

Policy Issues Related to Wolves in the Northern Rocky Mountains

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Introduction

Wolves were extirpated from the Northern Rocky Mountains (NRM) by the late 1930s (Young 1944). Wolves began to naturally recolonize the region in the early 1980s, with the first reproductive pack documented in 1986 in the North Fork of the Flathead River in northwest Montana (Ream et al. 1989). Wolf numbers and distribution increased gradually with local, but limited, public controversy in northwestern Montana from the late 1970s through the early 1990s. Throughout this period, wolves in the region were classified as endangered under the Endangered Species Act (ESA).

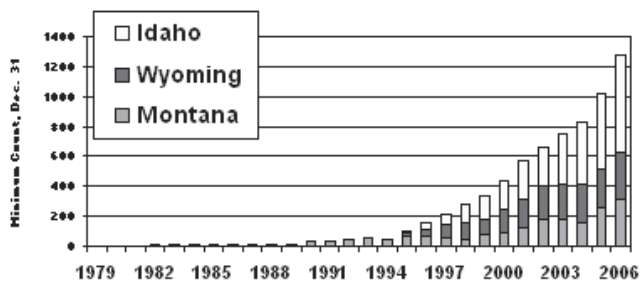
To accelerate NRM wolf recovery, the U.S. Fish and Wildlife Service (FWS) reintroduced wolves to wilderness areas in Central Idaho (CI) and to Yellowstone National Park (YNP) in 1995 and 1996 (Bangs et al. 1998). Large parts of Idaho (ID) and Montana (MT) and all of Wyoming (WY), where the reintroduced wolves were expected to range, were designated as experimental, nonessential population areas (Figure 1). This classification provided greater management flexibility under rules adopted under section 10(j) of the ESA, compared to the ID panhandle and northwestern MT where wolves retained endangered classification.

Following the reintroductions, wolf numbers and distribution in the CI and YNP areas increased rapidly. Wolves continued to increase in northwestern Montana at a slower rate (Figure 2). The overall NRM population met the recovery target 30 breeding pairs and of at least 300 wolves with an equitable distribution in each of the 3 subpopulations for 3 consecutive years at the end of 2002 (Sime and Bangs 2006). By the end of 2006, the minimum tristate population

Figure 1. Northern Rocky Mountain federal wolf recovery areas of northwestern MT, where wolves are currently classified as endangered under the federal Endangered Species Act, Central ID Experimental Area, and the Greater Yellowstone Experimental Area, where wolves are classified as experimental, nonessential. Note that the states of MT and ID contain portions of all three federal recovery areas.



Figure 2. Northern Rocky Mountain minimum estimated wolf population by state, December 31, 1979 to 2006.



was about 1,300 wolves with about 86 breeding pairs, and the 3 subpopulations had effectively merged into a regional metapopulation (Sime and Bangs 2007).

Although the magnitude of biological effects varies across the region based on a range of environmental circumstances, wolf restoration in the NRM through natural colonization and reintroduction has altered ecological relationships in the region. Profound changes have also occurred in the political and socioeconomic realms. The public policy issues and responses vary, based on the cultural and political values within and among the three states. This paper discusses some of the policy issues related to the recovery, delisting and anticipated state management of wolves in the NRM.

Policy Issues Related to Management of Prey Populations

Among the most biologically, socially and politically complex policy issues are those related to ungulate management following wolf recovery. During the years when wolves were absent from the NRM, ID, MT and WY managed ungulate populations to provide various public benefits, including recreational hunting for both food and trophies and prevention of game damage to agriculture. Although mountain lions, coyotes, black bears and grizzly bears have always preyed on ungulates, managers have been able to allocate a substantial, annual harvest to hunters and have used hunting as a tool to regulate population size and age structure.

Given wolf recovery, agencies and commissions are faced with a new and highly variable element in the management equation. Wolf predation, alone or in combination with other environmental factors, may alter recruitment and survival rates, ungulate distribution and availability, harvestable surplus, or hunter success. These factors must be considered when setting seasons, bag limits, permit numbers or other aspects of ungulate management.

The impact wolf predation could have on harvestable surplus of ungulates for hunters differs from species to species, place to place, and through time; thus, it is difficult to generalize. In a few, high-profile cases, such as the northern YNP elk herd and the Upper Gallatin drainage south of Bozeman, Montana, wolf predation is one of several factors contributing to population declines and has, in part, led managers to reduce antlerless and late-season elk harvest opportunity (Montana Fish, Wildlife and Parks, unpublished data 2006). Changes in elk behavior in response to wolves (Creel et al. 2005, Gude 2005) may also have contributed to reduced hunter success in some areas, particularly if hunters do not adjust their hunting strategies. Apparent shifts in elk habitat use or increased wariness has also led some hunters to believe elk numbers have declined even more than agency surveys indicate. At the same time, in northwestern MT, where wolves first returned to the NRM 25 years ago, elk populations have not declined long-term, and no significant, sustained changes in hunter success or harvest levels are evident. Relatively small fluctuations through time are more habitat (forest fires or lack thereof) or weather related.

At present, there is considerable speculation about the impact of wolf predation in other areas, but relatively little scientific data from which to draw informed conclusions. In the absence of data, both pro- and antiwolf interests are

free to attempt to influence decision makers through purely political means. Both sides advance simplistic, direct cause-and-effect arguments to support their “reality,” and often proposed solutions are also simplistic and are exclusive of other interests. However, the ultimate reality is that wolves and ungulates exist in complex ecosystems with varying degrees of human influence and agency mandates, and there are no simple solutions. The debates related to the effects of wolf recovery, the allocation of ungulate mortality to wolves, hunters or other predator species, and other causes will be long and contentious, at least until managers in the NRM gain additional information and experience in the new environment.

Policy Issues Related to Wolf Harvest and Population Management

ID, MT and WY wolf-management plans all address the need for some level of population management and provide for public hunting or trapping. In some respects, managing wolf populations should be no more difficult than managing other wildlife populations. Managers know what is required to increase or decrease wolf numbers or distribution. In other respects it will be completely different.

As with all wildlife-management programs, managing wolves will require surveys to estimate population size, reproduction, mortality from all causes, distribution, harvestable numbers, etc. Wolf-monitoring methods can be relatively straightforward and practical, though costs per unit of data gathered are often high. Political or public pressure to acquire more detailed information through radio telemetry than is necessary to make management decisions will likely inflate costs, as well.

Some controversy will surround any proposal for wolf hunting or trapping. State agencies and commissions should anticipate competition between hunters and trappers for the opportunity to take any harvestable surplus. There will also be debate about the relative merits and potential outcomes of limited licenses and permits, compared to quota-based management systems. State agencies will need to gain experience in managing harvest under various local conditions before they can provide commissions with firm recommendations. Public-harvest levels will also be affected by the number of wolves killed—either legally (in defense of property) or illegally—and by nonhuman factors influencing wolf reproductive and mortality rates.

Commissions should also expect that people opposed to any wolf killing will enter the debate, particularly if they perceive the purpose of wolf harvest is to reduce wolf numbers to benefit big-game hunters. They may choose to participate through an agency's traditional, public-involvement process, through other political processes, through litigation or through a combination of these. This poses a dilemma for policy makers who will be faced with one segment of the public that strongly promotes using hunting or trapping to reduce wolves to reallocate ungulates to hunters and another segment that strongly opposes such actions. Agencies and commissions will hear from the most polarizing, vocal individuals having the strongest beliefs that they will lose. Engagement by the "masses in the middle," with more moderate viewpoints, will define the middle ground and the management strategies, rendering the polarizing viewpoints as extreme. Data gaps, limited experience managing wolf populations under conditions similar to the NRM and unequal political power among interest groups will likely frustrate policy makers.

The policy debate related to control actions involving government removal of wolves to benefit hunters will be even more contentious. Given the greater degree of habitat fragmentation and hunter access in the NRM, compared to Canada and Alaska, and given the need to remove wolves to reduce livestock depredation, agency-implemented, wolf-control programs may not be necessary to achieve wolf- and ungulate-population objectives that are acceptable to most people in the NRM. One exception could be the core wilderness areas of CI, where wolf harvest is likely to be lower due to limited access and because wolves are less likely to be killed to address wolf-livestock conflicts. In addition, prey populations that range in and out of YNP may be subject to impacts from wolves that cannot possibly be addressed through management of a fully protected wolf population within the park.

Based on experience in Alaska, it is reasonable to predict that any agency-implemented control intended to reallocate ungulate mortality from wolves to hunters will be met with in-state, national and international resistance through both legal and political challenges (Stephenson et al. 1995). Legal challenges will rely on the ESA, the National Environmental Policy Act and, possibly, the airborne hunting act at the federal-court level and on procedural or substantive law at the state level. The specific basis of the challenges will depend on state laws. Political challenges will be based on the prevailing beliefs about the appropriateness of reducing wolf numbers to increase hunter harvest, the role of

humans in manipulating ecosystems, cost-benefit analyses of programs, etc. Again, based on experience in Alaska, managers should expect volatility and frustration on the part of top-level policy makers in regard to this issue because choices will not be clear-cut. No single solution will likely satisfy most people, and all three branches of government will be involved.

Policy Issues Related to Livestock Depredation

Wherever wolves and livestock overlap, some depredation will occur. The USFWS in WY, the ID Department of Fish and Game (IDFG), and the Montana Department of Fish, Wildlife and Parks (MFWP) in their respective states, rely on U.S. Department of Agriculture, Wildlife Services (WS) to determine whether wolves were the cause of injured or dead livestock and to remove wolves causing depredation. Under both the original and updated 10(j) rules in the experimental, nonessential areas (Figure 1), the responsible managing agency generally authorizes WS to remove one or more wolves to prevent further losses following any depredation caused by wolves. Under the updated 10(j) rules now in effect in MT and ID, livestock producers also have significant flexibility to kill wolves that threaten, attack or kill their animals.

In the endangered-species area (Figure 1), however, MT and ID must be more conservative and can only authorize lethal control under the 1999 Interim Wolf Control Plan, adopted by the USFWS (U.S. Fish and Wildlife Service 1999). Further, in the endangered-species area, livestock producers cannot intervene at all when wolves harass or kill their animals. Producers near the boundary who may have livestock on both sides of the line and can protect some but not others from wolves are frustrated by the two classifications. This adds to the urgency to achieve delisting of the biologically recovered population in the NRM.

The fact that wolves were reintroduced to the NRM despite opposition from livestock interests, among others, creates an atmosphere in which some citizens seek to assign liability and blame for real or perceived impacts and changes brought about because the landscape is now shared with wolves. Policy makers and agency managers are thrust into positions in which public demands for redress or specific outcomes are significant. And, some sectors of the public believe agencies have to take responsibility.

Defenders of Wildlife (DOW) established a program to reimburse livestock producers in the NRM for confirmed and probable losses to wolves

while wolves are listed under the ESA. From 1987 through September 2006, DOW has paid \$638,292 (Defenders of Wildlife 2007) though many producers do not submit claims.

ID, MT and WY have different legal and political frameworks for compensating livestock producers for wolf losses. ID currently uses federal funds secured by their congressional delegation to reimburse some producers for losses. WY does not currently reimburse producers for losses to wolves, but, when wolves are delisted, WY Department of Game and Fish will be required by state law to pay for losses using license funds in any area where wolves are designated as trophy game. Concern about the impact of these payments is one of the factors affecting the ongoing debate over trophy game versus predator status in portions of WY (T. Cleveland, personal communication 2006).

The 2007 Montana legislature is considering a bill that would establish the Livestock Loss, Reduction and Mitigation Program. This bill, if approved, would create a seven-member board to oversee a program designed to help producers reduce the risk of loss and to reimburse producers at fair market value for both probable and confirmed losses. Funding for the program is uncertain, and the Montana administration has taken the position that no state funds will be appropriated. Efforts to obtain federal and private funds are ongoing.

Issues Related to Public Safety

Although wolf attacks on humans in North America are rare, they have occurred historically. More recently, wolves have injured humans in circumstances where wolves became habituated or food conditioned (Linnell et al. 2002, McNay 2002). In most cases, these conditions arise in national parks or on preserves where wolves are protected from human harassment or killing.

The state wildlife-management agencies anticipate using hunting and trapping, as well as outreach, to prevent habituation and food conditioning. All state management plans in the NRM also call for immediate removal of any wolf or wolves that threaten or injure humans.

In addition to public concern about physical attacks by wolves, an emerging concern is the potential for disease transmission from wolves to people or domestic animals. Although the real risk of disease transmission (e.g. rabies) or parasitic outbreaks (e.g. *Echinococcus* spp.) is negligible, they manifest as one more threat or problem with wolf restoration that is seized upon politically by

wolf opponents. Addressing and responding to disproportionately elevated public concern diverts managers' time from other, more significant, issues.

Issues Related to Funding

Wolf recovery has added significant costs to agencies in ID, MT and WY. One reason for this is the high level of information about wolves demanded by the public and elected officials. Each state is investing some hunting-license dollars in wolf management, but all three have consistently argued that restoring wolves to the NRM is a national priority, i. e. driven by federal law (ESA) and should be funded, primarily, by federal dollars. To date, U.S. Congress has appropriated funds to ID and MT through the USFWS budget. However, with the increasing federal deficit, changes in the federal-budget process and the potential delisting of the NRM wolf population, it is uncertain whether federal funds will continue to support wolf management.

If states must rely on their own sources, the impacts to states' general funds or to state hunting-license accounts could be significant. State wildlife agencies will likely have to redirect federal-aid funds from either the Pittman-Robertson Act or from state wildlife grants programs to fill the gap. This will change funding levels for wolf management and for other wildlife management. And, it will fuel more debate among legislators and the public regarding the appropriate sources and amounts of funding for wolf management. Alternatively, elected officials and the public could adjust their expectations downward to be commensurate with available funding or to be commensurate with their comfort levels with wolf conservation and management, which (in theory) should improve as everyone gains more experience.

In addition to affecting costs, wolf recovery may affect agency revenue. Any reduction in ungulate-license sales due to wolf predation, will adversely affect revenue. Conversely, after delisting, sales of wolf-hunting licenses may enhance revenue. It is impossible at this time to predict whether the net will be positive or negative.

Issues Related to Jurisdiction and Application of the ESA

The NRM wolf population is considered a regional population that ranges across several states. Although this population achieved the biological recovery

threshold in 2002, the USFWS did not initiate delisting until recently, based on their finding that WY laws and the state's management plan do not provide adequate regulatory mechanisms. WY has challenged that finding in federal court.

As an interim step to provide greater management flexibility in 2003, the USFWS created a western distinct population segment (DPS) that included most of the continental United States west of the Mississippi River (except Arizona, New Mexico and parts of Texas and Colorado, where efforts are ongoing to recover the Mexican wolf). And, it reclassified wolves in that DPS as threatened (U.S. Fish and Service 2003). However, that action was successfully challenged in federal court and the entire final rule was vacated (Boyd and Bangs 2005).

On February 8, 2007, the USFWS proposed a new western DPS that includes all of ID, MT and WY, as well as parts of Oregon, Utah and Washington (Sime and Bangs 2007). In the same federal register notice, the USFWS proposed to delist all or most of this DPS, depending on ongoing negotiations with WY regarding the adequacy of regulatory mechanisms in that state. If WY amends its law and its plan to the satisfaction of the USFWS, the entire DPS will be delisted. If WY does not adopt adequate regulatory mechanisms, a portion of northwestern WY would retain experimental, nonessential ESA status while the remainder of the DPS would be delisted.

ID and MT have advocated this innovative approach to delisting for several years, in the face of continued disagreement between WY and the USFWS. Although the states have continued to work together well at the field level on wolf management, at the policy level, there has been disagreement over whether MT and ID should join WY's litigation, or should increase pressure on WY to accept USFWS's terms.

The USFWS will make a final decision on delisting the NRM DPS in early 2008. Regardless of the decision, litigation is certain to follow.

Conclusion

The natural and accelerated recovery of NRM wolves has significantly affected both the biological and sociopolitical environment. Just as the return of wolves to the YNP ecosystem has cascading ecological effects that reach down through trophic levels reflected in changes in willows and even insects (Sime and Bangs 2007), there are equally profound and complex social, political and economic effects. Some of the issues raised are factually and socially

straightforward and can be resolved with limited additional effort and resources. Many others will continue to challenge wildlife managers, policy makers and the citizens we serve for generations to come as landscapes, human attitudes and values evolve.

In theory, adaptive management principles should successfully link decisions to wolf ecology and population status, to the land, and to people. But, state agencies are also in a unique position to influence the outcome of the ongoing policy debates. Beginning with the decision in 1999 to enter this arena, MFWP chose to embrace the controversy in an open, inclusive manner that respects all interests and that demands all parties rely on scientific information and constructive dialog, as opposed to speculation and political rhetoric, as the basis for decision-making. Evidence of the benefits of this approach include the opening line of the report of the Montana Governor's Wolf Advisory Council, a 12-member citizen panel appointed to develop consensus-based recommendations as the foundation for Montana's Wolf Conservation and Management Plan: "We recognize wolves as a native species" (Montana Wolf Management Advisory Council 2000:1). It is also evidenced by broad support for the state's wolf plan by all segments of the public and by the recent comments of a Montana rancher at a hearing on the proposed rule delisting wolves in the NRM. Wolves have as much right to be here as I do, but they don't have the right to steal my livestock (Quigley 2007).

Taking and maintaining this approach has not been easy and certainly has its detractors who opportunistically seize and exploit perceived weakness or inconsistencies. It is challenged by litigation initiated by participants in collaborative processes, leading other participants to question whether all parties acted in good faith and are truly committed to consensus-based outcomes. Agencies will also find it difficult to affirm and sustain collaborative agreements through time, particularly given the involvement of all three branches of state governments and the national and international attention western wolves command. Furthermore, there are limits to the degree to which this approach can influence decisions by other jurisdictions, given the fact that MT is linked to other states.

Wildlife managers and policy makers face numerous unknown and unpredictable factors related to wolf management in the NRM. How we respond to that uncertainty and the political forces at play will determine whether the path forward is contentious and frustrating or constructive and progressive.

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