

Wyoming Animal Damage Management Board

2008-2009 Annual Report for the Predator Management Program



Submitted by:
The Wyoming ADMB



Animal Damage Management Board

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MEMORANDUM

TO: Joint Agriculture, Public Lands and Water Committee

FROM: Jason Fearneyhough, ADMB Co-Chair
Steve Ferrell, ADMB Co-Chair

DATE: September 7, 2009

SUBJECT: 2008-2009 Wyoming Predator Management Program Annual Report

Please find enclosed the required annual progress report due on or before October 1 of each year regarding the Wyoming Predator Management Program as administered by the ADMB and the Department of Agriculture.

Feel free to contact us if you have any questions regarding this report.

cc: ADMB Members
Wyoming Board of Agriculture
Wyoming Game & Fish Commission
Governor Freudenthal
Joint Appropriations Committee
Joint Travel, Recreation, Wildlife and Cultural Resources Committee

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Program Details, County Summaries

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University of Wyoming Final Economic Analysis of Predator Management in Wyoming Report

Overview of Activities to Date:

1. Funding for the statewide predator management program was approved by the Wyoming Legislature on March 23, 2006.
2. Rules regulating the distribution of funds to the Predator Management Districts were filed with the Secretary of State on March 31, 2007.
3. To date, nineteen Predator Management Districts have qualified and applied for funding through the state program.
4. Through the work of the ADMB, \$4,638,477 of the current biennium's \$4.83 million (reduced from initial \$5.4 million) has been disbursed to the nineteen qualified districts. This funding has allowed the districts to continue developing proactive predator management programs for the benefit of both livestock and wildlife, strengthen infrastructure, and provide a valuable service the citizens of Wyoming.

Following is a listing of funded districts, and the amounts distributed to each for the current biennium.

<u>PREDATOR MANAGEMENT PROGRAM ALLOCATIONS</u>		
County	Date Approved	Amount Allocated
Albany	4/28/09	\$80,332
Big Horn	4/28/09	\$138,924
Campbell	4/28/09	\$97,015
Carbon	4/28/09	\$102,814
Converse	4/28/09	\$116,380
Crook	4/28/09	\$103,829
Fremont	4/28/09	\$125,505
Goshen	4/28/09	\$69,606
Hot Springs	4/28/09	\$166,725
Johnson	4/28/09	\$130,524
Lincoln	4/28/09	\$142,379
Natrona	4/28/09	\$162,964
Niobrara	4/28/09	\$89,318
Park	4/28/09	\$122,055
Sheridan	4/28/09	\$92,488
Sweetwater	4/28/09	\$113,164
Uinta	4/28/09	\$104,709
Washakie	4/28/09	\$96,252
Weston	4/28/09	\$87,907
		\$2,142,890

By July 1, 2009, each district provided to the ADMB a Year-End Report, detailing actions taken and results, monies expended, and the most recent audit report. The following contains some statistics from across the state, and a brief overview of wildlife projects being conducted in conjunction with livestock related management efforts.

Albany County – With direction from the Albany County Predator Management Board, U.S.D.A. Wildlife Services has worked on 64 properties totaling 1,049,963 acres. The Albany County Wildlife Project continued this year with the boundaries of the project area are –North to South-Sybille Canyon to Albany County road 17 (Roger's Canyon road); -West to East- WY Highway 30 to WY Highway 211. This project is focused primarily within Albany County, although it did extend into Laramie County due to the location of the Mule Deer prior to their migration back up the mountain. While working on the project to enhance wildlife within this area, personnel also checked coyotes for heart worm and retrieved plague and tularemia samples. This was done in order to get a better understanding of whether or not removal of coyotes has any effect on the recruitment of mule deer and sage grouse. In addition, 5 skunks were tested for rabies within the county borders with no positive cases reported.

So far, all cooperating ranchers within the wildlife project have reported very positive results and are very satisfied with the program and its effectiveness. At this point, losses to livestock and wildlife have not been totally eliminated, but have been reduced by a significant number.

Big Horn County – The Bighorn County Pheasant Enhancement Projects have been conducted with great success since April of 2007. In 2008 it was decided to begin a second project due to the overwhelming success and positive results from the first. Field activities begin April 1st – June 30th 2009. These projects are conducted under the direction of the Bighorn County Predator Management District (PMD) with the cooperation's of United States Department of Agriculture -Wildlife Services (WS), State Veterinary Laboratory, Wyoming Game and Fish Department (WGFD), and the Animal Damage Management Board (ADMB). These projects purpose are proposed to improve the pheasant population and to reduce damage for agriculture producers and residents. By removing striped skunks, raccoons, feral cats, red foxes, and coyotes, our goal is to enhance the wildlife resource, to reduce the damage caused by predators for farmers, livestock producers, and residents. As predators are removed, samples are collected for plague, tularemia, and rabies which provide information on zoonotic disease. Coyotes removed during the project have been examined for the presence of canine heartworm as well.

Success of the projects are determined by analyzing information gathered by WS specialists in the field and Wyoming Game and Fish Department information collected from sportsmen and field studies conducted in the project areas. Damage information was tracked by the MIS program (WS Database) as problems were reported with damage

confirmed where control actions were taken. Control actions were carried out using the best and most humane tools that provided immediate desired response for each situation and location. Live traps were the tool of choice by WS specialists due to the presence of pets and hobby animals in the areas.

The Bighorn County PMD has received positive feedback from both wildlife projects. There have been numerous reports from farmers and sportsmen about the positive impacts the project has had with reducing crop damage and improving pheasant production in both areas. Many farmers in the project areas have commented that since the first year the projects were initiated they have raised a quality crop of sweet corn without extensive damage and have observed a noticeable decrease in the amount of damage and consequent maintenance to irrigation systems. Farmers and sportsmen have noticed more pheasant broods in the areas throughout the summer and into the hunting season. For all these reasons, the Bighorn County PMD feels the projects are beneficial to farm production and wildlife protection and the projects should continue county wide.

Campbell County – The first year for Wade Jones, our Wildlife Biologist, has been very beneficial. He has established a great working relationship with many agencies and organizations in Campbell County. Most of his contacts and calls are referred by the Campbell County Sheriff's Department, City of Gillette Police Department, City of Gillette Animal Shelter, Campbell County Weed and Pest, Wyoming Game and Fish Department, Campbell County Department of Public Health, and the City of Wright. Wade is on call 24 hours a day, 7 days a week and he assists Campbell County residents and businesses in a wide variety of human/wildlife conflict issues. He has also been assisting the county coal mines with their project of controlling pigeons.

Along with direct control work, Wade assists with information about wildlife nuisance issues that include exclusion and harassment of damage or nuisance causing wildlife. He has conducted enhanced surveillance activities and public education in reference to rabies in Campbell County. He has sent in 41 skunks and 10 bats to the Wyoming State Vet lab to be tested for rabies. Of those, 9 skunks have come back positive for rabies. Wade has written public service announcements for radio and for the newspaper that run for several months during the summer. He has also conducted interviews for the newspaper and did a public access show on the local television station. He also assists the City of Gillette/Campbell County Animal Shelter during their rabies clinics. Along with the rabies issue, Wade has also tested 125 birds for the avian influenza and he has had some positive findings.

Our two county trappers have been busy helping the livestock producers and wildlife sportsman. Along with the trappers, we have had 13 various Wildlife Service's employees participate in activities in Campbell County. According to the Wildlife Service's report, Campbell County has 226 active agreements that are held between landowners and the Wildlife Services. Out of those agreements, our trappers have serviced 81 of them. Those agreements cover 1,195,563 acres. We increased our flying budget last year and our trappers flew 194 fixed wing hours and 31.9 helicopter hours.

This does not include the last billing from Wildlife Services which we have not received yet. The total number of animals removed in response to disease, nuisance and livestock damage complaints is as followed: 803 coyotes, 52 fox, 172 skunks, 33 raccoons, 13 jackrabbits, 1 porcupine, 241 pigeons, 59 feral cats, 8 badgers, 3 bats, 1 beaver, 1 muskrat, 2 poisonous snakes, 33 non-poisonous snakes, and 1 northern flicker. (As of last report from Wildlife Services) Twenty-eight coyotes were tested for Canine Heartworms.

The Campbell County Predator Management Board has provided the two trappers and our Wildlife Biologist with upgraded cell phone communication since there are numerous areas of Campbell County that cannot be reached with general public cell phones. We have also replaced 4-wheeler tires and repairs to vehicles. Since Campbell County has many landowners that lease out their land to out of state livestock producers, our board has refunded \$7,811.00 of the livestock brand predatory fees back to those out of state producers. This amount is up from \$700 that was refunded the last fiscal year.

Carbon County – Pursuant to WS11-6-21(g): as we predicted in our first year of this legislation, the amounts of refunds given to producers has increased substantially. Approximately 31% of collected fees were returned to producers this year. Many of the refunds were from those lessees that paid the fees at the time they left, but asked for a refund when they got home – out of our county. As you might guess, this puts a strain on the funds used to run our program. As a result, next year, we may need to ask for an increase in funds from the ADMB to keep our program at its current level.

We continue our Carbon County Wildlife Project #1, which is done in conjunction with Sweetwater and Lincoln Counties. A researcher contracted through Mike Conover of the Berryman Institute, at Utah State University, gathers information on antelope, mule deer and sage grouse. One of the three study area pairs is in Carbon County. Flat Top, is our heavily controlled area with Kinney Rim serving as the non-controlled area. A total of 195,886 acres are involved in this area. An increase in the antelope fawn ratio has been noted in the study.

Carbon County Wildlife Project #2, which is being done in cooperation with Wyoming Game and Fish, has the objective to raise mule deer numbers which are below objective levels. This is a 2-3 year project centered on the southern section of Deer Area 70. A total of 437,460 acres are involved in this project. Approximately half of the coyotes taken were tested for canine heartworm and found to be negative.

The number of participating livestock producers increased from 74 to 82 and successful raven control was continued on sheep lambing grounds. Total livestock and property loss was reported down \$11,894 from last year and the total loss verified was down \$8,415 from last year.

Several predator problems within the town limits of Rawlins were handled and a letter from the Mayor of the Town of Dixon prompted our aid in dealing with a severe feral cat problem.

Converse County –

Wildlife Issues

Trappers and aerial hunting are used to control predatory losses on wildlife, resulting in growth and preservation of the state's wildlife. By increasing wildlife numbers, more licenses can be sold which will be an economic benefit to Converse County and the State of Wyoming. Also our trappers have sampled 92 birds for avian influenza, 38 coyotes for plague and tularemia, 14 animals for rabies (1 bat showed positive in 2007), and 19 coyotes for canine heartworm.

Livestock Issues

Work with local producers and landowners to implement predator management practices for the benefit of the livestock industry in Converse County. The board had an opportunity to put together a brochure with information and contact information and distributed via mail to all livestock owners in Converse County. Converse County is a very large county with diverse topography and a large wildlife population. With our 2 trappers and our increased flying time, we feel we can provide our producers optimum control throughout the year. With last year's budgeted flying hours of 300 we used 290.8 and took 503-15dens coyotes, 43 Red Fox-10dens. As of January 2009 to current, 203 coyotes have been taken with 83.6 aerial hours. The numbers of livestock loss has significantly gone down.

Crook County – GRANT ACTION ITEMS AND RESULTS:

- A) Expand trapper force to include one additional full/time person.

We were able to contract with an additional trapper that has worked well for our district and a full report of his activities is available upon request.

- B) Facilitate an increase in wildlife numbers (deer and antelope) south of I-90.

New contract employee targets his man-hours to landowners and predator issues South of I-90 in Crook County. Additional agreements (approx. 5% increase) have been signed and a significant increase of hours is being spent in the key designated areas. See report for more detailed information on increased agricultural producers cooperating with Crook County trappers. Trapper assigned to area south of I-90 reports an increase in signed land-owner agreements (nearly 15) along with verbal approval to hunt areas when coming from contracted cooperators when necessary for an additional 7 to 8 % increase or approx. 8 landowner/operators. Not all kid/fawn increases can be attributed to predation animal management. However, the numbers show that there is obvious positive impact. Coyotes that have been checked for stomach content showed antelope young as primary food source.

- C) Joint efforts with Wyoming Game and Fish Department in coordinating recovery efforts and monitoring progress in wildlife numbers in Crook County. Wildlife animal counts are not officially tallied within County lines by WY Game and Fish Dept. and thus, the actual numbers for herd animals are not currently available for just Crook County. Continued efforts to improve relationships and find joint projects are important to the County Predator Animal Board. Working relationships are good. Wildlife numbers for Crook County have been solicited from the Game and Fish Department but were not available to us at the time of this report. They were flying for counts at this time and their areas for count are based on hunt designated areas not County line defined. The Predator Board and their activities work to address sportsman needs as well, keeping predatory animals under control and managing numbers at healthy levels. On-ground observation levels will come into play in our reported projections.
- D) In an effort to increase predatory animal management/control the Board allocated 300 hours of fixed wing use and just under 40 hours of helicopter use. Some of these hours were used for wildlife recovery. This winter's snow cover added to the benefit for aerial hunting. However, it did slow the on-the ground efforts because depths in the Black Hills made travel difficult.
- E) Human Health and Safety goals include control measures of coyote packs and thus reduce plague infested animals within the County. Trappers are trained through Wildlife Services to look for unhealthy animals and are trained/authorized to take specific samples for analysis. July 08 to June 09 south of I-90 reports show no plague infested animals during this time frame. No positive rabies cases were found.
- F) Information and Education efforts include a more knowledgeable public. Contracted representatives made over 40 contacts and visits with private parties, and approximately 15 public meetings July 1, 2008 through June 2009.

Fremont County –

SAGE GROUSE/MULE DEER PROJECT ANNUAL REPORT

In the past year our sage grouse/mule deer project has went smoothly with measurable results. The Goal of the project is 3-fold.

1. To identify which predators/animals depredate sage grouse nests. This has been accomplished using infrared motion sensing trail cameras on artificial sage grouse nests.
2. Measure, if possible, the difference in nesting success of sage grouse in areas of little predator control as opposed to and adjacent area with intense predator control.
3. To enhance a struggling mule deer population.

In spring/early summer 2009 trail cams were once again put out on artificial nests in both the “control” and the “treatment” area. This is the 4th year. 10 cameras total were used. Each cam is stationed at the same spot for one week and then rotated to a different nesting spot. This gives us a total of 40 different nesting sites to gather data on. 7 total nests were raided this year. This is significantly lower than previous years. Late snows and higher than normal rainfall fell and as a result there has been a very noticeable increase of grass/foliage compared to the much drier years previously. This may have been a contributing factor to less nest predation this year as the nests were much harder to physically see from both above (good sagebrush canopy) and at ground level (higher than normal grass heights). The common raven was the species that depredated all of the nests this year. In years past both magpies and red foxes depredated nests also.

It has been very difficult if not impossible to determine actual sage grouse population growth due to higher nesting success when coyotes and other ground predators are removed from the treatment area and not the control area. This is due to very few nests being depredated by ground predators thus far in the project. A few nests have been depredated by foxes and coyotes, but not enough to make any type of comparison. One thing is clear thus far: The common raven is top nest scavenger in central Wyoming.

A struggling mule deer herd in Wyoming Game and Fish Department hunt area 90 has been the focus of this project also. The main predator of the mule deer in this part of Wyoming is the coyote. The project area lies east of Riverton, Wyoming and takes in both area 90 and the Kirby creek area of the Wind River Indian Reservation. Coyotes are removed year round from the “treatment” area of the project. A coyote stomach analysis is done and a yearly deer count in late December-early January by USDA Wildlife Services personnel and aircraft. To date this year we have removed 239 coyotes. 178 field hours have been worked and 61.9 fixed wing hours have been flown. This is all in line with project costs and goals. Stomach content analysis on coyotes thus far this year has netted the following results:

22 coyote stomachs were analyzed. Of these, 7 were empty. This leaves 15 with edible material.

Mule deer 12%
Pronghorn antelope 10%
Sage grouse 3%
Livestock (fresh/carrion) 15%
Cottontail/jackrabbit 24%

Rodent 2%
Wild horse 10%
Indistinguishable 24%

In early late December 2008 we did our yearly mule deer count. 652 total deer were counted in the treatment portion of hunt area 90 and adjoining reservation land. This is up from 489 in 2007.

In conclusion, I think this project has been extremely beneficial in not only the data recovered for future use, but also a boost to our state's economy with an increased deer population. Thanks once again to the ADMB board for its support of this project.

DUBOIS BIGHORN SHEEP PROJECT

The Dubois bighorn sheep project is ongoing through the Fremont County PMD, Wyoming Game and Fish Department and FNAWS (Federation for North American Wild Sheep). The purpose of the project is to help increase bighorn sheep numbers and ewe/lamb percentages in the whiskey mountain and spring mountain areas close to Dubois, Wyoming.

Control work is done on coyotes around the sheep herds both on the ground and with aerial hunting. Most of the work is done from fall to spring. To date, 32 coyotes have been removed around the sheep. 10.1 hours have been flown and 43 hours worked on the ground. Population monitoring is done by Wyoming Game and Fish Department.

OCEAN LAKE PHEASANT PROJECT

The ocean lake pheasant project was started in cooperation with the Fremont County PMD and the Wyoming Game and Fish commission. Ocean Lake lies west of Riverton, Wyoming and is a public land resource owned by WGFD. An array of public activities takes place there. Boating, fishing, hunting, camping etc. In the fall, WGFD releases pheasants for bird hunters on the property at different times. The projects aim is to reduce predators just prior to the open bird season. This helps to keep more birds in the field for hunters. Red foxes are the dominant predator in the area. Coyotes, raccoons, skunks and feral house cats are also present.

Goshen County – The mission of the Goshen County Predator Management Board is to provide predator control for the benefit of health and human safety, livestock producers, wildlife populations, crop production and to reduce property and crop damage within Goshen County. The grant funds received from the ADMB have enabled the Board to add a full time trapper to carry out a wildlife project to improve pheasant populations, reduce rabies and plague, reduce property and crop damage, do starling control and to assist with coyote control in the county.

The wildlife project to increase pheasant and water fowl populations is progressing well. We are still concentrating on the five areas targeted initially. The pheasant population is increasing with crow counts from roosters steady or up instead of declining as they had been. With good moisture and cover for the first time in several years, we believe there will be a significant increase in pheasant numbers this year. The number of raccoons taken in the project areas this spring has decreased quite a bit showing that our efforts have had a significant impact on their population. As these numbers continue to decline, we will expand to other county areas in order to obtain good results for the work done.

Plague, roundworm, and rabies studies are also being done on the raccoons and skunks taken in the project and surrounding areas. According to a Nebraska report, the number of skunks with rabies is up dramatically in western Nebraska. The Board feels it is very important to continue all the skunk control possible.

Crop and property damage have become a large part of the wildlife project, with county losses from raccoons costing producers thousands of dollars. The University of Wyoming – SAREC research station experienced 100% loss in some of their field corn test plots in 2007. After control efforts by our trappers, their 2008 test plots were a success. Our board is trying to gather data to be able to put an actual dollar estimate to crop damage within Goshen County. With help from U.S.D.A. Wildlife Services, our board members and volunteers will document crop damage during the corn filling stage. Stephanie Swift, an economist from the National Wildlife Research Center in Ft. Collins is assisting with the study protocol and will help with computing results. Stephanie's help has been a great benefit to the District.

With deer numbers below Wyoming Game and Fish objectives, we are planning to incorporate a deer project into the livestock program along the Goshen Hole Rim. More time for fawn protection can be added with little additional cost. Our new local Game and Fish warden has shown good interest in helping our trappers with wildlife projects.

Due to the funds provided by the ADMB, our board has been able to add another trapper allowing us to be able to respond to livestock predation problems better and keep livestock losses down.

Finally, when considering human health and safety, a forty pound raccoon can do \$2,500 in damage to newer, lighter automobiles. The number of raccoons killed on the highways in and around the project areas has decreased tremendously. Greatly reduced collisions, less damage to autos, and many less dead raccoons on the highway make driving much more safe and pleasant for the public.

Hot Springs County –Reported livestock losses have remained fairly static in the last three years, after decreasing up to that point. The Hot Springs County Predator Management Board attributes this to the funding provided by the State of Wyoming and the competency of their personnel. According to livestock producers, most are increasing

their animal numbers, particularly sheep producers. Keeping losses low during an expansion in livestock numbers also shows the quality of the county programs.

Specific problem predators were targeted within the Town of Thermopolis. Bat and skunk samples were sent to the state lab to be tested for rabies. Also, raccoon, coyote and fox were tested for internal and external parasites, plague, and tularemia. None of the samples tested positive for rabies.

The Owl Creek Bird Project is in its second year. The results of this project have been hard to document, but the anecdotal evidence supports an increase in the pheasant numbers. A survey was sent out to sportsmen in the fall of 2008. This survey showed that even though bird numbers have increased, a majority of county sportsmen believe that the present numbers of upland game birds in Hot Springs County are below historic levels. Sportsmen will again be asked to report their observations in a survey mailed out in the fall of 2009.

Observations made by landowners in the Copper Mountain/Kirby Creek area show a significant increase in the number of sage grouse. While there are not specific projects in place for these birds at present, the other control efforts by the Hot Springs County Predator Management Board are also helping this species.

The Mule Deer project is in its second year. The 2/23/2008 aerial count was 411 deer, compared to 391 on 2/22/2009. While the count showed a decrease, when considering other variables within the study, the board didn't see any reason to change the program at this time. Additional years are needed to add to the data, to establish any trend.

Johnson County - The Johnson County Predator Management Board continues to be very active promoting control measures and continuing programs.

The state management grant fees continue to enable us to carry out an active program spelled out in our management plan.

- Aerial hunting has been very successful with good numbers of coyotes taken from the air. Many were taken just before or during the denning season, thus population control was achieved by good timing. This is not only advantageous to livestock producers, but great for the wildlife populations, county-wide. Some problems getting aircraft when conditions were right were incurred
- We have made major changes in the way of control officers are employed. These changes were made due to the significant number of overtime hours being worked and possibly much overtime being paid. On January 1, all full time employees were put on a contract basis. Vehicle leases, supply allowances, and liability insurance coverage were eliminated. These things were figured into a per day contract which will also save some employment fees to the district. Part-time and bookkeeping staff will remain as salaried employees.

- For the first time we had a request for refunds of predator fees collected. We continue to educate and inform our producers about our program at every chance but also feel that, as the agricultural economy struggles, we may see more refund requests.
- Cooperative efforts are being used with USDA Wildlife Services as we have seen recent wolf activity in our district. Meetings to coordinate overall efforts with the Wyoming Game & Fish have been set.

Johnson County continues its Rabies Mitigation Program with continued success. We have two seasonal employees for this program, one in Buffalo and one in Kaycee. Our contract employees also control and document rabies targeted animals. We've seen numbers lower and level off which might indicate a level of control. Both Buffalo and Kaycee city officials are very satisfied with the success of this program and have promised financial help for the upcoming fiscal year.

In summary, the livestock and wildlife of Johnson County as well as the residents of Buffalo and Kaycee are much safer due to the dedication of the members of the district board and the employees of the Johnson County Predator District. The success of the program is due, in great part, to the grant funding through the Wyoming Animal Management Board

Lincoln County - This past year, much progress was made for the Lincoln County Predator Management District (LCPMD). Two trappers transferred to new jobs but we were able to hire two new trappers that seem to be working quite well for the District. At present, we are capable of offering good services to the entire county.

The funds we have received from the ADMB have greatly helped LCPMB offer a better quality and quantity of predatory management. In 2008, over eight hundred coyotes were removed through the efforts of Wildlife Services, fixed wing and helicopter work. The fawn survival seems to be responding to increased control. The initial report on ravens and their impact on sage grouse are very impressive. We have agreed to two more years of study on these two studies by the Berryman Institute. A five year study should yield better overall data and statistically sounder.

In summary, because of the ADMB funding, we are able to carry on a decent predator management program in Lincoln County. We are able to purchase necessary equipment for our trappers and good data is coming forward with our wildlife studies. We hope to purchase jointly with Sweetwater County an infra-red heat-detecting device to hopefully aid in finding denning sites. Lincoln County is experiencing a buildup of wolves this past

winter and a huge build up of ravens and crows spreading havoc on newborn livestock, wildlife and sage grouse.

Natrona County – The Natrona County Predator Management Board has contracted with one full time trapper and one part time trapper, who cover a very large geographical area compared to other counties who have several full time trappers. The Board has been asked by U.S.D.A. Wildlife Services to have the two trappers complete testing procedures for them by collecting coyote blood samples to be tested for rabies and tularemia.

The Natrona County Predator Management Board has utilized aerial time and the trappers for the hunting of predators before critical fawning and nesting periods. The activity for this has been concentrated in areas within the county that the Wyoming Game and Fish Department has designated as critical fawning, nesting, and lek areas.

Natrona County is experiencing regular depredation to livestock as a result of a healthy coyote population. The Board has minimized the loss of livestock to predation, thereby enabling viability of the local producers. The addition of strategic flying time has had a tremendous impact on prevention of livestock losses, as this method is often one of the best tools for coyote control. Other control methods have been used to remove predators that are preying upon or threatening livestock, are creating hazards to public safety or are damaging crops or property.

Areas designated by the Wyoming Game & Fish Department for aerial and ground coyote removal are Southwest Casper, Southeast Casper, Northwest Casper, Northeast Casper, West and East of Casper.

Southwest Casper: This area corresponds with:

Deer Areas: 66, 88, 89, 97

Antelope Areas: 32, 63, 68, 69, 70, 72

Southeast Casper: This area corresponds with:

Deer Area: 158

Antelope Area: 25

Northwest Casper: This area corresponds with:

Deer Areas: 31, 33, 34, 36, 158, 163, 169

Antelope Areas: 21, 25, 73, 75, 113

Northeast Casper: This area corresponds with:

Deer Area: 34

Antelope Areas: 73

West of Casper: This area corresponds with:

Deer Areas: 34, 36

Antelope Areas: 73, 75

East of Casper: This area corresponds with:

Deer Area: 66

Antelope Area: 31

The Natrona County Predator Management Board purchased a booth to display at various sport shows within Natrona County. The booth has photographs of sheep and antelope taken by coyotes and other predators, various traps used by the trappers, loss statistics and predator management methods of control. The booth has been displayed at the Wool Growers banquet, Mule Deer Foundation banquet, SCI Natrona Chapter banquet, and Wyoming Stock Growers Association banquet. The board will also have a display in September at the Game and Fish Expo held in Casper.

Niobrara County – An aerial deer survey was conducted in the North special deer emphasis area, using the same protocol as the previous year. Although the average doe to fawn ratio in the entire emphasis area shows an 11% increase over last fall, the Snyder Creek count area showed an area of fawn devastation, with a ratio of 0%. This dovetails with the increased lamb losses to predators that were suffered on the south and east sides of the same general area of the county in 2008. The PMD has made adjustments to personnel and strategy to address the problem. The numbers show a relatively high predator take, but most were tallied in the fall and winter. Those efforts were too late to affect the 2008 fawn and lamb losses, but we hope to see a positive effect in 2009.

A survey was conducted in the Rawhide deer area in Fall of 2008, showing a 66% doe to fawn ratio, which was much higher than that found in the north area. The Rawhide location is an area where a successful multi-year mule deer recovery project was conducted in 2001-2004. During this time, using predator control as the only enhancement tool, doe to fawn ratios were raised from 20% to above 80%. Landowners felt that reduced predator control after completion of the project was beginning to manifest in a decline in the deer population. After receiving the state funding, we elected to once again emphasize wildlife enhancement through predator control in this area. Increased work has been done there since 2007. The PMD was in collaboration with Game & Fish and planned to obtain data from their scheduled deer count in the fall of 2007. Unfortunately, they did not conduct the expected count. Consequently, although the PMD commissioned our own count last fall and will do so this fall, we do not yet have comparison data on the doe to fawn ratio.

The controls for both deer emphasis areas are proving to be of little value. Most of the land in this county is privately owned, and we cannot withhold predator control from individuals just because they fall in an area that would serve well as a control. From the onset we defined these areas as “no extra work above maintenance”, rather than a true control. But we are finding that as much predator work is required in these areas as any other, and private individuals are harvesting predators within the boundaries as well. We feel that year-to-year comparisons of our deer census in the special areas will show the positive effect of predator control on deer populations without the use of control areas.

Sage grouse populations continue to be observed by board volunteers and personnel and appear to be stable. Swift fox have been noted, and we intend to monitor them more closely due to the prevalence of mange in the coyotes and red fox harvested.

In 2006 and 2007 the western side of the county experienced an explosive peak and subsequent dieback in the rabbit population, all in the midst of a multi-year drought. Fueled by the increase in prey, coyote litter sizes in 2007 and 2008 were astoundingly large. Predictably, the subsequent reduction in rabbits as prey had, by Fall 2007, stressed the enlarged predator population. Mange became prevalent in the predators, especially on the county's western side. Fawns and lambs were probably the easiest prey base for the sickened predators by the spring of 2008, and losses of both were higher than usual. The mangy coyotes are exhibiting behavior patterns different than normally seen, so traditional location and control methods seem to be less effective.

Mange has now spread throughout much of the county. Trappers' estimates run as high as a 50% infection rate. We have begun to take some encouragement from the unusually large number of dry females taken this spring and the scarcity of dens. Litter sizes are smaller as well. Perhaps mange has disrupted the reproductive cycle and will prove to be our ally this year. Good precipitation in some areas, and at least somewhat improved rainfall in all areas of the county have also helped to buoy spirits.

Park and Washakie County - The Park and Washakie County Cooperative Wildlife Enhancement Project was proposed to improve mule deer and antelope recruitment in deer hunt area 125 which is not only for Wyoming Game and Fish Department (WGFD) and hunters, but agricultural producers and wildlife enthusiasts as well. Although many environmental stresses affect wildlife populations, only a relative few can be manipulated. Predator management can be used, in some cases, to limit mortality in ungulate populations and enhance fawn recruitment, doe survival, and increase the portion of breeding bucks in problem areas. Although predation is rarely the sole factor limiting populations, it can play significant role in suppressing populations below herd objectives. This project may help boost ungulate populations to sustainable levels. The project will be evaluated after two years to determine whether it warrants continuation.

The project area encompasses WGFD deer hunt area 125 and antelope hunt area 77. Many landowners and sportsmen have voiced concern over the last few years regarding the declining dear and antelope numbers. The cooperative effort between the WGFD and the Bureau of Land Management (BLM) and their data on habitat and population parameters helped identify the decline.

Within the project area, project cooperators we have identified distinct winter ranges and fawning grounds utilized by antelope and mule deer. The project area consists of rangeland separated from agricultural crops which have no history of ungulate damage. As deer and antelope numbers respond positively to treatment the effects will expand outside of the project area. The WGFD Biologist, Bart Kroeger, feels any efforts to help improve the deer and antelope populations on native ranges are welcome, especially deer

which are currently under objective. The antelope population is near objective in this area.

Wildlife Services has selectively utilized trapping, snaring, denning, call/shoot, aerial hunting to accomplish project objectives. WS Specialists analyzed stomach contents from coyotes for dietary analysis along with age and sex classifications and placental scar inspection to determine reproductive status. Coyotes were tested for plague and tularemia as well as the presence of canine heartworm. All methods and activities were conducted in accordance with federal, state, and local laws and regulations. Project data was recorded daily including wildlife counts, GPS locations, and activities. Target wildlife species targeted for this project include coyotes and red foxes. Control activities are preapproved with the area livestock producer to ensure safety of stock and herding dogs.

All activities and methods were utilized in compliance with agreements established by WS with landowners and management agencies. All project activities were documented by the MIS program (activity tracking database) used by USDA-Wildlife Services.

WS used established ground and air census methods for mule deer and antelope surveys along with population trend data provided by the Wyoming Game and Fish Department. We used existing information from cooperating agencies to document long term trends for both deer and antelope populations. Wildlife Services collected the following data: GPS locations of predators taken, wildlife classifications and numbers.

Wildlife Services personnel identified and quantified predation on mule deer and antelope. On five different occasions, coyotes were taken by aircraft while in the act of killing fawns. In three situations, WS documented fawn deer and antelope remains at or near dens sites. Of coyote stomachs examined, 33% contained either antelope or deer remains (table3). Other prey found in stomachs of coyotes included: mice, snakes, cottontail rabbits, ground squirrels, marmots, sage grouse, grasshoppers, and beef calves.

Placental scar data were collected from female coyotes removed from the project area (table 3). These data showed litter numbers ranging from seven to twelve, with an average of nine pups. WS specialists observed signs of other potential ungulate predators in the project area including mountain lions, golden eagles, and bobcats.

There has been an increase in the total number of antelope observed during the 2008 classification surveys. This has been the first significant increase detected during the previous ten years. Although, doe/fawn numbers do not show a positive variation this can be explained by the herd dynamics in this situation. As we survive doe fawns starting in 2007 they reach breeding age at 15 -16 months. They require a gestation period of 240-245 days and usually produce a single fawns their first pregnancy. The herd in 2008 includes the new fawn crop with the non-productive yearlings looking like does which are tough to delineate. Due to this fact, as we continue to survive fawns of each year the doe/fawn ratio remains the same or may seem to decline. For this reason we feel the total population is the best identifier to prove success of the wildlife project and its effects on this herd.

Mule deer survey data were not available for the project area at the time this report was prepared. Anecdotally, however, Matt Lentsch (WGFD Game Warden); noted a definite increase in the mule deer population in 2008 in this particular area. He additionally mentioned seeing large numbers of coyotes during classification flights prior to 2008 and only noted a couple individuals during the 2008 flights. As predation was reduced on deer and antelope populations fawn survival increased.

Project results to date warrant continued efforts to clarify trends and the effects of predator removal.

Sheridan County – The Sheridan County Predator Management Board has set aside six areas around the county for intensive predator management for the benefit of wildlife. The results so far have been encouraging, with deer numbers in Hunt Areas 1-5 responding well to predator control methods. The doe/fawn ration in these areas has increased by 65 fawns to 100 does. The young buck, 2 points or better, has increased dramatically.

In Hunt Area 6, the mule deer seem to be making a comeback. Numbers are up dramatically over the last year. Whitetail deer numbers in this area are about the same, maybe just a slight increase.

The Sheridan County Predator Management Specialist has seen and counted more sage grouse this past winter. He has counted groups of 15 to 35 birds while he has been flying and while he has been on the ground.

According to the Sheridan County Predator Management Board, livestock producers have greatly benefited from the predator control efforts. No cattle losses due to coyote predation were recorded in the time period and the sheep losses are the lowest, from coyote predation, in the past 5 years.

During 2006-2007, the Wyoming Game and Fish Department (WGFD) received several reports of dead rabbits from throughout Sheridan County. The WGFD investigated various methods to document and monitor wildlife diseases. It was decided to collect blood from coyotes to test for diseases known to affect rabbits and other small mammals. An advantage of using coyotes to monitor plague and tularemia is that they are generally immune to these diseases; when exposed to either disease, they rarely develop clinical symptoms but do develop specific antibodies to each pathogen, which can then be detected in blood samples.

Plague is a bacterial disease of mammals generally transmitted by fleas. Rodents are very susceptible to plague and have a high mortality rate. In Wyoming, prairie dogs and ground squirrels are likely the most affected wildlife species.

Tularemia is a bacterial disease primarily of lagomorphs (rabbits) and rodents. Cottontail rabbits are very susceptible to tularemia and likely the affected species in Sheridan County. Exposure to tularemia appears to have dropped off significantly from the spring of 2007 when 5 of 6 samples (83%) tested positive. This is an extremely small sample and may not be representative of the true conditions so caution must be exercised when drawing conclusions. Since the summer of 2007, exposure to tularemia has ran about 25%, very similar to exposure rates recorded around Wyoming.

Coyotes are extremely resistant to both diseases and rarely develop clinical signs of either disease. If a coyote tests “positive” for either disease, it simply means it was exposed at one time and has developed specific antibodies to the bacteria, not that the animal is infectious or able to spread the disease.

The WGFD partnered with the Predator Management Board (PMB) of Sheridan County for this effort. The County Trapper, Allan Plummer, agreed to collect blood samples from coyotes collected during predator control activities. The PMB agreed to provide money for postage to ship samples overnight to the WGFD Wildlife Disease Laboratory in Laramie. The WGFD agreed to provide collection and shipping supplies; receive, store and ship samples; and conduct testing at the WGFD Wildlife Disease Lab.

Samples must be kept cool and tested as soon as practical after collection for best results. Overnight shipping is required to expedite testing. The PMB granted the WGFD \$1,200 to pay overnight shipping costs to send samples to the WGFD Wildlife Disease Lab located at the Wyoming Veterinary Laboratory in Laramie. As of June 1, 2009, there was a balance of \$768 left in this grant. This project is scheduled to continue one more year. Any money remaining as of June 30, 2010 will be returned to the PMB.

As of June 1, 2009, 112 usable samples have been submitted to the Lab. Of that, 51% (n=57) have tested positive for exposure to plague and 28% (n=31) have tested positive for exposure to tularemia. See summary of test results below.

RESULTS OF PREDATOR DISEASE SURVEIENC

April 1, 2007 – May 30, 2008

Total Number of Samples Submitted	28
Total Number of Usable Samples	23 (82%)
Total Number of Unusable Samples	5 (18%)
* samples may be unusable for numerous reasons	
Number Positive for Exposure to Plague	11 (48%)
Number Negative for Exposure to Plague	12 (52%)
Number Positive for Exposure to Tularemia	9 (39%)
Number Negative for Exposure to Tularemia	14 (61%)

June 1, 2008 – June 1, 2009

Total Number of Samples Submitted	104
Total Number of Usable Samples	89 (86%)

Total Number of Unusable Samples	15 (14%)
Number Positive for Exposure to Plague	46 (52%)
Number Negative for Exposure to Plague	43 (48%)
Number Positive for Exposure to Tularemia	22 (25%)
Number Negative for Exposure to Tularemia	67 (75%)
<u>TOTAL April 2007 – June 1, 2009</u>	
Total Number of Samples Submitted	132
Total Number of Usable Samples	112 (85%)
Total Number of Unusable Samples	20 (15%)
Number Positive for Exposure to Plague	57 (51%)
Number Negative for Exposure to Plague	55 (49%)
Number Positive for Exposure to Tularemia	31 (28%)
Number Negative for Exposure to Tularemia	81 (72%)

Sweetwater County – During the past year we have been attempting to limit livestock losses from predators in Sweetwater County with the cooperation of U.S.D.A. Wildlife Services. We contracted with the Berryman Institute of Utah State University to study the impacts of predators on deer and antelope fawns and the predatory impacts upon sage grouse in southwestern Wyoming and we carried out predator control in various wildlife areas to see how the wildlife populations responded to control areas as compared to non-control areas.

Surveys of these populations were conducted plus sage grouse have again been caught and fitted with electronic collars in order to follow their nesting and the predation that takes place in these nests.

It's unfortunate that our funds were drastically slashed in April 2009. We hope we won't have to abandon the studies since they are important to every industry in the west and to the State of Wyoming.

Uinta County – For the benefit of Uinta County livestock producers, our trappers attempted to clear designated areas of coyotes before sheep were moved into those areas and in areas before cattlemen brought cows into calving grounds. We were able to have reduced the number of predators during the winter before lambing and calving.

We also implemented and conducted several raven control projects that benefitted the producers in our county. We have had problems to both cattle and sheep producers regarding raven predation. Our efforts have provided an additional measure of control.

Our Board began working this year with the Wyoming Game and Fish Dept., and the Sweetwater and Lincoln County Predator Management Districts on a long term project to

study the effects of predator control on sage grouse populations. The project is being conducted by the Jack Berryman Institute with Utah State University and we have provided funding for part of the project. Our program of selective control in certain years and of intensive control in other years has been undertaken and results on numbers and locations are being evaluated.

We have focused some of our predator control work in known deer and antelope wintering ranges to provide some possible benefits during stressful times on these populations. We have seen increased deer and especially antelope numbers.

We are currently targeting raven and fox predation near Wy. Game and Fish known sage grouse leks and nesting sites. Hopefully, this will benefit the sage grouse in these areas and increase numbers and density of the birds.

During the summer of 2008, livestock losses were estimated at average for the summer months. Last fall, losses were somewhat below normal. Our board believes this was in part due to efforts made during the spring prior to entry into the spring-fall ranges. Due to a mild open winter, livestock producers were able to utilize more of the winter range. This provided more exposure for producer losses. Our trappers implemented a policy of trying to work certain areas prior to livestock arrivals. This benefited us tremendously as reported losses showed levels at or below normal loss rates on the winter ranges.

Washakie County – In addition to the Wildlife project listed in conjunction with Park County, our Washakie County Predator Management District had 58 agreements with livestock producers covering 990,000 acres. We are also undertaking a new Wildlife project in the upcoming year to increase pheasant populations.

Weston County – The Weston County Predator Management District funding for Fiscal 2009 was received August 2008. This funding was to purchase equipment, supplies, and office expense, fund two full time trappers, and flight time for aerial work done by this district along with ferry time.

WCPMD has acquired most of the equipment that was requested from the Fiscal 2008 funding. In December 2008, WCPMD entered into the yearly contract with Wildlife Services for 2 (two) full time employees and also 250 hours of flight time. The current contract terms with WS are from January 1, 2009 to Dec 31, 2009 for aerial work and the employment of two trappers. This contract also includes vehicle use, dog hire, horse hire, benefits and other associated costs. The amount of the contract that the district is obligated to is \$139947. It contract is expected to be amended to switch to a fiscal year for the contract with WS in the upcoming year.

Two Hundred Fifty (250) hours of flying time, which also includes ferry time was budgeted into the 2009 District contract with WS. The District has not been able to do as much aerial work as we had requested due to the lack of airplane availability. The district finds that the greatest need of flying conflicts with surrounding counties and their

needs for the plane. This is not a problem that will go away and we find that we have to work around the availability problem the best we can.

Observations of Sage Grouse leeks are being made and recorded as found. The Sage Hens have their chicks out in the grass and currently, the grass and sweet clover is very tall and thick so little chance to see chicks except on roads or at water holes. Grasshoppers and crickets are thick so there is no shortage of food for the Sage Grouse. The antelope population in District has recovered over the last few years and currently we find no shortage in most areas. Coyote and skunk removal was targeted again around the known Sage Grouse leek areas on Raven Creek during the spring of 2009.

Control of deprecating coyotes has been difficult during Fiscal 2009, as the trappers are seeing no end of coyotes moving into the sheep and calving areas. The rapid decrease of rabbits and mice over the last two years is thought to have caused livestock to become a more essential prey base for the coyotes in certain areas.

The Striped Skunk populations exploded during the spring of 2008 and skunk removal calls are up in the district in the urban and rural areas. Many of the skunks in the rural areas are removed privately, with District assistance. Skunks were prolific across the county during the past year and at this time, they seem to be as thick as a year ago. This is a major concern, as rabies outbreaks generally occur with major population surges. Ranchers and those who have out buildings are encouraged to skunk proof buildings and reduce possible skunk habitat.

As each year, the District receives many requests from the public for lion control which is referred to the Wyoming Game and Fish. The trappers explain to those making the requests that they are willing to investigate, however they also explain that the warden has final say on removing a lion. The trappers will assist the warden if requested in removal efforts.

Equipment purchased with grant moneys include one camper shell, one dog pen, one dog box for a truck, one set of range finding binoculars, and one rifle scope. The District currently has on order, 12 box traps for skunks and may buy more if available.

As stated in the previous year's report, the District trappers are receiving more calls from private cooperators in the District as more livestock producers are learning the District has the personal to do the work that is required to remove predacious animals that are affecting livestock.

Also as last year, during the year, when there are problem predators that need to be removed either by ground work or aircraft, the trappers work together in the problem areas. During times where the problem calls decrease, the trappers work in separate areas of the county. This is a benefit as when the problems arise, more man-hours can be thrown into the problem. As problems decrease, the man-hours can be spread over a larger area in the district. Ongoing training for the trappers is provided by Wildlife Services in all aspects of their work.

Brand inspection revenues for Fiscal 2009 was estimated to be \$30,000 and to date the District has received or been notified to receive \$27,915 in brand revenues with one month remaining in the Fiscal year.

The District received one request in 2009 for a refund, in which \$1,745 was refunded to a producer who runs strictly yearling grass cattle. The District finds a problem with refund requests in that the District does not receive the entire amount of the fee and the producer expects the refund to be in total.