WOLF CONSERVATION AND MANAGEMENT

IN IDAHO

PROGRESS REPORT 2006

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EXECUTIVE SUMMARY

In January 2005, the U.S. Fish and Wildlife Service (USFWS) published and adopted new regulations (10(j) Rule) governing wolf management within the Nonessential Experimental Population Areas of Idaho south of Interstate Highway 90 (Endangered and Threatened Wildlife and Plants; Regulation for Nonessential Experimental Populations of the Western Distinct Population Segment of the Gray Wolf [50 CFR Part 17.84]). The new 10(j) Rule allowed states, with USFWS-approved wolf management plans, to petition the Secretary of Interior for certain wolf management authorities as an interim measure to delisting. In January 2006, the Secretary of Interior and the Governor of Idaho signed a Memorandum of Agreement (MOA), which transferred most wolf management responsibilities to the State of Idaho. The Idaho Department of Fish and Game (IDFG) is the primary state agency responsible for carrying out wolf management activities in Idaho. In April 2005, the Governor of Idaho and the Nez Perce Tribe (NPT) signed an MOA that outlined responsibilities between the State of Idaho and the NPT in regards to wolf conservation and management. This annual progress report is a cooperative effort between the IDFG and the NPT with contributions from USDA Wildlife Services (WS) summarizing wolf activity and related management in Idaho during 2006.

During 2006, biologists documented 76 resident wolf packs in Idaho and 72 of those remained by the end of the year. A minimum of 415 wolves was observed, and the minimum population was estimated at 673 wolves (Appendix A). In addition, 10 documented border packs counted for Montana and Wyoming established territories straddling the Idaho state boundary and likely spent some time in Idaho. Of the 53 packs known to have reproduced, 41 qualified as breeding pairs by the end of the year. These 53 reproductive packs produced an estimated minimum 185 pups.

In Idaho, wolf packs ranged from near the Canadian border south to Interstate Highway 84, and from the Oregon border east to the Montana and Wyoming borders. Dispersing wolves were occasionally reported in previously unoccupied areas. Thirteen new packs were documented during 2006 of which 3 were removed for livestock depredation control. Four hundred ninety-six wolf observations were reported on IDFG's online website report form during 2006.

Sixty-eight wolves were confirmed to have died in Idaho in 2006. Of known mortalities, agency control and legal landowner take in response to wolf-livestock depredation accounted for 45 deaths, other human causes (including illegal take) 14 deaths, 7 unknown causes, and 2 wolves died of natural causes.

During the 2006 calendar year, 40 cattle, 237 sheep, and 4 dogs were classified by WS as confirmed or probable kills by wolves.

ACKNOWLEDGEMENTS

Wolf management in Idaho is a cooperative effort between the State of Idaho, NPT, WS, and the USFWS. The Governor's Office of Species Conservation director Jim Caswell and program advisor Jeff Allen provided insight, assistance, and oversight. The NPT's Executive Committee and Wildlife Program Director Keith Lawrence provided support and input. Mark Collinge, George Graves, Todd Grimm, Rick Williamson, and other WS field personnel expertly investigated and helped resolve wolf depredations on livestock. Ed Bangs, Jeff Foss, Steve Duke, Craig Tabor, Scott Bragonier, Scott Kabasa, and Scott Winkler with the USFWS provided support and assistance during transition of wolf management authorities. Jim Unsworth and Brad Compton provided support and input and numerous strategy sessions along with making some wolf control calls. We would also like to thank all the Outfitters and Guides for their information and assistance in the backcountry, especially Scott Farr and Travis Hutton for helping us trap wolves in the Middle Fork.

We would like to thank Dave Spicer, Lauri Hanauska-Brown, and Martha Wackenhut for assuming additional regional responsibilities. Carter Niemeyer worked as seasonal wolf biologist and did an excellent job trapping and helping in the livestock conflict arena. Additionally, George Pauley, Mark Hurley, Pete Zager, Jay Crenshaw, Mark and Henry Hill, Jeff Lonneker, Jim Derig, Craig White, Mike Scott, Clay Hickey, Bret Stansberry, Mark Bowman, Josh Stanley, Nate Borg, Dr. Mark Drew, Julie Mulholland, Crystal Christensen, Lynne Stone, and Nadine Hergenrider provided additional field and administrative assistance. Thanks to Roger Fuhrman, Sue Nass, Ed Mitchell, Niels Nokkentved, and Linn French from the communications bureau; and Jon Heggen, enforcement bureau chief, for oversight of field enforcement operations.

Dr. Clarence Binninger, NPT Wolf Recovery Program veterinarian, continues to assist with wolf capture efforts. We appreciate the field assistance of biologists Isaac Babcock and Tyler Hollow, as well as volunteers Brandon Mueller and Kerry Rennie. Thanks are also extended to Mary Allen, NPT Wolf Recovery Project; Jim and Holly Akenson, University of Idaho Taylor Ranch; Montana Fish, Wildlife and Parks wolf staff; Dr. Mike Mitchell and David Ausband, University of Montana Cooperative Wildlife Research Unit; Defenders of Wildlife; Stan Hawkins and Mike Westover.

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INTRODUCTION

In 1973, the gray wolf (*Canis lupus*) was listed under the Endangered Species Act (ESA) and protected as an endangered species in the continental United States. The USFWS is mandated to recover federally listed species, including gray wolves. In the early 1980s, individual wolves, naturally dispersing from Canada, recolonized portions of northwest Montana near Glacier National Park. The first USFWS wolf recovery plan was developed through interagency cooperation in 1987 (USFWS 1987). The 1987 plan called for establishing 3 northern Rocky Mountain wolf recovery areas: northwest Montana (NWMT), the greater Yellowstone Area (GYA) predominantly in Wyoming, and central Idaho (CID). The plan called for natural recovery in northwestern Montana and reintroductions of wolves into Yellowstone National Park and central Idaho. Following the guidelines of the 1987 plan, the USFWS developed an Environmental Impact Statement (EIS) for the reintroduction of gray wolves into Yellowstone National Park and central Idaho (USFWS 1994). The EIS designated the GYA and CID recovery areas as Nonessential Experimental Population Areas and called for reintroductions of wolves as nonessential experimental populations, a lesser protective classification under section 10(j) of the ESA, to facilitate wolf management and conflict resolution. The Secretary of Interior approved the final EIS in 1994. In 1995 and 1996, 66 wolves were captured in Alberta and British Columbia, Canada, respectively; 31 of which were reintroduced into Yellowstone National Park and 35 into central Idaho.

Also in 1994, the USFWS developed a Final Rule, which provided management guidelines for recovering nonessential experimental wolf populations in the GYA and CID recovery areas. These guidelines differed somewhat from federal guidelines for fully endangered wolves in the NWMT recovery area. The state of Idaho contains portions of all 3 northern Rocky Mountain recovery areas (Figure 1). Wolves south of Interstate Highway 90 (I-90) are classified as nonessential experimental and are managed according to the provisions of the Final Rule. Wolves north of I-90 are classified and managed under a fully endangered ESA classification.

Efforts between the State of Idaho and the USFWS to develop a state wolf recovery plan were terminated in 1995 when the state legislature rejected a draft plan and forbade the IDFG to engage in wolf recovery activities. In 1995, the NPT completed, and the USFWS approved, the "Wolf Recovery and Management Plan for Idaho", providing the mechanism for the USFWS to enter into a Cooperative Agreement with the NPT to recover and manage wolves in the CID recovery area. Wildlife Services also became partners with the USFWS to assist in investigating depredations and implementing wolf control actions in response to wolf-livestock conflicts.

In March 2002, the Idaho Legislature accepted and passed the Idaho Wolf Conservation and Management Plan (http://fishandgame.idaho.gov/cms/wildlife/wolves/wolf_plan.pdf). In April 2003, the Legislature passed House Bill 294, allowing the state to participate in wolf management, and IDFG to assist the Governor's Office of Species Conservation in implementing the State of Idaho's Wolf Conservation and Management Plan as well as participate in wolf management with the USFWS and the NPT.

In 2003 and 2004, the IDFG participated in wolf management in cooperation with other governments and agencies. The IDFG also started to develop a statewide program in preparation for overseeing wolf management in Idaho. Wolves were monitored and managed under cooperative agreements and work plans between cooperating governments and agencies.

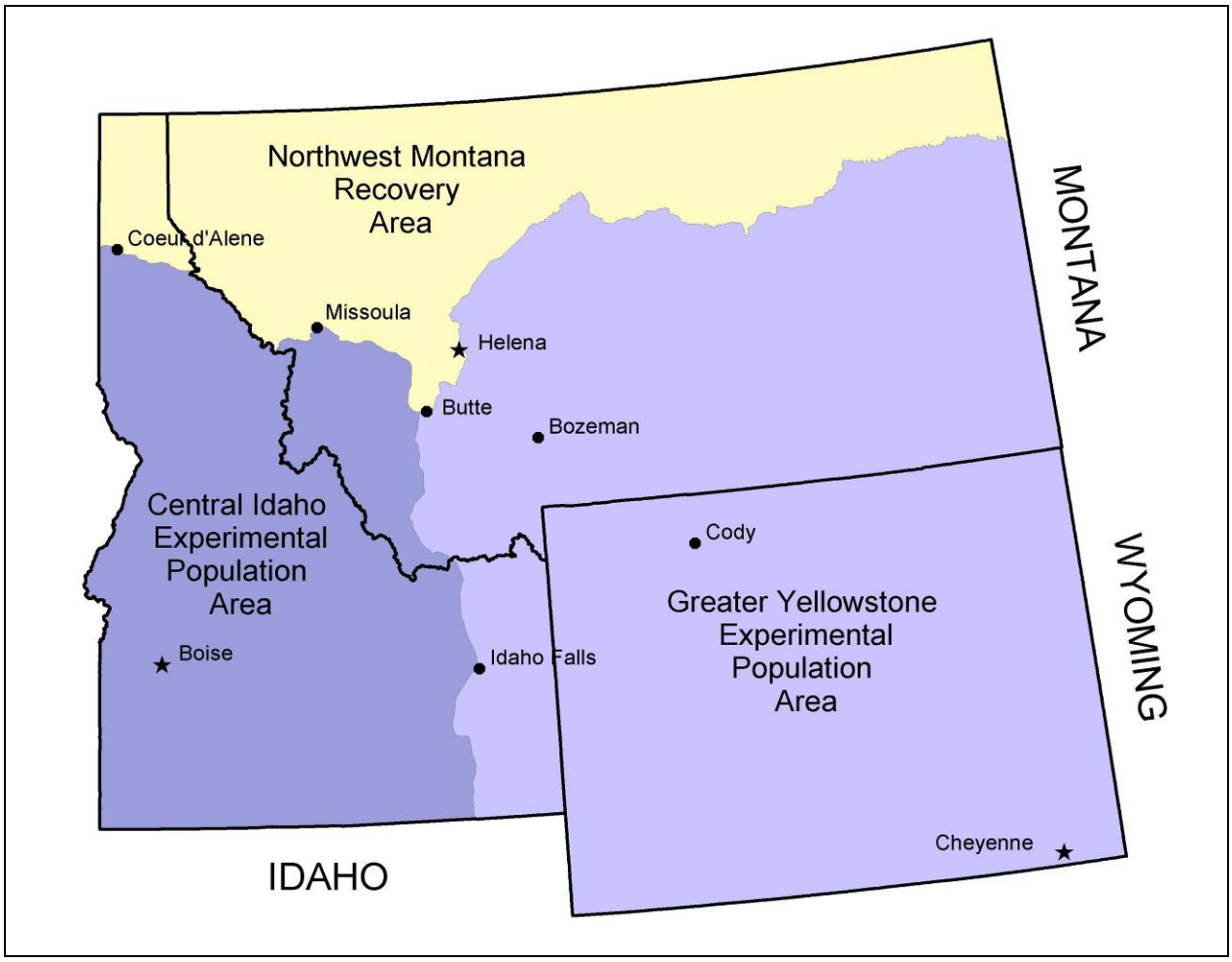

Figure 1. Recovery areas established by the U.S. Fish and Wildlife Service to restore gray wolf populations in the northern Rocky Mountains of Idaho, Montana, and Wyoming. Wolves are naturally recovering in the Northwest Montana Recovery Area, while wolves were reintroduced into the Central Idaho and Greater Yellowstone Experimental Population Areas.

In December 2002, the northern Rocky Mountain wolf population attained the established population recovery goal of 30 breeding pairs of wolves well distributed throughout the 3 states of Idaho, Montana, and Wyoming for 3 consecutive years (USFWS et al. 2003). In 2003, the USFWS adopted regulations that reclassified, or down-listed, wolves from endangered to threatened in Idaho north of I-90; however, in early 2005, a federal court judge remanded these regulations. Consequently, wolves north of I-90 remained classified as fully endangered.

The ultimate goal of federal, state, and tribal governments is to recover and remove wolves from the protections of the ESA (delisting process). The USFWS will initiate the delisting process when the northern Rocky Mountain wolf population meets or exceeds established population goals, and the 3 states of Idaho, Montana, and Wyoming each have USFWS-approved wolf management plans and other legislation and regulations in place to ensure long-term conservation of wolves. By 2003, most federal delisting requirements had been met. Wolf

population recovery goals were met in 2002 and the states of Idaho and Montana had USFWS-approved wolf management plans and adequate state laws in place. Wyoming's wolf management plan, however, was not approved by the USFWS. In response, Wyoming sued the federal government requesting court approval of their plan. Consequently, delisting was delayed until Wyoming makes USFWS-requested adjustments to its plan or federal courts rule that the USFWS accept Wyoming's plan.

In response to this delay, in February 2005, the USFWS revised the Final Rule (10(j) Rule). The new 10(j) Rule (Endangered and Threatened Wildlife and Plants; Regulation for Nonessential Experimental Populations of the Western Distinct Population Segment of the Gray Wolf [50 CFR Part 17.84]) applies only within the Nonessential Experimental Population Areas for states with USFWS-approved wolf management plans; currently Idaho and Montana (Figure 2). The 10(j) Rule is an interim measure to provide Idaho and Montana with more local wolf management authorities until Wyoming's situation is resolved and wolves can be delisted.

The 10(j) Rule allowed the states of Idaho and Montana to petition the Department of Interior to assume many day-to-day wolf management authorities. In January 2006, a Memorandum of Agreement (MOA) between the Secretary of Interior and the Governor of Idaho was signed that transferred most management authorities previously held by the USFWS to Idaho. The State of Idaho currently oversees daily management of wolves in Idaho and coordinates between agencies to fulfill obligations under the 10(j) Rule, the ESA, and the state wolf management plan.

In May 2005, an MOA was signed between the NPT and State of Idaho that outlined wolf monitoring and management responsibilities shared between the 2 governments. Under the MOA, the NPT is responsible for monitoring wolves within IDFG Clearwater Region and McCall Subregion, while the State of Idaho is responsible for monitoring wolves across the rest of the state and management statewide.

This report fulfills annual USFWS requirements to summarize and report wolf status and management activities in Idaho. The goal of the State of Idaho, NPT, USFWS, and WS is to continue to maximize knowledge of wolves in Idaho while reducing conflicts and continuing toward eventual delisting of wolves in the northern Rocky Mountains. (Editor's Note: at the time of this printing, the USFWS has proposed to delist wolves within the northern Rocky Mountains and posted a delisting rule in the Federal Register on February 7, 2007. The process will take at least a year to delist).

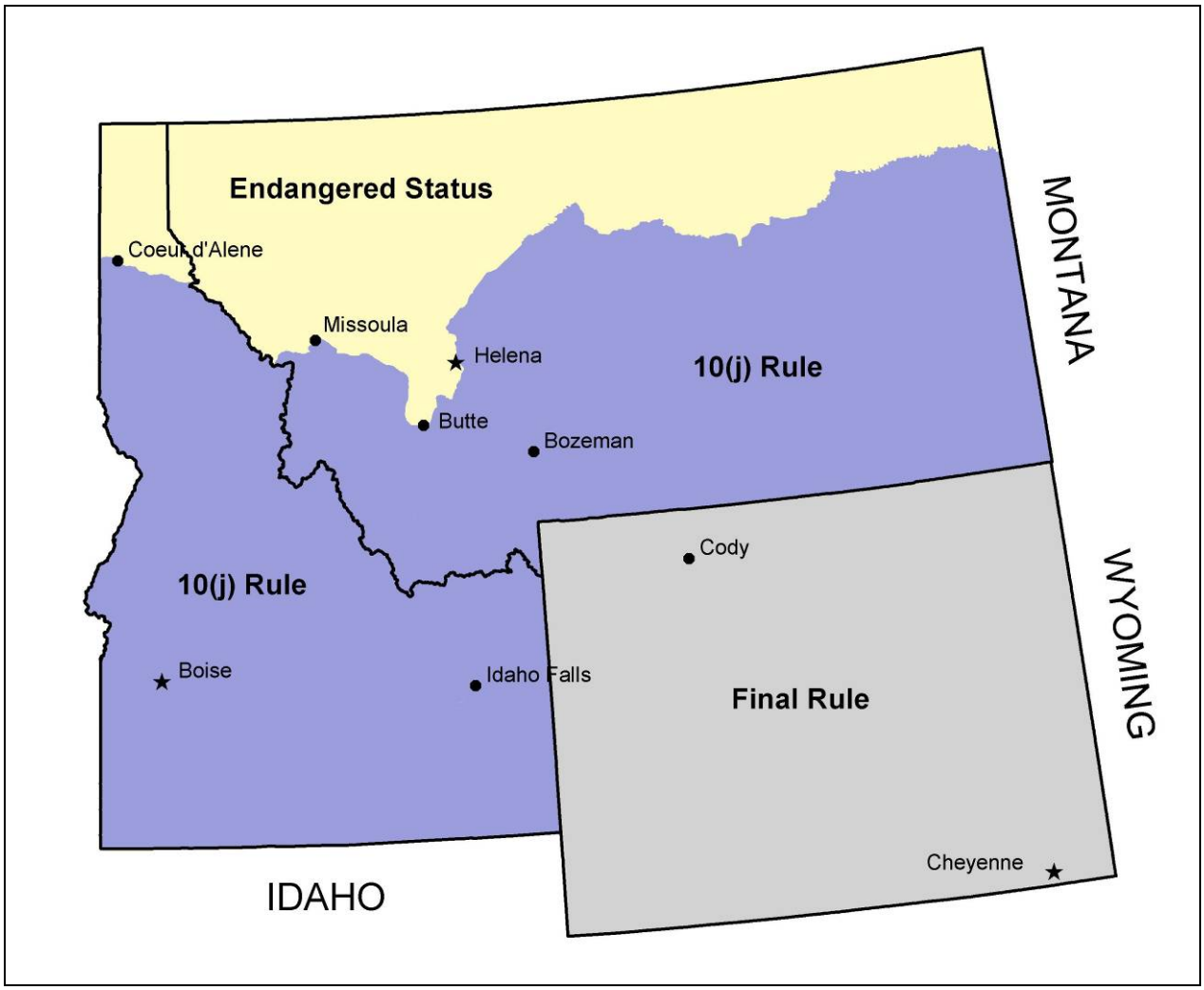

Figure 2. Management areas established by the U.S. Fish and Wildlife Service to restore gray wolf populations in the northern Rocky Mountains of Idaho, Montana, and Wyoming.

STATEWIDE SUMMARY

Previous progress reports by the NPT and the USFWS summarized wolf status within the Central Idaho Experimental Population Area including central Idaho and portions of southwestern Montana. However, this report summarizes the status of wolves and wolf management within the borders of the State of Idaho, including portions of all 3 northern Rocky Mountain recovery areas: endangered wolves in the NWMT recovery area north of I-90; and nonessential experimental wolves within Idaho portions of the CID and GYA recovery areas south of I-90.

Central Idaho, a vast, mountainous, and remote area, is one of the largest remaining undeveloped blocks of public land in the conterminous United States. Central Idaho includes 3 contiguous Wilderness Areas, the Selway-Bitterroot, Frank Church River-of-No-Return, and Gospel Hump, encompassing almost 4 million acres (1.6 million ha), which represents the largest block of federally-designated Wilderness in the lower 48 states.

Three major mountain chains and 2 large river systems create a very diverse landscape, ranging from sagebrush-covered flatlands in the southern part of Idaho, to extremely rugged peaks in the central and northern parts. A moisture gradient also influences the habitats of both wolves and their prey, with wetter maritime climates in the north supporting western red cedar-western hemlock vegetation types, grading into continental climates of Douglas fir and Ponderosa pine to the south. Elevations vary from 1,500 feet (457 m) to just over 12,000 feet (3,657 m). Annual precipitation varies from less than 8 inches (20 cm) at lower elevations to almost 100 inches (254 cm) at upper elevations.

Wolf Population Status

The Idaho wolf population has continued to expand in both numbers and packs since initial reintroductions in 1995 (Figures 3 and 4). By the end of 2006, 72 of 76 documented wolf packs remained extant in Idaho, including 10 of 13 new packs, and a minimum of 415 wolves was observed or monitored by wolf program personnel. Using techniques established in previous years, the Idaho population was estimated at 633 wolves (Appendix A). During the last 2 years, we have been exploring alternative population estimate techniques that are based on the number of documented packs and individuals within the packs, and using a lone wolf correction factor. This new method was peer reviewed by wolf biologists in the northern Rocky Mountains, as well as statisticians from the University of Idaho. **The minimum population estimate using the new technique is 673 (Appendix A), and is the official estimate for Idaho for 2007**.

Distribution, Reproduction, and Population Growth

Wolves were well distributed in the state from the Canadian border, south to the Snake River plain, and east to the Montana and Wyoming borders (Figure 5). Of the 72 documented packs that survived during 2006, territories of all were wholly or predominantly on U.S. Forest Service (USFS) public lands.

Of 72 documented packs, a minimum of 53 produced litters and 41 qualified as breeding pairs (Table 1). A minimum of 185 wolf pups was documented in 2006. Wolf pup counts were conservative estimates because not all pups were observed from packs that were monitored, and some documented packs were not visited. Minimum documented litter size ranged from 1-9 pups. Average minimum litter size for those packs where counts were believed complete (n = 32) was 4.5 pups per litter. Seven new breeding pairs were documented and the reproductive status of 23 documented packs was either not verified or believed to be non-reproductive during 2006. Many areas typically visited to count pups were not available to field crews due to extensive forest fires and subsequent area closures this year.

Comparing population growth rate between 2005 and 2006, using the same population estimation techniques between years, the Idaho wolf population increased by an estimated 22% (nearly identical to the previous year). The social carrying capacity for wolves will likely be below the biological carrying capacity as wolves are managed in concert with other wildlife values, livestock concerns, and management objectives. Ultimately the citizens of Idaho, not habitat, will determine the number of wolves that will persist in the state.

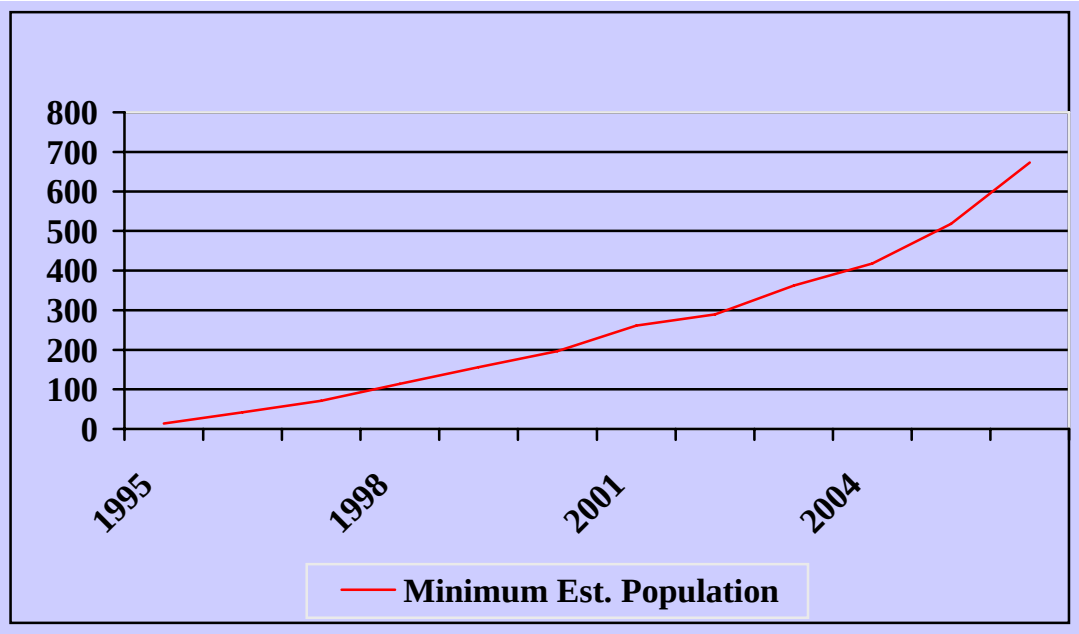

Figure 3. Estimated number of wolves in Idaho, 1995-2006. Annual numbers were based on best information available and were retroactively updated as new information became available.

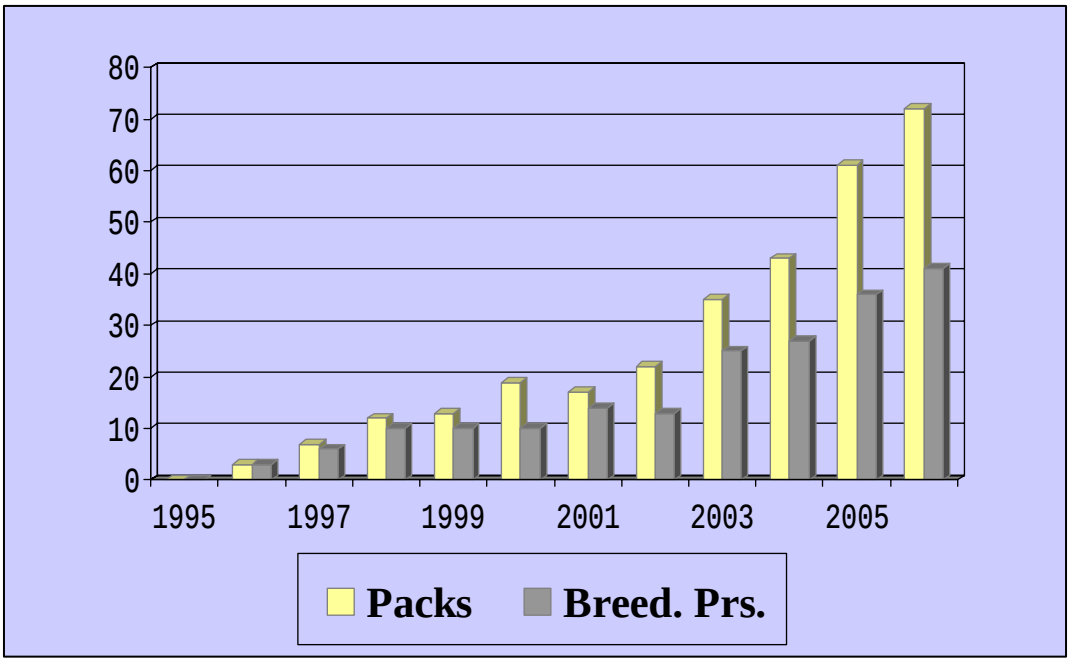

Figure 4. Number of documented wolf packs and breeding pairs in Idaho, 1995-2006. Annual numbers were based on best information available and were retroactively updated as new information became available.

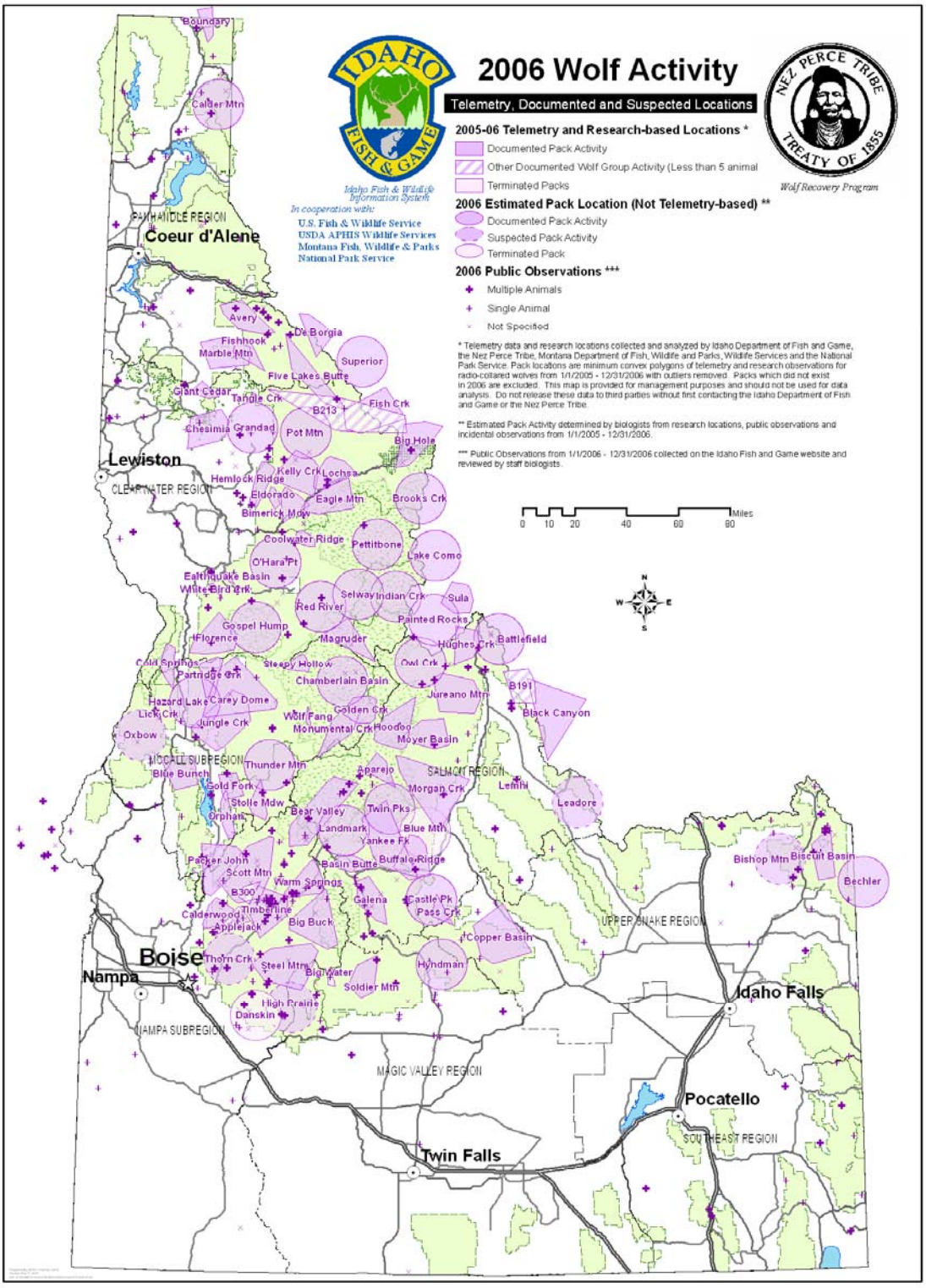

Figure 5. Distribution of documented and suspected wolf packs, other documented groups, and public wolf reports in Idaho, 2006.

Table 1. Number of wolves observed, documented packs, and other documented wolf groups; dispersal; reproductive status; mortality; monitoring status; and wolf-caused livestock depredations within Idaho Department of Fish and Game management regions, 2006.

	Management Region								
	Panhandle	Clearwater	McCall	Nampa	Magic Valley	Southeast	Upper Snake	Salmon	Total
Minimum number wolves detected[a]	35	125	73	61	9	0	14	98	415
Number documented packs	7	23	15	9	3	0	2	17	76
Packs lethally removed	0	0	1	1	1	0	0	1	4
Packs at end of year	7	23	14	8	2	0	2	16	72
Number other documented groups[b]	0	4	1	2	0	0	3	2	12
Groups lost	0	1	0	0	0		2	1	4
Groups at end of year	0	3	1	2	0		1	1	8
Known dispersal	1	2	1	3	1	0	1	4	13
Reproductive status									
Minimum number pups produced	14	56	35	24	7	0	9	40	185
Number reproductive packs	5	15	10	8	2	0	2	11	53
Number breeding pairs[c]	4	12	9	5	1	0	1	9	41
Documented mortalities									
Natural	0	1	0	0	0	0	0	1	2
Control[d]	0	0	12	13	3	0	6	11	45
Other human-caused[e]	1	3	2	1	2	0	2	3	14
Unknown	1	2	0	0	0	0	0	4	7
Monitoring status									
Active radiocollars	8	28	11	13	2	0	5	17	84
Number wolves captured[f]	8	11	10	9	0	0	5	12	55
Number wolves missing[g]	0	1	3	5	0	0	0	0	9
Confirmed & probable wolf-caused livestock losses									
Cattle	0	4	7	5	0	0	8	17	41
Sheep	0	0	145	57	15	0	14	6	237
Dogs	0	3	0	1	0	0	0	0	4

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Other documented wolf groups include suspected packs and known and suspected mated pairs; verified groups of wolves that do not meet the definition of a documented pack.

Table 1. Continued.

[c] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".
[d] Includes agency lethal control and legal take by landowners.
[e] Includes all other human-related deaths.
[f] Includes all wolves captured during 2006 for radiocollaring purposes (excludes captures for lethal control). Most, but not all, were radiocollared.
[g] Radiocollared wolves that became missing in 2006.

Mortality

Sixty-eight documented wolf mortalities were recorded in 2006 (Table 1). Fifty-nine of the confirmed mortalities were human caused, 7 were unknown, and 2 were natural. Of 59 confirmed human-caused mortalities, 39 were wolves controlled for livestock depredations by WS, 8 were illegally taken, 6 were from other human causes, and 6 were legally taken (shot by landowner while harassing or attacking livestock). These figures are underestimates of the true amount of overall mortality occurring within the wolf population, as documenting mortalities of uncollared wolves that are not controlled by agencies is difficult. Only 2 wolf deaths due to natural causes were recorded, another indication that mortality was underestimated, as more individuals likely succumbed to non human-related factors. There were no means to estimate deaths of pups that occurred prior to our visits.

More wolves (n = 39) were lethally controlled by WS in Idaho in 2006 than in any previous year. This mortality stemmed from removals in 14 packs: the Big Water pack (2 wolves) near Pine, Idaho; the Blue Bunch pack (2 wolves) southwest of McCall, Idaho; the Blue Mountain pack (2 wolves) west of Challis, Idaho; the Buffalo Ridge pack (2 wolves) near Clayton, Idaho; the Carey Dome pack (3 wolves) north of McCall; the Copper Basin pack (3 wolves) northwest of Mackay, Idaho; the Danskin pack (4 wolves) near Garden Valley, Idaho; the Gold Fork pack (4 wolves) east of Cascade, Idaho; the Jungle Creek pack (1 wolf) north of McCall, Idaho; the Morgan Creek pack (2 wolves) northwest of Challis, Idaho; the Moyer Basin pack (2 wolves) southwest of Salmon, Idaho; the Packer John pack (2 wolves) near Round Valley , Idaho; the Steel Mountain pack (4 wolves) near Trinity Lakes, Idaho; and the Timberline pack (2 wolves) north of Idaho City, Idaho. An additional 4 wolves were lethally removed from paired or unknown groups of wolves. Finally, 6 wolves were taken in the act of attacking livestock on private property by landowners under the revised 10(j) Rule.

Livestock and Dog Mortalities

During 2006, WS conducted 117 depredation investigations involving reported wolf-killed livestock. Of those, 63 (54%) involved confirmed wolf depredations, 16 (14%) involved probable wolf depredations, 24 (21%) were possible/unknown wolf depredations, and 14 (12%) were due to causes other than wolves. During the calendar year, WS reported 41 cattle, 238 sheep, and 4 dogs that were classified as confirmed or probable wolf kills (Table 1). Non-lethal techniques were used to reduce wolf-livestock conflicts when appropriate.

Law Enforcement

During 2006, USFWS Special Agents and IDFG Conservation Officers cooperatively investigated and reported 23 known and suspected cases of unlawful take of wolves. Of the 23 wolves investigated, 2 died of natural causes, 14 from human causes, and the cause of death for 7 was unknown.

Two people were prosecuted for the same incident through the federal court system. One was implicated in the “taking” of a gray wolf and both were charged with destruction of government property. Other investigations were ongoing.

Research and Management

Agencies continue to coordinate and support scientific research assisting in long-term wolf conservation and management.

Statewide Elk and Mule Deer Ecology Study

During 2006, the IDFG continued its effort to measure the effects of wolf predation, habitat condition, and forage nutrition on elk and mule deer populations across Idaho. Goals were met to radiocollar adult female elk and mule deer, 6-month-old elk calves and deer fawns, and newborn elk calves and deer fawns. Action is on-going to meet research objectives which include 1) determine survival, cause-specific mortality, pregnancy rates, and body condition for radiocollared animals; 2) monitor wolf distribution and abundance within project areas; 3) develop habitat condition and trend maps for Idaho; and 4) manipulate predator populations in project areas and monitor ungulate population responses. This research is providing contemporary estimates of non-hunting mortality, survival, and productivity of elk and deer populations for determining appropriate hunting seasons. Further, this research will help identify and evaluate specific predator and habitat management actions necessary to achieve ungulate population objectives.

Effects of Wolf Predation on North Central Idaho Elk Populations

The IDFG developed a proposal to evaluate effects of wolf predation on elk populations in the Lolo and Selway elk management zones. Elk populations in these 2 zones are below established state management objectives. The proposal included a review of elk population data, cause-specific mortality research being conducted on elk, wolf population data, and modeling conducted to simulate impacts of wolf predation on elk using estimated population parameters. Additionally, this proposal identified conservation measures already implemented, and future management actions and objectives proposed, in an attempt to improve and monitor elk populations in these areas. The proposal calls for removal of 75%, up to 43 wolves, within the Lolo elk management zone to enhance female elk survival. The USFWS has indicated to IDFG that the 10(j) requirement was to show that wolves were the "primary cause of the decline." The proposal clearly identified that the population of elk was in decline before the wolf reintroductions, but the concerns were more for continued impact on the declining elk population that were additive and preventing the population from recovering. The IDFG commission directed staff to continue to monitor and conduct research in the area and potentially submit the proposal for official review if wolf delisting is delayed.

Developing Monitoring Protocols for the Long-term Conservation and Management of Gray Wolves in Idaho

Gray Wolf recovery efforts in the northern Rocky Mountains (Idaho, Montana, and Wyoming) have met with much success, as all 3 states support viable recovered wolf populations. Monitoring and estimating recovering wolf populations in the northern Rocky Mountains has, to date, relied on time-intensive and expensive radiotelemetry techniques. Although this approach worked well in Idaho with initial small population sizes, these techniques are no longer appropriate or cost-effective given the current, much larger recovered population size and nearly statewide distribution.

The NPT, University of Montana Cooperative Wildlife Research Unit (Coop), the USFWS, and the IDFG are collaborating on a multi-year research effort to develop less intensive and more cost-effective approaches for estimating wolf population numbers across the varied landscapes of Idaho. Primary funding for this effort was provided by USFWS through their Tribal Wildlife Grants Program. A 3.5-year research effort will develop standardized wolf monitoring protocols for estimating wolf population parameters appropriate for meeting post-delisting monitoring and management needs, help implement wolf management plans, address wolf management goals and objectives, and ensure long-term conservation and management of the species.

During 2006, collaborators hired a project research assistant and developed a study plan that will be implemented summer 2007. Research will evaluate developing fine and broad scale monitoring approaches. Initial fine-scale approaches will focus initially on scat surveys and DNA analysis appropriate for obtaining high resolution data for specific regions of management concern. A Patch Occupancy model will be developed and evaluated as a broad-scale, statewide, monitoring approach. Fine and broad scale data sets will be combined into a single cohesive monitoring program to address wolf management goals and objectives.

Standardized monitoring protocols will be important in satisfying the USFWS' 5-year post-delisting monitoring requirements and will be crucial to ensure sustainability of the population through effective post-delisting conservation and management of wolves. Results of this effort will also be useful to other states, particularly Montana and Wyoming, developing monitoring protocols for wolves across the northern Rocky Mountains.

Outreach

Program personnel presented 45 information and education programs to a minimum of 1,838 people. Audiences included school students, agency personnel, livestock associations, community groups, sportsmen and outfitters, and legislators. In addition to organized presentations, program personnel talked to numerous members of the public via telephone, email, and in person. Also, news articles were released by IDFG summarizing all wolf-related livestock mortalities as well as wolf mortalities and any other noteworthy news item about wolves on a weekly basis. Program personnel talked with reporters from across Idaho and the nation regularly. Wolves continued to be an interesting topic for the public and television, radio, and print media contacted the program leader often to obtain wolf information and agency perspective. Thus, thousands more people were contacted regularly by program personnel about wolves through radio, television, and print media.

The IDFG online wolf reporting system provided an opportunity for the public and professionals to record wolf observations in Idaho. During 2006, 496 wolf observations were reported on the web site. The online reporting system is a tool which assists biologists locate new packs and allows the public a means to communicate wolf concerns to the appropriate agency.

REGIONAL SUMMARIES

Determining numbers, distribution, and population trends of wolves in Idaho is important for many reasons including effective species management, addressing social concerns of Idahoans, and meeting federal minimum wolf population requirements. A wolf pack is a group of wolves usually consisting of an adult male and female (alpha pair) and their offspring from one or more generations. A pack is first formed when a mated pair produces its first litter of pups. Because a

wolf pack is the basic reproductive unit for this species, enumerating the number of packs within the population is important in determining the reproductive status and long-term viability of the population. As such, the wolf pack has become the unit of measure for federal wolf recovery goals and relisting thresholds, and state wolf management objectives. Unfortunately, because wolf packs are dynamic, varying in size and age and sex composition, do not always travel together in 1 discrete group, and travel across large territories, they are difficult to detect and differentiate from one another in the field. In addition, not all groups of wolves are associated with reproductive packs.

The status of the wolf population was tracked by documenting and counting different wolf groups. Wolf groups reported here are classified as documented packs, suspected packs, potential mated pairs, and lone wolves. In Idaho, a documented pack was defined as 5 or more wolves verified (by program personnel or other reliable sources with evidence such as photos) traveling together, or 2 or more wolves that have had verified reproduction. Documented packs are considered fully reproductively functioning wolf packs containing an alpha pair and offspring. The estimate of the number of wolf packs in the state, for any given year, is based on counts of documented packs. Usually, some information about a documented pack's composition and social structure was known, as program personnel study these multi-generational packs from year to year. Although most wolf packs produce a litter every year, some packs do not. The reproductive history of documented packs is monitored annually. Documented packs that produced litters for a given year were considered reproductive packs for that year, and documented packs that did not produce litters, or for which reproduction was not verified, were considered non-reproductive packs for the year.

In addition, the USFWS has established a stricter definition for a wolf pack called a breeding pair. The USFWS defines a breeding pair as "An adult male and an adult female wolf that have produced at least 2 pups that survived until December 31 of the year of their birth…" (USFWS 1994). Breeding pairs are the USFWS' unit of measure for wolf recovery goals and relisting thresholds in the northern Rocky Mountains. Until wolves are delisted, and for a 5-year period following delisting, the USFWS will require the State of Idaho to monitor the numbers of breeding pairs. For any given year, all documented reproductive packs that survive intact or are composed of two adults plus a minimum of 2 pups, until December 31, are counted as breeding pairs for that year.

Suspected packs are known or suspected groups of wolves with unknown pack composition (numbers, sex and age structure, social structure) and reproductive history. A suspected pack is defined as multiple wolves or wolf activity repeatedly reported or documented that has not been verified as a pack. Suspected packs are assigned to geographic areas where, based on available evidence, wolf pack presence is suspected but not verified. Evidence can include multiple unverified reports suggesting pack presence, or verified presence of wolves of unknown status or composition.

Most documented packs were resident packs with year-round territories contained wholly within Idaho. However, some documented and suspected packs, called border packs, were only part-year residents of Idaho. Border packs had known or suspected territories that overlapped state boundaries between Idaho and neighboring states of Montana and Wyoming. The states of Idaho, Montana, and Wyoming have agreed, for federal recovery purposes, that border packs would be assigned to that state in which border packs den, or spend the majority of their time. For purposes of this report, we listed documented and suspected border packs for each IDFG

region and indicated the state to which the pack had been assigned for 2006. Specific information for border packs assigned to Montana and Wyoming were not provided in this report, with the exception of livestock depredations or wolf mortalities occurring within Idaho. For more information on Montana and Wyoming border packs, please see the Rocky Mountain Wolf Recovery 2006 Interagency Annual Report (USFWS et al. 2007).

Potential mated pairs are known small groups of wolves traveling together that have not yet formed a pack, but are anticipated to produce their first litter of pups the following year. Lone wolves are wolves not associated with a territory or other wolves. Usually, identified potential mated pairs and lone wolves are actively monitored through radiotelemetry and some information is known about their numbers, age and sex composition, and home range. For purposes of this report, potential mated pairs and lone wolves have been grouped into a single category called "Other Documented Wolf Groups."

Lastly, many areas of potential wolf activity are monitored based on sporadic reports to determine if packs are present; however, these are not reported herein. Also, any verifications of new wolf pack activity that occurred after December 31, 2006, are not included in the information presented below.

Monitoring the status of these different wolf groups from year to year assists the Recovery Program in verifying as many documented wolf packs as possible annually, and provides more accurate information for estimating and tracking wolf population numbers and trends.

Panhandle Region

Wolves found north of I-90 in this region are part of the NWMT Recovery Area and are classified as endangered. Wolves south of I-90 along the southern boundary of this region are within the CID recovery area and are classified as nonessential experimental animals.

There were 5 documented resident and 4 documented border packs in the Panhandle Region in 2006 (Figure 6; Table 2). Five of the 9 documented packs (Avery, Calder Mountain, Tangle Creek, Marble Mountain, and De Borgia) produced litters, 4 of which qualified as breeding pairs. The Calder Mountain border pack shared time between Idaho and Montana, and was counted as an Idaho pack, while De Borgia and Superior packs were counted by Montana. The Boundary pack moves between Idaho and Canada.

Two wolf-livestock conflicts were investigated in this region; one was considered a possible wolf kill and the other was a coyote kill. No dogs (herding/guarding or hunting) were reported killed by wolves in 2006.

Documented Resident Packs

Avery
This pack was first documented in 2005, but was suspected in 2004. In spring 2006, female B233 was found dead by gun shot. Personnel did not get a pup count on this pack but observed multiple pup sign during trapping efforts in early October. Trapping for this pack was unsuccessful in 2006, but alpha male B234 remains collared. The Avery pack ranges from the St. Joe River north almost to I-90 and from Elsie Peak east to Bird Creek. Ten wolves were

observed on a December monitoring flight. The Avery pack was counted as a breeding pair for 2006.

Fishhook
Two new radiocollars were put on wolves in this pack in 2006, female pup B293 and suspected breeding male B294. Two pups were observed in early August. In late October, female pup B293 was found dead from unknown causes. IDFG personnel observed 6 wolves during monitoring flights. Because 1 of the 2 pups died, Fishhook was not counted as a breeding pair for 2006.

Five Lakes Butte
Female B213 was not located with B212 during 2006. However both wolves are using portions of what has been considered Five Lakes Butte territory. Two trapping and scouting efforts into the traditional Five Lakes Butte denning area and rendezvous sites turned up no sign of reproduction. During December, B212 was observed with 2 other wolves on several occasions in the northern portion of the territory while B213 was observed with 2 other wolves in the southern portion of the territory. The Five Lakes Butte pack was not counted as a breeding pair for 2006.

Marble Mountain
Three pups were documented in this pack in late September. Female pup B314 was radiocollared on 25 September; she weighed 70 lb. at that time. We have had consistent counts of 6 wolves during monitoring flights. This pack ranges from south of Grandmother Mountain west to Blackwell Hump. Marble Mountain was counted as a breeding pair for 2006.

Tangle Creek
This is the first year Tangle Creek pack has been monitored; however, evidence indicates wolves were in the area in 2005. Three pups were confirmed during summer trapping efforts. Male pups B302, B310, and B311 were captured and collared in September, but B302 slipped his collar. He was recaptured but not recollared. The signal for B311 has not been heard since November. This pack ranges south from Freeze Out Ridge to the north and west shores of Dworshak Reservoir. Tangle Creek was counted as a breeding pair in 2006.

<u>Documented Border Packs</u>

Boundary
This newly documented pack was documented when IDFG bear research personnel captured subadult female B296 in a bear snare in late August. While no other wolves have been observed, WS investigated a wolf-livestock complaint in the Hull Mountain area during February, so we are considering this a confirmed pack. Only a few aerial locations were gathered for this pack, but from those locations we know they range from Wall Mountain north to at least 5 miles into Canada. The Boundary pack was not counted as a breeding pair for 2006.

Calder Mountain (ID)
This pack was first documented in 2005; however, no wolves were radiocollared. Successful reproduction was documented in 2006, but the only adult wolf captured escaped from the trap before it was anesthetized and collared. Calder Mountain pack dens near a popular horse trail that receives high use during prime trapping season making trapping efforts difficult. This pack

is a border pack between Montana and Idaho and was counted as an Idaho breeding pair for 2006.

De Borgia (MT)
One wolf was radiocollared in the De Borgia pack during summer 2006. This pack is monitored by Montana Department of Fish, Wildlife, and Parks (MTFWP), and IDFG personnel.
De Borgia is considered a border pack between Idaho and Montana and was counted as a breeding pair by Montana in 2006.

Superior (MT)
Superior is a confirmed pack for 2006, but reproduction was not documented. They are considered a border pack between Montana and Idaho. Superior was not considered a breeding pair for 2006.

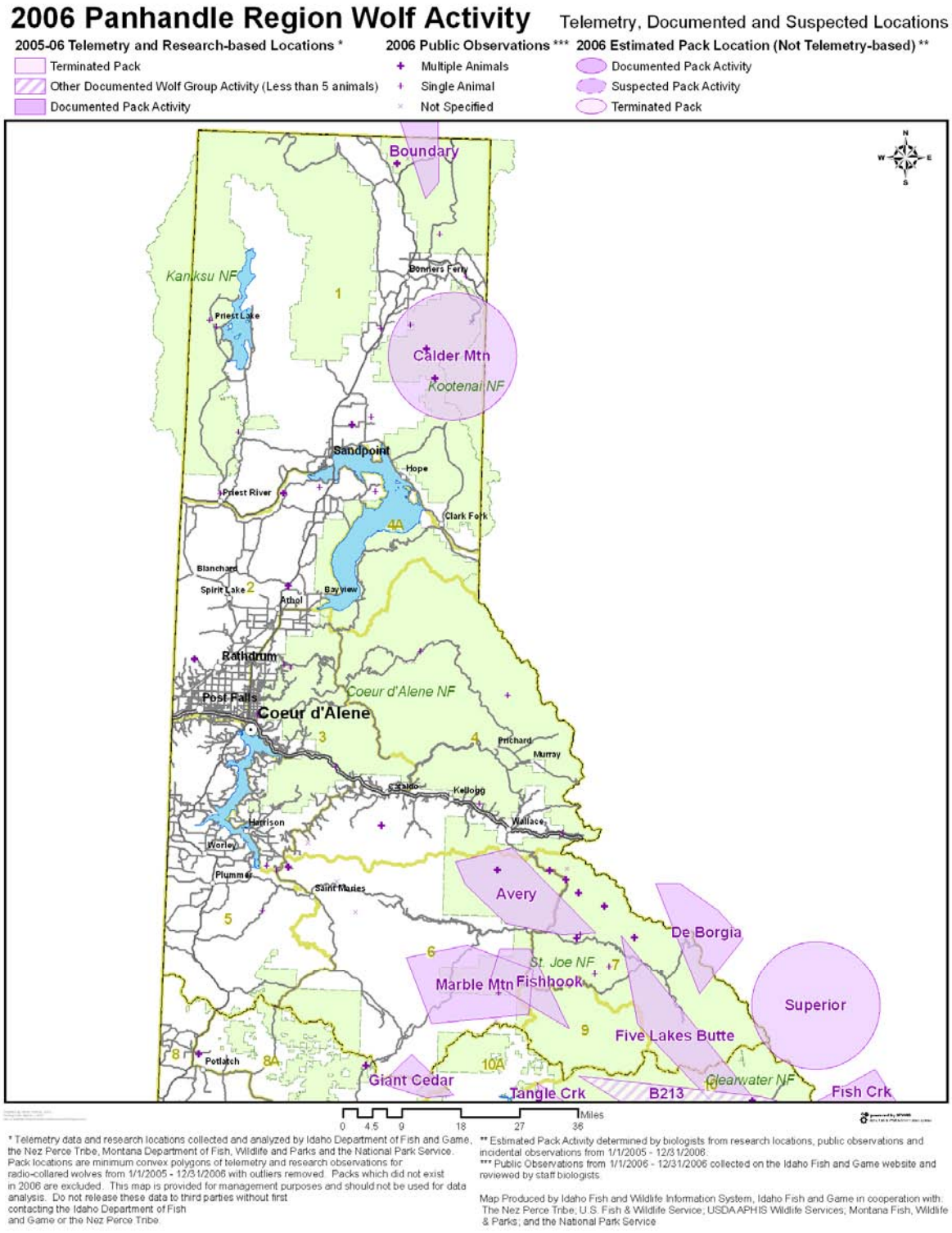

Figure 6. Wolf pack activity and observations in the Panhandle Region, 2006.

Table 2. Estimated pack size, reproductive status, mortality, dispersal, monitoring status, and livestock depredation for documented and suspected wolf packs within Idaho Department of Fish and Game Panhandle Region, 2006.

		Reproductive status			Documented mortalities					Monitoring status			Confirmed & probable wolf-caused livestock losses		
Wolf pack or group	Min. no. wolves detected[a]	Min. no. pups prod.	Reported as reprod. packs	Reported as breeding pairs[b]	Natural	Control[c]	Other human[d]	Unknown[e]	Known dispersal	Active radio collars	Number wolves captured[f]	Number wolves missing[g]	Cattle	Sheep	Dogs
Documented pack															
Avery	10	2	yes	yes	0	0	1	0	0	1	0	0	0	0	0
Boundary (ID)[h]	1	?	no	no	0	0	0	0	0	1	1	0	0	0	0
Calder Mtn (ID)[h]	4	4	yes	yes	0	0	0	0	0	0	0	0	0	0	0
De Borgia (MT)[h]															
Fishhook	6	2	yes	no	0	0	0	1	0	2	2	0	0	0	0
Five Lakes Butte	3	?	no	no	0	0	0	0	1	1	0	0	0	0	0
Marble Mountain	6	3	yes	yes	0	0	0	0	0	2	1	0	0	0	0
Superior (MT)[h]															
Tangle Creek	5	3	yes	yes	0	0	0	0	0	1	4	0	0	0	0
Regional total	35	14			0	0	1	1	1	8	8	0	0	0	0

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".

[c] Includes agency lethal control and legal take.

[d] Includes all other human-related deaths.

[e] Does not include pups that disappeared before winter.

[f] Includes all wolves captured during 2006. Most, but not all, were radiocollared.

[g] Radiocollared wolves that became missing in 2006.

[h] Border pack officially tallied to (state/nation); territory known or likely shared with Idaho. Data on these packs can be found in Rocky Mountain Wolf Recovery 2006 Interagency Annual Report.

Clearwater Region

The Clearwater Region was occupied by 21 documented resident, 4 documented border (including 2 tallied for Idaho [Fish Creek and Brooks Creek] and 2 for Montana [Big Hole and Lake Como]), and 1 suspected pack (Figure 7; Table 3). Twelve of the 15 Idaho (excluding Big Hole, see above) packs documented to have reproduced qualified as breeding pairs. For the 3 packs that did not qualify as breeding pairs, only 1 pup was observed for Lochsa pack, only 1 pup survived for Red River pack, and no pup count could be obtained for the Selway pack (although reproduction was confirmed as 1+ pups based on pup sign). Six wolf mortalities were recorded; 3 from illegal take, 2 by unknown causes, and 1 from natural cause. Livestock losses in the Clearwater Region during 2006 included 1 confirmed and 3 probable wolf-killed cattle. The White Bird Creek pack was responsible for the loss of 2 hunting hounds (and injured a third) and unknown wolves killed a hound near Weippe, Idaho, in 2006. Eleven wolves were captured and fitted with radiocollars in the region.

Law Enforcement Summary

Regional Conservation Officers, in consultation with USFWS Special Agents, investigated 1 incident involving a dead wolf. The wolf was determined to have been illegally killed and was reported to the USFWS for further investigation.

Documented Resident Packs

Bimerick Meadow
Monitoring male B247, suspected alpha, and newly radiocollared female B289 led biologists to a rendezvous site where 6 gray pups were observed in late August 2006. Minimum pack size, based upon an aerial observation, was estimated at 7 wolves. This pack was a breeding pair in 2006 for the second consecutive year.

Chesimia
After lethal control removed the alpha female and 3 other wolves in 2005, this pack did not display denning behavior in 2006 as indicated by telemetry locations of sole radiocollared wolf, yearling female B222. In addition, the livestock operator in this pack's territory noted significantly less evidence of wolves in 2006 near his cow camp, located in close proximity to the 2005 den site. Monthly aerial locations for B222 in August and September suggested that she might be dispersing, as they were outside of the pack's defined home range. B222 was not located during the October 2006 monitoring flight, but was found on the western edge of their territory in early December 2006. Four gray wolves, including B222, were observed in late December during a monitoring flight. The Chesimia pack was not considered a breeding pair for 2006.

Cold Springs
Following the death of the alpha female, B206, in October 2005, there were no radiocollared individuals in this pack. Multiple investigations of areas previously used by this pack failed to detect evidence of wolf activity. The southernmost aerial telemetry location for B206, from May 2005, was approximately 8 miles (13 km) northeast of the Lick Creek pack's 2006 rendezvous site, suggesting the possibility that these 2 packs were one and the same, and that the Cold Springs pack had shifted south during 2006. Further aerial telemetry data will be needed to

determine pack identities in this area of potential overlap. The Cold Springs pack was not a breeding pair for 2006.

Coolwater Ridge
The suspected alpha male of this pack, B286, was captured in June 2006. The alpha female, B163, was also radiocollared. Two black pups were observed and 2 others were heard howling at a rendezvous site in late June. A hunter illegally shot B286 in October 2006, possibly impacting this pack's capacity to reproduce in 2007. Field observations (official count) indicated a minimum pack size of 6 individuals, although an observation from the public during hunting season, following the death of B286, suggested that this pack contained 7-12 individuals. Despite the loss of the suspected alpha male, the Coolwater Ridge pack was a breeding pair in 2006.

Eagle Mountain
Alpha male B136 and his uncollared mate produced their fourth litter of pups in 2006. A minimum of 3 pups was observed in late July in a tributary of the Lochsa River. Because B136 was the sole radiocollared wolf and the collar was expected to expire soon, a capture effort was initiated in early August. Facilitated by a USFS horse packer, a program biologist trapped and radiocollared a young adult female, B295. During the October 2006 monitoring flight, B136 and B295 were located approximately 8 miles (13 km) southeast of the previously defined territorial boundary, in the North Fork of Moose Creek; it was not known if this represented an extraterritorial movement or whether this area was indeed part of the pack's home range. Pack size for 2006 was estimated at a minimum of 10, including 2 black individuals (no documentation of black wolves previously), based upon an aerial observation. This pack was a breeding pair for 2006.

Earthquake Basin
Two subadult female wolves were captured and radiocollared from this previously uncollared pack in early May 2006. Radio tracking of B274 and B275 subsequently led biologists to a rendezvous site where 5 black and 4 gray pups were observed, the largest litter recorded for 2006. Based upon field observations, this pack was estimated to contain a minimum of 13 wolves. The Earthquake Basin pack was a breeding pair for 2006.

Eldorado Creek
Trapping operations during summer led to the capture and radiocollaring of 2 wolves; adult male B281 and possible alpha female B301. Based upon howling, a minimum of 3 pups was detected. Aerial observations indicated a minimum of 5 wolves in this pack. The Eldorado Creek pack was a breeding pair for 2006.

Florence
Two of 3 radiocollared male wolves captured from this pack in 2004, B200 and B201, remained with the pack during 2006. The third, B202, either dispersed or his radiocollar failed, as he was not located after March 2005. Investigations of the den site in early June documented the presence of 4 gray pups. A domestic cow was listed as a probable wolf-kill in this pack's territory. Based upon field observations, a minimum of 7 wolves was present, although aerial sightings in both 2004 and 2005 revealed 15 individuals. Breeding pair status was retained by the Florence pack for 2006.

Giant Cedar
Although Giant Cedar was a suspected pack in 2005, subsequent monitoring of female wolf B256, radiocollared in 2005, allowed biologists to reclassify this group as a documented pack for 2006. Localized radiolocations during spring indicated probable denning. In early June, a single pup was heard howling in the vicinity of the suspected den site. The wolves moved away from the area following this detection, allowing biologists to locate the actual den structure, which happened to be a "giant" cedar log. Three more field efforts were required before a pup count was obtained in late August, at which time 3 gray pups were seen. Two of them, a male (B307) and female (B308), were subsequently captured and fitted with radiocollars. Pack size was estimated at a minimum of 6 individuals. The aptly named Giant Cedar pack was a breeding pair in 2006.

Gospel Hump
Contact with both radiocollared wolves, females B138 and B139, was lost during 2004, making monitoring of this pack difficult. Program personnel received reports during May, via a contract trail crew working for the USFS in the Gospel Hump Wilderness, of persistent howling and wolf sign in the vicinity of the pack's most recently known den site. Before the program could mount a survey effort, additional reports from the trail crew indicated that the wolves had probably left the area as no further howling was heard. No other reports were received and limited efforts failed to locate the pack. The Gospel Hump pack was not a breeding pair in 2006 and there was no estimate of pack size.

Hemlock Ridge
This pack produced its fourth documented litter in 2006. Based upon howling, a minimum of 2 pups was detected. Because of dense vegetation at the rendezvous site, program personnel observed no pups, but a fisheries biologist for Idaho Department of Lands reported seeing 2 gray pups and was able to photograph one. In addition, at least 4 adults were accounted for based upon radiocollared animals and howling that resulted in a minimum pack size estimate of 6 wolves for 2006. An aerial observation indicated the first presence of a black wolf in this pack. The Hemlock Ridge pack was a breeding pair for 2006.

Indian Creek
Five wolves were observed in this drainage during a winter ungulate survey conducted by IDFG in 2004, so this group was retroactively added as a documented pack for 2004. No reports of wolf activity were received in 2006. This pack was not considered a breeding pair and there was no estimate of pack size for 2006.

Kelly Creek
Three wolves, suspected alpha male B220 along with females B237 and B238, were present at a traditional rendezvous site in early August. Three gray pups were observed and a fourth was suspected based upon howling. Thirteen wolves were seen during a monitoring flight in December 2006, which did not include B238, whose membership in the pack was uncertain (she was not located with B220 or B237 after 1 August 2006 and had shifted west a few miles). The longstanding Kelly Creek pack was a breeding pair in 2006.

Lochsa
Radiocollared female wolf B232 led biologists to a rendezvous site in mid-August, where she was observed with 3-4 other gray adult-sized wolves and a single gray pup. There may have been additional pups, although group howls heard by project personnel did not support that

assumption. A trapping effort resulted in 2 wolf captures, but both pulled out of the traps; 1 escaped as it was approached to be sedated. Pack size was estimated at a minimum of 5-6 individuals in 2006 based upon field observations. An aerial observation of 9 gray wolves in December 2006 provided the official pack size count. The Lochsa pack was not a breeding pair for 2006.

Magruder
Suspected alpha male B110 had not been located since June 2004, probably due to expiration of his radiocollar, and female B219 not since late May 2005. One effort to investigate this uncollared pack's previously used rendezvous sites was made, but no wolf sign was found. Reports from backpackers and hunters in the area indicated that wolves were still residing within the home range. The Magruder pack was not a breeding pair in 2006 and there was no estimate of pack size.

O'Hara Point
Suspected alpha male B111 had not been located since October 2004, and it was likely his radiocollar expired. Male B162, captured as a pup in 2003, dispersed by mid-May 2005, leaving no radiocollared wolves in this pack. The pack did not use their traditional denning area in 2006, complicating efforts to document reproduction and conduct capture operations. Tracks of multiple wolves were found by biologists, confirming the continued presence of wolves in the territory. Also, wolves were confirmed to have injured 2 adult cows and 1 calf and probably killed 1 calf in this pack's territory in late August. B111's radiocollar was found by a hunter during November 2006, likely indicative of this wolf's death. The O'Hara Point pack was not a breeding pair in 2006.

Pettibone Creek
Six wolves were observed in this drainage during a winter ungulate survey conducted by IDFG in 2004, so this group was retroactively added as a documented pack for 2004. No estimate of pack size was made and no evidence of reproduction was obtained, so this pack was not a breeding pair for 2006.

Pot Mountain
Five wolves were observed on the flank of Pot Mountain during a winter ungulate survey conducted by IDFG in spring 2005, so this group was added as a documented pack for 2005. Field efforts in 2006 were unsuccessful in locating these wolves as very limited wolf sign was detected in the area. No estimate of pack size was made and no evidence of reproduction was obtained, so this pack was not a breeding pair for 2006.

Red River
No radiocollared wolves were monitored during 2006. In mid-July, a single black pup was observed along Red River south of the Red River Wildlife Management Area. The following day, 1-2 pups responded to howling. The presence of pups initiated a capture operation, despite the lack of adult wolf sign observed in the area. This trapping session and a subsequent one was unsuccessful, so this pack remained without a radiocollared member. A dead wolf was reported to program personnel in early October; a gray pup was recovered in the South Fork of Red River drainage and USFWS Law Enforcement initiated an investigation. Sightings of 8-10 wolves observed at Red River Wildlife Management Area were received in early fall. The Red River pack was not considered a breeding pair for 2006.

Selway
Monitoring efforts in 2006 included 3 investigations of previously used rendezvous sites. Tracks of 4 wolves were located in the Meadow Creek drainage in late September, and hunters reported hearing multiple wolves howling the night these tracks were discovered. Copious pup scats were located the following day at a previously identified rendezvous site in the Bargamin Creek drainage; no evidence of wolf use was previously detected at this site in mid-July, indicating the pack occupied the area between mid-July and mid-September. The Selway pack was counted as a reproductive pack (officially tallied as 1+ pups based on sign observed), but not a breeding pair in 2006 because a minimum of 2 pups was not documented.

White Bird Creek
Alpha female B284 and adult male B285 were captured and radiocollared following an incident between this pack and hunting dogs. Three wolves killed 2 hounds and injured a third when the wolves encountered the dogs in late May 2006. A program biologist subsequently located the pack's rendezvous site, leading to the successful trapping effort. A minimum of 2 pups and 3 adults was detected at that time, based upon howling. This pack was also implicated in a probable wolf-killed cattle loss and the probable wounding of another. One wolf was documented as an illegal kill in November. Six wolves were observed during a monitoring flight during winter 2006/2007. The newly documented White Bird Creek pack was a breeding pair for 2006.

Documented Border Packs

Big Hole (MT)
Because they denned in Montana, and the majority of their locations were there as well, the Big Hole pack was officially counted as a Montana pack in 2006 for the second consecutive year (fieldwork was conducted by NPT personnel in coordination with MTFWP). The pack produced 2 black and 2 gray pups. Estimated pack size at the end of 2006 was 6 wolves based on an aerial sighting from July. The sole radiocollared wolf, female B151, remained with the pack. This pack qualified as a breeding pair for Montana in 2006.

Brooks Creek
A radiocollar was placed on a wolf, SW17M, in this drainage in spring 2005 by an MTFWP biologist. Based upon telemetry locations obtained during spring 2006, MTFWP personnel believed this pack denned in the White Sand Creek drainage of Idaho. During a monitoring flight in July, an MTFWP biologist observed 4 black and 2 gray pups. Minimum pack size was estimated at 9 wolves based upon a ground observation in October. Counted as a breeding pair for Montana in 2005, this border pack was tallied as a breeding pair for Idaho in 2006 due to its suspected den location.

Fish Creek
The Fish Creek pack denned in Idaho on the Clearwater National Forest in 2006; their previous den was in Montana in 2005. During a monitoring flight conducted by MTFWP in August 2006, 7 pups were observed. In November, 14 wolves were seen during a monitoring flight. This border pack was considered an Idaho breeding pair for 2006.

Lake Como (MT)
A minimum of 3 wolves was present in this area, as documented by MTFWP, but none were radiocollared. No evidence of reproduction was obtained in 2006. Pups were last known to be

produced in the Lake Como pack in 2002. Very little was known about wolf activity in this area from 2002 to present and this pack, tallied for Montana, was not a breeding pair in 2006.

Suspected Resident Packs

Grandad
Investigation of the area where an outfitter, in May 2005, reported 6 wolf pups and program biologists observed 3 gray adults, yielded little evidence of wolf use in 2006. The livestock manager in the area reported that he had seen less wolf sign in 2006 than the 2 preceding years, suggesting either a reduced level of wolf activity or those wolves had shifted use to another area. Video of a wolf was taken in mid-June near Flannery Creek, a tributary of Washington Creek, approximately 12 miles (19 km) from where 3 wolves were observed in 2005. An extensive survey of the heavily roaded area yielded minimal wolf sign. A prolonged survey/trapping effort during the latter half of August detected 4 sets of wolf tracks and a wolf capture; however, the wolf escaped by pulling out of the trap. Wolf presence was confirmed, but pack and reproductive status were not verified during 2006.

Other Documented Wolf Groups

B147
After dispersing from the Jureano Mountain pack, female B147 resided in what would be the White Bird Creek pack's territory (although their range was not well understood at the time due to limited number of locations) from May 2004 until she crossed the South Fork Clearwater River in spring 2006. She was later located in Earthquake Basin, home to the pack of that name. While conducting a capture effort for the Earthquake Basin pack, biologists detected B147's radio signal on mortality mode in May 2006 and discovered her carcass. Necropsy results determined that her death was due to natural causes, osteosarcoma and terminal sepsis.

B213
Female B213, radiocollared as an adult in the Five Lakes Butte pack in 2004, was last located within this pack's territory in September 2005. Her signal was not detected again until January 2006 when she was located in the Kelly Creek drainage, within the Fish Creek pack's territory. B213 continued her extraterritorial wanderings, when she was located near Lolo Hot Springs (Big Hole pack's home range) and Scurvy Mountain (home to Paradise/Scurvy/Gorman/ Toboggan area of suspected wolf activity); she then returned to Five Lakes Butte pack's home range in May 2006. She was not located with the other radiocollared wolf in that pack, B212, throughout 2006. Her pack membership and social status was uncertain at the end of 2006, although she was observed with 2 other wolves in the North Fork Clearwater River drainage in December 2006.

B238
Female B238's affiliation to the Kelly Creek pack seemed to have ended in August 2006. She was present at the pack's rendezvous site, along with B220 and B237 in August 2006, but during the next monitoring flight (mid-August 2006), she was located apart from her radiocollared pack mates and was not located with them for the rest of 2006. From August through November, she seemed to have settled in the interstice between the Kelly Creek and Eldorado Creek packs' territories. In mid-December, B238 was seen scent-marking within the Eldorado Creek pack's territory, possibly attempting to join that pack or usurp a portion of their territory. Further observations will be required to determine B238's status.

B258

Female B258, sole radiocollared individual in the Eldorado Creek pack at the end of 2005, dispersed from her territory, and in January was found approximately 34 miles (55 km) northwest of her December 2005 aerial location. B258 was located again in April west of Elk River, approximately 41 miles (65 km) from this pack's home range; she has not been detected since.

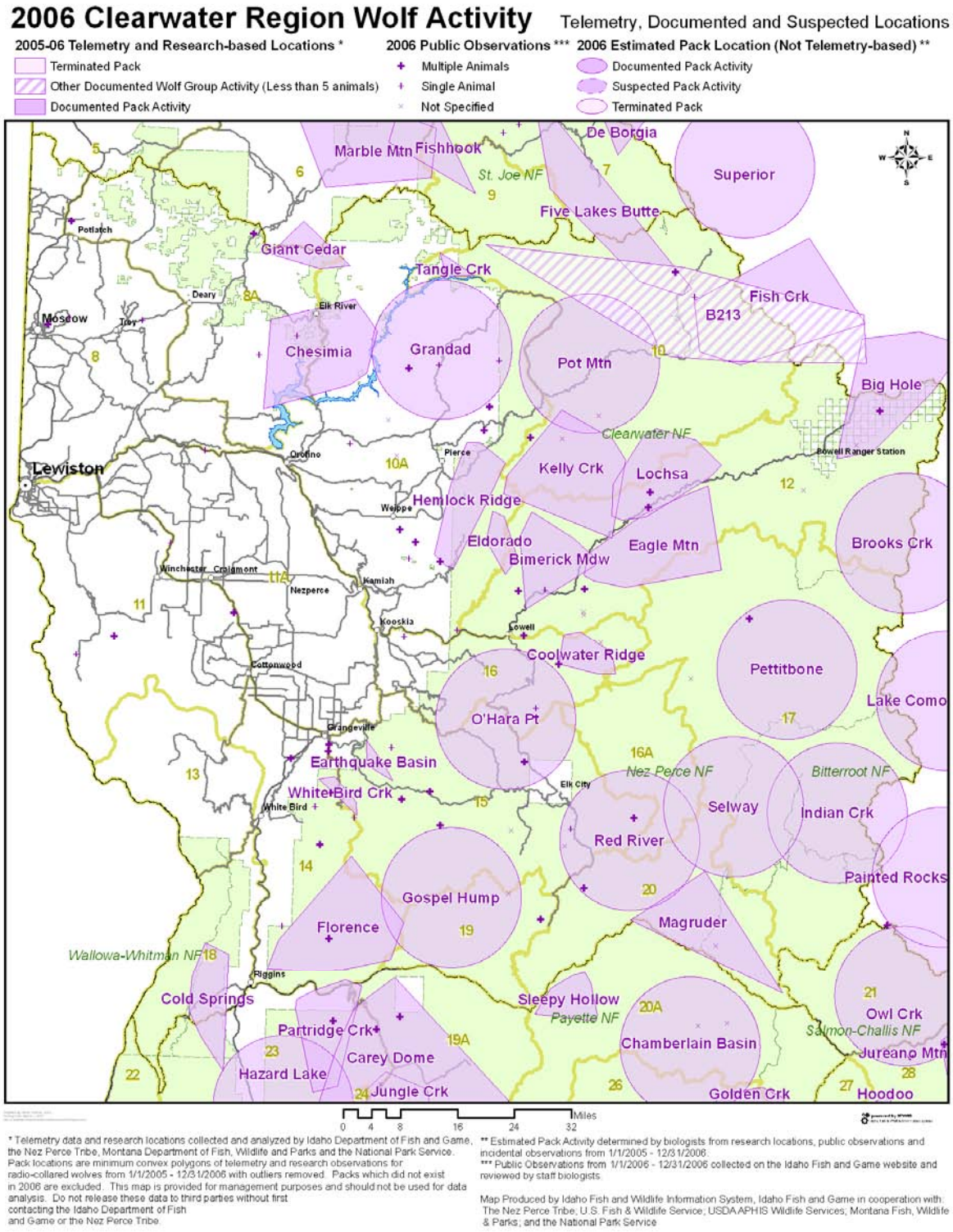

Figure 7. Wolf pack activity and observations in the Clearwater Region, 2006.

Table 3. Estimated pack size, reproductive status, mortality, dispersal, monitoring status, and livestock depredation for documented and suspected wolf packs within Idaho Department of Fish and Game Clearwater Region, 2006.

		Reproductive status			Documented mortalities					Monitoring status			Confirmed & probable wolf-caused livestock losses		
Wolf pack or group	Min. no. wolves detected[a]	Min. no. pups prod.	Reported as reprod. packs	Reported as breeding pairs[b]	Natural	Control[c]	Other human[d]	Unknown[e]	Known dispersal	Active radio collars	Number wolves captured[f]	Number wolves missing[g]	Cattle	Sheep	Dogs
Documented pack															
Big Hole (MT)[h]															
Bimerick Meadow	7	6	yes	yes	0	0	0	0	0	2	1	0	0	0	0
Brooks Crk (ID)[h]	9	6	yes	yes	0	0	0	0	0	1	0	0	0	0	0
Chesimia	4	0	no	no	0	0	0	0	0	1	0	0	0	0	0
Cold Springs	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Coolwater Ridge	6	4	yes	yes	0	0	1	0	0	1	1	0	0	0	0
Eagle Mountain	10	3	yes	yes	0	0	0	0	0	2	1	0	0	0	0
Earthquake Basin	13	9	yes	yes	0	0	0	0	0	2	2	0	0	0	0
Eldorado Creek	5	3	yes	yes	0	0	0	1	1	2	2	0	0	0	0
Fish Creek (ID)[h]	14	7	yes	yes	0	0	0	0	0	2	0	0	0	0	0
Florence	7	4	yes	yes	0	0	0	0	0	2	0	0	1	0	0
Giant Cedar	6	3	yes	yes	0	0	0	0	0	3	2	0	0	0	0
Gospel Hump	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Hemlock Ridge	6	2	yes	yes	0	0	0	0	0	2	0	0	0	0	0
Indian Creek	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Kelly Creek	13	3	yes	yes	0	0	0	0	1	2	0	0	0	0	0
Lake Como (MT)[h]															
Lochsa	9	1	yes	no	0	0	0	0	0	1	0	0	0	0	0
Magruder	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
O'Hara Point	?	?	no	no	0	0	0	0	0	0	0	0	1	0	0
Pettibone Creek	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Pot Mountain	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Red River	1	2	yes	no	0	0	0	1	0	0	0	0	0	0	0
Selway	4	1	yes	no	0	0	0	0	0	0	0	0	0	0	0
White Bird Creek	6	2	yes	yes	0	0	1	0	0	2	2	0	1	0	2
Subtotal	120	56			0	0	2	2	2	25	11	0	3	0	2
Suspected pack															
Grandad	4				0	0	0	0	0	0	0	0	0	0	0
Subtotal	4				0	0	0	0	0	0	0	0	0	0	0
Other doc. group															
B147[i]	0				1	0	0	0	0	0	0	0	0	0	0
B213	3				0	0	0	0	0	1	0	0	0	0	0
B238	1				0	0	0	0	0	1	0	0	0	0	0

Table 3. Continued.

Wolf pack or group	Min. no. wolves detected[a]	Reproductive status: Min. no. pups prod.	Reproductive status: Reported as reprod. packs	Reproductive status: Reported as breeding pairs[b]	Documented mortalities: Natural	Documented mortalities: Control[c]	Documented mortalities: Other human[d]	Documented mortalities: Unknown[e]	Known dispersal	Monitoring status: Active radio collars	Monitoring status: Number wolves captured[f]	Monitoring status: Number wolves missing[g]	Confirmed & probable wolf-caused livestock losses: Cattle	Sheep	Dogs
B258	1				0	0	0	0	0	1	0	1	0	0	0
Subtotal	5				1	0	0	0	0	3	0	1	0	0	0
Unknown					0	0	1	0	0	0	0	0	1	0	1
Subtotal					0	0	1	0	0	0	0	0	1	0	1
Regional total	129	56			1	0	3	2	2	28	11	1	4	0	3

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".

[c] Includes agency lethal control and legal take by landowners.

[d] Includes all other human-related deaths.

[e] Does not include pups that disappeared before winter.

[f] Includes all wolves captured during 2006. Most, but not all, were radiocollared.

[g] Radiocollared wolves that became missing in 2006.

[h] Border pack officially tallied to (state); territory known or likely shared with Idaho. Data on these packs can be found in Rocky Mountain Wolf Recovery 2006 Interagency Annual Report.

[i] Lost during 2006; not included in end-of-year tallies.

McCall Subregion of the Southwest Region

The McCall Subregion was home to 15 documented packs and 1 suspected pack during 2006 (Figure 8; Table 4). Nine of 10 reproductive packs qualified as breeding pairs. All documented mortalities (n = 14) were related to human causes: agency lethal control (n = 10); legal take (n = 2); and illegal take (n = 2). A Golden Creek pack disperser, originating in the McCall Subregion, was found dead in the Salmon Region. Confirmed (n = 5) and probable (n = 2) wolf-caused losses of cattle were attributed to the Gold Fork and Orphan packs, and wolves within the Hazard Lake pack home range. Confirmed (n = 143) and probable (n = 2) wolf-caused losses of sheep were attributed to the Blue Bunch, Carey Dome, Gold Fork, Jungle Creek, and Lick Creek packs, and wolves within the Hazard Lake pack home range. Due to lethal control conducted in 2004 and 2005, the status of the Hazard Lake and Partridge Creek packs was not known during 2006; these packs may no longer exist, although both were officially counted per program protocols. Ten wolves were captured by program personnel that resulted in the placement of 8 new radiocollars and replacement of 2 existing radiocollars. In addition, 2 wolves were lethally controlled after having been trapped. One wolf trapped during a lethal control effort was found dead at the capture site, apparently killed by other wolves.

Law Enforcement Summary

Regional Conservation Officers, in consultation with USFWS Special Agents, investigated 5 reports of shot or dead wolves. Of those, 2 were determined to be legally shot under authority of the 10(j) Rule while observed harassing livestock guard dogs and livestock. A Fish and Game officer responded to a report of a wolf lying dead on a road near McCall, which was determined to have been illegally shot. The fourth incident involved a dead wolf that was reported to an IDFG officer by an antler hunter; follow-up interviews led USFWS agents to conclude this was not an illegal kill. Lastly, a wolf was retrieved by an IDFG officer after it had been reported by an observer; the wolf was determined to have been shot and was turned over to the USFWS for investigation.

Documented Resident Packs

Blue Bunch
Founded by alpha female B218 and an unknown male, this pack produced its second litter of pups in 2006. The vicinity of the den site was located near their namesake ridge, where 7 gray pups were observed in early July 2006. This pack was implicated in depredations on domestic sheep, when 5 lambs were confirmed killed by wolves; the resulting control action led to lethal removal of 2 subadult females, as well as re-collaring of B218 and radiocollaring of a pup (slipped collar within 2.5 weeks). Based upon field observations, minimum pack size was estimated at 9 individuals. The Blue Bunch pack attained breeding pair status for 2006.

Carey Dome
Female wolf B257 was radiocollared during a control action in late August 2005, after depredations on domestic sheep in this area. In early May 2006, a dispersing male from the Scott Mountain pack, B263, was located on the north side of the Salmon River across from the mouth of French Creek. In May 2006, he was aerially located with B257 approximately 2 miles (3 km) west of Carey Dome. These 2 wolves were never located together again, but each used portions of what was formerly Partridge Creek pack territory, including the Little French Creek and French Creek drainages. B257 remained in the pack's home range until August, at which

time she apparently dispersed as her signal was not detected after that. B263 was observed with 2-3 other gray wolves, from the air and ground, in mid-August. Wolves known or believed affiliated with the Carey Dome pack were implicated in depredations on domestic sheep that resulted in 63 confirmed and 2 probable losses; an additional 45 sheep were missing. During control actions, 2 additional wolves, females B309 and B315, were captured and radiocollared; they were believed to be members of the Carey Dome pack, although actual number of packs and wolf membership was not certain in this area. Three pups were observed with B309 from a helicopter during a lethal control action in which 2 uncollared gray wolves were killed on Center Ridge in September 2006. A third wolf was lethally controlled during a trapping effort. During the October 2006 monitoring flight, B263's signal was detected on mortality mode; based upon their findings, USFWS Law Enforcement opened an investigation. Two other investigations were initiated in 2006 for wolves illegally killed in the Carey Dome pack's territory. Based upon field observations, minimum pack size was estimated at 6 wolves. The Carey Dome pack was considered a breeding pair for 2006.

Chamberlain Basin

During surveys of former Chamberlain Basin pack rendezvous sites, wolves were located southwest of the Chamberlain airstrip and a trapping operation was initiated. A male pup, B298, was captured and radiocollared in mid-August 2006. This was the first time the program was able to monitor this pack since 2001 when the founding pair's (male B9 and female B16) radiocollars expired. During the September 2006 monitoring flight, B298's signal was on mortality mode; investigation revealed that the pup had slipped the radiocollar. Four gray pups were observed, marking the Chamberlain Basin pack as a breeding pair for 2006.

Gold Fork

Aerial telemetry indicated that suspected alpha female B130 probably did not den during spring or lost her litter shortly after giving birth. During a June monitoring flight, she was observed with 3 other gray wolves north of Boulder Lake. Also in June, B117, formerly the Gold Fork pack's alpha male but last known associated with the Orphan pack, was legally killed while chasing cattle in the southern portion of the Gold Fork pack's territory. Field observations and information from residents of Little Valley suggested only 2-3 wolves were present in early August. This pack was implicated in depredations on cattle (3 confirmed losses) and sheep (5 confirmed losses). During a helicopter control action in late September 2006, an uncollared gray wolf with B130 was fired upon, but it was unknown whether it was killed. In late November 2006, 2 uncollared gray wolves from a group of 5 (including B130) were lethally removed. One subsequent aerial observation of 3 gray wolves was made. In December, B130 and a gray adult male wolf were lethally controlled, functionally eliminating this pack. This pack was not a breeding pair in 2006.

Golden Creek

Researchers from the University of Idaho's Taylor Ranch field station captured and radiocollared female B267 in late April, bringing to 2 the number of wolves being monitored in the pack (female B229 was radiocollared in 2005). Personnel from Taylor Ranch observed 4 gray pups near the suspected den area. A program biologist recaptured B229 in late June and found she had lactated; presumably she was the alpha (breeding) female. B267's signal was not detected after July 2006, but her carcass was reported to IDFG in November 2006; her remains were retrieved and USFWS Law Enforcement opened an investigation. Estimated pack size was 6 individuals. The Golden Creek pack was a breeding pair for 2006.

Hazard Lake
Little information pertaining to this pack was obtained in 2006 following lethal control of all radiocollared pack members in 2004 and 2005. Reported wolf activity in the Brown Creek drainage, known to have been used by this pack in the past, suggested that wolves were still present in this area, but pack status and reproduction were not confirmed. Also, 2 cattle and 5 sheep were classified as probable or confirmed wolf-kills, respectively, in this pack's home range; an additional 19 sheep were missing. The Hazard Lake pack was not a breeding pair in 2006.

Jungle Creek
This pack made an extraterritorial foray outside of their previously defined home range from December 2005 through March 2006. During that time, the sole radiocollared wolf, suspected alpha male B157, and pack mates were located north and east of New Meadows, Idaho. During an April 2006 monitoring flight, B157 and 3 gray wolves were seen traveling toward their traditional den site area. Monitoring flights in May 2006 confirmed that the pack had denned there. Field efforts in early July led to a sighting of 6 adult-sized wolves and 2 pups. Although additional pups were suspected based upon howling, only 2 were confirmed. This pack was implicated in 2 depredations on domestic sheep that resulted in the confirmed loss of 22 sheep; an additional 84 sheep were missing. Wildlife Services implemented control actions and a subadult gray female was found dead in a trap on 4 September 2006. A field necropsy suggested that this individual had been killed by other wolves; however, it is extremely unusual for wolves to kill a member of their own pack. One possible scenario was the wolf was trespassing and was killed by the resident Jungle Creek pack. Field observations led to a minimum estimated pack size of 7 individuals. This pack was a breeding pair for 2006.

Lick Creek
Multiple wolf reports were received in a short time span from the vicinity of Lick Creek Lookout in late June. Program personnel located a rendezvous site while conducting a capture operation. The alpha female, B288, was captured and radiocollared. Three gray pups and 3 gray adult-sized wolves were observed at the rendezvous site, although the number of adult wolves was estimated at 4-5 from howling. The Lick Creek pack was apparently all gray, whereas the Cold Springs pack contained 3 black wolves when last observed; the lack of black wolves could be due to death or dispersal. Further aerial telemetry data will be needed to determine pack identities in this area of potential overlap; i.e., should locations for the Lick Creek pack occur in areas formerly occupied by the Cold Springs pack, the assumption that they are the same group would be strengthened, although an alternate possibility could be that the Cold Springs pack dissolved and their territory was annexed by the Lick Creek pack. This pack was implicated in 2 depredations that resulted in 43 sheep confirmed killed; an additional 124 sheep were missing. During a helicopter control action, 2 uncollared gray wolves were fired upon, but it was unknown whether they were killed. An aerial observation of 8 gray wolves was made during winter 2006/2007. The Lick Creek pack was a breeding pair for 2006.

Monumental Creek
Female B250, captured and outfitted with a radiocollar in 2005, remained with this pack in 2006. A second wolf, female B287, was radiocollared in July 2006 near the traditional den/rendezvous site in the Monumental Creek drainage. Several days prior to B287's capture, program biologists elicited howling from multiple adults and 3+ pups there. Based upon aerial telemetry, this pack's territory encompassed the Monumental Creek drainage from its headwaters eastward to Rush Creek, with locations on the north side of Big Creek, in what would be considered the

Golden Creek pack's home range around the mouth of Cabin Creek. This pack qualified as a breeding pair for 2006.

Orphan
Following the death of female B244 in October 2005, program biologists maintained contact with the pack via male B246. His signal was detected within the pack's territory in March 2006 but was not located afterwards. With no radiocollared wolves to assist biologists, this pack was difficult to monitor. The pack did not use the same area for a rendezvous site as they did in 2005; the possibility existed that no pups were produced in 2006. Little wolf sign was detected in areas of past use, although a program biologist heard 2 adults howling in Scott Valley northeast of Cascade, Idaho. Tracks indicated that only 2 wolves were in the area at that time. A capture operation was initiated, but was terminated due to lack of wolf activity and human disturbance. An adult cow and a calf were deemed confirmed wolf-kills in this pack's home range in November 2006. Pack and reproductive status of the Orphan pack was unknown at the end of 2006.

Partridge Creek
It was believed that this pack was eliminated, dissolved, or remnant members absorbed by other packs following lethal removals and illegal kills in 2004 and 2005. Prior to depredations on domestic sheep, the Partridge Creek, Hazard Lake, Jungle Creek, and probably the Carey Dome packs were resident between McCall, Idaho, and the Salmon River. Program personnel suspected that the level of wolf control resulting from livestock depredations had potentially upset the inter- and intra-pack social dynamics of wolves inhabiting this area, which made it extremely difficult to ascertain the true number of wolf packs and their territorial boundaries, if any. Carey Dome pack members B257, B263, B309, and B315 were all located within the Partridge Creek pack's territory in 2006, including the rendezvous site used by the latter in 2004. Additional evidence supported the contention that this pack no longer existed: the Jungle Creek pack traversed the southern portion of Partridge Creek pack's territory in December 2005 and April 2006, a movement never undertaken while the latter pack was known to exist. Per program protocol, the Partridge Creek pack remained a documented pack because evidence was not conclusive regarding their demise. This pack was not a breeding pair in 2006.

Sleepy Hollow
Though it was still not resolved which radiocollared wolf was present, reproduction was confirmed for this newly documented pack. Male B148, captured as a member of the Big Hole pack, and male B181, captured as a member of the Partridge Creek pack, have adjacent radio frequencies and due to frequency drift, program personnel have been unable to identify which of these wolves was being monitored. Radio contact with B148 was lost from October 2003 until January 2005; he was approximately 71 miles (115 km) from his last location in his natal territory. After capture in January 2004, B181 moved eastward and was located in the core of Sleepy Hollow territory in April 2004; approximately 40 miles (64 km) from his last location in Partridge Creek pack home range. Aerial telemetry locations during spring 2006 indicated probable denning in a tributary entering the Salmon River from the south. In mid-August 2006, a program biologist observed 3 gray pups and heard 4 adult-sized wolves howling at a rendezvous site near Sheepeater Lookout. The Sleepy Hollow pack was documented as a breeding pair for the first time in 2006.

Stolle Meadows
Aerial telemetry locations suggested that alpha female B249 had denned in spring 2006. A reproduction survey in early June appeared to validate this as 1) pup-sized scats and beds were found in the suspected den area, and 2) both radiocollared wolves, B249 and suspected alpha male B259, were repeatedly located there. Multiple surveys and ground tracking efforts throughout the summer and fall failed to yield either a sighting of pups or elicit pup howling. Based upon aerial sightings during winter 2006/2007, pack size was estimated at 2 wolves (radiocollared pair); suggesting any pup(s) may have perished. . The Stolle Meadows pack was not a breeding pair for the second consecutive year, although, based on sign, a minimum of 1 pup was recorded.

Thunder Mountain
Program efforts to document continued wolf occupancy of this pack's territory were unsuccessful; however, reported wolf harassment of livestock at a hunting camp at Mule Hill provided evidence that wolves were still present. No evidence of reproduction was obtained, so the Thunder Mountain pack was not a breeding pair for 2006.

Wolf Fang
This pack, whose last radiocollared wolf was suspected to have died in 2003, returned to active monitored status with the capture and radiocollaring of alpha female B282 in early June. Her radio signals led biologists to a rendezvous site where 5 gray pups were observed. B282's signal was last detected in September; possibly due to premature radiocollar failure or illegal take, as it was unlikely an alpha (breeding) female would disperse. Despite B282's disappearance, the Wolf Fang pack was considered a breeding pair for 2006.

Suspected Resident Packs

Oxbow
Program personnel confirmed the presence of multiple wolves in and around the Wildhorse River drainage during winter 2004-2005. In March 2006, 2 wolves were observed fighting with livestock guard dogs north of Cambridge, Idaho. One of the wolves, a gray female, was legally killed. She was infested with lice (*Trichodectes canis*), the first known instance of this external parasite in wolves in Idaho, which had caused some hair loss. In August 2006, multiple wolves were reported howling near Lafferty Campground along the Crooked River approximately 9 miles (14 km) west of Lost Valley Reservoir. These 2 reports were approximately 22 miles (35 km) apart.

Other Documented Wolf Groups

B315
Female B315 was captured during a control action near Hartley Meadows north of McCall, Idaho, in mid-October 2006. It was supposed that she was a member of the Carey Dome pack, although other radiocollared members of that pack had not been located in the Hartley Meadows area before. Her November 2006 aerial location was along the breaks of the Salmon River west of Carey Dome approximately 13 miles (21 km). A subsequent aerial location placed her east of Pollock, Idaho, along the Little Salmon River in what was formerly Hazard Lake pack territory.

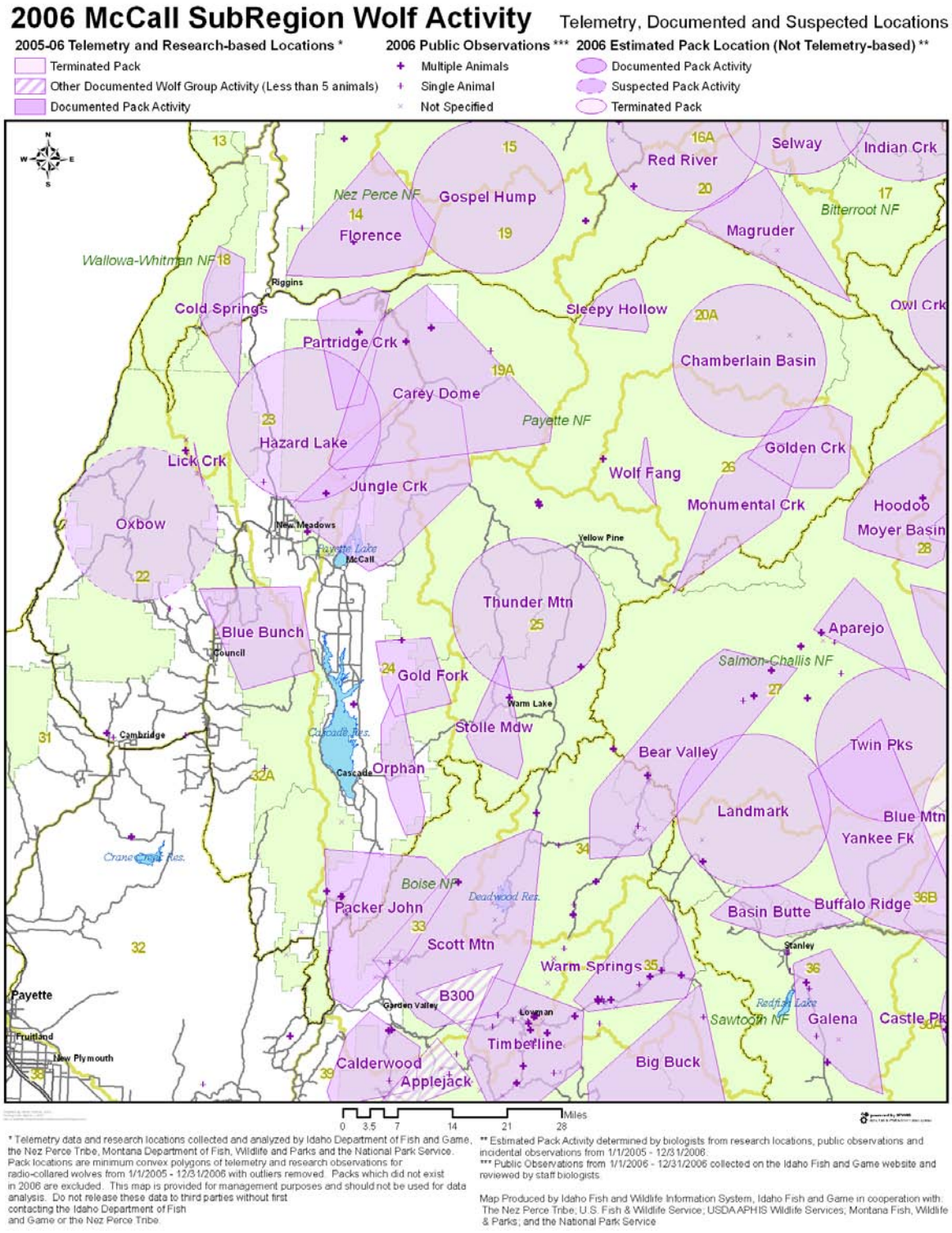

Figure 8. Wolf pack activity and observations in the McCall Subregion, 2006.

Table 4. Estimated pack size, reproductive status, mortality, dispersal, monitoring status, and livestock depredation for documented and suspected wolf packs within Idaho Department of Fish and Game McCall Subregion, 2006.

		Reproductive status			Documented mortalities					Monitoring status			Confirmed & probable wolf-caused livestock losses		
Wolf pack or group	Min. no. wolves detected[a]	Min. no. pups prod.	Reported as reprod. packs	Reported as breeding pairs[b]	Natural	Control[c]	Other human[d]	Unknown[e]	Known dispersal	Active radio collars	Number wolves captured[f]	Number wolves missing[g]	Cattle	Sheep	Dogs
Documented pack															
Blue Bunch	9	7	yes	yes	0	2	0	0	0	1	2	0	0	5	0
Carey Dome	6	3	yes	yes	0	3	2	0	0	1	1	1	0	65	0
Chamberlain Basin	6	4	yes	yes	0	0	0	0	0	0	1	0	0	0	0
Gold Fork[h]	1	0	no	no	0	5	0	0	0	0	0	0	3	5	0
Golden Creek[i]	6	4	yes	yes	0	0	0	0	1	1	2	0	0	0	0
Hazard Lake	?	?	no	no	0	0	0	0	0	0	0	0	2	5	0
Jungle Creek	7	2	yes	yes	0	1	0	0	0	1	0	0	0	22	0
Lick Creek	8	3	yes	yes	0	0	0	0	0	1	1	0	0	43	0
Monumental Crk	10	3	yes	yes	0	0	0	0	0	2	1	0	0	0	0
Orphan	2	0	no	no	0	0	0	0	0	0	0	1	2	0	0
Partridge Creek	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Sleepy Hollow	7	3	yes	yes	0	0	0	0	0	1	0	0	0	0	0
Stolle Meadows	2	1	yes	no	0	0	0	0	0	2	0	0	0	0	0
Thunder Mountain	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Wolf Fang	7	5	yes	yes	0	0	0	0	0	0	1	1	0	0	0
Subtotal	71	35			0	11	2	0	1	10	9	3	7	145	0
Suspected pack															
Oxbow	1				0	1	0	0	0	0	0	0	0	0	0
Subtotal	1				0	1	0	0	0	0	0	0	0	0	0
Other doc. group															
B315	1				0	0	0	0	0	1	1	0	0	0	0
Subtotal	1				0	0	0	0	0	1	1	0	0	0	0
Regional total	73	35			0	12	2	0	1	11	10	3	7	145	0

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".

[c] Includes agency lethal control and legal take by landowners.

[d] Includes all other human-related deaths.

[e] Does not include pups that disappeared before winter.

[f] Includes all wolves captured during 2006. Most, but not all, were radiocollared.

Table 4. Continued.

[g] Radiocollared wolves that became missing in 2006.
[i] One wolf died in the Salmon Region while dispersing from this territory.
[h] Lethally removed during 2006; not included in end-of-year tallies.

Nampa Subregion of the Southwest Region

During 2006, the Nampa Subregion portion of the Southwest Region was home to 9 documented wolf packs (Figure 9; Table 5). Five documented packs were counted as breeding pairs. All 14 documented mortalities were human caused. Confirmed sheep losses (*n* = 57) were attributed to the Steel Mountain, Timberline, and Warm Springs packs. Additionally, sheep losses which could not be attributed to a known pack occurred near Trapper Creek. Confirmed cattle losses (*n* = 5) were attributed to the Danskin and Packer John packs. The Timberline pack was confirmed to have killed 1 dog, and the Warm Springs pack was confirmed to have injured a dog.. Twelve wolves were lethally removed from the Danskin, Packer John, Steel Mountain, and Timberline packs. One wolf was lethally removed from the Trapper Creek depredation site. Nine wolves were captured and radiocollared; 7 by trapping and 2 by aerial darting.

Law Enforcement Summary

Regional Conservation Officers, in consultation with USFWS Special Agents, investigated 2 incidents of reports involving shot or dead wolves. The first report involved a possible wolf shooting near Prairie, Idaho. Officers from IDFG and the USFWS responded and confirmed that a wolf had been shot and wounded based on physical evidence. The officers attempted to trail and locate the animal, but it was not found. In the second incident, an IDFG officer responded to a report of a dead wolf in Garden Valley, Idaho. The officer determined the wolf was shot and the case was turned over to the USFWS for investigation.

Documented Resident Packs

Bear Valley
Female B215 remained the sole radiocollared member of this pack throughout the year. While flight locations indicated this pack was localized in their traditional Bear Valley denning area, forest fire closures in the vicinity prevented access so that field confirmation of reproduction could not be obtained. Because pups were not documented over the course of the summer, the Bear Valley pack was not counted as a breeding pair for 2006; however, given the relatively large increase in pack size from 2005 (*n* = 8 gray) to 2006 (*n* = 13 gray), it's likely these wolves did raise a litter of pups.

Big Buck
Alpha female B255 remained the sole radiocollared member of this pack throughout the year. Late fall flights confirmed biologists' summer tracking estimate of 2 pups. This first year pack had a minimum of 5 wolves (4 gray, 1 black), was not implicated in livestock depredations, and was counted as a breeding pair for 2006.

Photo Michael Lucid
Members of Big Buck pack feeding on a kill.

Calderwood
Alpha female B141 remained the sole radiocollar in this pack. Ground monitoring led to an observation of 4 gray pups. This third-year pack had a minimum of 5 gray wolves, was not implicated in livestock depredations, and was counted as a breeding pair for 2006.

Danskin
Livestock producers reported wolf activity in spring 2006, which was confirmed by program personnel. Three gray pups were observed. Danskin was confirmed in 3 calf depredations and probably depredated on a fourth. Two adults and 2 pups were subsequently removed via aerial gunning. This first-year pack had a minimum of 5 wolves (4 grays, 1 black) during the summer, but was reduced to a minimum of 1 gray wolf in the fall. It was not counted as a breeding pair for 2006.

Packer John
B261 disappeared shortly after capture in December 2005, leaving the 2 alphas, B205 and B262, as remaining radiocollared members. One gray pup was observed over the course of the summer. This may not have been a complete pup count. Packer John was implicated in depredating upon 1 calf. Two gray adult females were lethally controlled as a result. This third-year pack had a minimum of 3 wolves (2 grays, 1 black) based on aerial counts and was not counted as a breeding pair for 2006.

Scott Mountain
This pack began 2006 with 2 radiocollars; B178 and B263. B263 dispersed shortly after December 2005. Winter aerial observations indicated B263 may have paired with another wolf in the Garden Valley area; however, contact was briefly lost with B263 when he dispersed to join the Florence Pack. B178 remained with the pack but was found sporadically through spring monitoring. Eventually she led biologists to a rendezvous site where 1 black pup was counted. In addition to the pup, B178 and another collared gray wolf were observed. The other collared gray was with the pup and is assumed to be alpha female B78, whose collar is presumed to be non-functional. Howling observations later in the summer confirmed the presence of at least 1 pup and 2 adults. During December mule deer composition counts, biologists observed a group of 4 gray wolves, of which 1-2 had radiocollars, in Scott Mountain's territory. The combination of a same-day wolf monitoring flight which confirmed these wolves were not an adjacent documented wolf pack and that the observed wolves were wearing radiocollars (Scott Mountain likely has 1 or 2 inactive collars) suggests they were Scott Mountain. Thus, this sixth-year pack had a minimum of 4 gray wolves, was not implicated in livestock depredations, and did not count as a breeding pair for 2006.

Steel Mountain
Early in 2006, subordinate female B188 dispersed to found the Big Water pack along the South Fork of the Boise River. This left alphas R241 and B189 as collared pack animals. Subordinate male B271 was captured and collared in May. During the capture operation, 2 gray and 2 black pups were observed at the den. Between June and September, pack members were implicated in 5 separate sheep depredation events totaling 23 confirmed and 11 probable. The result of these depredations was a control action which removed 3 black and 1 gray subadult females. All depredations and 3 of the wolf removals actually occurred in the Magic Valley Region (Table 6). This fourth-year pack had a minimum of 10 wolves (5 black, 5 gray) and was counted as a breeding pair for 2006.

Photo Michael Lucid

Steel Mountain pups in Den.

Photo Michael Lucid

Hollie Miyasaki handling B266 of the Timberline pack.

Timberline

2006 began with no Timberline wolves on the air. In February, 2 subadults (B265 and B266) were darted and radiocollared. These wolves were originally believed to belong to a separate pack. However, subsequent monitoring of 2 Timberline subadult wolves (B279 and B280) which were captured in April revealed an association between all 4 wolves. These radiocollared wolves led biologists to a rendezvous site where 3 gray pups were observed. Later in the summer, an additional 2 subadults (B299 and B300) were radiocollared resulting in 6 active radiocollars. By late fall, 3 radios (B279, B280, and B299) were missing and B300 had dispersed. By December, B265 and B266 were the only collars in the pack. In September, this pack was implicated in 1 confirmed and 1 probable sheep depredation as well as 1 confirmed guard dog depredation. This depredation resulted in a control action which removed 1 subadult female and 1 pup. This fifth-year pack had a minimum of 10 gray wolves and was counted as a breeding pair for 2006.

Photo Michael Lucid

Member of Timberline pack.

Warm Springs
Alpha male B190 was the sole radiocollared member until subadult B283 was captured in June. A bear hunter confirmed reproduction by submitting a video of 6 gray pups feeding on his bait. Warm Springs again chose the Bull Trout Lake area as a rendezvous site providing numerous campers the opportunity to hear wolves howling near a developed campground. In August, WS confirmed Warm Springs pack members killed a sheep and injured a guard dog. Traps were not set to remove a wolf due to high human activity. Instead, WS personnel spent a few nights with the sheep band to be on hand in case the wolves attacked again. The wolves never returned. In the fall, B190 was illegally shot leaving B283 as the sole radiocollared wolf at the end of the year. This third-year pack had a minimum of 4 gray pack members and was counted as a breeding pair for 2006.

Photo Michael Lucid

Warm Springs pack members.

Suspected Resident Packs

Thorn Creek
Multiple reports indicated there may have been undocumented wolf activity in this area. Biologists confirmed wolf tracks in the Thorn Creek drainage during February.

Other Documented Wolf Groups

B300
This female was captured as a member of the Timberline pack in late summer. In the fall, she dispersed and was located at various locations throughout the Garden Valley area. During a December monitoring flight, a black wolf was observed near her, although a visual of B300

could not be obtained. This first-year group had a minimum of 2 wolves (1 gray, 1 black) and was considered a potential mated pair.

B306

A subadult female, B306, was caught during a late-summer trapping operation for Calderwood. Despite Calderwood's alpha female B141 being nearby when B306 was captured, subsequent monitoring did not support a pack affiliation between the 2 wolves. A visual was obtained during a September monitoring flight of B306 with 1-2 other gray wolves and a visual of 3 gray wolves was obtained during a December monitoring flight. This first-year group had a minimum of 3 gray wolves and was considered a potential mated pair.

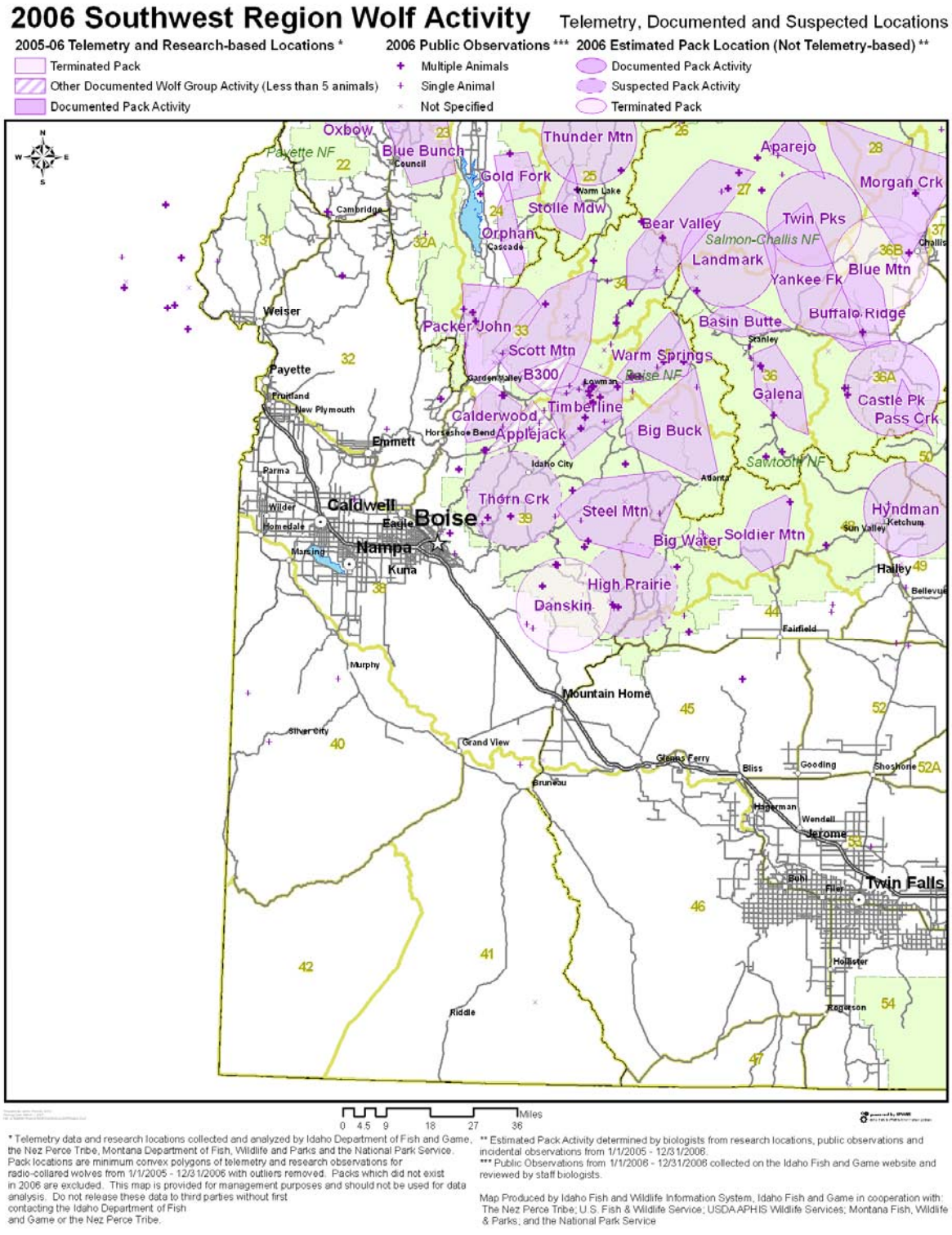

Figure 9. Wolf pack activity and observations in the Nampa Subregion, 2006.

Table 5. Estimated pack size, reproductive status, mortality, dispersal, monitoring status, and livestock depredation for documented and suspected wolf packs within Idaho Department of Fish and Game Nampa Subregion, 2006.

		Reproductive status			Documented mortalities					Monitoring status			Confirmed & probable wolf-caused livestock losses		
Wolf pack or group	Min. no. wolves detected[a]	Min. no. pups prod.	Reported as reprod. packs	Reported as breeding pairs[b]	Natural	Control[c]	Other human[d]	Unknown[e]	Known dispersal	Active radiocollars	Number wolves captured[f]	Number wolves missing[g]	Cattle	Sheep	Dogs
Documented pack															
Bear Valley	13	?	no	no	0	0	0	0	0	1	0	0	0	0	0
Big Buck	5	2	yes	yes	0	0	0	0	0	1	0	0	0	0	0
Calderwood	5	4	yes	yes	0	0	0	0	0	1	0	0	0	0	0
Danskin[h]	1	3	yes	no	0	4	0	0	0	0	0	0	4	0	0
Packer John	3	1	yes	no	0	2[i]	0	0	0	2	0	1	1[i]	0	0
Scott Mountain	4	1	yes	no	0	0	0	0	1	0	0	1	0	0	0
Steel Mountain	10	4	yes	yes	0	4[j]	0	0	1	3	1	0	0	33[j]	0
Timberline	10	3	yes	yes	0	2	0	0	1	2	6	3	0	2	1
Warm Springs	4	6	yes	yes	0	0	1	0	0	1	1	0	0	1	0
Subtotal	55	24			0	12	1	0	3	11	8	5	5	37	1
Suspected pack															
Thorn Creek	1				0	0	0	0	0	0	0	0	0	0	0
Subtotal	1				0	0	0	0	0	0	0	0	0	0	0
Other doc. group															
B300	2				0	0	0	0	0	1	0[k]	0	0	0	0
B306	3				0	0	0	0	0	1	1	0	0	0	0
Subtotal	5				0	0	0	0	0	2	1	0	0	0	0
Unknown					0	1	0	0	0	0	0	0	0	21	0
Subtotal					0	1	0	0	0	0	0	0	0	21	0
Regional total	61	24			0	13	1	0	3	13	9	5	5	57	1

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".

[c] Includes agency lethal control and legal take by landowners.

[d] Includes all other human-related deaths.

[e] Does not include pups that disappeared before winter.

[f] Includes all wolves captured during 2006. Most, but not all, were radiocollared.

[g] Radiocollared wolves that became missing in 2006.

[h] Lethally removed during 2006; not included in end-of-year tallies.

Table 5. Continued.

[i] Depredations and control action happened in the McCall Subregion.
[j] All Steel Mountain depredations and 1 of 4 control actions occurred in the Magic Valley Region.
[k] B300 was captured in 2006 while a member of Timberline and subsequently dispersed.

Magic Valley Region

During 2006, the Magic Valley Region was home to 3 documented wolf packs. One documented pack counted as a breeding pair (Figure 10; Table 6). All 5 documented mortalities were human caused. Confirmed sheep losses (*n* = 11) were attributed to the Big Water pack, which was subsequently removed (*n* = 7 wolves). Additional sheep (*n* = 4) were lost in the Lime Creek and Vat Creek areas. These losses were not attributed to a known pack. The Steel Mountain pack also killed sheep in the Magic Valley Region; however, these losses are documented in the Nampa Subregion section (Table 5). Four Steel Mountain wolves were controlled; one of which was within the boundaries of the Magic Valley Region. No cattle or dog losses were documented. No wolves were radiocollared in 2006.

Photo Michael Lucid
Soldier Mountain alpha male B149 with pack mate.

Law Enforcement Summary

Regional Conservation Officers, in consultation with USFWS Special Agents, investigated 3 reports of shot wolves. The first incident involved 2 subjects that admitted to shooting a wolf near the South Fork Boise River. An IDFG officer collected the initial evidence and assisted USFWS Special Agents in interviewing the subjects, resulting in a conviction. In the second incident, a Conservation Officer responded to a wolf shot in amongst sheep by the livestock owner; it was determined a wolf had been shot, but no carcass could be found. In the third incident, a bow-hunter called in a group of 3 wolves near Pine and shot 1 of the wolves with an arrow. A carcass was not recovered and the investigation is on-going. Additionally, a road-killed wolf was found near Mountain Home.

Documented Resident Packs

Big Water
Mid-winter monitoring flights detected Steel Mountain subordinate female B188 had dispersed and localized along the South Fork of the Boise River. B188 was observed with another wolf

through winter and spring. Five pups were counted in the spring, confirming reproduction. In June, this pack was implicated in a sheep depredation event in which 11 sheep were killed. Alpha female B188 and her mate were subsequently trapped and euthanized. The remaining pups are suspected to have died from lack of parental care. Big Water was not counted as a breeding pair for 2006.

Hyndman
Multiple attempts by biologists failed to locate wolves in Hyndman's traditional use area. Although wolf presence was not verified in 2006, Hyndman is listed as a documented pack due to the 2-year rule.

Soldier Mountain
In May, coyote hunters illegally shot alpha female B150. This left alpha male B149 and subordinate female B192 as the remaining radiocollars in this pack. A biologist visited the den site several days after B150's death but was unable to determine if pups still survived. In July, a biologist visited a rendezvous site and was able to get multiple pups to howl; confirming reproduction and pup survival several months after the alpha female's death. Subordinate female B191 was documented as a disperser to Montana by MTFWP biologists. This fifth-year pack had a minimum of 9 wolves (3 gray, 6 black), was not implicated in livestock depredations, and was counted as a breeding pair for 2006.

Photo Michael Lucid

Soldier Mountain den hole.

<u>Suspected Resident Packs</u>

High Prairie
A sheep depredation in Lime Creek affirmed wolf activity in this area and resulted in the control of 1 wolf. Additionally, several public reports indicate there may be pack activity in this area.

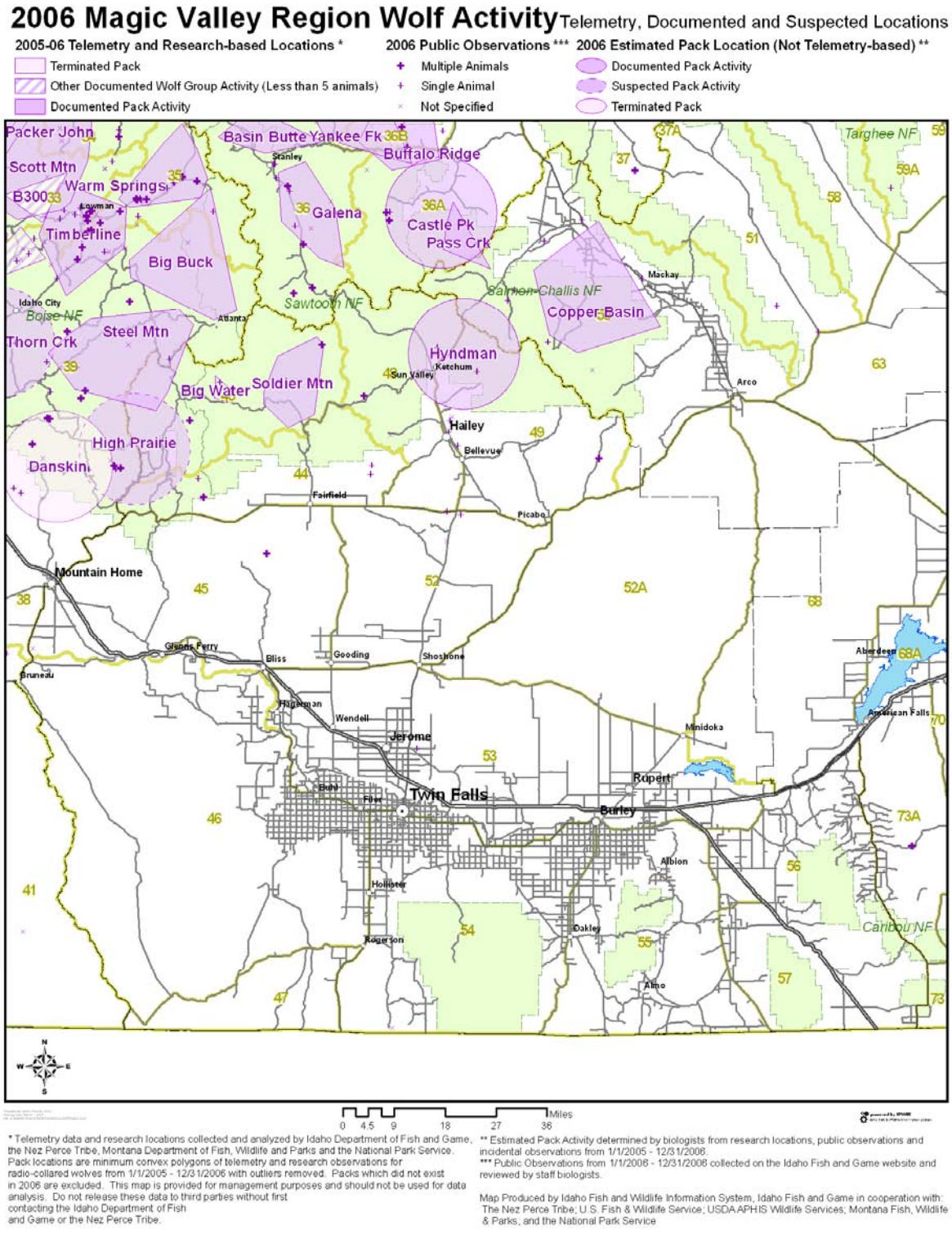

Figure 10. Wolf pack activity and observations in the Magic Valley Region, 2006.

Table 6. Estimated pack size, reproductive status, mortality, dispersal, monitoring status, and livestock depredation for documented and suspected wolf packs within Idaho Department of Fish and Game Magic Valley Region, 2006.

		Reproductive status			Documented mortalities					Monitoring status			Confirmed & probable wolf-caused livestock losses		
Wolf pack or group	Min. no. wolves detected[a]	Min. no. pups prod.	Reported as reprod. packs	Reported as breeding pairs[b]	Natural	Control[c]	Other human[d]	Unknown[e]	Known dispersal	Active radiocollars	Number wolves captured[f]	Number wolves missing[g]	Cattle	Sheep[h]	Dogs
Documented pack															
Big Water[i]	0	5	yes	no	0	2	0	0	0	0	0	0	0	11	0
Hyndman	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Soldier Mountain	9	2	yes	yes	0	0	1	0	1	2	0	0	0	0	0
Subtotal	9	7			0	2	1	0	1	2	0	0	0	11	0
Suspected pack															
High Prairie	?				0	1	0	0	0	0	0	0	0	1	0
Subtotal					0	1	0	0	0	0	0	0	0	1	0
Unknown					0	0	1	0	0	0	0	0	0	3	0
Subtotal					0	0	1	0	0	0	0	0	0	3	0
Regional total	9	7			0	3	2	0	1	2	0	0	0	15	0

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".

[c] Includes agency lethal control and legal take by landowners.

[d] Includes all other human-related deaths.

[e] Does not include pups that disappeared before winter.

[f] Includes all wolves captured during 2006. Most, but not all, were radiocollared.

[g] Radiocollared wolves that became missing in 2006.

[h] The Steel mountain pack (reported under the Nampa Subregion, Table 5) was responsible for 33 confirmed and probable sheep depredations in the Magic Valley Region.

[i] Lethally removed during 2006; not included in end-of-year tallies.

Southeast Region

There were no established packs documented in the Southeast Region during 2006 (Figure 11). Observations of lone wolves have been reported over several years and a wolf was killed along the Utah border near Weston in 2003.

Figure 11. Wolf pack activity and observations in the Southeast Region, 2006.

Upper Snake Region

The Upper Snake Region was occupied by 2 documented resident, 2 documented border, and 1 suspected resident packs during 2006 (Figure 12; Table 7). While both Copper Basin and Biscuit Basin packs reproduced, only the Biscuit Basin pack qualified as a breeding pair; lethal control removed all breeding-age wolves from the Copper Basin pack and thus disqualified them from breeding pair status. The primary source of mortality was lethal control (n = 6), followed by other human causes (n = 2). Two lethally controlled wolves were from a Wyoming wolf pack and were legally taken under the 10(j) Rule near Driggs, Idaho. Confirmed and probable cattle and sheep losses were attributed to the Copper Basin and Driggs/Teton packs (WY). There were also several other confirmed/probable depredations attributed to suspected (Bishop Mountain) or unknown groups of wolves. Five wolves were captured, resulting in the deployment of 4 standard VHF radiocollars and 1 GPS radiocollar.

Law Enforcement Summary

Regional Conservation Officers, in consultation with USFWS Special Agents, investigated 2 incidents involving wolf shootings in the Teton Valley. The first wolf, killed near Victor in early May, was determined to be legal under the 10(j) Rule. The second wolf, killed near Victor 2 weeks later, was also determined to be legal under the 10(j) Rule. A Conservation Officer in Mackay retrieved a road-killed wolf near Arco. The same officer also investigated a wolf reported killed by a snare; it was later determined the snare was placed and left by WS personnel for coyote control.

Documented Resident Packs

Biscuit Basin
Having relocated from Wyoming, this was the second consecutive year the Biscuit Basin pack resided in Idaho. Of the 2 radiocollared animals in the pack, 1 dispersed in winter and was later found lying in a road in the Tobacco Root Mountains of Montana. The animal was euthanized, and lab tests indicated the wolf was infected with Canine Distemper Virus. Three pups were observed in June at their den site, and aerial observations indicated a minimum of 6 wolves in the pack. This pack was considered a breeding pair in 2006.

Copper Basin
Reduced to adults B197 and B227 and 2 pups by the end of 2005, this pack denned and produced a litter of 6 pups in spring of 2006. In May, a wolf was trapped and instrumented with a GPS radiocollar with the intent of examining wolf-livestock interactions; however, the collar came off prematurely when the drop-off mechanism failed. Another 4 pups were captured and radiocollared, so this pack with a history of chronic livestock depredations could be better monitored. As in previous years, the Copper Basin wolves continued to exhibit a propensity for livestock depredations in this area of high cattle densities. With 5 confirmed/probable cattle losses and an additional sheep depredation over the course of the summer, 3 wolves were lethally removed in response: the suspected breeding pair and a subadult. The vacancy created by the removal of the 2 adults was quickly filled in December by male B253 (see B253 pair). Because of wolf control measures, this pack did not contain breeding adults at the end of the year and was not counted as a breeding pair for 2006.

Documented Border Packs

Bechler (WY)
The Bechler pack was a Wyoming-documented pack that occasionally used the Idaho side of the state border near Driggs, Idaho.

Driggs/Teton (WY)
The Driggs/Teton pack was a Wyoming-documented pack that occasionally crossed the border into Idaho during spring 2006. In March, USFWS biologists collected a radiocollar that had been chewed off outside of Victor, Idaho, from a wolf previously collared in Wyoming. Two wolves were legally shot in Teton Valley under the 10(j) Rule in May. One domestic calf was confirmed killed by wolves on the ranch where these wolves were killed. A third wolf (B276) was radiocollared following the removals. The carcass of B276 was later located near the Idaho border in Wyoming in mid-August. Laboratory reports confirmed the wolf died of natural causes. While unverified wolf reports continued to come in from this area, it is believed this is no longer a viable pack.

Suspected Resident Packs

Bishop Mountain
Bishop Mountain was a suspected pack that appeared to be derived from the Nez Perce pack of Yellowstone National Park. The only radiocollared wolf in this group was last located in September 2005. There were no radiocollars in this group during 2006, and therefore reproduction was not verified. One depredation of 1 domestic sheep was attributed to this suspected pack. Trapping efforts in response to livestock conflicts and for research purposes were unsuccessful.

Other Documented Wolf Groups

B93
Displaced as breeding male from the Buffalo Ridge pack, this wolf was missing for several months before being located in the Big Wood River drainage in September. This animal continued to roam widely, and was last located within the Upper Snake Region in the Little Lost River drainage.

B242
Male B242 dispersed from the Moyer Basin pack during summer; he was eventually located when he was killed by a car north of Arco, Idaho, in October.

Photo J. Husseman

Wolf B242 appears ragged as he sheds from his thick winter coat.

B253

This wolf was captured as a member of the Galena pack in 2005 and stayed until the following spring, when he dispersed. He was later located north of Copper Basin with an uncollared wolf. In August, this pair was implicated in the injury of a domestic calf, and the uncollared female was lethally controlled. B253 was not located again until December, when he was observed traveling with the Copper Basin pack (see Copper Basin).

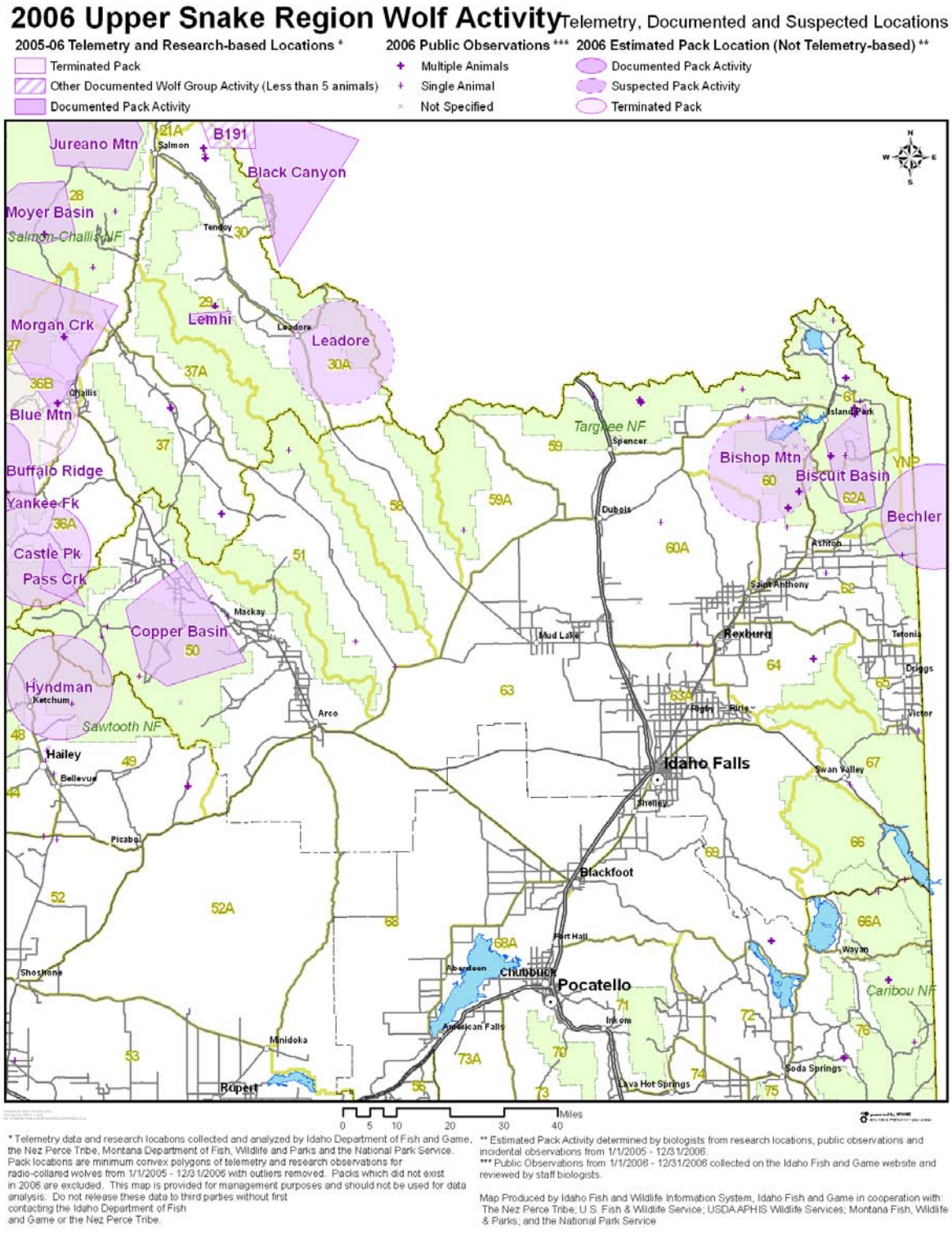

Figure 12. Wolf pack activity and observations in the Upper Snake Region, 2006.

Table 7. Estimated pack size, reproductive status, mortality, dispersal, monitoring status, and livestock depredation for documented and suspected wolf packs within Idaho Department of Fish and Game Upper Snake Region, 2006.

		Reproductive status			Documented mortalities					Monitoring status			Confirmed & probable wolf-caused livestock losses		
Wolf pack or group	Min. no. wolves detected[a]	Min. no. pups prod.	Reported as reprod. packs	Reported as breeding pairs[b]	Natural	Control[c]	Other human[d]	Unknown[e]	Known dispersal	Active radiocollars	Number wolves captured[f]	Number wolves missing[g]	Cattle	Sheep	Dogs
Documented pack															
Bechler (WY)[h]															
Biscuit Basin	6	3	yes	yes	0	0	0	0	1	1	0	0	0	0	0
Copper Basin	7	6	yes	no	0	3	0	0	0	3	5	0	5	1	0
Driggs/Teton (WY)[h]						2							1		
Subtotal	13	9			0	5	0	0	1	4	5	0	6	1	0
Suspected pack															
Bishop Mountain	0				0	0	0	0	0	0	0	0	0	1	0
Subtotal	0				0	0	0	0	0	0	0	0	0	1	0
Other doc. group															
B93	1				0	0	0	0	0	1	0	0	0	0	0
B242	0				0	0	1	0	0	0	0	0	0	0	0
B253[i]	0				0	1	0	0	0	0	0	0	0	0	0
Subtotal	1				0	1	1	0	0	1	0	0	0	0	0
Unknown					0	0	1	0	0	0	0	0	2	12	0
Subtotal					0	0	1	0	0	0	0	0	2	12	0
Regional total	14	9			0	6	2	0	1	5	5	0	8	14	0

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".

[c] Includes agency lethal control and legal take by landowners.

[d] Includes all other human-related deaths.

[e] Does not include pups that disappeared before winter.

[f] Includes all wolves captured during 2006. Most, but not all, were radiocollared.

[g] Radiocollared wolves that became missing in 2006.

[h] Border pack officially tallied to (state); territory known or likely shared with Idaho. Data on these packs can be found in Rocky Mountain Wolf Recovery 2006 Interagency Annual Report.

[i] Remaining wolf B253 joined Copper Basin pack and was included in that pack's statistical totals.

Salmon Region

The Salmon Region was occupied by 16 documented resident, 5 documented border (including 1 tallied to Idaho [Hughes Creek] and 4 to Montana [Battlefield, Black Canyon, Painted Rocks, and Sula]), and 1 suspected packs during 2006 (Figure 13; Table 8). Nine of 11 confirmed reproductive packs also qualified as breeding pairs; lack of radiocollars prevented determining the reproductive status of the remaining resident packs. Lethal control was the primary source of mortality (n = 11), followed by unknown (n = 4), other human-related (n = 3), and natural (n = 1) causes. One pack (Blue Mountain) was functionally eliminated after the founding pair was killed for livestock depredations. Eight resident packs were responsible for 13 confirmed and probable cattle depredation losses. An additional 4 confirmed/probable cattle were killed by suspected packs or unknown wolves. The loss of 1 sheep was attributed to the Lemhi pack, 2 were confirmed killed by the Blue Mountain pack, and 3 sheep were killed by unknown wolves. Twelve wolves were captured; 11 were previously uncollared wolves that received radiocollars, and another wolf was recaptured and its radiocollar replaced.

Law Enforcement Summary

Regional Conservation Officers, in consultation with USFWS Special Agents, investigated or responded to 7 reports involving wolves. In January, an IDFG officer and biologist responded to a wolf caught in a bobcat snare; the wolf had to be euthanized due to its injuries. Conservation officers also investigated 2 dead wolves for which cause of death could not be determined. Another 2 dead wolves were investigated by IDFG officers, 1 killed by a vehicle and the other died of natural causes. Two wolves shot near a ranch in Leadore were investigated, and it was determined by USFWS Special Agents that these shootings were justified under the 10(j) Rule. Lastly, an IDFG officer investigated a report of a foreign substance found near a suspected wolf den.

Documented Resident Packs

Aparejo
Several sightings in spring 2006 of wolves near a tributary of the Middle Fork Salmon River in the Frank Church Wilderness prompted IDFG program to fly in and attempt to radiocollar this suspected pack. With generous assistance by the local outfitter and his guide, ample wolf sign was located and traps were set. As a result, 2 wolves were captured and fitted with radiocollars. Unfortunately, 1 collar was later retrieved, having been chewed off by other wolves. Due to the remoteness of the location and time constraints, this group of wolves was not surveyed to determine whether pups were present. As such, this pack was not considered a breeding pair in 2006. However, due to the relatively large pack size (n = 11) observed in winter flights, reproduction in the previous year(s) was assumed with a reasonable degree of confidence, and this pack was retroactively counted for 2005.

Basin Butte
Originating from dispersing wolf B171 and her uncollared mate, this new pack established a territory north of Stanley and raised their first litter of 5 pups in spring-summer 2006. This pack was involved with 1 confirmed depredation of a domestic calf on private property. Trapping for this pack in the fall resulted in 2 pups being fitted with radiocollars, bringing to 3 the number of wolves being monitored in the pack. Aerial counts of 8 wolves confirmed the presence of a wolf

of unknown origin, in addition to the 5 pups and the breeding pair. This pack was considered a breeding pair for 2006.

Blue Mountain
This pair of wolves was lethally removed from an area between Challis and Blue Mountain in May after 2 sheep were confirmed killed on a private residence near Challis, Idaho. A necropsy suggested this wolf had given birth to multiple pups based upon placental scars, although it did not appear the animal had been nursing. It is unknown whether these wolves were associated with other wolves, or if they were a newly-established pair. However, because evidence indicated reproduction occurred, this was considered a newly established, but eliminated, pack.

Buffalo Ridge
In early winter 2005/2006, male B93 began traveling apart from the rest of the pack; it was thought that dispersing male B196 from the Morgan Creek pack, accepted into the Buffalo Ridge pack in February 2005, displaced him as breeding male. Denning surveys revealed the presence of 5 black pups, corroborating the assertion that this previously all-gray pack had a new breeding male. Wolf B95, wearing a non-functioning radiocollar, was also observed with the pups, suggesting she was still the breeding female. Two wolves were removed from this pack in January after a domestic calf was killed. Another wolf was trapped and radiocollared in spring. The Buffalo Ridge pack once again qualified as a breeding pair in 2006.

Photo J. Husseman
Suspected breeding female B95 of the Buffalo Ridge pack playing with several black pups at a rendezvous site.

Castle Peak
The status of this pack has been unknown since the disappearance of B195, the sole radiocollared wolf in the pack, in March 2004. While there was some speculation that the wolves using the

East Pass drainage could be the Castle Peak pack, the areas used by the wolves in East Pass was inconsistent with what the small amount of location data acquired on the Castle Peak pack revealed of their territorial use (see Pass Creek). Sightings of wolves and wolf sign, as well as a confirmed depredation in the East Fork Salmon River drainage, indicated this pack was still present; however, it was not counted as a breeding pair for 2006.

Galena
A longstanding pack in the Sawtooth Valley, the Galena pack's status was temporarily unknown in spring when the collar on B107 expired and wolf B253 dispersed. However, a flurry of wolf activity southeast of Stanley resulted in the capture and radiocollaring of 2 wolves by IDFG biologists in May (1 wolf subsequently died of unknown causes). The observation of 5 pups by a USFS biologist resulted in this pack qualifying as a breeding pair for 2006.

Hoodoo
Aerial telemetry locations indicate this pack once again denned in a tributary of the Middle Fork Salmon River, although the remoteness of the location precluded ground confirmation. During a trapping effort near a rendezvous site, multiple pups were heard howling along with several adults. Unfortunately, the only capture resulted in a wolf managing to pull itself free of the trap. Aerial observations in December indicated this pack consisted of 9 wolves. This pack was counted as a breeding pair for 2006.

Jureano Mountain
In 2006, the Jureano Mountain pack continued to use their traditional denning and rendezvous sites in the Panther Creek drainage west of Salmon, Idaho. A ground observation in January of a large, radiocollared gray wolf suggested B106, whose collar failed 2 years previous, remained as the pack's breeding male. Reproductive surveys and aerial observations verified 5 pups and a total of 12 wolves in this pack. There was a single documented mortality in 2006, when wolf B225 was found dead of unknown causes. This pack was responsible for 1 confirmed depredation on a calf. The control effort initiated from the depredation resulted in the capture and recollaring of wolf B223 by WS personnel. The Jureano Mountain pack was counted as a breeding pair for 2006.

Landmark
This pack has remained without a functioning radiocollar since 2003, and therefore little was known about their status. Surveys of historical use areas (den, rendezvous sites) in past years have indicated that this pack was still in existence; however, time constraints were such that no historical Landmark sites were surveyed in 2006. Therefore, this pack did not count as a breeding pair in 2006.

Lemhi
This pack was first discovered when Wildlife Service agents trapped and collared the suspected breeding male in response to a livestock depredation. The collared wolf led IDFG personnel to a probable den location where a single pup was observed. The Lemhi pack was implicated in depredations of 2 cattle and a single sheep. Aerial observations resulted in a pack count of at least 5 wolves. Although reproduction was documented, only 1 pup was observed; therefore, this pack did not satisfy the breeding pair definition.

Morgan Creek
Aerial monitoring indicated this pack again used their traditional den location, but by the time the area was accessible, the wolves had already moved before reproduction could be confirmed. Four pups were eventually observed at a rendezvous site. In response to several sightings of wolves in the Morgan Creek drainage, a subadult wolf was captured and radiocollared by IDFG personnel. This pack was implicated in 3 confirmed or probable cattle losses, resulting in the lethal removal of 2 wolves. Another wolf, suspected breeding female B198, was found dead in December of unknown cause. Aerial observations indicated at least 11 wolves in the pack at the end of 2006. This pack qualified as a breeding pair in 2006.

Moyer Basin
Based upon aerial and ground telemetry, it appeared this pack continued to use its traditional denning location, but ground searches revealed their 2004/2005 den to be unoccupied. After several attempts, a minimum of 2 pups were located several miles from their old den. The Moyer Basin wolves were responsible for 3 confirmed or probable cattle losses, which led to the lethal removal of 2 wolves. Two of 3 wolves radiocollared in the previous year also died in 2006, both killed by vehicles; male B243 was hit within the pack's territory in January, and male B242 was struck near Arco (tallied to Upper Snake region) in October after dispersing sometime in late summer. The third animal radiocollared in 2005 dispersed in winter, and was believed to be traveling with the Yankee Fork pack. Given the level of mortality, it was not unexpected that the end-of-year count dropped from 11 in 2005 to 7 in 2006. This pack met the criteria of a breeding pair for 2006.

Photo J. Husseman
An uncollared Moyer Basin pack wolf finds a shady spot to nap during a hot summer day.

Owl Creek
Since this pack was first verified by IDFG biologists in 2005, there have been no reports of wolf sightings or activity from the remote location this pack is believed to occupy. Therefore, this pack did not qualify as a breeding pair in 2006.

Pass Creek

This pack was initially located in 2005 when IDFG personnel confirmed reports of wolves using the upper tributaries of the East Fork Salmon River. Subsequent investigations in summer 2006 led to the capture of a subadult wolf, as well as an observation of 3 pups. Given their proximity to the uncollared Castle Peak pack, there was speculation this newly radiocollared pack could be the Castle Peak pack (see Castle Peak). However, telemetry locations and other evidence suggested these were in fact 2 separate packs. The Pass Creek pack was implicated in 1 cattle loss, although no lethal control was conducted. Aerial counts resulted in a minimum pack size of 6 wolves. The Pass Creek wolves qualified as a breeding pair for 2006.

Photo J. Husseman

Wolf B297 of the Pass Creek pack recuperates from anesthesia after being trapped and fitted with a radiocollar.

Twin Peaks

The collarless Twin Peaks pack's existence has until recently been confirmed via surveys for wolf activity at their traditional rendezvous site. However, time constraints did not permit a survey of this remote area in 2006 (a survey in 2005 indicated this pack did not return to their rendezvous site). This pack was not counted as a breeding pair in 2006.

Yankee Fork

Initially documented in late summer 2005 with the radiocollaring of female B252, this pack appeared to have gained another member when wolf B240 was located with them in early spring. However, wolf B252 was found dead of natural causes in June. Attempts to confirm reproduction based on B240's movements proved unsuccessful, as he ranged widely throughout the pack territory. Evidence suggested this animal was traveling alone, raising questions with respect to his pack association, or whether the Yankee Fork pack was still intact. During a winter monitoring flight, wolf B240 was seen with at least 2 other wolves within the pack's territory, indicating pack persistence. Because reproduction was not verified, the Yankee Fork pack was not counted as a breeding pair in 2006.

Documented Border Packs

Battlefield (MT)
The Battlefield pack was a Montana-documented pack whose territory overlapped the state border near Gibbonsville, Idaho. As in 2005, depredations in Montana's Big Hole Valley led to control actions that resulted in lethal removal of 6 wolves in 2006. In November and December 2006, the sole radiocollared Battlefield wolf was located on the Idaho side of the border. By the end of 2006, aerial observations indicated this pack numbered 4 wolves. The Battlefield pack was not listed as a breeding pair for Montana in 2006.

Black Canyon (MT)
The Black Canyon pack was a Montana-documented pack. Although there was no evidence that this pack's territory overlapped into Idaho, this pack was considered a border pack because of the close proximity to the Montana/Idaho border around the upper Lemhi River area. Depredations led to removal of 3 wolves from this pack. An adult male wolf was opportunistically radiocollared by WS conducting coyote control in February; however, radio contact with this wolf was lost in August. Although reproduction was not confirmed, a minimum of 2 wolves continued to occupy this pack's territory.

Hughes Creek
Until 2006, the Hughes Creek pack had managed to evade capture; however, IDFG biologists managed to dart and radiocollar the suspected breeding male during big game helicopter surveys in January. In late spring, the suspected breeding female was observed with a large litter, consisting of 4 black and 4 gray pups. Another observation during winter big game surveys in December resulted in a minimum pack count of 13 wolves. Because this pack was located in Montana on 1 occasion, they are considered to be a border pack. The Hughes Creek pack was a breeding pair for 2006.

Painted Rocks (MT)
The Painted Rocks pack was a Montana-documented pack. Wolf activity was first documented by NPT in the Painted Rocks area (West Fork of the Bitterroot River near the Montana-Idaho border) with the dispersal of Idaho female B67 in 2001. B67 was monitored through 2002, and the pack has not been collared since. At least 4 wolves have been in the area continuously and appeared to spend the majority of their time on the Montana side of the border. MTFWP personnel scouted the West Fork several times during the summer and found old wolf sign but nothing fresh enough to trap on. MTFWP conducted snow tracking surveys in the West Fork in December and confirmed a minimum of 4 wolves at the end of 2006. Montana did not count this pack as a breeding pair in 2006.

Sula (MT)
The Sula pack was a Montana-documented pack. Seven wolves were believed to exist in the Sula pack at the beginning of 2006. The pack appeared to localize near the denning season but no pups were seen or documented. Monitoring of the radiocollared wolf resulted in a minimum count of 7 wolves in this pack. This pack was not considered a breeding pair in 2006.

Suspected Resident Packs

Leadore
In early spring 2006, the probable breeding male and female from this often-seen group of wolves were shot under authority of the 10(j) Rules near a ranch south of Leadore. A necropsy revealed the female was in fact pregnant, although it was undetermined if the other wolf shot was the breeding male. While reproduction by this group was prevented, other wolves were reportedly seen in the area prior to, as well as after, the shooting of the 2 wolves. With the presence of other wolves, the potential existed for this suspected pack to continue to occupy the area. Future monitoring will be required to determine the status of this group.

Other Documented Wolf Groups

B191 (MT)
A disperser from the Soldier Mountain pack, B191 was missing for several months before she was eventually located in summer 2006 with another wolf in the Big Hole Valley, Montana. Although this pair was occasionally located on the Idaho side of the Beaverhead Mountains, aerial telemetry locations indicated these wolves were residing primarily in Montana and will be counted for that state's total.

B267
Wolf B267 was found dead of unknown causes in a tributary of the Middle Fork Salmon River, within the Salmon Region boundary. Thought to be a member of the Golden Creek pack in the adjacent McCall Subregion, it was unknown if this wolf was dispersing or if it was traveling with other Golden Creek wolves when it died.

SW-64
Originally a member of the Sage Creek pack in Montana, wolf SW-64 appeared to have dispersed and was located by IDFG and MTFWP biologists traveling with an uncollared wolf between southwest Montana and the upper Lemhi Valley, Idaho. After a confirmed livestock depredation in October, the uncollared wolf traveling with SW-64 was lethally controlled southeast of Leadore. Wolf SW-64 remained in the general vicinity, and by late fall, all telemetry locations of this wolf were within the Lemhi Valley. This animal will continue to be monitored in 2007.

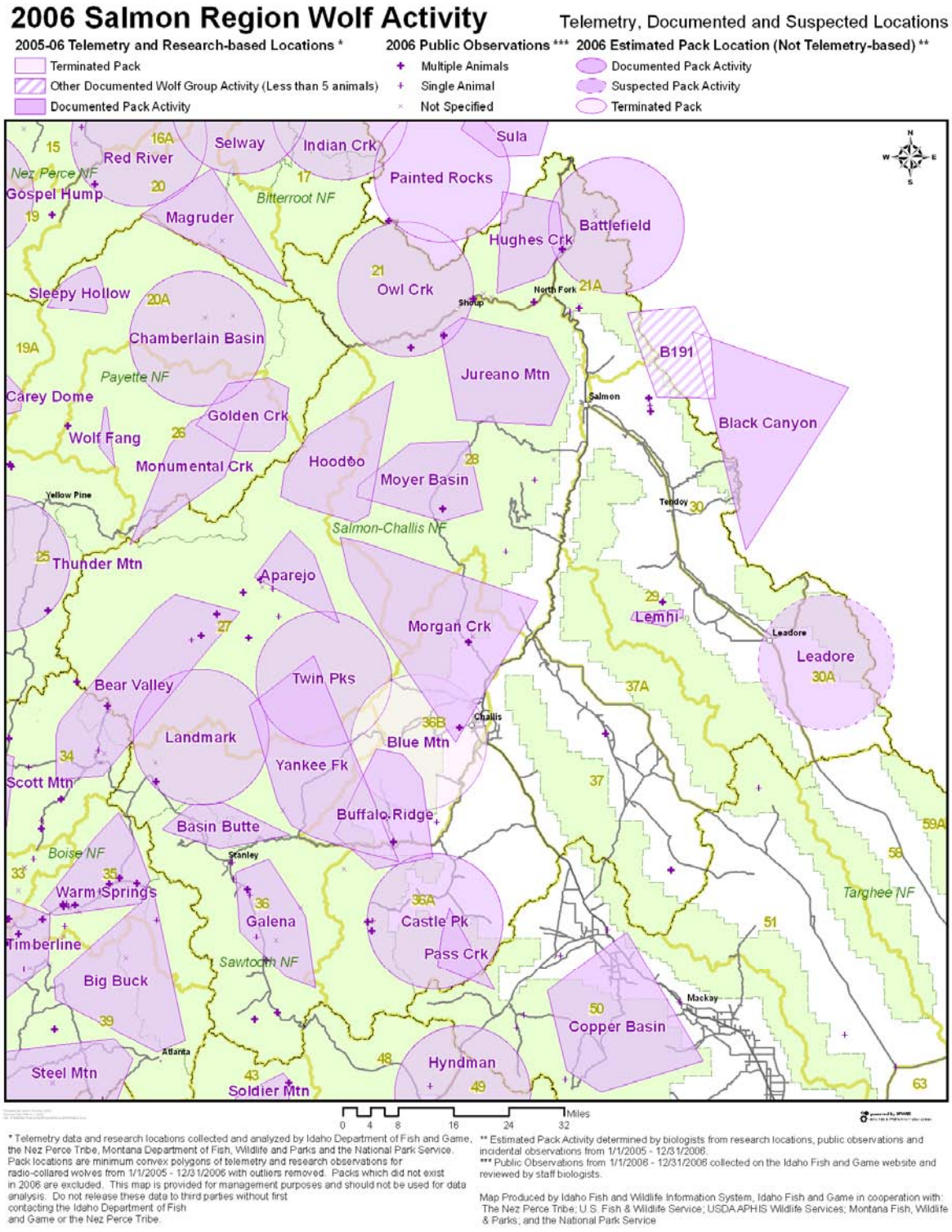

Figure 13. Wolf pack activity and observations in the Salmon Region, 2006.

Table 8. Estimated pack size, reproductive status, mortality, dispersal, monitoring status, and livestock depredation for documented and suspected wolf packs within Idaho Department of Fish and Game Salmon Region, 2006.

		Reproductive status			Documented mortalities					Monitoring status			Confirmed & probable wolf-caused livestock losses		
Wolf pack or group	Min. no. wolves detected[a]	Min. no. pups prod.	Reported as reprod. packs	Reported as breeding pairs[b]	Natural	Control[c]	Other human[d]	Unknown[e]	Known dispersal	Active radio collars	Number wolves captured[f]	Number wolves missing[g]	Cattle	Sheep	Dogs
Documented pack															
Aparejo	11	?	no	no	0	0	0	0	0	1	2	0	0	0	0
Basin Butte	8	5	yes	yes	0	0	0	0	0	3	2	0	1	0	0
Battlefield (MT)[h]															
Black Cyn (MT)[h]															
Blue Mountain[i]	0	?	yes	no	0	2	0	0	0	0	0	0	0	2	0
Buffalo Ridge	6	5	yes	yes	0	2	0	0	1	2	1	0	1	0	0
Castle Peak	?	?	no	no	0	0	0	0	0	0	0	0	1	0	0
Galena	6	5	yes	yes	0	0	0	1	1	1	2	0	0	0	0
Hoodoo	9	2	yes	yes	0	0	0	0	0	1	0	0	0	0	0
Hughes Creek (ID)	13	8	yes	yes	0	0	0	0	0	1	1	0	0	0	0
Jureano Mountain	12	5	yes	yes	0	0	0	1	0	2	1	0	1	0	0
Landmark	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Lemhi	5	1	yes	no	0	0	0	0	0	1	1	0	2	1	0
Morgan Creek	11	4	yes	yes	0	2	0	1	0	1	1	0	3	0	0
Moyer Basin	7	2	yes	yes	0	2	1	0	2	1	0	0	3	0	0
Owl Creek	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Painted Rocks (MT)[h]															
Pass Creek	6	3	yes	yes	0	0	0	0	0	1	1	0	1[j]	0	0
Sula (MT)[h]															
Twin Peaks	?	?	no	no	0	0	0	0	0	0	0	0	0	0	0
Yankee Fork	3	?	no	no	1	0	0	0	0	1	0	0	0	0	0
Subtotal	97	40			1	8	1	3	4	16	12	0	13	3	0
Suspected pack															
Leadore	?				0	2	0	0	0	0	0	0	2	0	0
Subtotal					0	2	0	0	0	0	0	0	2	0	0
Other doc. group															
B191 (MT)[h]															
B267	0				0	0	0	1	0	0	0	0	0	0	0
SW-64	1				0	1	0	0	0	1	0	0	0	0	0
Subtotal	1				0	1	0	1	0	1	0	0	0	0	0

Table 8. Continued.

Wolf pack or group	Min. no. wolves detected[a]	Reproductive status: Min. no. pups prod.	Reproductive status: Reported as reprod. packs	Reproductive status: Reported as breeding pairs[b]	Documented mortalities: Natural	Documented mortalities: Control[c]	Documented mortalities: Other human[d]	Documented mortalities: Unknown[e]	Known dispersal	Monitoring status: Active radio collars	Monitoring status: Number wolves captured[f]	Monitoring status: Number wolves missing[g]	Confirmed & probable wolf-caused livestock losses: Cattle	Sheep	Dogs
Unknown					0	0	2	0	0	0	0	0	2	3	0
Subtotal					0	0	2	0	0	0	0	0	2	3	0
Regional total	98	40			1	11	3	4	4	17	12	0	17	6	0

[a] Number of wolves detected by wolf program personnel through observations of wolves or wolf sign and believed alive at end of 2006. Unknown status denoted by "?" Sum of this column does not equate to number of wolves estimated to be present in the population.

[b] Breeding pairs are the measure of Federal and State wolf recovery and management goals. A breeding pair is defined as "an adult male and an adult female wolf that have produced at least 2 pups that survive until December 31 of the year of their birth…".

[c] Includes agency lethal control and legal take by landowners.

[d] Includes all other human-related deaths.

[e] Does not include pups that disappeared before winter.

[f] Includes all wolves captured during 2006. Most, but not all, were radiocollared.

[g] Radiocollared wolves that became missing in 2006.

[h] Border pack officially tallied to (state); territory known or likely shared with Idaho. Data on these packs can be found in Rocky Mountain Wolf Recovery 2006 Interagency Annual Report.

[i] Lethally removed during 2006; not included in end-of-year tallies.

[j] Depredation attributed to this pack occurred outside the Salmon Region.

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APPENDIX A: POPULATION ESTIMATION TECHNIQUES USED TO DETERMINE WOLF POPULATION NUMBERS IN IDAHO

Since wolves were first reintroduced into Idaho, annual winter wolf population estimates have been calculated using the same technique. Following this technique, for any given year, the wolf population is estimated by starting with the previous end-of-year estimate, adding all documented reproduction and immigration, and subtracting all documented mortality and emigration for the current year. Mathematically this technique is represented as:

Minimum Wolf Population Estimate = Last year's population estimate + documented pups produced + immigrants – documented mortalities – emigrants

Using this technique, the 2006 wolf population estimate is 633 wolves:

(518) + (185) + (1) – (68) – (3) = 633 wolves*

This technique worked well for the first several years after wolves were reintroduced when the population was relatively small and most wolves were radiocollared. As most, if not all, packs could be actively monitored using radiotelemetry, reproduction, mortality, and dispersal could be accurately assessed. For small recovering populations monitored using radiotelemetry, this technique is essentially a total count method.

Using the same population estimation technique from year to year is important to assess population trends across years. Idaho wolf population estimates have increased every year since wolves were first reintroduced in 1995. The 2006 estimate indicated a 22.2% population increase from the previous year (*lambda* = 1.22).

As the Idaho wolf population expanded, our confidence in this technique has waned because it became increasingly difficult to document all packs; a smaller proportion of the wolf population was radiocollared increasing the difficulty for monitoring status of known packs; and reproduction, mortality, and dispersal became more difficult to assess. Static funding and personnel levels in the face of an expanding wolf population and workload added to the challenge of collecting sufficient data required by this technique to accurately estimate the growing number of wolves.

We have, for the past few years, explored additional methods of estimating the wolf population that are more appropriate given a much larger, fully recovered population and applicable for the types of data we are able to collect. Our efforts have recently focused on one of the most promising methods, which we provided to a peer review group of wolf biologists and statisticians in spring 2006. This technique bypasses the need to count pups in every pack, and instead relies on our documented packs, estimated pack size, number of wolves documented in small groups not considered packs, and a percentage of the population believed to be lone wolves. Mathematically this technique is represented as:

Minimum Wolf Population Estimate = ((Documented packs * mean pack size) + (Wolves in other documented wolf groups)) * (lone wolf factor)

Using this technique, the 2006 wolf population estimate is 673 wolves:

((72 * 8.2) + (8)) * 1.125
(590 + 8) * 1.125
602 * 1.125 =
673

The number of documented packs that were extant at the end of 2006 was 72.

Mean pack size (8.2) was calculated using only those packs (*n* = 29) for which biologists believed complete pack counts were obtained in 2006. Even so, these counts should be considered minimums.

To account for wolves not classified as lone wolves and not associated with documented packs, we included a "total count" for those radiocollared wolves in groups of 2-4 wolves that were not considered packs under Idaho's definition. This resulted in the addition of 8 wolves from 3 groups.

A lone wolf factor (12.5%) was added to account for that component of the wolf population comprised of wolves not associated with packs or groups of 2-4 wolves. This was a mid value derived from 5 peer-reviewed, published studies and 4 non-reviewed papers from studies that occurred in North America and were summarized and reported in 2003 (Mech and Boitani 2003, page 170). For 2006, an estimated 75 lone wolves were in the Idaho population.

* An error was found and corrected in the 2005 minimum population estimate (Nadeau et al. 2005), 6 additional wolves were added for a total of 518.

APPENDIX B: CONTACTS FOR IDAHO WOLF MANAGEMENT

Idaho Fish and Game Regional Offices at:

Headquarters Wildlife Bureau	(208) 334-2920
Panhandle Region	(208) 769-1414
Clearwater Region	(208) 799-5010
Southwest Region	(208) 465-8465
McCall Subregion	(208) 634-8137
Magic Valley Region	(208) 324-4350
Southeast Region	(208) 232-4703
Upper Snake Region	(208) 525-7290
Salmon Region	(208) 756-2271

For information about wolves in Idaho and IDFG management:

http://fishandgame.idaho.gov/cms/wildlife/wolves/

To contact IDFG via email:

http://fishandgame.idaho.gov/inc/contact.cfm

The Nez Perce Tribe's Idaho Wolf Recovery Program:

Telephone: (208) 634-1061
Fax: (208) 634-3231
Mail: P.O. Box 1922
McCall, ID 83638-1922
Email: cmack@nezperce.org
jholyan@nezperce.org

For information about the Nez Perce Tribe's Wildlife Program and to view Recovery Program Progress Reports, please visit the following website:

http://www.nezperce.org/programs/wildlife_program.htm

U.S. Fish and Wildlife Service Northern Rocky Mountain Wolf Recovery:

For information about wolf recovery in the Northern Rocky Mountains, please visit the USFWS website at the following:

http://www.westerngraywolf.fws.gov/

To report wolf sightings within Idaho:

Report online: http://fishandgame.idaho.gov/wildlife/wolves/report.cfm

To report livestock depredations within Idaho:

USDA/APHIS/Wildlife Services	
State Office, Boise, ID	(208) 378-5077
District Supervisor, Boise, ID	(208) 378-5077
District Supervisor, Gooding, ID	(208) 934-4554
District Supervisor, Pocatello, ID	(208) 236-6921
Wolf Specialist, Arco, ID	(208) 681-3127

To report information regarding the illegal killing of a wolf or a dead wolf within Idaho:

U.S. Fish and Wildlife Service Senior Agent, Boise, ID	(208) 378-5333
Citizens Against Poaching (24hr)	1-800-632-5999
or any IDFG Office	