

NEVADA DEPARTMENT OF WILDLIFE

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UPLAND GAME TRAP, TRANSPLANT & MONITORING

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Job Progress Report Federal Aid in Wildlife Restoration Grant W-48-R-41, Sub-Grant III Upland Game Management

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STATE: Nevada

GRANT: Nevada Wildlife - Game Management - W-48-R-41

SUB-GRANT III: Upland Game Management

PROJECT NO. 2: Upland Game Trapping, Transplanting and Monitoring

PERIOD COVERED: July 1, 2009 - June 30, 2010

SUMMARY

The Nevada Department of Wildlife (NDOW) continues to capture and release wild upland game bird species for population augmentation and establishment in accordance with the Nevada Upland Game Release Plan for Fiscal Years 2010 and 2011. In State Fiscal Year 2010 translocations of mountain quail, ruffed grouse, California quail and Rio Grande turkey were conducted. In addition to the translocation operations, monitoring of radio-marked segments of the release compliments provided valuable information regarding distribution and survival.

NDOW once again received 100 mountain quail from Oregon in 2010. This was the third year in a row that Nevada has received mountain quail from the southwestern portion of Oregon. These birds were captured during the winter from existing wild populations in the Coast Range. The total cost for capture of these quail, through the use of a qualified vendor, was \$6,000 and was funded through Nevada's Upland Game Stamp program. A total of 92 birds were released (8 mortalities within the holding pen) into the Bilk Creek Range in Humboldt County. In addition to the release, 32 radio transmitters (necklace) were placed on a segment of the released quail. Transmitters were used to document movement, monitor nesting activities and location, and determine survival. Upland game stamp funds were also used to purchase the transmitters at a cost of \$5,920. The transmitters, largely because of their size (model #: PD-2C, 3.8 grams), only have a 6 month battery life, so routine follow-up was imperative. A seasonal technician was dedicated to this project to follow-up on radio-marked birds and document locations, mortality and cause of death.

Ruffed grouse are a species that have great potential in various areas throughout northern and central Nevada. One of the priority areas for ruffed grouse population establishment is the Toiyabe Range located in Nye and Lander Counties (Nevada Upland Game and Waterfowl Release Plan). In September of 2010, Game Division biologists made a concerted effort to capture ruffed grouse from an established population within the Bull Run Mountains of northern Elko County. Many trap days throughout the month of September netted 27 ruffed grouse and 8 releases were made into the northern Toiyabe Range. One mortality (juvenile) occurred during the transportation phase and a total of 26 ruffed grouse were released. Four ruffed grouse were fitted with VHF transmitters and have been followed-up on a regular basis for the past 9 months. A total of 2 mortalities have been documented since the release. Upland Game Stamp funding was used to help pay for follow-up telemetry flights using Owyhee Air Services.

In addition to the above releases, the Utah Division of Wildlife Resources was able to provide a total of 63 Rio Grande turkeys for release into Lincoln County. One adult female died during transportation. Two releases of 31 turkeys each were conducted: one near Bunker Pass in the

Clover Mountains and one near Chokecherry Spring in the north end of the Delamar Range. These areas have adequate, but somewhat limited habitat available for wild turkey. However, these birds will have the ability to distribute themselves across a broad landscape and occupy appropriate niches.

Lastly, NDOW receives multiple complaints during the winter months of large coveys of California quail that congregate in Reno and Carson City residential areas each year. Complaints often involve defoliation of lawns and ornamental shrubs. NDOW views these birds as source stock and places some effort into capture and translocation into suitable habitats through the volunteer program and with existing staff. During capture efforts conducted in FY10, a total of 152 California quail were captured and released at various locations in Churchill, Douglas, and Washoe Counties. No specific monitoring was conducted in association with these releases; however, subsequent hunter harvest in or near release areas was suspected to be a result of these efforts.

OBJECTIVES

Columbian Sharp-tailed Grouse

1. Monitor the existing, re-established population and, if birds become available, re-establish Columbian sharp-tailed grouse (CSG) within those portions of their former range that presently constitute suitable habitat.
 - a. Determine areas of known or suspected former range of CSG which may now be capable of supporting viable populations of this species due to past and present land use practices that have resulted in habitat changes.
 - b. Obtain adequate numbers (preferably 50+) of CSG for reintroduction into selected suitable habitats in Nevada from any available source.
 - c. Monitor new populations throughout the year to determine seasonal habitat preference and relative success of releases.

Chukar

1. Establish, re-establish, or augment chukar populations in Nevada to levels capable of supporting hunting.
 - a. Trap chukar from outside or within Nevada to transplant to areas of extremely low densities following severe droughts or winters or into the vicinity of recently constructed water developments where few or no chukars currently exist.

Mountain Quail

1. Re-establish mountain quail into suitable habitat within each Region, attempting to match source population habitats with release site habitats.
 - a. Trap mountain quail from available sources and transplant to sites where historic populations of mountain quail existed and/or where habitat is similar to source populations and provides the necessary components for sustainability.

- b. Determine areas that may be capable of supporting viable populations of this species where land use practices provide suitable habitat.
2. Coordinate with appropriate land management agencies, private landowners and tribal governments to conduct habitat improvement projects for mountain quail.

California quail

1. Maintain and restore populations of California quail in Nevada following losses due to drought or severe winters.
2. Establish California quail populations in suitable habitats in Nevada where they do not currently exist.
3. Work with federal land management agencies and private landowners to improve habitat conditions for California quail on public and private lands.

Wild Turkeys

1. Establish wild turkey populations in areas with suitable habitat, preferably on suitable public lands managed by the Bureau of Land Management or U.S. Forest Service.
2. Maintain and/or augment existing turkey populations on Nevada's Wildlife Management Areas that provide adequate amounts of quality habitat.
3. Provide a source of turkeys for future transplants.
4. Provide a wildlife resource that can serve both consumptive and non-consumptive desires of the public.

PROCEDURES

1. Personnel should first consult the Nevada Upland Game Species Management Plan (2008) for guidance regarding the species of interest. Habitats should be evaluated prior to release to ensure that the necessary vegetative components are in place to support healthy populations of certain upland game. A prioritized list of potential release sites will be provided in the biennial Upland Game Release Plan.
2. Arrangements through cooperative agreements, contracts or other methods (e.g. letter of authorization) will be made with state or provincial wildlife agencies for the acquisition of Columbian sharp-tailed grouse, ruffed grouse, chukar, California quail, mountain quail and turkeys.
3. Coordination efforts will be made with the appropriate federal land management agencies and/or private landowners prior to release to facilitate an expedient and successful project. This will include obtaining the necessary NEPA compliance documents (Categorical Exclusions or Environmental Assessments) or cooperative agreements well in advance of the release.

4. Upland game will be acquired through trapping operations involving Nevada Department of Wildlife personnel, other state wildlife agency personnel or contract wildlife capture vendors qualified to conduct the work.

FINDINGS

Ruffed Grouse

Trapping and Transplanting

There are several mountain ranges within Nevada that have appropriate habitat conditions for ruffed grouse. The Toiyabe Range in central Nevada offers multiple drainages with aspen stands with quality understory vegetation as well as diverse uplands for ruffed grouse to prosper. The Toiyabe Range ruffed grouse introduction was first initiated by Larry Teske (retired NDOW biologist) in 2001. After coordination with USFS biologist Lance Brown, the project was presented to the Lander County Advisory Board and the Nevada Wildlife Commission. The project was approved and included in the Upland Game and Waterfowl Release Plan for fiscal years 2004 and 2005.

In August of 2009, NDOW biologists identified Birch Creek as an ideal release site for ruffed grouse. This site has good to excellent habitat conditions and relatively easy access. Trapping operations commenced in September of 2009 within the Bull Run Mountains of Elko County. Eight releases were conducted between September 5th and September 29th. A total of 27 birds were transported and all but one juvenile survived the 260 mile transport from capture to release site. All of the grouse were transported from the trapping location to the release site in plastic dog crates. Crates were packed ~200 yards up the canyon from the road. Upon leaving the crates the majority of the birds flew out of the kennels and into aspen trees. All 26 ruffed grouse appeared healthy upon release.

Central Nevada has a tremendous opportunity to support a robust and healthy ruffed grouse population. Some of the largest contiguous aspen stands in Nevada are found in the central portion of the state. Hopefully this effort will be the first of many to establish this popular game bird in this portion of Nevada. Establishing ruffed grouse in central Nevada will provide sportsmen and the public with unique opportunities for generations to come.

Monitoring

Four ruffed grouse from the Birch Creek release were equipped with small VHF radio collars. These were attached to determine seasonal movements, habitat preference areas, brood rearing areas, and drumming locations. As of January 2010 one mortality was documented while the remaining three radio-marked birds were alive and located in the vicinity of their release.

A total of four telemetry flights were conducted from October 2009 through June 2010. An additional two days were spent conducting telemetry follow-up from the ground. Signals could be heard emanating from above the canyons, but when attempts were made to physically locate birds, the dense vegetation within the aspen stands prevented pinpoint locations. All four radio-marked birds stayed within a two-mile radius of the release site. This was valuable information and indicates that habitat conditions were suitable.

As of June 2010, two mortalities were documented out of the four radio-marked birds. Both mortalities likely took place in early winter as the detection was made during a survey flight in January of 2010. Both birds were located in the general area of the release site. Drumming, brood surveys and telemetry surveys will continue to help determine the status and distribution of this population.

Columbian Sharp-tailed Grouse

Trapping and Transplanting

No Columbian sharp-tailed grouse were captured or transplanted in FY2010. However, ongoing discussions with the Utah Division of Wildlife Resources, as well as the Idaho Department of Fish and Game, have centered on translocation efforts for Columbian sharp-tailed grouse and the potential for research regarding translocation methods, survival, reproduction and distribution post release.

Monitoring

There are two known leks that have been documented in the Snake Mountains north of Wells, Nevada. One of the leks is considered active and the other inactive. During April of 2009, one lek visitation was made from the ground. A total of 3 sharp-tailed grouse was flushed from the known active lek. No other new leks were located or other concentrations of birds observed.

Chukar

Trapping and Transplanting

No trapping or translocation efforts for chukar partridge were made in Nevada in FY2009.

Monitoring

Chukars have been established in all counties of Nevada for many decades. Monitoring was conducted during summer fieldwork and reported in the *2008 Upland and Migratory Game Bird, Rabbit and Furbearing Mammals Harvest Data and Population Status Reports* federal aid report (W48-R-40, Sub-grant I S&I – Project 2 & 3).

Mountain Quail

Trapping and Transplanting

The Nevada Department of Wildlife (NDOW) remains committed to augmenting and establishing mountain quail populations in appropriate habitats throughout Nevada. Several areas (n=6) have been identified for mountain quail; however, obtaining source stock has been a difficult proposition. Over the past three years, the Oregon Department of Fish and Wildlife has been very gracious in providing 300 wild mountain quail for translocation via a contract capture vendor.

During fiscal year 2010, 92 mountain quail were released into the Bilk Creek Range in northern Humboldt County. These birds were released during mid-April after being held over the winter

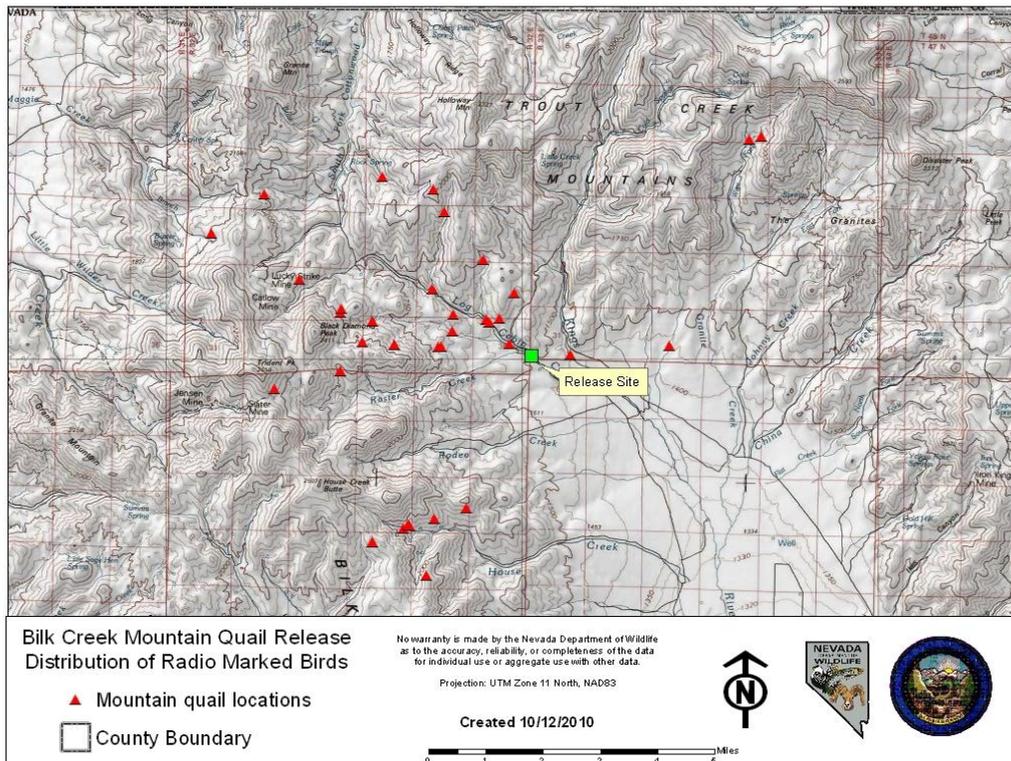
in a pen at the Mason Valley Wildlife Management Area. Eight mountain quail died during the three month holding period due to various factors.

This release was considered an augmentation of the existing mountain quail population within the Bilk Creek, Montana, and Trout Creek Mountain complex. This work also complemented release efforts being conducted by the Oregon Department of Fish and Wildlife (ODFW) in the Trout Creek Mountains (Harney County, Oregon). The hope is to develop several coveys of birds that have the ability to interchange either seasonally or on a continuous basis.

Monitoring

To help monitor the success of the Bilk Creek release, a total of 32 quail was marked with VHF transmitters. A seasonal technician, funded through the Nevada Upland Game Stamp program, collected follow-up information for a three month period from April through July, 2010. Data were collected on bird location, elevation, occupied habitat type, behavior and mortality. Two telemetry flights were also conducted using Owyhee Air contract services to augment location data.

Over the three month period, 22 mortalities were documented and 2 birds were not located, either because the transmitter malfunctioned or birds moved completely out of the suspected release area (>10 miles). The estimated survival rate (through July 2010) was estimated at 37%. Mortality events were largely attributed to avian predators such as falcons, hawks and owls; however, mammalian predators were also suspected to be the cause for some of the losses. Even though no nests were physically documented, some behavior suggested that nesting did occur. It was likely that some birds elected to nest later given the cold and damp spring and early summer conditions. In addition, the follow-up confirmed that mountain quail spread out over suitable habitats in the Bilk Creek, Montana and Trout Creek Mountain complex. The map below shows the wide distribution of mountain quail post release.



This project was discontinued at the end of July because the Nevada Board of Wildlife Commissioners rejected an Upland Game Stamp proposal to extend the project for Fiscal Year 2011. This proposal entailed a more comprehensive research effort through the University of Nevada, Reno to determine survival rates and success of additional translocated quail into the Bilk Creek Range and compare those and other variables to extant populations in Washoe and/or Churchill County.

California quail

Trapping and Transplanting

The Nevada Department of Wildlife (NDOW) headquarters and Western Region office in Reno continue to receive complaints during the winter months of large coveys (>300 birds) of California quail that congregate in residential areas. Complaints often involve defoliation of lawns and ornamental shrubs. NDOW views these birds as source stock and places some effort into capture and translocation into suitable habitats through the volunteer program and with existing staff. During capture efforts conducted in the Reno and Carson City areas in FY10, a total of 152 California quail were captured and released at the locations provided in the table below.

Release Location	County	# of Birds	Males	Females
West Lee Creek	Churchill	55	25	30
Hot Springs Mountain	Douglas	53	32	21
Parsnip Wash	Washoe	44	21	23
Totals:		152	78	74

Monitoring

Quail observations were reported in the *2009 Upland and Migratory Game Bird, Rabbit and Furbearing Mammals Harvest Data and Population Status Report* (W48-R-41, Sub-grant I S&I – Project 2 & 3).

Merriam’s/Eastern Turkeys

Trapping and Transplanting

No trapping or translocation efforts for Merriam’s turkeys were made in Nevada in FY2009.

Monitoring

Monitoring was conducted during summer fieldwork and reported in the *2009 Upland and Migratory Game Bird, Rabbit and Furbearing Mammals Harvest Data and Population Status Report* (W48-R-40, Sub-grant I S&I – Project 2 & 3).

Rio Grande Turkeys

Trapping and Tansplanting

There were two Rio Grande turkey releases conducted in Nevada during state fiscal year 2010. Both releases took place in Lincoln County in southeastern Nevada with a total of 62 birds being liberated during the releases. Birds were provided from capture efforts conducted by the Utah Division of Wildlife Resources.

Two separate releases were conducted of 31 birds each. One release took place near Bunker Pass in the Clover Mountains consisting of one adult male, 2 jakes, 18 adult hens and 10 juvenile hens. The other release occurred near Chokecherry Spring in the north end of the Delamar Mountains southwest of Caliente, Nevada. The gender and age breakdown for this release consisted of 1 adult male, 3 jakes, 19 adult hens and 8 juvenile hens. All birds were tested for Salmonella and Mycoplasma species and appeared to be in good condition. Quality habitat for wild turkeys is available in limited, well distributed segments within this particular region. Turkeys are expected to distribute themselves across a fairly broad landscape.

Monitoring

Monitoring was conducted on turkeys released in the Carson Valley of Douglas County. The release of 59 birds occurred during January and February of 2009. Subsequent surveys were conducted during the summer of 2009 and spring of 2010. Eight turkeys were radio marked with VHF transmitters. Of these birds, five were found dead. Two birds were hit by vehicles on U.S. Highway 395 near the Leviathan Mine Road. Two other birds were suspected to have been killed by predators. The cause of the other mortality was unknown.

Location information obtained from radio-marked birds prior to death, as well as the other three live birds, shows that turkeys have distributed themselves over a large area both downstream and upstream along the Carson River. Several reports have been made through phone calls of three jakes frequenting the Carson Valley Golf Course area south of Gardnerville. These are the only known birds to have made their way to a conflict area. Other birds have also been reported upstream from the release site across the California/Nevada state line.

RECOMMENDATIONS

1. Continue to pursue funding sources for trapping, transplant and monitoring operations.
2. Continue coordination efforts to obtain Columbian sharp-tailed grouse with other states. Develop trade or purchase agreements.
3. Continue mountain quail and California quail reestablishment efforts into suitable habitat, as well as seek alternative sources of mountain quail where habitats closely match those found in Nevada.
4. Identify suitable release sites for ruffed grouse and continue coordination efforts to obtain ruffed grouse, both from other states and within Nevada where population numbers allow.

5. Continue or establish new cooperative agreements with appropriate universities to conduct research and monitoring of relocated sharp-tailed grouse, mountain quail and ruffed grouse.
6. Monitor the success of recent wild turkey releases through follow up of radio-marked individuals and harvest of marked birds. These efforts can help determine future management needs and direction.
7. Expand water development efforts and maintain existing developments throughout the state to provide increased opportunities for transplanting and/or maintaining upland game bird populations.
8. Coordinate with federal land management agencies and private landowners to improve habitat conditions, especially water sources such as natural springs, for upland game species.