

# Nevada Department of Wildlife

## 2007

### Upland and Migratory Game Bird, Rabbit and Furbearing Mammals



### Harvest Data and Population Status Reports

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*This program receives Federal Aid in Wildlife Restoration Grant W-48-R-38,  
Sub Grant I, Survey & Inventory – Project 2: Jobs 1,2,3,4,5,6,7; Project 3: Jobs 1 and 2*

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Washington, D.C. 20240

**ON THE COVER:** The wood duck has made a great comeback and its number in Nevada is increasing. Read more in the Special Features section. Painting by Craig Mortimore



## DIRECTOR'S MESSAGE

### Ken Mayer, Director Nevada Department of Wildlife

Dear Fellow Sportsmen:

I am pleased to provide the Department's annual status report "book" for upland game, migratory birds and furbearers. In these first few months as your new Director, I have discovered many superb products culminating from the labors of the dedicated people here at NDOW. This document is one example. This book and the similar one describing the status of Nevada's big game species have been prepared and made available to the public since the late 1950's. Using modern tools to aid in data analysis and report preparation, our biologists have worked hard in recent years to fill the book with facts and insight to communicate to Nevada's sportsmen. In my travels across the state, I have come to recognize a comparatively sophisticated level of ecological and wildlife management knowledge among the people who enjoy our state's wildlife resources. I am convinced that publications such as this one contribute to that degree of understanding and I hope that the following pages will benefit all readers.

In last year's Director's Message, we placed a great deal of positive emphasis on the upcoming (2006-07) waterfowl season. We noted how wetland conditions in Nevada combined with continental duck production foretold of a great hunting season in Nevada. In fact that came to pass, as the estimated harvest was significantly higher than the previous year and nearly double the average during this decade's recent drought years. Unfortunately, this was a short-lived bonanza since precipitation this year within northern Nevada's watersheds has been dismal. Most of Nevada's marshes continue to contract under the drought. However, waterfowl breeding pair counts in the arctic and subarctic are very positive this summer, thus waterfowlers that set up in Nevada's remaining marshes should be able to profit from good densities. Pre-season scouting is certainly in order.

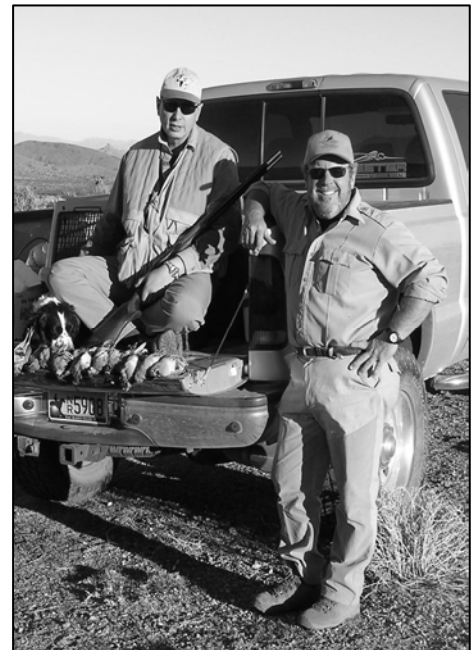
These climatic conditions are similarly impacting our resident small game species. Poor winter snowfall and the almost total absence of late spring and summer precipitation has impeded plant growth and insect production. As guzzlers dry down and natural waters diminish, these factors have combined to influence poor brood production, as witnessed by our field personnel. This will not be one of Nevada's better years for upland bird hunting; however, as we well know, these species have a terrific ability to flourish when conditions improve.

On the positive side, we issued nearly 1,000 turkey tags for the spring hunt, Nevada's highest total ever. This is impressive given that the state was devoid of this wonderful game bird twenty years ago. Nevada's overall success rate ranks well above the national average, thus Nevada hunters have an enjoyable experience pursuing this wiley game bird.

And finally, we are also concerned about the short and long-term impacts that this year's wildfires will have upon our wildlife resources. Nearly a million acres of habitat have been lost to wildfire this summer alone. Combined with amount of land blackened in the early part of this decade, we are seeing a devastating impact upon sagebrush obligate species like sage-grouse. We have been diligent in our efforts to recover this lost habitat, but the benefits of our labors won't be realized until many years from now.

Regardless of the poor forecast for the coming season, it is my intent to lace-up my boots, sharpen my aim, and keep the truck gassed up ready for a hunting opportunity. Nevada has much to offer even if the chukar densities are low and some mallards may pass us by. I'll be glad to see you out there with me.

*Ken Mayer*



Director Mayer (right) enjoys a Gambel's quail hunt in Clark County with Professor Brian Reilly of Tshwane University of South Africa.

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# 2007-2008 HUNTING SEASONS & BAG LIMIT REGULATIONS

## CR 07-07

### For 2007-2008

*Dates are for 2007, unless otherwise noted.*

Adoption on June 23, 2007

## UPLAND GAME

(Units referenced are Game Management Units)

<b>YOUTH CHUKAR AND HUNGARIAN PARTRIDGE HUNT</b>	
OPEN AREAS:	Statewide
SPECIES ALLOWED:	Chukar and Hungarian partridge.
SEASON DATES:	September 29 - 30
LIMITS:	Daily bag limit 6. Possession limit 12.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate. Open to hunters 15 years of age or younger only. Youth must be accompanied by an adult who is at least 18 years old.

<b>YOUTH CALIFORNIA, GAMBEL'S AND SCALED QUAIL HUNT</b>	
OPEN AREAS:	Statewide
SPECIES ALLOWED:	California, Gambel's and scaled quail
SEASON DATES:	September 29 - 30
LIMITS:	Daily bag limit 10. Possession Limit 20.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate. Open to hunters 15 years of age or younger only. Youth must be accompanied by an adult who is at least 18 years old.

<b>RABBIT YOUTH HUNT</b>	
OPEN AREAS:	Statewide
SPECIES ALLOWED:	Cottontail, pygmy and white-jackrabbits
SEASON DATES:	September 29 - 30
LIMITS:	Daily bag limit 10. Possession Limit 20.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate. Open to hunters 15 years of age or younger only. Youth must be accompanied by an adult who is at least 18 years old.

<b>SAGE-GROUSE</b>	
OPEN AREAS:	Churchill County, except Units 041, 181, 182 and 183 Humboldt County, except Units 032, 033, 035, 042, 044, 046 and 151 Lander County portion of Unit 184 Washoe County, except Units 021, 022, 033, 194 and 196
SEASON DATES:	October 5 – October 14
LIMITS:	Daily bag limit 2. Possession limit 4.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Closed to Nonresidents.
OPEN AREAS:	Elko County, except Units 079, 091 and 106 Eureka County Lander County, except Units 151, 183 and 184 <sup>(1)</sup> Nye County except Units 132, 133, 181, 251 and 252 White Pine County, except Unit 132
SEASON DATES:	September 25 – October 9
LIMITS:	Daily bag limit 2. Possession limit 4.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Closed to Nonresidents. <sup>(1)</sup> Unit 184 of Churchill and Lander Counties is only open from October 5th through October 14 <sup>th</sup> .
OPEN AREAS:	Unit 033 of Washoe and Humboldt Counties excluding the Little Sheldon and other areas as posted. The Sheldon National Wildlife Refuge.
<b>Hunt Period #1</b>	
SEASON DATES:	September 15 - 16
<b>Hunt Period #2</b>	
SEASON DATES:	September 22 - 23
LIMITS:	Daily bag limit 3. Possession limit 6.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Open to Nonresidents. Limited to 75 reservations per hunt period, awarded through random draw. Unless his privilege is limited or revoked pursuant to law, any resident or nonresident is eligible to apply once for the Sheldon Special Sage Grouse Hunt in a year. Up to 4 applicants may apply as a party. Parties may be comprised of a combination of residents and nonresidents. Applications for reservations for the Sheldon Special Sage Grouse Hunt must be received by the Nevada Department of Wildlife, Game Bureau, 1100 Valley Road, Reno NV 89512 by 5:00 p.m. on the first Friday in August. Successful applicants will be notified by mail.

<b>BLUE AND RUFFED GROUSE</b>	
OPEN AREAS:	Statewide
SEASON DATES:	September 1 - November 30
LIMITS:	Daily bag limit 3. Possession limit 6.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate.  Persons harvesting ruffed grouse in Humboldt County are requested to report harvest to the Department of Wildlife - Winnemucca sub-office: 815 East Fourth St., Winnemucca, NV 89445; phone- (775) 623-6565

<b>SNOWCOCK</b>	
OPEN AREAS:	Elko - Management Units 101,102, and 103, and that portion of White Pine County in Unit 103.
SEASON DATES:	September 1 - November 30
LIMITS:	Daily bag limit 2. Possession limit 2.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate.  Prior to hunting snowcock persons must obtain a snowcock hunting free-use permit from any Nevada Department of Wildlife office. Permits may be faxed to persons planning to hunt snowcock once appropriate information has been collected from the hunter.

<b>CHUKAR AND HUNGARIAN PARTRIDGE</b>	
OPEN AREAS:	Statewide
SEASON DATES:	October 13 – January 31, 2008
LIMITS:	Daily bag limit 6. Possession limit 18.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate.

<b>CALIFORNIA, GAMBEL'S, SCALED AND MOUNTAIN QUAIL</b>	
OPEN AREAS:	Statewide
SEASON DATES:	October 13 – January 31, 2008
LIMITS:	Daily bag limit 10. Possession limit 20.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate except for mountain quail where limits may not include more than 2 daily and 4 in possession. Persons who harvest mountain quail are requested to report their harvest to the Nevada Department of Wildlife, 1100 Valley Road, Reno, NV 89512, phone (775) 688-1500.

<b>PHEASANT</b>	
OPEN AREAS:	Statewide
SEASON DATES:	November 1 – November 30.
LIMITS:	Daily bag limit 2. Possession limit 4.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Cocks only

<b>COTTONTAIL, PYGMY AND WHITE-TAILED RABBITS</b>	
OPEN AREAS:	Statewide
SEASON DATES:	October 13 – February 29, 2008
LIMITS:	Daily bag limit 10. Possession limit 20.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	Limit singly or in the aggregate.

## WILD TURKEY

<b>WILD TURKEY 2007 FALL – LIMITED ENTRY – HUNTS 0131 &amp; 0132</b>			
PHYSICAL CHARACTERISTICS:	Either Sex Wild Turkey		
LIMIT:	1 by tag only		
SHOOTING HOURS:	Sunrise to sunset daily		
SPECIAL REGULATIONS:	Application Deadline 5:00 p.m. on September 7. Release date on September 21.		
MASON VALLEY WILDLIFE MANAGEMENT AREA OF LYON COUNTY			
	Season	Tag Quota	
		Resident Hunt 0131	Nonresident Hunt 0132
Hunt Periods:	Oct. 5 – Oct. 14	10	1
	Oct. 15 – Oct. 24	10	1
	Oct. 25 – Nov. 3	10	1
MOAPA VALLEY OF CLARK COUNTY			
Hunt Periods:	Nov. 1 – Nov. 10	10	1
	Nov. 11 – Nov. 20	10	1

<b>WILD TURKEY 2007 FALL - GENERAL – HUNTS 0135 &amp; 0137</b>		
PHYSICAL CHARACTERISTICS:	Either Sex Wild Turkey	
LIMIT:	1 by tag only.	
SHOOTING HOURS:	Sunrise to sunset daily.	
SPECIAL REGULATIONS:	Application Deadline 5:00 p.m. on September 7. Release date on September 21.	
OPEN AREAS:	Season	Quota
Lyon County, except the Mason Valley Wildlife Management Area	Oct. 5 – Oct. 25	Open*

\* Applicants are advised that a significant portion of the turkey population occurs on private lands.

Turkey continued on next page

<b>WILD TURKEY 2008 SPRING – LIMITED ENTRY – HUNTS 0131 &amp; 0132</b>			
PHYSICAL CHARACTERISTICS:	Bearded Wild Turkey		
LIMIT:	1 by tag only		
SHOOTING HOURS:	One half hour before sunrise to 1:00 p.m. daily		
SPECIAL REGULATIONS:	Application Deadline 5:00 p.m. on February 19, 2008. Release date on March 7, 2008		
<b>ELKO COUNTY – Unit 102*</b>			
	Seasons	Tag Quota	
		Resident Hunt 0131	Nonresident Hunt 0132
Hunt Period:	March 25 – May 5, 2008	25	2
<b>ELKO &amp; WHITE PINE COUNTIES – Unit 103*</b>			
Hunt Period:	March 25 – May 5, 2008	15	1
<b>LANDER COUNTY – Unit 151 and 152*</b>			
Hunt Period:	March 25 – May 5, 2008	3	-
<b>LOVELOCK VALLEY OF PERSHING COUNTY</b>			
Hunt Periods	March 25 – April 13, 2008	5	-
	April 14 – May 3, 2008	5	-
<b>LINCOLN COUNTY**</b>			
Hunt Periods:	April 4 – April 13, 2008	40	4
	April 14 – April 23, 2008	40	4
	April 24 – May 3, 2008	40	4
<b>MASON VALLEY WILDLIFE MANAGEMENT AREA OF LYON COUNTY</b>			
Hunt Periods:	March 25 – April 3, 2008	15	1
	April 4 – April 13, 2008	15	1
	April 14 – April 23, 2008	15	1
	April 24 – May 3, 2008	15	1
*Applicants are advised that a significant portion of the turkey population occurs on private lands.			
** Applicants are advised that a portion of the turkey population occurs on private lands.			

Turkey continued on next page

Wild Turkey (continued)

<b>WILD TURKEY 2008 SPRING – LIMITED ENTRY – HUNTS 0131 &amp; 0132</b>			
PHYSICAL CHARACTERISTICS:	Bearded Wild Turkey		
LIMIT:	1 by tag only		
SHOOTING HOURS:	One half hour before sunrise to 1:00 p.m. daily		
SPECIAL REGULATIONS:	Application Deadline 5:00 p.m. on February 19, 2008. Release date on March 7, 2008		
<b>MOAPA VALLEY OF CLARK COUNTY*</b>			
	Season	Tag Quota	
		Resident Hunt 0131	Nonresident Hunt 0132
Hunt Periods:	March 25 – April 3, 2008	5	1
	April 4 – April 13, 2008	5	1
	April 14 – April 23, 2008	5	1
<b>WHITE PINE COUNTY UNIT 114*</b>			
Hunt Period:	March 25 – May 5, 2008	3	-
<b>WHITE PINE COUNTY UNIT 115</b>			
Hunt Period:	March 25 – May 5, 2008	4	-
*Applicants are advised that a significant portion of the turkey population occurs on private lands.			

<b>WILD TURKEY 2008 GENERAL SPRING HUNTS - 0135 &amp; 0137</b>		
PHYSICAL CHARACTERISTICS:	Bearded Wild Turkey	
LIMIT:	1 by tag only.	
SHOOTING HOURS:	One half hour before sunrise to 1:00 p.m. daily	
SPECIAL REGULATIONS:	Application Deadline 5:00 p.m. on February 19, 2008. Release date on March 7, 2008	
OPEN AREAS:	Season Dates	Quota
Lyon County*, except the Mason Valley Wildlife Management Area	March 25 – May 5, 2008	Open*
Churchill County*	March 25 – May 5, 2008	Open*
* Applicants are advised that a significant portion of the turkey population occurs on private lands.		

<b>JUNIOR WILD TURKEY 2008 GENERAL SPRING HUNTS – 0138 &amp; 0139</b>		
PHYSICAL CHARACTERISTICS:	Bearded Wild Turkey	
LIMIT:	1 by tag only.	
SHOOTING HOURS:	One half hour before sunrise to 1:00 p.m. daily	
SPECIAL REGULATIONS:	Youth must be 12 prior to the opening of the hunt season indicated and not attain their 17 <sup>th</sup> birthday until after the last day of the hunt season indicated, pursuant to NAC 502.063. Application Deadline 5:00 p.m. on February 19, 2008. Release date on March 7, 2008. Applications for these tags will only be accepted during this period.	
OPEN AREAS:	Season Dates	Quota
Lincoln County**	March 25 – April 3, 2008	Open**
** Applicants are advised that a portion of the turkey population occurs on private lands.		

<b>2007 – 2008 APPLICATION PROCEDURES FOR RESIDENT AND NONRESIDENT HUNTS:</b>
<p>Unless his privilege is limited or revoked pursuant to law, an eligible person may apply once for a type of hunt for Wild Turkey during a draw period.</p> <p>Only one person may apply on an application.</p> <p>Applications must be mailed to the address specified on the application through a postal service or submitted online through the Internet at <a href="http://www.ndow.org">www.ndow.org</a>. Applications will be accepted until 5:00 p.m. on the date specified in the regulation. Hand delivered applications will not be accepted.</p> <p>Except for the Junior Wild Turkey Hunts, any remaining tags will be available on a first come first serve basis through the Internet at <a href="http://www.ndow.org">www.ndow.org</a>, by mail or over the counter during business hours, M – F, 8 a.m. to 5 p.m. at Wildlife Administrative Services, 185 N. Maine St, Fallon, Nevada 89407 until the close of the season.</p> <p>Only one Wild Turkey tag can be awarded to an individual within a calendar year.</p>

Turkey continued on next page

<b>WILD TURKEY 2008 SPRING HUNTS - 0135 &amp; 0137 PARADISE VALLEY OF HUMBOLDT COUNTY</b>		
PHYSICAL CHARACTERISTICS:	Bearded Wild Turkey	
LIMIT:	1 by tag only.	
SHOOTING HOURS:	One half hour before sunrise to 1:00 p.m. daily.	
SEASON DATES:	March 25 – May 5, 2008	
QUOTAS:	Resident Hunt 0135	Nonresident Hunt 0137
	Open	Open
<p><b>SPECIAL REGULATIONS:</b></p> <p><b>PARADISE VALLEY OF HUMBOLDT COUNTY APPLICATION REGULATIONS:</b></p> <p>A Paradise Valley of Humboldt County Application Form is required. Hunters can obtain these forms from the participating landowners. A landowner must sign the application form. The form must be submitted through the mail or over the counter during business hours, M-F, 8 a.m. to 5 p.m. at Wildlife Administrative Services, PO Box 1345, Fallon, NV 89407-1345. Tags will be available until the close of the season. Internet applications for the Paradise Valley of Humboldt County hunt will not be available.</p> <p>Unless his privilege is limited or revoked pursuant to law, an eligible person may apply once for a type of hunt for Wild Turkey during a draw period.</p> <p>Only one person may apply on an application.</p> <p>Only one Wild Turkey tag per calendar year.</p>		

## FURBEARING ANIMALS

<b>BEAVER, MINK AND MUSKRAT</b>	
<b>OPEN AREAS:</b>	Statewide
<b>SEASON DATES:</b>	October 1 – March 31, 2008

<b>OTTER</b>	
<b>OPEN AREAS:</b>	Elko, Eureka, Humboldt, Lander and Pershing Counties
<b>SEASON DATES:</b>	October 1 – March 31, 2008
<b>SPECIAL REGULATIONS:</b>	<p>Carson City, Churchill, Clark, Douglas, Esmeralda, Lincoln, Lyon, Mineral, Nye, Storey, Washoe and White Pine counties are closed to otter trapping.</p> <p>If an otter is accidentally trapped or killed in those counties which are closed, the person trapping or killing it shall report the trapping or killing within 48 hours to a representative of the Department of Wildlife. The animal must be disposed of in accordance with the instructions of the representative.</p>

<b>KIT AND RED FOX</b>	
<b>OPEN AREAS:</b>	Statewide
<b>SEASON DATES:</b>	October 1 – February 29, 2008

<b>BOBCAT AND GRAY FOX</b>	
<b>OPEN AREAS:</b>	Statewide
<b>SEASON DATES:</b>	November 1 - February 29, 2008
<b>SPECIAL REGULATIONS:</b>	<b>Closed to Nonresidents.</b>

## MIGRATORY UPLAND GAME BIRDS

<b>AMERICAN CROW</b>	
<b>OPEN AREAS:</b>	Statewide
<b>FALL SEASON:</b>	September 1 – November 17
<b>SPRING SEASON:</b>	March 1 – April 15, 2008
<b>LIMITS:</b>	Daily bag limit 10
<b>SHOOTING HOURS:</b>	Sunrise to sunset daily.
<b>SPECIAL REGULATIONS:</b>	Shotguns only.
<b>FOOTNOTE:</b> <i>Season closed on ravens</i>	All crows must be retrieved and removed from the field.

**Note:** pursuant to 50 CFR 20.133 the maximum number of days a state can allow crow hunting is 124 in a calendar year.

<b>MOURNING &amp; WHITE-WINGED DOVE</b>	
<b>OPEN AREAS:</b>	Statewide
<b>SEASON:</b>	September 1 – 30
<b>LIMITS:</b>	Daily bag limit 10. Possession limit 20.
<b>SHOOTING HOURS:</b>	One half hour before sunrise to sunset daily.
<b>SPECIAL REGULATIONS:</b>	White-wing dove season is closed in all counties except Clark and Nye counties.  Limits for mourning dove and white-wing dove are singly or in aggregate in Clark and Nye Counties.

**Note:** Federal Framework for dove hunting seasons is published in July each year. Identified dates and season length are subject to change. Should the federal framework require alteration of Commission-approved seasons, then an amendment to CR07-07 shall be submitted for Commission action at their August meeting.

## FALCONRY SEASONS FOR UPLAND GAME BIRDS & RABBITS

OPEN AREAS:	<b>Statewide*</b>
SEASON DATES:	September 1 – February 29, 2008
LIMITS:	Daily bag limit 2. Possession limit 2.
SHOOTING HOURS:	Sunrise to sunset daily.
SPECIAL REGULATIONS:	<p>All resident upland game birds except turkey and sharp-tailed grouse.</p> <p>Cottontail, pygmy and White-tailed jackrabbits</p> <p>The taking of sage grouse by falconry is only allowed in those units where there is an established open season.</p> <p>Limits singly or in the aggregate</p>

*\*except per NAC 504.340*

# **W.M.A. REGULATIONS**

## **PUBLIC HUNTING LIMITED ON WILDLIFE MANAGEMENT AREAS AND DESIGNATED STATE LANDS**

### **SCRIPPS WILDLIFE MANAGEMENT AREA and WASHOE LAKE STATE PARK**

1. During the waterfowl season, hunting is permitted only on Saturdays, Sundays, Wednesdays, and the following legal State holidays: Nevada Day, Veterans Day, Thanksgiving, Family Day (day after Thanksgiving), Christmas, New Years Day and Martin Luther King Day.

### **MASON VALLEY WILDLIFE MANAGEMENT AREA**

1. During the waterfowl season, hunting is permitted only on Saturdays, Sundays, Wednesdays and the following legal State holidays: Nevada Day, Veterans Day, Thanksgiving, Family Day (day after Thanksgiving), Christmas, New Years Day, and Martin Luther King Day. Hunters with a valid turkey tag for the Mason Valley Wildlife Management Area may hunt each day of the established turkey season. Before or after the waterfowl season, hunting is allowed every day for wildlife species upon which there is an established open season.
2. AREAS CLOSED TO ALL HUNTING ADJACENT TO THE FT. CHURCHILL WATERFOWL SANCTUARY: Those portions of SE corner of Section 36, T.15N, R.25E; W ½ of Section 31, T.15N, R.26E, and N ½ of Section 1, T.14N, R.25E, M.D. & M. are closed to hunting as posted.
3. The following area within the Mason Valley Wildlife Management Area is designated as a CONTROLLED GOOSE HUNTING ZONE and will be closed to all persons five (5) days prior to the last Saturday in November through the end of the controlled goose hunting season, except for those persons having a valid Mason Valley controlled goose hunting reservation, described in #5 below. Prior to and after the described closure dates, all legal hunting is allowed within the CONTROLLED GOOSE HUNTING ZONE. The CONTROLLED GOOSE HUNTING ZONE includes those portions of the Mason Valley Wildlife Management Area within Sections 1, 2 and 12, T.14N, R.25E; Section 35, T.15N, R.25E; Sections 6 and 7, T.14N, R.26E, and Section 31, T.15N, R.26E, M.D.B. & M. as posted. The assigned blinds for the controlled goose hunt and Family Hunt are located in farm fields MV-8, 10 and 11, and B-11, 12, 13, 14 and 15. A lottery is held the morning of the hunt to determine blind assignments for those parties awarded a hunt reservation as described in #5 below. If blinds are still available after the first lottery for parties with reservations, a special lottery will be held for standby hunters present at 5:30 a.m.
4. Two Saturdays in mid-December will be set aside as Family Hunt Days, when all of the blinds in the CONTROLLED GOOSE HUNTING ZONE will be available for Family Hunt Day applicants as described in #5 below. The Wednesdays prior to the Family Hunt Days will be open for all other applicants as described in #5 below. If a standby lottery is invoked on Family Hunt Days, preference will be given to those parties containing at least one hunter 15 years of age or younger on that hunt day.
5. Hunt permit applications for the CONTROLLED GOOSE HUNTING ZONE within the Mason Valley Wildlife Management Area are available through the Headquarters Office in Reno, the Western Region Office in Fallon or on the NDOW website at ndow.org. Unless their privilege is limited or revoked pursuant to law, any resident or nonresident is eligible to apply once for a hunt reservation. A person whose name appears on more than one application will be rejected from the

drawing. Hunt applications will be accepted for groups no larger than four individuals, and all members of a group must hunt from the same assigned location. Any application submitted for Family Hunt Days must include at least one licensed hunter who will be 15 years old or younger on the day of the hunt. Applications for the Special Mason Valley Wildlife Management Area Goose Hunt shall be received at the Headquarters Office in Reno (through a postal service only) no later than the second Wednesday in October. A public drawing will be held at the Headquarters Office in Reno at 10:00 a.m. on the last Wednesday in October. Successful applicants will receive a reservation confirmation by return mail.

### **FT. CHURCHILL COOPERATIVE WILDLIFE MANAGEMENT AREA**

1. From October 1, through the Friday preceding the second Saturday of February, the area shall be closed to trespass.

### **OVERTON WILDLIFE MANAGEMENT AREA**

1. During the waterfowl season, hunting is permitted on the Moapa Valley portion of the area only on the opening day of the duck season, alternate days thereafter throughout the season, opening day of the goose season, and the closing two days of the duck and goose seasons. Before or after the waterfowl season, hunting is allowed every day for wildlife species upon which there is an established open season.
2. During the waterfowl season on the Moapa Valley portion of the area, hunters must hunt from assigned hunt locations (blinds) constructed by the Department of Wildlife. A maximum of up to four hunters are permitted at each hunt location. Assigned hunt locations are marked by numbered stakes. Hunters shall hunt only within their assigned hunt location and moving to vacant locations is prohibited. The only exception involves reasonable accommodation of the disabled.
3. During the opening day and the first weekend of the dove season the maximum capacity for the Moapa Valley portion of the area is 60 hunters by reservation. Vacancies will be filled by stand-by hunters on a first-come, first-served basis.
4. The hunting of upland game species is prohibited during the waterfowl season, except for persons possessing a valid tag for Hunt# 0131 or 0132 to hunt turkeys in the Moapa Valley of Clark County. Such persons wishing to pursue turkeys on the Overton WMA are prohibited from pursuing any other upland game during such time that the fall turkey season is concurrent with the waterfowl season.
5. On Overton Hunt days, only persons authorized to hunt waterfowl may use vessels on the portion of the area inundated by Lake Mead.

### **KEY PITTMAN WILDLIFE MANAGEMENT AREA**

1. During the waterfowl season, hunting is permitted on the opening weekend of the duck season, odd-numbered days throughout the season, opening day of the goose season, and the closing two days of the waterfowl season.
2. The maximum hunter capacity during the opening day of duck season and the opening day of goose season will be 55 at any time.

3. All hunters will check-in and out at the main entrance and will park in designated parking areas only. No vehicles are allowed on the area during the hunting season.
4. The area is closed to fishing during the waterfowl season.

### **OVERTON-KEY PITTMAN HUNTER RESERVATION SYSTEM**

1. To guarantee an opportunity to hunt, reservations must be made for the following specified days of each hunt listed: on the Moapa Valley portion of the Overton Wildlife Management Area - opening day and the first weekend of the dove season and the entire duck and goose seasons; on the Key Pittman Wildlife Management Area - the opening day of the duck and goose seasons. A reservation may be made for one hunt day only. On Overton Wildlife Management Area, a person or his representative applying for reservations for group hunting on either hunt area will be limited to up to four hunters per party.
2. A drawing will be held for reservations starting at 8:00 a.m. on the Monday prior to the opening of the above listed seasons. If the Monday prior to season opening is a state holiday, the drawing will be held on Tuesday. Reservations remaining after the drawing are available on a "first come, first served" basis, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday, except for holidays, through the close of these seasons.
3. Reservations must be made in person (or by a representative) at the Las Vegas Office, the Henderson office or at the Overton or Key Pittman Wildlife Management Areas. The reservations must be in the hunter's possession and be shown to the check station attendant to constitute a valid reservation for the day specified. Reservations will not be accepted by mail or phone. At the Key Pittman Wildlife Management Area, reservations for hunting will be required only on the opening day of duck season and the opening day of goose season. On all other waterfowl hunt days, hunters must obtain a reservation card at the Frenchy Lake or Nesbitt check stations prior to hunting. This card must be filled out and returned to the check station upon completion of the hunt. Failure to turn in a completed card at the Key Pittman Wildlife Management Area or failure to check out at the Overton Wildlife Management Area may result in a citation being issued, and the loss of hunting privileges for the remainder of the season.
4. At the Overton Wildlife Management Area, during the waterfowl season an assigned hunt location program will be in effect. An individual may reserve no more than one assigned hunt location on the Moapa Valley portion of the area for no more than four individuals to hunt as a party and this reservation must be utilized prior to reserving another hunt day. Hunters will make a reservation for one of four types of hunt locations (field, pond, bulrush plot, or lake) and the specific hunt location will be determined by a drawing at the check station prior to each day's hunt.
5. A hunter with a reservation will be considered as a "no-show" if he does not present himself at the check station by one full hour before shooting time, except that at the Overton Wildlife Management Area, a hunter with a reservation will be considered a "no-show" if he does not present himself at the checking station one and one-half hours before shooting time during the waterfowl season.
6. Standby hunters must register at the check station upon arrival.
7. All reservations, permits and assigned hunting locations are nontransferable.

## BOBCAT PELT SEALING DATES

Pelt sealing will be done only during normal business hours (8:00 a.m. - 5:00 p.m.) on the dates specified, unless otherwise noted. Sealing locations will be at Department offices unless otherwise noted.

<b>BOBCAT PELT SEALING DATES FOR THE 2006-2007 SEASON</b>			
<b>City</b>	<b>Date</b>	<b>Time</b>	<b>Location</b>
Elko	Fourth Tuesday in January	8 a.m. – 5 p.m.	NDOW Elko Office
	Second Tuesday in February		
	Third Wednesday in February		
	March 10 <sup>th</sup>		
Ely	Fourth Friday in January	8 a.m. – 2 p.m.	NDOW Ely Office
	Friday associated with NTA fur sale <i>if a sale is scheduled.</i>	1 p.m. – 5 p.m.	Nevada Trappers Association Ely Fur Sale
	Saturday associated with NTA fur sale <i>if a sale is scheduled.</i>	7 a.m. – 12 p.m.	
	Third Friday in February	8 a.m. – 2 p.m.	NDOW Ely Office
	March 9 <sup>th</sup>		
Eureka	Fourth Thursday in January	12 p.m. – 5 p.m.	NDOW Eureka Office
	Third Thursday in February		
	March 8 <sup>th</sup>		
Fallon	Last Monday in January	10 a.m. – 3 p.m.	NDOW Fallon Office
	Third Thursday in February	7 a.m. – 12 p.m.	Nevada Trappers Association Fallon Fur Sale
	Annually scheduled to coincide with the Friday, Saturday and Sunday mornings of the NTA Sale		
	March 10 <sup>th</sup>	10 a.m. – 3 p.m.	NDOW Fallon Office
Las Vegas	Second Tuesday in January	1 p.m. – 5 p.m.	NDOW Las Vegas Office
	Third Tuesday in February	8 a.m. – 5 p.m.	
	March 10 <sup>th</sup>	1 p.m. – 5 p.m.	
Panaca	Third Thursday in February	8 a.m. – 5 p.m.	Nevada State Parks - NDOW Office, Panaca
	March 10 <sup>th</sup>	1 p.m. – 5 p.m.	
Tonopah	Third Thursday in February	8 a.m. – 5 p.m.	NDOW Tonopah Office
	March 10 <sup>th</sup>	1 p.m. – 5 p.m.	
Winnemucca	Third Friday in February	8 a.m. – 1 p.m.	NDOW Winnemucca Office

**SEASONS, BAG LIMITS, AND SPECIAL REGULATIONS FOR  
MIGRATORY WATERFOWL**

**CR 07-08  
2007-2008**

**Adopted on August 11, 2007**

Note regarding Zone designations:

NORTHERN ZONE: Carson City, Churchill, Douglas, Elko, Esmeralda, Eureka, Humboldt, Lander, Lyon, Nye, Pershing, Storey, Washoe & White Pine Counties

SOUTHERN ZONE: Clark and Lincoln Counties

<b>SPECIAL YOUTH WATERFOWL HUNT</b>	
OPEN AREAS:	NORTHERN ZONE
2007-08 SEASON:	Saturday September 29
OPEN AREAS:	SOUTHERN ZONE
2007-08 SEASON:	Saturday February 2 and 3, 2008
LIMITS:	Daily bag limit is the same as that for the general season for ducks, mergansers, geese, coots and moorhens. Limits singly or in the aggregate for Canada and white-fronted geese. Limits singly or in the aggregate for Snow and Ross' geese. Snow and Ross' geese are closed in Ruby Valley within Elko and White Pine Counties.
SHOOTING HOURS:	½ hour before sunrise to sunset
SPECIAL REGULATIONS:	Open to hunters 15 years of age or younger. Youth must be accompanied by an adult who is at least 18 years old. Adults are not allowed to hunt during this season. Open to Nonresidents.

<b>DUCKS AND MERGANSERS</b>	
OPEN AREAS:	NORTHERN ZONE
2007-08 SEASON:	October 13, 2007 – January 26, 2008
OPEN AREAS:	SOUTHERN ZONE
2007-08 SEASON:	October 13, 2007 – January 25, 2008
LIMITS (daily/possession)	
General duck limits:	7 / 14
Pintail	1 / 2
Canvasback	2 / 4
Mallard (Total/ female)	Included within the general duck limit, but not to include more than 2 hen mallards daily or 4 in possession.
Redhead	2 / 4
Scaup	3 / 6
Shooting hours:	½ before sunrise to sunset
Special Regulations:	Open to Nonresidents

<b>COOTS AND COMMON MOORHENS (Common Gallinules)</b>	
OPEN AREAS:	NORTHERN ZONE
2007-08 SEASON:	October 13, 2007 – January 26, 2008
OPEN AREAS:	SOUTHERN ZONE
2007-08 SEASON:	October 13, 2007 – January 25, 2008
Limits (daily/possession)	25 / 25
Shooting hours:	½ before sunrise to sunset
Special Regulations:	Open to Nonresidents

<b>COMMON SNIPE</b>	
OPEN AREAS:	NORTHERN ZONE
2007-08 SEASON:	October 13, 2007 – January 26, 2008
OPEN AREAS:	SOUTHERN ZONE
2007-08 SEASON:	October 13, 2007 – January 25, 2008
Limits (daily/possession)	8 / 16
Shooting hours:	½ before sunrise to sunset
Special Regulations:	Open to Nonresidents

<b>CANADA AND WHITE-FRONTED GEESE</b>	
Open Areas:	Statewide
2007-08 Season:	October 20, 2007 – January 27, 2008
Limits (daily/possession)	3 / 6
Shooting hours:	½ before sunrise to sunset
Special Regulations:	Open to Nonresidents

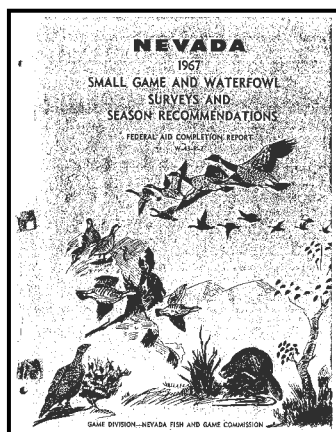
<b>SNOW AND ROSS' GEESE</b>	
Open Areas:	Statewide
2007-08 Season:	October 20, 2007 – January 27, 2008
Limits (daily/possession)	4 / 8
Shooting hours:	½ before sunrise to sunset
Special Regulations:	Open to Nonresidents CLOSED: Ruby Valley within Elko and White Pine Counties

<b>FALCONRY SEASONS FOR MIGRATORY GAME BIRDS</b>	
Open Areas:	Statewide
2007-08 Season:	Concurrent with Commission-adopted duck seasons.
Limits (daily/possession)	3 / 6
Shooting hours:	½ before sunrise to sunset
Special Regulations:	Migratory birds allowed for take include: geese, ducks, mergansers, coots, common moorhens and common snipe. Limits for all permitted migratory birds are singly or in the aggregate. Open to Nonresidents.

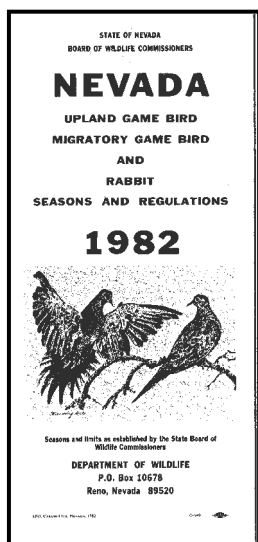
<b>SWAN</b>	
<b>OPEN AREAS:</b>	Churchill, Lyon and Pershing counties
<b>2007-08 Season:</b>	October 20, 2007 - January 6, 2008
<b>LIMITS:</b>	One swan per swan hunt permit Maximum two swan hunt permits per season One swan per day
<b>SHOOTING HOURS:</b>	½ before sunrise to sunset
<b>SPECIAL REGULATIONS:</b>	<p>Persons may apply for one of the 650 swan hunt permits. Applications must be mailed through a postal service to the address listed on the application or submitted online through the Internet at <a href="http://www.ndow.org">www.ndow.org</a>. Permits are to be awarded through an initial drawing.</p> <p>Deadline: Applications must be received by 5:00 p.m. by Friday September 14, 2007. No hand delivered applications for the drawing. Results of the initial drawing will be provided by Friday, October 5<sup>th</sup>, 2007.</p> <p>Any remaining swan hunt permits will be available on a first come, first served basis online or through the mail up to 7 weekdays before the close of the season or over the counter until the close of the season during normal business hours (M-F 8:00 am – 5:00 pm) at the Wildlife Administrative Services Office, 185 North Main Street, Fallon, Nevada Beginning on Monday, October 8, 2007. Applications are available at all Department of Wildlife offices and select license agents. Persons may apply for a second swan permit beginning on Monday, October 8, 2007. Applicants can submit one application per draw period. Applicants that did not apply for the initial drawing period may submit two applications during the first come, first served draw period.</p> <p>Successful swan hunters are required to validate their permit pursuant to NAC 502.380, and then present at least the head and neck of their swan to an NDOW agent at selected sites for species verification within five (5) days of harvest. Mandatory inspection sites and requirements will be provided with the swan hunt permits.</p> <p>If a total harvest of five (5) trumpeter swans is reached, the swan season is closed for the remainder of the season.</p> <p>Persons must possess a valid annual Nevada hunting license and both a current Federal Migratory Game Bird Hunting Stamp and a current Nevada duck Stamp, when required, to hunt swan in Nevada.</p> <p>Open to Nonresidents who have a valid annual Nevada hunting license or a Nonresident Short-Term permit to hunt Upland game &amp; Waterfowl and required waterfowl stamps.</p>

# SPECIAL FEATURES

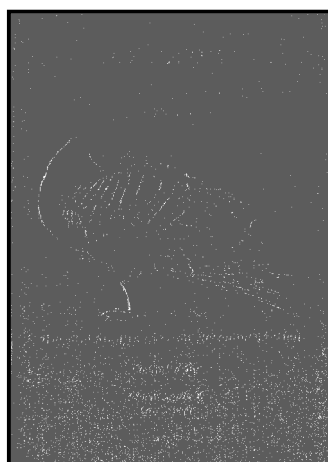
## HISTORICAL REVIEW



**Forty Years Ago (1967)** Just two years after the contemporary record harvest of 175,571 chukar (it remains the 2<sup>nd</sup> highest total on record) the 1966 harvest plummets to 28,963 birds. The number of participants (5,214 hunters) is the lowest single year participation rate on record. Biologists blamed this on a very conservative late opener in late October but offer no details about how this conclusion was derived. Three seasons later the harvest climbs to 160,000 birds. The 1967 dove harvest ends up being the second highest on record at 156,000 birds. The 1967 pheasant harvest is the lowest on record (2,300) at the time following the highest harvest (22,000) the preceding year. Biologists remark that production was abysmal, but more likely was the fact that pheasants were not planted before the 1967 season.



**Twenty-five Years Ago (1982)** Most species' adult breeding populations have been diminished due to poor environmental conditions during the previous years, but beneficial summer and spring precipitation set the stage for good cover and forage. Biologists become concerned that heavy rainfall in May and June may have hindered downy chick survival since brood survey data comes in short of expectations for chukar, sage grouse and California quail in Northern Nevada. After a record harvest of 219,000 chukar in 1980, the 1981 total drops to 84,500. It will drop further to 55,500 in 1982. Because of the increased precipitation, wetlands improve and the 1982 harvest picks up. Canada goose numbers are improving and Nevada hunters begin to take advantage. In 1981, Nevada offered its first band-tailed pigeon hunt. A total of 64 free hunt permits are provided, but only 28 permittees actually hunt in the Western Nevada hunt area. Six hunters kill a total of 18 pigeons. The total effort amounted to 39 days afield.

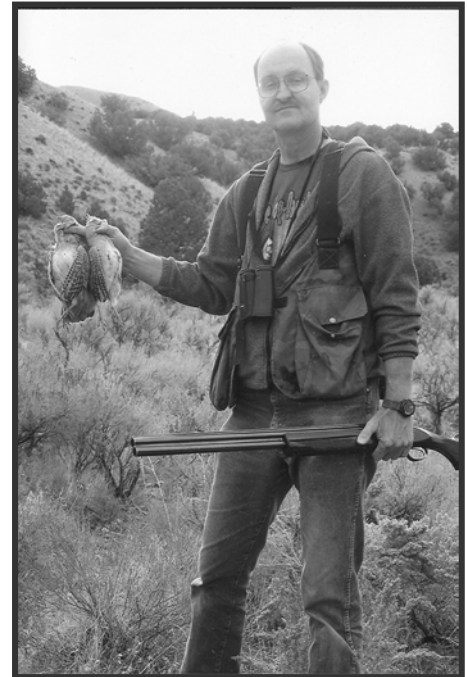


**Ten Years Ago (1997)** **Duck** hunters have a decent season in 1996 after marsh conditions improve in the wake of a prolonged dry period. Continental duck numbers are up thus the pintail limit is liberalized to three daily after nine years at one or two daily. Nevada's mid winter count results in the observation of 128,540 ducks, the highest count on record. Despite this abundance, the Commission approves an outside request to reduce the Overton WMA season to 78 days, 29 short of the Federal Framework maximum allowed days. Muskrats also benefit from improved habitat and driven by increased pelt prices, trappers take 6,717 of the aquatic rodents in 1996 and 9,600 in 1997. Nevada's Gambel's quail are devastated by drought and the 1996 harvest drops to 5,384, the 2<sup>nd</sup> lowest on record.

## **BIOLOGIST PROFILE**

### **LARRY GILBERTSON, Supervising Biologist – Eastern Region – Elko**

It is said that if you stay busy time passes by faster. This is an axiom generally appreciated by those waiting for 5:00 p.m. However, Larry Gilbertson is not a clock-watcher - he's just been so busy that it has been somewhat of a surprise how fast his 28 years with NDOW have passed. Larry was born in Henderson and educated at UNLV. While working toward a Master's degree in biology, Larry took a summer job with the then Nevada Department of Fish & Game. He's been with the agency ever since having worked as a biologist on the Saval Project in Elko County, as the manager of Kirch WMA and then as a long-tenured game biologist stationed in Ely. In 1992 NDOW determined that Larry's talents were needed to lead the hard charging Eastern Region biologists as the supervising biologist for that region. He continues in that role and for the duration of his career he has been an instrumental influence on Department and Commission policy and regulation. Along the way, Larry got to move his fair share of bighorns, elk and antelope as well as ruffed, sharp-tailed and sage grouse. He has enhanced his fair share of wetland and upland habitat and spent more than his fair share of time in helicopters and airplanes looking down upon the creatures he so genuinely admires.



Larry is a dedicated outdoorsman, spending countless days afield pursuing Nevada's big and small game, or backpacking through the state's open expanses. One might say this is pretty typical among NDOW's Game biologists, but Larry nurtures a specific passion for chasing those game birds that are often overlooked by most of Nevada's bird hunters. In the photo above he holds a brace of Hungarian partridge. He's an admitted blue grouse junkie and usually meets with success in many places where this bird exists in the Silver State. Continuing with the unusual, Larry hunts snipe and snowcock, though he says with less success with the former and no success with the latter. "All the more motivation to continue" muses the optimist. Other interests include camping, fishing and skiing.

Larry's knowledge of the environment and the ecological limitations within the state's Great Basin and Mojave Desert biomes give him great pause for concern. Knowing full well that the paucity of riparian sites within these dry environs amplifies their importance where they exist, Larry has tirelessly lobbied for their protection or enhancement through the formal land management agency input process and through coordination with sportsmen's organizations. Having such a long tenure also means that he has seen broad changes in the status of the state's wildlife. It is good for the perspective and lends him credence when he forewarns of the threats that ongoing development activities have upon what remains of the formerly plentiful wildlife stocks.

Larry and his wife Mary (also with a biology degree from UNLV) are proud to have seen their three girls achieve so well in college. Holly graduated from the University of Notre Dame and is a post-graduate at Regis University. Lisa completed her degree at Cornell University and now works for the Nature Conservancy. Lindsay is currently attending Notre Dame. Larry has had several visits to South Bend, Indiana to see his girls and it was inevitable that this member of the Knights of Columbus became a Fighting Irish football fan. Now if he could just parlay his devotion in exchange for a little divine intervention or luck of the Irish to help him finally bag that snowcock.

## SPORTSMAN PROFILE

### JIM BILLINGSLEY, Winnemucca

It is necessary to clear up a couple things about Jim Billingsley: (1) Jim is retired, and (2) Jim is not retired. What this actually means is he has retired from a long career as a school teacher and coach at Albert Lowry High School in Winnemucca. What this also actually means is that Jim is not necessarily retired in the classic sense. A local product, Jim graduated from Lowry HS in 1973 and went on to Boise State University on a wrestling scholarship. He subsequently earned a Master's degree with the United States Sports Academy. This background served him as a long-time teacher and wrestling coach at Lowry HS. This interest continues in his "retirement" as the head coach for the Buckaroo Wrestling Club and the Winnemucca Wolverines traveling baseball team.



The strength and conditioning demands of wrestling have been invaluable in his other paramount interests – enjoying the outdoors. A dedicated sportsman, Jim grew up in a portion of Nevada that has an abundance and diversity of game within close proximity to his home. He has harvested his fair share of chukar and trout, bucks and ducks and like many sportsmen, Jim innately felt a desire to contribute to the conservation movement. He holds life memberships in Nevada Bighorns Unlimited and the North American Hunting Club. He also is a member of the Nevada Chukar Foundation and Rocky Mountain Elk Foundation. Jim is an official scorer for the Nevada Wildlife Record Book and Safari Club International. Jim maintains an active role in Nevada wildlife management as a member of the Humboldt County Wildlife Advisory Board. Jim is not so retired.

Jim has parlayed his knowledge and interest of hunting & fishing into a mentoring program at Lowry High School. He developed the Northern Nevada Outdoors (NNO) magazine – a periodical prepared and published by students that includes articles on outdoor recreation and wildlife management issues in Nevada. Through this program, Jim has instilled an outdoor interest in many students who might otherwise have probably gone through their lives with only a cursory understanding of the environment. He remains as the group's instructor and editor. Jim also owns and operates Jim Dandy Productions, an outdoor film production company which keeps him busy documenting North American hunting experiences. And finally, Jim also has a full time job as the Audio/Visual Director for *America's Car Collection* - a world class auto museum under construction in Winnemucca. Jim is not so retired.

Jim's ambition to inspire outdoor interests among local youth was recently heightened through NNO with the creation of the Cody Louk-Northern Nevada Outdoors Dream Keeper Foundation, which provides youth having a life threatening disease or disability the opportunity to enjoy an outdoor experience. It is named in honor of one of Jim's original students in NNO who tragically lost his life in a car accident this year.

Teaching is a family affair for the Billingsleys. Jim's wife Jeri, a Paradise Valley girl, is a teacher at French Ford Middle School in Winnemucca and their daughter Jamie will soon graduate from the University of Nevada with a teaching degree. It is not yet known if their 8<sup>th</sup> grader Jace, seen with Jim in the photo, will also go on to teach, but it's a sure bet he'll be a sportsman. His not-so-retired dad will make sure of it.

## SPECIES PROFILE

### WOOD DUCK



2007 Nevada Duck Stamp by Ken Michaelsen

subject of countless artists' renderings, most recently as the subject of the 2007 Nevada duck stamp (see inset).

The drake Wood Duck (*Aix sponsa*) is resplendent in extravagant plumage containing virtually every hue. He possesses a regal crest trailing his head and nape that shimmers with iridescence and contains contrasting, stark white lines that seem to point to its ruby eyes. As with most ducks, the females are more drab, a general adaptation to help hens on the nest to avoid detection. But the hen wood duck also has an abbreviated crest and generally speaking is the "prettiest" of the female ducks, if such a human term can be applied. It is little wonder that these medium sized dabblers have been the

subject of countless artists' renderings, most recently as the subject of the 2007 Nevada duck stamp (see inset). But the wood duck's fate had been somewhat less beautiful in the past. The species was in serious decline in the early part of the 20<sup>th</sup> century due to over-hunting in the days before sport regulations. Some biologists were concerned that the species bordered on extinction. The Migratory Bird Treaty Act imposed a nationwide ban on the hunting of wood ducks in 1918. By 1941, the species had recovered to the point that hunters could once again hunt the birds under carefully-crafted season and bag limitations. However, many states continued to prohibit wood duck hunting until the late 1950's when evidence of the species' recovery was highly convincing. Modern regulatory restrictions have been imposed to keep hunting mortality low in an attempt to rebuild the breeding population. This approach met with considerable success, particularly in Mississippi and Atlantic Flyways where wood duck adaptive harvest management (AHM) through a two wood duck daily limit continues to be imposed in many states.

Contemporary harvest data indicate that wood ducks amount to roughly 10% or more of the annual US duck harvest. Woodies have been the second most common bird (mallards being first) within bags of Atlantic and Mississippi flyway hunters for most of the past three decades. Nevada had bag limit restrictions for years during a time when wood ducks were somewhat of a rarity in our state (see appendix page A-16). Generally speaking, wood ducks are less common in the Pacific Flyway and all indicators suggest that the population is spreading in distribution and increasing in number. Today, wood duck limits are part of the general duck limit (7 daily) in all Pacific Flyway states. Woodies are not well-represented within the Nevada harvest based upon estimates derived from the United States Fish & Wildlife Services (FWS) Parts Collection Survey and Harvest Information Program (HIP). Over the long-term, wood ducks comprise approximately 0.6% of Nevada's harvest, almost all of it in Lahontan Valley.

As is the case with many creatures, habitat degradation and loss, particularly habitat important to reproduction, is a key factor affecting the fate of a species. Wood ducks are cavity nesters and they demonstrate philopatry, which means they generally return to the same breeding grounds each spring. As the human population expanded in the United States, swamps were drained to create urban landscapes or farmland. Thus trees were depleted, particularly those within permanent or seasonal wetlands. But man recognized this and developed a relatively simple

solution – to produce artificial nest cavities. Perhaps 300,000 wood duck nest boxes have been installed and managers suggest that these structures help to produce an estimated 100,000 ducklings annually in North America.

There has been considerable research on the value of nest boxes based upon their placement and density. In Western Nevada, nest boxes have been erected in many wetland habitats, but most notably within the Walker and Carson River systems. University of Nevada PhD candidate Chris Nicolai has been conducting a wood duck population and nesting ecology study in Lahontan Valley since 2003. With the support of Nevada Waterfowl Association, the University, Ducks Unlimited, FWS, the Boy Scouts of America, NDOW's Heritage Fund, and numerous private landowners and volunteers Nicolai and others have placed approximately 300 nesting boxes in the valley. There are an additional number of undocumented boxes that had been previously installed in the years prior to the study. His data have shown that nest success among occupied structures is quite high at 80%. He has also banded around 1,600 adult and juvenile woodies, 1,000 of which were banded this year since the close of the 2006-07 hunting season. Subsequent recaptures infer that survival rates are comparably high. Only 30 of the 600 (5%) birds banded prior to 2007 have been recovered by hunters; half in Lahontan Valley, 25% in California's Central Valley and 25% in the Snake River Valley of Idaho.

Nicolai also has included radio telemetry in his research. He and his crew surgically implanted 42 small transmitters into the backs of 42 wood ducks thus far. Twelve of these birds subsequently emitted mortality signals and upon investigation of each recovered device, it was determined that most of the birds had succumbed to predation, primarily by raccoons. A total of 70% of the instrumented birds departed the study area by May 15<sup>th</sup>, suggesting that nest selection may have taken place in another state, possibly southern Idaho. Some radioed birds have returned very recently. This and initial band recovery data help pose a preliminary hypothesis that Lahontan Valley plays an important role for a population that may span a linear range from the Snake River Basin to the Central Valley. Forty more transmitters will be tucked into the backs of captured wood ducks following the close of the upcoming hunting season.



A hen wood duck departs the capture site trailing the antenna of an implanted radio transmitter.

Nicolai's investigations and analysis will be important in determining wood duck population dynamics and will have some ecological application in Nevada and elsewhere. It will be very unlikely that woodies will be the second most abundant duck during our hunting season, but it is good to know that these colorful flyers are increasing in the Silver State.

# WEATHER AND HABITAT

## CLIMATE REPORT

Below are paragraphs for each part of the state describing how moisture, snow, and temperature affect both vegetation and upland game populations. The majority of data are provided by the Natural Resource Conservation Service's National Water and Climate Center. Table 1 summarizes snow pack and water-year precipitation from SNOTEL sites throughout Nevada and the surrounding water basins. **According to the National Oceanic Atmospheric Administration and the National Climatic Data Center, the period from September 2006 through August 2007 was the second driest period since records were established in 1895.**

### Western and Northwestern Nevada

It has been said that Nevada's long-term precipitation averages are built on extremes and the 2006-07 water year was certainly no exception to this adage. While no records were set, the northwestern portion of the state witnessed very few significant snowfall events and subsequent stream and spring flow forecast values were similar to those observed during the drought years of the early 1990's. As of May 1, 2007, snow pack values for three major western Nevada watersheds, the Truckee, Carson and Walker River basins was 34%, 18% and 40% of average respectively. This compares to snow pack values upwards of 160% for these three watersheds during the same time frame in 2006. In the Northern Great Basin, which includes the northwestern portion of the state, precipitation receipts were only 20% of average compared to 146% of average on May 1, 2006. Data available from the Natural Resource Conservation Service SNOTEL summaries show that the Northern Great Basin including the areas of Disaster Peak and the Sheldon National Wildlife Refuge were at 62% and 71% of average annual precipitation received as of September 1, 2007.

General range conditions benefited from above average precipitation received during the previous winters of 2004-05 and 2005-06. Shrubs that serve as important nesting cover and forage were showing signs of improvement. Grass and forb production, important to all upland game species during the spring and early summer months, was abundant at these times in both previous years; however, this trend has now been completely reversed. Upland game species found water less available during the summer months and food sources dried rather quickly. This, in turn, likely resulted in birds attempting to simply maintain body condition to survive, rather than expending energy nesting and trying to raise a brood.

### Central Nevada

According to data published by the Western Regional Climate Center (WRCC) central Nevada has suffered below average precipitation receipts most months since late spring of 2006. While a short period of favorable conditions occurred in May and April during the spring of 2006, below average precipitation throughout the remainder of the spring and through the summer negatively impacted range conditions over much of central Nevada through the fall and early winter.

The winter of 2006-07 saw a continuation of very dry conditions. For example, the Reese River watershed received just 70% of average annual precipitation as of May 1, 2007. Although the lack of significant snow accumulations should have allowed good over-winter survival of upland game species, the resultant impacts to range conditions overall had a negative influence on most

species. Due to continuing drought conditions in much of central Nevada through the spring and summer of 2007, habitat conditions have continued to worsen. The failure of federal land management agencies to institute drought closures or reductions in livestock stocking rates in central Nevada allotments has also compounded the problem. The production of most upland species has been severely impacted in 2007, and the outlook is for reduced availability of upland game for sportsmen this coming season.

### **Northeastern Nevada**

Although the previous two winters experienced above-average snow pack and precipitation levels throughout northeastern Nevada, the 2006-07 winter fell short of average. Snow pack levels and moisture content was well below the long-term average for the Ruby Mountains and adjacent mountain ranges. An extreme example is provided in the Nevada State Basin Outlook Report for Clover Valley and the Franklin River which received 0% of normal precipitation through May 1, 2007. The precipitation total for eastern Nevada including White Pine County was better, but only 55% of average. There were at least two weeks of sub-zero weather in mid January throughout the Eastern Region. Fortunately this sub-zero weather was combined with below average snow depths, lessening direct mortality on upland game populations such as chukar and Hungarian partridge. As of September 1, 2007, SNOTEL data show that eastern and northeastern Nevada are roughly between 70% and 80% of average in terms of precipitation received.

Range conditions in the spring and early summer were below average at best due to the lack of spring and early summer rains. Leader growth associated with shrub species such as bitterbrush, sagebrush, serviceberry and snowberry was virtually non-existent and forb production was lacking in 2007. This has led to a poor to fair production year for most species of upland game.

Fires that swept across the landscape in western and northern Elko County have drastically reduced the available habitat for most upland game species. In particular, sage-grouse populations have been reduced because of the loss of habitat. The Murphy Complex and West Basin fires have negatively affected multiple species of upland game including mountain quail, sage-grouse, ruffed grouse, Columbian sharp-tailed grouse, pygmy rabbit, chukar, Hungarian partridge, blue grouse and white-tailed jackrabbit.

### **Southeastern Nevada**

According to BLM precipitation data with 26 stations reporting, Lincoln County received an average of 87% of the previous ten-year average of precipitation between January and December 2006. According to WRCC/DRI, during 2006, Pioche and Alamo received 100% of average precipitation while Caliente received 69% of average precipitation compared to the short-term average since 2000. Since January 2007, approximately 64% of average precipitation has fallen in Pioche, while Caliente is over 118% of normal, and Alamo is lacking with just over 30% of average. October of 2006 was relatively wet, however, since that time Lincoln County has been mostly dry up until late July and early August of 2007 when summertime monsoonal moisture relieved an otherwise parched landscape. Temperatures were colder than normal in December and January, which could have lead to higher mortality rates for upland game species.

Range conditions are moderate throughout most areas of Lincoln County. Warm and dry conditions prevailed through February and March. As usual, precipitation is varied across the landscape of Lincoln County with some areas near or above average while other areas are well below average. Spring rains can be a double edged sword in the southern ranges of Lincoln County. If those areas receive heavy spring precipitation, cheatgrass and red brome can build up heavy fuel loads which can allow wildfires to burn massive acreages during the hot summer months. However, without spring rains, those same areas may have dry water developments and little forage available for wildlife. Late summer moisture in this area of the state helped with restocking water developments, but did little in terms of providing forage for upland game populations.

### **Southern Nevada (Mojave Desert)**

In southern Nevada, dramatic reversals of environmental conditions have occurred within the last seven years. With few exceptions, wildlife populations endured severe drought for three consecutive years beginning in 2000 (2000-02). The National Weather Service Forecast Office (NWSFO) in Las Vegas, centrally located in Clark County, reported 2002 the sixth driest year on record.

Beginning in February 2003, environmental conditions greatly improved. According to NWSFO in Las Vegas, 2003 ranked the ninth wettest year on record after receiving 6.86 inches of precipitation. In 2004, moisture receipts exceeded those of the previous year such that 2004 ranked the fourth wettest year on record. The NWSFO reported 7.76 inches of precipitation in 2004 (173% of normal). Although rainfall amounts in Las Vegas trailed off late in 2005, moisture receipts earlier in the year, including the fourth wettest February on record, were sufficient to place 2005 the sixth wettest year on record.

In contrast to the two previous wet winters (2003-04 and 2004-05), the recent winters of 2005-06 and 2006-07 were notably drier. Based on rain gauge data collected by Clark County Regional Flood Control District in cooperation with United States Geologic Survey and NWS, Las Vegas and outlying areas in Clark County experienced drier conditions from November 2005 through March 2007. Thus far in 2007, precipitation receipts have been low and generally distributed in mountain ranges at higher elevations and throughout the Spring Mountains.

In Las Vegas, temperature data collected since 1937 by the National Weather Service indicate each of the last seven years (2000-06) to be among the hottest years on record. The hottest month overall recorded was July 2005, followed by July months in 2003 and 2006. According to NWS, in a period of one week (latter half of July 2005), a total of 17 different temperature records were broken or tied including the second time Las Vegas reached 117 degrees.

Overall, upland game populations in southern Nevada benefited from favorable environmental conditions from early 2003 to nearly the end of 2005. High precipitation receipts promoted germination and growth of nutritious and preferred forage plant species. With few exceptions, production and recruitment rates among upland game populations were above long-term averages.

The pendulum has swung significantly in 2006 and 2007 with extremely dry conditions prevailing up until the later part of July of 2007 when much needed rain was received through August. This precipitation alleviated some problems related to water availability, but did little to

assist with forage availability. Overall, reduced precipitation coupled with increased temperatures since November 2005 has resulted in relative scarcity of highly digestible, nutritious forage plant species. Upland game populations such as Gambel's quail and chukar have been further stressed over this time period due to reduced availability of water at otherwise reliable springs, seeps and water developments.

**TABLE 1.** Water basin climate data from SNOTEL monitoring stations throughout Nevada and the Sierra Nevada Mountains for total precipitation received from October 1, 2006 through September 18, 2006 in inches (Natural Resources Conservation Service). Averages are based on data from 1971 – 2000.

<b>BASIN</b>		<b>Total Precipitation</b>		
Data Site Name	Elev (ft.)	Current	Average	% of Avg
<b>NORTHERN GREAT BASIN</b>				<b>71</b>
Cedar Pass	7100	-M	34.9	*
Dismal Swamp	6500	36.2	48.9	74
Disaster Peak	7000	12.9	20.4	63
Sheldon	5860	6.9	9.1	76
<b>TRUCKEE RIVER</b>				<b>63</b>
<b>LAKE TAHOE</b>				<b>64</b>
Marlette Lake	7880	17.5	33.4	52
Mt Rose Ski Area	8801	30.8	52.8	58
<b>CARSON RIVER</b>				<b>56</b>
<b>WALKER RIVER</b>				<b>56</b>
<b>SALMON FALLS BASIN</b>				<b>91</b>
<b>BRUNEAU BASIN</b>				<b>84</b>
<b>OWYHEE BASIN</b>				<b>92</b>
Jack Creek Upper	7250	23.2	28.4	82
Fawn Creek	7000	25.7	33.4	77
<b>UPPER HUMBOLDT RIVER</b>				<b>77</b>
Corral Canyon	8500	25.3	29.0	78
Dorsey Basin	8100	28.1	31.7	89
Green Mountain	8000	27.4	31.9	86
Lamoille #3	7700	24.4	32.5	75
Draw Creek	7200	16.2	19.2	84
<b>LOWER HUMBOLDT RIVER</b>				<b>68</b>
Big Creek Sum	8695	21.0	27.7	76
Granite Peak	8543	20.3	32.1	63
Buckskin Lower	6915	16.9	26.6	64
Lamance Creek	6000	19.9	28.1	71
<b>CLOVER VALLEY</b>	7900	29.5	34.3	<b>86</b>
<b>EASTERN NEVADA</b>				<b>81</b>
Ward Mountain	9200	16.1	21.8	74
Berry Creek	9100	21.8	26.6	82
Diamond Peak	8033	20.6	24.2	85

# WETLAND HABITAT CONDITION REPORT

## Western Nevada

Western Nevada's (and the state's) major wetlands are the terminal lakes of the Carson and Humboldt River drainages. Mountain ranges within these systems received lower than average snowfall and thus supported a poorer snow pack during the past winter. These circumstances persisted into the spring as rainfall was particularly dismal. As of this writing, the Carson Range from Reno to Topaz Lake has gone eighty days without summer precipitation. As a result, the terminal wetlands in Lahontan Valley and Lovelock Valley are vastly reduced compared to the previous year when above average precipitation brought these marshes to levels in excess of normal capacity.

Presently, the Humboldt Wildlife Management Area (WMA) is at 15% of normal capacity. The Upper Lake is evaporating rapidly and likely will be dry for the opener unless a significant rainfall event occurs. The Toulon Unit is in good condition and provides the habitat for almost all of the waterfowl remaining on the WMA. The Lower Lake is dry, thus with no outflow Jessup is dry this year. It was only last year when water flowing out of Jessup through the Humboldt Slough was reported to have met with water spreading past the Battlegrounds into the Carson Sink. This was a rare occurrence where water flowing from both the Humboldt and Carson drainages actually met.

In Lahontan Valley, at the Stillwater National Wildlife Refuge (NWR) the northern lakes are all dry while most of the other units are fairly low and receding in the unrelenting heat and dry winds. The NWR experienced some difficulties in water deliveries in the early summer which has contributed to these conditions. Some important forage, particularly sago pondweed, was probably lost. Presently, water is coming in and conditions will improve. It is expected that approximately 5,000 surface acres will be available by mid-October. Pintail bay will probably remain dry throughout the season and Nutgrass will have good surface acreage but will be very shallow. Reports suggest that Lahontan Reservoir will be drawn down to a minimum pool by the end of the irrigation season. The Nevada Waterfowl Association, working with NDOW, obtained a favorable ruling in front of the State Water Engineer recently that calls for a full duty transfer to Lahontan Valley wetlands. Unless there is a protest by the Pyramid Lake Paiute Tribe, this decision could culminate in an additional 5-6,000 acre feet of water to Stillwater and Carson Lake. At Carson Lake (Greenhead) most of the units are dry except for the Big Water. Water deliveries will commence in late August and most of the units should be wet by late October.

Elsewhere in Western Nevada Alkali Lake WMA is dry and will remain so into the winter. Once atmospheric conditions abate, evaporation should decline at the Fernley WMA and the effluent discharge should allow an accumulation of surface acreage. Since it was mostly dry through the summer though, forage will likely be insufficient to hold birds for long. The Scripps WMA and the rest of Washoe Lake continues to hold water and the current level is estimated to be 80% of normal. Migrating waterfowl will find an abundance of sago at Scripps. Along the shoreline, bulrush and cattails are spreading and will provide decent storm cover for waterfowl and hiding cover for hunters. At the Mason Valley WMA, the Walker River system also suffered under the same conditions as the Carson and Humboldt systems. Decree water was severed in late June, thus water deliveries have ceased from that point to the present. Approximately 60-75% of the

waterfowl ponds will be available for the upcoming waterfowl season. Water quality has suffered without a fresh supply and it is expected that some water from the Fort Churchill cooling pond will offer some reprieve along with water supplied through the area's wells. An electricity budget was established to run the Joggles Well. The area's fields are in very good shape and should provide good forage for migrating geese and mallards.

### **Eastern Nevada**

The same high pressure system that sat over the Great Basin for most of the spring and summer also impacted the White River drainage. At Kirch WMA, natural flows were poor in the face of a prolonged absence of precipitation. However, some skillful planning resulted in water storage in the area's major reservoirs. Accordingly, much of the wetlands dried, but the staff used the opportunity to plant nutgrass and spray hardstem. The rain clouds eventually reappeared and created the usual gully washers. These plus the release of the stored water has allowed most of Kirch to wet up and conditions are reported to be nearly optimal at this time.

At Key Pittman WMA, Nesbitt Lake is low but will be in good condition for waterfowl hunters. Frenchy Lake is very low and likely will not offer good hunting conditions in the early part of the season. This water usually fills later in the season and will be a better spot to hunt come mid to late November. Franklin Lake WMA in Elko County is nearly dry and probably will be by October. The adjacent Ruby Lake NWR has some wetlands fed by the spring sources, but its total surface acreage is below normal.

### **Continental<sup>1</sup>**

Overall, continental habitat conditions for breeding waterfowl in 2007 were similar or slightly improved compared to conditions in 2006. The total pond estimate (Prairie Canada and U.S. combined) was  $7.0 \pm 0.3$  million ponds. This was 15% greater than last year's estimate of  $6.1 \pm 0.2$  million ponds and 44% higher than the long-term average of  $4.9 \pm 0.03$  million ponds. For the third year in a row, habitat conditions were good or excellent in the northern grasslands and parklands of southern Saskatchewan and southern Manitoba. Three years of plentiful precipitation has generally maintained or improved the quality of the wetland and upland vegetation in this region. The 2007 estimate of ponds in Prairie Canada was  $5.0 \pm 0.3$  million. This was a 13% increase from last year's estimate ( $4.4 \pm 0.2$  million), 49% above the 1955-2006 average ( $3.4 \pm 0.03$  million), and the fourth highest number of Canadian ponds on record (Table 12; Figure 2). However, some areas of the parklands of southern Saskatchewan experienced severe flooding resulting from record amounts of spring runoff and some nests may have flooded. The southern grasslands of Saskatchewan and Manitoba remained dry, and were in fair to poor condition. Conditions in southern Alberta, which have generally been either fair or poor for much of the last decade, improved for the second consecutive year, largely due to melting of large snow packs and wet soil conditions.

Habitat conditions in U.S. prairies were highly variable, ranging from good to poor. The 2007 pond estimate for the north-central U.S. of  $2.0 \pm 0.1$  million was 19% greater than last year's estimate ( $1.6 \pm 0.09$  million) and 29% above the long-term average ( $1.5 \pm 0.02$  million). The drought conditions seen last year in the Eastern Dakotas were improved by abundant fall and

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<sup>1</sup> Wilkins, et.al. 2007. Trends in Duck Breeding Populations, 1955-2007. U.S. Fish & Wildlife Service, Laurel, Maryland, USA.

winter precipitation, especially in eastern South Dakota. Exceptionally heavy rain events during May helped to improve conditions in eastern Montana and parts of the Dakotas. Unfortunately, the area affected by this rain did not include the high quality duck habitat of the Missouri Coteau region in the Eastern Dakotas. Although this precipitation occurred after many ducks had moved through the survey area, it probably benefited re-nesting birds and improved vegetation quality in wetlands and uplands, thereby aiding brood survival.

Habitat in the bush regions of the traditional survey area (Alaska, Northern Manitoba, Northern Saskatchewan, Western Ontario) was mostly classified as good due to a normal spring ice breakup and generally good water conditions in the beaver ponds, river deltas, and small lakes and ponds that are characteristic of this region. Spring phenology and water levels varied slightly in local areas. For example, spring was slightly late in the Old Crow Flats, slightly early in the Yukon Delta, and slightly drier in the Yukon Flats compared to other regions in Alaska, but habitat conditions were still generally good across the bush region. The exceptions were the somewhat drier conditions in northwest Saskatchewan and central Alberta and the potential for some flooding in northern Saskatchewan and Manitoba.

The boreal forests of the eastern survey area were generally in good or excellent condition this spring, except for a few drier patches in Northern Quebec that were in fair condition. Spring arrived early in the James and Hudson Bay Lowlands for the 3<sup>rd</sup> consecutive year, and habitat conditions were classified as excellent. In eastern and southern Ontario, the winter snow pack was below normal; however, a good frost seal, spring runoff, and spring storms left this region in good condition at the time of the survey. Storms following the survey period produced local flooding of some nesting habitat. Wetland basins in Quebec were adequately charged and spring temperatures were near normal. There was some potential for flooding of nests in Maine and the Maritimes due to heavy rain during mid-May, but this was not as problematic as it had been during the past few years. Newfoundland and Labrador experienced a late spring compared to the last 5 years, with the northernmost part of the survey region in Labrador still frozen in late May. However, this region was still considered in good condition.

# STATEWIDE SUMMARY OF MIGRATORY GAME BIRDS

## WATERFOWL

### Harvest

In accordance with the Pacific Flyway's Regulations Frameworks for 2006-07 late hunting Seasons established by the United States Fish & Wildlife Service (FWS) the Nevada Board of Wildlife Commissioners (Commission) adopted the full number of days (107) allowed for waterfowl hunting. Called the 'liberal' regulations package, this season length reflects an assessment of waterfowl abundance and expected productivity in North America. This was the 10<sup>th</sup> consecutive year that a 107 day season was selected for Nevada. Last year, the duck hunting season began on October 14<sup>th</sup> throughout Nevada except for the Moapa Valley portion of the Overton Wildlife Management Area. Here the Commission adopted a later opener (November 4<sup>th</sup>) in accordance with public input. The hunting season for ducks ended on Friday January 26<sup>th</sup>, 2007 in the Southern Zone (Lincoln & Clark Counties) and on Saturday January 27<sup>th</sup> in the remainder of the state. These closures accommodated days set aside for youth waterfowl hunting, which was a single day in the Northern Zone (September 20, 2006) and 2 days in the Southern Zone (Feb 3<sup>rd</sup> & 4<sup>th</sup>, 2007). There were no partial seasons imposed for specific species.

For a second year, the Department of Wildlife utilized its recently-modified post-season questionnaire to collect hunter and harvest statistics from license buyers in Nevada. The questionnaire again was sent to 10% of all license buyers rather than to all expressed waterfowl hunters (Nevada Duck Stamp purchasers). Accordingly, data had to be extrapolated in the same manner that the Department has been doing for nearly five decades. This process has been useful in portraying annual and long-term changes in participation and success rates.

The FWS also conducts a harvest and hunter survey originally through a *Waterfowl Harvest Survey* from 1952 to the 1990's. This strategy was replaced in 1992 with the *Harvest Information Program* (HIP) in 1992, a mandatory reporting process that requires hunters to take a telephone or online poll in order to participate in the next year's migratory bird season. HIP became fully implemented in 1999. Table 1 exhibits the harvest estimates produced through the two methods. Both processes are expressions of median values and each is accompanied with a range of figures that is broad or narrow depending upon the statistical power of the collected data. It is interesting to note that both processes produced statistically similar results for most years. In 2006, Nevada's median harvest estimate considerably exceeded the FWS estimate.

**Table 1. Comparisons between HIP and Nevada Questionnaire estimates.**

Year	Estimated Duck Hunters			Estimated Total Duck Harvest		
	HIP <sup>(1)</sup>	NV Questionnaire	% Diff.	HIP	NV Questionnaire	% Diff.
2001	3,800	3,692	+3%	35,201	31,203	+13%
2002	3,900	4,028	-3%	46,000	33,113	+39%
2003	4,200	4,298	-2%	50,200	44,022	+14%
2004	3,500	3,572	-2%	37,100	38,305	-3%
2005	3,600	3,960 <sup>(2)</sup>	-9%	49,600	56,428	-12%
<b>2006</b>	<b>4,000</b>	<b>4,525<sup>(2)</sup></b>	<b>-12%</b>	<b>55,402</b>	<b>69,893</b>	<b>-21%</b>

(1) Expressed as "Active Adult Hunters" within the HIP survey.

(2) Figures in 2005 & 2006 are individual hunters – see explanation in next section.

## Ducks & Mergansers

The general limit was seven ducks per day with single bird daily bags for pintail and canvasback, two-bird limits for hen mallards and redhead and a three bird daily bag limit for scaup. Possession limits were double the daily bag. Table 2 describes harvest and effort statistics compiled through Nevada's post-season questionnaire.

**Table 2. STATEWIDE DUCK & MERGANSER HARVEST  
From Post-season Questionnaire**

	STATEWIDE TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Ducks &amp; Mergs.</b>	56,428	<b>69,893</b>	66,306	23.9%	5.4%
<b>No. of Hunters*</b>	5,005	<b>5,909</b>	5,808	18.1%	1.7%
<b>No. of Days</b>	26,921	<b>31,413</b>	34,055	16.7%	-7.8%
<b>Birds / Hunter</b>	11.27	<b>11.83</b>	10.83	4.9%	9.2%
<b>Birds/Hunter Day</b>	2.10	<b>2.22</b>	1.84	6.2%	20.9%
<b>Individual Hunters*</b>	<b>3,960</b>	<b>4,525</b>	--	<b>14.3%</b>	--

\* see explanation below.

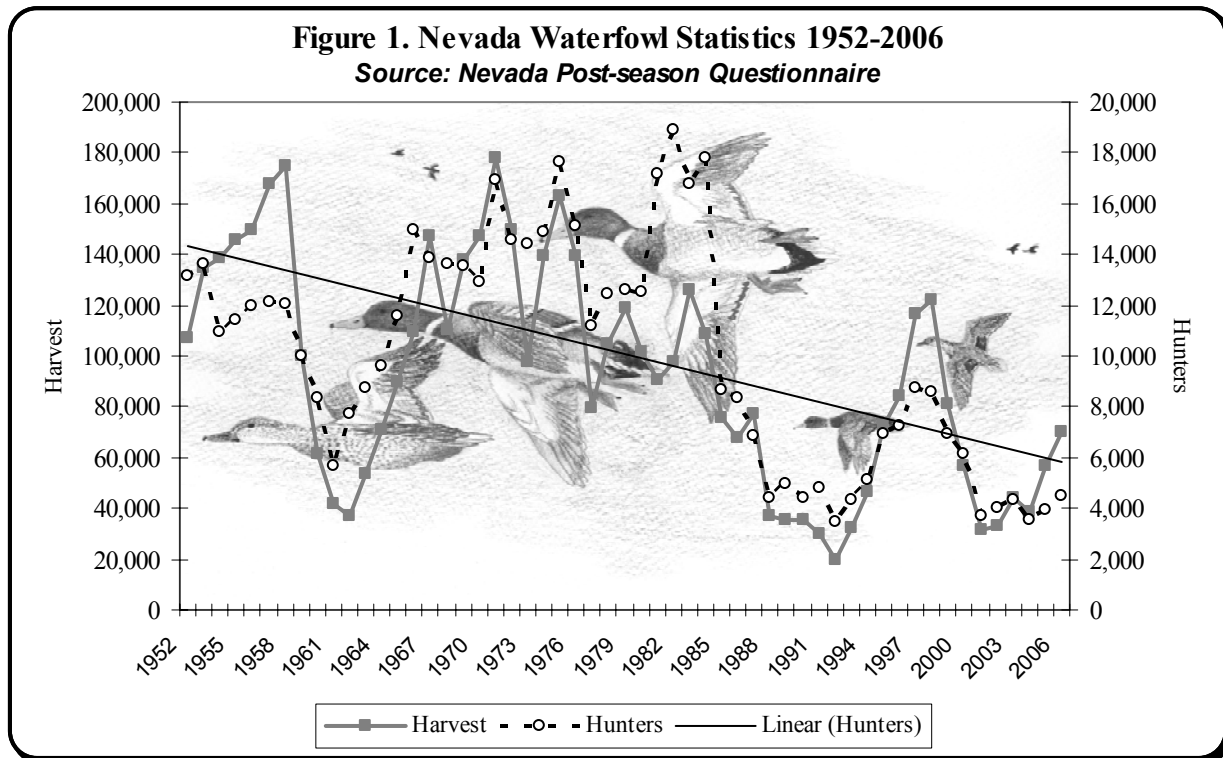
The revised questionnaire allows managers to analyze individual hunters – the estimated number of license holders that hunted ducks, as well as cumulative hunters – the total of all the estimated number of persons that hunted in each of the state's 17 counties. Since past analysis incorporated the cumulative value, it is used here for comparison to short and long-term averages. It is obvious that many duck hunters actively hunt in more than one county. Individual total calculations are only estimated for the past two seasons.

Last year's pre-season hunting forecast was optimistic given the reported improvement in continental duck numbers as well as the restoration of Nevada wetlands that had been dry during the prolonged dry spell. As the season unfolded, hunters discovered an abundance of migratory ducks, particularly mallards. This species accounted for 40% of the harvest, and mid-winter survey data indicate that their presence in early January was above average (see appendices).

Marsh conditions had improved significantly following two full years of above-average precipitation for the Humboldt and Carson River systems. The terminal wetlands of these two drainages host the vast majority of birds and hunters. Raw questionnaire return data indicate that 87% of the entire duck harvest occurred in the Western Region, primarily in the Lahontan Valley of Churchill County. Moreover, 26% of all ducks were harvested at Carson Lake on the south end of the valley. Wetlands in Eastern Nevada likewise improved and Franklin Lake WMA actually provided considerable surface acreage in Ruby Valley. Although Eastern Nevada's (including Lincoln County) wetlands do not provide a significant proportion of the overall state harvest (8.8%), these wetlands are important to migratory waterfowl.

Accordingly, both harvest and hunter participation increased for the 2006-07 hunting season. Success was good as well with hunters averaging 11.83 ducks per hunter and 2.22 ducks per hunter day, both figures are the highest over the past decade. Carson Lake hunters averaged over 30 ducks for the season. These circumstances should be the impetus for a return to hunter numbers seen in previous decades. However, regulation complexity, particularly with regard to pintail restrictions, could be dissuading hunters from pursuing waterfowl.

Figure 1 describes the trends for duck harvest and hunter numbers in Nevada. This data was derived from Nevada's post-season questionnaire. Clearly, the duck hunter trend has diminished with the passing years, although a short-term increasing trend in participation is noted for the past two years, again likely due to the circumstances previously described.



There is a strong correlation between habitat conditions and harvest effort, an obvious conclusion since ducks must have wetlands and bird densities in the marshes are what sustain hunter participation. Last year's report discussed trends and made note of trend iterations, the peaks and valleys depicted in the graph. The report observes that harvest and participation peaks had been diminishing with each successive iteration. Had wetland conditions continued to be good this past spring and summer and into the fall, the expectation would be that the short term trend would continue to rise. Unfortunately, as noted in the Weather & Habitat section of this report, wetlands have withered under the dearth of precipitation and the relentless heat this summer. Harvest will likely diminish for the 2007-08 season, and so too will hunter participation.

**Avian Influenza** – A nationwide effort to detect the occurrence of a deadly form H<sub>5</sub>N<sub>1</sub> of avian influenza, called Highly Pathogenic Avian Influenza (HPAI). Under the guidelines set forth within the *State of Nevada Highly Pathogenic Avian Influenza Surveillance Plan* (May, 2006) personnel of NDOW, FWS and the U.S. Department of Agriculture's Wildlife Services conducted testing of live and hunter-killed waterfowl and shorebirds in Nevada. A total of 772 samples were obtained, roughly half from live birds captured for banding in Western Nevada and the other half from hunter-harvested birds, again mostly in Western Nevada. Additional samples were collected by the FWS and WS collected more bird samples and a substantial number of environmental samples. Collectively, there were 2,716 samples collected in Nevada and 148,977 samples collected nationwide. The HPAI H<sub>5</sub>N<sub>1</sub> virus was not detected in the United States or Canada. Surveillance activities will occur again this year.

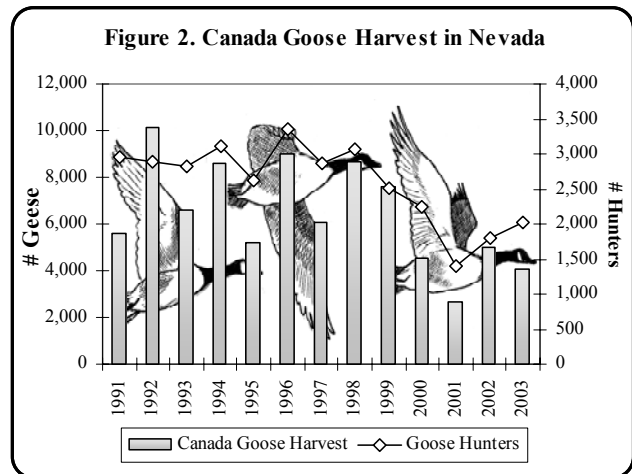
## Geese

Statewide Canada and white-fronted geese limits were three daily, species singly or in the aggregate. White geese (snow and Ross's geese) limits were four daily. Possession limits for geese were double the daily limit. Goose season began on October 21, 2006 with the exception of the Moapa Valley portion of the Overton WMA, which commenced on November 4<sup>th</sup>. All seasons concluded on January 28<sup>th</sup>.

**Table 3. STATEWIDE DARK & WHITE GOOSE HARVEST  
From Post-season Questionnaire**

	STATEWIDE TOTALS:			Percent Change	
	2005	2006	10 Yr. Avg.	Prev. Yr.	vs. Avg.
<b>Dark Geese Harvest</b>	6,036	<b>6,719</b>	5,761	11.3%	16.6%
<b>No. of Hunters</b>	1,884	<b>1,982</b>	2,266	5.2%	-12.5%
<b>Light Geese Harvest</b>	1,141	<b>848</b>	582	-25.7%	45.7%
<b>No. of Hunters</b>	523	<b>449</b>	426	-14.1%	5.4%
<b>TOTAL GEESE:</b>	7,177	<b>7,567</b>	6,343	5.4%	19.3%

With two high exceptions in 1998 & 1999 and one low exception in 2001, the statewide estimated Canada goose harvest has been relatively static for the past ten years (see figure 1). Unlike last year, where the highest proportion of the harvest occurred in Douglas County, 31% of the reported kill occurred in Churchill County. It is speculated that because wetland conditions and duck abundance drew 35% more hunters to the marshes in Lovelock Valley, then many geese were taken incidental to duck hunting. In Douglas County declines in both estimated dark goose harvest and estimated duck and goose hunters were proportionally similar, which could indicate a sampling artifact or it could mean that Douglas County residents headed east to Fallon rather than stay home.



The white goose harvest declined significantly last year, yet the 2006-07 estimated kill still remains above the ten-year average, which had been heavily influenced by estimated high harvest totals in 2004 & 2005. All of the reported harvest transpired in the Western Region. The Pacific Flyway's standard goose surveys found nearly 800,000 white geese in the Skagit-Fraser (WA/BC) and California/elsewhere survey segments. This was the highest total observed. Correspondingly, the mid-winter survey also had one of the highest white goose totals within the history of the survey. In Nevada, the mid-winter survey found fewer white geese this year than last year but the total was average for the past ten years. These data suggest that the Flyway's total white goose population is on the rise (hence liberalized regulations in many flyway states) but visitation in Nevada remains light and sporadic.

## Tundra Swan

A number of regulatory changes were adopted by the commission for the 2006-07 swan season. The tag was changed to a permit and by so doing eliminated the statutory requirement to attach a predator fee to the application. This action also allowed nonresidents to apply for and hunt with a permit without having to buy a full-year license. Additionally, persons could purchase a second permit from the pool of unsubscribed permits remaining after the initial draw. These changes were implemented in an attempt to stimulate greater interest.

The 2006-07 swan season commenced on October 21<sup>st</sup>, concurrent with the goose season, and concluded on January 7<sup>th</sup>, 2007. Again 650 permits were allocated to Nevada. Continuing a flyway commitment to detect trumpeter swan harvest, NDOW required all successful hunters to have their swan and tag validated within five days of the harvest date. Agency personnel inspected swans at specific NDOW offices where they could examine the birds' bills and feather coloration. This scrutiny is necessary to detect occurrence of protected trumpeter swans. In this manner, incidental take can be documented and its impact to the latter species can be assessed. Additionally, tundra swans are considered a primary candidate species for exposure to or infection from the HPAI H5N1 virus. Personnel collected 63 samples from hunter-killed birds.

Participation greatly increased last year due to the regulation changes as well as good habitat conditions and high duck numbers. A total of 605 permits were sold (table 4), far greater than average. In actuality there were 486 participants, similar to the long-term average of participants. One hundred and nineteen of these hunters (24%) purchased a second permit. Nonresidents took advantage of the regulatory changes – they comprised 10% of the individual participants. Swan hunters presented 111 adult and 39 (27% of T) juvenile swans for validation last season. A post-season questionnaire was mailed to all tagholders that did not validate a swan. In late November 2006 a hunter harvested a trumpeter swan. This represents only the second individual of this species detected since 1995 when the formal effort to measure swans was initiated.

**Table 4. Past Ten Years of Nevada Swan Harvest**

<b>Year</b>	<b>Tags / Permits Purchased</b>	<b>Percent Participating</b>	<b>Reported Harvest</b>	<b>Expanded Hunter Days<sup>(2)</sup></b>
1997	381	86%	118	1,282
1998	492	85%	164	1,580
1999	518	84%	193	1,817
2000	493	63%	71	1,242
2001	308	78%	58	1,171
2002	273	69%	40 <sup>(1)</sup>	886
2003	298	74%	71	802
2004	330	67%	77	892
2005	370	73%	92	934
<b>2006</b>	<b>605</b>	<b>73%</b>	<b>147</b>	<b>2,014</b>
<b>'69-'06 Avg.</b>	<b>438</b>	<b>76%</b>	<b>113</b>	<b>1,232</b>

<sup>(1)</sup> includes one poached swan

<sup>(2)</sup> reported hunter days divided by percent return

## **Population Status**

A continental assessment of the status of waterfowl is conducted annually and reported by the FWS<sup>2</sup>. Habitat and breeding population data is collected within traditional survey areas in the central and northwest portions of North America, known as the Prairie Pothole Region and the Canadian Parkland Region, and in Northwest Canada and Alaska. Observations are interpreted and incorporated into annual or multi-year population models, some of which are species specific. This summer's breeding duck population estimate within the traditional survey area was estimated to be between 38.3 – 44.1 million birds, [41.2 million with a standard error of  $\pm 0.7$ ]. This total is 14% greater than last year's estimate and 24% greater than the long-term average (LTA) collected since 1955. Mallards were estimated to number 8.3 million [ $\pm 0.2$ , +14% v. 2006; + 11% LTA]. Pintails were predicted to number 3.3 million [ $\pm 0.3$ , -3% v. 2006; - 19% LTA]. Although the combined total of greater and lesser scaup results in them to be the 4<sup>th</sup> most abundant species on the continent at 3.5 million birds, their total is 33% below the LTA of 5.1 million. Managers are struggling to understand the reasons for the diminishing trend and have invoked harvest restrictions to at least reduce this mortality factor.

In Nevada, wintering waterfowl numbers, counted in January 2007, increased (see appendix) for the third consecutive year. The mid-winter survey is a coordinated effort to inventory the Pacific Flyway's migrating waterfowl. States conduct the survey simultaneously in early January to avoid double counts between proximal geographic areas. Because of the myriad factors affecting migration, distribution and density, the data has a stronger analytical application on a flyway scale than on a statewide scale. However, MWI data does have some utility in Nevada in that the information can have a strong correlation with late season harvest. The table demonstrates a short-term comparison over the past five years along with long-term averages to demonstrate how present day numbers have changed. Documented duck numbers peaked in 1996 when 128,520 ducks were observed from the airplane. Goose numbers peaked three years later just short of 34,000. Mid winter observation data for total ducks and total geese are depicted in a chart in the appendix.

Mid-winter mallard numbers were very high, just short of the record recorded in 1997. Managers acknowledge that the numbers are more representative than finite, since survey methodology cannot determine actual numbers. It is sufficient to conclude that mallard numbers were higher than usual in January 2007 and this is supported by the abundance of mallards checked by AI surveillance workers and the anecdotal accounts of hunters. Pintail numbers also greatly improved, eclipsing last year's increase as well as the recent and long-term averages. Federal scientists predicted a higher fall flight and it would appear that these numbers are supportive. The value of this increase to the sportsman was



Photo credit: Chris Nicolai

### **CANVASBACK STATUS**

Canvasback numbers have rebounded in recent years. The summer BPOP estimate for this species within the traditional survey area was 865,000 birds, an increase of 25% compared to 2006 and +53% compared to the LTA. The FWS further states that this is a record high estimate. Accordingly, managers have agreed to liberalize the harvest to allow for a 2 bird daily limit, the first time since 1994 that Nevadans could harvest up to two of these magnificent ducks.

<sup>2</sup> U. S. Fish and Wildlife Service. 2005. *Waterfowl population status, 2005*. U.S Dept. of the Interior, Washington, D.C. 58pp.

nebulous though, at least in the immediate sense since the bag limit is one bird daily regardless of their abundance. A record number of observed redheads was recorded this year. At 13,300 birds, this figure has been approximated only once in the history of Nevada’s mid-winter survey. The FWS’s estimated 2006 breeding population of redhead numbers greatly improved last summer but this increase alone cannot fully explain last January’s dramatic escalation in the number of this pochard.

**Productivity Potential**

Nevada breeding pair survey data is provided within the appendix. Total observed pair numbers improved against last year’s observations, but remain well short of the preceding 10-year average and the LTA (48 years). Perhaps because of increased habitat and more abundant food to sustain the bird numbers discussed in the previous section, mallard numbers were much higher than the previous year; however, the figure is about average for the history of this survey.

Despite large numbers of wintering redheads, the number of birds remaining for the breeding season was unchanged from the previous year. Redheads are the most numerous breeders in Nevada but their contemporary numbers fall well below the recent average and LTA. It is speculated that the condition of Nevada’s wetlands prior to their recovery may have influenced breeding birds to seek breeding grounds elsewhere. The FWS estimates that the continent’s breeding population, at just over a million birds, is the highest recorded in the 53 year history of the breeding waterfowl survey. Given the condition of Nevada’s wetlands, it is unlikely that biologists will see large numbers of this species in January 2008.

<b>Table 5. Species Composition in Nevada Breeding Pair Surveys</b>						
	<b>2006</b>		<b>2007</b>		<b>1959-2006 Avg.</b>	
	<b>Number</b>	<b>% of Total</b>	<b>Number</b>	<b>% of Total</b>	<b>Number</b>	<b>% of Total</b>
<b>Mallard</b>	344	7%	675	10%	406	6%
<b>Gadwall</b>	858	16%	1,358	20%	1,096	17%
<b>Pintail</b>	71	1%	79	1%	187	3%
<b>Cinnamon Teal</b>	1,513	29%	1,811	27%	1,883	29%
<b>Shoveler</b>	110	2%	62	1%	71	1%
<b>Redhead</b>	1,529	29%	1,732	26%	2,023	32%
<b>Canvasback</b>	21	0%	20	0%	16	0%
<b>Ruddy</b>	783	15%	933	14%	595	9%
<b>Misc. Duck</b>	23	0%	100	1%	133	2%
<b>Est. Total Pairs</b>	<b>5,252</b>		<b>6,770</b>		<b>6,406</b>	

Although nesting substrate had become more abundant as the wetlands recovered from the long dry period, Nevada’s nesting waterfowl were faced with shrinking wetland conditions in the early summer due to reasons described within the Weather and Habitat section of this report. Moreover, water quality worsened as evaporation drew down water levels and forage began to desiccate.

As of this writing, there have been no confirmed major outbreaks of botulism, a natural mortality factor that affects all age classes.

*Readers are encouraged to obtain additional information about the status of migratory birds by visiting the United States Fish & Wildlife Service, Division of Migratory Bird Management’s website at: [migratorybirds.fws.gov/reports/reports.html](http://migratorybirds.fws.gov/reports/reports.html)*

# MOURNING DOVE

## Harvest

Nevada’s traditional dove season comprised the 30 days of September 2006. The bag and possession limits were 10 and 20, respectively. The hunting of white-wing doves was limited to Nye and Clark counties only.

Like waterfowl harvest data, dove harvest is monitored through two independent procedures. Refer to the explanation offered in paragraphs two and three of the preceding waterfowl report. Preliminary HIP data published by the United States Fish & Wildlife Service (FWS or Service) indicates that 4,100 hunters spent 9,400 days to harvest 38,900 doves in 2006<sup>3</sup>. Nevada collects harvest data through its post-season questionnaire, a process spanning over four decades. Comparisons are offered in Table 1. The two methods are in agreement about the number of hunters in Nevada; however, harvest and hunter day data are significantly divergent. One matter to contemplate is the fact that the two questionnaires occur at different times of the year, and that Nevada’s is a sample while the HIP survey approximates a census.

**Table 1. Comparisons Between Estimated Dove Harvest Statistics for Nevada.\***

Year	Estd. Hunter Numbers			Estimated Hunter Days			Estimated Dove Harvest		
	HIP <sup>(1)</sup>	NV Q	% Diff	HIP	NV Q	% Diff	HIP	NV Q	% Diff
2002	5,200	5,355	-3%	17,800	15,112	+15%	71,300	62,977	+12%
2003	4,700	4,074	+13%	10,800	10,177	+6%	42,100	37,750	+10%
2004	3,800	3,434	+10%	8,800	9,619	-9%	36,500	34,650	+5%
2005	4,100	4,110 <sup>(2)</sup>	--	10,000	14,580	-46%	47,700	50,364	-6%
2006	4,100	4,325 <sup>(2)</sup>	-5%	9,400	13,650	-45%	38,900	53,850	-38%

(1) Expressed as “Active Adult Hunters” within the HIP survey.

(2) Figures in 2005 & 2006 are *individual* hunters – see explanation in next section.

Dove harvest data obtained through the 2006 Nevada post-season Harvest Questionnaire are as follows:

**Table 2. STATEWIDE DOVE HARVEST  
From Post-season Questionnaire**

	STATE TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	50,364	53,851	<b>46,918</b>	6.9%	14.8%
<b>No. of Hunters</b>	4,400	4,590	<b>4,469</b>	4.3%	2.7%
<b>No. of Days</b>	14,580	13,650	<b>12,788</b>	-6.4%	6.7%
<b>Birds / Hunter</b>	11.45	11.73	<b>10.43</b>	2.5%	12.5%
<b>Birds/Hunter Day</b>	3.45	3.95	<b>3.66</b>	14.2%	7.8%

The revised questionnaire allows managers to analyze individual hunters – the estimated number of license holders that hunted doves, as well as cumulative hunters – the total of all the estimated number of persons that hunted in each of the state’s 17 counties. Since past analysis incorporated the cumulative value, it is used here for comparison to short and long-term averages. It is obvious that some dove hunters actively hunt in more than one county. Individual total calculations are only estimated for the past two seasons.

<sup>3</sup> Dolton, D.D., R.D. Rau and K. Parker. 2007. Mourning dove population status, 2007. U.S. Fish & Wildlife Service, Laurel, Maryland, USA.

Following a trend of the past couple of decades, the majority of the dove harvest has occurred in the Western Region (Table 3.). This phenomenon could be attributable to several factors, all of which would require considerable scientific effort to validate. Biologists speculate that migration terminus or layovers are increasingly higher in latitude, thereby increasing their vulnerability within the region of the state where most of the license holders reside. It is evident that dove remain within cities and suburban settings throughout the winter in greater number now than they ever have. This is attributable to backyard feeding, lack of aerial predators and hard surfaces which offer warm microclimates.

**Table 3. DOVE HARVEST COMPARISON BY REGION**  
From Post-season Questionnaire

	WESTERN			EASTERN			SOUTHERN		
	2005	2006	Avg.	2005	2006	Avg.	2005	2006	Avg.
<b>No. of Birds</b>	31,813	36,387	<b>23,153</b>	5,380	5,497	<b>5,765</b>	13,171	11,967	<b>18,000</b>
<b>No. of Hunters</b>	2,740	2,981	<b>2,268</b>	580	673	<b>694</b>	1,080	936	<b>1,506</b>
<b>No. of Days</b>	9,290	8,939	<b>6,203</b>	1,900	1,508	<b>1,731</b>	3,390	3,203	<b>4,854</b>
<b>Birds / Hunter</b>	11.61	12.21	<b>10.22</b>	9.28	8.17	<b>8.1</b>	12.20	12.79	<b>11.9</b>
<b>Birds/Hunter Day</b>	3.42	4.07	<b>3.73</b>	2.83	3.65	<b>3.4</b>	3.89	3.74	<b>3.7</b>

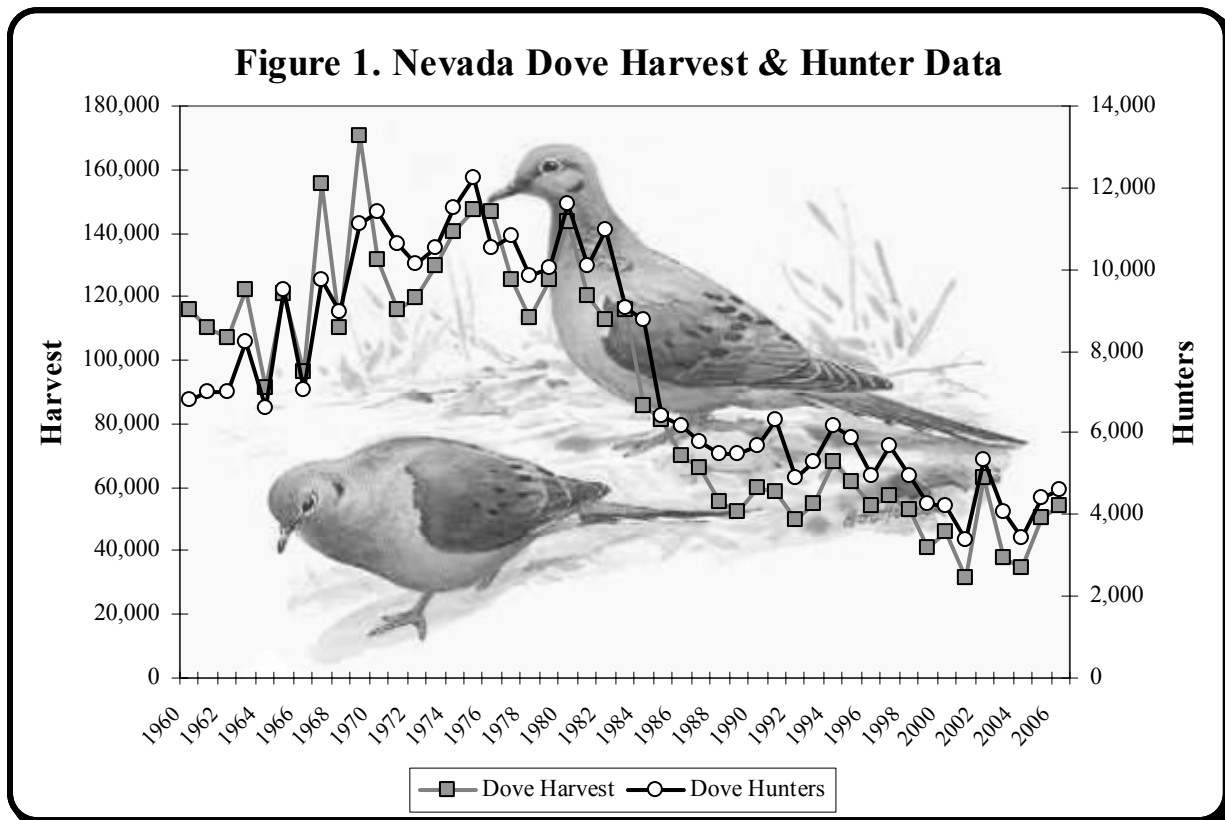


Figure 1 depicts long-term dove harvest information from the post-season questionnaire. The trend is clearly down, but managers are not convinced that this is a function of bird abundance.

After dropping to a near record low statewide harvest in 2004, hunters have bagged increasing numbers of doves during the past two seasons. These values are fairly similar to their respective previous year and the 10-year averages; however, when compared to previous decades, the recent statistics are pale (table 4). This is particularly evident when comparing harvest and days.

**Table 4. STATEWIDE DOVE HARVEST AVERAGES BY DECADE**  
From Post-season Questionnaire

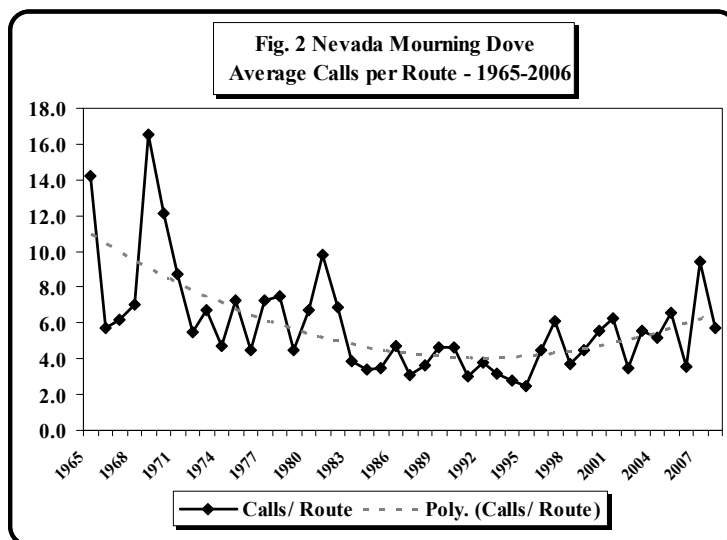
	1960's	1970's	1980's	1990's	2000's
<b>No. of Birds</b>	119,945	129,489	90,248	55,843	45,327
<b>No. of Hunters</b>	8,208	10,765	7,968	5,410	4,202
<b>No. of Days</b>	26,590	34,388	23,333	15,600	12,041
<b>Birds / Hunter</b>	14.61	12.03	11.33	10.32	10.67
<b>Birds/Hunter Day</b>	4.51	3.77	3.87	3.58	3.75

There were over 1,800 questionnaire respondents that indicated they hunted upland game. Only four indicated that they killed white-winged dove – a total of 12 in 18 days of hunting (presumably general dove hunting).

**Population Status**

The FWS coordinates the Mourning Dove Call-count Survey for the entire nation. This comprehensive effort includes more than 1,000 randomly selected routes distributed within physiographic regions. These migratory game birds are managed within three zones – the Eastern, Central and Western Management Units (MU). Populations within these MUs are considered to be largely independent of one another. Nevada is one of seven of the contiguous western states within the WMU. There are 22 call-count routes in Nevada, most of which have been run since 1964.

This spring, route-runners conducted all of Nevada’s 22 survey routes. These people recorded 131 calls and observed 179 doves. These data compare to long-term averages of 110 heard and 175 seen. The call per route average this year was 5.7, compared to the long-term average of 5.9. Figure 2 depicts dove call count results since the inception of the survey. Only call per route data is comparable since some routes have been added, deleted or modified since 1964. Generally, the dove breeding index trend is downward during the 40-year analysis period, a trend found throughout the WMU. However, calls per route averages have stabilized in Nevada and the WMU for the past ten years a polynomial trend line is used to indicate that dove population indicators are actually on the rise in Nevada.



## BAND-TAILED PIGEON

No survey and inventory activities were conducted for this job during this report period.

## AMERICAN CROW

### Harvest

Crow hunting was open statewide with two hunt periods. The fall 2006 hunt was September 1 – November 17<sup>th</sup>. The spring hunt commenced on March 1<sup>st</sup>, 2007 and ended on April 15<sup>th</sup>. The limit was 10 daily and in possession and hunters were required to retrieve their crows and remove them from the field.

Hunters were provided the opportunity to separately record crow harvest data within the questionnaire. The sample data was minimal and could not be used perform an expansion calculation, therefore the data is listed as raw, unexpanded and can be viewed within the Questionnaire appendix of this report.

**Table 1. – Reported American Crow Harvest in Nevada – Unexpanded Questionnaire Data**

	DO	CC	CH	HU	LY	MN	PE	WA	EL	EU	LA	WP	CL	ES	LN	NY
<b>2003</b>	5	4	5	--	--	--	--	--	2	17	--	--	1	--	1	--
<b>2004</b>	2	--	6	36	124	--	4	--	--	32	13	--	42	--	--	18
<b>2005</b>	--	3	1	4	49	41	2	1	54	1	51	5	--	--	2	10
<b>2006</b>	--	--	0	9	3	3	15	1	16	--	11	--	--	6	16	1

Crow hunting continues to be somewhat of a novelty in Nevada and there is little information to suggest that a crow hunting tradition is under development. Such a tradition is present in many other states, primarily east of the Mississippi River, where crow hunting had been common even before the advent of modern regulatory management. In Nevada birds are most likely taken under three circumstances: incidental to other hunting activities, or by individuals that formerly hunted crows and have moved to this state, or by individuals who are motivated by a personal animosity toward the species.

### Population Status

Crows are not classified as migratory game birds under federal rule thus the FWS does not regulate the take of American Crows. Accordingly, there are no coordinated efforts within the flyways to determine their population status.



# REGIONAL GAME BUREAU STAFF

## WESTERN REGION

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Rodney Johnson, Lovelock  
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Kyle Neill, Fallon  
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Jason Salisbury, Fallon

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Biologists:

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Ken Gray, Elko  
Kari Martin, Elko  
Mike Podborny, Eureka  
Larry Teske, Battle Mountain  
Tony Wasley, Elko  
Russell Woolstenhulme, Elko

## SOUTHERN REGION

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Pat Cummings, Las Vegas  
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Mike Scott, Pioche

# REGIONAL SPECIES SUMMARIES

## SAGEGROUSE

### WESTERN REGION

#### Harvest

During the 2006 general season, a nine-day hunt was held for sage-grouse. In Humboldt and Washoe counties, Areas 1, 3, and 5 were open for harvest excluding certain units. These units included units 032, 033, 034, 035, 042, 044, 046, and 151 in Humboldt County and 033, 021, 022, 194, and 196 in Washoe County. The 2006 season extended from October 7<sup>th</sup> through October 15<sup>th</sup> with a two daily and four in possession limits. Unit 033, on the Sheldon National Wildlife Refuge, had two special two-day hunts offered during September. The two weekends were September 16<sup>th</sup>-17<sup>th</sup> and September 23<sup>rd</sup>-24<sup>th</sup>. Participation was limited to 75 permits per hunt period, awarded by lottery. The daily bag and possession limits for these special hunts were two and four, respectively. Table 1 describes the combined hunting season results of the open counties within the Western Region.

**Table 1. WESTERN REGION SAGE GROUSE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	1,386	<b>1,643</b>	1,881	18.5%	-12.7%
<b>No. of Hunters</b>	603	<b>837</b>	795	38.8%	5.3%
<b>No. of Days</b>	1,438	<b>1,751</b>	1,754	21.8%	--
<b>Birds / Hunter</b>	2.29	<b>1.96</b>	2.34	-14.4%	-16.2%
<b>Birds/Hunter Day</b>	0.96	<b>0.94</b>	1.05	-2.1%	-10.5%

For 2006, the reported number of birds that were harvested is up slightly from the 2005 hunt. Along with the number of birds, hunter numbers are up as well. The number of birds harvested in 2006 is still down from the last three year average. There was an increase in effort in 2006 compared to 2005 with fewer birds being harvested. The reason for the difference may be attributed to the amount of moisture that was received prior to the hunt in 2006. A fair amount of precipitation fell prior to the hunt, resulting in birds dispersing and not concentrating on water sources. The other contributing factor is a decrease in population numbers during the last two years. This decrease is somewhat expected due to the decrease in observed production values based on hunter harvested wing analyses. Like many other upland game birds, sage-grouse populations respond favorably in the short term to timely receipts of precipitation that facilitate forb growth both pre and post nesting. Precipitation patterns over the last two years have not been conducive to good chick production. Wing collection and other investigations will continue to better determine population demographics.

## Population Status

Department biologists continue to monitor sage-grouse population trends throughout the region. Spring lek counts are conducted annually and brood surveys are performed in those populations that are not hunted. From these lek counts and brood surveys, population estimates have been established for most sage-grouse populations. According to Western Association of Fish and Wildlife Agencies (WAFWA) guidelines, populations with less than 300 breeding birds should not be hunted and, for hunted populations, harvest rates should not exceed 10% of the estimated fall population. Like last year, only some areas in Humboldt and Washoe Counties had hunts. All hunted areas in these two counties have either met or exceeded harvest guidelines.

Major factors that have influenced sage grouse populations in the Western Region include urbanization, mining and wildland fires that have converted vegetation types. Areas in Pershing and Humboldt counties where brood counts were conducted saw a decrease in young/hen ratios. Some areas in Humboldt County that have not had an open season recently are approaching WAFWA guideline requirements for potential future hunting opportunities, but production rates will have to improve from recent figures to seriously consider this option.

During the 2006 sage-grouse hunting season, 1,655 hunter-harvested wings were gathered in the Western Region to help assess demographic characteristics. Table 2 summarizes the information obtained from the annual wing-bee conducted in November of 2006.

**Table 2. WESTERN REGION WING DATA BY AREA**

Hunt Area	Adults		Juveniles		Total Harvest	Young/Hen
	Males	Females	Males	Females		
Sheldon NWR	27	28	27	52	134	2.82
Buffalo/Skedaddle	21	48	11	23	103	0.71
Total Massacre PMU	48	67	35	50	200	1.27
Vya PMU	0	28	2	5	35	0.25
Other Washoe	4	8	2	3	17	0.63
<b>Total WA Co.</b>	<b>100</b>	<b>179</b>	<b>77</b>	<b>133</b>	<b>489</b>	<b>1.17</b>
Santa Rosa PMU	96	193	43	87	419	0.67
Lone Willow PMU	189	294	107	157	747	0.90
Pine Forest PMU	0	0	0	0	0	0
Black Rock PMU	0	0	0	0	0	0
<b>Total HU Co.</b>	<b>285</b>	<b>487</b>	<b>150</b>	<b>244</b>	<b>1,166</b>	<b>0.81</b>
<b>Total Western Region</b>	<b>385</b>	<b>666</b>	<b>227</b>	<b>377</b>	<b>1,655</b>	<b>0.91</b>

*PMU = population management unit*

The Western Region average chicks per hen ration of 0.91 is extremely low and certainly well below that required to maintain a stable to slightly increasing population (2.25 chicks per hen). The only area that experienced good production was the Sheldon National Wildlife Refuge with 2.82 chicks per hen. Overall, chicks per hen values have declined over the last two years in most Population Management Units (PMUs). Production values in both The Santa Rosa PMU and the Lone Willow PMU are roughly half of that recorded in 2005.

Lek counts were conducted during the spring of 2007 both from the ground and the air using a helicopter. A total of 406 leks were visited with 205 classified as active. 4,618 sage-grouse were observed on active leks. Attendance on the leks that were visited was down anywhere from 15% to 30% depending on area. Continued monitoring efforts are on going throughout the region and include radio-marking studies to monitor movement patterns as well as use areas. These projects have provided vital information to assist with the management of this species.

### **Productivity Potential**

With the dry conditions through the winter and the cyclic nature of sage-grouse populations, lek count attendance showed a decline indicating that winter survival may have been low in some areas. Some areas had formal brood counts conducted and showed slight decreases compared to last year. Brood counts that were conducted in July indicate a low survival of chicks and possibly poor hatches this year. Wildland fires in the western region did not have a major impact on sage grouse use areas. Information gained from those birds that were harvested during the 2006 season combined with spring lek surveys in 2007 indicates populations to have slight decreases in some areas. Sage Grouse populations are starting to show declines. Overall the Western Region had poor production and the number of sage grouse is expected to be down compared to what was observed last year.

### **Fall Prediction**

Extremely dry conditions have prevailed over much of the Western Region throughout the spring and summer months of 2007. As mentioned earlier, this has translated into minimal production rates. Coupled with low production rates in 2006, hunters can expect seeing fewer numbers of sage-grouse in the field during the 2007 season. Based on this year's lek surveys, most of the units that were closed last year will remain closed during this hunting season. These areas, as well as those with small populations, will remain closed until biologists observe bird numbers that meet or exceed harvest guidelines. One unit in area three (034) has met WAFWA guideline requirements and will be opened to hunting during the 2007 season.

## **EASTERN REGION**

### **Harvest**

The Eastern Region had a 9-day sage-grouse season running from October 7 through October 15, 2006. Bag limits were 2 daily and 4 in possession. The Eastern Region season has been the same length (9 days) in all four counties (Elko, Eureka, Lander and White Pine) since 1999. The only exception was for Lander County where Game Management Unit 151 has been closed to sage-grouse hunting since 2003 based on low population levels of sage grouse in the Battle Mountain and Fish Creek PMUs.

**Table 3. EASTERN REGION SAGE GROUSE HARVEST BY COUNTY**

	COUNTY TOTALS:			Percent Change	
	2005	2006	10 Yr.Avg.	Prev. yr.	vs. Avg.
Elko	846	<b>829</b>	1,993	-2%	-58%
Eureka	410	<b>430</b>	325	5%	32%
Lander	129	<b>338</b>	294	162%	-15%
White Pine	286	<b>238</b>	273	-17%	-12%
<b>Eastern Region</b>	<b>1,671</b>	<b>1,835</b>	<b>2,885</b>	<b>9%</b>	<b>-36%</b>

**Table 4. EASTERN REGION SAGE GROUSE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10 Yr.Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	1,671	<b>1,835</b>	2,885	10%	-36%
<b>No. of Hunters</b>	809	<b>991</b>	1,579	22%	-37%
<b>No. of Days</b>	2,275	<b>2,211</b>	3,663	-3%	-40%
<b>Birds / Hunter</b>	2.1	<b>1.9</b>	1.8	-10%	5%
<b>Birds/Hunter Day</b>	0.7	<b>0.8</b>	0.8	-14%	0%

The 2006 sage-grouse harvest increased in 2 of 4 Eastern Region counties and was only down slightly in Elko County. Harvest increased again in Eureka County and was 32% higher than the previous ten-year-average. Sage-grouse harvest increased 9% overall for the Eastern Region but was still below the previous ten-year-average.

**Population Status**

Summer brood survey sample sizes in 2006 remain below average for the Eastern Region (Table 5) because effort to collect samples has been reduced. The largest sample of sage-grouse

**Table 5. SAGE GROUSE PRODUCTION SUMMARY - EASTERN REGION 2006**

County	Bird Totals					Ratios		Total Complete Broods	Tot. Yng. w/in Complete Broods	Avg. Brood Size
	Observed.	Classified	Adults	Hens	Young	Young/Ad	Young/Hen			
<b>Elko</b>	83	83	40	30	43	1.01	1.43	10	41	4.1
<b>Eureka</b>	0	0	0	0	0	0.00	0.00	0	0	0
<b>Lander</b>	183	183	119	55	64	.66	1.50	13	47	3.6
<b>White Pine</b>	214	153	79	26	74	.94	2.85	16	74	4.6
<b>Reg. Total:</b>	<b>480</b>	<b>419</b>	<b>238</b>	<b>111</b>	<b>181</b>	<b>.76</b>	<b>1.63</b>	<b>39</b>	<b>162</b>	<b>4.2</b>

classified was obtained again in Lander County (44% of the Eastern Region’s sample) followed by White Pine (37%). A total Regional sample of 419 sage grouse was classified with an average brood size of 4.2, a young/100 hen ratio of 1.63 and a young/100 adult ratio of 0.76. The

Region's sample size in 2005 was 383 with an average brood size of 3.4, a young/100 hen ratio of 2.15 and a young/100 adult ratio of 1.14. The young/100 hen ratio increased from 2005. Brood sizes increased in all three counties where samples were obtained. Brood sizes were above average in 2006 and have been average to above average since 1995.

Wings collected from hunters in 2006 were assessed to determine male/female ratios and production. Wing data for the Eastern Region are summarized in Table 6.

**Table 6. EASTERN REGION SAGE GROUSE WING DATA - 2006**

County	Total Wings	Adult Males	Adult Females	Juvenile Males	Juvenile Females	Ratios	
						Juv./ Ad Hen	Juv./ Adult
<b>Elko</b>	576	135	169	135	137	1.61	0.82
<b>Eureka</b>	153	36	53	24	40	1.21	0.72
<b>Lander</b>	189	70	53	33	33	1.25	0.54
<b>White Pine</b>	85	15	24	29	17	1.92	1.18
<b>Reg. Total:</b>	1,003	256	299	221	227	1.50	0.81

Wings were obtained from hunters through strategically placed wing collection depositories (*wing barrels*) and through field contacts between NDOW personnel and successful hunters. Wing analysis indicated survival of young birds into October was similar to the previous year. A comparison with brood data shows that 163 young/100 hens observed in July decreased to only 150 by October.

Winter survival of birds was good throughout the Eastern Region in 2006-2007. Sage-grouse are adapted to heavy snow cover, cold temperatures, and deep snow as long as heavy crusting is not experienced and especially if there are vast areas available for migration of sage-grouse to other winter ranges like in the Eastern Region. Strutting ground count data on comparable leks in the Eastern Region for 2007 are summarized as follows: -17% in Elko County, -36% in Eureka County, -26% in Lander County and +8% in White Pine County. There has been a gradual downward trend in lek counts over the long-term throughout the Eastern Region since the 1960's. For 2006, three of four counties in the Eastern Region showed decreases in attendance of males at trend leks and one was up. Lek attendance has been relatively high for the past few years and this year's decrease is not considered significant but rather a normal short-term population fluctuation. Three of four counties showed an increase in lek attendance at trend leks in 2005, 2002 and 2003. In 2004 all four counties showed an increase in lek attendance.

Elko County harbors some of the largest sage-grouse populations within Nevada. There are a total of ten PMUs within this planning area. Four biologists share responsibilities for these ten PMUs. Lek-monitoring efforts were coordinated between Elko NDOW, USFS and Elko BLM Field Office personnel as well as volunteers. Monitoring by NDOW personnel focused on trend ground counts and ground verification of existing leks in the database while accompanying BLM personnel's directed efforts towards checking leks for activity associated with burned areas, proposed power line projects or in areas that have little historic data available. USFS personnel and volunteer's assisted with lek occupancy and lek counts. NDOW personnel checked trend leks between two and six times each during April and early May of 2007. During the spring of

2007, 412 leks were visited with 199 active, 172 unknown, 39 inactive, 4 new leks confirmed from last year, and 13 potential new leks in eastern Elko County that need to be verified in 2008. In comparison, 334 leks were visited with 139 active leks, 186 unknown status and 20 possible new leks documented in 2006. As a result of 2007 fieldwork and assessment, 68 leks (54 within the North Fork, Tuscarora and Desert PMU's) were eliminated from the database due to the lack of long-term data (one time counts in questionable habitat) or the lek was combined with an existing adjacent lek. In 2007 there were 3,552 male sage grouse observed on 199 leks resulting in an average of 17.8 males/lek compared to 1,604 male sage grouse on 139 leks for an average of 11.5 males/lek in 2006. There are still a substantial number of leks on the list that need to be evaluated as to whether they were one-time sightings or if they are actual strutting areas. Wildfires burned over numerous leks in 2007. These leks will be monitored for use over the next several years.

NDOW personnel monitored 18 trend leks in Elko County counting 762 males for 42 males/lek showing a 17% decrease in numbers from 2006. Different than recent years, phenology seemed to be a few weeks early and many leks peaked in late March and early April rather than late April and early May.

In Eureka County, the number of trend grounds was increased to ten in 2000 to collect a larger sample for comparison. The peak male attendance on the ten comparable grounds for 2007 was 263 for an average of 26.3 males per ground. This resulted in a 36% decrease from 2006 when 411 males were counted for an average of 41.1 males per ground. The decrease in 2007 followed a significant increase the year before and could be expected based on normal fluctuations in sage-grouse populations. The twenty-year-average (1986 to 2005) for comparable grounds was 26 males/lek and the ten-year-average (1996-2005) was 24. In addition to trend counts, there were 7 additional active leks surveyed by NDOW, BLM, and UNR graduate students in 2007 for 17 leks to compare. These 17 active leks had 374 males in attendance for an average of 21 males/lek. In 2006, these 17 active leks checked with 638 males yielding an average of 38 males/lek. Using this extended list of leks monitored, a decrease of 43% in lek attendance was documented.

Lander County PMU lek counts (Shoshone, Toiyabe, Battle Mountain, and Fish Creek) generated an average of 11.8 male sage-grouse observed per active lek in 2007 with 927 cocks counted on 78 leks. In 2006, an average of 14.1 males were counted per active lek.

The White Pine planning area basically resides within the confines of White Pine County, with some minor exceptions. The majority of three PMUs (Butte/Buck/White Pine, Schell/Antelope, and Snake Valley) are within White Pine County. Two other PMUs (Diamond and Steptoe/Cave) are partially within White Pine County. Lek monitoring efforts in White Pine County by Ely District BLM, Ely USFS Ranger District, Great Basin National Park, NDOW personnel, and SNWA (Southern Nevada Water Authority) personnel resulted in 90 leks visited in 2007 with 66 (73%) observed to be active and 24 either unknown or inactive. A total of 1,214 males were counted on the 90 leks, resulting in 13.5 males/lek in 2007. In comparison, 90 leks were visited with 54 (60%) found to be active and a total of 1,047 males observed for an average of 19.4 males/lek in 2006. Various agency personnel monitored 25 trend leks. A total of 481 males were observed for 19.2 males/lek, a 9% increase over 2006 figures.

Overall in the Eastern Region, 597 leks were monitored with 6,067 male sage grouse documented using those leks for a minimum of 10 cocks/lek. Lek data indicate sage grouse populations are well distributed throughout the Region and continue to thrive in spite of recent wildfire and development challenges in Elko County and White Pine County. Trend lek counts are down over the long term (20 years). Strutting ground and harvest data indicate base populations of sage grouse are low to moderate in the Region compared to the late 1970's and early 1980's.

### **Productivity Potential**

Summer conditions were only fair for brooding sage grouse in most of the Eastern Region due to the lack of precipitation. Insect numbers were fair in June with fewer parts of the Region experiencing large Mormon cricket infestations. Preliminary brood data and sightings suggest sage grouse were only doing fair in 2007 and populations are expected to be only stable to decreasing in the Eastern Region. Large areas north of Interstate 80 in Elko County were negatively impacted where significant wildfires burned hundreds of thousands of acres of sage grouse habitat. Initially, it will come back as mostly a grass and forb complex with only limited seasonal use value for sage grouse. Of major concern is the loss of wintering habitat (October through March) and spring production habitat (March through June) for leks and nesting. If these wildfires continue to burn significant acreages of sage grouse habitat, Elko County will soon be facing significant challenges in terms of supporting the healthy populations it has been known for in the past.

### **Fall Prediction**

Bird availability in the Eastern Region is predicted to be fair for the 2007 season especially in areas of Elko County where large wildfires destroyed sage grouse habitat. Measurable precipitation occurring immediately prior to and during the season tends to reduce hunting success. Dry conditions often concentrate birds making them more available to the hunter. Hunting is expected to be fair in most of the Region for 2007.

## **SOUTHERN REGION**

### **Harvest**

Currently, northern Nye County is the only portion of the Southern Region which maintains an open sage-grouse season. Although sage-grouse occur in both Esmeralda and Lincoln counties, these populations are not considered large enough to support harvest at the present time. Accepted sage-grouse harvest guidelines state that harvest should only occur in areas where more than 300 birds comprise the spring breeding population.

The Southern Region's 2006 sage-grouse season was 9 days in length, running from October 7<sup>th</sup> to October 15<sup>th</sup>. Daily bag and possession limits remained unchanged at 2 daily and 4 in possession. Harvest data collected for the 2006 sage-grouse season indicate 146 hunters harvested 192 sage-grouse in Nye County. In comparison, harvest data for the 2005 sage-grouse season showed a harvest of 108 sage grouse by 102 hunters. Although data suggest that interest in pursuing sage grouse in central Nevada remains well below what it was in the 1990's, the past three years have seen an encouraging, if somewhat small, increase in hunter participation. Birds

per hunter day data indicate that sportsmen were more successful locating and harvesting sage-grouse in 2006 than in 2005.

It is important to note that although the questionnaire data provide important information regarding overall harvest and hunter pressure trends; small sample sizes may produce biased results. Refer to the following table for the short- and long-term perspectives of harvest.

**Table 7. SOUTHERN REGION (NYE COUNTY) SAGE GROUSE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	108	<b>192</b>	189	78%	2%
<b>No. of Hunters</b>	102	<b>146</b>	147	43%	0%
<b>No. of Days</b>	108	<b>323</b>	291	199%	11%
<b>Birds / Hunter</b>	1.1	<b>1.3</b>	1.20	18%	8%
<b>Birds/Hunter Day</b>	0.4	<b>0.6</b>	0.73	50%	-18%

**Population Status**

Each spring, Nevada Department of Wildlife personnel, BLM and USFS biologists, and PROWL volunteers, conduct sage-grouse lek counts in central Nevada to determine breeding population trends and status. In central Nevada, 14 leks have been identified as trend leks. These leks are typically surveyed once each week for five weeks in order to determine peak attendance of male sage-grouse.

During the spring of 2007, 9 of these trend leks showed slight to moderate increases in male attendance, while 5 showed slight decreases from 2006. Overall, 2007 trend lek data indicate that male attendance was up 9% from 2006, and was 40% above the previous 5-year average.

During the fall sage grouse hunting season, NDOW collects hunter harvested sage grouse wings in order to determine male/female harvest ratios, nesting success, and young of the year recruitment rates. Wing data gathered in 2006 indicate a ratio of 2.2 chicks per adult hen during the fall time period. Available research suggests that fall ratios above 2.25 juveniles per adult hen are required for stable to increasing sage grouse populations. Central Nevada has experienced recruitment rates above 2.0 chicks per hen for three of the last five years. Data also indicate that nesting success in central Nevada increased from 44% in 2005 to 55% in 2006. The reliability of wing data is partially dependent upon sample size, and samples are relatively small for Nye County most years. Wing data for central Nevada are summarized in Table 4.

Owing to a mild winter, over winter survival of sage-grouse should have been good during the 2006-07 winter period. Lower elevation sagebrush benches remained open and available to wildlife throughout the winter period in central Nevada.

**Table 8. SOUTHERN REGION SAGE GROUSE WING DATA**

Year	Total Sample	Adults		Juveniles		Young/ Ad Hen
		Males	Females	Males	Females	
1999	16	4	2	5	2	1.4
2000	33	5	10	7	11	1.8
2001	76	10	16	21	28	3.1
2002	63	10	25	9	19	1.1
2003	75	6	20	26	23	2.5
2004	62	14	24	10	14	1.0
2005	90	8	23	36	23	2.6
2006	155	28	40	31	56	2.2
<b>Average</b>	<b>71</b>	<b>11</b>	<b>20</b>	<b>18</b>	<b>22</b>	<b>2.0</b>

**Productivity Potential**

The Basin-Wide Precipitation Data Summary provided by the Natural Resources Conservation Service (NRCS) indicates that the winter of 2006-2007 was a dry one in much of central Nevada. Total accumulated precipitation was reported to be 72% of average at the end of February, 2006. Due to a continued dry trend throughout the late winter, spring, and early summer, total precipitation receipts for central Nevada totaled only 74% of average by the end of July 2007. Habitat conditions were severely impacted by the lack of moisture and sage-grouse production was hampered in many areas.

Limited brood survey data has been collected in central Nevada as of this writing. Currently, data indicate a ratio of 1.4 chicks per hen in the areas surveyed. This data is still preliminary and results may change as the survey season progresses. Due to the many factors that can affect chick survival through the summer and early fall, brood survey data is of minimal value in predicting actual recruitment. Wings collected in the fall from hunter harvested sage-grouse are presently the most effective method of determining recruitment. Unfortunately, in areas where sage-grouse hunting does not occur, as in Lincoln County, this source of data is not available.

**Fall Prediction**

Winter survival of adults should have been good throughout most sage-grouse ranges of the Southern Region. For central Nevada, the extremely dry winter, spring and early summer periods negatively impacted sage-grouse production. The number of young birds available to sportsmen will be considerably lower this season than has been the case in the past two years. Despite the lack of young birds this year, central Nevada sage-grouse populations overall have increased as of late, and adult birds should still be comparatively abundant. The 2007 sage-grouse season is expected to be fair in central Nevada. It is important to note that even with fair bird availability; sage-grouse hunter success can vary widely depending upon localized population densities, fall weather patterns, and an individual's knowledge of specific hunting areas and sage-grouse habits.

## BLUE AND RUFFED GROUSE

**Statewide Hunting Season:** The 2006 forest grouse (blue & ruffed grouse) hunting season was 90 days long, beginning on September 2 and ending on November 30. Limits were two daily and four in possession.

### WESTERN REGION

#### Harvest

In 2006, a total of 425 birds were harvested by a total of 616 hunters (Table 1). Blue grouse make up the majority of the forest grouse harvest in the Western Region as the only existing ruffed grouse population resides within Humboldt County. Limits were two daily and four in possession. Ruffed grouse harvest in Humboldt County was minimal with 3 birds taken by 9 hunters (*expanded data from questionnaire*)

**Table 1. WESTERN REGION BLUE GROUSE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	253	<b>422</b>	305	66.8%	38.3%
<b>No. of Hunters</b>	270	<b>607</b>	255	124.8%	138.5%
<b>No. of Days</b>	524	<b>1,477</b>	573	181.9%	158.0%
<b>Birds / Hunter</b>	0.94	<b>0.70</b>	1.2	-25.8%	-42.1%
<b>Birds/Hunter Day</b>	0.48	<b>0.29</b>	0.5	-40.8%	-47.0%

#### Population Status and Productivity Potential

Formal surveys are not conducted for forest grouse species in the Western Region. Above average precipitation was received during the winter of 2005-2006. The spring of 2006 also received good precipitation up until May when warm and dry conditions prevailed throughout the summer and early fall months. These conditions were responsible for the high harvest during the 2006 hunting season. However, the winter of 2006-07 provided less than adequate precipitation and the spring and summer of 2007 has been extremely dry. These circumstances have most likely limited brood survival.

#### Fall Prediction

Habitat conditions in the Western Region going into the 2007 season have not been favorable to upland game survival. Hunters can expect limited opportunity in most of the areas associated with previous success. Fires in the Carson Range and in Humboldt County have had an effect on forest grouse habitat, the consequences of which are yet to be seen.

## EASTERN REGION

### Harvest

Blue grouse make up the majority of forest grouse harvest. Limited ruffed grouse harvest was reported in Elko County (25 estimated in 2006). Eastern Region ruffed grouse populations are located in the Ruby Mountains, East Humboldt Range, and in extreme northern Elko County from the Independence/Bull Run Range complex to the Jarbidge Mountains. The following tables illustrate forest grouse harvest in the Eastern Region:

**Table 2. EASTERN REGION FOREST GROUSE HARVEST BY COUNTY**

COUNTY	COUNTY TOTALS:			Percent Change	
	2005	2006	10 Yr.Avg.	Prev. yr.	vs. Avg.
<b>Elko</b>	320	1,029	367	+222%	+180%
<b>Eureka</b>	135	211	31	+56%	+581%
<b>Lander</b>	88	79	53	-10%	+49%
<b>White Pine</b>	1,234	1,081	581	-12%	+86%
<b>Eastern Region</b>	1,774	2,400	955	+35%	+151%

**Table 3. EASTERN REGION FOREST GROUSE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10 Yr.Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	1,759	<b>2,400</b>	955	+36%	+151%
<b>No. of Hunters</b>	879	<b>1,319</b>	558	+50%	+136%
<b>No. of Days</b>	2,046	<b>2,954</b>	1,265	+44%	+134%
<b>Birds / Hunter</b>	2.0	<b>1.8</b>	1.7	-10%	+6%
<b>Birds/Hunter Day</b>	0.9	<b>0.8</b>	0.8	-11%	0%

Forest grouse harvest in the Eastern Region increased 35% from 2005 following a significant increase from 2004. For the fourth consecutive year White Pine County carried the highest forest grouse harvest in the Region (1,081) and Elko County was second (1,021). The Eureka County blue grouse harvest of 211 birds was a new record for the county and well above the previous record harvest of 145 birds in 1975. Lander County's blue grouse harvest decreased but was still well above the long-term average. Harvest data suggest blue grouse populations were still well above average for the Eastern Region.

### Population Status

Only 1 brood of 6 chicks was reported from Elko County in 2006. No forest grouse brood data was reported from the Eastern Region in 2005.

### Productivity Potential

The major impact to brooding forest grouse is believed to be the condition of riparian habitat that can often be degraded by heavy livestock grazing. The removal of understory vegetation in riparian areas reduces cover that is valuable for brood-rearing habitat, making chicks more susceptible to predation. Winter moisture was average and spring moisture for the 2006-07 period was only fair. Nesting and escape cover for early brooding in the Eastern Region

was only fair in 2007. The 2007 summer period lacked rainfall and ranges dried up quickly. Biologists reported heavy grazing in most riparian areas. Brooding habitat was negatively impacted in much of the Eastern Region in 2007.

**Fall Prediction**

Forest grouse availability in 2007 is predicted to be fair in the Eastern Region. Population levels are predicted to be fair in all four counties of the Eastern Region. Eureka and Lander counties have much more limited distribution than Elko and White Pine counties. Blue grouse hunting in 2007 should only be fair and not expected to exceed last year's above average level.

**SOUTHERN REGION**

**Harvest**

Although the forest grouse season was open statewide in 2006, within the Southern Region only Esmeralda, Lincoln, and Nye counties support blue grouse. Blue grouse are the only species of forest grouse that occur in the Southern Region at this time, and provide for 100% of the harvest.

Post-season questionnaire data for 2006 indicate that hunter interest and total harvest of blue grouse was down considerably from 2005. Table 3 summarizes this data.

Although questionnaire data provide important information regarding overall harvest and hunter pressure trends, it can be influenced by sampling bias. This bias is particularly apparent when sample sizes are small, as is typically the case with forest grouse. This bias is very apparent in the 2006 data set which indicates 53 hunters harvested zero blue grouse in the Southern Region. In addition, a new questionnaire, data entry and expansion process was developed in 2005, and this may have increased the potential for errors in the data. The process is still being refined. Refer to the following table for a breakdown of the Southern Region harvest, as well as the short- and long-term perspectives of harvest.

**Table 4. SOUTHERN REGION FOREST GROUSE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	34	<b>0</b>	30	-100.0%	-100.0%
<b>No. of Hunters</b>	118	<b>53</b>	35	-55.1%	51.6%
<b>No. of Days</b>	389	<b>79</b>	97	-79.7%	-18.9%
<b>Birds / Hunter</b>	0.29	<b>0.00</b>	1.1	-100.0%	-100.0%
<b>Birds/Hunter Day</b>	0.09	<b>0.00</b>	0.47	-100.0%	-100.0%

**Population Status and Productivity Potential**

The Basin-Wide Precipitation Data Summary provided by the Natural Resources Conservation Service (NRCS) indicates that the winter of 2006-2007 was a dry one in much of central Nevada. Total accumulated precipitation was reported to be 72% of average at the end of

February, 2006. Due to a continued dry trend throughout the late winter, spring, and early summer, total precipitation receipts for central Nevada totaled only 74% of average by the end of July 2007. Habitat conditions were severely impacted by the lack of moisture and blue grouse production was likely hampered.

Over-winter survival of adult blue grouse is expected to have been good during the winter of 2006-2007. Not only was this past winter a very mild and dry one, but blue grouse populations also typically display a unique “reversed” migration pattern. Birds normally move to higher elevation habitats with the onset of winter and survive by roosting above ground in coniferous trees where they are protected from the elements and can feed on pine needles, often times gaining weight until spring.

### **Fall Prediction**

With regard to forest grouse and even more so than with other species of upland game, erratic fluctuations in data and small sample sizes can make post-season questionnaire data somewhat difficult to analyze. Consequently, the data that may be most helpful in making predictions in regard to blue grouse are birds per hunter and birds per hunter day. These data suggest that bird availability dropped noticeably during the 2006 season. Due to very dry conditions experienced over the past year, and the resultant impacts to habitat and upland game production, blue grouse hunting is expected to be only fair again for the 2007 season. Hunters familiar with the habits of blue grouse should be able to locate birds in their typical haunts, but they should not expect high numbers of young birds this season.

# SNOWCOCK

## EASTERN REGION

### Harvest

Between 1980 and 1994, snowcock seasons were held from September 1 through the 30<sup>th</sup>. Beginning in 1995, seasons were extended to October 15<sup>th</sup> to increase hunting opportunity and the potential to provide the opportunity to obtain higher quality capes for preparing taxidermy specimens. Opening dates are generally the Saturday nearest September 1. The snowcock season was 44 days long in 1995 and 46 days long in 1996. The 1997 season was the longest on record, running 48 days from August 29 through October 15. Beginning in 2001 the snowcock season was extended until November 15<sup>th</sup>. The 2003 season was 93 days long running from August 30 through November 30<sup>th</sup>. The 2004 season was 88 days long running from September 4 through November 30<sup>th</sup>. The extension of the season has allowed increased hunter opportunity but doesn't appear to result in a greater harvest. There was a daily and possession limit of one bird beginning with the first season held in 1980 until 2000. Beginning in 2001, the daily and possession limit was two birds. The change in limits has not affected the overall reported harvest but does provide the hunter with a rare opportunity to harvest a second bird if they are lucky.

The Department of Wildlife did not establish a hunt permit system or mandatory reporting procedure for the 1995 or 1996 seasons. Snowcock hunters reported taking six in 1995 and three snowcock in 1996. The free hunt permit system, in place since 1997, is intended to track hunter participation and harvest. Several methods have been tried to monitor harvest and hunter participation since Nevada began hunting snowcock including mandatory hunt permits, voluntary hunt permits, post-season questionnaires, and even follow-up phone surveys. Return rates of the various techniques have ranged between 33% for voluntary return to 47% for questionnaires with pre-addressed returns. In 2005, a total of 7 "mandatory" questionnaires were received and prompted yet another change in the issuance of permits. Due to the extremely low compliance rate of hunters who could easily and without expense download "free-use permits" from the internet, the Elko office staff began to collect contact information from hunters who obtained permits in person. Post-hunt follow-up calls improved reporting compliance greatly. For the 2006 snowcock hunting season, 27 questionnaires were received. Of those 27 received, 6 indicated that they did not hunt. The 21 hunters who reported spending time in the field, reported harvesting 5 birds, wounding 5 birds, and seeing 246 snowcocks during 42 days of hunting. Reported snowcock harvest has ranged between 2 and 23 birds annually and has averaged 8 birds per year since 1980. Once again in 2006, it is not possible to calculate the percent return because the total number of hunters is not known. Further changes in the permitting and reporting requirements will make significant improvements for the 2007 season and should be fully implemented and functional for the 2008 season.

### Population Status

The habits and remote habitat preference of these birds make standard population surveys extremely difficult. Random sightings and observations noted during other wildlife management activities are recorded. Snowcock density and distribution surveys were previously conducted in conjunction with helicopter mountain goat/bighorn sheep surveys. Aerial surveys conducted since 1994 indicated good distribution of birds throughout the East Humboldt/Ruby Mountain

complex in suitable habitats. Actual numbers counted have varied from the record sample of 217 birds observed in 1994 to only 79 in 1995, 83 in 1996, 73 in 1997, 95 in 1998, 73 in 2000, 68 in 2001, 80 in 2002 and 148 in 2003, and 119 in 2004. Beginning in 2005, bighorn sheep surveys and Rocky Mountain goat surveys were rescheduled to late winter to better assess lamb and kid recruitment. Unfortunately, because snowcock data were collected incidental to helicopter sheep and goat surveys, summer aerial surveys are no longer being conducted. If better knowledge on snowcock population trend and distribution is desired, it would be necessary to formalize the procedure and allocate sufficient helicopter time in order to better assess snowcock population and distribution.

### **Productivity Potential**

Climatic conditions for the past few years were represented by average winters with relatively harsh spring weather in occupied snowcock habitat. During the 2006 breeding and nesting periods, a below average snow pack was present and drought conditions existed, potentially negatively affecting nesting success and brood survival. The snowcock population appears to be at low to moderate levels at the current time based on limited observations from hunters and helicopter surveys. More intensive survey work would be needed to adequately assess snowcock population condition and trend.

### **Fall Prediction**

Climatic conditions, habitat preference, the snowcocks wary nature, and the current low to moderate population level are expected to keep harvest levels low. Bird availability is expected to be fair to poor during the 2007 hunting season and harvest is expected to remain at a low level.

## CHUKAR & HUNGARIAN PARTRIDGE

**Statewide Hunting Season:** The 2006-07 chukar and Hungarian partridge hunting season opened on October 14th and ended on January 31<sup>st</sup>, 2007. The daily bag limit was six partridge with 18 birds allowed in possession. The new 18 bird possession limit was established to allow hunters an opportunity to spend more time in the field pursuing these species. Limits were singly or in aggregate for the two species.

### WESTERN REGION

#### Harvest

The 10% hunter questionnaire provided the following expanded chukar harvest information for the 2006-07 hunting season:

**Table 1. WESTERN REGION CHUKAR HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	85,323	<b>75,787</b>	52,285	-11.1%	45.0%
<b>No. of Hunters</b>	9,248	<b>7,739</b>	6,632	-16.3%	16.7%
<b>No. of Days</b>	41,798	<b>42,263</b>	26,476	1.0%	59.7%
<b>Birds / Hunter</b>	9.3	<b>9.8</b>	7.7	5.4%	27.3%
<b>Birds/Hunter Day</b>	2.04	<b>1.8</b>	1.9	-11.7%	-5.2%

A total of 75,787 chukar were harvested in the Western Region during the 2006-07 hunting season. This was a decrease of approximately 11% from the very high harvest level obtained in 2005. The 2006-07 harvest represents the sixth highest harvest level since 1976. However, the reduction in the number of birds harvested this past year was mainly attributable to the reduced number of chukar hunters in the field in 2006-07. Hunter participation data show that just over 16% fewer hunters participated in chukar hunting this past year when compared with the number of hunters in the field in 2005-06. The fairly significant decline in hunter participation led to the decrease in the total number of birds harvested in the Western Region.

The birds per hunter average of 9.8 birds per hunter for the 2006 hunting season indicates that the 2006-07 hunting season was a successful chukar hunting season for many hunters. However, it appears that the hunters who hunted during the 2006-07 hunting season had to expend more time in the field to harvest birds. Despite, having 16% fewer hunters in the field when compared with the 2005-06 season, the average number of days hunted actually increased over the previous year's data and remained approximately 60% above the long-term average. Hunters were slightly less successful in bagging chukar on a daily basis as is shown in the slight reduction in the number of birds killed per day category. Overall, hunters enjoyed another very successful chukar hunting season and continue expending considerable time in the field pursuing them.

Hunters enjoyed very good chukar hunting in several of the counties within the Western Region this past year. Humboldt, Washoe, Pershing, Churchill and Storey Counties all reported better than average hunter harvest and success rates. All counties mentioned above had an average greater than 8 birds harvested per hunter in 2006-07. These same areas of the state also reported an average of near or greater than 2.0 birds harvested per day. The highest average for birds harvested per day was 2.67 chukar per day back in 1980.

The 75,787 birds harvested within the Western Region represented 73% of the statewide total chukar harvest. This is very similar to past years where harvest in the Western Region has been generally between 70 and 75% of the total statewide harvest. Hunters who expended time hunting in Humboldt, Washoe and Pershing Counties harvested approximately 82% of the total birds harvested from the Western Region.

Hunters averaged 9.8 birds per hunter in the Western Region during the 2006-07 hunting season. This is slightly above the 2005-06 average of 9.3 birds per hunter. Between 2003 and 2006 hunters have enjoyed good to excellent chukar hunting due to consecutive years of good recruitment and strong adult base population levels.

However, the extremely dry conditions throughout the fall and winter of 2006-07 and the resulting lack of green-up available, is believed to have negatively impacted chukar populations in the Western Region. Early in the hunting season (October), “young of the year” were well represented in the harvest. However, by November and December, most hunters reported observing and harvesting low numbers of young birds in their bag limits. The lack of nutritious feed (green-up) over a several month period is thought to have resulted in significant mortality of the young birds. Adults are also believed to have been in only fair to poor condition through the winter and some winter mortality may have occurred. Chukar hens are also believed to have been in only fair condition entering into the breeding season. Although, some moisture was received from scattered thundershowers, nest success and brood survival for chukar this past summer was generally poor.

Preliminary brood count data collected by NDOW biologists show many areas having little to no production while a few areas appear to have limited production. Overall, recruitment of young birds in the Western Region is expected to be poor to very poor in 2007-08. The extended drought has led to poor habitat conditions and has significantly reduced the water sources available to chukar and other wildlife. Good quality forage has been virtually non-existent for most of the year. Competition at existing water sources between wildlife, livestock and horses has increased dramatically this summer. Summer precipitation from thundershowers has also been below average in most areas, contributing to the decline in habitat conditions. Adult base population levels are expected to be at moderate levels but reduced from the population levels observed over the past few years. A majority of the chukar harvested during the upcoming hunting season will be made up of mostly adult birds. If the drought conditions continue into the fall, chukar will be concentrated around the limited number of water sources available.

**Table 2. WESTERN REGION HUNGARIAN PARTRIDGE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	1,280	<b>2,961</b>	1279	131%	132%
<b>No. of Hunters</b>	807	<b>1,003</b>	441	24%	128%
<b>No. of Days</b>	3,157	<b>3,918</b>	1263	24%	210%
<b>Birds / Hunter</b>	1.59	<b>2.95</b>	2.8	86%	5%
<b>Birds/Hunter Day</b>	0.41	<b>0.76</b>	1.0	85%	-24%

As is usually the case, the majority of Hungarian partridge harvest within the Western Region occurs in Humboldt County. Humboldt County also represents over 40% of the total statewide harvest of Hungarian partridge. Other incidental harvest within the Western Region occurs in Washoe and Pershing Counties. For the second year in a row, harvest of Hungarian partridge was reported in Lyon County. The data appears to be inaccurate due to the fact that there are no known populations of Hungarian partridge existing in Lyon County.

The number of hunters and the amount of time hunters expended hunting for Hungarian partridge increased by 24% over the 2005-06 hunting season. The harvest of “Huns” increased dramatically this year compared with the previous hunting season and was well above the ten-year average of 1279 birds. The harvest of 2,961 “huns” ranks as the third highest harvest level since records have been kept in 1976. Hunter success rates increased significantly when compared with the 2005-06 hunting season but remain near average when compared with the long-term averages. More hunters participated in chasing Hungarian partridge and also expended more days in the field.

### **Population Status**

Adult base populations remain strong but are reduced from those levels enjoyed over the last few years. Recruitment of young birds is expected to be very poor this year. This will result in decreasing trends for chukar populations in the Western region. Drought conditions continue as of this writing and habitat conditions are worsening as the long dry summer progresses. Little to no precipitation has been received from summer thundershowers. Water availability for chukar is limited and much reduced from what has been observed over the past two years. Chukar are having to adapt to increased competition for food water and space due to the extended drought. With the current habitat conditions chukar are merely in a “maintenance mode” and body condition of the birds is expected to be only fair going into this fall and winter. Significant moisture is needed that will help provide chukar with green-up and to improve water flows to springs and other water sources. A good green-up would help to build-up fat reserves in chukar for the upcoming winter.

### **Productivity Potential**

Precipitation received this past winter was well below normal throughout the western region. Unfortunately, the dry conditions lasted into the spring and summer of 2007. Some moisture was received this past spring but the dry conditions returned by early summer and lasted throughout the summer months. Survival of young birds was poor through the winter and the body condition of adult birds was only fair entering into the nesting season. During the summer of 2007, NDOW biologists have observed very poor production and expect recruitment of young birds to be poor in northwestern Nevada. Significant moisture is needed to help reverse declining habitat trends.

### **Fall Prediction**

The upcoming hunting season is expected to be fair to good with the majority of harvest consisting of adult carryover from previous years. Adult population levels are at moderate levels but recruitment of young birds is expected to be very low. Hunters may find that chukar and “huns” are concentrated around the limited water sources early on in the season; however, the

birds encountered will be mostly made up of wary adult birds that could make hunting more difficult once precipitation scatters the birds. Overall, harvest is expected to decline in 2007-08 due to the low production over the last two years. Hunters will have to work harder to harvest a few less birds. Hungarian partridge production and recruitment is expected to mimic that of chukar and hunter success rates and the harvest of huns will also be reduced. Overall, hunters will have a more difficult time this upcoming season harvesting the same number of birds that they have become accustomed to over the past few years. The adult birds will become harder and harder to approach as the hunting season progresses.

## EASTERN REGION

### Harvest

**Table 3. EASTERN REGION CHUKAR HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	30,477	<b>25,463</b>	21,221	-16%	+20%
<b>No. of Hunters</b>	4,095	<b>2,869</b>	2,914	-30%	-2%
<b>No. of Days</b>	17,987	<b>13,479</b>	11,727	-25%	+15%
<b>Birds / Hunter</b>	7.4	<b>8.9</b>	7.0	+20%	+27%
<b>Birds/Hunter Day</b>	1.7	<b>1.9</b>	1.8	+12%	+6%

Although the 2006 Eastern Region estimated chukar harvest total diminished slightly from the previous year, it nevertheless remains above the preceding ten-year-average. Estimates derived from the questionnaire suggest that hunter numbers declined by a significant amount compared to the previous year as did the days they spent in the field. Chukar hunting was exceptionally good throughout the state in 2005, owing to very favorable environmental factors and the resultant high production and recruitment rates. Hunters responded to this during the 2005-06 season, partially prompted by optimistic reports given by NDOW. However, it became apparent that the numbers were not sustained into 2006. Furthermore, in December 2006 and January 2007 the range occupied by chukar did not receive the same snow coverage that had given hunters a considerable advantage in the previous hunting season.

**Table 4. EASTERN REGION HUNGARIAN PARTRIDGE HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	1,488	<b>1,373</b>	1,621	-8%	-15%
<b>No. of Hunters</b>	807	<b>864</b>	511	+7%	+69%
<b>No. of Days</b>	3,434	<b>2,684</b>	1,628	-22%	+65%
<b>Birds / Hunter</b>	1.8	<b>1.6</b>	3.1	-11%	-48%
<b>Birds/Hunter Day</b>	0.4	<b>0.5</b>	1.1	+25%	-55%

Hungarian partridge harvest and hunter participation in the Eastern Region were statistically similar to the previous year's values, respectively. The lowest Hun harvest on record was 66 birds in 1994. The highest reported Hun harvest was 7,011 birds in 1974.

## Population Status

Chukar and Hungarian partridge populations were extremely low following several years of drought and the harsh winter of 1992-93 but exhibited a remarkable recovery between 1997 and 1999. Population data collected since 2000 suggest partridge populations were high in the Region.

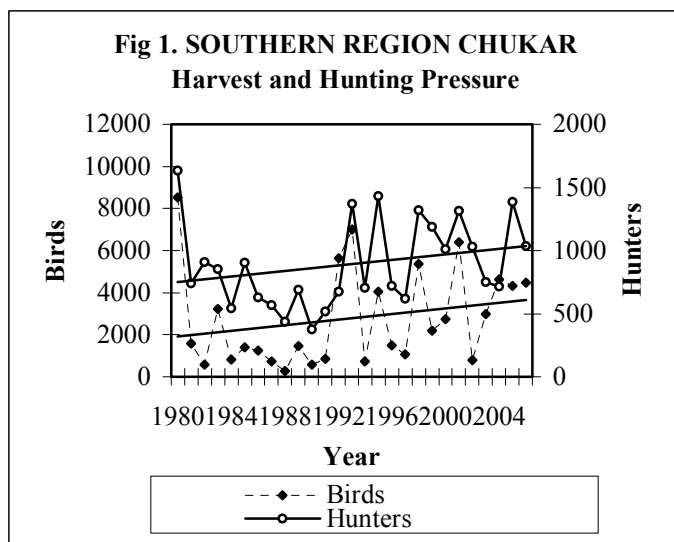
The region's brood production survey sample increased from 660 chukar observed in 2005 to 728 chukar in 2006, comprised of 383 adults and 345 young (90 young/100 adults). Brood sizes also decreased between 2005 & 2006 with 29 complete broods seen in 2005 averaging 7.7 chicks per brood compared to 16 complete broods seen last year. Last year's average brood was 6.8 young/brood. The diminished recruitment was mentioned previously as a probable reason for the decreased harvest in 2006-07. Due to extremely unfavorable climatic conditions (see climate report – p. 27) recruitment again decreased again this summer. Biologists observed a fair number of birds, but the 710 bird sample was comprised of 472 mature birds and only 238 young, a dismal productivity rate of only 50.0 young/100 adults. A few complete broods were observed and they averaged an impressive 8.5 chicks per brood. But the collective sample tells a story of overall nest failure or very poor brood survival. Hun production was expected to be poor based on habitat conditions and observations of chukar broods in Lander County. In spite of early reports of good chukar production, devastating summer wildfires have again destroyed a significant amount of chukar habitat in some places north of I-80 in Elko County.

## Fall Prediction

Chukar hunters are expected to experience only fair chukar hunting in the Eastern Region in 2007 especially in freshly burned areas. Hungarian partridge hunting is expected to be fair and mostly incidental to chukar hunting.

## SOUTHERN REGION

### Harvest



On occasion, a few sportsmen report the harvest of a small number of Hungarian partridge in the Southern Region, the species does not typically occur in the Southern Region and the remainder of this report will deal solely with chukar partridge.

Figure 1 illustrates chukar harvest and hunting pressure trends for the Southern Region, based upon post-season questionnaire data for the 1980-06 period. Data for the 2006-07 season indicate a harvest of 4,472 chukar by 1,034 hunters. A total of 3,459 days of

effort was expended by sportsmen this past season. In comparison, 2005-06 data showed a harvest of 4,335 chukar by 1,385 hunters. While harvest levels for the 2005-06 and 2006-07 seasons were nearly identical, fewer sportsmen took to the field during the 2006-07 season. Data also indicates that even though fewer sportsmen took to the field this past season, bird availability, and therefore chukar hunting overall was improved over the 2005-06 season. Although the actual numbers can vary greatly year to year, the trend lines in Figure 1 above make it apparent that overall hunter participation and the total number of birds harvested has been increasing over the past 20 years in the Southern Region. The rapid population growth in Clark County is almost certainly the reason behind the increase.

**Table 5. SOUTHERN REGION CHUKAR HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	4,335	4,472	<b>3,198</b>	3.2%	39.8%
<b>No. of Hunters</b>	1,385	1,034	<b>1,014</b>	-25.3%	2.0%
<b>No. of Days</b>	4,869	3,459	<b>3,574</b>	-29.0%	-3.2%
<b>Birds / Hunter</b>	3.13	4.32	<b>3.07</b>	38.2%	37.8%
<b>Birds/Hunter Day</b>	0.89	1.29	<b>0.94</b>	45.2%	48.6%

### **Population Status**

Favorable moisture patterns during the 2004-2006 period resulted in an increase in chukar populations throughout central Nevada over the past few years. Unfortunately, very dry conditions returned to central Nevada during the latter part of 2006 and into the summer of 2007. While adult carryover was good due to a mild and dry winter, production during the spring of 2007 was severely hampered by poor range conditions, resulting in a decrease in chukar populations in Nye and Esmeralda counties.

Chukar populations inhabiting Lincoln County had been doing well for the past few years. Although recent wildfires have increased chukar habitat overall in Lincoln County, production was hampered this spring due to very dry conditions and chukar populations will have to wait for more favorable circumstances to expand into new areas.

Despite a relative boom in chukar populations in 2001, typical dry Mojave Desert conditions have returned to Clark County. Overall, this portion of the Southern Region has experienced dry conditions since November 2005, and the past year has been even worse. Chukar populations are expected to remain at low levels in most areas until there is a return to more favorable conditions.

### **Productivity Potential**

The Basin-Wide Precipitation Data Summary provided by the Natural Resources Conservation Service (NRCS) indicates that the winter of 2006-2007 was a dry one in much of central Nevada. Total accumulated precipitation was reported to be 72% of average at the end of February, 2006. Due to a continued dry trend throughout the late winter, spring, and early summer, total precipitation receipts for central Nevada totaled only 74% of average by the end of July 2007. Habitat conditions were severely impacted by the lack of moisture and chukar production was hampered.

Conditions were poor for chukar production in Lincoln County as well. Wildfires experienced during the summer of 2005 burned vast acreages in several mountain ranges, and while they are too recent to have benefited chukar to date, in the long-term, chukar populations should greatly benefit from the fires. Particularly hard hit were the Delamar, Meadow Valley, Mormon, and Clover Mountains.

Chukar populations in Clark County experienced poor production this past spring. Very productive years are relatively rare in the Mojave Desert country of Clark County, and populations are not expected to see an increase in 2007.

Limited, preliminary brood survey data collected up to this point during 2007 indicate that chukar populations in Nye and Esmeralda counties are experiencing poor production.

### **Fall Prediction**

The 2007-08 chukar season is expected to be fair in the northern portion of the Southern Region. Sportsmen taking to the field this season should encounter fair numbers of adult birds, but the absence of young of the year birds will make hunting much more of a challenge. In Lincoln County, the outlook is also fair. Production was good during the spring of 2006, and adult birds should have carried over the winter well, but as in central Nevada, an absence of young birds this season will challenge hunters. Bird availability in Clark County is expected to be below average. Chukar populations remain in historic “hot spots”, but overall, the season outlook is poor for most of Clark County.

## QUAIL

The 2006-07 statewide quail hunting season in Nevada ran from October 14<sup>th</sup> through January 31<sup>st</sup>, 2007. Limits were 10 daily and 20 in possession singly or in the aggregate of Gambel's, California and scaled quail. Specific limits for mountain quail were established at two daily and four in possession.

### WESTERN REGION

#### Harvest

**Table 1. WESTERN REGION QUAIL HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	13,452	20,393	<b>26,462</b>	52%	-23%
<b>No. of Hunters</b>	1,706	2,128	<b>3,153</b>	25%	-33%
<b>No. of Days</b>	7,213	9,764	<b>11,987</b>	35%	-19%
<b>Birds / Hunter</b>	7.9	9.6	<b>8.4</b>	22%	15%
<b>Birds/Hunter Day</b>	1.9	2.1	<b>2.2</b>	12%	-5%

Information gathered from hunters using post-season questionnaire surveys indicates that harvest during the 2006-07 quail season increased from what was reported in 2005 but still remains below long-term trends.

#### Population Status

Both Mountain and California quail are pursued by upland hunters in the Western Region. Mountain quail make up only a very small portion of the total quail harvest within the Western Region. This past year hunters reported harvesting approximately 1,100 mountain quail or six percent of the total quail harvest in the western region. The top three mountain quail producing counties during this past season were Douglas, Lyon and Pershing.

California quail are generally associated with vegetation surrounding rivers, wetlands and mountain springs and seeps. They also can be found in association with agricultural areas and within urban settings. In northwestern Nevada, drainages with good willow cover and small associated riparian areas provide good quality California quail habitat and provide an additional species to hunt for those out pursuing chukar in the same vicinity.

#### Productivity Potential

This past winter, spring and summer period was one of extremes with record low and high temperatures and very low levels of precipitation. With the exception of record low temperatures during late December and early January there was little in the way of weather events occurring this past winter that would have impacted base populations of quail. However, precipitation needed to stimulate production during the early spring and summer never materialized. Although no formal brood surveys were conducted in the northwest for either species of quail, general observations indicate relatively poor production rates in most areas where quail have been found.

## **Fall Prediction**

Quail populations within the Western Region are thought to be at moderate levels due to good production and recruitment which occurred during the previous two years. Hunters should find relatively decent numbers of California quail to pursue in the agricultural areas and in areas surrounding the urban interface. California quail numbers in upland areas will be below levels observed during the last two years because of low production rates during this past summer. Mountain quail will still be available to the hunter in the mountains where they exist, but will continue to be a challenge to locate in the vast amount of habitat available to them.

## **EASTERN REGION**

### **Harvest**

**Table 2. EASTERN REGION QUAIL HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	242	787	297	+225%	+165%
<b>No. of Hunters</b>	48	49	112	+2%	-56%
<b>No. of Days</b>	140	221	341	+58%	-35%
<b>Birds / Hunter</b>	5.0	16.0	2.1	+220%	+662%
<b>Birds/Hunter Day</b>	1.7	3.6	0.9	+112%	+300%

The Post-season Questionnaire data support an Eastern Region quail harvest estimate that is a significant increase compared to the previous year. Questionnaire sample sizes are always small for the region since quail hunting is relatively limited; this year's estimated California quail harvest representing only 4% of the statewide total. Thus the data are not very robust and estimated harvest and hunter values generally have poor confidence intervals.

### **Population Status**

The base population of quail was reduced by the severe winter of 1992-93. There were 675 mountain quail from China Lake Naval Air Weapons Station released into Elko and Lander counties between 1993 and 1996 and between 2000 and 2002 (87 mountain quail were released along McDonald Creek in the Bruneau River drainage in the spring of 2002). In addition, 218 California (Valley) quail were released into Lander and White Pine counties in 1996 and forty California quail were released at the Baker Silver Creek Ranch in White Pine County in the spring of 2004. A follow-up release of 41 California quail (14 males, 27 females) was made at the Baker's Silver Creek Ranch in 2005. Brood surveys, sightings, harvest and hunter-day data indicate quail populations remain at low levels throughout the Eastern Region with a few more sightings and reports received during the summer of 2007 in Elko County.

### **Fall Prediction**

Eastern Region quail populations are very low compared to most of the State. Small quail populations in some portions of the Region will again provide limited hunting during the 2007 season. Quail hunting overall should be poor with most quail harvested by hunters pursuing other species such as rabbits and chukar.

## SOUTHERN REGION

### Harvest

**Table 3. SOUTHERN REGION GAMBEL'S QUAIL HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	20,241	<b>17,861</b>	17,089	-11.8%	4.5%
<b>No. of Hunters</b>	1,443	<b>1,981</b>	2,126	37.3%	-6.8%
<b>No. of Days</b>	6,656	<b>7,280</b>	8,350	9.4%	-12.8%
<b>Birds / Hunter</b>	14.03	<b>9.02</b>	8.34	-35.7%	8.2%
<b>Birds/Hunter Day</b>	3.04	<b>2.45</b>	2.04	-19.4%	19.9%

Based on hunter questionnaire data for the Southern Region, 1,981 hunters harvested 17,089 Gambel's quail during the 2006-2007 season. This total represents an 11.8% decrease from the 2005-2006 quail season. Quail harvest, birds per hunter, and birds per hunter day were all down compared to the 2005-06 season. However, number of hunters and number of hunter days were both up compared to the 2005-06 season. Number of birds harvested, birds per hunter, and birds per hunter day were above the ten-year average, while numbers of hunters and hunter days were below the ten-year average. The following table presents current harvest figures as well as short- and long-term harvest perspectives.

**Table 4. SOUTHERN REGION QUAIL HARVEST BY COUNTY**

	2005-2006	2006-2007	% Difference
<b>Clark</b>	14,460	11,545	-20%
<b>Esmeralda</b>	102	178	+74%
<b>Lincoln</b>	4,328	4,157	-4%
<b>Nye</b>	1,352	1,981	+46%
<b>Total</b>	<b>20,241</b>	<b>17,861</b>	<b>-11.8%</b>

Clark County supported the highest percentage of the harvest for the region at 65%. Lincoln County was next with approximately 23% of the Gambel's quail harvested, followed by Nye at 11%, and Esmeralda with 1%.

### Population Status

Drought conditions prevailed throughout much of the spring and summer in the Southern Region. Late summer precipitation may allow existing birds to enter the fall and winter in moderate condition. Quail populations are moderate throughout most of the Southern Region. Quail harvest showed a decrease in the 2006-07 season likely due to habitat conditions that were not as favorable as those observed in 2005.

### Productivity Potential

Limited brood surveys during the summer of 2007 resulted in the classification 93 Gambel's quail. All birds were classified in Lincoln County and consisted of 21 adults and 72 young. The average brood size was 8.1 chicks.

### **Fall Prediction**

According to the Department of Energy - CEMP, precipitation in southern Nevada was anywhere from 40-50% below average. The combination of a mild winter, dry spring and summer likely resulted in a poor to moderate year for upland species throughout much of the Southern Region. Moderate precipitation during the late summer of 2007 may result in good survival of quail. Isolated summer thundershowers may result in areas with moderate to good range conditions that will benefit quail. Gambel's quail populations are at low to moderate levels, with most areas experiencing low to moderate production that may lead to average numbers this fall and potential decreases in harvest.

# PHEASANT

The 2006 statewide pheasant season in Nevada ran from November 4<sup>th</sup> through December 3<sup>rd</sup>. Limits were two cocks daily and four in possession. Natural reproducing populations of pheasants exist in only a few of Nevada's counties.

## WESTERN REGION

### Harvest

**Table 1. WESTERN REGION PHEASANT HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Birds</b>	271	<b>341</b>	798	25%	-57%
<b>No. of Hunters</b>	195	<b>199</b>	603	2%	-67%
<b>No. of Days</b>	596	<b>442</b>	1,219	-26%	-64%
<b>Birds / Hunter</b>	1.39	<b>1.71</b>	1.4	23%	24%
<b>Birds/Hunter Day</b>	0.50	<b>0.77</b>	0.7	69%	17%

The Western Region pheasant harvest last year was 341 birds according to the post-season questionnaire data (Table 1.). This represents a harvest increase of 25% over the 2005 harvest of 272 birds. Hunter participation was similar to last year's efforts and continues to remain low and well below the 10-year average. Humboldt County continues to regularly produce the most harvest in the state. A total of 268 birds were harvested in Humboldt County in 2006. This represents 69% of the statewide harvest. Pershing and Washoe Counties ranked second and third respectively in number of birds harvested in 2006 within the Western Region.

### Population Status

Based on past harvest questionnaire data, the pheasant population throughout the Western Region is at low levels. The population in Humboldt County appears to be stable. Evidence of stability is supported by consistent kill/hunter at 1.81 birds, which is near the 10-year average of 1.72. During the last 10 years, pheasant harvest in Humboldt County peaked in 2003 when 1,202 birds were taken by an estimated 411 hunters. Since then, current harvest has tapered off to 268 birds harvested by 148 hunters in 2006.

The pheasant population at Mason Valley Wildlife Management Area (MVWMA) in Lyon County, also appears to be stable and at low numbers at this time. This is based upon pheasant crow call counts, which are recorded on the area in the spring for an expended time of six weeks and random sightings by area personnel. In 2007, the crow call count average was 12.8 calls/week, which is near the 3-year average of 14.79 calls/week.

Farming practices in Humboldt County and MVWMA continue to favor delayed cutting of alfalfa, which is crucial to hens and broods that prefer to utilize these areas during the nesting/brood period. Both of these areas also support healthy stands of buffalo berry that aid in providing escape and thermal cover throughout the year. Other agricultural areas in the Western Region still utilize the most efficient methods of farming, which does not benefit pheasant propagation. Urbanization

of agricultural areas has also lead towards a declining and non-existed pheasant population in many of the Region's counties.

### **Productivity Potential**

In spite of experiencing below average precipitation last winter and into the summer months, many of the Region's agricultural areas were allocated with full water rights. Additionally, a large portion of the regions agricultural areas pump water for irrigation and usually provide dependable year round habitat for pheasants. This year, Western Region biologists have noted good habitat conditions on irrigated fields and that pheasant production was fair.

### **Fall Prediction**

Pheasant harvest and hunter participation now appears to have remained stagnate and at low levels. Even though production was thought to be fair, hunters who chose to hunt in Humboldt County this year should experience bird numbers similar to last year because a good number of carry over birds exist in the county. Pheasant hunting throughout the rest of the Western Region will probably remain poor with many hunters relying on pen raised birds.

## **SOUTHERN REGION**

**Harvest** - In 2006, questionnaire data suggested no pheasants were harvested.

### **Population Status**

The small pheasant population in Moapa Valley has been impacted by protracted drought conditions, habitat loss and high predation rates. Department personnel on OWMA indicated no pheasants have been observed on the management area thus far in 2007. Presently, there are no data or accounts that would suggest a viable pheasant population exists in Moapa Valley.

Re-establishment of a viable pheasant population would likely require releases of wild birds, adequate precipitation, habitat conservation, and, pending the determination of overall effectiveness, continuance of raven control.

### **Fall Prediction**

Pheasant hunting opportunities in Moapa Valley are extremely limited, perhaps nonexistent. In recent years, opportunities to hunt pheasants in the Southern Region have declined steadily due to downward population trend and habitat loss. Presently, the pheasant population in the Moapa Valley is not deemed viable.

# TURKEY

Harvest data for both fall and spring turkey hunts are obtained through a directed post-season questionnaire sent to every tagholder. Specific information is obtained through a series of questions and generally return rates are quite high. Accordingly, the harvest information presented within this report a fairly accurate representation of actual harvest rather than an estimate of harvest as done for other small game species.

## WESTERN REGION

### Harvest

#### *Fall 2006*

The fall 2006 hunt period allowed the harvest of one turkey of either sex. Mason Valley Wildlife Management Area (MVWMA) had limited entry hunts for wild turkey in the fall to control overcrowding on state administered lands. The MVWMA hunt periods were broken up into two seven-day hunt periods and one eight-day period. The first hunt period began on October 7<sup>th</sup> and the last one concluded on October 29<sup>th</sup>. Quotas were 15 resident tags per hunt period, with the drawing administered by Wildlife Administrative Services. Lyon and Churchill counties had open quotas for the fall hunts in 2006. This opportunity was available to both resident and non-resident hunters. This particular season extended from October 7<sup>th</sup> through November 5<sup>th</sup>. The Churchill County fall turkey hunt was discontinued in 2007 due to low overall hunter success.

**Table 1. FALL 2006 TURKEY HARVEST – WESTERN REGION**

Area	# Tags Issued	Percent Return	# Turkeys Harvested	Overall % Success	% Success Participants*
<b>MVWMA</b>	45	93%	18	40%	52%
<b>Churchill County</b>	19	100%	3	16%	19%
<b>Lyon County</b>	53	88%	15	28%	41%

*\*Participant* success determined by dividing harvest by the number of hunters reporting that they hunted.

MVWMA hunter effort averaged 2.3 days per hunter, a slight increase from 2.0 days reported in 2005. The average number of days that hunters expended scouting prior to their hunt remained about the same at 1.0 days per hunter in 2006. Scouting for wild turkeys on the MVWMA has enabled hunters to improve there familiarity with the area and has enhanced their overall success.

During the fall hunt periods large groups of turkeys from the MVWMA congregate on adjacent private land. This congregation is either a result of turkeys seeking out new foraging areas or a product of higher levels of activity within the MVWMA because of other concurrent seasons. Turkey distribution can be influenced by many factors that affect movement in and out of the MVWMA including fall upland and waterfowl hunting. Hunter success rates decreased this year on the MVWMA compared with the previous fall hunting season, which indicates that turkey abundance was lower on the MVWMA. Conversely, fall hunter success increased significantly in the Lyon County open quota hunt.

Hunter response was 100% in Churchill County in 2006 as 19 questionnaires were returned. Three of the 19 hunters indicated that they did not hunt. Of 16 hunters, 3 harvested turkeys, two of which reported harvesting on public lands. Turkey hunters reported seeing few birds. Turkey distribution and availability during the hunting season can seriously influence hunter success rates. Because of the low overall success rate for harvest and low overall densities of turkeys in Churchill County, the fall 2007 season was closed indefinitely. If overall turkey distribution and densities increase in Churchill County the fall hunt could be reopened in the future.

Hunter response was also 100% for the Lyon County open quota hunt in 2006 as 53 hunters returned harvest questionnaires. Of these, 16 indicated that they did not hunt. The 37 participating hunters harvested 15 turkeys, distributed primarily on private lands around Mason Valley. The hunters had predominantly positive remarks about the fall hunt and indicated good numbers of birds being observed. An interesting note is that 73% of the birds harvested outside of the MVWMA during the fall hunt were toms.

### *Spring 2007*

The MVWMA had five hunt periods with the first beginning on March 31<sup>st</sup> and the last concluding on May 6<sup>th</sup>, 2007. The different hunt periods included 12 resident and one nonresident tag. Churchill, Lyon and Pershing County “open quota” seasons opened on April 7<sup>th</sup> and lasted through May 6<sup>th</sup>. The “open quota” system allows any hunter the opportunity to take to the field each season to hunt any bearded turkey.

In the Paradise Valley of Humboldt County, an “open quota” system is also in place; however, this hunt stipulates that persons wishing to participate in this hunt obtain permission from a Paradise Valley private landowner and submit a form provided by the landowner before hunting. A tag is then issued by the NDOW license office.

**Table 2. SPRING 2007 TURKEY HARVEST – WESTERN REGION**

Hunt Area		# Tags Issued	#Questionnaires Returned	DNH	Number Successful	Percent Success*
Mason Valley WMA		65	64	8	30	54%
Lovelock Valley		52	37	9	9	32%
Open Quota Areas	Lyon County	243	170	41	23	18%
	Paradise Valley	52	41	2	23	59%
	Churchill County	97	77	25	9	17%
<b>Western Region Totals:</b>		<b>509</b>	<b>389</b>	<b>85</b>	<b>94</b>	<b>36%</b>

\**Participant* success determined by dividing harvest by the number of hunters reporting that they hunted.

The overall success for turkey harvest in the western region is down from what was reported in 2006. On the MVWMA hunter success was slightly below what was reported last year although bird observations by hunters increased slightly. Paradise Valley of Humboldt County also showed a decrease in overall success. Increased hunter activity may cause birds to be more reclusive in nature and could have attributed to lower overall success in Paradise Valley. Hunter participation increased for several open quota units. Paradise Valley issued 52 tags this year compared to 9 tags last year resulting in an increase in hunter participation of 470%. Lyon County issued 243 tags compared to 107 tags last year resulting in an increase of 127%. The demand by hunters for hunting wild turkeys in Nevada is quite significant when you look at the demand for the open quota seasons.

Lahontan State Recreation Area (LSRA) located in Churchill County and Lyon County has been a difficult place for hunters to find and harvest birds. Churchill County hunter success rates can fluctuate from year to year depending upon the hunter's ability to acquire access to private lands. Turkeys in Churchill County are spread out across a large geographic area and are distributed in a few small flocks. The distribution and the size of the flocks can sometimes limit the hunter's ability to find turkeys during the hunting season.

Pershing County hunters experienced an increase in hunter success when compared with the hunting season of 2006. Hunter success rates increased from 9% in 2006 to 32% in 2007. Hunters have traditionally had a difficult time accessing private lands within the Lovelock Valley. Public lands in the area provide limited opportunity and success. The Nevada Department of Wildlife (NDOW) has gone through extensive efforts to caution hunters about applying for open quota units if they have little opportunity to hunt private property.

### **Population Status**

Wild turkey populations seem to be stable to increasing at this time in the MVWMA. Lyon County hunters outside of the MVWMA also reported seeing large congregations of turkeys. The consistent sightings of large flocks in Lyon County indicates stable to increasing populations in the Mason Valley area. The last augmentation of Rio Grande Turkeys occurred in January of 2006 in which 46 turkeys were released onto the MVWMA. Quick responses in productivity following initial releases are not uncommon while the new species and other elements of the local ecosystem adjust.

Populations elsewhere within the Western Region continue to exist at densities that are probably ecologically static. Predation is a factor affecting wild turkey populations within their occupied habitats. Agricultural practices also play an important role in hen and brood survival. The conversion of desert shrub to garlic and onion production has a negative impact on turkey survival. The desert shrub communities provide needed cover and protection for hens and their broods.

At the MVWMA, the Nevada Department of Wildlife has the ability to harvest crops later in the year, which provides needed cover and insects for hens to raise their broods. This allows a hen and its young ample time to grow before the harvest of a crop occurs. In other private land areas managed for agriculture, brood survival can be diminished if the harvest of crops coincides with nesting and brood rearing. High hen mortality is expected in agricultural fields that usually contain ample nesting cover. Tall and dense cover is the preferred nesting habitat for the wild turkey. Hens are reluctant to move off a nest if a combine is cutting a field and direct mortality can be a limiting factor.

The Pershing County turkey population appears to be composed of a few flocks that range in size. The first introductions of wild turkeys in Pershing County occurred in the late 1990's. Observations from hunters indicate sizable groups of birds located on private property in Lovelock Valley. In 2006, 35 hunters reported taking 3 turkeys for a success rate of 9%. In 2007, 28 hunters reported taking 9 turkeys for a 32% success rate. Hunters stated seeing very few mature gobblers on their hunts. The increase in hunter success rate for the 2007 spring hunt could be correlated to the fact that 4 out of the 9 successful hunters live in Lovelock Valley, which may contribute to better familiarity with the land and private landowners.

In Paradise Valley of Humboldt County, the turkey population continues to exhibit a stable to increasing population trend. Of the 23 successful hunters, 22 took mature gobblers and observed large flocks of turkeys on their hunts. One of the most noticeable changes for the 2007 season was the increase of hunters in the field in this area. In 2006, 9 hunters took to the field compared to 50 hunters in 2007.

### **Production**

No turkey production surveys were conducted on MVWMA in 2007. The drought like conditions we experienced this last year is considerably worse than previous drought years. Adequate cover of standing crops in the MVWMA should have allowed for some turkey production and increased survival for hens and their broods. The resiliency of the wild turkey and its ability to adapt to climate changes and habitat conditions contribute to their success as a species. Agricultural and riparian areas provide important elements that are needed for the success of the species. Without these areas and their interface with adjacent desert scrub habitats, the wild turkey would have a difficult time sustaining itself in Western Nevada.

## **EASTERN REGION**

### **Harvest**

During the 2007 spring hunt, the two units within the Eastern Region that had turkey hunts were Hunt Unit 102 in Elko County and Hunt unit 103 in Elko and White Pine Counties. Hunt Unit 102 (Lamoille) offered 26 spring turkey tags. Twenty-two of the hunters reported spending 26 days scouting and 64 days hunting. Two tag-holders reported not hunting. Thirteen turkeys were harvested (65% success) including 10 toms and 3 jakes. No birds were reported lost during the Unit 102 hunt. The Unit 103 hunt (South Ruby) in Elko and White Pine Counties offered 16 spring turkey tags. Fourteen of the hunters reported spending 57 days scouting and 57 days hunting. Two tag-holders reported not hunting. Six turkeys were harvested (43% success) including 2 toms and 4 jakes.

In unit 102, hunter success increased from 36% success in 2006 to 65% in 2007 (81% increase). Success in Unit 103 likewise increased from 13% in 2006 to 43% in 2007 (231% increase). Hunt success for both hunts was closer to success rates from two years ago (2005) after low success rates in 2006. A mild spring in 2007 likely allowed for greater uphill movement of turkeys away from private lands to public lands where access is more available to hunters. This certainly gave hunters an advantage over the 2006 hunt that had deep spring snow accumulations that kept turkeys on private land.

### **Population Status**

No turkeys were released in the Eastern Region during 2006. The Ruby Mountain turkey populations in Units 102 and 103 are doing well. Frequent turkey observations from Lamoille, the South Ruby Range and the South Fork area were reported in 2004 through 2007 and both of these populations are gradually spreading out onto public land along the western benches of the Rubies. Reports from Unit 101 indicate that the turkey population is gradually spreading along available habitat in Clover Valley.

During 2006 the Utah Division of Wildlife released Rio Grande Turkeys on the Utah (East) side of Pilot peak. Surveys of turkey habitat along the Nevada side show some limited use by turkeys. This population is still primarily using the Utah side, but may expand onto the Nevada side as the population grows.

Summer of 2007 fires burned much of the areas used by turkeys in the Bruneau River area. Limited reports indicate that turkeys are still present and as the habitat recovers in the area, turkeys may be able to make a comeback. Conditions and populations will continue to be monitored.

The Licking Ranch release site continues to be monitored to track the success or failure of this release on the Humboldt River in Lander County. It is somewhat limited by roosting habitat but turkeys were observed in the release area during 2007 with additional reports received of turkey expansion both up and down the river from the release site.

### **Productivity Potential**

Reported observations of turkeys in the Region indicate that they are expanding from the original release sites. Spring and summer moisture was very limited but broods were reported in most of the turkey areas during the summer. Numerous jakes from the 2006 hatch were documented during 2007 in many of the region's turkey populations. High jake numbers indicate good potential for the 2008 spring turkey hunt.

### **Fall/Spring Prediction**

Turkeys in Units 102 (Lamoille) and 103 (South Rubies) are believed to be stable with good jake populations that will allow spring hunts to continue. Clover Valley, Lander County and White Pine County turkey populations are expanding and a new population may be starting in the Pilot Range. The future potential for hunts in the Eastern Region looks promising.

## **SOUTHERN REGION**

### **Harvest**

#### *Fall 2006*

In Moapa Valley, Clark County, turkey hunters vied for 20 either-sex tags in the limited entry hunt. Tags were apportioned to one nonresident and ten residents in each of two consecutive seasons: October 7<sup>th</sup> through October 13<sup>th</sup> and October 14<sup>th</sup> through October 20<sup>th</sup>. Although two tags were available to nonresidents, no applications were received. Twenty turkey tags were issued to resident hunters.

Based on questionnaire data (20 respondents), 16 hunters in Moapa Valley collectively expended 37 days scouting and 35 days hunting. Four tagholders did not hunt. On average, hunters scouted 2.3 days and hunted slightly more than two days. The turkey harvest in Moapa Valley was comprised of one juvenile male, 11 adult males and two adult females. Reported wounding loss amounted to two turkeys. Overall, hunter success was 94%.

#### *Spring 2007*

The spring limited entry drawing in Moapa Valley involved three consecutive seasons that were initiated by two seven-day hunts followed by a nine-day hunt: April 14<sup>th</sup> through April 20<sup>th</sup>, April 21<sup>st</sup> through April 27<sup>th</sup>, and April 28<sup>th</sup> through May 6<sup>th</sup>. One nonresident and five resident tags were allotted in each of the three seasons.

Based on questionnaire data submitted by 15 hunters, eight adult male turkeys and two juvenile male turkeys were harvested. Hunter success among 13 hunters equated to 77%. Two respondents did not hunt. Overall, hunters expended 53 days scouting and 29 days hunting. On average, hunters scouted four days and hunted approximately two days.

In Lincoln County, the harvest strategy in initial spring hunts (2001-05) involved limited tag quotas. In 2006, an inaugural open quota hunt was adopted which ran throughout the month of April. The general season was open to resident and nonresident hunters. In 2007, 370 spring turkey tags were issued for which 295 return questionnaires were received. Based on questionnaire data, 48 turkeys were harvested among 247 reporting hunters. Hunter success equated to 19% after factoring out 48 hunters that did not participate.

Collectively, hunters in Lincoln County expended 333 days scouting and 1,112 days hunting. On average, hunters scouted slightly more than one day and hunted four and a half days. The harvest was comprised of 27 adult males and 21 juvenile males (Table 1). Reported wounding loss amounted to six turkeys.

**Table 3. SOUTHERN REGION SPRING 2006 TURKEY HARVEST**

Hunt Area	#Tags Issued	# Questionnaires Returned	DNH	Number Successful	Percent Success*
Moapa Valley	18	15	2	10	77%
Lincoln County	370	295	48	48	19%
Southern Region Totals:	388	310	50	58	22%

\**Participant* success determined by dividing harvest by number of hunters that hunted.

## **Population Status**

### *Moapa Valley*

The Moapa Valley turkey population experienced a population decline that began in the late 1990s and extended through 2002. Important factors in the downward trend included drought conditions, habitat loss, poaching and reduced survivorship of juveniles attributed to predation. Predator populations are likely abundant, diverse and broadly distributed throughout the agricultural and suburban areas of Moapa Valley. Predators suspected of impacting turkey nesting success and juvenile survival include a host of indigenous species as well as feral dogs and cats.

A raven control program to enhance nesting and brood rearing success of upland game birds and waterfowl in Moapa Valley was identified in the *Nevada Predator Management Plan*. In July 2002, the first phase of the control effort, administered by Wildlife Services in the Animal and Plant Health Inspection Service of the U.S. Department of Agriculture, resulted in removal of approximately 500 ravens through application of DRC-1339 treated eggs and shooting. A second control effort commenced in March 2003 and concluded at the end of June 2003. Wildlife Services estimated approximately 172 ravens were removed in the follow up effort through application of the same treatments.

In southern Nevada, dramatic reversals of environmental conditions occurred within the first seven years of the present decade. Turkeys in the Moapa Valley endured severe drought for three consecutive years beginning in 2000 (2000-02). Beginning in February 2003 and extending through October 2005, environmental conditions greatly improved as precipitation receipts were generally above average. Although no formal brood surveys were conducted during the period of improved environmental conditions, Overton Wildlife Management Area (OWMA) personnel noted increased wild turkey production and recruitment. It was reasoned improved vegetative conditions increased insect availability, and raven control contributed to apparent increases in turkey nesting success and poult survival.

More recently, drought conditions have generally prevailed since November 2005. Overall, vegetative conditions and insect availability have been unfavorable. Observed nesting success and poult survival appeared low relative to observations in recent years marked by high precipitation receipts. On June 14, 2007, a turkey production survey yielded a total of 86 birds observed in four areas. The sample was comprised of 9 Toms, 19 Jakes, 49 hens and 9 poults. Brood sizes ranged from 1 to 4 poults. On OWMA, a rafter of turkeys comprised of 5 Toms, 7 Jakes and 33 hens was observed adjacent to housing on OWMA.

In Moapa Valley, wild turkey habitat exists in a fairly confined, narrow band along the Muddy River. Increasingly, crop fields adjacent to the river are being subdivided and developed for housing and commercial enterprises. It is anticipated in the near future, the loss of habitat coupled with an inevitable no-shooting ordinance will likely result in a reduced turkey population and restriction to hunting. Wild turkeys tend to concentrate throughout the year in a relatively small area that includes the OWMA and nearby croplands in Overton and Logandale.

### *Lincoln County*

Since 1999, NDOW has accomplished several Rio Grande turkey translocation projects in Lincoln County. Turkey releases have occurred on public and private lands, and in some cases required development of cooperative agreements with landowners.

In 2005, lightning-caused wildfires in Lincoln County impacted turkey habitat over broad areas. In the short-term, large fires in the Delamar Mountains and Clover Mountains resulted in diminished forage species, reduced insect availability and elimination of cover. However, in spring months in 2006 and 2007, NDOW personnel noted abundant growth of grass and herbaceous species and substantial regeneration of shrub live oak. Over the long-term, it is anticipated post-fire plant succession and regeneration will benefit turkeys.

Based on information from a limited number of turkey brood surveys coupled with numerous reported observations, turkeys appear to now inhabit a large region in Lincoln County. Limited information also suggests some turkey populations may be expanding.

### **Fall Prediction**

#### *Moapa Valley*

Over the long-term, the wild turkey population in the Moapa Valley is expected to trend downward due to habitat loss and degradation, predation, harassment, and illegal take.

Nevertheless, hunters should experience little difficulty in locating turkeys on private lands during fall either-sex hunts.

A substantial proportion of the Moapa Valley turkey population occurs on private land, and as a result, tagholders generally have to seek landowner consent to access fields. Incidences have arisen where this situation ultimately resulted in lost hunting opportunity for some sportsmen.

# RABBIT

Nevada's 2006-07 statewide rabbit season commenced on October 14<sup>th</sup> and ended on February 28<sup>th</sup>, 2008. Limits were 10 daily and 20 in possession and included cottontail and pygmy rabbits and white-tailed jackrabbit singly or in the aggregate.

## WESTERN REGION

### Harvest

**Table 1. WESTERN REGION RABBIT HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Rabbits</b>	8,592	<b>8,033</b>	4,835	-7%	66%
<b>No. of Hunters</b>	673	<b>903</b>	991	34%	-9%
<b>No. of Days</b>	4,908	<b>4,252</b>	4,044	-13%	5%
<b>Rabbits / Hunter</b>	12.77	<b>8.9</b>	5.3	-30%	69%
<b>Rabbits/Hunter Day</b>	1.75	<b>1.89</b>	1.2	8%	58%

Post-season questionnaire data shows a 2006 Western Region harvest of 8,033 rabbits, which is similar to the 2005 harvest of 8,592 (Table 1.). Harvest in 2006 was 66% better than the 10-year average of 4,835 rabbits. Hunter participation in 2006 increased by 34% and participation was near the 10-year average. Hunters continued to enjoy high harvest during the last two years with an average of 8.9 rabbits per hunter and 1.89 rabbits per hunter day. Both of these values are well above their respective 10-year averages.

### Population Status and Production Potential

Long-term post-season questionnaire data indicates that the Western Region's lagomorph population has increased over the last two years and now remains stable at high levels. However, the past spring and summer months have been some of the driest months on record. Many of the region's meadows and springs have withered throughout these months leaving rabbits with poor habitat conditions for production.

### Fall Prediction

Lyon and Humboldt Counties had the highest harvest last year in the Western Region. Also, Lyon County produced 5% of the statewide harvest. Despite average to poor habitat conditions for reproduction, hunters should enjoy good carry-over of adult rabbits for harvest. Ultimately, most rabbit harvest in the Western Region is by chukar hunters who take rabbits incidentally while in the field.

## EASTERN REGION

### Harvest

**Table 2. EASTERN REGION RABBIT HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Rabbits</b>	3,501	<b>19,632</b>	4,505	+461%	+336%
<b>No. of Hunters</b>	240	<b>545</b>	683	+127%	-20%
<b>No. of Days</b>	1,381	<b>2,760</b>	2,666	+100%	+4%
<b>Rabbits / Hunter</b>	14.5	<b>36.1</b>	6.3	+149%	+473%
<b>Rabbits /Hunter Day</b>	2.5	<b>7.1</b>	1.6	+184%	+344%

There was a significant increase in the regional rabbit harvest from the previous year's total (+461%) and harvest was also 336% above the long-term average. The Eastern Region 2006 rabbit harvest was an all time record even surpassing the 19,231 rabbits harvested in 1958. Rabbit harvest increased significantly in three of four Eastern Region counties in 2006. The only County that showed a decrease in rabbit harvest was Lander County where it decreased 50% from 683 rabbits in 2005 to 343 in 2006. The number of hunters in 2006 was 127% above the previous year but still 20% below the long-term-average. Rabbits/hunter (36.1) and rabbits/hunter day (7.1) were well above the long-term average for the region.

### Population Status

Eastern Region rabbit populations were at good to excellent levels and exhibiting a stable trend in most of the region. Biologist reported observing increased numbers of young rabbits and adult rabbits in many portions of the region for the past 4 summers and road-killed rabbits are becoming common in many places in the region.

### Productivity Potential

Weather conditions, especially precipitation levels, have provided good conditions for rabbits throughout most of the Region for several years. The 2006-07 winter and spring has received average or less precipitation and cover and forage for rabbits early in the 2007 summer were only fair. The productivity potential remains fair to good throughout most of the Eastern Region in 2007 except where wildfires have occurred.

### Fall Prediction

The Eastern Region rabbit population is relatively stable in most of the Eastern Region. Rabbit hunters should experience good hunting during the 2007-08 season but harvest is not expected to come close to the record harvest of 2006.

## SOUTHERN REGION

### Harvest

Post-season questionnaire data for the four counties of the Southern Region show that 485 hunters harvested a total of 11,062 rabbits during 4,252 days of hunting. The number of rabbits harvested, number of hunters, number of days hunted, rabbits per hunter, and rabbits per hunter day all showed increases from 2005-06 data. Compared to long-term data the number of number of hunters, and number of hunter days were both down. The number of rabbits harvested, rabbits per hunter, and rabbits per hunter day were both above the long-term average. The Southern Region accounted for approximately 29% of the statewide rabbit harvest during the 2006-2007 rabbit season.

**Table 3. SOUTHERN REGION RABBIT HARVEST**

	REGIONAL TOTALS:			Percent Change	
	2005	2006	10-Yr Avg.	Prev. yr.	vs. Avg.
<b>No. of Rabbits</b>	4,444	<b>11,062</b>	5,722	148.9%	93.3%
<b>No. of Hunters</b>	438	<b>485</b>	983	10.7%	-50.7%
<b>No. of Days</b>	2,579	<b>4,252</b>	5,148	64.9%	-17.4%
<b>Rabbits / Hunter</b>	9.29	<b>22.80</b>	6.91	145.4%	230.0%
<b>Rabbits /Hunter Day</b>	1.57	<b>4.00</b>	1.36	154.8%	195.2%

**Table 4. SOUTHERN REGION RABBIT HARVEST BY COUNTY**

	2005-06	2006-07	2006-07 % of harvest	% Difference Short-term
<b>Clark</b>	1,860	1,469	13%	-21%
<b>Esmeralda</b>	15	224	2%	+1393%
<b>Lincoln</b>	1,850	2,864	26%	+85%
<b>Nye</b>	719	6,504	59%	+805%
<b>Total</b>	<b>4,444</b>	<b>11,061</b>	<b>100%</b>	<b>149%</b>

### Population Status

The Southern Region rabbit population appears to be above the 10-year- average. Two separate vehicle-rabbit transects conducted in Lincoln County covering 41 miles driven (20 miles and 21 miles) resulted in 40 rabbits observed for a total 0.98 rabbits per mile. This is down from the 2006 survey which resulted in 1.05 rabbits per mile observed. This was the third straight year that these transects have been driven. Rabbit populations are generally subject to cyclical changes which are normal to most populations of Lagomorphs.

### Fall Prediction

According to the Department of Energy - CEMP, precipitation in southern Nevada is anywhere from 40-50% below average. The combination of a mild winter, dry spring and early summer likely resulted in a poor to moderate year for upland species throughout much of the southern region. Isolated summer thundershowers may result in areas with moderate to good range conditions that will benefit rabbits. Rabbit populations are at moderate levels, with most areas experiencing moderate production that may lead to lower numbers this fall and potential decreases in harvest. Of concern is the drop in rabbit hunters over the last few years. It appears

that hunters who continue to show interest in rabbits are being rewarded with increased numbers of rabbits in the bag. Rabbit hunting should be fair throughout the Southern Region with a few areas holding moderate densities of rabbits. The prediction is for average harvest during the 2007-2008 rabbit season.

## FURBEARERS

Trapping harvest and trapper effort data are obtained through an annual harvest questionnaire which is sent to all trapping license buyers following the conclusion of the trapping season. Prior to the season, the Department sends trappers a log book to facilitate their documentation of trapping effort. Because the questionnaire return rate is not 100% the Department must extrapolate the figures to generate an estimate of harvest and trapper effort. These data have been comparable for decades. The Department also obtains bobcat harvest and trapper effort through a mandatory check-in process. Trappers are required to retain and remit a portion of the lower jaw preserving one or more canine teeth. The canines are later extract by biologists who can determine the age of the animal based upon tooth characteristics. Cumulative data discloses the age structure of the bobcats harvested for a geographic area.

### WESTERN REGION

#### Harvest

In the Western Region, a total of 11,190 furbearing animals were harvested, an increase of about 185% from last season. Trapper take increased for all species, most notably muskrat, gray fox and mink (Table 1). Western Region trappers recorded 76% of the state's total fur harvest of over 19,648 animals. Favorable trapping conditions persisted throughout the season. Overall trapper numbers increased accordingly. Table 1 represents the fur harvest in the Western Region, indicating the seven most sought after species.

**Table 1. WESTERN REGION FURBEARER HARVEST - 2002-2007**

SPECIES	2002-03	2003-04	2004-05	2005-06	2006-07	% + or - Previous yr
<b>Bobcat</b>	618	887	848	1174	<b>1739</b>	48%
<b>Coyote</b>	589	1025	746	682	<b>1442</b>	111%
<b>Gray Fox</b>	34	174	49	87	<b>595</b>	584%
<b>Kit Fox</b>	97	199	281	246	<b>391</b>	59%
<b>Beaver</b>	450	495	287	333	<b>519</b>	56%
<b>Muskrat</b>	274	510	351	1252	<b>5904</b>	372%
Mink	37	27	35	17	<b>131</b>	671%

Using statewide average fur prices, the expanded fur value for all species taken in the Western Region is \$473,724, up 15% from last year. Fur prices decreased for almost every species trapped in the state, increasing only for gray fox, kit fox and mink.

**Table 2. WESTERN REGION - FUR VALUES- 2003-2007**

(All figures in average dollars per pelt)

SPECIES	2002-03	2003-04	2004-05	2005-06	2006-07	% + or - Previous yr
<b>Bobcat</b>	\$257.18	\$253.95	\$232.50	\$318.82	<b>\$217.16</b>	-32%
<b>Coyote</b>	\$22.36	\$19.36	\$14.84	\$26.94	<b>\$25.48</b>	-5%
<b>Gray Fox</b>	\$14.53	\$15.07	\$12.44	\$22.14	<b>\$39.91</b>	80%
<b>Kit Fox</b>	\$9.99	\$8.19	\$7.31	\$9.46	<b>\$9.64</b>	2%
<b>Beaver</b>	\$9.17	\$11.21	\$13.85	\$23.07	<b>\$19.08</b>	-17%
<b>Muskrat</b>	\$2.22	\$1.60	\$1.52	\$5.25	<b>\$3.35</b>	-36%
<b>Mink</b>	\$4.46	\$2.70	\$10.91	\$12.71	<b>\$13.05</b>	3%

## Bobcat

Bobcat harvest data is collected annually from information reported by the trappers on their bobcat harvest report forms. Additional data is derived from the collection and processing of the lower jaw of each animal. Trappers are required to turn in the lower jaw, with intact canines, at the time their pelts are sealed. One canine from each jaw is then removed to determine juvenile or adult.

Bobcat harvest for the Western Region increased over last year, due to last years fur prices which brought more licensed trappers into the field (Tables 2 & 3). The .83 kittens/adult female ratio, which drives the production data estimate for the year, indicates good production. The ratio of adult males/adult females, at 1.39, is indicative of a healthy bobcat population and has remained so for several years. Trapper effort, measured in trap days/bobcat, increased to 209 days, an indication of the increase in inexperienced trappers.

**Table 3. WESTERN REGION BOBCAT HARVEST STATISTICS- 2002-2007**

	2002-03	2003-04	2004-05	2005-06	2006-07
<b>Season Length (days)</b>	120	121	120	120	<b>120</b>
<b>Total Harvest</b>	618	899	848	1181	<b>1739</b>
<b>Kitten/Adult Female</b>	.24	1.07	1.08	.89	<b>.83</b>
<b>Adult Male/ Adult Female</b>	1.36	1.84	1.82	1.90	<b>1.39</b>
<b># Of Trappers</b>	74	105	112	134	<b>158</b>
<b>Trap days/ bobcat</b>	148	138	137	123	<b>209</b>
<b>Bobcats/trapper</b>	8.4	8.5	7.6	8.8	<b>8.0</b>

### Population Status and Analysis

The 2006-07 trapping season saw an increase in harvest for a couple of reasons. The weather played the biggest part with late freezes and a mild winter allowing land trappers to remain set longer and water trappers access to open water. The increase in the number of trappers seeking bobcats also contributed. Prices are expected to decrease slightly and with that forecast in mind, along with the high fuel prices, many part-time trappers may not go afield this year.

Furbearer populations in north western Nevada appear healthy and at sufficient numbers to maintain population viability. The extremely dry spring and summer of 2007 will have an affect on survivability of juvenile predators as prey species such as quail, chukar and Passeriformes struggle to brood successfully. Biologists also report lower numbers of lagomorphs. Not only will this influence bobcat kitten production for example, but it will undoubtedly affect the water species like beaver and muskrat. Gray fox and Kit fox populations are unpronounced but stable, based on habitat conditions and harvest figures.

River otter sightings indicate low but stable to increasing numbers throughout the Western Region. Red fox sightings (reportedly two trapped in the region) seem to be increasing in the western part of the state, although they are still few and far between.

## EASTERN REGION

### Harvest

During the 2006-07 season 4,176 furbearers were taken in the Eastern Region. The two previous year's furbearer harvest in the Eastern Region was 2,270 and 2,456 respectively. This year represents an 84% increase over last year's fur harvest in the Eastern Region. The harvest level was above the ten-year average for most species, but low interest in furbearer harvest during much of the last decade resulted in relatively low ten-year-average figures. It appears that an improved fur market has resulted in renewed interest from trappers. Comparisons of current and historic Eastern Region furbearer and predator harvest for several species are presented in Table 4. For a complete list please see furbearer tables in the appendix.

**Table 4. EASTERN REGION FURBEARER HARVEST**

Species:	Average 1996-05	2005-06	2006-07	Percent Change	
				Prev. Year	10 Year Avg.
<b>Beaver</b>	154	75	129	+ 72	- 16
<b>Muskrat</b>	55	28	60	+ 114	+ 9
<b>Coyote</b>	659	784	1,494	+ 91	+ 127
<b>Gray Fox</b>	45	96	203	+ 112	+ 351
<b>Kit Fox</b>	12	7	39	+ 457	+ 225
<b>Red Fox</b>	2	3	11	+ 267	+ 450
<b>Otter</b>	8	7	2	- 72	- 75

During the 2006-07 trapping season fur prices decreased from the previous year for most species, but trapper interest remained elevated. Gradually declining pelt values through most of last season could decrease trapper interest in the coming year. Instability in the world fur trade continues to have the most significant effect upon the Nevada fur industry. Prices and interest are expected to remain somewhat unpredictable but directly proportional.

The 2006-07 Eastern Region beaver harvest increased compared to the previous year. However, regional beaver harvest was still 16 % below long-term averages. Low beaver pelt prices seem to be the primary reason beaver harvest remains low. Regional muskrat harvest continued to be negligible and was well below the previous highs of the 1970-1990 period. Low muskrat numbers following consecutive years of drought during the early part of the decade and relatively few good muskrat trapping locations in the Eastern Region appear to be primary reasons for low harvest. Pelt prices rose early in the season but fell slightly as the market adjusted. Higher prices are beginning to renew interest in muskrat trapping.

Coyote harvest increased during the past season despite average prices for pelts decreasing. Pelt prices for coyotes decreased by 5% in 2006-07, prices are below \$30. Regional coyote harvest increased 91% (1,494 coyotes vs. 784 in 2005-06) from the previous year and up 127% from the long-term average. In addition to sport harvest, Wildlife Services personnel removed additional coyotes in response to livestock depredation complaints and the Department's predator management program in the Eastern Region.

**Table 5. EASTERN REGION BOBCAT HARVEST**

	Average 1996-05	2005-06	2006-07	Percent Change	
				Prev. Year	10 Year Avg.
<b>Bobcat Harvest</b>	446	1,148	1,457	+27	+227
<b>Bobcat Trappers</b>	70	210	202	-4	+189
<b>Trap Days</b>	70,017	185,375	258,971	+40	+270
<b>Trap Days / Cat</b>	172	166	182	+10	+6
<b>Bobcats / Trapper</b>	6.4	5.5	5.3	+31	+13
<b>Season Length</b>	103	120	120	0	+17

The number of bobcats harvested in the Eastern Region increased during the 2006-07 season. Increases in bobcat harvest, effort and number of trappers were stimulated by pelt prices in recent years. The number of trap days required to catch a cat increased from the previous year and is above the long-term average. Increasing prices usually attract some new trappers which results in an increase in trap days per bobcat. The number of cats per trapper (7.2) indicated bobcats were readily available. Bobcat pelt prices dipped in 2006-07. If the downward trend in prices continues, it is expected to decrease trapping pressure since pelt prices tend to dictate trapper participation.

**Population Status**

Prey base populations (rodents and lagomorphs) have been increasing throughout the Region for several years, especially jack-rabbit populations which may be reaching peak levels in some areas. All of the carnivorous furbearer populations should respond favorably.

**Fox**

Red fox are becoming increasingly more common throughout the Eastern Region. Trapping records and sightings indicate a general expansion of red fox numbers and distribution. Gray fox harvest increased sharply in 2006-07. Gray fox pelt value increased during the last season which may have stimulated interest. However, gray fox harvest is more closely related to bobcat value due to the fact the species overlap in habitat use. Gray fox have a widespread distribution and it is believed that they have also responded favorably to increased prey availability. Kit fox populations within the Eastern Region are fairly widespread with populations present in most valleys. Harvest information indicates that populations and/or trapping interest are relatively low.

**Bobcat**

Bobcat harvest that had been relatively low for several years increased sharply over the last two seasons. An expanding prey base is believed responsible for promoting production. Kitten production remained high again this year allowing bobcat numbers to increase.

**Aquatics**

Beaver populations are believed to be stable at moderate levels the Eastern Region. Some higher populations exist in areas with good habitat. Drought conditions are negatively affecting available beaver habitat in some areas. Harvest levels are believed to be related to beaver pelt prices. Harvest should continue to remain low along with pelt prices. The isolated muskrat populations that exist throughout the Region fluctuate annually depending on climatic conditions

and local water levels. The only large, stable population of muskrat within the Eastern Region is associated with the Ruby Lake National Wildlife Refuge. Ruby Lake is no longer available for harvest since the Refuge is not allowing muskrat trapping like it had in the past. The distribution of otter and mink is widespread throughout the major drainages of the Eastern Region. Information regarding these species is extremely limited at the present time. Localized population levels are low to moderate and stable.

### **Analysis**

Bobcat harvest levels were managed for many years through season length adjustment. Historically, season length reductions were recommended when kitten production fell below 0.5 kittens/adult female and trapping interest was high. The kitten per adult female ratio was 0.93 in 2006-07. Production was 0.86 and 0.71 in 2005-06 and 2004-05, respectively. Other biological parameters measured to evaluate trends in the bobcat population also indicate continued stability. The adult male to adult female ratio was 1.4 in 2006-07. The ratio was 1.3 in 2005-06 and 1.5 in 2004-05. Kitten production was good and the effort necessary to trap a cat was up. With numerous new trappers entering the trapping arena, effort is expected to increase. Bobcat populations are healthy and stable in the Eastern Region.

Beaver harvest decreased in 2006-07 in the Eastern Region and was only slightly below the long-term average. Beaver populations remain at moderate to high levels and continue to present problems to some private landowners. Beaver trapping seasons of maximum length have been maintained in order to maximize beaver harvest. This has been desirable from both a biological and damage management standpoint. The majority of river otter harvested within the Region were captured incidental to beaver trapping. With low beaver trapping interest, few otter are taken. Nevada does not offer an export seal for otter, which will continue to depress prices and trapping interest. Populations should remain stable along major drainages and reservoirs.

Overall, populations of furbearer species in the Eastern Region remain at healthy levels with stable to increasing population trends for both prey species and furbearers.

## SOUTHERN REGION

### Harvest

Based on post-season questionnaires and trapper-submitted bobcat harvest reports, 4,420 animals were harvested in the Southern Region during the 2006-07 trapping year. This figure represents a 109% increase compared to 2,113 animals harvested in 2005-06. Notable changes relative to last year involved substantially increased harvest of coyote and gray fox. Additionally, the overall harvest in Lincoln County included four red foxes. Current harvest figures as well as short- and long-term perspectives are presented below.

**Table 6. SOUTHERN REGION FURBEARER HARVEST**

	Average 1996-05	2004-05	2005-06	2006-07	%Difference Short-term	%Difference Long-term
<b>Beaver</b>	10	2	1	<b>2</b>	100%	-80%
<b>Muskrat</b>	49	30	0	<b>0</b>	--	--
<b>Coyote</b>	339	288	310	<b>940</b>	203%	177%
<b>Gray Fox</b>	398	447	537	<b>1,310</b>	144%	229%
<b>Kit Fox</b>	97	75	189	<b>248</b>	31%	154%

Over the long-term, muskrat and beaver harvest has been erratic. Increases in harvest over both short- and long-term occurred for coyote, gray fox and kit fox. Relative to last year, commonly sought species associated with lower average valuations included bobcat and coyote. In contrast, average pelt prices increased for gray fox and kit fox.

### **Bobcat**

In the Southern Region, 1,715 bobcats were harvested through trapping and shooting during the 2006-07 season, which reflected increases of 74% and 119% relative to 2005 and 2004, respectively. Compared to the long-term average, the bobcat harvest in 2006-07 represented a 192% increase (Table 2).

In the 2006-07 season, more trappers harvested more bobcats while expending less time compared to trappers in 2005-06. The Southern Region bobcat harvest (trapping and shooting) comprised 36% of the statewide total which exceeded the 30% proportion reported last year. Current trapping figures as well as short- and long-term harvest perspectives are described below.

**Table 7. SOUTHERN REGION BOBCAT HARVEST**

	Average 1996-05	2004-05	2005-06	2006-07	%Difference Short-term	%Difference Long-term
<b>Bobcat Harvest</b>	587	786	987	<b>1,715</b>	74%	192%
<b>Bobcat Trappers</b>	99	111	168	<b>193</b>	15%	95%
<b>Trap Days</b>	113,261	156,224	156,583	<b>273,447</b>	75%	141%
<b>Trap Days/Cat</b>	208	203	169	<b>160</b>	-5%	-23%
<b>Bobcats/Trapper</b>	5.5	6.9	5.5	<b>8.9</b>	62%	62%
<b>Season Length</b>	112	120	120	<b>120</b>	0%	7%

## **Population Status**

### **Bobcat**

Based on analysis of bobcat tooth data, bobcat kitten production in the Southern Region was moderate to high in the last three years. Bobcat harvest data corresponding to the 2006-07 season indicate a kitten per adult female ratio of 0.74. Thus, higher kitten production and survival resulted in nearly as many kittens harvested as adult females. Viewed against the long-term (1980-2005) average ratio of kittens to adult female (0.65), there was a 14% increase in kittens to adult female (0.74) in 2006-07. The Mojave Desert bobcat population experienced a 44% decrease in the ratio of kittens per adult female from 1.20 in 2005-06 to 0.67. Compared to the long-term (1980-05) average ratio of 0.70 kittens per adult female, the Mojave Desert population experienced a 4% decrease in kittens per adult female. Great Basin bobcat populations experienced a 2% decrease in the ratio of kittens per adult female from 0.85 in 2005-06 to 0.83. Compared to the long-term average (1980-05) ratio of 0.72 kittens per adult female, Great Basin populations experienced a 15% increase in kittens per adult female.

### **Coyote**

The U.S. Department of Agriculture, Wildlife Services, removes predators in response to livestock depredation complaints, and increasingly, aggressive coyotes in situations of human and pet encounters. The increase in reported incidences of human and pet interactions with coyotes is largely related to continued rapid urbanization and habitat loss in Southern Nevada.

### **Fox**

Kit fox, gray fox and coyote populations in the Southern Region are broadly distributed, and occur in varying densities.

### **Aquatics**

Status and trend information corresponding to furbearers associated with wetlands (i.e., beaver and muskrat) is largely unavailable in the Southern Region. Harvest of these species is minimal. The impacts to aquatic furbearers by protracted drought conditions are unknown. Beavers occur in southern Nevada and appear to have small stable populations. Muskrat populations in the Southern Region are limited in size and distribution, and occur in Pahrangat Valley, Lincoln County, and Overton Wildlife Management Area, Clark County.

In 2005 and 2006, lightning caused wildfires in Clark and Lincoln counties impacted wildlife habitats over broad areas. Wildfires in Clark County occurred in the Spring Mountains and Gold Buttes. In Lincoln County, wildfires impacted wildlife habitats in the Delamar Mountains, Meadow Valley Mountains, Mormon Mountains, Clover Mountains, Tule Desert and Pahroc Mountains. The areas affected by fires offer diminished resources (i.e., food and cover) for many wildlife species. Consequently, in burned areas over the near-term, reduced populations of prey species will negatively influence availability of bobcats, coyotes, kit foxes, gray foxes and badgers.

## **Fall Prediction**

Despite relatively high demand and market pelt prices for many wild furs, furbearer harvest levels in the upcoming 2007-08 season are anticipated to decline in response to diminished prey populations as a consequence of protracted drought conditions. Bobcat trapper participation is anticipated to remain largely unchanged relative to the 2006-07 season.