

NEVADA CHUKAR HUNTING FORECAST 2008-2009 SEASON



How NDOW Surveys Chukar

The Nevada Department of Wildlife historically relied on late summer brood surveys conducted by foot or vehicle to estimate production from year to year. However, these surveys did not provide a reasonable estimate of the overall number of birds that would be available to hunters in the fall. In 1975, biologists began to experiment with chukar survey techniques using a helicopter. Department biologists noted that they were readily able to observe chukar while on big game surveys and felt that using a helicopter might be an efficient way to determine relative chukar population densities.

Since the inaugural survey, the technique has undergone some slight modifications and a series of verification checks. Simple statistical analyses show that biologists usually observe about one-third of a population in any given survey plot. Additionally, the reliability of a count is estimated to be about 70%. This means that if a biologist counts 100 birds per square mile in a study area, the actual number of birds would likely be between 210 and 390 birds, 95% of the time.

Surveys conducted during 2008 were made possible through funding provided by the Nevada Chukar Foundation (NCF). NCF and other sportsmen's groups with emphasis on chukar have been an integral part of establishing water developments, implementing habitat improvements and survey efforts for many upland game species. This year's surveys were conducted using El Aero Services and their Bell Jet Ranger helicopter. During the survey, the helicopter makes a series of passes between 25-100 feet above the ground at a speed of 35 to 45 miles per hour. Biologists seated in the front and back of the aircraft count chukar as they flush in front of and to the side of the helicopter. After their first flight, birds are reluctant to take wing again.

Chukars are surveyed on a series of 13 study plots in Washoe, Pershing, Humboldt, Lander and Elko Counties. Many of these study plots have been in place for up to 15 years through 2001, the last year that these counts were conducted. The study plots include both water courses and upland areas to give a more accurate estimate of density. These study plots are not "hotspots", but rather representative segments of chukar habitat in that general region.

Please consider the following statements when interpreting the data provided below. The number of birds observed in a particular study plot is not directly comparable to the number of birds observed in another plot. Some areas seem to have extremely high local densities while other areas show much lower densities depending on habitat conditions and any landscape changes such as wildfire. Look for annual changes in individual study plots and compare those numbers to your own field experience in that general area.

2008 Survey Results

We conducted surveys on all 13 of our long-term study plots from August 18th through 21st, 2008. Record low numbers of birds were recorded on 3 of the 13 study plots (Jackson, Argenta and Sheep Creek). On the bright side, record high numbers of birds were observed on two study plots (Buffalo Hills and Izzenhood) while average to above average numbers were recorded on six survey plots. Across study plots, a good ratio of young of the year birds were observed even in study plots with lower than average numbers of birds. Survey results show that Pershing County and portions of Washoe County have high densities of chukar whereas Humboldt, Lander, and Elko County study plots are below average to average. Less than ideal survey conditions (high winds) were encountered in the Jackson Mountains and results from this survey are thought to be lower than what is actually present. Additionally, conditions that were experienced in the Buffalo Hills (dry with few water sources) may have led to concentrations of birds not normally experienced. Brood surveys conducted from the ground in central Nevada show moderate production levels which should lead to a fair to good hunt in this region of the state. Southern Nevada has not experienced favorable moisture patterns for the last two years and this is reflected in low numbers of chukar as well as Gambel's quail.

2008-2009 CHUKAR HUNTING

The fall of 2007 was not very favorable to chukars as little precipitation was received from September through November. This resulted in very little "green up" during this period and forced birds to rely on less nutritious cheatgrass seeds. Winter moisture basically arrived all at once in January and early February giving way to dry conditions during the key months of March, April and most of May. Chukars likely were not in very good body condition in mid-May to begin the nesting season. Then during Memorial Day weekend, storms delivered much needed rain throughout northern Nevada. This led to a flush of native grasses and forbs that likely provided chukar with enough food resources to produce nests and have broods with a good number of chicks. These few storms may very well have saved the 2008 season and kept it from being one of the most dismal on record.

In 2008, wildland fires have not adversely impacted chukar habitats to the degree that they have over the last nine years. During this period (1999-2007), approximately 6 million acres of various habitat types have burned in Nevada resulting in the establishment of cheatgrass and other invasive non-native weed species across the low to mid elevations. This has been

detrimental to many chukar populations because of the lack of native shrubs that are important for cover, nesting and forage purposes. Many areas of northern Lander, Eureka and western Elko Counties have experienced extensive fires with some fires re-burning habitat. These areas are not likely to be productive for chukar for many years.

The 2008-2009 chukar hunting season is expected to be fair to good for most of Nevada with some areas providing excellent hunting. Unlike last season, coveys will be composed of a good number of young birds. This will allow the hunter to approach within shotgun range for at least the first half of the season. Hunters across the state will still have to spend a fair amount of time on foot pursuing the species as overall numbers are not what they were three to four years ago. Look for a better hunt than the 2007 season provided, especially in the Sonoma, Granite and Izzenhood Ranges as well as the Buffalo Hills and Lava Beds.

Chukar Helicopter Survey Study Plots Birds Observed per Square Mile

Year	Double H	Santa Rosa	Pine Forest	Jacksons	Rock Creek	Argenta	Sonoma	Lava Beds	Selenite	Granites	Buffalo	Izzenhood	Sheep Creek	Overall Average
75	31									26				29
76	11									6				9
77	9	13								11				11
78	34	26								16				25
79	84	47								42				58
80	105	34								62				67
81	64	26												45
82	47	8												28
83	46	8												27
84	18	3												11
85	10		40											25
86	28	30	68		49	23	25	39	18	92	43			42
87	53	54	59	101	74	49	24	37	22	37	40			50
88	85	23	83	123	51	61	46	56	32	21	40			56
89	61	63	82	143	127	95	63	43	36	31	57			73
90	62	76	57	168	115	69	64	47	8	17	35			65
91	23	51	59	134	56	33	3	26	7	23	46			42
92	26	40	90	76	36	25	2	14	7	41	41			36
93	6	6	51	42	27	20	7	16	6	0	4	23	17	17
94	21	13	80	66	86	20	18	37	11	6	22	23	28	33
95	32	17	41	55	68	62	19	57	11	9	23	16	29	34
96	18	20	61	54	97	26	34	52	5	32	62	15	18	38
97	32	11		109	54	26						11	42	41
98	18	45	44	140	39	46	37	61	11	53	31	13	58	46
99	77	102	59	258	74	48	125	125	25	51	67	6	112	87
2000	39	59	81	156	92	37	49	44	17	41	46	11	53	56
01	81	85	130	109	56	35	31	41	31	100	32	23	58	62
08	32	61	61	15	39	9	112	60	33	49	70	25	3	57
Min	6	3	40	15	27	9	2	14	5	0	4	6	3	9
Max	105	102	130	258	127	95	125	125	36	100	70	25	112	87
Avg	41	37	67	109	67	40	41	47	18	35	41	17	42	46

