Region portion of the Greater Curlew area is displayed in the Southeast Region section of this report.

Trapping and Translocation

Idaho's Columbian sharp-tailed grouse translocation program began in 1991 with the goal of reestablishing populations of this subspecies in Idaho and other western states where suitable habitat exists. During 1991-2010, 1,341 Columbian sharp-tailed grouse (805 males, 536 females) were trapped in southeast Idaho for reintroduction projects in Idaho, Oregon, Washington, and Nevada. Six hundred six grouse were released in the Shoshone Basin and House Creek areas of Twin Falls County, Idaho, and 735 birds were provided to the other states.

During 2003-2010, 247 sharp-tails (160 males, 87 females) were translocated to the House Creek area in southwest Twin Falls County. In addition to having suitable habitat for Columbian sharp-

tailed grouse, the House Creek area was selected for reintroduction efforts because it is relatively near Shoshone Basin (20 miles) and the Snake Mountains in Nevada (29 miles), where other reintroduction efforts have occurred. It is hoped these new populations will eventually link together. In April 2010, 1 active lek was known to have established as a result of the releases, however, others are suspected to occur in the area.

During 1992-1999, 359 sharp-tails (210 males, 149 females) were released in Shoshone Basin. During April 2010, 2 leks resulting from this release were documented. Grouse observations during the past 12 years have been reported over an area of greater than 200 mi². While it is suspected that additional leks exist, efforts to locate them have been unsuccessful.

Management Implications

Columbian sharp-tailed grouse numbers are currently strong as a result of the abundant habitat provided by the CRP program and mountain shrub communities on adjacent BLM and USFS lands. A statewide database of sharp-tailed grouse leks has been completed, which will facilitate the tracking of lek activity and attendance. Current sharp-tailed grouse population levels justify liberal hunting opportunity. Results of the grouse reintroduction efforts in Shoshone Basin and House Creek are encouraging. The multi-state reintroduction program will continue during the 2010-2011 reporting period as will monitoring of past reintroduction efforts.

Chukar

Population Surveys

No surveys for chukar populations were conducted in Magic Valley Region during the 2009-2010 reporting period. The sample of wings collected from hunter-killed birds was inadequate to allow inference about annual production.

Harvest Characteristics

Estimated chukar harvests in 2003-2006 were the highest recorded in the region during the previous 18 years. In 2006, hunters took an estimated 26,076 birds, more than four times the 1985-2005 average of 5,895 birds annually. Estimated harvests in 2007-2009 have averaged 7,346 birds; 39% lower than the 2001-2008 average (Table 8). It should be noted that harvest within Magic Valley Region in Owyhee and Elmore counties is included with the Southwest Region data.

Chukar harvest and population trend is also monitored at 10 opening weekend check stations. Chukar checked per 100 hunters peaked in 2003 and 2004, remained near the 10-year average in 2005 and 2006, and declined substantially in 2007 and 2008. Chukar hunter success improved in 2009 but was still below the 1999-2008 mean (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

Population Surveys

August roadside surveys do not adequately sample uncultivated partridge habitat and thus, do not provide useful data for predicting overall fall population status. The routes do sample partridge populations in cultivated areas and suggest low numbers of birds in 2009 (Table 9).

Harvest Characteristics

Estimated harvest from 1985-2009 has ranged from 1,900 birds in 1989 to 22,000 birds in 1996, demonstrating the extreme population fluctuations observed in this species. In 2009, the estimated harvest was similar to 2007 and 2008 and 46% below the 10-year average (Table 9)

Hunter success trends are monitored at 10 opening weekend check stations that sample hunters, mostly from uncultivated habitat. The number of gray partridge checked/100 hunters in 2009 increased by 327% from 2008 and was 109% higher than the 10-yr average (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 1997-2004, roadside survey data suggest relatively stable numbers of partridge, but the number of birds checked on opening weekend in 1999-2003 increased to well above the long-term average. One possible explanation for the disagreement in these 2 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. Magic Valley Region will continue to give priority to habitat enhancement (HIP, Cooperative Wildlife Program, Pheasants Forever) for gray partridge management.

Wild Turkey

Trapping and Translocation

From 1988-2001, 152 Rio Grande turkeys were released at the Big Cottonwood WMA in Unit 54 (Table 10). Since 2004, 106 nuisance turkeys have been trapped and relocated to the Goose Creek and Green Creek drainages in Unit 54.

Harvest Characteristics

From 2003-2010, 3 spring hunts have been authorized in Unit 54, including a youth-only hunt. Total permit levels have increased from 12 permits in 2003 to 78 permits in 2008-2010. In 2009 26 of the 63 hunters that participated were successful (Table 11).

Management Implications

Opportunities to establish self-sustaining turkey populations in Magic Valley Region are limited without supplemental feeding during winter. 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. The turkey population in Unit 54 is expanding and turkeys have become a nuisance around several farms near Oakley and Big Cottonwood WMA. Winter habitat is the primary limiting factor for turkeys in Unit 54.

Mourning Dove

Population Surveys

Department personnel, in cooperation with USFWS, collect data on 4 spring call-count routes in Magic Valley Region.

On August roadside surveys, doves observed have ranged from 1.3 doves/mi in 2000 to 5.1 doves/mi. in 2009. The number of doves observed on August routes has trended upward during the past 23 years. From 1999-2008, 3.4 doves/mi were observed and during 1986-1998, 2.3 doves/mi were observed (Table 12).

Trapping and Banding

Magic Valley Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 13). In 2009, 172 doves were banded at 2 sites including Big Cottonwood WMA and near Jerome. During 2003-2009, 1,460 total doves were banded in the region. Banding will continue during the 2010-2011 reporting period.

Harvest Characteristics

Harvest information on mourning doves is collected via the USFWS harvest survey. A telephone survey of hunters has not been conducted since 1996 (Table 12).

Management Implications

Roadside survey data collected in the 1980s suggest that as many as 50% of doves have migrated out of the Magic Valley area by the opening of hunting season on 1 September. The onset of cooler weather, usually in early September, triggers movement of many remaining doves. Spring

call-count routes and August roadside surveys will be continued to monitor dove trends and abundance.

Cottontail Rabbits

Population Surveys

Cottontail rabbits are counted on the 28 roadside surveys conducted each August in Magic Valley Region. The number of cottontails observed has varied from 4 (1999-2001 and 2006, 2008) to 16 (2005). Five cottontails were observed on 2009 routes.

Harvest Characteristics

No cottontails have been checked at opening weekend check stations since 2002 (Table 4). In 2009, it was estimated that 549 hunters harvested 3,291 cottontails in the region (Table 14).

Management Implications

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

American Crow

The American crow will continue to be a species with no active management.

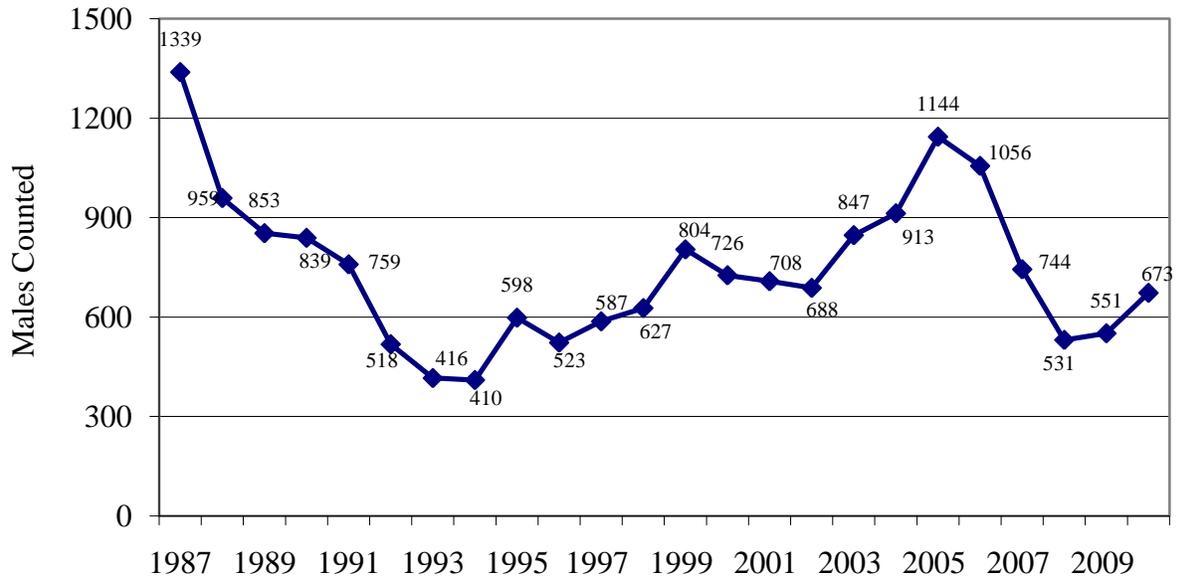


Fig. 1. Total male greater sage-grouse counted on 10 comparable lek routes, Magic Valley Region, 1987-present.

Table 1. Pheasant population characteristics and production, Magic Valley Region, 1985-present.

Year	Winter sex ratio		Routes (miles) counted	Birds per mile	Percent unsuccessful females	Juv:100 adult females	Brood size	
	Hens per cock	<i>n</i>					<i>n</i>	Average
1985	3.2	359	12 (530)	0.47	11	670	31	6.6
1986	1.6	397	13 (768)	0.36	14	803	50	6.3
1987	1.8	490	13 (789)	0.25	6	631	50	6.1
1988	3.0	809	14 (858)	0.34	13	723	32	5.8
1989	2.1	884	14 (854)	0.27	16	554	24	6.1
1990 ^a	1.9	1,333	14 (854)	0.52	29	742	31	6.2
			28 (575)	0.54	30	447		
1991			28 (575)	0.33	43	529	22	4.9
1992	2.2	1,572	28 (575)	0.42	26	361	19	5.2
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
2003			28 (575)	0.31	23	636	14	6.1
2004			28 (575)	0.22	9	982	8	8.3
2005			28 (573)	0.42	35	468	21	5.8
2006			28 (573)	0.25	22	452	6	4.3
2007			28 (573)	0.24	10	467	9	4.2
2008			28 (567)	0.14	38	825	2	5.5
2009			28 (570)	0.11	57	357	3	3.3
10-year average				0.23	24	604	10	5.7

^a Survey was modified in 1990. Both the old and new surveys were conducted to allow continuity of trend data.

Table 2. Estimated pheasant harvest, Magic Valley Region, 1985-present.

Year ^a	Hunters	Birds harvested	Birds per hunter	Birds per hunter-day
1985	14,013	51,330	3.7	0.7
1986	12,288	33,810	2.8	0.6
1987	8,910	25,854	2.9	0.6
1988	6,707	25,278	3.8	0.8
1989	6,037	20,521	3.4	0.6
1990	8,644	36,602	4.2	0.8
1991	7,576	24,411	3.2	0.6
1992	6,603	27,347	4.1	0.7
1993	5,071	24,769	4.9	0.7
1994	3,802	24,629	6.5	1.0
1995	4,975	20,289	4.1	0.6
1996	7,200	17,551	2.4	0.6
2001	5,491	19,368	3.5	0.6
2002	4,621	11,677	2.5	0.5
2003	5,579	13,622	2.4	0.6
2004	6,644	15,317	2.3	0.6
2005	5,298	20,595	3.9	0.6
2006	8,757	39,964	4.6	0.8
2007	5,628	16,247	2.9	0.6
2008	5,101	16,094	3.1	0.7
2009	3,407	12,787	3.75	0.57
2001-2008 average	5,890	19,111	3.2	0.6

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

Table 3. California quail population characteristics and estimated harvest, Magic Valley Region, 1985-present.

Year	Brood routes ^a		Telephone survey ^b		
	Routes (miles) counted	Birds per mile	Hunters	Birds harvested	Birds per hunter-day
1985			435	1,375	1.0
1986			615	4,170	1.8
1987			342	1,599	2.0
1988			534	2,685	1.4
1989			306	2,362	2.4
1990	28 (575)	0.15	946	6,446	1.6
1991	28 (575)	0.15	688	5,624	1.4
1992	28 (575)	0.06	726	3,199	0.8
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
2003	28 (575)	0.17	1,070	4,706	1.9
2004	28 (575)	0.18	1,618	12,949	1.6
2005	28 (573)	0.40	1,086	16,647	2.2
2006	28 (573)	0.28	2,686	38,522	2.7
2007	28 (573)	0.31	1,948	15,797	1.8
2008	28 (567)	0.25	2,088	11,049	1.5
2009	28 (570)	0.25	1,122	7,939	1.27
2001-2008 average		0.23	1,649	14,627	1.83

^a Brood routes were not conducted from 1985-1989.

^b 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 sage-grouse, quail, and partridge season, Magic Valley Region, 1985-present.

Year	Sage-grouse	Dusky grouse	Ruffed grouse	Chukar partridge	Gray partridge	Mourning dove	CA quail	Cottontail/pygmy rabbit ^a	Hunter numbers
1985	59.9	1.9	0.00	0.3	2.4	0.1	0.00	0.04	2,153
1986	77.0	0.4	0.00	1.7	3.7	0.5	0.07	0.11	2,824
1987	85.3	0.3	0.04	2.6	4.4	0.6	1.12	0.61	2,684
1988	85.1	0.1	0.00	2.5	2.6	1.6	1.46	0.41	2,459
1989	78.3	0.4	0.10	1.3	1.2	1.5	0.10	0.40	2,037
1990	118.3	0.6	0.13	1.7	2.6	0.3	0.25	1.88	2,393
1991	62.8	0.2	0.20	1.8	1.7	0.9	0.37	0.00	2,449
1992	47.0	0.3	0.54	1.1	0.9	0.3	1.03	1.08	1,852
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
2003	56.9	0.3	0.25	13.0	4.3	0.4	0.66	0.00	1,206
2004	54.4	1.2	0.59	11.7	2.4	1.0	1.09	0.00	1,193
2005	78.4	0.4	0.29	9.3	3.2	0.5	0.38	0.00	1,045
2006	60.0	0.3	0.35	7.1	4.7	1.7	1.50	0.00	1,133
2007	38.2	0.5	0.62	2.2	4.5	1.9	4.52	0.00	641
2008	37.3	0.4	0.74	1.5	2.2	3.1	4.81	0.00	541
2009	43.4	1.4	2.35	6.3	9.4	0.9	1.64	0.00	426
1999-2008 average	54.0	1.0	0.57	7.9	4.5	1.5	1.93	0.14	1,010

^a The pygmy rabbit season was closed in 2002.

Table 5. Estimated forest grouse harvest, Magic Valley Region, 1985-present.

Year ^a	Hunters	Birds harvested	Birds per hunter	Birds per hunter-day
1985	472	768	1.6	0.8
1986	724	2,322	3.2	0.8
1987	634	2,002	3.2	0.8
1988	804	3,243	4.0	0.9
1989	639	2,182	3.4	1.1
1990	765	3,097	4.0	0.7
1991	922	4,357	4.7	1.1
1992	1,102	3,226	2.9	0.9
1993	2,814	4,329	1.5	0.4
1994	1,910	5,544	2.9	0.7
1995	1,990	5,138	2.6	0.05
1996	1,408	5,631	4.0	1.0
2001	2,847	10,001	3.5	0.8
2002	3,083	8,470	2.7	0.6
2003	2,951	9,641	3.3	0.7
2004	3,260	10,060	3.1	0.6
2005	2,212	7,151	3.2	0.6
2006	2,721	7,297	2.7	0.4
2007	2,663	5,716	2.1	0.3
2008	1,718	2,616	1.5	0.4
2009	1,121	4,546	4.1	0.7
2001-2008 average	2,681	7,619	2.8	0.6

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

Table 6. Greater sage-grouse production based on wing collections, Magic Valley Region, 1985-present.

Year	Juv:100 females	Juv:100 adults	% unsuccessful females
1985	252	155	48
1986	244	161	37
1987	142	90	43
1988	120	77	56
1989	194	125	50
1990	239	146	48
1991	102	67	80
1992	117	63	78
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
2003	179	123	70
2004	177	122	74
2005	252	139	79
2006	216	129	69
2007	57	25	57
2008	113	80	72
2009	131	94	55
1999-2008 average	165	104	70

Table 7. Estimated Greater sage-grouse harvest, Magic Valley Region, 1985-present.

Year	Check station			Telephone survey ^a			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds harvested	Birds per hunter-day
1985	2,153	1,290	0.60	7.4	1,788	2,513	0.8
1986	2,824	2,169	0.77	5.6	2,280	4,158	0.9
1987	2,359	1,961	0.83	5.3	2,526	6,743	1.2
1988	2,459	2,092	0.85	5.3	2,969	6,451	1.0
1989	2,018	1,580	0.78	5.5	2,107	4,548	0.6
1990	2,375	2,833	1.19	3.9	4,205	20,584	1.5
1991	2,429	1,525	0.63	7.5	4,121	8,239	0.7
1992	1,847	870	0.47	9.9	3,256	7,710	0.9
1993	1,709	729	0.43	11.3	5,288	6,672	0.4
1994	1,647	1,213	0.74	6.2	4,177	11,331	0.9
1995	1,303	520	0.40	11.1	4,285	8,062	0.6
1996	938	555	0.59	6.5	6,615	8,269	2.8
1997	1,033	421	0.41	11.6			
1998	888	497	0.56	7.2			
1999	1,036	661	0.64	6.2			
2000	1,009	556	0.55	7.7	2,513	3,280	0.6
2001	873	479	0.55	8.0	2,440	3,138	0.6
2002	1,029	540	0.52	8.4	2,677	3,066	0.5
2003	1,127	686	0.61	6.7			
2004	1,164	623	0.54	7.2	3,012	3,173	0.6
2005	989	833	0.84	5.0	2,284	3,185	0.8
2006	1,003	680	0.68	5.8	4,236	6,407	0.7
2007	598	229	0.38	9.7	1,699	1,286	0.4
2008	491	194	0.40	9.0	1,169	773	0.4
2009	382	185	0.48	7.2	1,106	1,024	0.5
2000-2008 average	920	536	0.56	7.5	2,504	3,039	0.6

^a Telephone survey data at the regional level were not collected from 1997-1999. Telephone survey data for 2003 is not available.

Table 8. Estimated chukar harvest, Magic Valley Region, 1985-present.

Year ^a	Hunters	Birds harvested	Birds per hunter	Birds per hunter-day
1985	764	2,092	2.7	0.7
1986	919	3,125	3.4	1.0
1987	1,151	3,394	2.9	0.8
1988	973	1,805	1.9	0.6
1989	594	1,546	2.6	1.0
1990	1,383	4,312	3.1	1.1
1991	721	3,871	5.4	1.9
1992	857	1,487	1.7	1.2
1993	1,763	4,360	2.5	0.6
1994	1,105	3,371	3.1	0.9
1995	1,584	5,788	3.7	0.9
1996	1,408	7,273	5.2	1.2
2001	2,207	7,250	3.3	0.8
2002	1,753	6,966	4.0	1.1
2003	2,171	11,110	5.1	1.2
2004	2,725	11,450	4.2	1.1
2005	2,237	21,017	9.4	1.6
2006	3,337	26,076	7.8	1.8
2007	2,877	7,910	2.7	0.8
2008	1,030	4,708	4.6	1.6
2009	1,485	9,420	6.4	1.6
2001-2008 average	2,292	12,061	5.1	1.3

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

Table 9. Gray partridge population characteristics and estimated harvest, Magic Valley Region, 1985-present.

Year	Production					Telephone survey ^a		
	Routes (miles) counted	Birds per mile	Birds	Brood size	<i>n</i>	Hunters	Birds harvested	Birds per hunter day
1985	12 (530)	<0.02	12	9.0	2	923	3,644	0.9
1986	13 (768)	0.20	156	11.8	13	1,223	4,012	0.7
1987	13 (789)	0.24	192	8.2	22	1,183	4,427	0.9
1988	14 (858)	0.18	149	8.9	13	757	2,578	0.7
1989	14 (854)	0.20	170	10.6	13	628	1,921	0.6
1990 ^b	14 (854)	0.19	157	10.1	15	1,773	9,361	1.1
		0.35	195					
1991	28 (575)	0.18	111	9.7	9	1,295	2,805	0.5
1992	28 (575)	0.22	123	7.5	11	1,038	3,932	0.8
1993	28 (575)	0.13	71	8.4	17	1,886	6,741	0.9
1994	28 (575)	0.21	112	11.2	10	1,555	5,188	0.7
1995	28 (575)	0.08	45	11.2	4	2,092	8,834	0.8
1996	28 (575)	0.41	244	14.6	16	3,050	22,053	1.1
1997	28 (575)	0.11	62	10.2	6			
1998	28 (575)	0.15	83	11.9	7			
1999	28 (575)	0.11	63	12.2	5			
2000	28 (575)	0.15	86	7.1	8			
2001	28 (575)	0.10	54	7.7	8	2,751	10,133	0.6
2002	28 (575)	0.09	49	9.4	5	1,162	2,753	0.6
2003	28 (575)	0.14	77	10.7	7	2,789	7,277	0.8
2004	28 (575)	0.13	73	10.7	7	2,612	9,272	0.6
2005	28 (573)	0.35	200	13.3	12	2,242	11,576	0.8
2006	28 (573)	0.29	163	9.0	6	2,447	19,827	1.1
2007	28 (573)	0.16	92	7.5	11	1,546	5,904	0.7
2008	28 (567)	0.06	31	7.8	4	1,816	6,699	0.7
2009	28 (570)	0.10	56	9.0	3	1,178	3,980	0.6
2001- 2008 average		0.17	92	9.51	8	2,171	9,180	0.74

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

^b Survey was modified in 1990. Both the old and new surveys were conducted to allow continuity of trend data.

Table 10. Turkey translocation 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
2004	R	Goose Creek-54	8	N
2007	R	Green Creek-54	17	N
2008	R	Green Creek-54	64	S
2009	R	Green Creek-54	17	S

^a M = Merriam's; R = Rio Grande.

Table 11. Estimated turkey harvest, Magic Valley Region, 1985-present.

Year Hunt ^a	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1985						
Controlled	2	10	10	4	5.0	20
1986						
Controlled	3	15	15	5	8.4	42
1987						
Controlled	6	21	21	4	15.3	61
1988						
Controlled	6	21	21	9	6.9	62
General			93	0		56
1989						
Controlled	6	21	21	9		
General			31	3	39.6	119
1990						
Controlled	3	6	6	2	3.2	19
General			18	1	39.0	39
1991						
General			58	3	62.7	118
1992						
General			8	2	4.0	8
1993						
General			10	0		118
1994-1996	Closed					
1997						
Controlled (youth)	1	3	3	3		
1998						
Controlled (youth)	Canceled					
1999-2001	Closed					
2002						
Controlled	1	3	3	3	1.7	5
Controlled (youth)	1	3	3	3	2.7	8
2003						
Controlled	2	8	8	8	3.4	27
Controlled (youth)	1	4	2	2	1.0	2
2004						
Controlled	2	16	14	13		
Controlled (youth)	1	8	6	6		
2005						
Controlled	2	24	23	11	8.5	93
Controlled (youth)	1	12	8	5	8.8	42
2006						
Controlled	2	32	25	11	9.0	99
Controlled (youth)	1	18	10	6	6.2	40
2007						
Controlled	2	32	27	8		
Controlled (youth)	1	18	16	14		
2008						
Controlled	2	48	39	14	10.2	143
Controlled (youth)	1	30	25	11	9.0	99
2009						
Controlled (1 youth)	3	78	63	26	11.1	288
2010						

Year Hunt ^a	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
Controlled (1 youth)	3	78				

^a Regular controlled hunts were closed from 1991-2001 and reopened in 2002. A controlled youth-only hunt was initiated in 1997, closed from 1998-2001, and reopened in 2002. General season was initiated in 1988 and discontinued in 1994.

Table 12. Mourning dove August roadside survey results and estimated harvest, Magic Valley Region, 1985-present.

Year	August roadside routes		Telephone survey ^a		
	Routes (miles) counted	Doves observed/mile	Hunters	Birds harvested	Birds per hunter day
1985			1,593	21,505	2.89
1986	7 (413)	2.0	1,703	18,122	3.92
1987	13 (788)	2.5	1,384	15,121	2.02
1988	15 (911)	2.0	1,003	9,333	2.89
1989	14 (854)	2.4	1,273	10,424	3.11
1990 ^b	14 (829)	4.8	1,208	17,828	3.43
	28 (575)	3.1			
1991	28 (575)	2.0	1,290	17,983	3.12
1992	28 (575)	1.8	1,303	16,991	4.12
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			
2003	28 (575)	3.4			
2004	28 (575)	3.3			
2005	28 (573)	4.1			
2006	28 (573)	4.8			
2007	28 (573)	5.0			
2008	28 (567)	3.4			
2009	28 (570)	5.1			
1999-2008 average		3.4			

^a Telephone survey data at the regional level were not collected after 1996; harvest is reported directly to the USFWS by hunters.

^b Survey was modified in 1990. Both the old and new surveys were conducted to allow continuity of trend data.

Table 13. Mourning doves banded in Magic Valley Region, 2003-present.

Year	Adult			Hatch-year	Unknown	Total
	Male	Female	Unknown			
2003	46	45	7	96	6	200
2004	65	14	2	104	0	185
2005	85	27	0	86	0	198
2006	76	17	0	109	1	203
2007	46	21	0	154	6	227
2008	118	40	0	111	6	275
2009	48	5	0	119	0	172
Total	484	169	9	779	19	1,460

Table 14. Estimated cottontail rabbit and snowshoe hare harvest, Magic Valley Region, 2004-present.

Year	Cottontail rabbit		Snowshoe hare	
	Hunters	Cottontails harvested	Hunters	Hares harvested
2004	1,271	9,675	139	54
2005	1,089	7,550	126	1,948
2006	1,125	9,164	0	0
2007	475	1,445	106	11
2008	539	1,091	33	27
2009	549	3,291	0	0
2004-2008 average	900	5,567	81	408

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>5</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED: <u>July 1, 2009 to June 30, 2010</u>			

SOUTHEAST REGION

Climatic Conditions

Environmental conditions during the critical months of nesting were fair during spring 2009. Spring conditions had deeper snow and persisting colder temperatures than normal. Conditions increased with precipitation at or above normal for the 2009-2010 winter; snow-pack measurements averaged 80-110% of the 30-year mean for most of Southeast Region. Summer conditions were dry; with some slight relief in late summer/early fall resulting from short duration thundershowers and cooler temperatures.

Pheasant

Abstract

Subjective evaluation of pheasant numbers indicates relatively stable populations in parts of Southeast Region and gradual increases in others. No hunter check stations were operated 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 1999 (Table 1). Brood route surveys were discontinued at that time due to low numbers of birds seen.

Harvest Characteristics

In 2006, data was collected from the American Falls check station only. Because of this, the data is not comparable to previous years in the table. When comparing just the American Falls check station data, the hunter numbers increased by 37% from 95 to 136. Harvest decreased slightly from 110 birds in 2005 to 102 birds in 2006 (8%). Pheasant check stations are no longer conducted during pheasant seasons.

A telephone survey estimated that 3,975 hunters harvested 12,727 pheasants in 2009 (Table 2). According to the survey, harvest decreased (44%) from 22,889 birds harvested in 2008.

Release of Pen-reared Pheasants

There were 2,700 fully-grown game-farm cocks released on the Sterling WMA during fall 2009. Game-farm birds have been released on the WMA historically to provide hunters with additional opportunity. Bag limit for pheasants on the WMA remained 2 birds. Adults hunting on WMAs where game-farm pheasants were released were required to obtain a WMA pheasant permit. In addition to pen raised birds being released on Sterling WMA, Department staff worked with Sportsman for Wildlife (SFW) and Idaho for Wildlife (IFW) volunteers placing 2 Surrogators[®] on the Sterling WMA with day old chicks, the chicks were banded and released as an attempt to evaluate these devices. A total of 220 birds (193 banded) were released onto the WMA from this effort, with 1 band recovered. Numerous bands were found at the release site; bands were likely to large for the birds and did not remain on long enough for proper evaluation.

Management Implications

Declining habitat quality due to changes in farming practices has resulted in a decline in pheasant numbers in Southeast Region from levels of 10-20 years ago. Until the quantity and quality of available habitat increases, pheasant numbers will likely remain below historical levels. The U.S. Department of Agriculture's CRP program enrolled over 400,000 acres in 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 10 years beginning in 1997. During the initial 1997 enrollment period, 288,978 acres in Southeast Region were accepted. It is currently unknown what impact a decrease in CRP acreage in Southeast Region would 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.

Forest Grouse

Population Surveys

Data on age characteristics of forest grouse populations are collected in Southeast Region from voluntary wing drop barrels placed during hunting season. Fourteen wing barrels were placed throughout the region during 2009. 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 26 blue grouse wings were collected in 2009, a 13% increase from 2008 (Table 3). The ratio of juveniles:100 adults for blue grouse increased 52% from 77 in 2007 to 117 in 2009.

A total of 184 ruffed grouse wings were collected in 2009, a 93% increase from 2008 and 51% lower than the 10-year average (Table 3). The ratio of juveniles:100 adults increased from 187 in 2008 to 360 in 2009, exceeding the 10-year average of 207.

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 plus information on sex and age of birds harvested.

Telephone survey data estimated that 2,817 hunters harvested 8,431 forest grouse in 2009 (Table 4). According to the 2009 survey, harvest decreased (18%) from 10,267 birds harvested in 2008.

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 2009 indicated an increase throughout southeast Idaho compared to 2008 levels; however, sample sizes were very small. Male grouse counted on leks were similar compared to 2008.

Population Surveys

Lek count routes in recent years have included four leks in Bingham and Power counties, 16 leks in Oneida County (Table 5), 35 leks in Butte and Blaine counties (Table 6), and three leks each in Bear Lake and Caribou counties (Table 7).

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 1996-2001, no wings were collected from that area during that period. Following the reopening of the Big Desert in 2002, wing collection has been variable. Wings collected in 2007, 2008, and 2009 were 57, 73, and 72, respectively (Table 8).

The Curlew Grasslands were opened to hunting in 2008. The entire eastern portion of the Southeast Region or East Idaho Uplands was closed to sage grouse harvest in 2008 due to inadequate population data, this includes portions of Franklin, and Bannock counties and all of Caribou and Bear Lake counties (Table 8).

A total of 77 sage-grouse wings were collected in Southeast Region in 2009 (Table 8). The overall ratio of juveniles:100 adults was 166. It is difficult to relate this level of production to recent years since, from 1996-2001, nearly all wings were collected in the Curlew Valley and from 2002-2007, nearly all wings were from the Big Desert.

Harvest Characteristics

A hunter check station was operated at American Falls on opening weekend of the season in 2008. Hunting effort appeared to be very low compared to the years prior to the season closure (1996-2001). Bag and possession limits and season length have been significantly reduced from earlier years.

Telephone survey estimates indicate 378 hunters harvested 340 sage-grouse in 2009, an average of 0.5 birds harvested per day (Table 9). In 2008, the number of hunters was lower than in 2009 (167) and number of birds harvested was less (209).

Trapping and Translocation

Thirty-three sage-grouse were radio-collared in the Greater Curlew area during spring 2002. Birds were monitored through the nesting and brood-rearing season and into the winter months, primarily to identify areas of use during those periods. Monitoring was continued through spring 2003, although no additional birds were marked. Eighteen sage-grouse were captured and radio-collared in winter 2004 to determine sage-grouse wintering habitat in the Greater Curlew area. The study will continue until 2008.

Management Implications

Production of sage-grouse appeared to increase; however, sample sizes were small. Hunter harvest, success, and/or lek count data suggest populations are at low levels. Big Desert harvest has been variable since reopening in 2002. 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 LWG, 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 area and to offer suggestions for future management. In 2003, the Idaho Sage-grouse Advisory Committee was formed consisting of a representative from each LWG across the state, including the Curlew LWG, as well as interest groups and government agencies. A draft sage-grouse conservation plan was sent out for public comment in March 2006 and the final plan was adopted and signed by Governor Risch on 10 July 2006. It can be found on the Department's website at http://fishandgame.idaho.gov/cms/hunt/grouse/conserves_plan/.

Sharp-tailed Grouse

Abstract

Age-ratio data of wings indicated a decrease in sharp-tailed grouse production during 2009 compared to 2008. The ratio of juveniles:100 adults was above the recent 10-year average. Two of the five established lek routes in the region were checked in 2009.

Population Surveys

Wing barrels placed throughout the region provide the majority of wings collected. The Department has also sent out random surveys asking for hunter harvest wing returns to add to the sample. Data analysis of sharp-tailed grouse wings ($n = 473$) indicated an increase in the ratio of juveniles:100 adults (110:100) from 2008 (102:100) levels (Table 10). The 2009 ratio was greater than the previous 10-year average of 89. Two of 5 established lek routes in the region were surveyed during 2009 (Table 11). The Pocatello Valley route decreased from 53 to 42 males observed from 2008 to 2009, respectively. The Downey route increased from 99 to 109 males observed from 2008 to 2009, respectively.

Harvest Characteristics

For the Greater Curlew area, telephone survey estimates indicate 642 hunters harvested 1,501 sharp-tailed grouse in 2009, an average of 0.8 birds harvested per day (Table 12). In 2008, 618 hunters harvested 1,509 birds, and birds per hunter day was (0.8).

Outside the Greater Curlew area, telephone survey estimates indicate 735 hunters harvested 2,123 sharp-tailed grouse in 2009, an average of 1.0 birds harvested per day (Table 12). In 2008, 746 hunters harvested 1,463 birds, and birds per hunter day (0.7).

For the region, telephone survey estimates indicate 1,395 hunters harvested 3,624 sharp-tailed grouse in 2009, an average of 0.9 birds harvested per day (Table 13). In 2008, 1,364 hunters harvested 2,972 birds, and birds per hunter day (0.8).

Management Implications

Currently, the single most important factor affecting sharp-tailed grouse populations in Southeast Region is believed to be the CRP program. During 1985-1997, 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 10 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. As previously mentioned, the existing CRP acreage in Southeast Region will decrease over the next few years; this is anticipated to have some impact on sharp-tailed grouse.

Trapping and Translocation

See Magic Valley Region section.

Chukar

Population Surveys

Few, if any, chukar 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 Southeast Region. Areas known to support limited chukar populations at present are the northeast corner of GMU 70 near Pocatello, the Blackrock area in GMU 71, and several portions of GMU 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

Telephone survey estimates indicate 504 hunters harvested 894 chukars in 2009, an average of 0.4 birds harvested per day (Table 14). According to the survey, both the number of hunters and birds harvested decreased compared to 2008, but birds per hunter day increased.

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.

Gray Partridge

Population Surveys

No data were collected on gray partridge populations. 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 Southeast Region.

Harvest Characteristics

Estimates vary widely from year to year, due primarily to small sample sizes from the region. A regional telephone harvest survey was conducted during 2009. Gray partridge harvest decreased substantially from the previous year with roughly the same number of hunters. Hunters harvested 4,434 birds in 2009 compared to 3,257 birds in 2008 (Table 14). Birds per hunter day decreased to from 0.5 in 2008 to 0.4 in 2009.

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.

Wild Turkey

Abstract

Eight controlled hunts with a total of 395 permits (312 hunters) resulted in an estimated 2009 harvest of 176 turkeys, up from the 168 birds harvested in 2008. This is in large part due to the increase in controlled hunts and permits within the region, including 2 fall controlled hunts with 100 permits each. Hunters harvested an estimated 405 turkeys during the general spring and fall turkey's seasons in 2009. 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. No surveys have been conducted in that area since. Even under good snow conditions, surveys provide limited useful data.

Incidental reports indicate increasing numbers and expanded range of turkeys in Franklin and Bannock counties, due in part to unauthorized releases of turkeys of unknown origin. Turkeys have been sighted in parts of GMUs 70, 73, 74, 75, and 78, in addition to the release areas in GMU 77. In October of 2009 turkeys were observed in the NE corner of GMU 76 and the North Central portion of GMU 66A. These turkeys are likely distributing from the Star Valley in Wyoming. Bird numbers are small and the winters in this area may greatly limit their ability to establish in these areas.

Harvest Characteristics

Following introductions of wild turkeys in GMU 77 from South Dakota, 3 consecutive spring hunts with 5 permits each were initiated in Franklin County in 1995. In 1999, permits were increased to 20 and the hunt area was expanded to include all of GMUs 73, 74, 75, and 77. In 2000, permits were increased to 30 for each hunt, and a general fall either-sex hunt was initiated. The permit level was increased to 50 per hunt in 2002. In 2006, a general gobbler hunt was initiated for GMUs 73, 74, 75, 77, and 78. In 2004, 3 controlled spring hunts with 5 permits each were added in GMU 71. In 2007, there were 6 controlled hunts with a total of 195 permits available in Southeast Region. In 2008 the controlled hunts were increased to 8 with 395 available permits. Permit levels were increased in some hunts, and 2 new fall hunts in GMU 71 were instituted to deal with wild turkey complaints and issues.

The 2009 spring harvest, as estimated by the telephone harvest survey, showed a total of 234 birds taken in the region for both general and controlled spring hunts (Table 15). The fall harvest was estimated at 348 birds taken by 721 hunters for both general and controlled hunts.

Trapping and Translocation

Wild turkeys have been translocated into three general areas in 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 GMU 71 southeast of Pocatello.

During winter 2008, 82 turkeys were released in GMU 68A along the Snake River near Firth (Table 16).

Management Implications

Various translocations have occurred within the Southeast Region to establish a harvestable population of wild turkeys. These efforts were in large part successful and turkey numbers remain stable to increasing with their range and distribution increasing annually throughout the region. The newest challenge in turkey management within the Southeast region is dealing with wild turkey depredation issues and recreational feeding issues, which are often related. In the winter of 2007 depredation hunts were used to deal with some of these issues. Additionally, the GMU 71 population has grown to such an extent that fall either sex hunts have been established to decrease the population and the associated landowner complaints. Typically complaints are not associated with crop damage, they usually deal with too many turkeys and the problems associated with their presence in, on, and around people's homes.

Mourning Dove

Population Surveys

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

Call-counts are conducted on three established routes in Southeast Region in conjunction with the USFWS (Table 17). Routes are located in Oneida, Caribou, and Bear Lake counties. Results from mourning dove call-count routes are reported directly to USFWS.

Harvest Characteristics

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

Trapping and Banding

Southeast Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 18). No doves were banded in Southeast Region in 2007. During 2003-2006, 475 total doves were banded in the region. Banding did not occur during the 2008-2009 or the 2009-2010 periods.

Management Implications

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

Rabbits and Hares

Population Surveys

No population surveys were conducted during this report period.

Harvest Characteristics

Sample size tends to be small and estimates of participation and harvest vary widely. A regional telephone survey was conducted during 2009. Cottontail rabbit harvest decreased from 4,859 animals in 2008 to 2,283 animals in 2009 (Table 19), and hunter participation decreased from 656 to 548 rabbit hunters.

Management Implications

In the past, limited data on rabbits and hares have been collected in 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.

American Crow

Abstract

The American crow is, and will continue to be, a species with no active management.

Table 1. Pheasant population characteristics and production, Southeast Region, 1984-1999.

Year	Winter sex ratio ^b	Brood routes ^a					Brood size	
		<i>n</i>	Routes (miles counted)	Birds per mile	Percent unsuccessful females	Juv:100 adult females	<i>n</i>	Average
1984	2.5	2,388					7	5.7
1985	3.8	453						
1986	4.0	436					12	5.2
1987	1.4	81						
1988								
1989								
1990	1.9	264	10 (200)	0.04	50	650	7	3.7
1991			10 (200)	0.09	83	180	2	5.5
1992			10 (200)	0.28	55	400	5	8.8
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.

Table 2. Estimated pheasant harvest, Southeast Region, 1987-present.

Year	Check station ^a			Telephone survey ^b			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1987	480	161	0.3	10.8	3,319	9,089	0.6
1988	276	87	0.3	11.7	3,561	11,532	0.6
1989	456	243	0.5	7.9	2,290	6,688	0.7
1990	222	141	0.6	6.2	3,485	12,526	0.6
1991	287	149	0.5	7.5	3,525	15,839	0.8
1992	263	188	0.7	4.9	4,520	20,368	1.0
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	0.4	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
2003	236	131	0.6	6.7	4,263	13,404	0.7
2004	239	113	0.5	7.9	4,052	12,222	0.6
2005	199	193	1.0	3.4	3,965	14,887	0.7
2006 ^c	136	102	0.8	3.2	3,497	17,812	0.6
2007 ^d					4,882	26,048	0.9
2008 ^d					4,473	22,889	0.7
2009 ^d					3,975	12,727	0.6
10-year average					3,983	14,835	0.6

^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.

^c Only the American Falls check station was operated.

^d No check stations were operated during 2007-2008.

Table 3. Forest grouse production based on wing collection, Southeast Region, 1987-present.

Year	Blue grouse			Ruffed grouse	
	<i>n</i>	Juv:100 adult females	Juv:100 adults	<i>n</i>	Juv:100 adults
1987	74		87	505	158
1988	67	291	156	204	152
1989	79		243	186	110
1990	60		155	170	128
1991	92	268	93	119	358
1992	157	368	142	216	65
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
2003	136		115	863	113
2004	78		66	277	177
2005	30		100	112	229
2006	35		250	229	218
2007	73		204	432	148
2008	23		77	95	187
2009	26		117	184	360
10-year avg.	85		141	375	207

Table 4. Estimated forest grouse harvest, Southeast Region, 2002-present.

Year	Hunters	Birds harvested	Birds per hunter	Birds per hunter day
2002	2,902	8,810	3.0	0.7
2003	5,201	29,479	5.7	1.2
2004	4,127	15,380	3.7	0.6
2005	2,758	14,118	3.3	0.6
2006	2,637	7,934	3.0	0.4
2007	4,061	26,037	6.4	0.7
2008	2,954	10,267	3.5	0.2
2009	2,817	8,431	3.0	0.5
3-year avg.	3,432	15,057	4.0	0.6

Table 5. Maximum number of male greater sage-grouse counted on lek routes in Bingham, Power, and Oneida counties, Southeast Region, 1986-present.

Year	Herriott Lake	Jugalard Lake	Rock Lake	Mosby well #2	Curlew route ^a	Rockland route ^b
1987	78	96	118	3		
1988	71	112	92	0		
1989	47	69	68			
1990	57	88	93			
1991	41	72	60			
1992						
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
2003	54	0	47	0	13	94
2004	40	0	39	0	16	147
2005	30	0	49	0	14	88
2006	26	0	55	0	8	132
2007	23	0	36	0	18	117
2008	25	0	37	0	9	94
2009	25	0	31	0	4	86

^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 greater sage-grouse counted on lek routes in Butte and Blaine counties, Southeast Region, 1988-present.

Year	Route #1 ^a	Route #2 ^b	Route #3 ^c	Route #4 ^d	Route #5 ^e	Fingers Butte ^f
1989	61	52	75	93	92	
1990	92	54	96	99	79	
1991	51	31	84	103	137	
1992	47	11	62	41	63	
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
2003	141		98		146	229
2004	114		84		124	225
2005	151		107		146	193
2006	110		153		188	309
2007	141		126		180	296
2008	82		119		97	226
2009	109		83		101	183

^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, three Red Tanks, Pratt Lake, Pratt Lake S., Coyote Waterhole, Smith Trough #2, Finger's Well Res., Smith Round Tank.

Table 7. Maximum number of male greater sage-grouse counted on lek routes in Bear Lake and Caribou counties, Southeast Region, 1986-present.

Year	Bloomington Bottoms	Bloomington Mine	Sheep Creek	Trail Creek	Slug Creek #1	Slug Creek #2
1987				38	15	
1988				24	11	
1989				27	8	
1990				32	8	10
1991				22	7	26
1992				28	8	24
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
2003	14	0	40			
2004			69			
2005	31		77			
2006	21	0	56			
2007	27	0	34			
2008	21	0	31			
2009	27	0	38			

Table 8. Greater sage-grouse production based on wing collections, Southeast Region, 1985-present.

Year	<i>n</i>	Juv:100 females ^a	Juv:100 adults ^b	<i>n</i>	Percent unsuccessful females ^a
Power/Bingham (Big Desert) GMU ^c					
1988	818	108	77	331	
1989		230	149		
1990	378	267	164	88	6
1991		91	62		78
1992	127	84	57	55	84
1993	77	162	103	19	47
1994	307	291	198	60	80
1995	240	85	56	109	60
2002	96	431		16	62
2003	141	104	64	81	40
2004	34	317	127	18	83
2005	143	372	186	72	60
2006	155	244	131	77	75
2007	57	115	68	10	50
2008	73	170	87	20	55
2009	72	346	167	14	69
Holbrook (Curlew) GMU ^d					
1987		165	109		44
1988	78	152	95	25	
1989		277	161		
1990	77	183	133	24	
1991		186	130		86
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
2008 ^f	2	NA	NA	NA	NA
2009 ^f	5	NA	NA	NA	NA
Bear Lake GMU					
1989		334	191		
1990	126	282	168	28	
1991		135	93		57
1992	105	177	110	31	74
1993	26	767	767	8	33
1994	35	244	169	5	80
1995	19	186	144	7	43

Table 8. Continued.

Year	<i>n</i>	Juv:100 females ^a	Juv:100 adults ^b	<i>n</i>	Percent unsuccessful females ^a
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
2003	0				
2004	26	300	136	10	80
2005	17	550	183	6	100
2006	7		600	4	
2007	2	NA	NA	NA	NA
2008 ^c	closed	closed	closed	closed	closed
2009	closed	closed	closed	closed	closed
Southeast Region					
1988	934	115	81	362	42
1989		235	151		60
1990	581	256	161	156	41
1991		98	70		72
1992	367	121	79	134	82
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
2003	144	98	62	56	39
2004	62	292	130	30	75
2005	160	385	186	78	63
2006	162	261	138	81	75
2007	57	115	68	10	50
2008	75	170	87	20	55
2009	77	320	166	17	73
10-year average	89	228	126	35	64

^a Females = adults + yearlings.

^b Adults = adults + yearlings.

^c Big Desert harvest season closed from 1996-2001.

^d Harvest closed in 2002, then reopened in 2008.

^e Harvest closed in 2008.

^f Inadequate sample size.

Table 9. Estimated greater sage-grouse harvest, Southeast Region, 1986-present.

Year	Daily bag ^b	Check station				Telephone survey ^a		
		Hunters	Birds	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1987	3 (2)	341	450	1.3	3.4	2,002	6,076	1.3
1988	3 (2)	393	491	1.2	4.3	1,862	7,962	1.1
1989	3 (2)	402	283	0.7	7.1	1,922	4,118	0.7
1990	3	344	498	1.4	3.2	2,073	6,004	0.8
1991	3	314	153	0.5	9.7	2,063	3,743	0.6
1992	3	168	52	0.3	15.1	2,242	5,077	0.6
1993	3	112	13	0.1	40.7	3,123	4,332	0.4
1994	3	167	109	0.6	7.6	2,528	4,401	0.5
1995	3	122	35	0.3	15.5	1,462	2,559	0.5
2000	1					743	669	0.4
2001	1					551	489	0.3
2002	1	37	11	0.3	13.1	430	422	0.4
2003	1	31	23	0.7	3.6			
2004	1	35	10	0.3	7.0	342 ^c	382	0.4
2005	1	59	42	0.7	3.3	429 ^c	403	0.5
2006	1	83	61	0.7	3.9	305 ^c	397	1.3
2007	1	84	13	0.2	10.6	342 ^c	264	0.3
2008	1	53	24	0.5	9.6	167 ^d	209	0.4
2009	1	55	19	0.4	9.6	378	340	0.5
3-year average		64	19	0.4	9.9	378	271	0.4

^a Telephone survey data at the regional level were not collected from 1996-1999. Telephone survey data for 2003 is not available.

^b From 1986-1989, the bag limit for areas off the Big Desert were smaller (2) than for those on the Desert. From 1996-2001, the Big Desert was closed to harvest. The Curlew Grassland was closed to harvest in 2002.

^c Used Zone 5 harvest data only, Southeast Region also includes portions of Zone 8, which is reported in statewide section and Upper Snake section.

^d Includes only Zone 5A (curlew area) which reopened to hunting in 2008, while Zone 5 closed in 2008 due to lack of population data.

Table 10. Sharp-tailed grouse production based on wing collections, Southeast Region, 1986-present.

Year	Juveniles:100 adults ^a	<i>n</i>
1987	99	238
1988	76	147
1989	118	219
1990	69	210
1991	105	187
1992	96	382
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
2003	70	398
2004	39	194
2005	74	169
2006	166	263
2007	65	221
2008	102	297
2009	110	473
10-year average	89	275

^a Includes data from Malad City area and Pocatello Creek.

Table 11. Maximum number of sharp-tailed grouse counted on lek routes in Oneida, Power, and Bannock counties, 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
2003			96		34
2004			59		54
2005			86		48
2006			62		74
2007			102		110
2008			53		99
2009			42		109

^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 12. Estimated sharp-tailed grouse harvest Greater Curlew area, Southeast Region, 2001-present.

Year	Greater Curlew area ^a				
	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
2001	656	1,337	1,706	2.0	0.8
2002	473	986	1,288	2.1	0.8
2003	836	2,122	2,203	2.5	1.0
2004	646	1,587	1,572	2.5	1.0
2005	779	1,593	1,607	2.0	1.0
2006	697	1,839	1,905	2.6	1.0
2007	647	1,637	1,715	2.5	1.0
2008	618	1,509	1,825	2.4	0.8
2009	642	1,501	1,779	2.3	0.8
3-year average	636	1,549	1,773	2.4	0.9
Year	Outside the Greater Curlew area ^b				
	Hunters	Birds harvested	Hunter days	Birds per hunter	Birds per hunter day
2001	763	1,377	2,130	1.8	0.6
2002	702	1,215	1,771	1.7	0.7
2003	899	2,644	2,760	2.9	1.0
2004	742	1,825	2,178	2.5	0.8
2005	991	1,881	2,260	1.9	0.8
2006	928	2,288	2,698	2.5	0.8
2007	796	1,612	1,954	2.0	0.8
2008	746	1,463	2,225	2.0	0.7
2009	735	2,123	2,130	3.0	1.0
3-year average	759	1,733	2,103	2.3	0.8

^a Sharptail grouse reporting Zone 1.

^b Sharptail grouse reporting Zone 2.

Table 13. Estimated sharp-tailed grouse harvest, Southeast Region, 1985-present.

Year	Hunter report cards ^a				Telephone survey ^{b,c}		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1985					219	456	1.0
1986					331	495	0.9
1987	117	157	1.3	2.9	64	2,118	2.0
1988	99	133	1.3	3.0	361	2,286	1.1
1989	144	166	1.2	3.1	573	1,448	0.8
1990	167	238	1.4	2.5	1,152	4,632	1.2
1991	162	198	1.2	3.2	1,127	4,864	1.1
1992	284	408	1.4	3.4	1,601	6,198	1.2
1993	158	184	1.2	3.4	2,721	5,071	0.5
1994					2,042	4,570	0.6
1995					1,706	3,899	0.6
2000					1,799	3,716	0.8
2001					1,419	2,714	0.7
2002					1,175	2,201	0.7
2003							
2004					1,388	3,412	0.9
2005					1,770	3,474	0.9
2006					1,625	4,127	0.9
2007					1,443	3,249	0.9
2008					1,364	2,972	0.8
2009					1,378	3,624	0.9
3-year average					1,395	3,282	0.9

^a Hunter report cards were only collected from 1987-1993.

^b Telephone survey data at the regional level were not collected from 1996-1999. Telephone survey data for 2003 is not available.

^c Sharptail grouse reporting Zones 1 & 2.

Table 14. Estimated gray and chukar harvest, Southeast Region, 1986-present.

Year ^a	Gray partridge			Chukar		
	Hunters	Birds	Birds per hunter day	Hunters	Birds	Birds per hunter day
1986	414	1,257	0.4	400	1,164	0.7
1987	445	933	0.5	139	243	1.9
1988	582	4,938	1.1	266	854	0.8
1989	388	933	1.1	374	366	0.5
1990	944	3,854	0.8	400	1,164	0.7
1991	1,200	8,622	1.4	294	822	0.8
1992	1,204	6,500	1.1	430	2,540	1.0
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
2001	1,376	3,798	0.6	247	952	0.7
2002	984	2,293	0.3	230	193	0.3
2003	1,269	8,607	1.5	792	3,335	1.5
2004	1,223	3,558	0.8	498	224	0.2
2005	1,006	6,957	1.0	326	614	0.6
2006	829	3,069	1.0	274	825	0.5
2007	1,112	5,640	1.0	517	1,505	0.6
2008	1,095	3,257	0.5	589	1,006	0.1
2009	1,343	4,434	0.4	504	894	0.4
3-year avg.	1,183	4,443	0.6	537	1,135	0.4

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

Table 15. Estimated turkey harvest, Southeast Region, 1986-present.

Year Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
1986						
Controlled	6	20	14	2	17.5	35
1987						
Controlled	9	45	45	11	12.0	132
1988						
Controlled	9	45	32	6	23.2	139
1989						
Controlled	9	45	39	5		
1990						
Controlled	5	30	20	6	25.7	154
1991						
Controlled	2	10	10	3	15.0	45
1992						
Controlled	2	10	10	4	10.0	40
1993						
Controlled	2	10	10	1	45.0	45
1994						
Controlled	2	20	20	6	12.0	72
1995						
Controlled	6	30	30	6	16.7	100
1996						
Controlled	6	30	30	15	6.7	100
1997						
Controlled	6	60	44	32	3.4	110
1998						
Controlled	8	175	154	86		
1999						
Controlled	8	205	178	116	5.0	581
2000						
Controlled	6	135	113	64	5.5	349
General			382	159	7.3	1,168
2001						
Controlled	6	135	133	67	6.6	445
General			493	190	6.7	1,276
2002						
Controlled ^a	6	195	168	69	8.8	605
General			623	165	14.5	2,389
2003						
Controlled	6	195	163	67	8.0	539
General			852	535	4.5	2,383
2004						
Controlled	9	210	183	74	9.4	692

Table 15. Continued.

Year Hunt	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
2005 General			988	304	12.4	3,783
Controlled	6	120	103	32	16.0	510
General			2,071	358	18.8	6,732
2006 Controlled	6	120	98	28	15.0	419
General			1,558	363	16.0	5,826
2007 Controlled	6	120	103	33	11.0	362
General			1,751	524	12.0	6,331
2008 Controlled	8	395	298	168	15.4	1,100
General			1,798	343	6.6	5,294
2009 Controlled	8	395	312	176	7.1	1,258
General			1,106	405	12.2	4,953

^a No data for Hunt 68A-3.

Table 16. Turkey translocation history, Southeast Region, 1982-present.

Year	Sub-species ^a	Release site	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
	M	Bear River	32	S
1999	U	Deep Creek, Bear River	15	S
2000	U	Oneida Narrows	50	S
2001	U	GMU 71	136	N
2003	H	Snake River, GMU 69	42	S
2007	H	Snake River, GMU 68A	82	S

^a H = Hybrid, M = Merriam's, R = Rio Grande, U = Unknown.

Table 17. Mourning dove call-count survey results and estimated harvest, Southeast Region, 1984-2008.

Year	Coo-count routes		Telephone survey ^a		
	Routes counted	Doves heard/mile	Hunters	Birds	Birds/hunter day
1984	3	1.5	455	824	1.8
1985	2	0.4	452	1,358	0.7
1986	3	0.4	221	453	1.3
1987	2	0.6	292	1,030	1.0
1988	3	0.9	97	122	1.5
1989	2	1.0	266	708	1.4
1990	1	0.8	908	9,865	1.8
1991	2	0.8	397	1,733	1.9
1992	3	2.0	882	15,061	2.1
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			
2003	3	0.6			
2004	3	0.6			
2005	3	0.7			
2006	3	0.8			
2007	3	0.6			
2008	3	0.8			

^a Telephone survey data at the regional level were not collected after 1995; harvest is reported directly to USFWS by hunters.

Table 18. Mourning doves banded in Southeast Region, 2003-present.

Year	Adult			Hatch-year	Unknown	Total
	Male	Female	Unknown			
2003	17	11	1	50	1	80
2004	54	45	7	33	0	139
2005	30	50	44	26	0	150
2006	9	59	20	9	9	106
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0

Table 19. Estimated cottontail rabbit harvest, 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
2003	590	7,190	7,819	0.9
2004	897	5,509	4,803	1.1
2005	472	2,821	1,369	2.1
2006	297	2,359	1,748	1.3
2007	363	1,996	2,226	0.9
2008	656	4,859	2,867	1.7
2009	548	2,283	4,670	0.5
3-year avg.	522	3,046	3,254	1.0

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>6</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED:	<u>July 1, 2009 to June 30, 2010</u>		

UPPER SNAKE REGION

Climatic Conditions

Overall, climatic conditions were favorable for upland game birds throughout this reporting period. The summer of 2009 was moist and the region saw exceptional vegetation growth, creating excellent habitat conditions throughout the region. The winter of 2009-2010 was mild, with less than average snow pack. The minimal winter snowpack receded quickly and moist spring conditions led to good forage conditions throughout the spring and early summer of 2010. There were few severe weather events during the nesting season.

Trapping and Translocation

No Department trapping or translocation took place in Upper Snake Region for pheasant, forest grouse, sage grouse, sharp-tailed grouse, chukar, gray partridge, or turkey during the reporting period. However, there was sage grouse trapping on the INL in springs 2008 and 2009. The WCS captured and collared sage grouse on the INL (mostly in lower Birch Creek) to monitor seasonal movements and habitat use.

Pheasant

Population Surveys

No population survey was conducted during this reporting period; however, general observations suggest pheasant populations remain extremely low in the region.

Harvest Characteristics

No check stations were operated during the 2009 pheasant season (Table 1).

A mail-in and telephone survey for upland game estimated that 1,744 hunters harvested 5,237 pheasants in 2009 (Table 1). This is a 1% increase in hunters and 11% decrease in harvest from the 2008 estimate. The estimated harvest was 0.7 pheasants per hunter day.

A special youth hunt area of 182 acres was identified on the south agricultural field at Market Lake WMA. This area has been maintained for youth hunting since the 2004 season. The area was set aside to encourage youth hunting opportunity in Upper Snake Region. Adult pheasant hunters were requested not to hunt in the youth hunt area unless they were accompanied by a youth ≤ 17 years-of-age. Although no data on use was collected, general observations and unscheduled contact with hunters suggested the area received moderate to heavy use by youth pheasant hunters and was well received by the hunting public. There is also a 50-acre youth hunting area at Mud Lake WMA; on the east section of the agricultural fields, north of the lake. This area is also regularly used by youth hunters, but there seems to be yearly confusion by adults that think the area is only youth-only during the youth only hunt (i.e., the week prior to general season opening).

Habitat Conditions

Pheasant are distributed at low densities on and around agricultural land in Upper Snake Region. Pheasant habitat is marginal due to periodic severe winters and agricultural practices inconsistent with quality nesting and brood habitat. There are patches of habitat supporting a few pheasant scattered throughout the area including Howe, Montevue, Mud Lake WMA, Market Lake WMA, Deer Parks 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 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.

Release of Pen-reared Pheasants

Adult roosters were purchased from a contractor and released on Department lands in the Upper Snake Region. Nine hundred seventy-six pheasant cocks were released at Mud Lake WMA, 899 at Market Lake WMA, and 664 at Cartier Slough WMA during the 2009 hunting season. Two releases were made weekly on each WMA throughout the pheasant hunting season. One hundred fifteen of the Market Lake WMA pheasants were released for the special youth pheasant hunt on 3-9 October 2009. Adult hunters hunting on WMAs where game-farm pheasants were released were again required to obtain a WMA pheasant permit in 2009.

Management Implications

There seems to be little the Department can do on a scale large enough to make an observable difference in wild pheasant numbers given present agricultural economics, practices, and technology. 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 Upper Snake Region. Although some winter habitat improvement projects have been implemented in the region, little has been done to improve nesting habitat.

Forest Grouse

Population Surveys

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

Wings were examined to estimate forest grouse production; however, sample sizes are too small to be of value. Forty-four ruffed grouse wings were collected at check stations, wing barrels, or turned in to the Department during the 2009 season. Examination of these gave a juvenile:adult ratio of 282:100. The juvenile:adult ratio from ruffed grouse wings collected during the 2007 and 2008 seasons, which were also based on small samples (N = 30 and N = 40, respectively), was 150:100 and 122:100, respectively. Sixteen blue grouse wings were turned in during the 2009 season, yielding a ratio of 129:100. No blue grouse wings were turned in during the 2008 season.

Harvest Characteristics

Harvest information has been collected from the statewide survey and from check stations operated during opening weekend of sage grouse season (Table 2). Forest grouse checked at check stations are typically taken in conjunction with sage grouse hunting. Significant reductions in sage grouse hunting opportunity occurred beginning in 1996. Sage grouse hunting opportunity was increased in 2008 (change from 1-bird bag to 2-bird bag in much of the region), and hunter numbers at check stations also increased. However, hunter numbers still did not approach those of the late 1980s and early 1990s. Check station data have been used to calculate an index of forest grouse per 100 hunters checked on opening weekend of sage grouse season. 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. Twelve ruffed grouse and 4 blue grouse were checked at sage grouse check stations in 2009, producing an estimate of 2.5 forest grouse per 100 hunters (Table 2).

The 2009 statewide telephone survey estimated 4,543 hunters harvested 13,590 forest grouse in the Region. This is an 82% increase in hunters and a 28% increase in harvest from 2008 estimates. The 2009 estimated forest grouse harvest per day was 0.5.

Management Implications

The forest grouse hunter participation and harvest estimates have fluctuated widely in the past 10 years. The number of birds checked at check stations on opening weekend of sage grouse season has varied between 0 and 60 with a mean of 21. Telephone survey estimates also vary widely with an estimated harvest of 23,213 forest grouse in 2001 to 7,219 harvested in 2005.

It has been suggested that forest grouse harvest is primarily incidental to other hunting activity, mainly big game. If this is true, harvest, and to a lesser extent hunter participation, is dependent upon annual production in the areas that hunters are hunting other species, especially big game.

This may explain the large fluctuation in harvest over time. If this hypothesis is true, harvest of forest grouse is somewhat self-limiting because hunters only harvest forest grouse incidental to other hunting activity and, therefore, seasons can be fairly liberal.

Sage grouse

Population Surveys

Sage grouse are distributed throughout Upper Snake Region in sagebrush-steppe habitat. Seventeen lek routes were counted in 2009. Three routes (Lidy, Market Lake, and Lower Big Lost) were discontinued in 2004 to reduce workloads and place more emphasis on obtaining better quality data for routes counted; although the Lidy route was re-established in 2007 and the Market Lake route was run once in 2009. The 16 routes now counted consistently (not including Market Lake) provide a good distribution of routes in the different sagebrush types, precipitation regimes, and elevations across the region. Eleven routes had a lower peak male count in 2009 than in 2008, and 13 routes had a lower peak male count in 2009 than the route's 10-year average (Table 3).

The juvenile to adult female ratio is determined from hunter-harvested sage grouse wings. These data indicate production improved every year from 2007 through 2009 and that 2009 production was slightly above the 10-year average (Table 4). Sample sizes for 2008 and 2009 (1,051 and 1,212 wings, respectively) were much better than 2007 (477 wings), and should produce more reliable estimates of production.

Harvest Characteristics

We run 3 check stations in the region to monitor sage grouse harvest characteristics. Check station data since 1996 reflects the reduced bag/possession limits with fewer hunters checked and fewer grouse harvested on opening weekend (Table 5). However, the sage grouse season in much of the Upper Snake Region was increased from a 1-bird daily bag, 7 day season to a 2-bird daily bag, 23 day season for 2008 and 2009. Birds per hunter was higher and hours per bird harvested decreased in 2008 and 2009, relative to 2007, reflecting increased numbers or less-difficult hunting conditions in 2008 and 2009. All harvest statistics were similar between 2008 and 2009.

Starting in 2000, sage grouse and/or sharp-tailed grouse hunters were required to purchase a validation on their hunting license, allowing the Department to more accurately survey these hunters and request wings from harvested birds. A statewide survey conducted for the 2009 season estimated 2,229 hunters harvested 4,651 sage grouse. This is a 19% decrease in hunters and a 13% decrease in harvest from 2008 estimates, but still represented a 104% increase in harvest over the 2007 estimate (Table 5). The estimated sage grouse harvest per day in 2009 was 0.9. Estimates from the survey since 2000 are not comparable with the telephone surveys done prior to 1996.

In 2009, the Department surveyed sage grouse hunters statewide to determine hunter participation and harvest throughout the season relative to opening weekend. For the region

(harvest zones 6, 7C, 7D, and 8B), a few more hunters (51%) hunted opening weekend than hunted after opening weekend (49%). Forty-four percent of the sage grouse harvest occurred on opening weekend compared to 56% after opening weekend. Of the days hunters spent hunting sage grouse, 40% occurred on opening weekend compared to 60% after opening weekend. These harvest timing statistics were exactly the same for the 2008 season as well. This differs from the traditional perception that most of the sage grouse hunting and harvest occurs on opening weekend of sage grouse season. These data suggest that under half of the hunting effort and harvest occurred on opening weekend.

Habitat Conditions

Sage grouse habitat continues to be altered by agriculture, fire, and human developments throughout the region. Reduced numbers of sage grouse resulting from these habitat losses are expected to occur into the future. There were no major sagebrush wildfires in the region during 2009.

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 was published in a separate research completion report in 2006 (W-160-R-34-53.doc) and is available at the Department's Boise office. A University of Idaho graduate research project designed to evaluate the impacts of elevated structures on sage grouse was initiated in southeastern Idaho in early 2009. Project data collection was slated to be complete by mid-2010, with a completed thesis in 2011. This thesis will be referenced in this report when it is available.

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, bag and possession limits, season length, and grouse populations.

The BLM, USFS, U.S. Sheep Experiment Station, and INL have assisted the Department in conducting lek surveys in recent years. Lek route monitoring trends show long-term population declines throughout the region; however, these declines seem to be reversing in the past several years. Both quantity and quality of habitat have declined due to agriculture encroachment, sagebrush manipulation, loss of moist areas, 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. Surveillance and cooperation with other agencies and private landowners needs to be continued to reduce sagebrush conversion and fragmentation and to improve grazing management.

The Upper Snake LWG, a group of federal and state agency personnel, sportsmen, ranchers, and landowners from Upper Snake Region, was formed in November 1998 to address sage grouse declines. Initially, 50-60 members met on a bi-monthly or monthly basis, but this number has dwindled to 10-15 over the past 5 years. In 2006, Upper Snake LWG members reviewed and

commented on the statewide sage grouse conservation plan, which legitimized their local plan. The Upper Snake LWG has commented on numerous development and habitat manipulation projects that had the potential to impact sage grouse populations in the Region and have received OSC funding for many research and management project designed to improve sage grouse habitat, populations, or data collection.

In February 2007, 2 additional sage grouse LWGs were formed. The Eastern Idaho Uplands LWG (South of the South Fork Snake River and East of I-15 within the region) and the Big Desert LWG (South of Highway 20/26 and west of I-15 within the region) have portions of their area boundaries within the Upper Snake Region. Both groups have had good public and agency participation and recently finished drafting their LWG plans.

Sharp-tailed Grouse

Population Surveys

Five sharp-tailed grouse lek routes were surveyed in the Region during 2008 and 6 routes were surveyed in the spring of 2009 (Table 6). Weather conditions and snow pack prevented access to the Teton River lek route during 2009. We established a new lek route in the Sand Creek area (Chokecherry route) for the 2009 lek season to replace the Grassy route, which was mostly-enclosed in the Big Grassy private elk enclosure during 2006. The number of grouse attending leks in 2009 increased for 3 routes and decreased for 1 route, relative to 2008. The number of grouse on leks increased for 5 routes and decreased for 1 route in 2010, relative to 2009. Five of 6 routes were above their 10-year average in 2010 (Table 6). We plan to continue to monitor the 6 routes monitored during 2010.

Production

The Department made a significant effort to improve our sample of wings collected from harvested sharp-tailed grouse on the Sand Creek and Tex Creek areas during the 2009 season. We placed additional, more appealing and easy to use, wing collection kiosks throughout these areas. These efforts, along with wings mailed-in to the department, resulted in the collection of 448 wings. This was a 70% improvement in wing sample size over the 2008 sample (N = 263). Analysis of the wings indicated 170 juveniles:100 adults for 2009. This was 60% above the 10-year average and the highest estimated production since the 1999 season (Table 7).

Harvest Characteristics

Trends in harvest of sharp-tailed grouse were historically monitored through the Red Road check station on opening weekend of the sage and sharp-tailed grouse seasons (Table 8). However, since 1998, sharp-tailed season has opened two weeks later than sage grouse season. Consequently, no check station harvest data was obtained on sharp-tailed grouse in 1998 or 1999. A check station was operated on the Sand Creek Road on opening day to obtain some harvest information in 2000, 2001, and 2002. Check station hunter numbers prior to 2000 also include sage grouse hunters, but only sharp-tailed grouse hunters are included in the 2000, 2001, and 2002 data. No check station data have been collected on sharp-tailed grouse since 2002.

Starting in 2000, sage grouse and/or sharp-tailed grouse hunters were required to purchase a validation on their hunting license, allowing the Department to more accurately survey these hunters and request wings from harvested birds. A statewide survey conducted for the 2009 season estimated 979 hunters harvested 1,907 sharp-tailed grouse. This is a 4% decrease in hunters and a 3% decrease in harvest from the 2008 estimates (Table 8). The estimated sharp-tailed grouse harvest per day in 2009 was 0.8. These estimates are not comparable with the telephone surveys done prior to 1996. Similar to the 2008 season, there were more hunters and birds harvested at Sand Creek (hunters = 642; birds = 1,140) than Tex Creek (hunters = 337; birds = 766) but birds per day was higher at Tex Creek (0.93) than Sand Creek (0.75).

Habitat Conditions

Lands enrolled in the CRP program in Bonneville, Bingham, Teton, Madison, and Fremont counties benefit sharp-tailed grouse. Increased distribution of sharp-tailed grouse during the lek season has been documented, and they have been observed wintering in areas enrolled in CRP, especially in Fremont, Madison, and Teton counties. In 2006, the Department worked with NRCS and a private landowner in Teton County to establish 652 acres of CRP for sharp-tailed grouse habitat. Numerous habitat projects, aimed at improving mule deer habitat in the Upper Snake Region, were conducted in 2009. Many of these projects also have the potential to benefit sharp-tailed grouse (see 2009 Habitat District Annual Reports for additional information).

Lek Surveys

Two wildlife technicians were hired by a BLM-IDFG Cooperative Cost Share Project to conduct a sharp-tailed grouse lek survey in portions of Bonneville, Teton, and Fremont counties during April and May 2008. Much of this land was enrolled in the federal CRP farm program. Severe and extended winter weather conditions hampered early search efforts. The accessible portion of approximately 90,632 hectares was surveyed and 16 new sharp-tailed grouse leks identified. The dominant land use in which grouse were observed was land enrolled in the CRP, 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 6.8 with a maximum of 26 and a minimum of 2.

Due to the poor weather conditions that occurred during the 2008 lek search effort, lek searches were conducted again in the spring of 2010 in portions of Fremont and Teton counties that were inaccessible in 2008. Technicians searched for leks within a 92,000 acre portion of these counties, from just south of the Teton River up to the Falls River. Eighteen new leks were identified, with an average of 7.6 birds/lek (range = 2-17 grouse). Habitat characteristics of these lek sites was very similar to those found during the 2008 effort, with all 18 leks occurring on private land comprised of CRP grasses or agriculture.

Management Implications

Sharp-tailed grouse production was low from 1992-1994, 2000-2001, and 2003-2005. Unfavorable weather conditions may be responsible. Drought conditions prevailed throughout the spring and summer in 1992, 2003, and 2007, while 1993 and 1994 were abnormally cool and wet. Production, based on wing analysis, improved markedly from 1995-1999, but has been relatively low again since then. These fluctuations may also be the result of small wing data sample size. The newer lek routes in the Teton Valley, Sand Creek desert, and GMU 69 will provide an opportunity to monitor sharp-tailed grouse breeding populations in these areas. The Ozone route in GMU 69 is also important to monitor the effects of wind towers on the sharp-tailed grouse in that area. Although the 2008 and 2010 lek search projects were not as successful as the 2002 and 2003 efforts in finding new leks, the projects reaffirmed the importance of CRP lands to sharp-tailed grouse and increased our knowledge about the distribution of sharp-tailed grouse across the Upper Snake Region.

Chukar

Population Surveys

No chukar production data were collected during this reporting period. Only 6 chukar wings were collected at check stations, wing barrels, or turned in to the Department during the 2009 season, making any estimate of production impossible.

Harvest Characteristics

Harvest survey estimates for the region indicate a very dramatic increase in chukar harvest and an increase in birds per day in 2008 and 2009, compared to 2007 (Table 9). However, the 2008 and 2009 chukar harvest estimates were substantially inflated by a few survey respondents that reported a large harvest within a small sample of survey responses, likely resulting in an overestimate of harvest in 2008 and 2009. Hunter numbers, number of harvested birds, and harvest per hunter day steadily increased from 2001 to 2005, but declined thereafter until the 2008 estimate.

Although operated primarily to check sage grouse hunters, opening weekend check stations also provide minimal trend information on chukar harvest. No chukar were checked in 2005, 60 were checked in 2006, 42 were checked in 2007, 0 were checked in 2008, and 6 were checked in 2009; showing a somewhat contrary trend to harvest survey data that is probably due to small sample size.

Management Implications

Chukar 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.

Gray Partridge

Population Surveys

No population trend data were collected for this reporting period. Only 7 gray partridge wings were collected at check stations, wing barrels, or turned in to the Department during the 2009 season, making any estimate of production impossible.

Harvest Characteristics

Harvest information is gathered from check stations operated at Sage Junction, Highway 20, and Red Road during opening weekend of sage grouse season and through a statewide combined mail-out and telephone survey. Seven gray partridge were checked in Upper Snake Region in 2009 (Table 10). It should be noted that there has been a reduction in check station participation since 1996, resulting from restricted sage grouse hunting opportunity in the region. Statewide survey estimates indicate a 31% increase in the number of hunters and a 162% increase in gray partridge harvested in 2009, relative to 2008 (Table 10). However, gray partridge harvest estimates during 2007-2009 were based on a small sample of survey respondents, which likely resulted in the fairly dramatic swings in estimated hunter numbers and harvest between years.

Habitat Conditions

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.

Gray partridge are distributed at lower elevations throughout 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 more able than chukar to survive harsh winter conditions, severe winters cause increased mortality.

Management Implications

Although gray partridge density in the region tends to be low relative to other regions throughout the state, 2 or more years of good production can result in a dramatic increase in numbers. This may have been the case from 2004-2007, when estimated harvest of gray partridge increased steadily. The prolonged winter of 2007-2008 may have had a negative impact on gray partridge numbers for the 2008 hunting season, while the winter of 2008-2009 was relatively mild and harvest estimates subsequently increased during the 2009 season.

Wild Turkey

Population Surveys

There were no population surveys conducted during this reporting period; however, turkeys have been observed along the South Fork Snake River and adjacent tributaries and habitat, the lower Henrys Fork, the lower Falls River, the Teton River in the Teton Basin, the Snake River upstream of Roberts, and along the Big Lost River south of Mackay.

Harvest Characteristics

Three hundred permits (50 were youth-only) were offered for Controlled Hunt Area 950 (Hunts 950-1, 950-2, and 950-3), which included the entire region, in spring 2009. The harvest estimate was 81 turkeys (Table 11). Beginning in the fall of 2008, a fall youth-only controlled turkey hunt was offered throughout the Upper Snake (Controlled Hunt Area 950-4). Twenty-five permits were offered in 2009, resulting in an estimated 15 youth that actually hunted and a harvest of 8 turkeys (Table 12).

Habitat Conditions

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

Trapping and Translocation

No turkeys were released in the region during this reporting period (Table 13). Fifty-nine Merriam's turkeys were released on the Big Lost River below Mackay in February and March 1999. The first hunt on this population was offered in spring 2002.

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

Depredation

There were no turkey depredation complaints reported to the Upper Snake Region during 2008 or 2009. In 2007, there were 3 turkey depredation complaints. One complaint concerned 3 nuisance turkeys around a private residence, while the other 2 complaints involved 6 and 100+ turkeys that were depredating haystacks on livestock winter-feed grounds.

Management Implications

Turkey hunter success in the region remains relatively low, although success increased for the 2009 season. Hunter success on the spring-controlled hunts was 27% in 2008 and 37% in 2009.

However, turkey observations in the region suggest they are continuing to expand into all relatively suitable habitat within the Upper Snake Region.

Mourning Dove

Population Characteristics

Data from mourning dove call-count routes are reported directly to USFWS.

Harvest Characteristics

No doves were checked at check stations on opening weekend of the 2009 sage grouse season. Harvest surveys have not been conducted since 1996. Hunters report harvest directly to USFWS.

Trapping and Banding

The Upper Snake Region has participated in a statewide effort to trap and band mourning doves since 2003 (Table 14). In 2009, 146 doves were banded at two sites. During 2003-2009, 941 total doves were banded in the region. Banding will continue during the 2010-2011 reporting period.

Management Implications

The mourning dove is one of the most common nesting game birds in Upper Snake Region. However, in many years, the majority of birds have left the area prior to the hunting season opening (1 Sep) or shortly thereafter. Management efforts are aimed at minimizing 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

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

Since 2002, the nongame program in the region has been encouraging Department personnel, federal and state land management agencies, and individuals pursuing outdoor activities to report observations of pygmy rabbits and active pygmy rabbit burrows. These reports, after being verified, are sent into the Department's Conservation Data Center.

Rabbit management is a low priority in the Upper Snake Region. A statewide survey of rabbit hunters estimated 351 hunters harvested 2,047 cottontail rabbits in Upper Snake Region during 2009 (Table 15). The survey also estimated that 170 hunters harvested 256 snowshoe hare in the region in 2009. This represents a 36% decrease in rabbit hunters and a 15% increase in rabbit harvest; a 6% increase in snowshoe hare hunters and a 72% increase in snowshoe harvest from 2008. However, rabbit and hare harvest estimates are based on a small sample of survey

respondents; therefore, estimates will likely vary significantly from year-to-year based on the reporting of one or a few individuals. No production or population information is collected on rabbit or hare populations.

American Crow

The American crow will continue to be a species with no active management.

Table 1. Estimated pheasant harvest, Upper Snake Region, 1983-present.

Year	Check station				Telephone survey ^a		
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1983	58	56	1.0	2.9	108	18	0.1
1984	163	106	0.7	4.9	4,827	2,565	0.7
1985	124	41	0.3	9.0	3,681	5,933	0.5
1986	17	6	0.4	5.0	880	2,188	0.6
1987	15	7	0.5	10.0	1,387	2,198	0.5
1988	27	17	0.6	3.5	1,113	1,815	0.4
1989	47	9	0.2	15.5	1,502	2,023	0.4
1990	20	5	0.3	11.2	1,561	4,325	0.6
1991	10	0	0.0		765	1,441	0.6
1992	18	2	0.1	27.8	856	273	0.2
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
2003 ^c					954	2,654	0.3
2004 ^c					1,103	2,625	0.7
2005 ^c					1,258	5,790	1.1
2006 ^{c,d}					1,523	4,869	0.8
2007 ^{c,d}					1,662	4,960	0.8
2008 ^{c,d}					1,730	5,894	0.7
2009 ^{c,d}					1,744	5,237	0.7
3-year average					1,712	5,364	0.7

^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 Check station not operated on opening weekend.

^d Harvest data from the telephone/mail survey includes wild, stocked, and private shooting preserve pheasants in the total.

Table 2. Estimated forest grouse harvest, Upper Snake Region, 1983-present.

Year	Check station				Telephone survey ^a			
	Hunters ^b	Number of grouse		Total ^c	Forest grouse/100 hunters	Hunters	Birds harvested	Birds per hunter day
1983	1,711	79	1	80	4.6			
1984	1,292	56	0	56	4.3			
1985	2,796	45	7	52	1.6	1,198	3,176	0.9
1986	3,089	32	0	32	1.0	1,414	4,588	1.0
1987	2,932	59	14	73	2.0	1,482	4,653	1.1
1988	2,851	41	0	41	1.4	1,458	7,429	1.2
1989	2,150	67	3	70	3.0	1,688	9,295	1.0
1990	2,303	40	4	44	1.7	1,930	6,378	0.7
1991	2,250	38	0	38	1.7	1,917	7,102	1.3
1992 ^d	1,561	7	7	14	0.5	2,055	12,914	0.9
1993	1,565	4	4	8	0.3	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
2003	751	14	9	23	3.1	4,291	21,116	0.9
2004	647	11	1	33	5.1	4,459	14,900	0.7
2005	597	3	0	3	0.0	2,538	7,219	0.6
2006	553	0	0	0	0.0	4,259	12,217	0.5
2007	490	4	1	5	1.0	3,202	14,169	0.4
2008	660	0	17	17	2.6	2,503	10,641	0.5
2009	651	4	12	16	2.5	4,543	13,590	0.5
10-year average	628	12	6	21	3.1	3,579	14,918	0.7

^a Telephone survey data at the regional level were not collected from 1983-1984 and 1997-2000.

^b Number of hunters includes those hunting for forest grouse, sage grouse, and partridge.

^c Total includes those forest grouse checked that were not classified to species.

^d A toxic chemical spill on I-15 on opening day 1992 resulted in some hunters being rerouted and missed by the Sage-Junction check station.

Table 3. Male greater sage grouse counted on lek routes, Upper Snake Region, 1983-present.

Year	Lek route ^a																		Total	Avg
	LBC	RR	J	ML	LL	L	P ^c	UBC	CC	MLk ^b	SS ^d	TB ^e	SR ^e	I ^d	TF ^d	LBL ^{b,f}	AC ^f	UBL ^g		
1983	68	88	39	150	148	66		1	22										582	73
1984	37	86	58	183	174	75			136										749	107
1985	50	81	57	200	268	35		31	122										844	106
1986	31	130	39	231	122	55		40	35										683	85
1987	36	123	57	223	194	120		32	213										998	125
1988	39	100	44	100	200	105			40										628	90
1989	42	75	14	53	102		151	13	59										509	64
1990	43	77		42	90	183	181	26	85	31									758	84
1991	56	61	38	71	126	230	296	3	106										987	110
1992	28	106	35	67	87	67	182	0	90										662	74
1993	18	34	49	25	57	100	144	0	58										485	54
1994	29	53	71	67	57	80	79	0	120										556	62
1995	18	40	77	50	79	62	106	4	105		83			18	75				717	60
1996	6	69	90	35	48	26	48	8	61		88			15	54				548	46
1997	16	74	67	32	77	72	106	13	120	26	131	70	57	26	77				964	64
1998	25	52	159	96	67	71	131	11	112	31	110	185	96	58	103	62	31		1400	82
1999	37	168	125	129	131	110	80	17	132	30	162	129	143	117	113	74	24		1721	101
2000	30	153	104	159	157	210	122	19	181	19	213	165	116	70	135	50	29		1932	114
2001	28	106	115	165	115	149	104	22	138	10	284	174	138	89	125	67	31	51	1911	106
2002	61	111	82	101	109	180	84	12	135	11	153	74	61	148	110	81	35		1548	91
2003	98	110	114	144	81	233	138	25	167	34	189	157	105	135	132	51		35	1948	115
2004	41	137	92	201	91		131	28	152		167	175	66	98	124		43	87	1633	109
2005	85	124	142	213	57		130	40	136		314	322	55	179	220		111	72	2200	147
2006	125	136	247	165	115		130	50	144		354	264	80	132	218		150	69	2379	159
2007	133	182	327	276	79	278	114	70	195		296	157	44	73	100		107	79	2510	157
2008	67	74	166	157	79	530	79	59	77		297	110	35	105	106		26	60	2027	127
2009	62	108	187	136	143	191	84	48	109	8	280	77	39	87	125		61	43	1780	111
2010	54	97	223	124	95	314	79	37	128		279	79	31	99	119		44	39	1841	115
10-year Avg	75	119	170	168	96	268	107	39	138	16	261	159	65	115	138	66	68	59	1978	124

^a LBC = Lower Birch Creek, RR = Red Road, J = Jacoby, ML = Medicine Lodge, LL = Little Lost, L = Lidy, P = Plano, UBC = Upper Birch Creek, CC = Crooked Creek, MLk = Market Lake, SS = Sheep Station, TB = Table Butte, SR = Stibal Road, I = Idaho National Laboratory, TF = Tractor Flat, LBL = Lower Big Lost, AC = Antelope Creek, and UBL = Upper Big Lost.

^b Route discontinued in 2004.

^c New route established in 1989.

^d New route established in 1995.

^e New route established in 1997.

^f New route established in 1998.

^g New route established in 2001.

Table 4. Greater sage grouse production based on wing collections, Upper Snake Region, 1983-present.

Year	Juveniles:100 females	Juveniles:100 adults
1983	278	233
1984	154	133
1985	201	180
1986	234	201
1987	108	85
1988	90	69
1989	239	162
1990	279	173
1991	168	103
1992	155	106
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
2003 ^a	166	119
2004 ^a	200	147
2005 ^a	297	215
2006 ^a	267	172
2007 ^a	110	71
2008	182	138
2009	217	161
10-year average	207	150

^a Small sample sizes.

Table 5. Estimated greater sage grouse harvest, Upper Snake Region, 1983-present.

Year	Check station				Telephone survey ^a		
	Hunters ^b	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1983	1,711	1,860	1.1	3.8	3,014	7,053	0.8
1984	1,301	1,107	0.9	4.7	2,088	3,351	0.9
1985	2,796	2,933	1.1	4.9	4,614	13,459	1.1
1986	3,089	3,711	1.2	4.3	5,119	18,515	1.3
1987	2,932	3,714	1.3	4.1	4,370	16,979	1.3
1988	2,851	2,635	0.9	5.7	4,461	13,370	0.9
1989	2,150	2,202	1.0	4.6	3,541	10,521	1.4
1990	2,303	2,812	1.2	4.0	4,650	16,862	1.2
1991	2,250	1,944	0.9	5.5	4,385	10,593	1.1
1992 ^c	1,561	1,077	0.7	7.4	3,660	4,990	0.6
1993	1,565	889	0.6	8.7	6,586	10,979	0.6
1994	1,634	1,131	0.7	7.2	3,765	8,728	0.8
1995	1,133	492	0.4	10.7	3,148	5,422	0.6
1996	432	202	0.5	7.6	1,543	2,536	0.6
1997	455	248	0.6	7.3			
1998	524	336	0.6	6.5			
1999	526	424	0.8	4.5			
2000	573	387	0.7	5.6	1,672	2,221	0.6
2001	611	367	0.6	6.5	1,777	2,147	0.6
2002	742	610	0.8	4.3	1,877	2,532	0.6
2003	751	515	0.7	5.0			
2004	647	349	0.5	5.9	2,240	2,263	0.5
2005	579	412	0.7	5.0	3,272	3,658	0.7
2006 ^d	553	302	0.5	7.1	3,339	3,883	0.6
2007 ^e	490	306	0.6	6.3	2,119	2,280	0.6
2008 ^e	660	589	0.9	4.8	2,768	5,339	0.8
2009 ^f	651	574	0.9	4.7	2,229	4,651	0.9
10-year average	632	447	0.7	5.5	2,452	3,344	0.7

^a Telephone survey data at the regional level were not collected from 1997-1999. Telephone survey data for 2003 is not available.

^b Number of hunters includes those hunting for forest grouse, sage grouse, and partridge.

^c A toxic chemical spill on I-15 on opening day in 1992 resulted in some hunters being rerouted and missed by the Sage-Junction check station.

^d Telephone survey data reported in this table includes zones 6 and 8.

^e Telephone survey data reported in this table includes zones 6, 7A, and 8.

^f Telephone survey data reported in this table includes zones 6, 7C, 7D, and 8B.

Table 6. Sharp-tailed grouse counted on lek routes, Upper Snake Region, 1983-present.

Year	Route - maximum total count						
	Sand Creek	Grassy	Pine Creek ^a	Teton River ^b	Ozone ^b	Birch Creek ^b	Chokecherry ^c
1983	7	29					
1984	10	17					
1985	9	28					
1986	19	40					
1987	34	38					
1988	10	56					
1989							
1990	25	12					
1991	22	11					
1992		26					
1993	17	5					
1994	24	5					
1995	18	4					
1996	22	4					
1997	5	3					
1998	39	13					
1999	32	32	22				
2000	43	28	21				
2001	41	33	21				
2002	29	21	29				
2003	60	20	26				
2004	31	19	71	52	14	1	
2005	34	22	74	60	14	55	
2006	49	16 ^d	57	62	21	72	
2007	75		58	57	40	58	
2008	25		57		10	68	
2009	34		17		19	74	25
2010	54		43	62	25	67	32
10-year average	43		45	59	20	56	29

^a New route established in 1999.

^b New route established in 2004; Teton River not run in 2008 or 2009 due to poor access/weather conditions.

^c New route established in 2009.

^d All but 1 lek on route is now within the Siddoway Big Grassy elk enclosure; lek route discontinued after 2006.

Table 7. Sharp-tailed grouse production based on wing collections^a, Upper Snake Region, 1985-present.

Year	Juveniles:100 adults	<i>n</i>
1985	131	120
1986	356	228
1987	93	326
1988	49	122
1989	167	72
1990	173	227
1991	270	122
1992	39	124
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
2003	38	73
2004	90	50
2005	73	206
2006	112	240
2007	114	148
2008	155	263
2009	170	448
10-year average	106	186

^a Small sample sizes with the exception of 1987 and 2009.

Table 8. Estimated sharp-tailed grouse harvest, Upper Snake Region, 1984-present.

Year	Check station			Telephone survey ^a			
	Hunters	Birds harvested	Birds per hunter	Hours per bird	Hunters	Birds	Birds per hunter day
1984	402	25	0.06	8.0	98	25	0.3
1985	993	117	0.12	7.0	321	575	0.7
1986	1,050	225	0.21	5.2	134	206	0.6
1987	1,125	327	0.29	4.9	283	618	1.1
1988	890	94	0.11	7.2	283	1,199	1.0
1989	696	65	0.09	9.1	362	953	1.4
1990	772	112	0.15	5.4	366	2,905	2.3
1991	826	94	0.11	6.4	555	653	0.6
1992 ^b	645	65	0.10	8.8	393	967	1.4
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 ^b	39	19	0.49	6.4	1,019	2,107	0.7
2001 ^b	23	15	0.65	5.5	891	1,344	0.6
2002 ^b	4	0	0.00		793	1,295	0.6
2003 ^c							
2004 ^c					944	1,436	0.6
2005 ^c					1,112	1,763	0.7
2006 ^{c,d}					1,307	2,668	0.7
2007 ^{c,d}					833	1,645	0.7
2008 ^{c,d}					1,019	1,967	0.7
2009 ^{c,d}					979	1,907	0.8
10-year average					989	1,792	0.7

^a Telephone survey data at the regional level were not collected from 1997-1999. Telephone survey data for 2003 is not available.

^b Check station operated 1 October.

^c No check station data collected because sharp-tail season opened later (1 Oct) than sage grouse season.

^d Telephone survey data includes Zones 3 (C) and 4 (D).

Table 9. Estimated chukar harvest, Upper Snake Region, 1984-present.

Year	Check station			Telephone survey ^a			
	Hunters ^b	Birds harvested	Birds per hunter	Hunters	Birds harvested	Hunter days	Birds per hunter day
1984	1,301	0	0.000				
1985	2,796	11	0.004				
1986	3,089	13	0.004				
1987	2,932	36	0.012				
1988	2,851	40	0.014				
1989	2,150	15	0.007				
1990	2,303	5	0.002				
1991	2,250	29	0.013				
1992 ^c	1,561	10	0.006				
1993	1,565	0	0.000				
1994	1,634	9	0.006				
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
2003	751	8	0.011	490	820	1,283	0.6
2004	647	2	0.003	495	1,953	2,511	0.8
2005				726	3,206	2,128	1.5
2006	553	60	0.109	373	786	910	0.9
2007	490	42	0.086	272	300	551	0.5
2008 ^d	660	0	0.000	446	4,772	5,154	0.9
2009 ^d	651	6	0.009	271	3,134	2,952	1.1
10-year average	631	19	0.034	402	1,780	1,921	0.8

^a Telephone survey data at the regional level were not collected prior to 2001.

^b Number of hunters includes those hunting for forest grouse, sage grouse, and partridge.

^c A toxic chemical spill on I-15 on opening day 1992 resulted in some hunters being rerouted and missed by the Sage-Junction check station.

^d Telephone survey harvest estimate was substantially inflated by few respondents that reported a large harvest in a small sample of survey responses.

Table 10. Estimated gray partridge harvest, Upper Snake Region, 1984-present.

Year	Check station			Telephone survey ^a			
	Hunters ^b	Birds harvested	Birds per hunter	Hunters	Birds harvested	Hunter days	Birds per hunter day
1984	1,301	0	0.000				
1985	2,796	83	0.030				
1986	3,089	109	0.035				
1987	2,932	98	0.033				
1988	2,851	60	0.021				
1989	2,150	7	0.003				
1990	2,303	33	0.014				
1991	2,250	28	0.012				
1992 ^c	1,561	18	0.012				
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
2003	751	0	0.000	626	761	1,758	0.4
2004	647	8	0.012	547	1,280	2,115	0.6
2005	597	22	0.037	765	3,271	3,451	1.0
2006	553	4	0.007	828	4,252	3,278	1.3
2007 ^d	490	7	0.014	723	7,190	3,398	2.1
2008	660	3	0.005	347	1,344	2,048	0.7
2009	651	7	0.011	454	3,526	3,258	1.1
10-year average	628	7	0.011	662	2,821	2,656	1.0

^a Telephone survey data at the regional level were not collected prior to 2001.

^b Number of hunters includes those hunting for forest grouse, sage grouse, and partridge.

^c A toxic chemical spill on I-15 on opening day 1992 resulted in some hunters being rerouted and missed by the Sage-Junction check station.

^d Telephone survey harvest estimate was substantially inflated by 1 respondent that reported a large harvest (95 birds) in a small sample (n = 22) of survey responses.

Table 11. Estimated spring turkey harvest, Upper Snake Region, 1987-present.

Hunt type	Year ^a	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
Controlled	1987	3	9	9	6		
	1988	3	9	9	1	33	33
	1989	1	3	3	0	0	5
	2002	1	10	10	2	20	40
	2003	1	100	81	45	10	430
	2004	2	200 ^b	121	39	30	1,159
	2005	2	200 ^b	169	70	13	934
	2006	2	250 ^c	206	50	20	984
	2007	2	250 ^c	224	62	15	916
	2008	3	300 ^d	276	75	15	1,094
	2009	3	300 ^d	219	81	12	1,004

^a Hunts were not offered from 1990-2001.

^b Includes 25 youth permits and 175 any hunter permits.

^c Includes 50 youth permits and 200 any hunter permits.

^d Includes 50 youth permits and 250 any hunter permits.

Table 12. Estimated fall turkey harvest, Upper Snake Region, 2008^a-present.

Hunt type	Year	Number of hunts	Permits available	Hunters	Birds harvested	Days per bird	Total days hunted
Controlled	2008	1	25	17	8	8	65
	2009	1	25	15	8	6	50

^a Hunt initiated in 2008.

Table 13. Turkey translocation history, Upper Snake Region, 1984-2002.

Year	Sub-species ^a	Release site - GMU	Source	Birds released
1984	R	Archer - 63A	Texas	16
	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
	M	Deer Parks - 63A	Southwest Region, ID	45
2001	M	GMUs 63A, 67	Panhandle, Clearwater regions	416
2002	M	GMUs 63A, 67, 69	Panhandle, Southwest regions	163

^a M = Merriam's; R = Rio Grande.

Table 14. Mourning doves banded in Upper Snake Region, 2003-present.

Year	Adult			Hatch-year	Unknown	Total
	Male	Female	Unknown			
2003	4	7	1	8	0	20
2004	73	20	11	122	0	226
2005	58	42	5	98	1	204
2006	84	8	2	52	0	146
2007	82	22	1	44	0	149
2008	28	10	1	11	0	100
2009	64	23	0	59	0	146
Total	393	132	21	394	1	941

Table 15. Estimated cottontail rabbit and snowshoe hare harvest, Upper Snake Region, 2003-present.

Year	Cottontail rabbit		Snowshoe hare	
	Hunters	Cottontails harvested	Hunters	Hares harvested
2003	514	2,356	18	18
2004	726	3,584	110	355
2005	204	1,111	37	92
2006	764	3,707	285	272
2007 ^a	507	6,414	60	120
2008	546	1,775	161	149
2009	351	2,047	170	256
3-year average	468	3,412	130	175

^a Harvest estimate was substantially inflated by 1 respondent that reported a large harvest in a small sample (n = 11) of survey responses.

**PROGRESS REPORT
SURVEYS AND INVENTORIES**

STATE:	<u>Idaho</u>	JOB TITLE:	<u>Upland Game Surveys and</u>
PROJECT:	<u>W-170-R-34</u>		<u>Inventories</u>
SUBPROJECT:	<u>7</u>	STUDY NAME:	<u>Upland Game and Waterfowl</u>
STUDY:	<u>II</u>		<u>Population Status and Trends</u>
JOB:	<u>1</u>		
PERIOD COVERED: <u>July 1, 2009 to June 30, 2010</u>			

SALMON REGION

Climatic Conditions

Rainfall during summer months in 2009 was above average, with some cool, moist weather during spring and early summer. Vegetative growth appeared well above average. Winter conditions were generally moderate, with normal temperatures and below normal precipitation. In general, animals should have entered winter in above average body condition, then encountered a mild winter, which should have produced moderate to high over-winter survival for adults. Snow-pack (as measured at higher elevations) was approximately 69% of average by late winter. Onset of spring weather and associated plant phenology was later than normal in 2010. Water-year precipitation through June 2010 has been approximately 90% of average at both higher elevations (Snotel sites) and low elevations (Salmon weather station). Spring and early summer conditions in 2010 were cool and wetter than average.

Trapping and Translocation

No trapping for translocation took place in Salmon Region for upland game during the reporting period.

Pheasant

Abstract

Small populations of pheasants exist in limited but stable habitats in 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). Harvest estimates are likely biased because of very small sample sizes.

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, cattail (*Typha* spp.) marshes, hay meadows, and cattle pastures. Cereal cropland is uncommon. This habitat complex has been relatively stable from year to year and unaffected by annual weather variations or changes in grain commodity markets. However, reductions in the small amount of cereal grain acreage over time have negatively impacted pheasants. More recently, rural residential housing has been increasing, resulting in increased land clearing, more feral pets, and less hunting opportunity.

Management Implications

Pheasants in 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. Overall, 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 except for some opportunity associated with recent enrollment in the “Access Yes!” program.

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.

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 and the population appears stable. Although limited in distribution, the population could likely support harvest. Opportunity and harvest would be primarily limited by 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 than any other upland game species (Table 2). Harvest estimates are likely biased because of very small sample sizes.

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

Habitat Conditions

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

Management Implications

Forest grouse populations in 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 decreased in 1992 and continued a downward trend through 1996. Harvest has apparently remained low, but little effort has been allocated toward local hunter contacts. Region-wide, lek attendance had an increasing trend from 1996 – 2006, however has been since declining.

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 1979-1981 to a peak of 48 leks in 2002. In 2010, 67 leks were counted. 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 1997-2004. Average lek attendance in 2010 was about the same as 2008 and 2009, but lower than the 10-year average. The average of 15.4 males/lek was approximately 83% of the long-term average (18.6) for leks surveyed for the long-term population index since 1971. In general, spring lek counts in and of themselves are apparently not good indicators of fall harvest in Salmon Region.

Sage-grouse production in 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

The hunting season was reduced from a 23 day, 2 bird daily limit season to a 7 day, 1 bird daily limit (2 in possession) season in 2009 due to a lower number of males per lek in the population index. The restrictive 2009 season resulted in a 63% reduction in harvest compared to 2008 (Table 5). Based on check stations at Howe and Sage Junction in Upper Snake Region, hunter days and harvest reached a recent low in 2004 (Table 5). Some roving field checks of sage-grouse hunters during opening weekends occurred in the past (Table 6), but have been discontinued. Data from both types of field checks and from telephone surveys are somewhat correlated.

Habitat Conditions

Documented loss of sage-grouse habitat in Salmon Region has been minimal in recent years. Habitat losses that do occur are generally caused by sagebrush conversion on private lands, desert land entry on public lands, conifer encroachment into sagebrush habitats, loss of wet-meadow habitats, or wildfire. Conversely, existing habitat conditions are poor to fair in several areas as a result of intensive livestock grazing, particularly in years of below-average precipitation.

Habitat Use Monitoring

Since 2002 regional staff have participated in a series of challenge cost-share agreements with BLM and projects in cooperation with the LWG to search for undocumented sage-grouse leks and capture sage-grouse to identify winter habitat use and characteristics of nesting and brood-rearing locations.

The batteries of radio-collars on sage-grouse in the Pahsimeroi Valley died by the beginning of 2010 ending the 5-year study. No additional sage-grouse were banded or collared in the Pahsimeroi.

During the spring of 2010, three males and three females were radio-marked at the Deer Gulch and Little Hat Leks near Ellis. One hen was re-collared at the Warm Springs lek in the mid-Lemhi Valley. We located two nests of the three hens in Little Hat Creek and Warm Springs. During July 2010, two hens were radio-collared in Moyer Basin near Panther Creek. One of the hens from the Little Hat lek was found in Moyer Basin during July.

Habitat measurements were collected at 1 nest site during the spring of 2010.

Harvest rates of marked birds have been relatively low with only 7 of 222 marked sage-grouse reported as harvested since marking began in 2002.

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. We do not know if a similar condition exists in the Pahsimeroi Valley, however several hens have moved from the Pahsimeroi to nest in the upper Little Lost and one stayed through the winter.

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 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.

Chukar

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.

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). Estimates of regional harvest appear to fluctuate widely and may reflect inadequate sampling of hunters in the region.

Habitat Conditions

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

Management Implications

Chukar populations in 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 a distant third with regard to harvest among 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

While usually ranked third among upland bird harvest, gray partridge represent a minor portion of upland game hunter effort and bag in Salmon Region (Table 8). Harvest estimates are likely biased because of very small sample sizes.

Habitat Conditions

Although widely distributed, gray partridge habitat is not abundant in 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 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 appear to be established near Challis and south of Salmon, and a very limited hunting season was implemented in spring 2005. Between 1991 and 1999, 139 wild turkeys were released in Salmon Region to augment existing groups and in novel areas. However, habitat limitations and access to private property may restrict ability to permit significant hunting opportunity.

Population Surveys

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

Harvest Characteristics

A controlled hunt with 5 permits was instituted in GMUs 36B and 37 in spring 2005. An additional 10 permits were added in 2008 plus a youth hunt with 5 permits was offered. Hunter success was 100% in 2006 -2010 seasons.

Habitat Conditions

Potential wild turkey winter habitat exists in deciduous river bottoms along 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 Salmon Region. Virtually all winter habitat is privately owned.

Trapping and Translocation

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

Management Implications

Current population levels can probably sustain limited recreational harvest. However, access to private lands, where most wild turkeys occur, will be critical to developing harvest management and opportunity. 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 Salmon Region but are usually only lightly harvested here due to migration timing.

Population Surveys

Salmon Region contains a breeding population of mourning doves. The only population information is obtained from a call count in the southern portion of Lemhi Valley. During 1985, 1986, and 1987, a total of 4 mourning doves were seen or heard along the route (Table 10). Doves heard and seen increased in the 2000's, but declined to only 1 dove seen in 2010. In 1988, the southern half of the route was relocated 3 miles to the east. Beginning in 2000, the western portion (approximately 7 miles) of the route on Highway 28 was relocated to the north and east. The new section follows Lemhi Back Road from Leadore to Little Eightmile Creek.

Trapping and Translocation

As part of a national mourning dove banding project (under auspices of USFWS), staff in Salmon Region have captured and banded doves since 2003 (Table 11). Capture was conducted at 2 sites, Baker and Kirtley Creek, from 2003-2006. During 2010, Baker was the only capture

site; we placed standard and internet reporting bands on 109 doves and recaptured 20 birds from previous years. Based on recapture rates across subsequent years, minimum survival rates were surprisingly high, particularly for birds captured during 2003 at the Baker site. Minimum survival rates for doves captured in 2003 at Baker were 42% through 2004 and 30% through 2005; 2% of doves banded in Baker in 2003 were recaptured in 2010. Minimum 1-year survival for doves captured in 2004 through 2009 at Baker ranged from 7% to 23%.

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.

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 likely to decrease as housing developments replace working ranches. However, dove numbers may remain stable if appropriate vegetation accompanies housing development.

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 Salmon Region.

Population Surveys

No production data were collected during this reporting period.

Harvest Characteristics

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 12). However, harvest estimates are likely biased because of very small sample sizes.

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 are collected nor is it anticipated this effort will increase.

American Crow

Abstract

The American crow is, and will continue to be, a species with no active management.

Literature Cited

Connelly, J. W., M. A. Schroeder, A. R. Sands, and C. E. Braun. 2000. Guidelines to manage sage-grouse populations and their habitats. *Wildlife Society Bulletin* 28:967-985.

Table 1. Estimated pheasant harvest, Salmon Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds/ hunter	Birds/ hunter day
1985	388	1,199	1,018	3.1	1.2
1986	315	387	528	1.2	0.7
1987	339	497	797	1.5	0.6
1988	175	244	340	1.4	0.7
1989	289	231	642	0.8	0.4
1990	235	284	570	1.2	0.5
1991	155	200	985	1.3	0.2
1992	286	490	442	1.7	1.1
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
2001	206	365	875	1.8	0.4
2002	445	686	980	1.5	0.7
2003	60	60	119	1.0	0.5
2004	173	279	398	1.6	0.7
2005	169	377	425	2.2	0.9
2006	10	0	21	0.0	0.0
2007	107	103	572	1.0	0.2
2008	57	133	76	2.3	1.8
2009	54	78	123	1.4	0.6
3-year average	73	105	257	1.6	0.9

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

Table 2. Estimated forest grouse harvest, Salmon Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds/ hunter	Birds/ hunter day
1985	1,325	3,590	4,662	2.7	0.8
1986	835	3,086	3,354	3.7	0.9
1987	907	4,628	3,329	5.1	1.4
1988	956	4,762	5,411	5.0	0.9
1989	962	4,356	5,004	4.5	0.9
1990	930	3,708	5,453	4.0	0.7
1991	803	2,205	3,150	2.7	0.7
1992	1,378	9,647	10,042	7.0	1.0
1993	2,350	5,566	12,864	2.4	0.4
1994	3,184	11,557	21,277	3.6	0.5
1995	3,574	12,834	20,775	3.6	0.6
2001	2,171	10,914	11,304	5.0	1.0
2002	1,941	6,636	7,544	3.4	0.9
2003	2,179	15,821	11,041	7.3	1.4
2004	1,789	6,848	8,155	3.8	0.8
2005	1,437	5,107	5,810	3.6	0.9
2006	1,468	3,930	9,321	2.7	0.4
2007	1,690	5,638	10,791	3.3	0.5
2008	1,120	4,183	5,324	4.8	0.8
2009	1,728	3,517	7,984	2.0	0.4
3-year average	1,513	4,486	8,033	3.4	0.6

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

Table 3. Male greater sage-grouse counted on Lower Lemhi lek route, Salmon Region, 1993-present.

Year	Lower Lemhi lek L-3	Lower Lemhi lek route (L-3 to L-5)
1993	0	0
1994		0
1995		
1996		0
1997	14	14
1998	16	16
1999	0	3
2000	0	0
2001	0	18
2002	15	31
2003	19	34
2004	16	23
2005	11	28
2006	15	42
2007	21	43
2008	15	34
2009	16	30
2010	13	32

Table 4. Greater sage-grouse production based on wing collections, Salmon Region, 1979-present.

Year	Juv:100 females	Juv:100 adults	Percent unsuccessful females
1979	275	149	60
1980	188	102	66
1981	118	75	45
1982	157	113	57
1983	275	133	36
1984	228	134	52
1985	150	72	53
1986	247	159	45
1987	126	61	53
1988	143	72	
1989	177	98	
1990	175	116	
1991	168	100	69
1992	150	70	70
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
2003	280	124	73
2004	190	121	81
2005	117	50	44
2006	188	143	50
2007	112	63	67
2008	100	58	47
2009	200	105	27

Table 5. Estimated greater sage-grouse harvest, Salmon Region, 1985-present.

Year	Check station ^a				Telephone survey ^b		
	Hunters	Birds harvested	Birds/hunter	Hours/bird	Hunters	Birds harvested	Birds/hunter day
1985	180	228	1.3	6.5	667	976	0.8
1986	106	147	1.4	4.5	390	911	1.9
1987	117	265	2.3	3.0	625	2,852	2.0
1988	120	276	2.3	3.0	727	2,326	0.8
1989	125	192	1.5	3.6	560	974	0.8
1990	155	167	1.1	3.9	519	1,842	1.1
1991	91	153	1.7	4.1	760	2,122	0.8
1992	93	105	1.1	7.0	913	941	0.4
1993	84	48	0.6	13.1	1,670	2,620	0.6
1994	74	64	0.9	7.1	1,236	4,327	0.9
1995	79	25	0.3	23.9	1,117	2,132	0.4
1996	68	31	0.5	9.2			
1997	42	19	0.5	11.1			
1998	62	29	0.5	7.5			
1999	56	50	0.9	4.1			
2000	48	60	1.3	5.7	526	788	1.5
2001	41	29	0.7	7.8	440	571	1.3
2002	63	60	1.0	6.4	629	956	0.7
2003	52	50	1.0	7.9			
2004	25	20	0.8	5.4	364	459	0.6
2005	33	40	1.2	7.7	728	949	0.7
2006	48	65	1.4	7.5	946	1,813	0.8
2007					289	495	0.6
2008	36	44	1.2	4.5	299	487	0.6
2009 ^c	30	21	0.7	5.8	189	182	0.4
10-year average	42	43	1.0		490	744	0.8

^a Howe and Sage Junction check stations.

^b Telephone survey data at the regional level were not collected from 1996-1999. Data from 2000-2003 includes all mountain-valley areas (zones 7A and 7B). Telephone survey data for 2003 is not available.

^c Season reduced from 23 day, 2 bird daily limit to 7 day, 1 bird daily limit.

Table 6. Opening weekend field checks of greater sage-grouse hunters, Salmon Region, 1981-2001.

Area				
Year	Hunters	Birds harvested	Birds/hunter	Hours/bird
Lemhi Valley				
1981	105	199	1.9	2.6
1982	48	55	1.2	5.1
1983	133	128	1.0	4.0
1984	49	50	1.0	5.1
1985	117	81	0.7	9.2
1986	104	120	1.2	4.3
1987	97	134	1.4	4.2
1988	67	94	1.4	3.9
1989	34	30	0.9	5.1
1990	23	31	1.3	2.7
1992	101	77	0.8	6.2
1994	59	58	1.0	4.6
1995	18	12	0.7	5.2
1997	6	0	0.0	
1998	18	11	1.6	7.2
1999	19	22	1.2	3.5
2001	11	5	0.5	13.2
Pahsimeroi Valley				
1981	108	134	1.2	3.7
1982	71	68	1.0	3.6
1983	13	4	0.3	11.0
1984	8	5	0.6	7.8
1985	55	46	0.8	3.7
1986	22	43	2.0	3.1
1987	44	57	1.3	
1988	25	21	0.8	1.7
1989	33	38	1.2	1.7
1990	15	12	0.8	4.7
1992	21	16	0.8	3.0
1994	19	8	0.4	8.0
1995	2	1	0.5	6.0
1997	2	5	0.4	4.4
1998		4	2.0	3.5

Table 7. Estimated chukar harvest, Salmon Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds/ hunter	Birds/ hunter day
1985	96	23		0.2	0.9
1986	166	263		1.6	1.1
1987	569	2,097		3.7	1.6
1988	529	2,548		4.8	1.1
1989	444	1,139		2.6	0.8
1990	499	4,964	1,460	9.9	3.4
1991	276	1,837	1,435	6.7	1.3
1992	713	7,809	3,725	11.0	2.1
1993	495	1,886	3,216	3.8	0.6
1994	862	4,027	3,765	4.7	1.1
1995	812	3,980	4,346	4.9	0.9
2001	927	6,847	4,236	7.4	1.6
2002	1,276	7,080	4,282	5.5	1.7
2003	2,341	14,046	9,717	6.0	1.4
2004	1,744	11,852	7,374	6.8	1.6
2005	726	3,206	2,128	4.4	1.5
2006	1,039	2,817	3,925	2.7	0.7
2007	1,240	4,012	3,081	3.2	1.3
2008	1,075	5,586	7,110	5.2	0.8
2009	674	5,587	3,833	8.3	1.5
3-year average	996	5,062	4,675	5.6	1.2

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

Table 8. Estimated gray partridge harvest, Salmon Region, 1985-present.

Year ^a	Hunters	Birds harvested	Hunter days	Birds/ hunter	Birds/ hunter day
1985	20	3		0.2	3.0
1986	49	35		0.7	1.8
1987	112	848		7.6	0.9
1988	38	38		1.0	0.6
1989	64	125		2.0	2.7
1990	89	96		1.1	0.8
1991	100	275		2.8	0.5
1992	45	0		0.0	
1993	278	278	1,051	1.0	0.3
1994	318	1,292	1,704	4.1	0.8
1995	426	508	1,868	1.2	0.3
2001	283	1,209	1,418	4.3	0.9
2002	322	966	1,057	3.0	0.9
2003	217	236	370	1.1	0.6
2004	403	217	1,839	0.5	0.1
2005	272	1,082	960	4.0	1.1
2006	82	72	103	0.9	0.7
2007	227	782	842	3.4	0.9
2008	49	141	84	2.9	1.7
2009	120	399	174	3.3	2.3
3-year average	132	441	367	3.2	1.6

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

Table 9. Turkey translocation history, Salmon Region, 1983-1999.

Year	Sub-species ^a	Release site - GMU	Birds released			New or supplemental release
			M	F	Total	
1983	R	Shoup Bridge area - 28	0	16	16	N
	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
	M	Salmon River - 36B	4	21	25	N
1993	M	Fourth of July Creek - 21A	13	12	25	N
	M	Salmon River - 36B	6	4	10	S
1999	M	Salmon River - 37			50	N
	M	Salmon River - 28			14	N

^a M = Merriam's; R = Rio Grande.

Table 10. Mourning dove call-count survey results and estimated harvest, Salmon Region, 1985-present.

Year	Call-count routes		Telephone survey ^a		
	Miles counted	Doves/mile	Hunters	Birds harvested	Birds/hunter day
1985	20	0.10	22	335	7.4
1986	20	0.00	114	1,037	3.6
1987	20	0.10	42	943	10.0
1988	20	0.05	68	431	3.2
	20 ^b	0.55			
1989	20	0.10	0	0	0.0
1990	20	0.05	31	4	1.0
1991	20	0.00	0	0	0.0
1992	20	0.05	0	0	0.0
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			
2003	20	0.35			
2004	20	0.55			
2005	20	0.05			
2006	20	0.60			
2007	20	1.30			
2008	20	0.65			
2009	20	1.15			
2010	20	0.05			

^a New telephone survey methodology employed beginning in 1993 (results not directly comparable to previous results). Telephone survey data at the regional level were not collected after 1995; harvest is reported directly to USFWS by hunters.

^b Route relocated.

Table 11. Mourning doves banded in Salmon Region, 2003-present.

Year	Adult			Hatch-year	Unknown	Total
	Male	Female	Unknown			
2003	37	22	6	17	0	82
2004	63	19	18	44	0	144
2005	53	32	12	51	1	149
2006	72	33	13	30	1	149
2007	58	12	16	46	0	132
2008	30	10	12	26	0	78
2009	27	19	14	24	0	84
2010	30	19	18	42	0	109
Total	370	166	109	280	2	927

Table 12. Estimated cottontail harvest, Salmon Region, 1985-present.

Year ^a	Hunters	Cottontails harvested	Days hunted	Cottontails/hunter	Cottontails/hunter day
1985	143	621		4.3	1.5
1986	126	38		0.3	0.5
1987	0				
1988	19	75		3.9	1.3
1989	0				
1990	117	757		6.5	6.5
1991	59	203		3.4	1.0
1992	64	31	11	0.5	2.8
1993 ^b	928	18,894	6,679	20.4	2.8
1994	880	23,150	4,851	26.3	4.8
1995	670	4,366	4,833	6.5	0.9
2001	114	321	161	2.8	2.0
2002	29	58	58	2.0	1.0
2003	166	474	327	2.9	1.4
2004	388	4,337	1,582	11.2	2.7
2005	82	232	168	2.8	1.4
2006	112	278	204	2.5	1.4
2007	222	210	960	1.0	0.2
2008	19	38	19	2.0	2.0
2009	46	213	253	4.6	0.8
3-year average	96	154	411	2.5	0.8

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

^b New telephone survey methodology employed beginning in 1993 (results not directly comparable to previous results).

APPENDIX A
IDAHO
2009 SEASON
UPLAND GAME RULES

2008-2009 & 2009-2010 Upland Game, Furbearer & Turkey Seasons and Rules



RULES

2008 — 2009

2009 — 2010

Upland Game Birds, Turkeys, Rabbits and Hares

April 2008-March 2009

April 2009-March 2010

Furbearers, Predators & Unprotected Species

July 2008-June 2010

Crows, Doves and Sandhill Cranes

September 2008-January 2009

September 2009-January 2010

Falconry

August 2008-March 2010

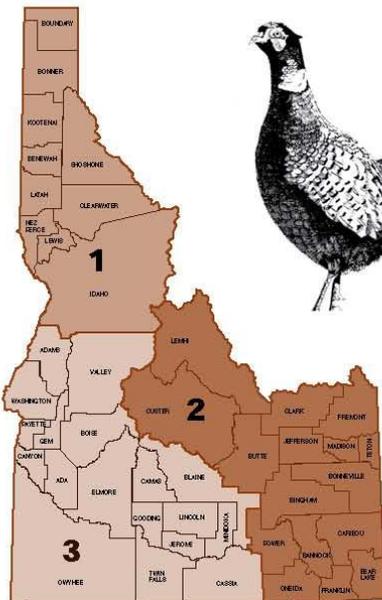
Major changes highlighted in yellow

You may refer to this link for laws pertaining to this rule book:

Administrative Procedures Act:

<http://adm.idaho.gov/adminrules/rule/idapa13/13index.htm>

Pheasants - All Varieties



Area 1

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

Area 1 seasons begin at 1/2 hour before sunrise on opening day and are as follows:

Seasons

2008 — Oct. 11 through Dec. 31
2009 — Oct. 10 through Dec. 31

Daily Bag Limit **3 cocks**

Possession Limit After

First Day of Season..... **6 cocks**

Area 2

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

Seasons

Area 2 seasons begin at noon on opening day and are as follows:

2008 — Oct. 18 through Nov. 30
2009 — Oct. 17 through Nov. 30

Daily Bag Limit **3 cocks**

Except Market Lake and Mud Lake WMAs in Jefferson County, Cartier WMA in Madison County, and Sterling WMA in Bingham County.

..... **2 cocks**

Possession Limit After

First Day of Season..... **6 cocks**

Except Market Lake and Mud Lake WMAs in Jefferson County, Cartier WMA in Madison County, Sterling WMA in Bingham County.

..... **4 cocks**

Area 3

Ada, Adams, Blaine, Boise, Camas, Canyon, Cassia, Elmore, Gem, Gooding, Jerome, Lincoln, Minidoka, Owyhee, Payette, Twin Falls, Valley, and Washington Counties (including all islands in the Snake River except Patch and Porter Islands). Hunting hours start at 10a.m. after opening day on Fort Boise, C.J. Strike, Montour and Payette River WMAs.

Seasons

Area 3 seasons begin at noon on opening day and are as follows:

2008 — Oct. 18 through Dec. 31
2009 — Oct. 17 through Dec. 31

Daily Bag Limit **3 cocks**

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**

Except Fort Boise WMA (including Gold Island) in Canyon County, C.J. Strike WMA in Owyhee County, birding Island segment of the Payette River WMA in Payette County and Montour Management Area in Gem County and Niagara Springs WMA in Gooding County.

..... **2 cocks**

Possession Limit After

First Day of Season..... **6 cocks**

Except Fort Boise WMA (including Gold Island) in Canyon County, C.J. Strike WMA in Owyhee County, birding

Island segment of the Payette River WMA in Payette County and Montour Management Area in Gem County and Niagara Springs WMA in Gooding County. **4 cocks**

Youth Hunt Season

2008 — Oct. 4 through Oct. 10
2009 — Oct. 3 through Oct. 9

In Area 1 the season begins 1/2 hour before sunrise. In Areas 2 and 3 the season begins at noon. It is open statewide. 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 except on WMAs where pheasants are stocked. **Bag limit is 2 cocks and possession limit is 4 cocks.**

*One adult may accompany more than one youth hunter.

Pheasant information continues on the next page.

WMA Pheasant Permit

Hunting for pheasants on the nine WMAs listed below requires a WMA pheasant permit. Permit allows the take of 6 pheasants.

Recording harvest: The Department releases pheasants at nine 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:

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



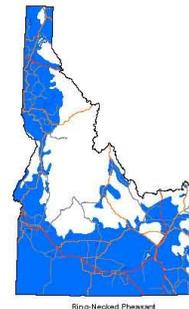
Permit Validation: When a pheasant is reduced to possession, the hunter must immediately:

- 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.

NOTE: All upland game hunters and upland game bird hunters are required to wear **visible hunter orange (minimum size 36 square inches) above the waist** during pheasant season when hunting on Wildlife Management Areas where pheasants are stocked. **A hunter orange hat meets this requirement.**

Pheasant

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.



For hunting hours on WMA's, see page 14.

Forest Grouse:

Dusky (blue), Ruffed, and Spruce

Entire State Open

Blue grouse is now known as the Dusky grouse

Seasons

2008 — Sept. 1 through December 31

2009 — Sept. 1 through December 31

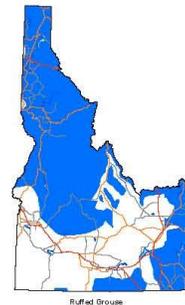
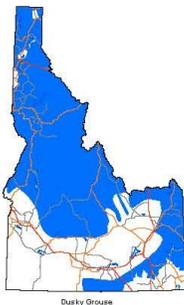
Daily Bag Limit **4 in the aggregate**

Possession Limit After

First Day of Season..... **8 in the aggregate**

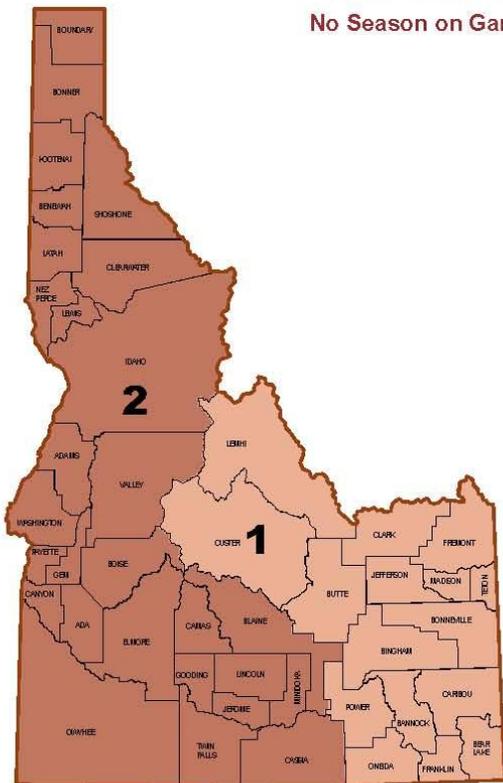
Forest Grouse

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. Dusky (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 and 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, Kootenai, Latah, Lewis, Nez Perce, Owyhee, Payette, Shoshone, Valley, Jerome, Lincoln, Minidoka, Twin Falls and Washington Counties.

Seasons

2008 — Sept. 20 through January 31, 2009

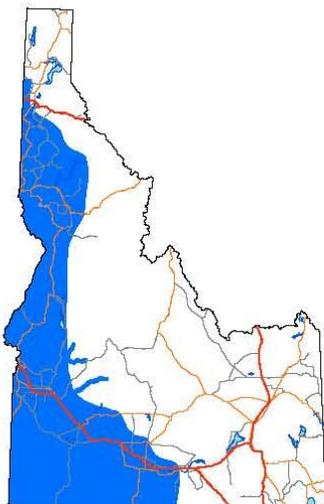
2009 — Sept. 19 through January 31, 2010

Daily Bag Limit 10 in the aggregate

Possession Limit

After First Day of Season 20 in the aggregate

Mountain quail have recently been reintroduced into historical habitat on Craig Mountain WMA (Nez Perce and Lewis Counties), and in Elmore and Gooding Counties. If quail are encountered, hunters are cautioned that there is no open hunting season for mountain quail in Idaho.



California Quail

California Quail

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 occurred in agricultural areas of the Boise Valley. Today bobwhite are rare. Hunters should not expect to encounter bobwhite quail. 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

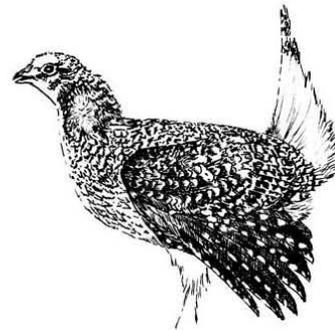


Sage/Sharp-tailed Grouse Permit Validation: Any person hunting sage or sharp-tailed grouse must have in possession their hunting license with a sage/sharp-tailed grouse permit validation.

Sharp-tailed Grouse

Note: Sharp-tailed grouse have recently been introduced into historical range in southern Twin Falls county and south eastern Owyhee County. These areas remain closed to hunting for sharptails to protect these populations. Also, the season is closed on a small remnant population north of Weiser.

Sharp-tailed grouse also occur around Split Butte area in Minidoka County. Hunting of sharp-tailed grouse is closed in Minidoka County.



Area 2

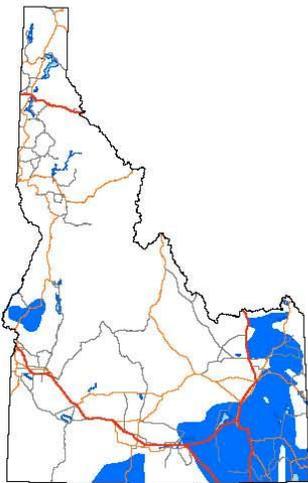
Bingham and Clark counties east of Interstate 15, Franklin, Fremont, Jefferson County east of Interstate 15, Madison, and Teton counties, Bonneville County east of Interstate 15, Bannock County east of Interstate 15 and south of Interstate 86, Bear Lake, Caribou, Cassia County east of Interstate 84 and 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.

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.

Seasons

2008 — Oct. 1 through Oct. 31	
2009 — Oct. 1 through Oct. 31	
Daily Bag Limit	2
Possession Limit	
After First Day	
of Season	4



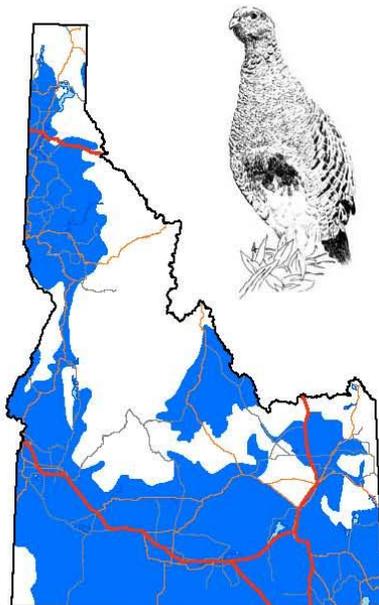
Columbian Sharp-Tailed Grouse

Sharp-tailed Grouse

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.

Chukar and Gray Partridge

Entire State Open



Gray Partridge

Seasons

2008—Sept. 20 through Jan. 31, 2009
 2009—Sept. 19 through Jan. 31, 2010

Daily Bag Limit:

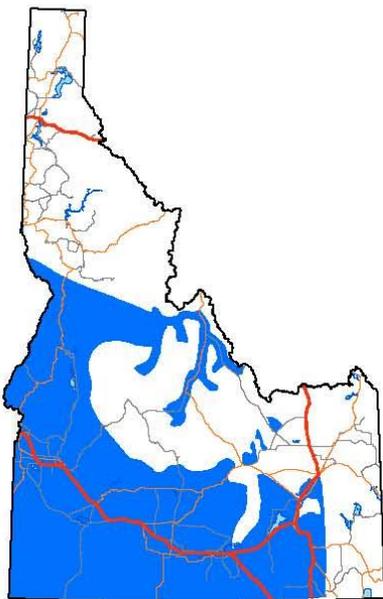
8 Chukar & 8 Gray Partridge

Possession Limit After First Day of Season:

16 Chukar & 16 Gray Partridge

Gray Partridge

Distribution and Habitat Use: Gray partridge, another introduced species, is 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.



Chukar

Chukar

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.

Turkey Seasons

General Hunt Seasons

(maps on page 39)

- **April 12-14 2008 and April 11-14, 2009.** General Spring Youth Hunt in Game Management Units open to General Season turkey hunting (See page 30 for age requirements) and open in Controlled Hunt areas to holders of a Youth Only Controlled Hunt Permit.
- **April 15, 2008 through May 25, 2008 and April 15, 2009 through May 25, 2009.** 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, 16A, 17, 18, 19, 20, 22, 23, 24, 31, 32 (except that portion in Payette County), 32A, 33, 39, 73, 74, 75, 77 and 78.
- **September 15, 2008 through December 15, 2008 and September 15, 2009 through December 15, 2009.** General Falls Hunt in Game Management Units 1, 2 (except Farragut State Park and Farragut WMA) 3, 4, 4A, 5 and 6.
- **September 15, 2008 through October 31, 2008 and September 15, 2009 through October 31, 2009.** General Fall Hunt in Game Management Units 73, 74, 75, 77 and 78.
- **September 15, 2008 through October 9, 2008 and September 15, 2009 through October 9, 2009.** General Fall Hunt in Game Management Units 8, 8A, 10, 10A, 11, 11A, 12, 13, 14, 15, 16, 16A, 17, 18, 19, 20, 22, 23, 24, 31, 32 (except that portion in Payette County), and 32A. Units 33 and 39 are closed to fall hunting.
- **November 21, 2008 through December 31, 2008 and November 21, 2009 through December 31, 2009.** General Fall Hunt in Game Management Units 8, 8A, 10A, 11, 11A, and 16. This hunt is open on private lands only.

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, except in Units, 1, 2, 3 and 5 where 5 turkeys (either sex) may be taken in a day during fall seasons. No more than 2 bearded turkeys may be taken per spring. A hunter may harvest as many turkeys as they have legal tags for during the year.

Tags: There are three types of tags.

The general tag is valid for spring and fall seasons. It can also be used during spring or fall controlled hunts with the purchase of a controlled hunt permit. If the general tag is not used to harvest a turkey in the spring it may be used in fall seasons.

The extra tag is valid for general seasons in spring between May 1 — 25 and in fall general or fall controlled hunt seasons. Fall controlled hunt permit hunters may also use extra tags in general season hunts.

Special Unit Tag is valid for fall season in Units 1, 2, 3 or 5. The Special Unit Tag is also valid for any designated depredation hunt during the calendar year.

Wild Turkey Controlled Hunt Seasons — Spring 2008 - 2009			
Hunt No	Controlled Hunt Area Descriptions	Spring Hunts	Permits
	 Use these numbers on your controlled hunt application.	Refer to Big Game Rules for unit boundary descriptions or this web site: http://fishandgame.idaho.gov/cms/hunt/rules/bg/units.pdf . Youth Hunts - hunter must be 15 years of age or younger on the opening day of the youth hunt.	
9001	938-1: All of Unit 38 and that portion of Unit 32 in Payette County.	April 15-May 25 Access is Limited	75
9002	938-2: All of Unit 38 and that portion of Unit 32 in Payette County.	Youth Hunt April 12 - May 25, 2008 April 11 - May 25, 2009 Access is Limited	60
9003	950-1: All of Unit 50, 51, 58, 59, 59A, 60, 60A, 61, 62, 62A, 63, 63A, 64, 65, 66, 67, 69.	April 15 - April 30	125*
9004	950-2: All of Unit 50, 51, 58, 59, 59A, 60, 60A, 61, 62, 62A, 63, 63A, 64, 65, 66, 67, 69.	May 1 - May 25	125*
9005	950-3: All of Unit 50, 51, 58, 59, 59A, 60, 60A, 61, 62, 62A, 63, 63A, 64, 65, 66, 67, 69.	Youth Hunt April 12 - May 25, 2008 April 11 - May 25, 2009	50*
9006	954-1: All of Unit 54.	Youth Hunt April 12 - May 25, 2008 April 11 - May 25, 2009	30
9007	954-2: All of Unit 54.	April 15 - May 5	24
9008	954-3: All of Unit 54.	May 6 - May 25	24
9009	968A-1: All of Unit 68A.	Youth Hunt April 12 - May 25, 2008 April 11 - May 25, 2009	15*
9010	968A-2: All of Unit 68A.	April 15 - April 30	15*
9011	968A-3: All of Unit 68A.	May 1 - May 25	15*
9012	971-1: All of Unit 71.	Youth Hunt April 12 - May 25, 2008 April 11 - May 25, 2009	50
9013	971-2: All of Unit 71.	April 15 - April 30	50
9014	971-3: All of Unit 71.	May 1 - May 25	50
9015	936B-1: All of Units 36B and 37.	April 15 - May 25 Access is Limited <i>(Recommend do not apply unless you have access to private property)</i>	15
9016	936B-2: All of Units 36B and 37.	Youth Hunt April 12 - May 25, 2008 April 11 - May 25, 2009 Access is Limited <i>(Recommend do not apply unless you have access to private property)</i>	5

* See Page 11 for areas closed to turkey hunting, i.e., federal refuges, bird refuges, active bald eagle nests, etc.

Wild Turkey Controlled Hunt Seasons — Fall 2008 - 2009

↓	Use these numbers on your controlled hunt application.	Refer to Big Game Rules for unit boundary descriptions or this web site: http://fishandgame.idaho.gov/cms/hunt/rules/bg/units.pdf . Youth Hunts - hunter must be 15 years of age or younger on the opening day of the youth hunt.	
Hunt No	Controlled Hunt Descriptions	Fall Hunts	Permits
9017	971-4: All of Unit 71.	Sept 15 - Dec 31	100
9018	971-5: All of Unit 71.	Youth Hunt Sept 15 - Dec 31	100
9019	950-4: All of Unit 50, 51, 58, 59, 59A, 60, 60A, 61, 62, 62A, 63, 63A, 64, 65, 66, 67, 69.	Youth Hunt Sept 15 - Nov 30	25

Turkey Hunting Safety and Ethics

1. Positively identify your target.
2. Assume every noise and movement is another hunter.
3. Never stalk a turkey or turkey sound.
4. Don't wear red, white, or blue.
5. Protect your back.
6. Shout "Stop" to alert approaching hunters.
7. Make your position known to other hunters.
8. Preselect a zone of fire.
9. Choose safe, ethical hunting companions.
10. Practice courtesy and self-control at all times.

All ethical wild turkey hunters support a series of rules that make wild turkey hunting the quality experience it can be. Following these rules will not only help maintain healthy flocks of wild turkeys in Idaho, but will also add to the challenge and excitement that is wild turkey hunting.

- **Do not disturb nesting hen turkeys or their nests.**
- **Though legal (during legal hours) to shoot a tom out of a roost tree, this practice is unacceptable among most sportsmen.**
- **If you hear another hunter calling a bird, allow that hunter to continue undisturbed and leave the area.**
- **Ask first to hunt on private land.**

TURKEY

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.

To correctly distinguish cottontail rabbits (season open) and pygmy rabbits (season closed), check for these characteristics:

Cottontail Rabbit

Tail: dark above and white underneath

Size: More than one foot in length (13.5-16.6 inches)

Pygmy Rabbit

Tail: buffy gray with no white on it.

Size: Less than one foot in length (9.7-11.3 inches)

- Contact your local regional office to determine if pygmy rabbits are found in your area of interest.

Areas Closed to Hunting

Hunting, killing, or molesting upland game animals is prohibited in the following areas:

- Craters of the Moon National Monument. See page 11 for a full description.
- 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, Warm Springs Avenue and the New York Canal from the New York Canal Diversion Dam downstream to the Boise City limits.
- Yellowstone National Park in Fremont County.
- Mann's Lake in Nez Perce County and extending three hundred (300) yards beyond the Bureau of Reclamation property that encompasses the lake.
- 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, Bags and Possession Limits - Statewide			
Species	Season	Daily Bag Limits	Possession Limits (after 1st day of season)
Cottontail Rabbits	2008: Sept. 1, 2008 - Feb 28, 2009 2009: Sept. 1, 2009 - Feb 28, 2010	8	16
Pygmy Rabbits	Season Closed		
Snowshoe Hares	2008: Sept. 1, 2008 - March 31, 2009 2009: Sept. 1, 2009 - March 31, 2010	8	16

Shaded areas show general distribution of these species



**Official Shooting Hours for Mourning Doves and Sandhill Cranes
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 the Salmon 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

DOVES & CRANES

Extended Falconry Seasons, Bag and Possession Limit				
Species	Open and Closed Areas	Season Dates	Daily Bag Limit	Possession Limit (After 1st day of season)
Pheasants (All varieties)	All counties or parts of counties which have a firearms season are open to hunting by falconry.	Aug 15, 2008 to the opening of the firearms season and from the close of firearms season through March 15, 2009. Aug 15, 2009 to the opening of the firearms season and from the close of the firearms season through March 15, 2010	3 of any kind and shall not include more than 1 pheasant (male or female), 1 sage-grouse, or 1 sharp-tailed grouse except during firearm seasons when those seasons' limits apply.	6 of any kind and shall not include more than 2 pheasant (male or female), 2 sage-grouse.
Gray partridge, chukar, partridge, bobwhite quail, California quail	Same as above.	Same as above.		
Forest grouse, Dusky (blue), ruffed & spruce)	Same as above.	Same as above.		
Sage-grouse	Same as above.	Same as above.		
Sharp-tailed grouse	Same as above.	Same as above.		
Crows	Open statewide.	Oct 1, 2008 - Jan 31, 2009 Oct 1, 2009 - Jan 31, 2010	No daily bag or possession limits	
Migratory game birds (ducks, coots, megansers, common snipe, mourning dove)	Open statewide.	These seasons shall coincide with the regular firearms seasons for these species.	3 of any kind	6 of any kind
Cottontail rabbits	Open statewide.	March 1, 2008 - Aug 31, 2008 March 1, 2009 - Aug 31, 2009	2 of any kind	4 of any kind
Snowshoe hares	Open statewide.	Apr 1, 2008 - Aug 31, 2008 Apr 1, 2009 - Aug 31, 2009		

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

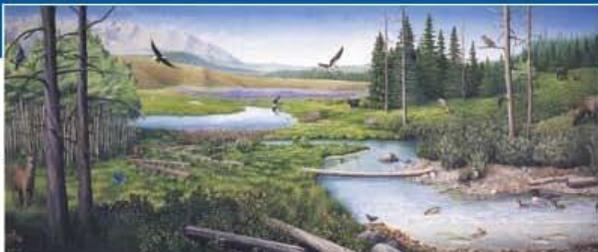
Areas closed to hunting of upland game birds are also closed to hunting of American crows. See pages 11 and 12.

Seasons, Bag and Possession Limits - Statewide		
Species	Season	Daily Bag and Possession Limits
American Crow	2008: Oct 1, 2008 - Jan 31, 2009	NO LIMITS
	2009: Oct 1, 2009 - Jan 31, 2010	

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Misc. BIRDS

Submitted by:

Jim Hayden
Regional Wildlife Manager

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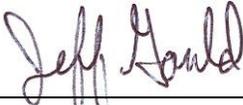
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Approved by: IDAHO DEPARTMENT OF FISH AND GAME



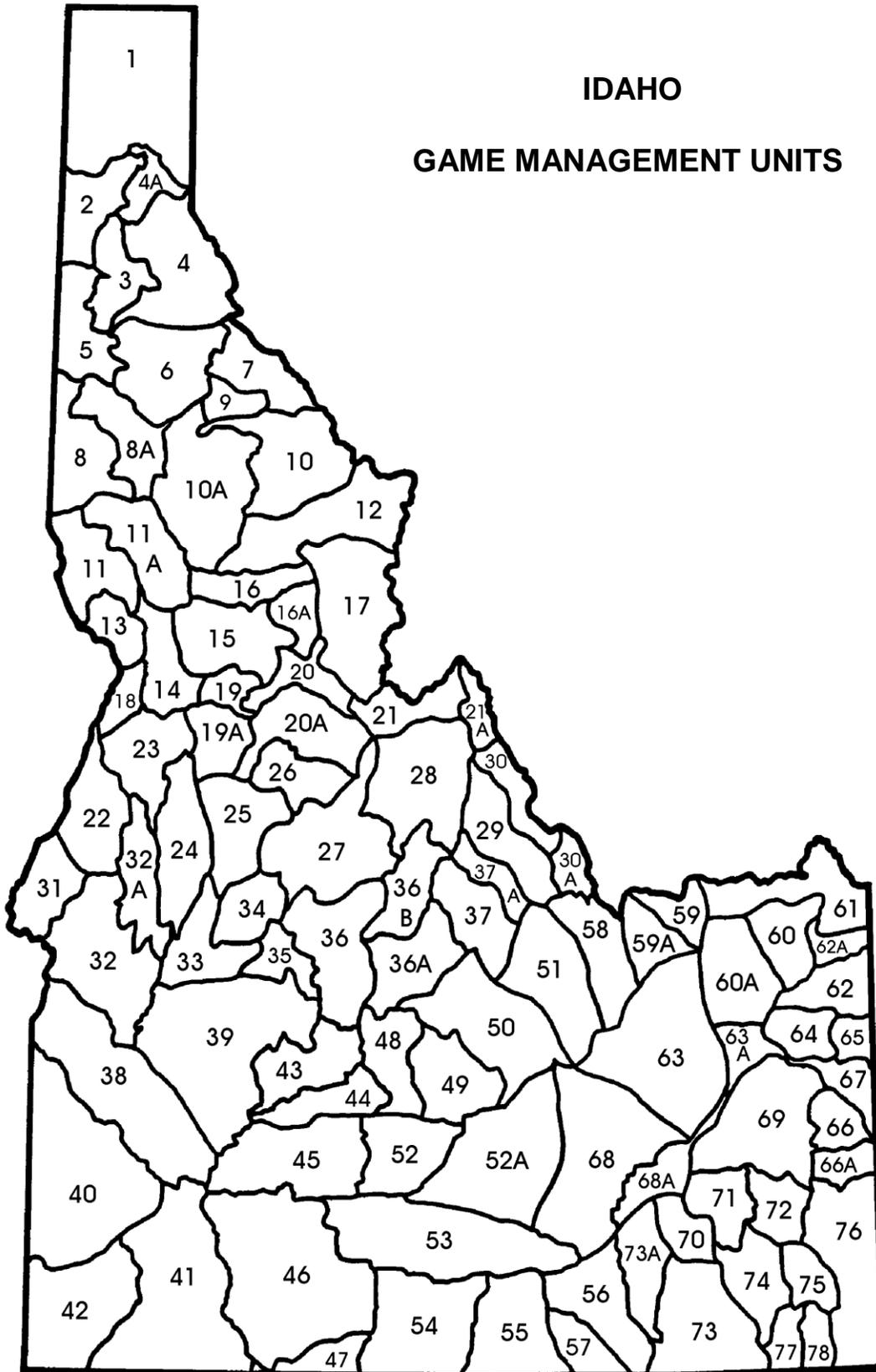
Brad Compton, Asst. Chief
Bureau of Wildlife



Jeff Gould, 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.

