2015 Amendment to the 2013 Biological Assessment for the Revised Shoshone National Forest Land Management Plan

Shoshone National Forest/Rocky Mountain Region

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1. Introduction

This amended biological assessment/biological evaluation documents the evaluation of possible effects of the Revised Shoshone National Forest Land and Natural Resource Management Plan on endangered, threatened, and proposed species known to occur on the Shoshone National Forest (SNF). Forest Service policy on threatened and endangered species is found in Forest Service Manual 2670.31. This assessment/evaluation was prepared in accordance with Section 7 of the Endangered Species Act (ESA) as amended (50 CFR 402.13), and Forest Service Manual 2672.42. Section 7 of the Endangered Species Act directs Federal departments and agencies to ensure actions authorized, funded, or carried out by them are not likely to jeopardize the continued existence of Endangered or Threatened species or result in the destruction or adverse modification of their critical habitats (16 USC 1536, 2009).

In accordance with the Endangered Species Act as provided in 50 CFR 402.16, re-initiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in a biological opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in a biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

The need for this amendment is the result of the change of status of the gray wolf (*Canis lupus*) and the North American wolverine (*Gulo gulo luscus*) under the ESA since the 2013 BA was written.

On September 23, 2014, the Federal District Court for the District of Columbia vacated the delisting of wolves in Wyoming under the ESA. The effect of the decision is the reinstatement of Federal protections that were in place prior to the wolves' 2012 delisting. Therefore, wolves are again listed as a nonessential experimental population in all of Wyoming. Take of wolves may be authorized only by the nonessential experimental population rules or by permits issued under section 10 of the ESA. All of Wyoming except the Wind River Indian Reservation again operates under the 1994 nonessential experimental population rule.

On August 13, 2014, the U.S. Fish and Wildlife Service withdrew a proposal to list the North American wolverine in the contiguous United States as a threatened species under the ESA. After carefully considering the best available science, the Service has determined that the effects of climate change are not likely to place the wolverine in danger of extinction now or in the foreseeable future. As a result, the wolverine does not meet the statutory definition of either a "threatened species" or an "endangered species" and does not warrant protection under the ESA.

This biological assessment amends the previous 2013 BA and will be used to tier to for future BA's prepared for the Revised Forest Plan. **For the most part, information used to prepare this amendment was taken from the 2013 Biological Evaluation (BE) of Terrestrial Wildlife prepared for the Revised Shoshone National Forest Land and Resource Management Plan. That BE addressed Rocky Mountain Region sensitive species which at**

that time included the gray wolf.

2. Description of the Proposal (Proposed Action)

The 1986 Shoshone National Forest Land and Resource Management Plan (Forest Plan) is being revised. Since 1986, the Forest Plan has been amended 14 times. Land use plans provide broad guidance and information needed for project and activity decision-making. This plan will guide relevant resource management programs, practices, uses, and protection measures. The associated environmental impact statement (EIS) examines potential environmental effects that could occur as a result of implementing projects associated with the land use plan.

Six revision/issue topics drove the development of the original six alternatives (A through F). A seventh alternative (G) was developed after public comment and has been selected as the preferred alternative; it is the only alternative analyzed in this amendment, as was the case in the original 2013 biological assessment.

Issue 1. Recreation Uses and Opportunities.

Issue 2. Special Areas and Designations.

Issue 3. Vegetation Management.

Issue 4. Wildlife Habitat Management.

Issue 5. Minerals.

Issue 6. Commercial Livestock Grazing.

Alternative G: Preferred alternative. This alternative describes the Forest Plan that responds to the identified purpose and need. This alternative is a modified version of alternative B and was developed in response to public comment received on the draft environmental impact statement. The alternative provides a diversity of forest uses and emphasizes active management of suitable timber lands, protects wildlife habitat, and maintains the dominant backcountry character of the Forest.

This alternative provides for the protection of federally listed species and their habitats using best available science, the Northern Rockies Lynx Management Direction 2007 (NRLMD) (USDA Forest Service 2007) and it specifically incorporates the *Final Conservation Strategy for the Grizzly Bear in the Greater Yellowstone Area 2007* (Interagency Conservation Strategy Team 2007). This alternative proposes to add 2,130 acres of precommercial thinning in lynx habitat that was not brought forward in the NRLMD.

All Shoshone National Forest System lands have been allocated to one of 29 management areas that range from areas where backcountry nonmotorized is emphasized to areas that are more intensely managed. In general, those management areas that allow a higher level of management

intensity may require a higher level of management attention to the protection and maintenance of habitats for species that are sensitive to habitat alteration and/or human disturbances.

3. Threatened, Endangered and Proposed Species Reviewed and Considered

The need for this amendment is the result of the change in status of the gray wolf (*Canis lupus*) and the North American wolverine (*Gulo gulo luscus*) under the ESA since the 2013 BA was written.

On September 23, 2014, the Federal District Court for the District of Columbia vacated the delisting of wolves in Wyoming under the ESA. The effect of the decision is the reinstatement of Federal protections that were in place prior to the wolves' 2012 delisting. Therefore, wolves are again listed as a nonessential experimental population in all of Wyoming. Take of wolves may be authorized only by the nonessential experimental population rules or by permits issued under section 10 of the ESA. All of Wyoming except the Wind River Indian Reservation again operates under the 1994 nonessential experimental population rule.

On August 13, 2014, the U.S. Fish and Wildlife Service withdrew a proposal to list the North American wolverine in the contiguous United States as a threatened species under the ESA. After carefully considering the best available science, the Service has determined that the effects of climate change are not likely to place the wolverine in danger of extinction now or in the foreseeable future. As a result, the wolverine does not meet the statutory definition of either a "threatened species" or an "endangered species" and does not warrant protection under the ESA.

Because wolverines were not listed under the ESA, they will not be considered further in this document. However, the analysis of possible effects to wolverines from the Revised Forest Plan has not changed from the original 2013 BA.

4. Species Status and Environmental Baseline- Gray wolf (*Canis lupus*)

History, Status, and Distribution on the Shoshone

The gray wolf is currently federally listed as a non-essential experimental population under section 10(j) of the Endangered Species Act in the Yellowstone ecosystem.

In 1974, the U.S. Fish and Wildlife Service (USFWS) listed two subspecies of gray wolf as endangered: the northern Rocky Mountain gray wolf (*C. l. irremotus*) and the eastern timber wolf (*C. l. lycaon*) in the Great Lakes region (39 FR 1171). On November 22, 1994, the USFWS designated portions of Idaho, Montana, and Wyoming as two nonessential experimental population areas for the gray wolf under section 10(j) of the Endangered Species Act, including the Yellowstone Experimental Population Area (59 FR 60252). The species was reintroduced into Yellowstone National Park in 1995 and began dispersing onto the Shoshone in 1999. The Shoshone lies within the Greater Yellowstone Wolf Recovery Area. In 2005 and 2008, the USFWS revised these regulations to provide increased management flexibility for this recovered

wolf population in states with USFWS-approved post-delisting wolf management plans [70 FR 1286; 73 FR 4720; 50 CFR 17.84(n)].

The northern Rocky Mountain wolf population achieved its numerical and distributional recovery goals at the end of 2000 and the temporal portion of the recovery goal was achieved in 2002, when the numerical and distributional recovery goals were exceeded for the third successive year. To meet Endangered Species Act requirements, Idaho, Montana, and Wyoming needed to develop post-delisting wolf management plans to ensure that adequate regulatory mechanisms would exist should Endangered Species Act protections be removed. In 2004 and in 2009, the USFWS determined that Wyoming's wolf management plan was inadequate to conserve Wyoming's share of a recovered northern Rocky Mountain gray wolf population. In August 2011, the Wyoming Governor and Interior Secretary reached an agreement to move forward with delisting. In September 2011, the Wyoming Game and Fish Commission approved changes to its Gray Wolf Management Plan and in October, the USFWS published a notice to delist wolves in Wyoming. In 2012, the Wyoming Legislature made changes to State statutes, which allowed Wyoming to move forward with its management plan.

The Wyoming Gray Wolf Management Plan (and an addendum that was added for clarification), applicable State statutes and Wyoming Game and Fish Commission (WGFC) regulations were subsequently revised and given final approval by USFWS on September 10, 2012. Wolves were delisted in Wyoming as of September 30, 2012.

On September 23, 2014, the Federal District Court for the District of Columbia vacated the delisting of wolves in Wyoming under the ESA. The effect of the decision is the reinstatement of Federal protections that were in place prior to the wolves' 2012 delisting. Therefore, wolves are again listed as a nonessential experimental population in all of Wyoming. Take of wolves may be authorized only by the nonessential experimental population rules or by permits issued under section 10 of the ESA. All of Wyoming except the Wind River Indian Reservation again operates under the 1994 nonessential experimental population rule.

Habitat Requirements, Home Range, Food Habits

The following information is from: Endangered and Threatened Wildlife and Plants; Final Rule To Identify the Northern Rocky Mountain Population of Gray Wolf as a Distinct Population Segment and To Revise the List of Endangered and Threatened Wildlife (USDI Fish and Wildlife Service, 2009a).

Gray wolves are the largest wild members of the dog family. In the northern Rocky Mountain gray wolf, adult males average over 45 kilograms (100 pounds), but may weigh up to 60 kilograms (130 pounds). Females weigh slightly less than males. Wolves primarily prey on medium and large mammals and normally live in packs of 2 to 12 animals. In the northern Rocky Mountain gray wolf, pack sizes average about 10 wolves in protected areas, but a few complex packs have been substantially bigger in some areas of Yellowstone National Park (Smith et al.

2006, p. 243; Service et al. 2008, Tables 1–3). Packs typically occupy large distinct territories from 518 to 1,295 square kilometers (km2) (200 to 500 square miles (mi2)) and defend these areas from other wolves or packs. Once a given area is occupied by resident wolf packs, it becomes saturated and wolf numbers become regulated by the amount of available prey, intra-species conflict, other forms of mortality, and dispersal. Dispersing wolves may cover large areas as they try to join other packs or attempt to form their own pack in unoccupied habitat (Mech and Boitani 2003, pp. 11–17).

Typically, only the top-ranking ("alpha") male and female in each pack breed and produce pups (Packard 2003, p. 38; Smith et al. 2006, pp. 243–4; Service et al. 2008, Tables 1–3). Females and males typically begin breeding as 2-year olds and may annually produce young until they are over 10 years old. Litters are typically born in April and range from 1 to 11 pups, but average around 5 pups (Service et al. 1989–2007, Tables 1–3). Most years, four of these five pups survive until winter (Service et al. 1989–2008, Tables 1–3). Wolves can live 13 years (Holyan et al. 2005, p. 446), but the average lifespan in the northern Rocky Mountain gray wolf is less than 4 years (Smith et al. 2006, p. 245). Pup production and survival can increase when wolf density is lower and food availability per wolf increases (Fuller et al. 2003, p. 186). Pack social structure is very adaptable and resilient. Breeding members can be quickly replaced either from within or outside the pack and pups can be reared by another pack member should their parents die (Packard 2003, p. 38; Brainerd et al. 2008; Mech 2006, p. 1482). Consequently, wolf populations can rapidly recover from severe disruptions, such as very high levels of human-caused mortality or disease. After severe declines, wolf populations can more than double in just 2 years if mortality is reduced; increases of nearly 100 percent per year have been documented in low-density suitable habitat (Fuller et al. 2003, pp. 181–183; Service et al. 2008, Table 4).

Population Status of northern Rocky Mountain Gray Wolf Distinct Population Segment in Wyoming

The following information (and references therein) are from the 2012 Wyoming Gray Wolf Population Monitoring and Management Annual Report (Wyoming Game and Fish Department et al. 2013).

Radio collars are the primary tool used for monitoring wolf populations in Wyoming and throughout the Northern Rocky Mountain gray wolf population. A pack is defined as more than two wolves traveling together using a defined home range. A breeding pair is defined as one or more adult males and one or more adult females in a pack producing two or more pups that survived through 31 December of that year.

At the end of 2012, 277 or more wolves in 43 or more packs (27 or more breeding pairs) inhabited Wyoming, including Yellowstone National Park. Figure BE- 2 shows the home ranges of wolf packs in Wyoming. Even though the wolf population decreased statewide by approximately 16 percent, 2012 became the eleventh consecutive year that the wolf population in

Wyoming has exceeded the numerical, distributional, and temporal recovery goals established by the USFWS.

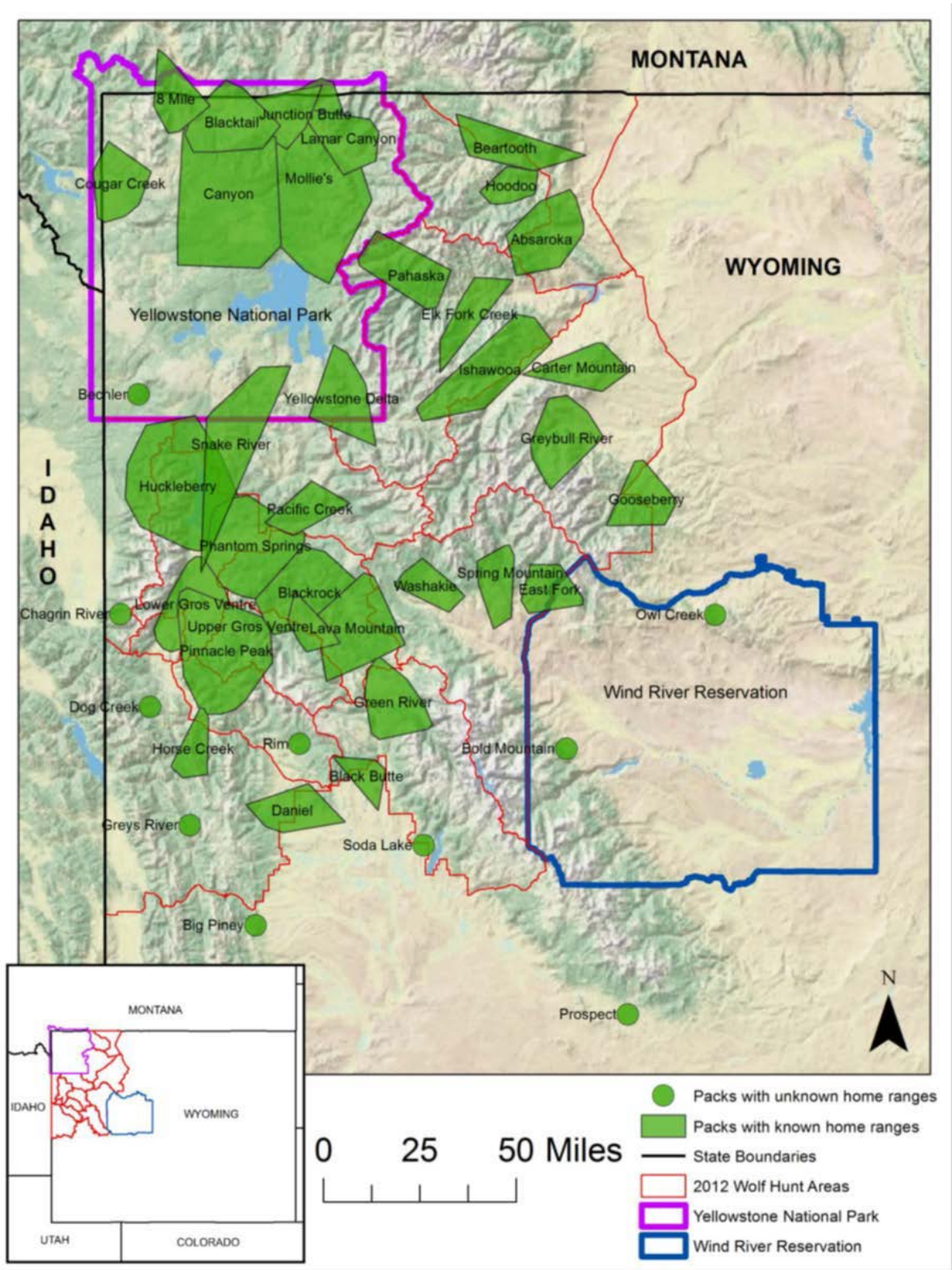

Figure BE- 2. Home ranges of confirmed wolf packs in Wyoming in 2012 (Wyoming Game and Fish Department 2013)

The wolf population in Wyoming (outside Yellowstone National Park) declined from 2011 (224), consisting of 186 or more wolves in 31 or more packs of which 15 or more were breeding pairs that survived through 31 December 2012. From 2002 through 2012, the wolf population has grown each year, with the exceptions in 2008, 2011, and 2012. Average pack size in 2012 was 5.5 wolves per pack.

Wolf numbers in Yellowstone National Park declined from 2011 (98) with 83 wolves living in 10 packs of which 6 were breeding pairs. Average pack size in Yellowstone National Park was 10 wolves per pack. Intraspecific strife, food stress, and mange are all likely reasons for fewer wolves in Yellowstone National Park.

There were 124 wolf mortalities recorded in Wyoming (outside Yellowstone National Park) in 2012. Causes of mortality included: agency control = 43; public harvest = 66; under investigation and unknown = 2; human other = 9, and natural = 4. The number of wolves that died in 2012 (124 wolves) was higher than in 2011 (51 wolves) primarily because hunting removed 66 wolves in addition to wolves that died of other causes. Causes of mortality other than hunting were slightly higher in 2012 (58 wolves) compared to 2011 (51 wolves), which also contributed to higher mortality in 2012.

Eleven wolf mortalities were recorded in Yellowstone National Park including 9 radio-collared wolves. Causes of mortality include intraspecific competition = 8, and 2 wolves died of unknown causes. One wolf that dispersed from the Yellowstone Delta pack was killed by a vehicle in South Dakota and was included in the Yellowstone National Park summary.

Wolf/Livestock Interactions

In 2012, wolves killed over 157 livestock (44 cattle, 112 sheep and 1 horse) and 3 dogs in Wyoming (Table BE- 4). Agency control efforts removed 43 depredating wolves to reduce livestock losses due to wolves. The number of cattle depredations in Wyoming decreased in 2007, 2008, and 2009, and increased in 2010, 2011 and 2012. The number of sheep killed by wolves increased in 2008, 2009 and 2012 and decreased in 2010 and 2011. In 2012, 66 wolves were legally harvested during Wyoming's first hunting season since delisting.

Table BE- 4. Wolf depredations in Wyoming: 2001—2012 (Jimenez et al. 2012, Wyoming Game and Fish Department et al. 2013)

Depredations	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Cattle	18	23	34	75	54	123	55	41	20	26	35	44
Sheep	34	0	7	18	27	38	16	26	195	33	30	112
Dogs	2	0	0	2	1	1	2	0	7	0	1	3
Goats	0	0	0	10	0	0	0	0	0	0	0	
Horses	0	0	2	0	1	0	1	0	0	1	1	1
Wolves Controlled	2	4	6	18	29	41	44	63	31	40	36	43

Habitat Distribution and Condition on the Shoshone

Gray wolves are habitat generalists. They have two basic habitat needs which are an abundance of natural prey and areas with minimal conflict with human interests (USFWS 1987). Wolf habitat and prey habitat is abundant on the Shoshone. Most of the Shoshone could be considered potential wolf habitat. Areas on the Shoshone that would likely not be considered habitat would be the rugged alpine portions of the Wind River Range. Also, areas with high occurrences of livestock would limit the establishment of wolves into those areas due to depredations and subsequent control efforts.

Concentrations of available prey occur in many areas of the Shoshone. Thirteen wolf packs (Beartooth, Hoodoo, Absaroka, Pahaska, Ishawooa, Carter Mountain, Elk Fork Creek, Greybull River, Gooseberry, Spring Mtn., Washakie, Lava Mountain, and East Fork) have home ranges that overlap National Forest System land on the Shoshone (Jimenez et al. 2012, Wyoming Game and Fish Department 2013). Eight of the 13 wolf packs are counted as breeding pairs toward recovery efforts. Den sites for several of these packs have traditionally occurred on the Forest. Table BE- 5 depicts confirmed wolf packs, population data and livestock depredation on the Shoshone in 2012.

Table BE- 5. Composition of confirmed wolf packs on the Shoshone National Forest in 2012 (Jimenez et al. 2012, Wyoming Game and Fish Department 2013)

		Documented mortalities			
Wolf Pack	**Pack size**	**Natural/Human***	**Harvest**	**Control**	**Depredation**
Absaroka	6	1	3	0	0
Beartooth	3	1	2	0	0
Carter Mtn.	8	0	1	0	0
East Fork	5	0	1	0	0
Elk Fork Cr.	4	0	0	1	0
Gooseberry	4	4	2	3	3-cattle
Greybull River	9	2	2	0	0
Hoodoo	4	0	3	3	5-cattle
Lava Mtn.	10	0	2	0	1-cattle
Ishawooa	9	1	1	2	3-cattle
Pahaska	8	2	3	0	0
Spring Mtn.	6	0	1	3	2-cattle
Washakie	6	0	0	1	1-cattle
Total	82	6	25	13	15-cattle

*Excludes wolves killed in control actions and legal harvest

The availability of stable prey base is the primary habitat requirement for this species. Available prey (in particular elk) does exist on the forest as the Shoshone provides yearlong habitat for big game species. No trend data are available that is specific to the Shoshone, but data are available for elk herd units that encompass the Forest. Five herd units overlap the Shoshone including: Gooseberry, Cody, Clarks Fork, Wiggins Fork and South Wind River. For the most part, trends for these herds have been relatively stable and population objectives have been at or above herd unit objectives for the past 10 years (Figure BE- 3).

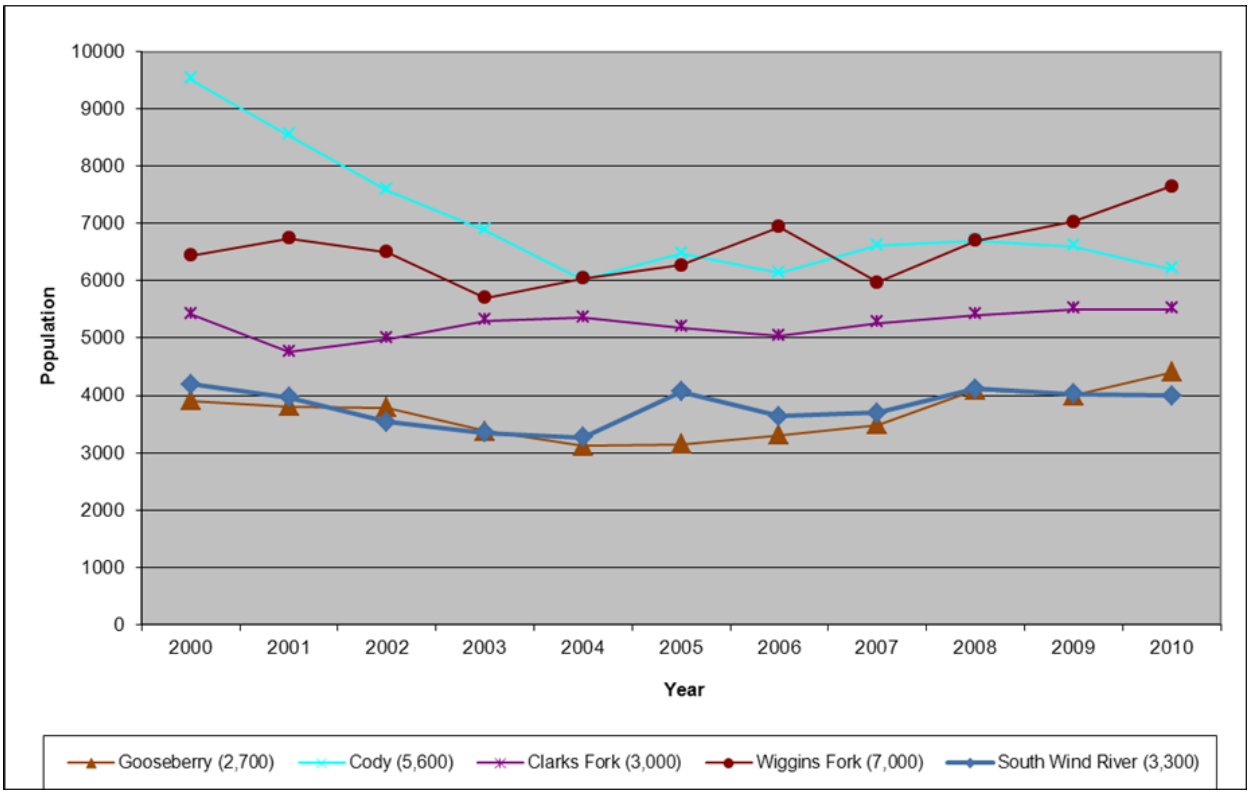

Figure BE- 3. Population trends for elk herd units that encompass the Shoshone National Forest

Wolf/Livestock Interactions within the Shoshone National Forest

The Wyoming Game and Fish Department authorizes the USDA-Wildlife Services to manage wolf/livestock conflicts and to remove the individuals responsible for depredations. There were 15 wolf/livestock conflicts within the Shoshone in 2012. Six of the known packs on the Shoshone depredated on livestock in 2012, and this resulted in the lethal removal of 13 wolves. Cattle depredations followed a seasonal pattern in 2012, with the highest number of depredations occurring in summer/fall from August through October (Jimenez et al. 2012). Losses do not reflect lost or missing livestock.

Risk Factors

Gray wolf populations naturally fluctuate with food availability, strife within packs, and disease. The primary risk factor from forest management is livestock grazing. Within the planning area, the main factor controlling the population is management by the Wyoming Game and Fish Department for livestock/wolf conflicts and hunting season harvest.

Habitat and Population Management Considerations

Habitat for wolves and their prey is abundant on the Forest. Managing habitat for ungulate prey species would be important.

Wolves living in areas with high native ungulate densities and relatively low exposure to domestic livestock cause fewer conflicts with livestock producers (Jimenez et. al 2011). Lethal control efforts occur in areas with chronic livestock depredation. Even with control efforts, the Wyoming wolf population outside of Yellowstone National Park continues to be well above recovery objectives. Minimizing conflicts between wolves and livestock would be important.

Conservation Measures

Abundant habitat exists for wolves and their prey on the Shoshone. Although conflicts occur between livestock and wolves resulting in lethal control of wolves, their population in Wyoming continues to be well above recovery objectives. This results in a low viability risk to wolves from forest management. In order to address these concerns and to provide management for this species to maintain or improve its potential distribution on the Forest, conservation measures need to be considered for incorporation into Forest Plan goals, objectives, standards and guidelines.

Conservation measures summarized include:

Under the Forest Plan, the Shoshone National Forest will continue to carry out programs for the conservation of gray wolves. Specifically, the LMP (pp. 45-47) provides the following goals and management direction pertaining to gray wolves:

Provide habitat capable of contributing to conservation and viability of sensitive species, which will keep sensitive species from being listed under the Endangered Species Act (SENS-GOAL-01).

Habitat for ungulate prey populations is available to support a recovered wolf population (SENS-GOAL-09).

Design management actions within known nesting or denning sites of sensitive species to avoid disrupting the reproductive success of those sites during the nesting and denning periods (SENS-STAND-02).

Furthermore, the SNF will:

Encourage livestock producers to minimize depredations by proactively increasing riders on grazing allotments and moving livestock to different pastures away from wolf activity.

Encourage the use of techniques such as the presence of sheep dogs or herders, delaying livestock turn-out dates until after lambing/calving is complete, and the use of electric fencing and fladry at localized sites to minimize wolf depredation on livestock.

Monitoring Considerations

Continue to cooperate with the USFWS and the WGFD (when wolves are delisted) to monitor wolf populations in the Greater Yellowstone Ecosystem.

5. Direct and Indirect Effects

Alternatives G (Alternative G is the preferred alternative). The number of animal unit months would remain unchanged. Conflicts with livestock would likely continue at current levels, and any potential for increase in conflicts would not be a result of increased allotments. Cattle numbers could increase in existing allotments, although any increases would likely be minor. Sheep conflicts have been virtually eliminated due to the lack of domestic sheep grazing.

Livestock/wolf conflicts are likely to continue. Conflicts may result in direct mortality of individuals responsible for depredations. Since pack social structure is very adaptable and resilient, breeding members can be quickly replaced either from within or outside the pack and pups can be reared by another pack member should their parents die (Packard 2003, p. 38; Brainerd et al. 2008; Mech 2006, p. 1482 in USDI Fish and Wildlife Service 2009). Consequently, wolf populations can rapidly recover from severe disruptions, such as very high levels of human-caused mortality or disease. After severe declines, wolf populations can more than double in just 2 years if mortality is reduced; increases of nearly 100 percent per year have been documented.

The wolf population met its recovery goals in 2002, and wolves continue to increase in number and distribution. The biggest impact to wolves at this point is management removals due to livestock conflicts, both on public and private land.

The Shoshone grazing program contributes indirectly to these management removals, by providing the livestock that wolves are attached to as prey. The allotments in this analysis have had conflicts that resulted in management removal of wolves. Generally on the Shoshone, when wolves are removed, they are replaced quickly with offspring dispersing from other packs, so the removals are not leading to overall population decline. This is a short-term population reduction as recruitment fills in the voids. These removals because of livestock depredation have had a minor effect to the total wolf population.

Cumulative Effects

Livestock grazing on State and private land is an identified potential threat to gray wolf conservation that contributes to cumulative adverse effects, due primarily to control actions when wolf/livestock conflicts occur. In Wyoming in 2011, 35 percent of all wolf depredations on

livestock occurred on private land. Control actions in response to confirmed livestock depredations includes trapping and radio collaring wolves; intensive monitoring; issuing Less-than-Lethal Munitions (rubber bullets) to harass wolves; lethally removing wolves through agency control actions; and issuing 16 Shoot-on-Sight (SOS) permits to livestock producers. No wolves were killed in 2011 using SOS permits. Non-lethal control was routinely considered but was often not applicable or cost effective in many areas in Wyoming due to: (1) specific wolf packs chronically killing livestock year after year; (2) unpredictable travel patterns and movements by wolves; and (3) very large wolf home ranges that cover vast areas including public grazing allotments. When non-lethal control methods were not effective, wolves were killed through agency control actions in an attempt to prevent further livestock depredations (Jimenez et al. 2012).

6. Determination

Based on the documented increase in the wolf population throughout the Northern Rocky Mountains annually since 2002, and related increase in the Wyoming population (see Status of Gray Wolf section), **although some actions anticipated by the Forest Plan may adversely impact some individual gray wolves, no action would result in jeopardy to gray wolves, nor cause a loss of species viability range-wide**.

In addition, under the Forest Plan, the Shoshone National Forest will continue to carry out programs for the conservation of gray wolves. Specifically, the LMP (pp. 45-47) provides the following positive 7(a)(1) conservation goals and management direction pertaining to gray wolves:

Provide habitat capable of contributing to conservation and viability of sensitive species, which will keep sensitive species from being listed under the Endangered Species Act (SENS-GOAL-01).

Habitat for ungulate prey populations is available to support a recovered wolf population (SENS-GOAL-09).

Design management actions within known nesting or denning sites of sensitive species to avoid disrupting the reproductive success of those sites during the nesting and denning periods (SENS-STAND-02).

Encourage the use of techniques such as the presence of sheep dogs or herders, delaying livestock turn-out dates until after lambing/calving is complete, and the use of electric fencing and fladry at localized sites to minimize wolf depredation on livestock.

Encourage livestock producers to minimize depredations by proactively increasing riders on grazing allotments and moving livestock to different pastures away from wolf activity.

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