V39 I #3

IDAHO

DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

Project No. W-168-C-4

FEDERAL AID TO WILDLIFE RESTORATION

July 1, 1986 - June 30, 1987

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PROGRESS REPORT

Study I, Job 1: Wildlife Research Coordination

Prepared by:

John J. Beecham
Wildlife Research Manager

September 1987

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH

STATE: Idaho **JOB NAME:** Wildlife Research Coordination

PROJECT: W-168-C-4

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Project supervision was maintained for all wildlife research projects including study plan development, document preparation, report editing, submitting project reports, and budget preparation. Federal aid coordination was provided for all wildlife research, management, and land development projects.

OBJECTIVES

To plan project work and to provide supervision and administrative support for all P-R funded projects.

Meetings and Presentations

Meetings

Date	Name	Location
7/21	BPA	Portland
8/11-15	Summer biologist meeting	McCall
9/9	Caribou project - U of I	Moscow
9/10	Grizzly update	Bonners Ferry
9/15	Met Commissioner Hansen	Bayview
9/19	Bighorn sheep meeting	Idaho Falls
9/24	Nonenforcement training	Boise
9/30	Caribou Steering Committee meeting	Creston, B.C.
10/7-9	Federal Aid meeting	Sacramento, Calif.
10/28-30	Investment in Excellence seminar	Boise
11/24-25	Caribou augmentation meeting - U of I	Moscow
12/10	Gifted and talented student presentation - grizzly	Boise
1/6	Section 6 meeting	Boise
1/19	Bureau of Wildlife-Region 3 coordination meeting	Boise
1/27	Bureau of Wildlife-Region 6 coordination meeting	Idaho Falls
1/28	Bureau of Wildlife-Region 5 coordination meeting	Pocatello
1/28	Bureau of Wildlife-Region 4 coordination meeting	Jerome
2/18-20	Winter biologist meeting	Boise
2/21	Idaho Chapter, TWS	Boise
2/24	Peregrine Fund, BSU, and BLM meeting	Boise
3/27	BOW-Region 3 meeting	Boise
4/9-10	Drug handling workshop	Moscow
4/20-23	Federal Aid meeting	Washington, D.C.
5/19-22	IGBC Researce Subcommittee meeting	Juneau, Alaska
6/22-25	IGBC meeting	Kalispell, Mont.; Cranbrook, B.C.; and Bonners Ferry, Idaho

FINDINGS

Project documentation, budgets, reports, and personnel evaluations were completed for each field project. A general summary of the activities of the research biologists during the year follows:

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH
RESEARCH COORDINATION REPORT
MULE DEER RESEARCH
C.G. BROWN, SENIOR WILDLIFE RESEARCH BIOLOGIST

STATE:	Idaho	**SUBPROJECT:**	Mule Deer Ecology
PROJECT:	W-160-R-14	**STUDY NAME:**	Mule Deer Population
SUBPROJECT:	1		Identification
STUDY:	I	**JOB NAME:**	Statewide Wildlife Research
JOB:	1		

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Thirty-eight mule deer were captured and marked, 31 with radio collars, on 5 Unit 73 winter-transitional ranges and 1 summer range. Summer trapping was conducted during August and September with 4 deer caught. Winter capture operations were conducted December through February. Deer captured and marked included 15 antlered bucks, 4 buck fawns, and 19 does. Capture methods used included: "Clover" trapping (1 capture), foot snares (4 captures), drugging with sucostrin (2 captures), drive-netting (23 captures), and aerial net-gunning (8 captures). Aerial monitoring flights were conducted on 39 dates. Observed summer-fall home ranges for 19 deer averaged 263 $\pm$ 121 ha in 1986. Five deer were monitored on both 1985 and 1986 summer ranges with an average of 81% of the summer range used both years. Fourteen deer monitored in 1986 returned to the area used in 1986 by late spring 1987. Four of 15 deer still being monitored from 1985-86 winter returned to their 1985-86 winter range while 11 wintered on their summer range or on transitional ranges. Six of these 11 deer moved to 1986 spring ranges in 1987. The deer tagged in 1987 were still dispersing in late June 1987 with 4 deer outside of Unit 73 and movements of up to 69 km recorded.

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH

STATE:	Idaho	**SUBPROJECT:**	Mule Deer Ecology
PROJECT:	W-160-R-14	**STUDY NAME:**	Mule Deer Security
SUBPROJECT:	1	**JOB NAME:**	Statewide Wildlife Research
STUDY:	III		
JOBS:	1, 2, and 3		

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Median size of summer-fall home ranges in secure habitat was 167 ha, N = 10; and in low security habitat was 160 ha, N = 9 with the difference not significant. Deer in secure habitats used a reduced home range within their overall summer range during the hunting season, averaging 46% ± 16% of the summer-fall range. Five of the 9 deer in low security summer habitats established hunting season home ranges in more secure habitats outside their summer range. Size of hunting season home range was not significantly different among deer staying on summer range (median, 57 ha, and N = 10) and deer moving to more secure areas (median, 67 ha, and N = 5). Distance between hunting season activity centers and summer activity centers averaged 15.5 km for 5 deer establishing separate hunting season home ranges.

Average number of hunters per vehicle was 2.22 ± 0.07, N = 903, with no significant differences recorded among habitat or time of season. Aerial counts of hunter vehicles in Unit 73 conducted on 9 dates during the 1986 season were used to apportion hunter effort. Hunting effort was 13.1 hunter days per km^2 of deer habitat and varied significantly among different habitats and different portions of the season. Over 50% of the hunter effort was recorded during the first week of the season and 90% by the end of the either-sex hunting. Numbers of deer seen per day averaged 7.8 (N = 2,349). Deer seen per day in secure habitat areas averaged 8.8 ± 0.9 (N = 1,263), significantly higher than in low security units, mean = 6.6 ± 0.5 (N = 1,011). Deer seen per day during the second week of the season averaged 37% fewer in low security units and 22% less in secure units. Nine deer with low security summer ranges moved within 5 days after the season opened or were killed. Distances moved between relocations (3.2 ± 1.4 km, N = 69) by deer from low security summer ranges was significantly larger than the distances moved (0.8 ± 0.2 km, N = 85) by deer summering in secure habitats. A total of 797 hunter-killed deer from Unit 73 were checked with age, sex, and kill locations recorded.

M. McDonald, graduate student, worked on the circadian rhythm of mule deer and prepared a detailed study plan covering work to be performed during the 1987 and 1988 fall and hunting season periods.

MEETINGS AND PRESENTATIONS

Brown, C.G. 1987. Movements of mule deer in response to hunting. Annual meeting of the Idaho Chapter - The Wildlife Society. February 20-21, 1987. Boise, ID.

Brown, C.G., J.W. Connelly, and J.W. Unsworth. 1987. Use of Loran C navigational equipment in wildlife telemetry studies. Annual meeting of the Idaho Chapter - The Wildlife Society. February 20-21, 1987. Boise, Idaho.

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH
RESEARCH COORDINATION REPORT
DALE E. TOWEILL, PRINCIPAL WILDLIFE RESEARCH BIOLOGIST

STATE: Idaho **SUBPROJECT:** California Bighorn Sheep

PROJECT: W-160-R-14 Ecology

SUBPROJECT: 5 **JOB NAME:** Statewide Wildlife Research

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Studies I (California bighorn sheep distribution) and II (habitat utilization) were initiated in FY 1987 under the direction of principal wildlife research biologist Dale Toweill. A temporary biological aide, Matt McCoy, was hired; and interagency research agreements with the Boise District Bureau of Land Management were completed.

Research efforts were focused on the Little Jack Creek area of Owyhee County south of Bruneau, Idaho. Scale natural-color aerial imagery of the entire 32,000-acre study area was obtained, digital evaluation maps ordered, and USGA topographic maps obtained. Vegetation transect data collection was initiated. Topographic, feature, and vegetation data will be entered onto the Boise District GIS system.

Initial ground and air counts of California bighorn sheep yield an estimate for the Little Jack Creek herd of approximately 200 animals. Radio-transmitter collars were placed on 12 bighorns (4 rams and 8 ewes) in February.

Monitoring of bighorn sheep conducted March through June has resulted in observation of 203 bighorn sheep groups ranging in numbers from 1 to 48 animals. Just over half (52%) of these groups contained 1 or more radio-collared bighorns. Focal-animal monitoring of groups, directed toward those animals and groups with radio collars, resulted in obtaining 2,456 locations of bighorn sheep coupled with data on location, activity, and terrain/weather variables at 5-minute intervals over periods ranging up to over 7 hours. These data will be used to examine patterns of bighorn sheep behavior and habitat utilization.

REPORTS, PUBLICATIONS, AND ARTICLES

Toweill, D.E. 1986. Resource partitioning by bobcats and coyotes in a coniferous forest. Ph.D. dissertation, Oregon State University, Corvallis. 155 pp.

Toweill, D.E. 1986. Notes on the development of a cougar kitten. Murrelet 67:20-23.

Toweill, D.E. 1986. Wildlife management in action: bighorn sheep, mountain goat, and moose species plans, 1986-1990. Idaho Wildlife 6(1):17-22.

Toweill, D.E. 1986. Wildlife management in action: Elk Species Plan, 1986-1990. Idaho Wildlife 6(2):8-12.

Toweill, D.E. 1986. Wildlife management in action: Upland Game Species Plan, 1986-1990. Idaho Wildlife 6(3):9-12.

Toweill, D.E. 1986. Wildlife management in action: Idaho's deer species plans, 1986-1990. Idaho Wildlife 6(5):17-22.

Toweill, D.E. 1986. Wildlife management in action: Waterfowl Species Management Plan, 1986-1990. Idaho Wildlife 6(6):19-22.

Toweill, D.E. 1986. Wildlife management in action: Nongame Species Management Plan, 1986-1990. Idaho Wildlife 7(1):9-11.

Toweill, D.E. 1986. Wildlife management in action: black bear/mountain lion species management plans, 1986-1990. Idaho Wildlife 7(2):25-28.

Toweill, D.E. 1986. Wildlife management in action: Pronghorn Antelope Management Plan, 1986-1990. Idaho Wildlife 7(4): in press.

MEETINGS AND PRESENTATIONS

7/28	Boise District BLM resources staff. Bighorn sheep research planning. Boise.
8/7	Idaho Senator Laird Noh, Sawtooth NF, Utah Cooperative Wildlife Research Unit. Met to discuss research potential of Cottonwood Creek bighorn sheep transplant. Jerome.
8/11-15	Summer Biologists and Land Managers Meeting. Discussed statewide management and research issues. Presented Depredation Plan draft. McCall.

9/4	Region 3. Multimedia first-aid training. Boise.
9/19	Bighorn Sheep Management Plan Committee. Discussed liberalized Rocky Mountain bighorn sheep hunt proposal. Idaho Falls.
10/22	Boise District BLM resources staff. Bighorn sheep research planning. Boise.
11/21	Region 3. Discussed regional research priorities for FY 1988. Boise.
12/1	Idaho Outfitters and Guides Association. Discussed Department Grant-in-Aid applications to the Foundation for North American Wild Sheep.
12/2	Region 3 Training. Game law enforcement procedures. Boise.
1/5	Region 4. Discussed regional research priorities for FY 1988. Jerome.
1/7	Boise District gifted and talented students, Grades 5 and 6. Presented talk, "Idaho's Bighorn Sheep." Boise.
1/9	Boise District BLM resources staff. Bighorn sheep research planning. Boise.
1/12-14	Region 3 personnel training. Investment in Excellence. Boise.
1/19	Region 3/Wildlife Bureau Coordination meeting. Presented talk "California Bighorn Sheep Research Activities." Boise.
1/20	Boise State University. Discussed interagency research cooperation. Boise.
1/21	Boise District gifted and talented students, Grades 5 and 6. Presented talk, "Bobcat Ecology." Boise.
1/27	Idaho ASCS. Reviewed mapping and map analysis capabilities. Boise.
1/27	Boise State University Graduate Student Seminar. Presented talk, "Wildlife Competition." Boise.
1/29	Region 4/Wildlife Bureau Coordination meeting. Presented talk, "California Bighorn Sheep Research Activities." Jerome.

2/2	Oregon State University Forestry Sciences Graduate Seminar. Presented talk, "Comparative Ecology of Two Large Predators in the Second-Growth Forest." Corvallis, Oregon.
2/18-20	Winter biologists and land managers meeting. Presented paper, "Capture of Bighorn Sheep Using Drive Nets." Boise.
2/20	Idaho Chapter - The Wildlife Society. Presented paper "History and Status of California Bighorn Sheep in Idaho." Boise.
2/21	Idaho Chapter - The Wildlife Society. Presented paper "Resource Partitioning by Bobcats and Coyotes in a Coniferous Forest." Boise.
2/26	Boise District BLM resources staff. Bighorn sheep planning meeting. Boise.
3/5	Department staff. Developed Grant-in-Aid requests for submission to the Foundation for North American Wild Sheep. Boise.
3/6	Boise District BLM resources staff. Bighorn sheep research planning meeting.
3/12	Bighorn Sheep Management Plan Committee. Developed priority rating for action items identified in the plan. Boise.
3/16 and 3/18	Idaho Senate Environmental and Resources Committee. Testified on HB 130; met in committee with Senator Beitelspacher. Boise.
3/20	Region 3/Administration Coordination meeting. Review of Administrative procedures and policies. Boise.
3/23	Idaho House of Representatives Resource Committee. Testified on HB 260. Boise.
3/27	Region 3/Wildlife Bureau Coordination meeting. Review of wildlife management and research direction. Boise.
4/2	Region 4/Wildlife Bureau Coordination meeting. Review of wildlife management and research direction. Jerome.
4/9-10	Interagency continuing education. Training on wildlife restraint techniques. Moscow and Pullman, Washington.

5/11	Region 3. Training in rope use. Boise.
5/12	Region 3. Game law enforcement training, physical fitness testing. Boise.
5/14	Statewide research staff. Annual budget preparation.
5/19	Boise District BLM resources staff. Discussed Bruneau Resource Area MFP amendments; bighorn research planning. Boise.
6/4	Region 3. Training in preparation and use of audiovisual materials. Boise.
6/13-14	Idaho Foundation. Presented talks on wildlife management in Owyhee County. Field trip in Owyhee County.
6/15	Region 4. Surveyed Cottonwood Creek bighorn sheep release site with Craig Kvale.

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH
RESEARCH COORDINATION REPORT
J.W. CONNELLY, PRINCIPAL WILDLIFE RESEARCH BIOLOGIST
SAGE GROUSE RESEARCH

STATE: Idaho **SUBPROJECT:** Sage Grouse Ecology

PROJECT: W-160-R-13 **JOB NAME:** Statewide Wildlife Research

SUBPROJECT: 9

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Sage grouse (Centrocercus urophasianus) were trapped and marked on leks in the study area and control area between mid-March and mid-April. A total of 257 birds was captured, and 43 were equipped with radios. Approximately 500 radiolocations were obtained on these birds from March 14 to June 30. Fifty-eight percent (N=19) of the radio-marked hens followed through the breeding season were successful nesters. The mean distance from leks to nest sites was 5.1 and ranged from <1 to 21 km.

Vegetation at nest sites and random sites was characterized during 1986 and 1987. Sagebrush canopy cover at nests was 18.2% and 21.5% for 1986 and 1987, respectively. Similar values were obtained for sagebrush cover at random sites.

REPORTS, PUBLICATIONS, AND ARTICLES

Connelly, J.W., H.W. Browers, and R.J. Gates. 1988. Seasonal movements of sage grouse in southeastern Idaho. J. Wildl. Manage. In press.

Gates, R.J., H.W. Browers, and J.W. Connelly. Seasonal range fidelity in southeastern Idaho sage grouse. Peer review.

MEETINGS AND PRESENTATIONS

Annual Meeting of the Idaho Chapter - The Wildlife Society. February 20-21, 1987, Boise, ID.

Brown, C.G., J.W. Connelly, and J.W. Unsworth. 1987. Use of Loran C Navigational equipment in wildlife telemetry studies. Presented at the Annual Meetings of the Idaho Chapter of The Wildlife Society. Feb. 20-21. Boise, ID.

Connelly, J.W. 1987. Funding wildlife research: an adventure in creative financing. Presented at the annual meeting of the Idaho Chapter of The Wildlife Society. Feb. 20-21. Boise, ID.

Musil, D.D. 1987. Preliminary report on the reintroduction of sage grouse into the Sawtooth Valley, Idaho. Presented at the annual meeting of the Idaho Chapter of The Wildlife Society. Feb. 20-21. Boise, ID.

Annual Meeting of the Western Bird Banding Association. October 10-11, 1986. San Diego, CA.

Musil, D.D., K.P. Reese, and J.W. Connelly. 1986. Preliminary report on the augmentation of sage grouse into the Sawtooth Valley, Idaho. Presented at the annual meeting of the Western Bird Banding Association. Oct. 10-11. San Diego, CA.

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH
RESEARCH COORDINATION REPORT
JEFF JONES, GRADUATE STUDENT

STATE: Idaho **SUBPROJECT:** Fisher Ecology

PROJECT: W-160-R-14 **JOB NAME:** Statewide Wildlife Research

SUBPROJECT: 10

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Progress

This progress report summarizes the work completed and the data that has been compiled during the period of July 1986 through September 1987. Thus, the information reported here was derived from essentially that portion of the project that has been undertaken by, and covered by the cooperative agreement between the U.S. Forest Service, Idaho Department of Fish and Game, and the University of Idaho.

The objectives of this study are to determine fisher habitat preference (use versus availability), fisher home range size, and fisher diet composition. An attempt will also be made to estimate productivity by analyzing corpera lutea and capture/recapture data. This report will display the field work that has been completed at this time. Data analysis will not begin until the spring of 1988.

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH
RESEARCH COORDINATION REPORT
BRUCE ACKERMAN, GRADUATE STUDENT

STATE: Idaho **SUBPROJECT:** Mule Deer Ecology

PROJECT: W-160-R-14 **STUDY NAME:** Mule Deer Census

SUBPROJECT: 11 **JOB NAME:** Statewide Wildlife Research

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

During February and March, 1987, 130 sightability trials were conducted on 9 different days on the Malad and Willow Creek study areas for a total of 280 trials, 1985 through 1987. Only 53% of the radio-collared deer were observed during these trials. The 1986-87 winter was very mild and open, and deer used higher elevation and vegetatively different habitats. The sample size of antlered bucks was substantially increased during this year. Group size and group behavior were the significant factors identified influencing the sightability of mule deer with lesser contributions from vegetative type, time of year, and snow cover. Considerable work was devoted to development of census model.

REPORTS, PUBLICATIONS, AND ARTICLES

Lindzy, F.G., B.B. Ackerman, D. Barnhurst, and T.P. Hemker. Survival rates of mountain lions in Utah. Jour. Wildl. Manage. Submitted.

MEETINGS AND PRESENTATIONS

Ackerman, B.B. and E. Garton. 1987. Evaluation of helicopter counts of mule deer in southeast Idaho. Annual meeting of the Idaho Chapter - The Wildlife Society. February 20-21, 1987. Boise, ID.

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH
RESEARCH COORDINATION REPORT
TERRY THOMAS, GRADUATE STUDENT

STATE: Idaho **SUBPROJECT:** Mule Deer Ecology

PROJECT: W-160-R-14 **STUDY NAME:** Willow Creek Deer Study

SUBPROJECT: 12 **JOB NAME:** Statewide Widllife Research

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Study was completed and completion report was prepared.

REPORTS, PUBLICATIONS, AND ARTICLES

Thomas, T. 1987. Year-long movements and habitat use of mule deer associated with the Willow Creek winter range in southeastern Idaho. Unpublished M.S. thesis, Montana State Univ., Bozeman. 122 pp.

PROGRESS REPORT
STATEWIDE WILDLIFE RESEARCH
RESEARCH COORDINATION REPORT

LONN KUCK, PWRB
J.W. UNSWORTH, SR., WRB

STATE: Idaho **SUBPROJECT:** Elk Ecology

PROJECT: W-160-R-14 **JOB NAME:** Statewide Wildlife Research

SUBPROJECT: 22

PERIOD COVERED: July 1, 1986 to June 30, 1987

ABSTRACT

Thirty bulls and 4 cows were monitored through the 1986 hunting season with the loss of 9 bulls during the hunting season; 16 bulls and 6 cows were tranquilized and instrumented with radios during the winter and spring of 1987. Over 2,000 aerial relocations have been generated since the initiation of the study to ascertain elk habitat use patterns for the Lochsa elk herd. A LANDSAT cover map of the study area being developed in cooperation with the Clearwater National Forest is nearing completion. The third elk sightability trial was successfully completed during the year. Preliminary results suggest that significantly fewer elk are being observed over the past 3 years with this technique. Fifteen additional sightability observation points for bulls were generated this past year. All instrumented elk were intensively monitored during the hunting season to document habitat security needs and mortality rates. Although sample sizes remain inadequate to draw any conclusions at this time, 2 elk were crippled and lost during the archery season, 1 bull was crippled and lost during the general season, 5 were returned to the legal bag and 1 was illegally killed following the close of the general season. The loss of 9 out of the 31 marked elk did allow a preliminary calculation of survival for this elk population. No mortality was documented outside the hunting season, and all mortality was man-caused.

MEETINGS AND PRESENTATIONS (L. KUCK)

Aug. 12-15, Summer Biologist Meeting, McCall.

Aug. 21, Caribou Technical Committee Meeting, Bonners Ferry.

Aug. 26-29, Investment in Excellence, Boise. Facilitator Training.

Sept. 10, Enforcement Training, Lewiston.

Nov. 18, Latah County Sportsmen's Club, Moscow. Gave slide series on elk sightability.

Jan. 9, International Caribou Technical Committee, Spokane, Wash. Gave update on caribou transplant.

Jan. 17, Region 1/Wildlife Bureau Meeting, Post Falls. Gave slide series on wildlife research in Regions 1 and 2.

Jan. 18, Region 2/Wildlife Bureau Meeting, Lewiston. Gave slide series on wildlife research in Regions 1 and 2.

Feb. 10, Mountain Goat Management Team meeting, Lewiston. Established criteria to monitor statewide mountain goat management program.

Feb. 14, Project WILD workshop, McCall. Gave slide series on endangered species in Idaho.

Feb. 18-20, Winter Biologist meeting, Boise. Gave slide series on caribou transplant.

Feb. 20-21, State Chapter - Wildlife Society, Boise.

Apr. 7-8, Drug Handling School, Pullman, Wash.

Apr. 9, Idaho Outfitters and Guides Association, Moscow. Gave slide series on elk sightability.

Apr. 16, Biologist meeting, Boise.

Apr. 16, Commission meeting, Boise. Gave slide series on caribou translocation program.

May 19, Wildlife Research Meeting, Boise.

May 30, Forest Service Wildlife Biologist workshop, Moscow. Participated on panel discussion on the roles and responsibilities of professionals.

MEETINGS AND PRESENTATIONS (J.W. UNSWORTH)

During the week of August 11-15 I attended the summer biologist meeting in McCall. It was attended by bureau staff, biologists, and land managers. I gave a presentation on our elk research and helped discuss black bear habitat use in the Council area.

On July 1, 1986 I attended a meeting in Boise with Headquarters staff to determine which stream reach cataloging system would be most appropriate for Department use. It was determined that the Environmental Protection Agency's system was the system of choice due to its wide use and its availability in a digitized form.

On October 20-October 22 I attended a joint meeting with the mule deer and elk management teams in Boise. We discussed the low subscription rates for controlled hunts and recommended reducing the waiting period to 1 year and publicizing drawing and success percentages.

On November 24, 1986 I attended a meeting in Lewiston with L. Nelson and the Region 2 management staff on the telephone survey.

On January 9, 1987 Carl Anderson and I held a public meeting at the Kamiah Office to solicit input on trophy seasons and landowner permits. People were more interested in the late white-tailed deer hunt (they felt it was at least 1 week too long), and there were a number of ranchers present who were experiencing depredation problems.

On February 17, 1987-February 20, 1987 I attended the winter biologist meeting in Boise. I gave a slide presentation on LANDSAT and geographic information systems.

Papers

Kuck, L., and J.W. Unsworth. 1986. Elk Ecology, job progress report. Idaho Dept. Fish and Game, Boise. 44 pp.

Kuck, L., and J.W. Unsworth. 1987. Elk Habitat Security Characteristics, job progress report. Idaho Dept. Fish and Game, Boise. 46 pp.

Kuck, L., and J.W. Unsworth. 1987. Hunting Season Mortality Rates, job progress report. Idaho Dept. Fish and Game, Boise. 50 pp.

Unsworth, J.W., L. Kuck, E.O. Garton, and B.B. Compton. 1987. Elk Sightability, job progress report. Idaho Dept. Fish and Game. 35 pp.

A manuscript under review for the Journal of Wildlife Management on black bear habitat use.

Submitted by: John J. Beecham

John J. Beecham
Wildlife Research Manager
Federal Aid Coordinator

Approved by:

IDAHO DEPARTMENT OF FISH AND GAME

Jerry M. Conley, Director

Tom Reinecker, Chief
Bureau of Wildlife