

IS THERE HARMONY IN THE HOWLING?  
AN ANALYSIS OF THE WOLF POLICY SUBSYSTEM IN WYOMING

by

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## ABSTRACT

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*Is There Harmony in the Howling? An Analysis of the Wolf Policy Subsystem  
in Wyoming*

Thesis directed by Associate Professor Deserai Anderson Crow, Ph.D.

In 1995, the U.S. Fish and Wildlife Service (USFWS) reintroduced gray wolves to Yellowstone National Park. Since then, wolf policy and management has been fraught with political conflict. This dissertation analyzes wolf policy and management in Wyoming since 2008, when the USFWS published the first delisting rule for wolves in the Northern Rockies. The central research question asks why conflict persists over wolf policy in Wyoming. Using a mixed methods approach of interviews, media document analysis, and survey data, I investigated political conflict over wolf management at different scales, as well as the dynamics of advocacy coalitions working to advance their preferred policies. First, the Narrative Policy Framework, used to understand how narratives influence policy processes, is applied through an analysis of media coverage of Wyoming's wolf policy and management. Then, the Advocacy Coalition Framework is utilized to understand long-term changes in coalitions of policy actors in this adversarial subsystem. Findings illustrate that the geographic scale at which coalition members operate may influence the long-term stability of coalitions. Particularly in protracted policy conflicts, local coalition members may seek alternative paths to achieve their preferred outcomes by circumventing the existing policy venue (i.e., through

litigation) or adjusting strategies and goals. These findings improve our understanding of the dynamics of coalitions advancing their policy preferences within contested policy arenas. Finally, citizens' preferences for conflict management between wolves and people are explored. Results indicate that proactive strategies for conflict management should be engaged to mitigate the need for reactive, post-conflict management actions.

In sum, at the community level, collaborative paths forward on policy conflicts may emerge to circumvent the political conflict existing at the state and federal levels of governance. Though this policy arena has been characterized by conflict, there are opportunities at the local level to address challenging issues related to wolf policy and management in Wyoming, though political conflict at the state and federal may continue.

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## LIST OF ACRONYMS

ACF: Advocacy Coalition Framework

BHTC: Behaviorally-mitigated trophic cascade

CBC: Community-based conservation

DPS: Distinct Population Segment

EIS: Environmental Impact Statement

ESA: Endangered Species Act

GTNP: Grand Teton National Park

GYA: Greater Yellowstone Area

GYE: Greater Yellowstone Ecosystem

HWC: Human-wildlife conflict

JDR: John D. Rockefeller Parkway

MOU: Memorandum of Understanding

NEPA: National Environmental Policy Act

(E)NGO: (Environmental) non-governmental organization

NPF: Narrative Policy Framework

NPS: National Park Service

NRCC: Northern Rockies Conservation Cooperative (Jackson, WY)

TGMA: Trophy Game Management Area

USFWS: United States Fish & Wildlife Service

WGFD: Wyoming Game & Fish Department

WRR: Wind River Reservation

YNP: Yellowstone National Park

# CHAPTER I

## INTRODUCTION

On January 12, 1995, one era in wolf history in North America ended, and another began. With the reintroduction of gray wolves (*Canis lupus*) to Yellowstone National Park,<sup>1</sup> wolf policy and management in the Northern Rockies transitioned from planning for the return of this native species to shepherding its recovery.

Fast forward to 2016, just over twenty years later. Wolves have recovered according to the biological goals set forth in the 1987 Northern Rockies Gray Wolf Recovery Plan, with a minimum of ten breeding pairs and 100 individuals in each of the three recovery zones: the Greater Yellowstone Area, Central Idaho, and northwest Montana (U.S. Fish & Wildlife Service, 1987). Wolves have expanded into Oregon, Washington, and, most recently, Northern California (Traverso, 2015). One individual from Wyoming traveled as far south as the Grand Canyon in 2015 (Larimer, 2015)<sup>2</sup>, while others have been sighted in Colorado (Padilla, 2016) and Utah (Prettyman, 2014). It is fair to say that the wolf has returned to the Northern Rockies – and beyond. Their expansion is limited by two key factors: practical conflicts between wolves and human interests (e.g., livestock, hunting), and, perhaps more challenging, political conflict over wolf policy and management.

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<sup>1</sup> The U.S. Fish and Wildlife Service released 14 wolves into Yellowstone National Park in January of 1995, and another 17 in January 1996. Wolves were reintroduced to a second recovery zone in Central Idaho as well, with 15 individuals set free in January 1995 and 20 in January 1996.

<sup>2</sup> Unfortunately, a hunter in Utah mistook this wolf for a coyote and shot her.

The state of Wyoming encompasses the recovery zone of the Greater Yellowstone area. With the return and expansion of the wolf within the state outside of the northwest corner's two iconic National Parks, Yellowstone and Grand Teton, wolves entered a landscape where their protection was challenged by the presence of livestock, as well as declining social tolerance as they moved farther from the Parks. Nonetheless, they reached the recovery goals by 2002. The state, supported by livestock and hunting interests, called for their delisting in order to assume management from the U.S. Fish and Wildlife Service (USFWS). To proceed with delisting, however, Wyoming had to produce a management plan that was approved by the USFWS. Wyoming's plan was unique in that it designated wolves as trophy game in the northwest corner, and predators throughout the rest of the state. (Wyoming's plan will be discussed in more detail, as well as the delisting process, in Chapter 2.)

Because of Wyoming's management plan, as well as legal and political actions taken in the interim, wolves were not delisted in the state until 2012. However, state management was terminated in September 2014 when a federal district court ruled that Wyoming lacked the "adequate regulatory mechanisms," as required by the Endangered Species Act, for ensuring that wolves would not fall below the recovery goals outlined in the original Northern Rockies Gray Wolf Recovery Plan. This decision raised questions about the effectiveness of wildlife management through litigation and the broader repercussions of ongoing lawsuits on long-term policy outcomes.

Prior to beginning my graduate career at the University of Colorado Boulder, I worked for a non-profit conservation organization in Jackson, Wyoming, the Northern Rockies Conservation Cooperative (NRCC). NRCC has a long and respected history of providing policy analysis on wildlife issues, particularly carnivores, and through my experience with NRCC I became interested in how carnivore policy has evolved over the past several decades. I also volunteered as a field technician on the Wyoming Wolf Recovery Project for the USFWS. These experiences motivated this study. Throughout my dissertation process, I hoped to contribute something *new* – and practically-oriented – to the existing extensive scholarship on wolves.

The ecology of wolves has been studied in depth, particularly in the Greater Yellowstone Ecosystem. Social attitudes towards wolves have been surveyed. Policy recommendations have been drafted. But conflict between humans and wolves persists – and conflicts between people over how to manage wolves have escalated. My research focused exclusively on the state of Wyoming – where the range of attitudes towards wolves is diverse, and where wolf management has been challenged by lawsuits, leaving a battered, inconsistent history of policy and management. I investigated wolf policy and management in Wyoming from 2008, when the first delisting rule for wolves in the Northern Rocky Mountains Distinct Population Segment (DPS) was published, until 2016.

To understand the wolf policy problem from multiple angles, I utilized a mixed-methods approach, including media content analysis, stakeholder interviews,

and surveys. In Chapter 3, I analyzed media coverage of wolf issues to understand how local and national media differ in their coverage, and posit how these differences might affect local versus national understanding of the policy problem. In Chapter 4, I applied the Advocacy Coalition Framework (ACF) (Jenkins-Smith, Nohrsted, Weible, & Sabatier, 2014; Sabatier & Jenkins-Smith, 1999; Sabatier & Weible, 2007). Drawing on primary data collected through semi-structured interviews, I analyzed the role of coalitions in affecting wolf policy and management, as well as the potential changes in coalition structure over time. In Chapter 5, I investigated the preferred policy outcomes of each participating coalition, and the influence of the policy output (the Wyoming wolf management plan) on coalition structure and tactics. In Chapter 6, I reported on a survey of citizens' policy preferences for wolf management in a community on the edge of Grand Teton National Park, which overlaps with the home ranges of two wolf packs (as of 2015). Jenkins Smith et al. (2014) identified that more research is warranted on how local knowledge serves as an information input into the policy process. This chapter suggested that knowledge of local citizens' policy and management preferences can help agency wildlife managers to address human-wolf conflict.

Chapters 3-6, which are the empirical chapters in this dissertation, are structured in journal article format; hence, there is some repetition in the information presented as related to the case study. Finally, in the conclusion, I presented recommendations on actions that may reduce conflict within the policy process. Other researchers have offered similar recommendations in the past (e.g.,



Clark, Curlee, & Reading, 1996; Clark, Rutherford, & Casey, 2005; Nie, 2003; Wilmot & Clark, 2005), but the challenges of wolf management remain as there has been little progress to secure common-interest policy solutions to wolf management in Wyoming.

## References

- Clark, T. W., Curlee, A. P., & Reading, R. P. (1996). Crafting effective solutions to the large carnivore conservation problem. *Conservation Biology*, 10(4), 940–948.
- Clark, T. W., Rutherford, M. B., & Casey, D. (Eds.). (2005). *Coexisting with Large Carnivores: Lessons from Greater Yellowstone*. Washington, D.C.: Island Press.
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.
- Larimer, S. (2015, February 12). The gray wolf spotted near the Grand Canyon this fall has already been killed by a hunter. *The Washington Post*. Washington, D.C. Retrieved from <https://www.washingtonpost.com/news/speaking-of-science/wp/2015/02/12/the-gray-wolf-spotted-near-the-grand-canyon-this-fall-has-already-been-killed-by-a-hunter/>
- Nie, M. (2003). *Beyond Wolves*. Minneapolis, MN: University of Minnesota Press.
- Padilla, A. (2016, July 18). Gray wolf population increasing in Colorado. *Fox 31 Denver*. Denver, CO. Retrieved from <http://kdvr.com/2016/07/18/you-may-start-seeing-gray-wolves-in-colorado/>
- Prettyman, B. (2014, October 30). Wolf from Idaho-Canada pack apparently roams through Utah. *The Salt Lake Tribune*. Salt Lake City, UT. Retrieved from <http://www.sltrib.com/news/1689851-155/utah-wolf-wolves-wildlife-state-collar>
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The Advocacy Coalition Framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (1st ed., pp. 117–166). Boulder, CO: Westview Press.
- Sabatier, P. A., & Weible, C. M. (2007). The Advocacy Coalition Framework: Innovations and clarifications. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (2nd ed., pp. 189–220). Boulder, CO: Westview Press.
- Traverso, J. (2015, August 20). CDFW news photo shows wolf pups in northern California. *California Department of Fish and Wildlife*. Retrieved from <https://cdfgnews.wordpress.com/2015/08/20/photo-shows-wolf-pups-in-northern-california/>
- U.S. Fish & Wildlife Service. (1987). *Northern Rocky Mountain Wolf Recovery Plan*. Denver, CO.

Wilmot, J., & Clark, T. W. (2005). Wolf restoration: A battle in the war over the West. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 138–173). Washington, D.C.: Island Press.

CHAPTER 2

WOLVES IN WYOMING:

THEORY, THE CASE STUDY, & METHODS

## **2.1 Introduction**

The 2004 World Parks Congress defined human-wildlife conflict (HWC) as “[occurring] when the needs and behavior of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact the needs of wildlife” (World Parks Congress, 2004, p. 259). HWC includes direct conflict between people and wildlife as well as conflict between people over how to manage wildlife as a result of “different goals, attitudes, values, feelings, levels of empowerment, and wealth” (Madden, 2004, p. 250). The latter expanded definition captures well the challenges of managing wolves in the Northern Rockies over the past several decades. Wolf recovery, policy, and management are characterized by persistent conflict, exhibited through lawsuits and court-ordered Endangered Species listing decisions. Despite the biological recovery of the species, consistent with the goals of the U.S. Fish and Wildlife Service’s (USFWS) Northern Rocky Mountain Wolf Recovery Plan (1987), political conflict among stakeholders continues, indicating a need for policy change.

## **2.2 Carnivore Policy Research in the Greater Yellowstone Ecosystem**

Scholars have addressed the challenging topic of large carnivore policy and management in the Greater Yellowstone Ecosystem for several decades. Writing

prior to reintroduction, Clark and Minta (1994) reflected that technical information was not lacking for reintroduction; however, the decision-making process was hampered by “states’-rights politics and cultural inertia (e.g., “wolves threaten livestock, wild ungulates, and people”)” (p. 93). These sentiments have not changed significantly in the decades since. Nie, in his book *Beyond Wolves* (2003), tackled questions related to political conflict, decision-making, and stakeholder involvement at a time when wolves were still on the endangered species list. He emphasizes the role of power and values in the debate over wolf management, and called for attention to the policy process:

From strategically defining the ‘wolf problem’ and setting the agenda to the struggle over political compromise and implementing the ESA, process matters and invariably affects the content of public policy. Process affects outcomes. Wolves are being reintroduced and managed during a period in which existing decision-making processes are being seriously challenged. The use of stakeholders and public participation will likely affect wolves and other wildlife well into the future. (Nie, 2003, p. 210)

There is also a need to improve policy and decision processes in carnivore management with the goal of achieving common-interest outcomes. In the current system of wildlife management, one “conspicuous failing...is that it often seems to serve special interests at the expense of the common interest” (Clark, Rutherford, & Casey, 2005, p. 17). This observation begs the question of what the common interest is, and who defines it, particularly in a policy realm overwhelmingly populated with what could be construed as special interests. One way of learning and advancing progress towards the common interest, however, is through prototyping, where small-scale, creative, and often locally-centered projects are implemented to address

damage from carnivores, as well as to “change carnivore meanings” (Clark & Milloy, 2014; Clark et al., 2005, p. 20). “Bottom-up” efforts have been implemented successfully in a few cases across the West, such as the Blackfoot Valley in Montana (Primm & Wilson, 2004; Wilson, Madel, Mattson, Graham, & Merrill, 2006). However, these types of projects, as well as efforts to improve the policy process for enhanced stakeholder participation and common-interest outcomes, have yet to be seen in Wyoming’s large carnivore management.

### **2.3 The Advocacy Coalition Framework**

Though policy scholarship is not new to this problem, as discussed in the previous section, the specific policy outcome of Wyoming’s wolf management plan had not been analyzed in depth. The Advocacy Coalition Framework (ACF) provides a theoretical lens through which to analyze long-term policy problems by focusing on the dynamics of stakeholders acting to address a policy problem (Jenkins-Smith, Nohrsted, Weible, & Sabatier, 2014; Sabatier & Weible, 2007). Here, I provide a brief overview of key aspects of the ACF that will be discussed in more depth in the following chapters. Note that because the following empirical chapters are formatted as journal articles, there will be some redundancy in the following section with literature presented later in the dissertation. For example, Chapter 4 again discusses beliefs as per the ACF’s structure.

Fundamental to the ACF is the understanding that the policy process is a complex and dynamic system comprised of stable parameters, events, and actors that shape policy subsystems, which are the primary unit of analysis (Sabatier &

Jenkins-Smith, 1999). Policy subsystems are geographically- and topically-bounded policy issues or problems involving an array of policy actors, or stakeholders, who organize into coalitions to advocate for their preferred policy outcomes (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). A policy subsystem may contain up to five coalitions competing for a successful outcome in the policy process for their constituency. The ACF is useful to study policy problems that have spanned significant time periods, such as a decade or longer, and yet remain intractable. These long-standing policy conflicts are referred to as “mature” subsystems (Sabatier & Weible, 2007).

Key to the formation of coalitions are the beliefs of the individual actors within the policy subsystem. Three layers of beliefs are identified. Most intrinsically are *deep core beliefs*, which likely will not change regardless of the acquisition of new information. Examples of deep core beliefs may include the role of government or the relationship of humans to nature (e.g., biocentrism or anthropocentrism). These beliefs are independent of the issues associated with the policy subsystem or policy issue; in other words, they are “valid across subsystems” and have been identified through previous ACF scholarship (e.g., Matti et al., 2011). The second tier, *policy core beliefs*, are unique to the policy subsystem and reflective of the policy problem at hand. These may include beliefs about the seriousness of the policy problem, as well as its causes and solutions. Empirical preferences, articulated through the preferred solutions to a policy problem, are a subset of policy core beliefs referred to as *policy core policy preferences*. Policy core beliefs are

typically the basis for the formation of coalitions, where members share similar policy core beliefs and coalesce around them to advocate for particular outcomes. In sum, policy core beliefs form the rationale for strategic coordination of policy actors to address a particular problem. Finally, *secondary beliefs* are those that dictate the specific actions or rules that should govern a policy issue in a particular place. They are less fundamental than policy core beliefs; coalitions may coalesce around policy core beliefs, but have alternative secondary core beliefs as to how the specifics of a policy are implemented (Jenkins-Smith et al., 2014; Sabatier & Jenkins-Smith, 1999; Sabatier & Weible, 2007). Ultimately, policy core beliefs are manifested in advocacy coalitions, where “policy participants strive to translate components of their belief systems into actual policy before their opponents can do the same” (Sabatier and Weible, 2007, p. 196).

Also critical to the identification and formation of coalitions is that members engage in a “non-trivial degree of coordination” (Sabatier & Jenkins-Smith, 1999; Sabatier & Weible, 2007; Weible, 2005). Policy core beliefs, as discussed above, provide the impetus for coalitions to coordinate their behavior in order to achieve their preferred policy solution or outcomes (Sabatier & Jenkins-Smith, 1999; Zafonte & Sabatier, 1998). Deep core beliefs, however, do not influence coalition coordination (Matti et al., 2011). Recent ACF research has called for additional clarification on the demarcation of beliefs (Jenkins-Smith et al., 2014). In particular, the concept of deep core beliefs has been criticized for “ad hoc” and inconsistent definitions. Researchers have advocated for a consistent measure of



this variable, perhaps utilizing cultural theory as a metric for better identifying deep core beliefs (Ripberger, Gupta, Silva, & Jenkins-Smith, 2014). Further analysis of deep core beliefs is beyond the scope of the research presented here; however, it is acknowledged that the premise of belief systems, and particularly the demarcation of deep core beliefs, is ripe for further clarification. Acknowledging the complications between the relationships of individual identify formation and deep core beliefs, the existing ACF literature coalesces on the idea that policy core beliefs and coordination form the basis of coalition formation, and will be the focus of examination in this research.

Coalition members may be politicians, government officials, and interest groups or thought leaders, business and non-profit representatives, as well as researchers, consultants, and media (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007; Weible, Sabatier, & McQueen, 2009). A policy subsystem contains at least one coalition, and may contain up to five, which is the upper limit currently identified in the literature (Jenkins-Smith et al., 2014). ACF identifies two types of policy subsystems: adversarial and collaborative. Subsystems that exhibit little to no learning across coalitions, due to the polarity of beliefs of each coalition, are considered adversarial. In these cases, coalitions look to secure the upper hand in the policy conflict however possible, and policy outputs have clearly identified winners and losers. In adversarial subsystems, coalitions utilize a variety of venues in order to outcompete their rival coalitions, including the court system. In contrast, collaborative subsystems may have coalitions that share some beliefs and seek

outcomes that secure common-interest solutions (Weible, Pattison, & Sabatier, 2010; Weible & Sabatier, 2009).

Coalitions use resources and strategies to advocate for their preferred policy outcomes. Several studies have evaluated the importance of seven identified critical resources (e.g., legal authority, public opinion, information, mobilizable troops, financial support, and leadership) (Sabatier and Weible, 2007, pp. 201-203). Tactics include litigation, lobbying, research, and engaging the public (Elliott & Schlaepfer, 2001b), and may be engaged across different venues such as legislatures or the courts (Weible, 2007). Researchers have analyzed the efficacy of different strategies on achieving policy change. For example, Pierce (2016) linked the use of resources to strategies in an analysis of fracking policy in Colorado, finding that the winning coalition used resources of leadership and information technology across a variety of tactics to its advantage.

One of the initial motivators for the development of the ACF was the role of scientific and technical knowledge, and its use within coalitions to substantiate belief systems (Sabatier & Jenkins-Smith, 1999). Recent ACF scholarship has asked how alternative forms of knowledge – specifically, local knowledge – may also play into policymaking processes (Jenkins-Smith et al., 2014). Collaborative and adversarial subsystems may use scientific information differently: the former is more likely to see it as a “tool” for learning and policy incorporation, while the latter leans on scientific or technical information as a “weapon” to leverage against opponents (Weible & Sabatier, 2009, p. 208). Further research substantiated this

finding, whereby scientists or experts in collaborative subsystems were not found to be either coalitions' allies or opponents, and scientific information, again, was used as a relatively apolitical tool in the policy-making process (Weible et al., 2010). Future research should analyze if and how the use of local knowledge in the policy process follows similar trends.

In addition to spurring the development of associated theory exploring the role of narratives in the policy-making process, (Jones, McBeth, & Shanahan, 2014; McBeth, Shanahan, & Jones, 2005; Shanahan, Jones, & McBeth, 2011; Shanahan, McBeth, & Hathaway, 2011), which will be further discussed in the context of the media analysis presented in Chapter 3, the ACF has been used to analyze policy dynamics across a number of substantive topics, including natural resource policy (Elliott & Schlaepfer, 2001a; Villamor, 2006; Weible, 2005, 2007), national intelligence policies (Nohrstedt, 2011), fracking (Pierce, 2016), wind power development (Jegen & Audet, 2011), disasters (Albright, 2011; Albright & Maguire, 2009), and others. Over several decades, scholars have presented periodic revisions to the framework based on new research (Jenkins-Smith et al., 2014; Sabatier, 1993; Sabatier & Jenkins-Smith, 1999; Sabatier & Weible, 2007; Weible et al., 2009). The ACF has proven to be a dynamic and tested theory of the policy process. In this research I explore its application to the wolf policy issue to assess its explanatory powers. Initial evidence suggests the ACF has promising potential because the policy subsystem studied here is well-defined geographically and topically. Second, this policy subsystem has existed for several decades, filling the

ACF's criterion that suggests its applicability to policy subsystems that have existed over a decade or longer. The long-term and contentious nature of Wyoming's wolf policy subsystem indicates that the ACF provides an apt framework for investigation into coalitions and coalition behavior.

## **2.4 The Context and Roots of the Wolf “Problem”**

Large carnivores are subject to increasing threats stemming from a diversity of sources, including habitat loss, illegal wildlife trade, disease, (Weber & Rabinowitz, 1996) and conflicts with humans (Madden & McQuinn, 2014). These animals are integral to ecosystem health, but their spatial and biological needs make them challenging neighbors for human communities. Nonetheless, they capture the public imagination, as evidenced by works of popular literature examining the nature of human relationships with large carnivores.<sup>1</sup>

In essence, carnivores are essential to global biodiversity conservation – but their management is often deeply challenged by politics, culture, and symbolism. The wolf is a particularly polarizing species. Thus, it is one of the most – if not *the* most – challenging carnivore species for which we endeavor to design policy and management strategies to achieve acceptable outcomes for a diversity of interests, not the least of which is the long-term conservation of the species itself.

In an ecological sense, the challenges of carnivore conservation are inherently related to competition with humans for space and food, which results in conflicts (Ripple et al., 2014). Practically, these challenges manifest themselves perhaps

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<sup>1</sup> See, for example, *Monster of God: The Man-Eating Predator in the Jungles of History and the Mind*, by David Quammen (2003) and *Where the Wild Things Were*, by William Stolzenburg (2008).

most frequently through livestock depredations, where large carnivores kill and eat domestic livestock that are an important economic resource to both individuals and communities (Fritts, Stephenson, Hayes, & Boitani, 2003; Treves & Karanth, 2003). Management agencies often use lethal control of wolves in order to address livestock depredation (Bergstrom et al., 2014), though results are mixed in terms of the ability of this method to improve tolerance and reduce the potential for future conflicts (Fernández-Gil et al., 2016), or to reduce predator population numbers (Wielgus & Peebles, 2014). The other primary area of conflict is over hunting, particularly of moose and elk in North America.

Socially, humans and wolves have a history wrought with a classic “love-hate” relationship. Negative views of wolves as bloodthirsty predators have persisted throughout cultures and history, resulting in the eradication of the wolf in numerous geographical contexts (Fritts et al., 2003). Examples include the elimination of wolves in Great Britain and Scotland (Boitani, 1995; Nilsen et al., 2007) and Japan (Walker, 2005), as well as the poisoning and trapping of wolves in North America as settlers arrived and moved westward (Boitani, 1995; Coleman, 2004). Fritts et al. (2003) observe:

Predators probably posed an important risk to humans for much of our history, and wolves, though as widespread as snakes, have flanked the development of culture from the time early humans colonized Eurasia. Conservation efforts around the world must contend with the long-standing fears. Negative perceptions of the wolf make it difficult to find a compromise between human interests and wolf conservation.” (p. 290)

On the contrary, wolves have been revered in some cultures as spiritually important, particularly observed in Native American beliefs (Casey & Clark, 1996).<sup>2</sup> Nonetheless, in contrast to frequently-held perceptions by both wolf supporters and critics today, the wolf historically did not enjoy an “elevated” status above other animals (Fritts et al., 2003; Lopez, 1978). In North America, settlers brought their entrenched cultural trappings of wolves with them, both emotional (e.g., fear) and practical (e.g., livestock depredation). Fritts et al. (2003) continue, “The wolf ultimately became a metaphor for the environmental challenges the new North Americans had to contend with and felt a moral obligation to subdue. The goals of subjugating wolves and wilderness became synonymous” (p. 293). Subsequently, wolves were targeted for eradication with the westward expansion of settlers, culminating with a federally-sponsored program in the early 1900s that paid hunters to target the last of the wolf population in the lower 48 states (Boitani, 1995; Coleman, 2004).

## **2.5 Northern Rockies Wolf Policy & Management History**

In western North America, trappers and settlers extirpated wolves from much of their historical range by the early part of the twentieth century. The last wolf was killed in Yellowstone National Park in 1936, despite the preservation mandate of the National Park Service (Smith, Brewster, & Bangs, 1999). Managers considered wolves to be vermin and a detriment to ungulate herds. Public sentiment

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<sup>2</sup> In Denise Casey and Tim W. Clark’s volume, *Tales of the Wolf* (1996), the authors compile stories of wolf interactions and beliefs from nine different Native American tribes. This volume also presents stories from settlers, explorers, naturalists, and others with wolf experiences prior to their eradication in the early part of the twentieth century.

slowly changed over the following decades (Coleman, 2004). Aldo Leopold was one of the first land managers to advocate for the reintroduction of the wolf as a viable tool to restore ecosystems degraded by over-grazing – despite his earlier heavy-handed management preferences. Likely his most oft-quoted passage concerns his experience shooting a female wolf – and watching “a fierce green fire dying in her eyes” (Leopold, 1966, p.138). After this experience, Leopold articulated his “land ethic,” advocating for humans to embrace responsibility towards protecting and respecting the natural world (Leopold, 1966).

The 1970s ushered in an era of environmental legislation. With the passage of the Endangered Species Act (ESA) in 1973 by Congress,<sup>3</sup> wolves were added to the list of threatened and endangered species in 1974.<sup>4</sup> The ESA mandates that the USFWS prepare a recovery plan for any endangered species, and so with the addition of gray wolves to the List, a federal endeavor began to restore the species to the lower 48 states. The first step in this process was the appointment of a Wolf Recovery Team in 1974, which was tasked with developing the recovery plan. The Recovery Team was comprised of eleven individuals representing different organizations and interests, including three people who represented entities outside federal or state government agencies – one stockman, one academic from the University of Montana, and one environmental non-governmental organization (NGO), the National Audubon Society. Federal agencies included: U.S. Forest

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<sup>3</sup> See Table 2 for a timeline of major policy milestones in wolf reintroduction and recovery.

<sup>4</sup> Wolf populations were endangered in the United States, but globally, the species has never been considered endangered or threatened.

Service (two representatives), Bureau of Land Management (one representative), National Park Service (two representatives), and USFWS (one representative, who was the Team Leader). State agencies represented included Montana Department of Fish, Wildlife, and Parks (one representative) and Idaho Department of Fish and Game (one representative). Wyoming did not have a state emissary despite that much of Yellowstone National Park, which was a proposed site for reintroduction, is contained within the state's boundaries.<sup>5</sup>

The USFWS and the Northern Rocky Mountain Wolf Recovery Team released a draft recovery plan for the Northern Rockies in 1982. After several years of revisions, in 1987 the USFWS adopted a final recovery plan for this region.<sup>6</sup> Two primary means of population recovery were identified: “natural recolonization,” where wolves would re-enter recovery areas and establish themselves without human assistance, and “reintroduction,” where wolves would be relocated from source populations and released in the appropriate location identified by the Recovery Team. Initially, reintroduction was considered for only Yellowstone National Park; the Central Idaho recovery area as well as western Montana were thought to be appropriate for natural recolonization (USFWS, 1987), though wolves

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<sup>5</sup> Acknowledgements in the plan recognize several other individuals who participated in various recovery meetings, including members of the National Woolgrowers' Association and another individual who founded a non-profit organization dedicated to wolf recovery, The Wolf Fund. As expressed in their bylaws, the Wolf Fund disbanded following the reintroduction of wolves in 1995. Renee Askins, the founder of The Wolf Fund, was a pivotal advocate for wolves in the years leading up to reintroduction. She documented her experience in her memoir: *Shadow Mountain: A Memoir of Wolves, a Woman, and the Wild* (2004).

<sup>6</sup> The USFWS also identified a second Distinct Population Segment (DPS) of wolves, the Western Great Lakes, and a recovery plan was also adopted in 1978 and revised in 1992. This plan required a “stable or growing” Minnesota population (of around 1500 animals), and essentially a Wisconsin-Michigan population of 100 animals (USFWS, 1992).



ultimately were reintroduced to Central Idaho in 1996. The Recovery Plan also suggested the creation of a “control plan” to address wolf-livestock conflicts, as well as ongoing research and monitoring over the recovery period (USFWS, 1987).

Finally, the Plan established the biological recovery goals for the species.

Specifically, the Northern Rocky Mountain wolf would be removed from the Endangered Species List once ten breeding pairs of wolves and 100 individuals had been documented in each of the recovery zones for at least three successive years.

Once the population reached this numeric recovery target, the delisting process would be initiated (USFWS, 1987).

Pursuant to the requirements of the National Environmental Policy Act (NEPA) (1970), the USFWS was directed by Congress to prepare an Environmental Impact Statement (EIS) for the “reintroduction” alternative proposed in the Recovery Plan. It took another eight years for the USFWS to issue the final EIS, in 1994, which identified reintroduction as the preferred alternative. One of the key compromises in the final EIS was the invocation of the ESA’s 10(j) rule, which allows the USFWS to categorize a reintroduced species as an “experimental and non-essential population,” to provide for greater management flexibility. In practice, managers could address wolves causing conflicts on public lands; for example, if individuals or packs were caught harassing or killing livestock, or “depredating,” they could be lethally controlled (50 CFR Part 17, 2008).<sup>7</sup>

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<sup>7</sup> In 2010, the rule was amended in Montana and Idaho to include lethal control as a management option in areas where wolves had substantially reduced ungulate populations.

In January 1995, federal officials released fourteen wolves into Yellowstone National Park and fifteen to central Idaho (Bangs & Fritts, 1996; Smith, Brewster, & Bangs, 1999).<sup>8</sup> In 2002, data collected through the monitoring of radio-collared wolves indicated that the biological goals of the recovery plan had been met and various stakeholders, particularly in the agricultural and outfitter sectors, called for the delisting process to begin.

## **2.6 Wyoming's Wolf Management Plan**

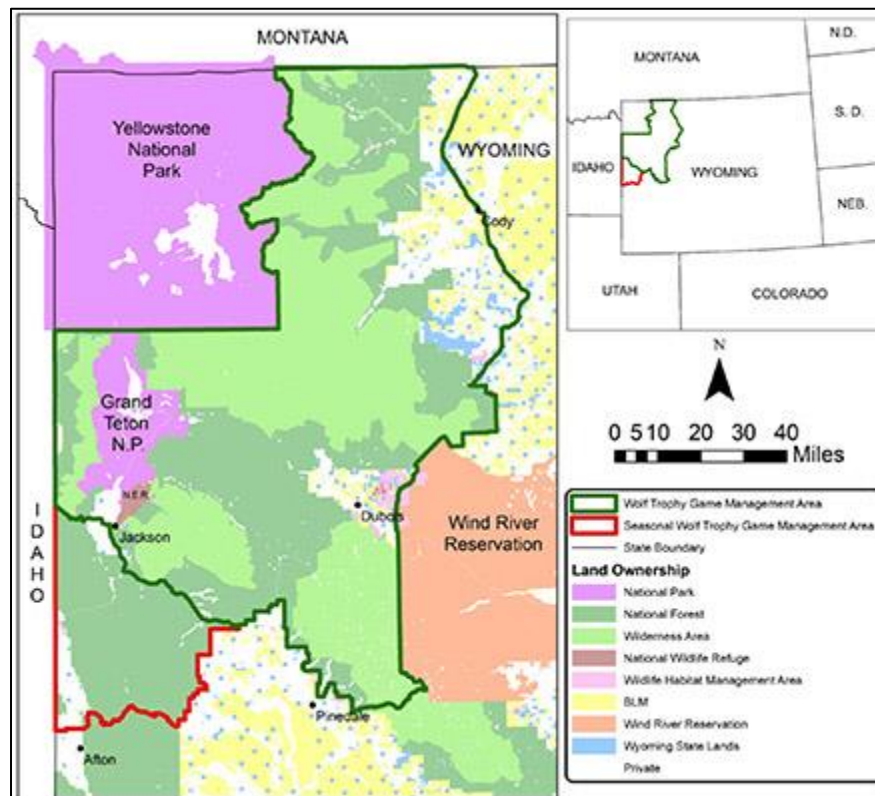
As a condition of delisting, the ESA required each of the states managing a recovery zone (Montana, Idaho, and Wyoming) to prepare a wolf management plan to be approved by USFWS (USFWS, 1987). Wyoming's plan was unique in that wolves held a "dual-status" designation, as either trophy game or predator depending on the animal's geographic location within the state. Wyoming was the only state containing one of the three recovery areas to propose this management approach. In the predator zone, a wolf could be killed at any time, by any method except poison, without a hunting license. Following the legal take of a wolf in the predator zone, the individual responsible for removing the wolf had to report it to the state management agency, Wyoming Game & Fish Department (WGFD). In northwest Wyoming, the proposed management plan declared wolves outside of Yellowstone and Grand Teton National Parks trophy game. Similar to other trophy game wildlife species, WGFD proposed to establish a hunting season, and hunters had to possess a valid wolf tag in order to harvest an animal (Wyoming Game &

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<sup>8</sup> In January 1996, officials conducted a second release to supplement the 1995 reintroduction.

Fish Commission, 2011). Wolves were protected from hunting within the national parks.<sup>9</sup> For comparison, in Montana and Idaho, wolves were designated as trophy game throughout the state (Idaho Legislative Wolf Oversight Committee, 2002; Montana Fish, Wildlife, & Parks, 2002).

Figure 2.1: Map of Wyoming's wolf management areas.  
(Wyoming Game and Fish Department, n.d.)



The USFWS rejected Wyoming's management plan because of the dual status designation. However, in early 2012, after several years of negotiations, the agency approved a plan that provided for dual status management. The central difference

<sup>9</sup> The John D. Rockefeller Memorial Parkway, which connects Grand Teton and Yellowstone National Parks, is federally managed by the National Park Service, though without the “national park” designation. WGFD retains authority to manage wildlife in the region of the Parkway. In theory, a wolf hunting area could be established legally here.

between the new plan and previous one was the addition of a “flex zone,” in which wolf predator and trophy game status changes depending on the time of year. (See Figure 2.1 for a map of Wyoming’s wolf management areas.) This compromise was intended to provide for increased genetic connectivity between the wolf populations in western Wyoming and eastern Idaho (Wyoming Game & Fish Commission, 2011), as wolves in these two areas would be protected during the primary months of dispersal. Whether this compromise achieves the intended goal of protecting wolves during dispersal remains unknown.

## **2.7 The Delisting Process<sup>10</sup>**

The first wolf delisting rule was published by the USFWS in March of 2008, after the agency approved management plans for the three states in the recovery zone – Montana, Idaho, and Wyoming – that would ensure the long-term maintenance of wolf populations in accordance with the original recovery goals. The decision of a subsequent lawsuit by environmental groups reinstated protection in July of 2008 in all three states due to the inadequacy of Wyoming’s wolf management plan (*Defenders of Wildlife, et al., v. Hall, et al.*, 2008). The USFWS responded by delisting wolves in only Idaho and Montana in March of 2009. Litigated yet again by environmental groups in June 2009, this “partial-delisting” decision was challenged on the grounds that wolf populations could not be delisted in some states and not others, based on the idea of the “Distinct Population Segment” (*Defenders of Wildlife, et al. v. Salazar, et al.*, 2010). Wolves returned yet

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<sup>10</sup> Figure 2.2 provides an overview of the key dates in wolf policy history.

again to the Endangered Species List in all three states in August of 2010. The political and legal tug-of-war tapered somewhat in early 2011, when the USFWS delisted the wolf populations in Idaho and Montana as well as in other states that had wolves present due to dispersal, but were not considered part of the recovery zone: Oregon,<sup>11</sup> Washington, and Utah (76 FR 25590, 2011). Though this move was technically still a “partial delisting” decision, Congress had directed the USFWS Congress to proceed with delisting through a rider in an appropriations bill. For the first time in the history of the Endangered Species Act, delisting was forced by Congress, which thereby set a precedent for delisting of endangered species by political action (Barringer & Broder, 2011; Cathcart, 2013).

The USFWS continued to work with Wyoming, and approved its wolf management plan in October of 2011. On March 8, 2012, Governor Matt Mead signed Wyoming’s wolf management bill into law, and the USFWS turned management of Wyoming’s wolf packs over to the state on September 30, 2012 (USFWS, 2012). The USFWS asserted, “Across the Northern Rockies (which includes the Greater Yellowstone, central Idaho, and northwest Montana subpopulations), the gray wolf population is biologically recovered, with more than 1,774 wolves and 109 breeding pairs. This population has exceeded recovery goals for 10 consecutive years, fully occupies nearly all suitable habitat, and has high levels of genetic diversity” (Katzenberger, 2012). Dan Ashe, the director of the

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<sup>11</sup> Oregon delisted its wolves from the state Endangered Species list in early 2016.

USFWS at the time, said in a June 2013 blog post announcing the final delisting rule:

We have brought back this great icon of the American wilderness. And as we face today's seemingly insurmountable challenges, today's critical voices, today's political minefields, let this success be a reminder of what we can accomplish. We can work conservation miracles, because we have. The gray wolf is proof. (Ashe, 2013, para. 14)

Nonetheless, environmental groups contested the decision to remove Wyoming's wolves from the Endangered Species list after a 90-day waiting period. In

September of 2014, a U.S. District Court decision in Washington, D.C., returned

Wyoming's wolves to the endangered species list and the USFWS resumed

management once again (*Defenders of Wildlife, et al., v. Jewell, et al.*, 2014). This

decision was primarily based on Wyoming's lack of commitment "in writing" in its management plan to maintaining a population buffer above the recovery goals.

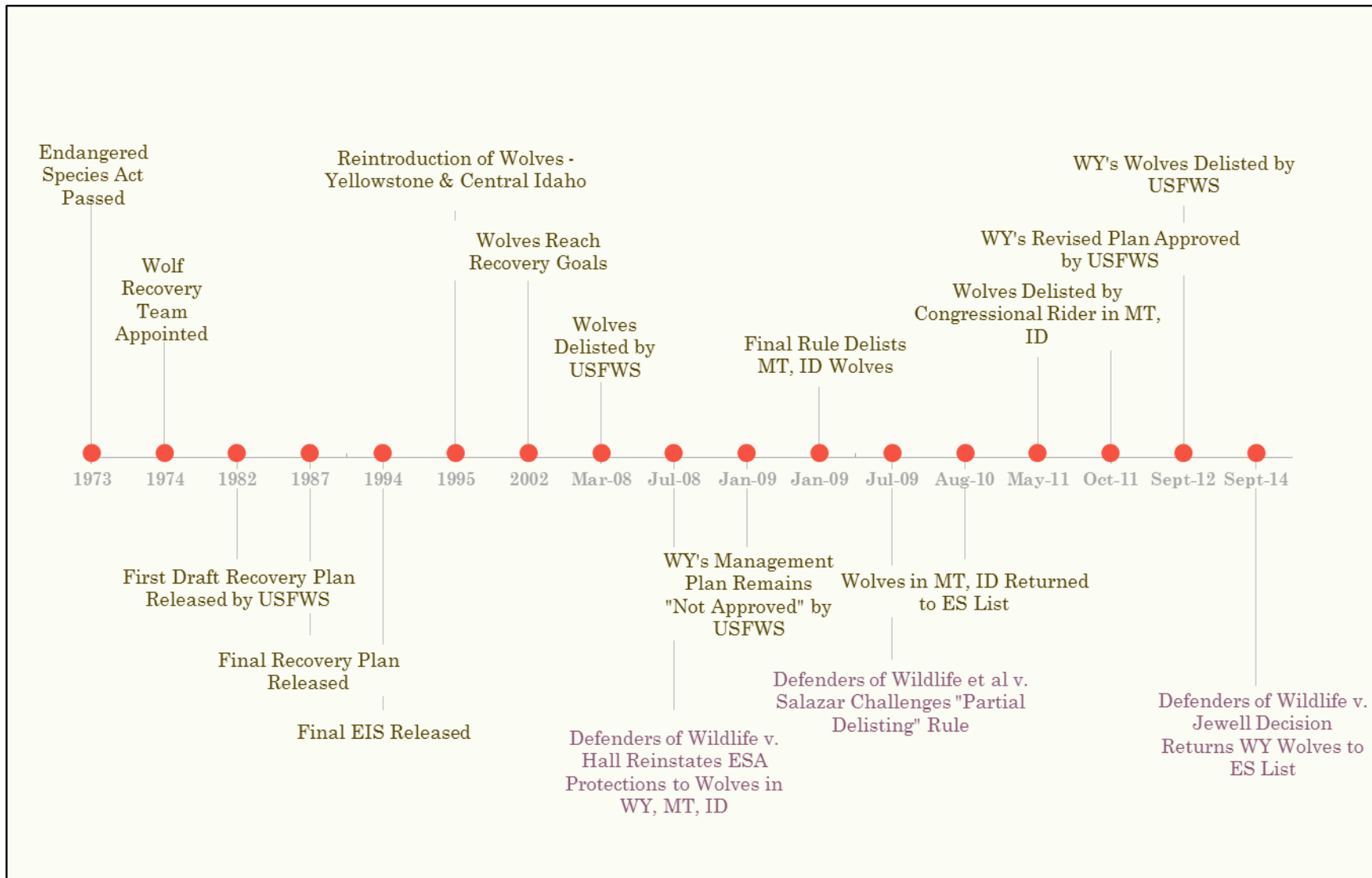
However, the two other primary arguments made by the plaintiffs, regarding "level of genetic exchange" and "endanger[ment] within a significant portion of its range," were not warranted. The Court stated:

The Service could not reasonably rely on unenforceable representations when it deemed Wyoming's regulatory mechanisms to be adequate. Given the level of genetic exchange reflected in the record, the Court will not disturb the finding that the species has recovered, and it will not overturn the agency's determination that the species is not endangered or threatened within a significant portion of its range. But the Court concludes that it was arbitrary and capricious for the Service to rely on the state's nonbinding promises to maintain a particular number of wolves when the availability of that specific numerical buffer was such a critical aspect of the delisting decision. (*Defenders of Wildlife, et al., v. Jewell, et al.*, 2014, p. 2)

This decision essentially reinforced USFWS's justification of its decision to remove wolves from the Endangered Species List, yet required Wyoming to commit to a

specific population buffer that would ensure that the state would not let its wolf numbers fall below the recovery goals and thus trigger a return to the Endangered Species list. Since September 2014, wolf management in Wyoming has been under the jurisdiction of the USFWS, with minimal involvement by the WGFD.

Figure 2.2: Timeline of major wolf policy milestones





## **2.8 An Overview of Key Issues in Wolf Management**

The following sections present a brief overview of issues critical to consider in Wyoming's wolf management plan. Where appropriate, they will be discussed in more detail in the following chapters.

### *2.8.1 Hunting*

Hunting of wolves by humans played a significant role in their extirpation in the United States. Partially because of this legacy, wolf hunting today remains controversial. As Mech (2010) observed, “With wolves recently on the [Endangered Species List], much of the public finds it hard to believe, distasteful, or dismaying that wolves can now be harvested. Conversely, many ranchers, outfitters, guides, and sportsmen living with recovered wolf populations are relieved that they can now help control or legally harvest wolves” (p. 1421). While wolves were protected under the Endangered Species Act, hunting was prohibited. However, with the advent of state management in both the west and the Midwest, hunting was included in management plans as an acceptable practice and tool for management. In Sweden, hunting policy is dictated through a collaborative process designed to improve communication among stakeholders, with the justification that “collaborative licensed hunting was the only way to deal with social conflicts arising from the existence of wolves and to increase their acceptance in rural areas” (Cinque, 2015, p. 158). In the United States, this reasoning has been applied in a broader sense, in that there is a persistent belief on the part of managers that both hunting and lethal control of problem wolves increase social tolerance for the

animal in areas where it isn't necessarily welcomed. Vucetich & Nelson (2014) summarize succinctly the ethical arguments surrounding the hunting of wolves, which are too extensive to cover thoroughly here. Relevant to the justification that hunting wolves is a tool in generating social tolerance among the less-supportive public, they offer that the "hunt 'em to conserve 'em" argument, as proposed above, and the associated result of "increasing social tolerance" falls short:

In particular, if intolerance is judged by the act of poaching, rather than by attitudes that are verbally expressed in surveys, then there are reasons to believe intolerance will decline. This intolerance is caused by the risk that some perceive in wolves. Considerable evidence suggests that perceived risk tends to decline as humans become increasingly familiar with the source of the perceived risk. Also, wolf intolerance is likely not distinct from other irrational intolerances (such as racism or sexism). That is, no one expects individual wolf haters to change their attitudes. Instead, over time their behaviors become less tolerated, and their attitudes become less common as the people holding them pass away. (Vucetich & Nelson, 2014, pp. 11–12)

Thus, if the primary reason for holding a wolf hunt is to increase tolerance for the species, by the account of these authors, that goal is unlikely to be achieved.

Nonetheless, managers advocate for a hunting season for wolves in order to provide a means of promoting acceptance in rural areas. More research is warranted in this realm to determine the social impacts of wolf hunting.

Though there have not been extensive empirical studies analyzing changes in tolerance or beliefs following the advent of a carnivore-hunting season (Treves, 2009), Treves et al. (2013) reported increased support over time for a public wolf hunt among longitudinally-surveyed residents of Wisconsin. Concurrently, research from Wisconsin indicates that "pendulum swings" from endangered to delisted status and back again may spur backlash against wolves in the form of greater

frequency in the incidents of illegal killing (Olson et al., 2014). There is a dearth of published research on perceptions towards hunting of wolves in the Northern Rockies, so it is unclear as to whether these same findings hold true in a different cultural and geographical context.

Another issue recently documented regarding wolf hunting is its effects on wolf behavior in the periphery zones of national parks, where wolf packs move across political boundaries without regard to their protected status. In high-profile parks where wolf-viewing is a “destination” activity, such as Yellowstone and Grand Teton National Parks in Wyoming and Denali National Park in Alaska, the impacts of successful wolf hunts (or harvest) in hunt areas adjacent to the parks reduced wolf viewing opportunities, though sightings were also related to pack size and proximity of dens to roads (Borg et al., 2016). A previous study on the behavioral responses of wolves to elk hunting on the northern perimeter of Yellowstone National Park had found that wolves did not move into the park to avoid hunters (essentially, a “no response” result) (Ruth et al., 2003). The latter study, however, took place prior to the establishment of wolf hunts in Montana and Wyoming. Thus, wariness of wolves to humans may have shifted with the advent of a wolf hunt. It has also been posited that the success rates of wolf hunts are likely to be quite low, as well as incidental (i.e., an elk hunter spots a wolf and kills it, rather than embarking on a targeted wolf hunt) (Mech, 2010). In this regard, the findings of Borg et al. (2016) are useful to managers trying to balance both consumptive (e.g., hunting) and non-consumptive (e.g., wildlife viewing) opportunities in the midst of a

wolf hunt, as it seems reasonable to suggest that wolves become more sensitive to human presence when they are hunted.

From an ecological perspective, the impacts of hunting on wolf populations have only recently begun to be explored as wolf hunting, until the delisting of wolves in the lower 48, has predominantly been confined to Canada. The loss of a breeder, or one of the reproductive animals in a pack, may affect pack stability and lead to dissolution. Given that hunting and breeding seasons overlap, harvest of a breeder at this time could have implications for wolf expansion into new areas by arresting population growth (Borg, Brainerd, Meier, & Prugh, 2015).

### *2.8.2 Lethal Control*

Researchers have assessed the efficacy of lethal control as a means to address livestock conflict<sup>11</sup> with mixed results, depending on pack size, number of wolves removed, timing, and other variables (Bradley et al., 2015; Poudyal, Baral, & Asah, 2016; Wielgus & Peebles, 2014). In some situations, the removal of wolves associated with livestock depredations may reduce the future likelihood of recurrence (Bradley et al., 2015), though research in Minnesota found the opposite in that lethal control had no effect on depredations one year following the removal (Harper, Paul, Mech, & Weisberg, 2008). Though the efficacy of lethal control as a concrete tool to address depredation is not clear, it is important to point out that these studies do not address the social benefits of lethal control in terms of

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<sup>11</sup> Livestock depredation is the most likely scenario to date in which wolves would be lethally controlled in Wyoming. In other states, particularly Idaho, lethal control measures have been justified to remove wolves due to their impacts on elk herds.

cultivating tolerance for the presence of wolves. By virtue of managers “taking action” to address a livestock producer’s loss, it may be seen as evidence that at least managers are “doing something” to address a conflict. Thus, utilizing lethal control judiciously to address confirmed livestock depredations, particularly on private property, is likely necessary in order to address the concerns of some residents, despite the uncertainty regarding the long-term effects of this method of control.

### *2.8.3 Non-Lethal Control & Husbandry Approaches*

Non-lethal approaches to managing conflicts with wolves do exist, though their efficacy tends to be context-dependent. Biofencing, or using foreign scents to erect a virtual “fence” around an area to exclude predators, has been tested in Idaho, with mixed results in two adjoining years of testing. Preliminary indications with this approach point to the necessity of significant time invested to maintain the fence, which may limit its broad applicability (Ausband, Mitchell, Bassing, & White, 2013). Shivik (2006) identifies two types of non-lethal approaches:

“disruptive-stimulus” and “aversive-stimulus.” The former “disrupts” the movement or activity of the wolf, while the latter actively trains the wolf to avoid situations. Examples of disruptive-stimulus tools include fladry, which is specialized fencing with flags that deter wolves, and other types of electronic “guarding” mechanisms, which deploy flashing strobe lights or sirens when wolves approach the perimeter of an off-limits area. “Aversive-stimulus” tools, in contrast, directly impact an animal

(e.g., shooting with rubber bullets) or deliver a shock (through a collar) (Shivik, 2006), much as a misbehaving dog may be trained.

The use of fladry is actually an almost-medieval technique employed by hunters in eastern Europe to corral their prey; its use as a non-lethal tool was adapted by Polish researchers as a means of scaring wolves away from areas where their presence was undesirable (Shivik, 2014). However, wolves can grow accustomed to its presence, so over time the effectiveness of fladry may decrease. Electrified fladry is a relatively recent technological development that combines aversive and disruptive approaches by delivering an electric shock (aversive) when the wolf crosses the fenceline (disruptive). Researchers comparing the efficacy of both electrified and traditional fladry have found positive results with the electrified version in captive trials, in that it was more effective in deterring wolves from a food reward (Lance, Breck, Sime, Callahan, & Shivik, 2010).

Modifying animal husbandry practices can also help to reduce the potential for livestock depredation. Livestock guardian dogs have traditionally been used in pastoral landscapes around the globe to reduce the threat of predation on goats and sheep, though early North American settlers did not bring this knowledge or tradition with them. However, not much research has explored the efficacy of these dogs against wolves, particularly in regards to cattle (Gehring, VerCauteren, & Landry, 2010). Llamas and donkeys may also be effective wolf deterrents (Smith, Hutchinson, & DeNesti, 2014). Other approaches include maintaining a human presence (“Range Riders”), ensuring that attractants, such as carcass dumps or

dead livestock, are promptly removed (Wilson et al., 2006), and changes in livestock management, such as rotating pastures and fencing calving areas (Smith et al., 2014).

Again, however, the challenges of non-lethal approaches and some husbandry practices are related to time and expense (Shivik, 2006). Without an incentive to deploy these methods, it is easier for a livestock operator suffering depredations to call on the state management agency (or U.S. Fish and Wildlife Service in Wyoming) to address the issue. Only Oregon, to date, has implemented a policy whereby ranchers dealing with wolves among their livestock must “document unsuccessful attempts to solve the situation through non-lethal means” (Oregon Department of Fish and Wildlife, 2014, p. 7) prior to granting permission to use lethal control. Furthermore, it is unclear how much effort is deployed into outreach to livestock operators to employ non-lethal approaches. Finally, more research needs to address whether any of these techniques are practically deployable at large geographic scales, such as grazing allotments in the tens of thousands of acres.

#### *2.8.4 Economic Considerations*

Wyoming’s wolf management plan includes a compensation program for ranchers that have lost livestock to wolf depredation.<sup>2</sup> The rates for cattle lost are 7-to-1 for calves lost to wolves and one-to-one for yearlings, cows, and the rare bull. Research in central Idaho found the detection rate for wolf-killed calves was one to

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<sup>2</sup> Information regarding the details of the compensation program has been gathered from interview data as well as public documents. Public documents are cited where appropriate; due to the sensitivity of the interview data and IRB requirements, names of interviewees who provided information on the compensation program are redacted.

eight; in other words, for every calf killed and found, an additional seven calves were likely lost to wolves as well (Oakleaf, Mack, & Murray, 2003). These results subsequently informed the compensation rates that the state has adopted (though they are not formally spelled out in the 2011 plan). Only livestock losses located in the area of the state where wolves are trophy game are eligible for compensation. Those individuals who have livestock losses in rest of the state, where wolves have “predator” status, cannot receive compensation; however, predator status does afford those individuals the ability to lethally remove wolves without any oversight other than reporting a wolf mortality to the state within ten days.

Perhaps critical to the maintenance of the compensation program is long-term and secure funding. According to the management plan, the state will “pursue all possible funding sources” for this program; however, WGFD will “attempt to secure alternative funding sources to ensure revenues from hunting license fees do not become a major source of funding for the livestock compensation program” ((Wyoming Game & Fish Commission, 2011, p. 31). At the time the management plan was drafted, wolf compensation funds were allocated from the state’s general fund. Though wolves returned to the Endangered Species List in 2014 and are managed again by USFWS, the state of Wyoming still pays compensation to ranchers who sustain livestock losses.

In a different vein, wolves are a prime attraction for visitors to western states, particular Wyoming, as it is the home of both Yellowstone and Grand Teton National Parks. In 2005, a survey of visitors to Yellowstone found that 44% of



participants wanted to see a wolf, second only to a grizzly bear (55% of visitors). Furthermore, “wolf-focused” visitors spent approximately \$35.5 million across Montana, Wyoming, and Idaho, which was considered “direct expenditure impact” of wolves in Yellowstone (Duffield, Neher, & Patterson, 2008). Eco-tour operators and wildlife photographers are other stakeholders with vested interests in maintaining a healthy wolf population, though their focus (in contrast to livestock operators or hunters) is predominantly within or directly adjacent to the national parks.

The considerations mentioned above are persistent themes in discussions over how wolves should be managed, in Wyoming and elsewhere in the Northern Rockies. They will recur throughout the following chapters and be discussed in more depth as to how policy-makers should and do balance competing interests in how wolves are managed, both inside and outside of the National Parks.

## **2.9 Wolves in the Northern Rockies Today**

Since their reintroduction, wolves have thrived from a biological perspective, expanding throughout the northern Rockies to Oregon, Washington, and, in 2015, to northern California. There was an estimated total of 1,704 individuals and 282 packs according to the USFWS’s 2015 report (USFWS et al., 2016).

The *2015 Wyoming Wolf Recovery Annual Report* estimated that, at the end of the year, in total there were about 382 wolves in more than 48 packs in the state. Of these wolves, Yellowstone National Park’s population was 99 individuals in 10 packs, and the Wind River Indian Reservation had more than 19 wolves in 2 packs

(Jimenez & Johnson, 2016). The wolves in both Yellowstone National Park and the Wind River Indian Reservation do not count towards the state of Wyoming's recovery population numbers. Nonetheless, the population of wolves in the state at the end of 2015 far surpassed the original recovery targets of ten breeding pairs and 100 individuals articulated in the original recovery plan (USFWS, 1987).

Following delisting, as per section 4(g) of the Endangered Species Act, each of the three states are still required to work with USFWS, which monitors management and population numbers in each of the recovery areas for five years to ensure that management actions are not having a detrimental effect on the recovered population (USFWS, 1973). Montana and Idaho are currently in the middle of that "grace" period as of June 2016, while Wyoming's wolves continue to be managed by the U.S. Fish and Wildlife Service. Presumably, once Wyoming's wolves are managed by WGFD, Wyoming will commence its five-year review period as well.

Wyoming's wolf management approach is unique among other states in the country with recovered or recovering wolf populations. Furthermore, Wyoming is the only state in the west where wolves remain federally protected by the Endangered Species Act.<sup>13</sup> The final outcomes of the last lawsuit remanding wolves to the Endangered Species list, as well as the future trajectory of wolf management in Wyoming, remain unknown. These characteristics make Wyoming a worthwhile case study for investigation into the nature of long-term political conflict over

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<sup>13</sup> This designation is current as of September 30, 2016.

wildlife management, and its impacts on stakeholders and policy, particularly in light of future Endangered Species Act delisting efforts for other polarizing species.

## **2.10 Research Questions**

Using the theoretical lens of the ACF, wolf policy in Wyoming provides a rich case study to examine a policy subsystem characterized by conflict and coalition activity. The overarching research question examined throughout this dissertation is as follows: Why is conflict over wolf management in Wyoming perpetuated, despite the biological success of wolf recovery under the Endangered Species Act? In the following chapters, I address the specific research questions listed here:

- RQ1: What are general patterns of media coverage of wolf issues?  
What are the major frames used to describe wolf policy issues? How are narratives constructed in wolf policy issues? (Chapter 3)
- RQ2: What advocacy coalitions exist in the wolf policy subsystem?  
What are their belief systems? Subsequently, have intracoalition dynamics changed as a result of long-term policy conflict? (Chapter 4)
- RQ3: What are the effects on the policy subsystem of the final “policy output” (Wyoming’s wolf management plan)? What were the policy effects of the subsequent relisting of Wyoming’s wolves in 2014? (Chapter 5)
- RQ4: What policy lessons can be learned from the case of Wyoming’s wolf management and policy for future conflicts over Endangered Species listing, delisting, and management? (Chapter 5)

- RQ5: What role do local citizens play in contributing to wolf management policy? How can the process by which local citizens access and participate in the policy process be improved? (Chapter 6)

### **2.11 Methods: Case Study Research Design**

This study employs an in-depth single case study approach. Given the uniqueness of Wyoming's wolf management plan, this single-case design approach is appropriate (Yin, 2009). Wyoming's wolf management plan is distinct among the other western states with recovering wolf populations, given its alternative management structure of classifying the wolf as either trophy game or predator depending on an animal's location geographically within the state (and the time of year in the case of the flex zone). The case study allows for in-depth investigation into a contemporary issue, and acknowledges the complexities of and interactions between different variables. Furthermore, it allows for multi-method data collection, and presents a method whereby theory can be constructed, tested, and refined (Yin, 2009). Wyoming's wolf management and policy provides a rich case study from which to glean theoretical insight, particularly on interactions among stakeholders within coalitions and the role of local information and participation in the policy process, as well as to provide recommendations to address conflict between people over wolf management in order to affect more sustainable policy outcomes. Because of the intense conflict over wolf management in Wyoming, this case study can potentially provide lessons for equally and less conflict-laden cases.

## 2.12 Data Collection

This research uses multiple methods in data collection, including media document gathering, interviews, and mailed/online surveys. Each empirical chapter expands on the discussion of research methods based on the specific analyses reported in the chapter.

### 2.12.1 Media Coverage

Chapter 3 reports on a content analysis (Krippendorff, 2013) of media coverage at the local and national level from January 2008 (when delisting was first proposed) through December 2012, when wolves were delisted in Wyoming. Newspaper articles were collected from two local newspapers in the largest communities in western Wyoming with wolf populations: the *Cody Enterprise* (Cody, Wyoming), and the *Jackson Hole News & Guide/Daily* (Jackson, Wyoming), as well as from the prestige press, including the *New York Times*, *Los Angeles Times*, and *Wall Street Journal*.

### 2.12.2 Interviews

In-depth, in-person semi-structured interviews (Rubin & Rubin, 2012) were conducted with stakeholders (n=33) between May 2014 and May 2016. These interviews focused on Wyoming's wolf management policy as well as practical conflicts between people and wolves. Stakeholders and organizations involved with the pro-wolf coalition in western Wyoming were identified through the researcher's personal knowledge of the conservation community in this region as well as media coverage and involvement in lawsuits. Additional stakeholders were contacted

based on recommendations from other study participants using a snowball-sampling approach. Within the conservation community in western Wyoming, several individuals have worked for multiple organizations and/or have a breadth of experience in media, research, and Wyoming politics; therefore, the diversity of background and knowledge gathered through our meetings cover a broader spectrum than the number of interviews might suggest. Interviews were concluded when saturation was reached, meaning that no new information was collected in meetings.

Duration of interviews ranged from one hour to three hours. All interviews were digitally recorded. Interview questions focused on analyses of Wyoming's wolf management plan, appraisal of the policy process by which management and listing/delisting decisions occurred, communication and collaboration within and among coalitions, resources used to advocate for preferred policy outcomes, political factors surrounding wolf management and policy, and preferred policy and management outcomes. The interview protocol is included in Appendix 2.

### *2.12.3 Lawsuits*

Data were gathered on each of the three lawsuits argued in federal court regarding wolf management and policy in Wyoming, beginning in 2008 when the first delisting rule was published.<sup>14</sup> Sources included the text of the lawsuits as published in legal databases.

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<sup>14</sup> Other legal challenges, including injunctions and dropped lawsuits, also took place during this time and are not included as they either did not result in a decision or did not reference Wyoming's management plan.

#### *2.12.4 Local Resident Survey Design*

Chapter 6 reports on a mailed survey of residents and property owners in two rural and adjacent communities, the Buffalo Valley and Pacific Creek, located in northwest Teton County, Wyoming. The mailed survey (Dillman, Smyth, & Christian, 2009) was distributed to all property owners (n=174) in the two communities. The survey is included in Appendix 4. Survey questions focused on four categories: tolerance for wolves, conflict experiences, conflict management preferences, and demographic variables. The survey response rate was 38%.

### **2.13 Data Analysis**

Data analysis utilized coding and statistical procedures appropriate for each of the three modes of collection and types of data.

#### *2.13.1 Media Coding*

The content of newspapers articles (n=151) was coded for focus as well as variables including framing, characters, solutions, and presentation of conflict. These results are presented in Chapter 3. Appendix 1 contains the media codebook.

#### *2.13.2 Qualitative Data Coding*

All interviews were transcribed and coded using NVIVO qualitative data analysis software (2015), where qualitative data are extracted from all interviews and categorized into relevant “bins” associated with codes. Codes were identified based on ACF literature as well as other research on social and political aspects of wolf management. Emergent codes based on interview content were allowed as well (Miles & Huberman, 1994). When data from interviews are presented in the

findings, they are cited according to a broad-scale “field” identifier (e.g., NGO (non-governmental organization), IND (individual) and a subject ID number (e.g., NGO-1).

Chapter 4 reports on the results of interviews from members of both of the coalitions involved in the wolf policy subsystem, focusing on intracoalition dynamics. Examples of codes included COALIT (coalition formation, splintering, or other coalition dynamics), LITIG (lawsuits or legal decisions), and NNGO (communication with regional or national NGOs). Chapter 5 also reports on the results of interview coding, primarily focusing on the supra-codes “OUTCOMES” and “SOLUTIONS,” including the sub-codes for “SOLUTIONS.” This chapter includes data from all interview subjects (n=33). See Appendix 3 for the interview codebook.

### *2.13.3 Statistical Analysis of Survey Data*

Mailed survey responses were recorded in Microsoft Excel (2013) worksheets, including transcribed qualitative data. Data were analyzed using STATA (2015). Statistical tests performed on the data included Chi-square ( $\chi^2$ ) tests of independence to determine if relationships existed between categorical variables as well as Fisher’s exact test for those values with frequencies less than two. An ordered logistical regression model was created to explore preferred methods to address conflict between people and wolves. Results of this survey are reported in more detail in Chapter 6.



## **2.14 Conclusion**

Wyoming's wolf policy presents a complex case study to analyze using the framework of the ACF given the longstanding and ongoing nature of the policy conflict. Furthermore, since little research has addressed the outcomes of state management of wolves, this project builds on the work of previous policy scholars addressing this topic, including Clark (1994, 2005, 20014) and Nie (2003). Chapters 3-6 will examine political and practical dimensions of wolf policy and management by using of multiple methods of data collection to focus on how the wolf policy subsystem has changed in more recent years, with an eye to finding policy recommendations that will reduce conflict.

## References

- Albright, E. A. (2011). Policy change and policy learning in Response to extreme flood events in Hungary: An Advocacy Coalition approach. *Policy Studies Journal*, 39(3), 485–512.
- Albright, E. A., & Maguire, L. A. (2009). Policy change and policy learning in a new democracy: Response to extreme floods in Hungary. *Policy Studies Journal*, 29(3), 485–511.
- Ashe, D. (2013, June 7). Director's Corner: Gray wolves are recovered; Next up, the Mexican wolf. Retrieved from <https://www.fws.gov/director/dan-ashe/index.cfm/2013/6/7/Gray-wolves-are-recovered-next-up-the-Mexican-wolf>
- Askins, R. (2004). *Shadow Mountain: A Memoir of Wolves, a Woman, and the Wild*. New York, NY: Anchor.
- Ausband, D. E., Mitchell, M. S., Bassing, S. B., & White, C. (2013). No trespassing: Using a biofence to manipulate wolf movements. *Wildlife Research*, 40(3), 207–216. <http://doi.org/10.1071/WR12176>
- Bangs, E. E., & Fritts, S. H. (1996). Reintroducing the gray wolf to Central Idaho and Yellowstone National Park. *Wildlife Society Bulletin*, 24(3), 402–413.
- Barringer, F., & Broder, J. M. (2011, April 12). Congress, in a first, removes an animal from the Endangered Species List. *New York Times*, p. A16.
- Bergstrom, B. J., Arias, L. C., Davidson, A. D., Ferguson, A. W., Randa, L. a., & Sheffield, S. R. (2014). License to kill: Reforming federal wildlife control to restore biodiversity and ecosystem function. *Conservation Letters*, 7(2), 131–142. <http://doi.org/10.1111/conl.12045>
- Boitani, L. (1995). Ecological and cultural diversities in the evolution of wolf-human relationships. In L. N. Carbyn, S. H. Fritts, & D. R. Seip (Eds.), *Ecology and Conservation of Wolves in a Changing World* (pp. 3–11). CCI Press. Retrieved from [http://www.kora.ch/malme/MALME-species-compendium/03\\_wolf/5\\_human-attitude/europe/human-attitude-wolf-europe.htm](http://www.kora.ch/malme/MALME-species-compendium/03_wolf/5_human-attitude/europe/human-attitude-wolf-europe.htm)
- Borg, B. L., Arthur, S. M., Broman, N. A., Cassidy, K. A., McIntyre, R., Smith, D. W., & Prugh, L. R. (2016). Implications of harvest on the boundaries of protected areas for large carnivore viewing opportunities. *PloS One*, 11(4), e0153808. <http://doi.org/10.1371/journal.pone.0153808>

- Borg, B. L., Brainerd, S. M., Meier, T. J., & Prugh, L. R. (2015). Impacts of breeder loss on social structure, reproduction and population growth in a social canid. *Journal of Animal Ecology*, 84(1), 177–187. <http://doi.org/10.1111/1365-2656.12256>
- Bradley, E. H., Robinson, H. S., Bangs, E. E., Kunkel, K., Jimenez, M. D., Gude, J. A., & Grimm, T. (2015). Effects of wolf removal on livestock depredation recurrence and wolf recovery in Montana, Idaho, and Wyoming. *Journal of Wildlife Management*, 79(8), 1337–1346. <http://doi.org/10.1002/jwmg.948>
- Casey, D., & Clark, T. W. (1996). *Tales of the Wolf*. (D. Casey & T. W. Clark, Eds.). Moose, WY: Homestead Publishing.
- Cathcart, E. (2013). All bark and no bite: Nonspecific magic words sweep aside Constitutional concerns and remove the Northern Rocky Mountain gray wolf from Endangered Species Act protection in *Alliance for the Wild Rockies v. Salazar*. *Villanova Environmental Law Journal*, 24, 253–285. <http://doi.org/10.1525/sp.2007.54.1.23>.
- Cinque, S. (2015). Collaborative management in wolf licensed hunting: The dilemmas of public managers in moving collaboration forward. *Wildlife Biology*, 21(3), 157–164. <http://doi.org/10.2981/wlb.00098>
- Clark, S. G., & Milloy, C. (2014). The North American Model of Wildlife Conservation: An analysis of challenges and adaptive opportunities. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 289–324). Chicago, IL: University of British Columbia.
- Clark, T. W., & Minta, S. C. (1994). *Greater Yellowstone's Future*. Moose, WY: Homestead Publishing.
- Clark, T. W., Rutherford, M. B., & Casey, D. (Eds.). (2005). *Coexisting with Large Carnivores: Lessons from Greater Yellowstone*. Washington, D.C.: Island Press.
- Coleman, J. T. (2004). *Vicious: Wolves and Men in America*. New Haven, CT: Yale University Press.
- Defenders of Wildlife, et al., v. Jewell, et al. (2014). 68 F.Supp.3d 193. U.S. District Court for the District of Columbia.
- Defenders of Wildlife et al. v. Hall et al. (2008). 565 F. Supp. 2d 1160. U.S. District Court, Missoula, Montana.
- Defenders of Wildlife v. Salazar (2010). 729 F. Supp. 2d 1207. United State District Court, Missoula, Montana.

- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (3rd ed.). Hoboken, NJ: John Wiley & Sons.
- Duffield, J. W., Neher, C. J., & Patterson, D. A. (2008). Wolf recovery in Yellowstone: Park attitudes, expenditures, and economic impacts. *Yellowstone Science*, 16(1), 20–25.
- Elliott, C., & Schlaepfer, R. (2001a). The Advocacy Coalition Framework: Application to the policy process for the development of forest certification in Sweden. *Journal of European Public Policy*, 8(4), 642–661. <http://doi.org/10.1080/13501760110064438>
- Elliott, C., & Schlaepfer, R. (2001b). Understanding forest certification using the Advocacy Coalition Framework. *Forest Policy and Economics*, 2(3–4), 257–266. [http://doi.org/10.1016/S1389-9341\(01\)00043-0](http://doi.org/10.1016/S1389-9341(01)00043-0)
- Endangered and threatened wildlife and plants; Final rule designating the Northern Rocky mountain population of gray wolf as a Distinct Population Segment and removing this Distinct Population Segment from the federal list of endangered and threatened wil (2008). 50 CFR Part 17.
- Endangered and threatened wildlife and plants; Reissuance of 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 (2011). 76 FR 25590.
- Fernández-Gil, A., Naves, J., Ordiz, A., Quevedo, M., Revilla, E., & Delibes, M. (2016). Conflict misleads large carnivore management and conservation: Brown bears and wolves in Spain. *Plos One*, 11(3), e0151541. <http://doi.org/10.1371/journal.pone.0151541>
- Fritts, S. H., Stephenson, R. O., Hayes, R. D., & Boitani, L. (2003). Wolves and humans. In L. D. Mech & L. Boitani (Eds.), *Wolves: Behavior, Ecology, and Conservation* (pp. 289–316). Chicago, IL: University of Chicago Press.
- Gehring, T. M., VerCauteren, K. C., & Landry, J.-M. (2010). Livestock protection dogs in the 21st century: Is an ancient tool relevant to modern conservation challenges? *BioScience*, 60(4), 299–308. <http://doi.org/10.1525/bio.2010.60.4.8>
- Harper, E., Paul, W. J., Mech, L. D., & Weisberg, S. (2008). Effectiveness of lethal, directed wolf-depredation control in Minnesota. *The Journal of Wildlife Management*, 72(3), 778–784. <http://doi.org/10.2193/2007-273>
- Idaho Legislative Wolf Oversight Committee. (2002). *Idaho Wolf Conservation and Management Plan*.

- Jegen, M., & Audet, G. (2011). Advocacy coalitions and wind power development: Insights from Quebec. *Energy Policy*, 39(11), 7439–7447. <http://doi.org/10.1016/j.enpol.2011.09.012>
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In P. A. Sabatier & C. M. Weible (Eds.), *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.
- Jimenez, M. D., & Johnson, A. (2016). Wyoming wolf recovery 2015 annual report. In *U.S. Fish and Wildlife Service Rocky Mountain Wolf Program 2015 Annual Report* (p. WY-1-WY-30). Helena, MT: USFWS, Ecological Services.
- Jones, M. D., McBeth, M. K., & Shanahan, E. A. (2014). Introducing the Narrative Policy Framework. In M. D. Jones, E. A. Shanahan, & M. K. McBeth (Eds.), *The Science of Stories* (1st ed., pp. 2–25). New York: Palgrave Macmillan.
- Katzenberger, D. (2012). News, information, and recovery status reports: Gray wolves in the Northern Rocky Mountains. Retrieved May 2, 2012, from <http://www.fws.gov/mountain-prairie/species/mammals/wolf/>.
- Krippendorff, K. (2013). *Content Analysis: An Introduction to Its Methodology* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- Lance, N. J., Breck, S. W., Sime, C., Callahan, P., & Shivik, J. A. (2010). Biological, technical, and social aspects of applying electrified fladry for livestock protection from wolves (*Canis lupus*). *Wildlife Research*, 37, 708–714.
- Leopold, A. (1966). *A Sand County Almanac*. New York, NY: Ballantine Books.
- Lopez, B. H. (1978). *Of Wolves and Men*. New York, NY: Charles Scribner's Sons.
- Madden, F. (2004). Creating coexistence between humans and wildlife: Global perspectives on local efforts to address human–wildlife conflict. *Human Dimensions of Wildlife*, 9(4), 247–257. <http://doi.org/10.1080/10871200490505675>
- Madden, F., & McQuinn, B. (2014). Conservation's blind spot: The case for conflict transformation in wildlife conservation. *Biological Conservation*, 178, 97–106. <http://doi.org/10.1016/j.biocon.2014.07.015>
- Matti, S., & Sandström, A. (2011). The rationale determining advocacy coalitions: Examining coordination networks and corresponding beliefs. *Policy Studies Journal*, 39(3), 385–410. <http://doi.org/10.1111/j.1541-0072.2011.00414.x>

- McBeth, M. K., Shanahan, E. A., & Jones, M. D. (2005). The science of storytelling: Measuring policy beliefs in Greater Yellowstone. *Society & Natural Resources*, 18(5), 413–429. JOUR. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/08941920590924765>
- Mech, L. D. (2010). Considerations for developing wolf harvesting regulations in the contiguous United States. *The Journal of Wildlife Management*, 74(7), 1421–1424. Retrieved from <http://www.bioone.org/doi/abs/10.2193/2009-540>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis* (2nd ed.). Washington, D.C.: Sage Publications.
- Montana Fish Wildlife and Parks. (2002). *Montana Wolf Conservation and Management Planning Document - DRAFT*.
- Nie, M. (2003). *Beyond Wolves*. Minneapolis, MN: University of Minnesota Press.
- Nilsen, E. B., Milner-Gulland, E. J., Schofield, L., Mysterud, A., Stenseth, N. C., & Coulson, T. (2007). Wolf reintroduction to Scotland: Public attitudes and consequences for red deer management. *Proceedings of the Royal Society B*, 274(1612), 995–1002. <http://doi.org/10.1098/rspb.2006.0369>
- Nohrstedt, D. (2011). Shifting resources and venues producing policy change in contested subsystems: A case study of Swedish signals intelligence policy. *Policy Studies Journal*, 39(3), 461–484. <http://doi.org/10.1111/j.1541-0072.2011.00417.x>
- Oakleaf, J. K., Mack, C., & Murray, D. L. (2003). Effects of wolves on livestock calf survival and movements in central Idaho. *The Journal of Wildlife Management*, 67(2), 299–306. <http://doi.org/10.2307/3802771>
- Olson, E. R., Stenglein, J. L., Shelley, V., Rissman, A. R., Browne-Nuñez, C., Voyles, Z., ... Van Deelen, T. (2015). Pendulum swings in wolf management led to conflict, illegal kills, and a legislated wolf hunt. *Conservation Letters*, 8(5), 351–360. <http://doi.org/10.1111/conl.12141>
- Oregon Department of Fish and Wildlife. (2014). Oregon wolf conservation and management plan. *Oregon Administrative Rules*. Salem, OR.
- Pierce, J. J. (2016). Advocacy coalition resources and strategies in Colorado hydraulic fracturing politics. *Society & Natural Resources*, 29(10), 1154–1168. <http://doi.org/10.1080/08941920.2015.1131876>
- Poudyal, N., Baral, N., & Asah, S. T. (2016). Wolf lethal control and livestock depredations: Counter-evidence from respecified models. *Plos One*, 11(2), e0148743. <http://doi.org/10.1371/journal.pone.0148743>

- Primm, S., & Wilson, S. M. (2004). Re-connecting grizzly bear populations : Prospects for participatory projects. *Ursus*, 15(1), 104–114.
- Quammen, D. (2003). *Monster of God: The Man-Eating Predator in the Jungles of History and the Mind*. New York, NY: W.W. Norton & Company.
- Ripberger, J. T., Gupta, K., Silva, C. L., & Jenkins-Smith, H. C. (2014). Cultural theory and the measurement of deep core beliefs within the Advocacy Coalition Framework. *Policy Studies Journal*, 42(4), 509–527. <http://doi.org/10.1111/psj.12074>
- Ripple, W. J., Estes, J. A., Beschta, R. L., Wilmers, C. C., Ritchie, E. G., Hebblewhite, M., ... Wirsing, A. J. (2014). Status and ecological effects of the world's largest carnivores. *Science*, 343(6167), 1241484-1-1241484–11. <http://doi.org/10.1126/science.1241484>
- Ruth, T. K., Smith, D. W., Haroldson, M. A., Buotte, P. C., Schwarz, C. C., Quigley, H. B., ... Frey, K. (2003). Large-carnivore response to recreational big-game hunting along the Yellowstone National Park and Absaroka- Beartooth Wilderness boundary. *Wildlife Society Bulletin*, 31(4), 1150–1161.
- Sabatier, P. A. (1993). Policy change over a decade or more. In P. A. Sabatier & H. C. Jenkins-Smith (Eds.), *Policy Change and Learning: An Advocacy Coalition Approach* (pp. 13–39). Boulder, CO: Westview Press.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The Advocacy Coalition Framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (1st ed., pp. 117–166). Boulder, CO: Westview Press.
- Sabatier, P. A., & Weible, C. M. (2007). The Advocacy Coalition Framework: Innovations and clarifications. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (2nd ed., pp. 189–220). Boulder, CO: Westview Press.
- Shanahan, E. A., Jones, M. D., & McBeth, M. K. (2011). Policy narratives and policy processes. *Policy Studies Journal*, 39(3), 535–561. <http://doi.org/10.1111/j.1541-0072.2011.00420.x>
- Shanahan, E. A., McBeth, M. K., & Hathaway, P. L. (2011). Narrative policy framework: The influence of media policy narratives on public opinion. *Politics and Policy*, 39(3), 373–400. <http://doi.org/10.1111/j.1747-1346.2011.00295.x>
- Shivik, J. A. (2006). Tools for the edge: What's new for conserving carnivores. *BioScience*, 56(3), 253. [http://doi.org/10.1641/0006-3568\(2006\)056\[0253:TFTEWN\]2.0.CO;2](http://doi.org/10.1641/0006-3568(2006)056[0253:TFTEWN]2.0.CO;2)

- Shivik, J. A. (2014). *The Predator Paradox: Ending the War with Wolves, Bears, Cougars, and Coyotes*. Boston, MA: Beacon Press.
- Smith, D. W., Brewster, W. G., & Bangs, E. E. (1999). Wolves in the Greater Yellowstone Ecosystem: Restoration of a top carnivore in a complex management environment. In T. W. Clark, A. P. Curlee, S. C. Minta, & P. M. Kareiva (Eds.), *Carnivores in Ecosystems: The Yellowstone Experience* (pp. 103–125). New Haven, CT: Yale University Press.
- Smith, L., Hutchinson, J., & DeNesti, L. (2014). *Living with Livestock & Wolves*. Port Townsend, WA.
- Stolzenburg, W. (2008). *Where the Wild Things Were*. New York, NY: Bloomsbury.
- Treves, A. (2009). Hunting for large carnivore conservation. *Journal of Applied Ecology*, 46(6), 1350–1356. <http://doi.org/10.1111/j.1365-2664.2009.01729.x>
- Treves, A., & Karanth, K. U. (2003). Human-carnivore conflict and perspectives on carnivore management worldwide. *Conservation Biology*, 17(6), 1491–1499. <http://doi.org/10.1111/j.1523-1739.2003.00059.x>
- Treves, A., Naughton-Treves, L., & Shelley, V. (2013). Longitudinal analysis of attitudes toward wolves. *Conservation Biology*, 27(2), 315–323. <http://doi.org/10.1111/cobi.12009>
- U.S. Fish & Wildlife Service. Endangered Species Act of 1973 (1973).
- U.S. Fish & Wildlife Service. (1987). *Northern Rocky Mountain Wolf Recovery Plan*. Denver, CO.
- U.S. Fish & Wildlife Service. (1992). *Recovery Plan for the Eastern Timber Wolf*. Twin Cities, MN.
- U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, Wyoming Game and Fish Department, Montana Fish Wildlife & Parks, Nez Perce Tribes, Service, N. P., ... USDA Wildlife Services. (2016). *Northern Rocky Mountain Wolf Recovery Program 2015 Interagency Annual Report*. Helena, MT. Retrieved from [http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL\\_NRM-Sum2\\_2013.pdf](http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL_NRM-Sum2_2013.pdf)
- Villamor, G. B. (2006). The rise of protected area policy in the Philippine forest policy: An analysis from the perspective of Advocacy Coalition Framework (ACF). *Forest Policy And Economics*, 9(2), 162–178.



- Vucetich, J., & Nelson, M. P. (2014). Wolf hunting and the ethics of predator control. *Oxford Handbook of Animal Studies*, (July), 1–15. <http://doi.org/10.1093/oxfordhb/9780199927142.013.007>
- Walker, B. (2005). *The Lost Wolves of Japan*. Seattle, WA: University of Washington Press.
- Weber, W., & Rabinowitz, A. (1996). A global perspective on large carnivore conservation. *Conservation Biology*, 10(4), 1046–1054.
- Weible, C. M. (2005a). Beliefs and perceived influence in a natural resource conflict: An Advocacy Coalition approach to policy networks. *Political Research Quarterly*, 58(3), 461–475. <http://doi.org/10.1177/106591290505800308>
- Weible, C. M. (2005b). Beliefs and perceived influence in a natural resource conflict: An advocacy coalition approach to policy networks. *Political Research Quarterly*, 58(3), 461–475. <http://doi.org/10.1177/106591290505800308>
- Weible, C. M. (2007). An advocacy coalition framework approach to stakeholder analysis: Understanding the political context of California marine protected area policy. *Journal of Public Administration Research and Theory*, 17(1), 95–117. <http://doi.org/10.1093/jopart/muj015>
- Weible, C. M., Pattison, A., & Sabatier, P. A. (2010). Harnessing expert-based information for learning and the sustainable management of complex socio-ecological systems. *Environmental Science and Policy*, 13(6), 522–534. <http://doi.org/10.1016/j.envsci.2010.05.005>
- Weible, C. M., & Sabatier, P. A. (2009). Coalitions, science, and belief change: Comparing adversarial and collaborative policy subsystems. *Policy Studies Journal*, 37(2), 195–212. <http://doi.org/10.1111/j.1541-0072.2009.00310.x>
- Weible, C. M., Sabatier, P. A., & McQueen, K. (2009). Themes and variations: Taking stock of the Advocacy Coalition Framework. *Policy Studies Journal*, 37(121–140), 121–140. <http://doi.org/10.1111/j.1541-0072.2008.00299.x>
- Wielgus, R. B., & Peebles, K. A. (2014). Effects of wolf mortality on livestock depredations. *PLoS ONE*, 9(12), 1–16. <http://doi.org/10.1371/journal.pone.0113505>
- Wilson, S. M., Madel, M. J., Mattson, D. J., Graham, J. M., & Merrill, T. (2006). Landscape conditions predisposing grizzly bears to conflicts on private agricultural lands in the western USA. *Biological Conservation*, 130(1), 47–59. JOUR. Retrieved from <http://linkinghub.elsevier.com/retrieve/pii/S0006320705005343>

- World Parks Congress. (2004). Preventing and mitigating human–wildlife conflicts: World Parks Congress recommendation. *Human Dimensions of Wildlife*, 9(4), 259–260. <http://doi.org/10.1080/10871200490505684>
- Wyoming Game & Fish Commission. (2011). *Wyoming Gray Wolf Management Plan*. Cheyenne, WY.
- Wyoming Game and Fish Department. (n.d.). Wolves in Wyoming. Retrieved from <https://wgfd.wyo.gov/Wildlife-in-Wyoming/Large-Carnivore/Wolves-in-Wyoming>
- Yin, R. K. (2009). *Case Study Research* (4th ed.). Washington, D.C.: Sage Publications.
- Zafonte, M., & Sabatier, P. A. (1998). Shared beliefs and imposed interdependencies as determinants of ally networks in overlapping subsystems. *Journal of Theoretical Politics*, 10(4), 473–505.

## CHAPTER 3

# HOWLING OVER WOLVES: THE ROLE OF LOCAL MEDIA IN UNDERSTANDING PERSISTENT POLICY CONFLICT<sup>5</sup>

### 3.1 Introduction

An article in the *Jackson Hole News & Guide* in December of 2012 announced that two radio-collared wolves whose home range included Grand Teton National Park (GTNP) had been killed in a legal wolf hunt. The article noted that their deaths “[localized] a debate about the legal killing of ‘park’ wolves used for research” (Koshmrl, 2012). The newspaper article posed to its readers a policy question about whether wolves that are “research animals” should be hunted, or if policymakers should consider establishing a buffer zone around the existing boundaries of GTNP to protect “park wolves.” The above example is just one manifestation of conflict over wolf management in the northern Rockies, which has been persistent and politically charged since the reintroduction of the species in 1995 to Yellowstone National Park. Wyoming’s wolf management, in particular, could be likened to a riveting game of political ping-pong, where wolves twice have been delisted and subsequently relisted on the Endangered Species list since 2008. Policy conflict on this issue appears to be intractable.

The empirical study of narratives can lend insight into how policy problems are interpreted, packaged, and presented to the public, and in turn, how they affect

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<sup>5</sup> Earlier drafts of this manuscript were presented at the International Wolf Symposium in October 2013, as well as the Conference on Communication and Environment in June 2015.

policy processes (Shanahan, Jones, & Mcbeth, 2011). The Narrative Policy Framework (NPF) (Jones & McBeth, 2010; Jones et al., 2014) is one approach to systematically and empirically evaluating “the influence of policy narratives on public opinion, policy change, and policy outcomes” (Shanahan et al., 2011, p. 535). Important variables in the assessment of narratives include a policy context, plot, characters, and solutions, which are considered the moral of the story (Jones & McBeth, 2010; Shanahan et al., 2011). Problem frames are also identified as relevant to understanding intractable policy problems (McBeth & Shanahan, 2004). Thus, the NPF provides a systematic framework to analyze long-term political conflicts, and is particularly suited to accommodate media analysis.

The goal of this research is to understand the framing, solutions, and characters associated with wolf management and policy in Wyoming that are presented in the media, as well as to assess differences between coverage in local and national media outlets. Analyzing how local and national media differ in their representations of a policy problem may help to provide insight into why the conflict over wolf Endangered Species Act listing and subsequent management decisions at the state level continues. In attempting to solve difficult policy problems, studying local media in communities directly affected an issue may help to expand the understanding of a policy problem and provide researchers and analysts with more context-sensitive and nuanced understandings of conflicts.

In this study, local and national newspaper coverage of wolf issues is analyzed to better understand media framing, solutions, and characters within the

wolf policy arena in Wyoming. First, an overview of the literature is presented describing the role of narratives in affecting the policy process and assessing how media analysis can lend insight into policy conflict. Then, major policy milestones in wolf policy in Wyoming from the period of 2008-2012 are related to illustrate the intractability of this particular policy issue. Methods of data collection and analysis are elaborated, followed with results and discussion of the key variables explored, including patterns of coverage, framing of media coverage, portrayals of conflict, characters, and solutions.

### **3.2 The Influence of Media Narratives on Policy**

Public narratives are important “in shaping the conduct and outcomes of all aspects of government” (Weible & Shlager, 2014). Narratives as influences on policy debates have been studied in post-positivist scholarship (e.g., Fischer & Forester, 1993; Fischer & Gottweis, 2012; Stone, 2012), but only recently has an empirical framework emerged to analyze the effects of narrative on policy. The Narrative Policy Framework (NPF) is “an approach to the study of the policy process that originates from post-positive theory in public policy (primarily policy analysis), yet, and seemingly paradoxically, the NPF also champions so-called ‘positivist methods’...to study the policy process” (Jones & Radaelli, 2015, p. 341). The NPF identifies specific elements present in a policy narrative, including a plot (policy problem), the moral (or solution), and characters, who are present as villains, victims, or heroes (Jones & McBeth, 2010; Jones et al., 2014). At a minimum, the narrative should include at least one character and refer to the policy problem

(called the problem referent) that will be described in the plot (Crow et al., 2016; Jones et al., 2014; Shanahan, Jones, McBeth, & Lane, 2013). NPF identifies three layers of analysis, micro (individual), meso (groups/coalitions), and macro (institutions/culture), where the influence of narratives can be measured (Shanahan et al., 2013). The meso-level, or the level at which groups of advocates work to achieve their policy goals, is the focus of the research presented here.

In order for a media story to be construed as a policy narrative, therefore, it must possess both a character and a problem referent. Research on media policy narratives in cases of controversial policy topics have been found to influence public opinion in two ways: either reinforcing existing beliefs of the media consumer in regards to the policy topic, or, alternatively, facilitating a change of opinion (Shanahan, McBeth, & Hathaway, 2011). Media are actors in the policy process; through journalistic decisions, they choose the information that is salient to a particular issue and decide how to present it, in a way that is “concise, yet attention-grabbing” (McLead, Kosicki, & McLeod, 2002, as cited in Crow and Lawlor, 2016, p. 475).

Within the narrative arc of a story, frames also help illuminate the most salient issues to a reader, and are also important to consider when analyzing media coverage of complex and conflict-laden stories (Entman, 1993; Iyengar, 1990). Recently, the connection between the NPF and framing scholarship has been made, urging scholars to employ both of these lenses to aid in the analysis of communication tools in policy processes (Crow & Lawlor, 2016). Story frames

highlight an issue of salience, or, a “piece of information that is more noticeable, meaningful, or memorable to audiences” as well as determines what parts of reality to emphasize or promote (Entman, 1993, p. 53). Frames can be useful to simplify complex topics. Because they utilize the mental models, or ways of looking at the world, to which an audience may already be pre-disposed, frames “become invaluable tools for presenting relatively complex issues...efficiently and in a way that makes them accessible to lay audiences” (Scheufele & Tewksbury, 2007, p. 12). However, the construction of a story necessitates that the author focus on the most compelling aspects of it, thereby directing the way in which the consumer digests the information. Thus, the choices made by the media actor have influence over public understanding of a particular policy issue (Crow & Lawlor, 2016). McBeth et al noted, “Policy stakeholders do not just naturally possess frames. Instead, frames are constructed to sell or market to citizens and influence policy outcomes” (2004, p. 320). Furthermore, policy marketers, or those actors engaged in a policy problem and controlling the construction of frames, can serve to polarize public opinion and exacerbate conflict (McBeth & Shanahan, 2004). Frames, therefore, are manifestations of power, as the way in which information is organized elevates some interpretations of a policy problem above others (Goffman, 1974).

In addition to selecting frames through which policy problems are viewed, media also can highlight potential solutions advocated by various stakeholder groups. For example, Nelson, Krogman, Johnston, and St. Clair (2014) found that after a specific focusing event, a catastrophic mass fatality of waterfowl in the tar

sands of Alberta, media articles posed solutions to the problem that tended to promote the improvement of technology used by industry in order to prevent a similar event from happening in the future. Other prominent solutions suggested in media coverage included regulatory measures. Thus, in congruence with the NPF, which identifies a “moral of the story,” or policy solution (Jones & McBeth, 2010; Jones et al., 2014), media can also define to consumers the range of possible solutions to address a policy problem.

Graber (2003) argues that the term “media” cannot be all encompassing given differing scopes, audiences, and even platforms by which information is framed and conveyed. However, media presentations of political conflicts do serve as the basis on which public opinion is formed, particularly about issues where individuals have not yet made up their mind on their position (Graber, 2003). Analyzing how coverage of an issue differs depending on the media outlet – in this case, local and national newspapers – can help predict what the public might think, as well as insight as to who *really* cares about an issue, and which stakeholders may have more power (exemplified through their use as sources in articles) to influence outcomes.

Shanahan et al. (2008) begin to explore these same ideas of narratives, framing, and differences in media as conduits for advocacy messages from policy coalitions, or groups of actors actively contributing to the creation and dissemination of policy narratives. In particular, they assess differences between national and local media in the case of snowmobile policies in Yellowstone National



Park as well as wolf reintroduction in the Greater Yellowstone Area (GYA). Their analysis finds that media can serve both roles – conduit or contributor – but they do not formally apply the NPF to analyze the narratives within the case. The work presented in this paper attempts to apply those lessons and move the discussion forward by applying the NPF (and adding the layer of character analysis in this case), analyzing frames, and particularly seeking to understand if the patterns of narrative and framing are different in local versus national media coverage of wolf issues within the state of Wyoming.

An analysis of patterns of local versus national media coverage is important in the case of wolves in Wyoming's policy subsystem due to the lasting conflict, which may be related to the different scales of advocacy and management in play within this case. Research on media trends often do not include analyses of "local" media (Rohlinger, Pederson, & Valle, 2015), and it is possible that some of the trends evident through media research (e.g., lack of diversity of viewpoints) may not hold at the local level. Furthermore, local media, particularly in rural communities, can play a valuable role in shaping public dialogue on a controversial public policy issue. Understanding local media may highlight whether a gap exists between local and national policy preferences, and thus provide insight into conflict, as well as illustrate characteristics of local identity (Carrus et al., 2009). In communities with few local news outlets, the local newspaper may be seen as a "keystone medium," [which is] the primary provider of a specific and important kind of information – news about local politics – and a medium that enables other media's coverage of this

area” (Nielsen, 2015, p. 12). Thus, analyzing the role of local media in contrast to national media and the respective narrative decisions used by each may provide additional insights into the nature of the policy problem, as well as the differences in narratives presented at these alternative geographic scales.

### **3.3 Wolf Policy in Wyoming: An Overview**

McBeth & Shanahan (2004) suggest that policy conflict within the Greater Yellowstone Area (GYA) is driven by the narratives espoused by particular interest groups to work towards achieving their preferred policy outcomes. The case of wolf policy in this region is one of long-term conflict with two primary coalitions, wolf-expansion and wolf-management, acting independently and most typically as adversaries to attempt to secure their policy outcomes (see chapter 4).

If, as McBeth and Shanahan (2004) and others have suggested, the GYA is a hotbed of intense policy conflict, characterized by strong local policy preferences and intense focus from outside the region, wolves are the tallest of political lightning rods. After their reintroduction in 1995, it took less than a decade for the population to reach the biological goals of the USFWS Recovery Plan of ten breeding pairs and 100 individuals in each of the three recovery zones (Greater Yellowstone Area, Central Idaho, and Northwest Montana) (USFWS, 1987). With the publication of the first delisting rule in early 2008, the USFWS removed wolves from the Endangered Species List. Each of the three states in the Northern Rockies containing recovery zones, Montana, Idaho, and Wyoming, assumed management. However, subsequent lawsuits by a cadre of environmental groups meant that

wolves bounced on and off the Endangered Species List over the next six years. Following a 2010 court decision to relist wolves in all three states, in a particularly unprecedented maneuver, Congress directed the USFWS to delist the wolf populations in Idaho and Montana via a rider tacked onto an appropriations bill. This incident was the first time that a budget rider was used to delist an endangered species (Cathcart, 2013). Wyoming wolves were still listed, however. Their controversial management plan established wolves as trophy game in the northwest corner of the state and as predators elsewhere, where they could be lethally removed without oversight by the state management agency, the Wyoming Game and Fish Department (WGFD). The USFWS finally approved Wyoming's plan in October of 2011 after state officials established a "flex zone" south of Grand Teton National Park in order to ensure genetic connectivity between wolf populations primarily in Idaho (Wyoming Game & Fish Commission, 2012). However, the trophy game/predator distinction remained. On March 8, 2012, Governor Matt Mead signed Wyoming's wolf management bill into law, and the USFWS delisted wolves in Wyoming in October of 2012. The USFWS asserts, "Across the Northern Rockies (which includes the Greater Yellowstone, central Idaho, and northwest Montana subpopulations), the gray wolf population is biologically recovered, with more than 1,774 wolves and 109 breeding pairs. This population has exceeded recovery goals for 10 consecutive years, fully occupies nearly all suitable habitat, and has high levels of genetic diversity" (Katzenberger, 2012).

Nonetheless, wolf management continues to be a source of political and social conflict as the wolf population expands through the West. Wyoming, in particular, presents a unique case study given its unprecedented management structure. The ‘dual-status’ designation in which Wyoming’s wolves are trophy game within a bounded area in northwest Wyoming, but predators throughout the rest of the state, as well as the compromise of the flex zone, have ensured that wolf management in the state remains a thorny issue.<sup>6</sup> McBeth and Shanahan (2004) note that challenging resource management issues tend to exhibit characteristics such as “protracted lawsuits, lengthy administrative rule-making, and intense appeals to public opinion by opposing interest groups” (p. 321). These characteristics are clearly evident in the wolf case, where nearly every political decision has been litigated since the first delisting rule posted in 2008.

Previous research analyzing the coverage of wolves in news media used content analysis to determine the differences in attitudes towards wolves in states with and without wolf populations, and whether these attitudes had changed over time (Houston, Bruskotter, & Fan, 2010a). This study used attitudes expressed in newspaper coverage as the primary measure of changing views towards wolves over a decade, and assumed that public opinion was a determinant for news coverage. The analysis presented here, however, which focuses on Wyoming’s case, provides contextual richness for an intractable policy conflict, as well as contributes to literature on how framing may be utilized in the NPF. This research contributes to

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<sup>6</sup> In fact, wolves in Wyoming only were returned to the federal endangered species list in September of 2014.

NPF scholarship in building on the work of Shanahan et al. (2008) which evaluated the presence of policy beliefs and frames in local and national media using a similar case study. However, this research also employs the NPF (which had not yet been fully articulated when Shanahan et al. published their findings in 2008) to investigate differences between local and national media as per the criteria of the NPF: the problem referent (wolves and wolf conflict) as well as characters. Furthermore, it provides context-specific analysis on this policy subsystem, which is jurisdictionally bifurcated in terms of the type of conflict occurring at the federal level as compared to the local level. Recalling the three levels at which NPF analysis focuses (micro, meso, and macro) (Jones & McBeth, 2010; Jones et al., 2014), this study is concerned with the meso-level, where groups of actors work together to advocate for policy. Media analysis can help lend insight into this type of conflicted policy subsystem, as media narratives can illuminate areas of conflict, potential solutions, and engaged actors.

In order to develop a contextual understanding of the role of media within Wyoming's wolf policy and management policy arena, the following research questions are investigated:

- R1: What are general patterns of media coverage of wolf issues?
  - R1a: Are there differences in local and national media coverage?
- R2: What are the major frames used to describe wolf policy issues?
  - R2a: How is conflict portrayed?
  - R2b: How do these frames differ in local and national coverage?

- R3: How are narratives constructed in wolf policy issues?
  - R3a: What solutions are presented to address the problem?
  - R3b: Who are the central characters presented in articles on wolf issues?
  - R3c: How do local and national media articles differ?

### 3.4 Methods

Articles on wolf issues published between January 1, 2008 and December 31, 2012 were collected from six newspapers (though two are owned by the same publisher). Three local newspapers were used in the dataset: the *Jackson Hole News and Guide* the *Jackson Hole Daily* (Teton County, WY), and the *Cody Enterprise* (Park County, WY). These two communities are the largest in northwestern Wyoming, where wolf issues are most salient. In addition, their archives are generally readily available online. The *Jackson Hole News and Guide* is published weekly and tends to have more in-depth, feature length stories, as compared to the *Jackson Hole Daily*, which is published Monday through Saturday and tends to have shorter stories. Local news is published on the first 3-4 pages; the rest of the paper includes AP news articles. The *Cody Enterprise* is published twice weekly. National coverage was aggregated from three elite newspapers, the *Los Angeles Times*, the *New York Times*, and the *Wall Street Journal*, as these publications cover issues of national interest and are frequently used to gauge national media coverage trends and content. Because wolves were first delisted in April of 2008, by starting data collection on January 1, 2008, any coverage in the period leading up to

this major policy change would have been included. Wolves finally were delisted in Wyoming, and management turned over to the state, on September 30, 2012. Similarly, analysis of media coverage until December 31, 2012, intended to capture articles post-delisting. Articles were collected by keyword searching for “wolf” or “wolves” on the websites of the local newspapers (n=151). In order to collect articles from *The New York Times*, these search terms were input into both the website as well as Lexis Nexis. Articles from the *Los Angeles Times* and the *Wall Street Journal* were collected from ProQuest.

Recognizing the increasing diversity of media outlets, there are shortcomings to focusing only on newspaper coverage. However, local newspapers still have a critical role to play in conveying news about local affairs, issues, and policies – despite the increase in social media and other digital news sources – as they focus reporting in their communities (Nielsen, 2015). Furthermore, newspapers are a more consistent source of data as they are reliably archived (as opposed to blogs, social media posts, etc.), and they typically act as intermedia agenda setters, influencing other media in the same market (McCombs, 2005).

Each article was then coded for the following variables and data were entered into Excel (2013) worksheets. (See Appendix 1 for the article codebook.) Development of the codebook followed Krippendorff (2013). The codebook identified the primary focus and any secondary foci of the article. Articles were then coded according to the framing approach, or how an article “selects some aspects of a perceived reality and makes them more salient in a communicating text, in such a

way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation” (Entman, 1993, p. 52). Frames were selected based on a thorough reading of the dataset to identify the most common depictions of the “wolf problem.” Most frames reflected adversarial relationships, or conflicts. Practical conflicts, or those directly between wolves and livestock, or wolves affecting hunting opportunity, were coded as such. Political conflicts, or those between stakeholders over wolf policy and management decisions, were delineated according to the way in which the article “pitted” coalitions against one another. Some framing approaches are common to western policy conflicts, such as debates over state versus federal management of resources, and support of hunting. A table of frames is presented below linking sub-frames to the political conflict, practical conflict, or non-adversarial meta-frames (Table 3.1).

Table 3.1: Meta- and sub-frames present in media articles

<b>Meta-Frame</b>	<b>Sub-Frame</b>
Political Conflict	State v. federal management of resources
Political Conflict	Interstate conflict
Political Conflict	Environmental interests v. State of WY
Political Conflict	Environmental interests v. “Old West” interests
Political Conflict	Environmental interests v. USFWS
Political Conflict	Hunting
Practical Conflict	Wolves/Livestock or Elk
Practical Conflict	Fear (Encounters w/ people)
Non-adversarial	Solutions
Non-adversarial	Misc.
Non-adversarial	No framing

Though other scholarship has grouped frames into broader categories, such as scientific, economic, technical, moral (duty-based) etc. (Crow & Lawlor, 2016; Lybecker, McBeth, & Kusko, 2012; McBeth & Shanahan, 2004), here, the author



chose to identify “sub-frames” around the broad topic of conflict because of the range of actors engaged in political conflict in this policy arena, with the intention that these more detailed distinctions would provide greater insight into the complex nature of the policy problem.

Each article was coded by the researcher as to whether the headline and first third of the article indicated existence of conflict.<sup>7</sup> Because one researcher coded all articles, using these proxies for full-text analysis made the coding process more efficient (Althaus et al., 2001). The principle of the “inverted pyramid” in journalism places the most important information at the beginning of the article (Bell, 1991). Thus, headlines and first third content are appropriate proxies to use when analyzing news articles and a mechanism to make hand-coding of documents manageable. Lawsuits were considered a proxy for conflict, given that they represent disagreement between stakeholders over management or policy. Any article with a headline or lead paragraph referring to legal action was coded as a conflict. Other subjects that were coded as “conflict” included any reference to stakeholders disagreeing over the wolf-related issue or policy. For example, one article was coded as “conflict” in both the headline (“Wolf controversy polarizes”) and lead paragraph discussed the disagreement among conservation groups over how to interpret data which looked at wolf impacts on elk populations (Hatch, 2010). For this variable, coding was binary (presence or absence of conflict) in the

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<sup>7</sup> The research piloted the codebook and test-coded three articles with four coders in an effort to ensure that the codebook was clearly articulated. However, single-coder bias is a limitation here as all of the articles in the dataset were coded by the researcher.

headline and first third content; however, an article could be coded for presence of conflict in the headline and absence of conflict in the first third, or vice versa.

Solutions or policy outcomes presented in the articles were also coded.

Categories were developed based on a thorough reading of the dataset. Examples of solutions included: acceptance of Wyoming's plan, acceptance of Wyoming's management plan with revisions, maintenance of Endangered Species listing, allowance of hunting, and use of lethal control to address practical conflicts.

Finally, characters present in the media articles were selected and associated with a relevant category (environmentalist, rancher, politician, etc.). Weible and Schlager (2014) have raised important considerations regarding the identified of characters in the NPF, such as the lack of consistency in identifying any noun that acts as a hero, villain, or victim (e.g., the "environment"). Crow & Berggren (2014) addressed this critique specifically by requiring a "proper" noun (or specific noun) in order for a thing to be a character. In their study of stakeholder strategy and effectiveness, a noun such as "the environment" was not sufficient to warrant character status; instead, "Flaming Gorge ecosystem," a much more specific characterization, was permitted. However, in other applications of the NPF, this specification of what constitutes a character is somewhat inconsistent (Weible and Schlager, 2014). In this case, the criterion of direct quotations provided in news articles was used to identify characters in the media narratives. This decision was prompted by the preponderance of political conflict represented in the frames, and thus, the wolf itself, while it could be construed as a villain or victim as per Crow

and Berggren's (2014) treatment of characters, was omitted. Instead, the wolf was used as the problem referent in this study and was the keyword(s) used to access media articles to include in the dataset. In other words, the wolf appeared as more of a policy symbol or policy image (Baumgartner & Jones, 2009), identifying the problem rather than a specific character contributing to the narrative.

In the combined dataset of national and local media articles, 133 individuals were directly quoted. Of these 133 articles containing direct quotations, there were 318 instances of direct quotes, and 127 unique characters. Those individuals quoted from statements, press releases, letters, or other data sources outside of direct interviews were not included, as their "participation" in the media story was not voluntary; thus, they were not actively promoting policy beliefs.

All data for each of the variables described above (frames, presence/absence of conflict, characters, solutions, etc.) were entered in an Excel (2013) spreadsheet and analyzed primarily using descriptive statistics to highlight differences between local and national media newspaper coverage. Because most of the sample sizes were quite small, limited statistical analyses were performed; however, chi-square tests of independence were applied to cross-tabulations to determine if significant differences existed between local and national media for specific variables.

### **3.5 Results**

The following section discusses the results of the analysis, focusing on patterns of media coverage, article framing, and the narrative components of characters and solutions in the dataset of n=151 newspaper articles.

### *3.5.1 Patterns of Media Coverage*

Media coverage of wolf issues was more frequent at the local level than at the national. At the national level, the timing and quantity of media coverage (Figure 3.1) coincided with major focusing events in the form of policy changes or lawsuits. Following the delisting of wolves in late March of 2008, media coverage responded both locally and nationally. The July 2008 decision to relist wolves following the challenge by environmental groups also coincided with a spike in media coverage nationally and locally. National coverage waned after this event, aside from an occasional reference to a relisting or delisting decision. A very slight spike occurred in early 2011 after Senators Tester and Baucus introduced a rider to congressional legislation to remove wolves from the Endangered Species list (P. Taylor, 2011) which was a controversial measure in that it set a precedent for legislative delisting of endangered species. Local media also covered these major events, and also appeared to cluster coverage of wolf issues. Clear spikes in local coverage can be seen in the data (Figure 3.1) corresponding to periods of intense debate over how Wyoming would manage its wolves. In early 2010, there appeared to be a significant interest in wolf hunting in the media, as Montana and Idaho's wolf hunts proceeded without Wyoming given that Wyoming's wolves were still federally protected. Media coverage illustrates that heated dialogue among a multitude of stakeholders flared during this time, when frustration levels peaked due the lack of clarity as to how Wyoming would move forward with their wolf management plan. Headlines in the local papers during this period are indicative of the debate over management:

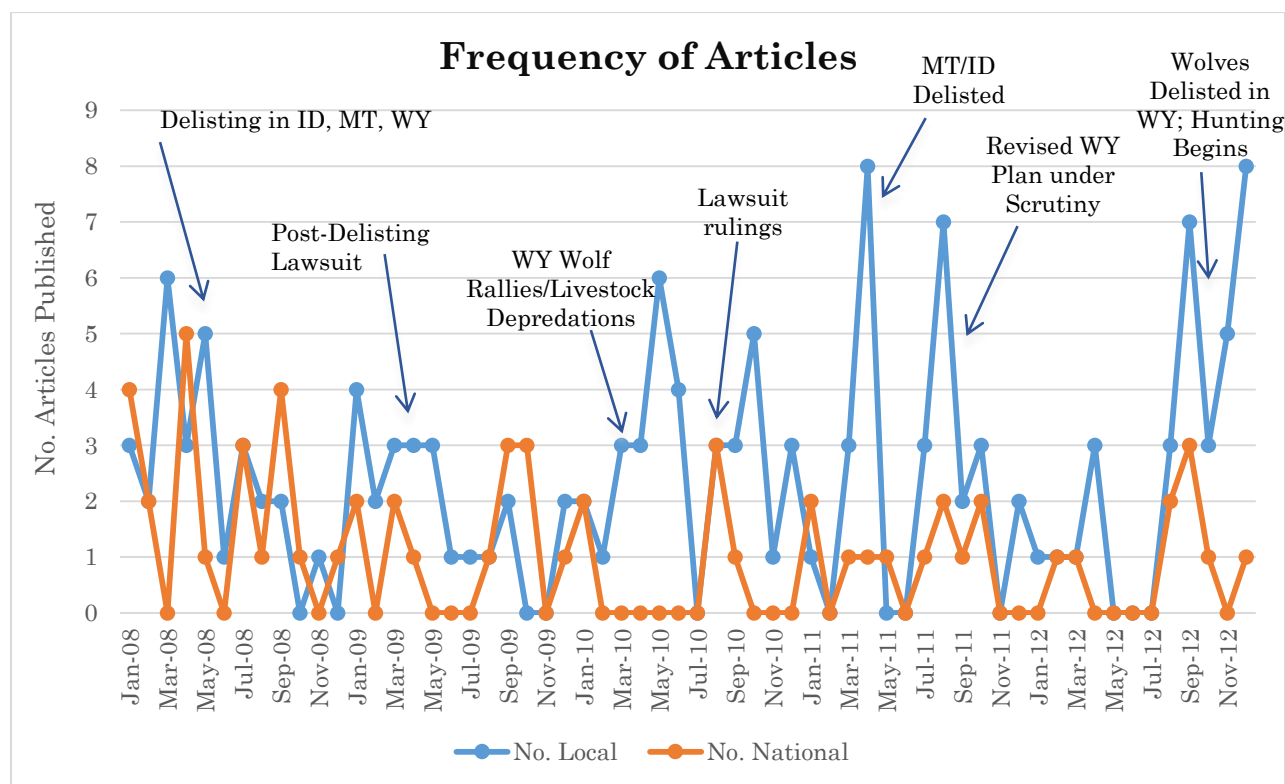
“Outfitters back off call for more wolf turf,” “Wolf protest draws 200 to downtown Jackson,” “Hunters rally to disperse wolves.” Hunter and outfitter groups were vocal during this period, and expressed dissatisfaction with the convoluted policy process. Hatch & Rank (2010) reported on a protest held in downtown Jackson, where outfitter Lynn Madsen expressed the sentiment held by many living with wolves: “We know we’re stuck with them. We just need to be managing the damn things.”

The second peak in local news coverage occurred in late summer of 2011, when Wyoming’s wolf management plan was nearing approval. Wyoming’s plan was unique in that it embraced a dual-classification status, where wolves could be shot on sight as predators once they moved outside a delineated area in northwest Wyoming.<sup>8</sup> Within the delineated Trophy Game Management Area (TGMA), however, wolves were managed as trophy game, with an established and regulated hunting season (Wyoming Game & Fish Commission, 2011). News coverage likely increased at this time as the plan was not significantly different from the previously-rejected version, other than the addition of a “flex zone,” where wolves were managed as trophy game and predators depending on the time of year, which intended to preserve opportunity for genetic dispersal among wolf populations.

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<sup>8</sup> Wolves were again listed as endangered in Wyoming in September 2014; hence the use of the past tense here. As of September 2016, Wyoming’s wolves remain managed by the USFWS and not the state.

Figure 3.1: Frequency of articles published in local and national newspapers, Jan. 2008 – Dec. 2012.



Local media, more so than national media, highlighted some of the complexity associated with wolf management and policy by covering a diversity of topics beyond policy events. In addition to covering major policy decisions, such as delisting, as well as issues of controversy nationally, including hunting and Endangered Species listing, articles also reported on livestock conflict, release of scientific studies, and routine state policy and management decisions (e.g., setting hunting area quotas). They also were more likely to highlight the nuance of conflict between stakeholders over wolf issues, instead of simplifying it. For example, an article in the *Jackson Hole News and Guide* in April of 2010 exemplified the tension between two prominent groups over approaches to wolf management: the Greater

Yellowstone Coalition and the Rocky Mountain Elk Foundation. The lead paragraph asserted:

The controversy over wolf management in Greater Yellowstone is polarizing conservation groups that might normally work together to protect the region's wildlife. (Hatch, 2010)

Local media tended to highlight issues of relevance to the community in addition to national policy decisions and lawsuits. Additionally, local media clustered other articles related to wolf issues when policy decisions were in the spotlight. For example, in late summer 2011, Hatch wrote an article titled, "Wolf deal could impinge on rights of landowners," as well as a piece looking at the impacts and management implications of the wolf plan on elk herds (Hatch, 2011a). These results again support that local media presented expanded media coverage on a diversity of angles in comparison to the national media.

### *3.5.2 Framing of Conflicts in Wolf Coverage*

In order to have a more thorough understanding of the diversity of frames in which the wolf problem is presented, each article was coded according to sub-frames, which were identified through a thorough reading of the dataset prior to coding (Figure 3.2). The most prevalent frame focused on state versus federal management of wolves; it appeared in both local (n=32) and national (n=4) media articles. This issue surfaces in many natural resource conflicts in the West (e.g., Clark et al., 2005; Krannich & Smith, 1998) and so it is not unexpected that it is seen here. The second most frequent frame used was a critique of the USFWS's delisting efforts by the environmental coalition (n=18 local; n=13 national). These articles focused on

the content of the various lawsuits (e.g., “Judge rules against USFWS on wolves;” Second coalition sues to stop wolf hunts”), and established the environmental groups as crusaders to save the wolves from certain annihilation if the USFWS delisted the species (e.g., “Shooting of ‘famed’ YNP wolf draws wide scrutiny”).

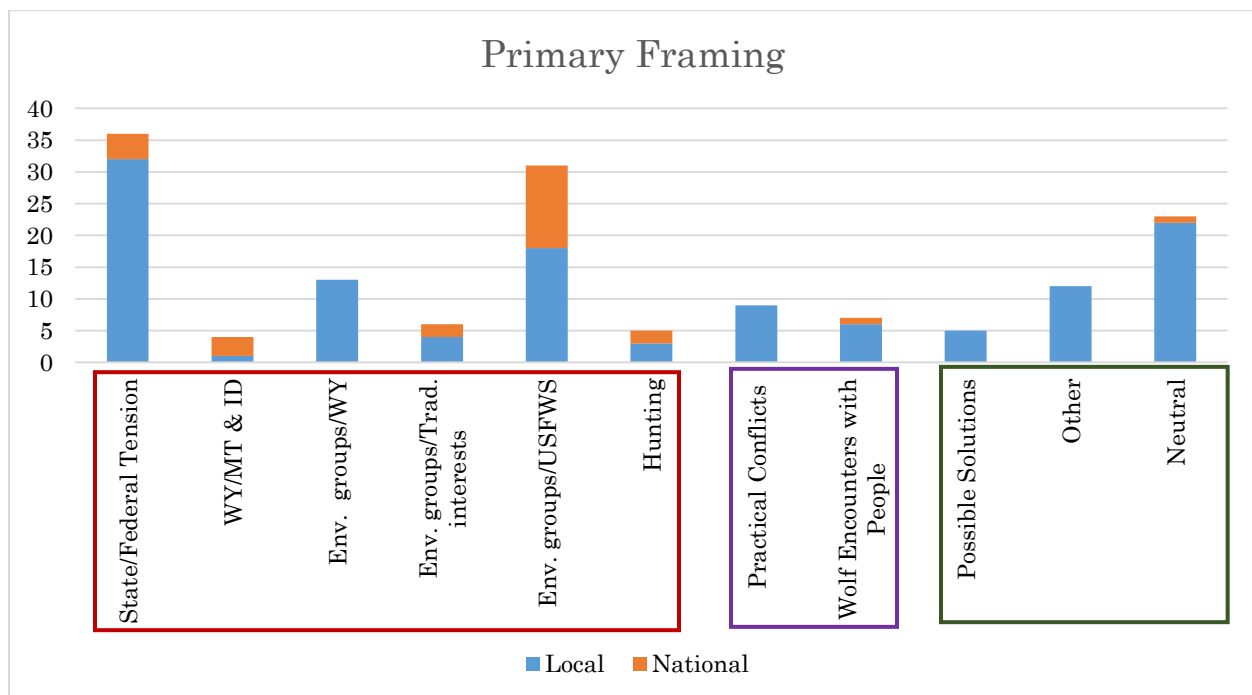
Another framing approach focused on political conflict situates pro- and anti-interest groups against one another (n=4 local, n=2 national). Reporters used quotes from a representative of the environmental constituency, followed by the rancher/outfitter response. For example, *The New York Times* published an article soon after the first wolf delisting, in April of 2008, with a headline proclaiming, “In the West, fierce battle over wolves.” The author described an open hunting season for wolves in Wyoming in the predator zones established following the delisting. He noted that, “Pro-wolf forces say that wolf killers may have created a martyr,” in reference to a charismatic collared wolf, 253M, who was shot in the predator zone on the first day after wolves were delisted (Johnson, 2008). Here, the dominant framing of pro/anti-wolf “forces” emerged, creating the image of a battleground and reinforcing the narrative of two primary coalitions advocating for conflicting policies. However, as illustrated above and in the following graphic (Figure 3.2), despite the use of this frame in both local and national media, it did not occur with nearly the frequency of the two frames discussed above.

Frames exclusively used in local media included reports on conflicts with livestock (n=9) and interactions between the state of Wyoming and environmentalists over the specific tenets of the state’s wolf management plan



(n=13). The latter frame is differentiated from the environmentalists/USFWS frame in that these articles provided critique of components of Wyoming’s plan (e.g., the flex zone and dual status) instead of the actual delisting decision. Other minor frames apparent in the articles reflect current events, such as Wyoming’s lack of willingness to cooperate with USFWS to secure delisting across all three states with recovery zones, as well as historical areas of dispute, such as hunting (e.g., “Hunt 11 wolves shy of quota”) and fear, exemplified through wolf-human encounters (e.g., “Wolves amble Tribal Trail”, and subsequently, “Jackson wolves targeted”). A small number of articles looked at conflicts between people over wolf management in a positive, solution-oriented framing. Neutral frames, or those with no apparent conflict, included stories on breaking news or science reports (e.g., “Researchers believe distemper killed pups;” “Valley wolf pack has mange, biologist said”).

Figure 3.2: Primary framing of articles published in local and national newspapers, Jan. 2008 – Dec. 2012. Boxes indicate political conflict (red), practical conflict (purple) and non-adversarial (green).



The use of battle-oriented language (e.g., “Wolves in crosshairs Sunday”), and the lambasting of technically-legal state policy (e.g., “Seven collared wolves from Yellowstone killed,”), illustrate that wolf coverage in newspapers is characterized by stories of conflict. Comparing the use of conflict as a hook in the headline and first third of the articles between national and local media can provide insight as to how the public consuming the media narratives may see the wolf problem. Interestingly, conflict was almost always used a hook in national media articles, and the differences between local and national newspapers’ use of conflict was statistically significant for both headlines ( $\chi^2 = 157.1426$ ,  $df = 4$ ,  $p < 0.05$ ) and first-third content ( $\chi^2 = 164.1823$ ,  $df = 4$ ,  $p < 0.05$ ). Findings are reported in the cross-tabulated tables below (Table 3.2).

Table 3.2: Cross-tabulated results of conflict coverage.

<b>Headline Content</b>		
	Conflict (1)	No Conflict (0)
Local Coverage	66	59
National Coverage	20	6

$\chi^2 = 157.1426$ ,  $df = 4$ ,  $p < 0.05$

<b>Lead Paragraph Content</b>		
	Conflict (1)	No Conflict (0)
Local Coverage	83	42
National Coverage	26	0

$\chi^2 = 164.1823$ ,  $df = 4$ ,  $p < 0.05$

#### *3.5.4 Policy Narratives and the Portrayal of Solutions and Characters*

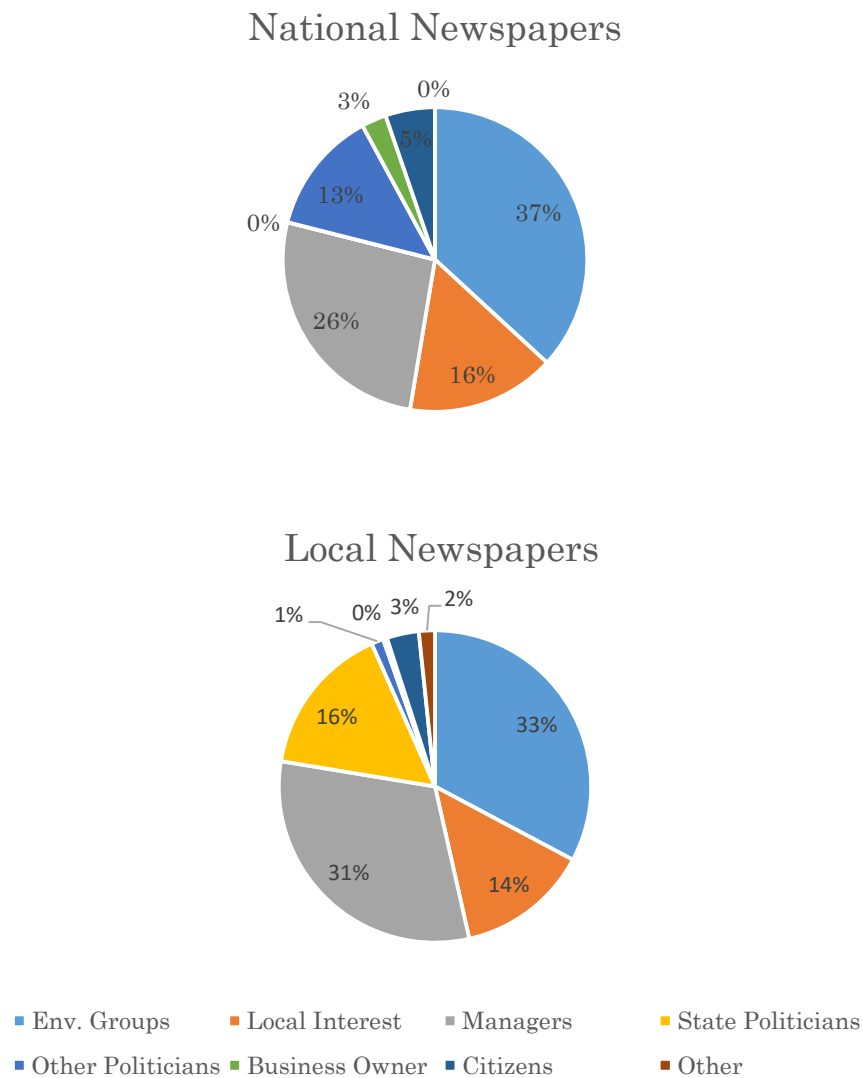
Solutions, according to the NPF, present “the moral of the story” (Jones & McBeth, 2010; Jones et al., 2014); media coverage can influence how the public sees the range of solutions to a particular policy problem (Nelson et al., 2014). In this case, local newspapers most frequently presented the solution to the wolf problem as keeping the existing Wyoming plan with revisions (such as eliminating the predator zone); the second most common solution was to keep the existing Wyoming plan as is. Neither of these options were presented in the national media. In fact, these newspapers focused on maintaining endangered species listing and, therefore, USFWS management. The local media reflected more detailed policy issues associated with wolf management on-the-ground, such as using lethal control, as well as policy option to institute a reduced- or no-hunting zone around the region’s national parks. Overall, there was a greater diversity in the policy presented in the local media as compared to the national media (Table 3.3).

Table 3.3: Solutions presented to wolf conflicts in local and national media outlets.

<b>Solutions</b>	<b>Local % (n)</b>	<b>National % (n)</b>
Keep existing WY plan.	18% (11)	0% (0)
Maintain Endangered Species listing	3% (2)	44% (7)
Include locals in process.	2% (1)	0% (0)
Collaborate with stakeholders	2% (1)	0% (0)
Keep WY plan, with revisions (i.e., no predator zone).	34% (21)	6% (1)
Conduct more research.	2% (1)	6% (1)
Prohibit wolf hunting.	2% (1)	6% (1)
Conduct more outreach/education.	3% (2)	0% (0)
Shoot, shovel, shut up.	0% (0)	0% (0)
Advocate for rule change.	0% (0)	19% (3)
Use lethal control for problem animals.	18% (11)	6% (1)
Allow hunting.	11% (7)	13% (2)
Institute a hunting buffer zone around national parks.	5% (3)	0% (0)
Use non-lethal conflict deterrents.	2% (1)	0% (0)
<b>TOTAL</b>	<b>100% (62)</b>	<b>100% (16)</b>
<i>% of Total Articles w/ Solution</i>	<i>49.6%</i>	<i>64%</i>

Environmental or conservation groups were the most often-quoted stakeholder group at 35%, followed by managers (28%), or those individuals directly responsible for dealing with wolves on the ground. Local interests, typically ranchers or outfitters, accounted for 15% of the characters. Other stakeholders included: Wyoming politicians (e.g., county commissioners, state and U.S. Congressional representatives) (11%), other politicians (e.g., Montana or Idaho representatives, federal legislators) (5%), unaffiliated citizens (4%), business owners (e.g., photographers, eco-tour operators) (1%), and others (1%), which included one academic, two lawyers unaffiliated with an advocacy group, and one unaffiliated ecologist. (See Figure 3.3.)

Figure 3.3: Percentage breakdown of stakeholder groups present in media coverage.



### 3.6 Discussion and Conclusion

The NPF provides an analytical framework to investigate how narratives influence the policy process (Jones & McBeth, 2010; Jones et al., 2014), particularly in the case of an intractable, long-term policy problem, such as wolf policy in Wyoming. By applying the NPF to media narratives, additional insight can be gained on how the perception of conflict within the media may further public

perceptions that a policy issue is, in fact, an ongoing problem. Wolves have a certain “charisma” that attracted media attention and public support for the reintroduction (Schlickeisen, 2001); the role of media in these subsequent years as an actor in this political conflict is important to consider.

First, media coverage followed major policy decisions at both the local and national level, confirming that these policy events can serve as focusing events for the media and public (Birkland, 1998). In particular, lawsuits in this case appear to act as focusing events, perhaps because they are exogenous to the policy decision process that is typically dominated by elected officials and wildlife management agencies. Endangered species decisions, particularly for a species as charismatic and symbolic as the wolf, will likely garner attention from national media. Furthermore, threat of litigation by environmental groups dominates media coverage during times of political activity, and lawsuits are the only real substantive issue other than policy decisions that are included in national media coverage of wolves. This trend corresponds well with Downs’s description of the issue-attention cycle, whereby a “problem leaps into prominence, remains there for a short time, and then – though still largely unresolved – gradually fades from the center of public attention” (Downs, 1972, p. 38). Major policy decisions that generate conflict among stakeholders garner media attention, which, in turn, may incite the public (particularly those consumers of national newspaper coverage) to feel that the problem is always conflict-ridden.

Crow and Lawlor (2016) argue that frames are integral to incorporate into the NPF as they provide insight into “the complex, connected, and complementary nature of frames and narratives that situate policy debates to the public” (p. 482). Furthermore, they argue that framing provides insight into media’s role as a policy actor, in addition to describing the multiple facets of a policy problem. The “sub-frames” identified herein illustrate the diversity of angles on political conflict present in the wolf policy arena, and also emphasize that Recognizing the diversity of frames in a context-specific case, as well as the difference in framing used between national and local media, is potentially useful to further refine the problem definition, which may be different at varying geographic scales. From an applied perspective, media outlets could address the perpetuation of conflict by diversifying the framing used to engage its readership to include success stories.

Shanahan et al. (2008) used both local and national media sources to determine whether media served as a conduit for communicating the policy beliefs of coalitions to a wider audience, or if it acted more as a contributor, “taking sides” to frame issues in a way that aligned with particular policy beliefs,<sup>9</sup> and, by extension, if differences existed between local and national media articles. Focusing on two case studies, snowmobile access in Yellowstone and wolf recovery in the GYA, the researchers found different policy beliefs related to federalism: national papers promote a national theory of federalism while local newspapers tend to

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<sup>9</sup> As Shanahan et al. (2008) note, policy process scholars have categorized media as a conduit (Baumgartner & Jones, 2009; Kingdon, 2011) or both a conduit and contributor (Sabatier & Jenkins-Smith, 1999) within the policy process.

espouse a compact theory of federalism, as well as “Old West” versus “New West” framing strategies. The results presented here are congruent with their findings, though fewer incidents of the “Old West/New West” terminology and dichotomy were identified. This difference could be a result of the newspapers chosen for analysis; Jackson Hole is considered to be a liberal enclave within a conservative state. Importantly, this research expands the previous work of Shanahan et al. (2008) by including characters, in accordance with the requirements for an NPF analysis, and further elucidating the differences in this bifurcated jurisdiction of a national policy issue with local implications.

The influence of media on public opinion is likely more impactful at the local level, where stakeholders and interest groups have access to the media and thus have more opportunities to advocate for particular outcomes and promote their standpoint. The less frequent use of conflict in headlines and first thirds of articles in local media also points to the salience of this issue – in all of its angles – for local citizens. In other words, at the local level perhaps reporters seek to present more “balanced” perspectives (in the interest of maintaining their readership). They report stories where conflict is not a driver, such as the population counts of wolves in the ecosystem, as these stories are of importance to their reader base. Crow (2010) found that local media coverage in smaller communities dealing with a policy problem that resonated at multiple scales actually had comparatively more coverage on the problem than newspapers in larger communities with more resources. The idea of “local issue salience” drives attention to these policy issues,



given the potentially greater impact to the community of decisions made at higher governmental levels.

Nelson et al. (2014) note that media play a role in identifying and defining solutions for policy problem. In this study, few articles focused exclusively on solutions. In the parlance of the NPF, solutions are “the moral of the story” (Jones & McBeth, 2010). In this case, local newspapers presented viewpoints in favor of Wyoming’s plan (with or without revisions), while national media tended to focus on maintaining federal management of wolves under Endangered Species Act protection. An important subtext evident here is that these “solutions” are tied to the frame of tension between state or federal management of wolves, which illustrates one of the persistent roots of conflict in this entrenched policy issue, but also is prevalent in many conflicts over natural resource management in the West. As Nelson et al. (2014) highlighted, in order to work towards resolution of policy conflicts, “Coverage must avoid simplistic dichotomies of environmental focusing events that promote reliance on technological solutions and expert voices, and, instead, support broad public dialogue about comprehensive, balanced, and lasting solutions for complex environmental problems” (p. 13). In this case, one potential solution to address conflict over wolf management would be to decouple the state-federal tension in media framing. However, with the current dearth of media coverage attempting to change the narrative by presenting positive narratives and examples of alternatives to the ongoing disputes between people over wolf

management, it is unlikely that any progressive change away from the entrenched conflict will occur.

Environmental and conservation groups dominate media coverage of wolf issues, and power in terms of media access is concentrated within a few groups. It is possible that these groups have better resources in terms of training and relationships with journalists; they may also hold the position as leaders on the issue, and so tend to appear in articles more frequently. Surprisingly, the local ranchers and outfitters were not as present as expected in the character coding, though there are several individuals who regularly appear in media coverage and purport to speak for the broader interests of these constituencies. Furthermore, actors who may have policy preferences in this subsystem are overlooked as characters in media coverage, such as wildlife photographers and eco-tour operators who work in and around the national parks, or business owners in National Park gateway communities. The voices of citizens living and recreating in wolf habitat are also rare. The reasons for this lack of diversity in the media are likely related to journalist access, relationships, and the short time frame in which stories need to be written. There is a dearth of in-depth coverage that goes beyond the heuristic of the conservationist versus the rancher. Graber points out that media (generally) act

...as a forum of limited discussion of conflicting elite views about numerous political issues. The range of sources interviewed for news stories and the views that are publicized generally fluctuate only narrowly around the political center and many important issues are slighted. Still, news currently alerts the public to the range of political alternatives that have a chance to be selected because they are within the mainstream and propounded by influential individuals or groups. (Graber, 2003, p. 154)

This phenomenon can be seen in the wolf case, where only a relatively select group of individuals is quoted in media as sources, both locally and nationally. The preponderance of environmental groups present in media articles in both local and national news venues indicates that this group was more frequently able to convey their message to a broader audience. The lack of state politician representation in the national media also points to a deficit in this coverage, as the state politicians are key actors in establishing Wyoming's wolf management policy.

Local media are an under-utilized source of contextual background for analyzing policy conflicts. As seen in this comparison to national media coverage of wolf issues in a period of contested political activity between 2008 and 2012 in Wyoming, the local media outlets provided coverage across a wider range of issues and explored different frames through which conflict over wolf management was evident. The comparatively diverse number of issues and stakeholders included in local media articles points to an argument for incorporating local media analysis into traditional media studies (Carrus et al., 2009; Rohlinger et al., 2014), but also in research examining policy problems at differing scales. The wolf case in Wyoming is a useful example, as federal policy decisions over Endangered Species Act listing have significant impacts at the local level. Local newspapers also reflect the culture of the community, and thus may provide context and alternative problem definitions. On the other hand, as the narratives differ at the local and national levels, a comprehensive understanding of how these local issues of national interest are portrayed to a wider audience provides insight into why the conflict over wolf

management continues. Previous research in this arena has also supported this concept (Shanahan et al., 2008). Key recommendations to leveraging media coverage to address perpetual conflict over wolf policy and management would be to increase the number of stories that cover positive relationships, promote intra-coalition cooperation, and encourage efforts to reduce conflicts which, in return, may change the narratives of entrenched battles between coalitions over wolf management. Perhaps the more salient question is how to reduce conflict between people over wolf policy, in addition to mitigating practical conflict between people and wolves. This observation sits well with previous scholarship on the nature of human-wildlife conflict (Madden, 2004; Madden, 2008).

### **3.7 Future Directions**

This research provides insight into the nature and definition of the wolf policy problem through the different frames used in coverage. It provides a contextual background for the subsequent chapters in this dissertation, as well as an overview of the characters and solutions prevalent in the policy arena. Further research on media effects on public understanding of the policy problem is warranted.

In addition, the NPF has been used to assess media venues including YouTube (Lybecker, Mcbeth, Husmann, & Pelikan, 2015; McBeth, Shanahan, Anderson, & Rose, 2012) and Twitter (Gupta, Ripberger, & Wehde, 2016). Given the polarizing nature of decisions over wolf management, incorporating an analysis of

internet-based media could also help to elucidate the nature of problem definitions of policy conflict at differing geographic scales.

Continuing with a longitudinal analysis of media coverage in this policy arena over time could help to document changing problem definitions and foci. Given the pending decision regarding grizzly bear delisting in the same region, understanding the key issues presented through the media to a local constituency can help policy makers and stakeholders have a comprehensive understanding of the information, frames, and characters disseminated to the public. In particular, linking characters to conflict frames would be useful. Given the prevalence of the environmental constituency in the media, the frames that they use to portray the wolf policy problem may have more influence on problem definition and solution-generation. It is safe to say that conflict over wolf policy will not subside soon, so longitudinal analysis of media coverage, expanding to other mediums as well as regional newspapers, could provide a rich dataset to understand the policy dynamics at work, as well as further theoretical insights into the NPF.

## References

- Althaus, S. L., Edy, J. A., Phalen, P. F., Phalen, P. F., & George, T. (2001). Using substitutes for full-text news stories in content analysis: Which text is best? *American Journal of Political Science*, 45(3), 707–723.
- Baumgartner, F. R., & Jones, B. D. (2009). *Agendas and Instability in American Politics* (2nd ed.). Chicago, IL: The University of Chicago Press.
- Bell, A. (1991). *The Language of News Media*. Wiley-Blackwell.
- Birkland, T. A. (1998). Focusing events, mobilization, and agenda setting. *Journal of Public Policy*, 18(1), 53–74.
- Carrus, G. A., Cini, F. B., Bonaiuto, M. B., & Mauro, A. B. (2009). Local mass media communication and environmental disputes: An analysis of press communication on the designation of the Tuscan Archipelago National Park in Italy. *Society and Natural Resources*, 22(7), 607–624.  
<http://doi.org/10.1080/08941920802112734>
- Cathcart, E. (2013). All bark and no bite: Nonspecific magic words sweep aside Constitutional concerns and remove the Northern Rocky Mountain gray wolf from Endangered Species Act protection in *Alliance for the Wild Rockies v. Salazar*. *Villanova Environmental Law Journal*, 24, 253–285.  
<http://doi.org/10.1525/sp.2007.54.1.23>.
- Clark, T. W., Rutherford, M. B., & Casey, D. (Eds.). (2005). *Coexisting with Large Carnivores: Lessons from Greater Yellowstone*. Washington, D.C.: Island Press.
- Crow, D. A. (2010). Local media and experts: Sources of environmental policy initiation? *Policy Studies Journal*, 38(1), 143–164. <http://doi.org/10.1111/j.1541-0072.2009.00348.x>
- Crow, D. A., & Berggren, J. (2014). Using the Narrative Policy Framework to understand stakeholder strategy and effectiveness: A multi-case analysis. In M. D. Jones, E. A. Shanahan, & M. K. McBeth (Eds.), *The Science of Stories: Applications of the Narrative Policy Framework in Public Policy Analysis* (pp. 131–156). New York: Palgrave Macmillan.
- Crow, D. A., Berggren, J., Lawhon, L. A., Koebele, E. A., Kroepsch, A., & Huda, J. (2016). Local media coverage of wildfire disasters: An analysis of problems and solutions in policy narratives. *Environment and Planning C: Government and Policy*. <http://doi.org/10.1177/0263774X16667302>

- Crow, D. A., & Lawlor, A. (2016). Media in the policy process: Using framing and narratives to understand policy influences. *Review of Policy Research*, 33(5), 472–491. <http://doi.org/10.1111/ropr.12187>
- Downs, A. (1972). Up and down with ecology - the “issue-attention cycle.” *Public Interest*, 287, 38–50.
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51–58.
- Fischer, F., & Forester, J. (Eds.). (1993). *The Argumentative Turn in Policy Analysis and Planning*. Durham, NC: Duke University Press.
- Fischer, F., & Gottweis, H. (Eds.). (2012). *The Argumentative Turn Revisited: Public Policy as Communicative Practice*. Durham, NC: Duke University Press.
- Goffman, E. (1974). *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper & Row.
- Graber, D. (2003). The media and democracy: Beyond myths and stereotypes. *Annual Review of Political Science*, 6(1), 139–160. <http://doi.org/10.1146/annurev.polisci.6.121901.085707>
- Gupta, K., Ripberger, J., & Wehde, W. (2016). Advocacy group messaging on social media: Using the Narrative Policy Framework to study Twitter messages about nuclear energy policy in the United States. *Policy Studies Journal*, 0(0). <http://doi.org/10.1111/psj.12176>
- Hatch, C. (2010, April 21). Wolf controversy polarizes. *Jackson Hole News & Guide*, p. Environment Section.
- Hatch, C. (2011a, August 17). Elk to star in wolf plan. *Jackson Hole News & Guide*.
- Hatch, C. (2011b, August 26). Wolf deal could impinge on rights of landowners. *Jackson Hole Daily*. Jackson, WY.
- Hatch, C., & Rank, C. (2010, March 17). Hunters rally to disperse wolves. *Jackson Hole News & Guide*. Jackson, WY.
- Houston, M., Bruskotter, J., & Fan, D. (2010). Attitudes toward wolves in the United States and Canada: A content analysis of the print news media, 1999–2008. *Human Dimensions of Wildlife*, 15(March), 389–403. <http://doi.org/10.1080/10871209.2010.507563>
- Iyengar, S. (1990). Framing responsibility for political issues: The case of poverty. *Political Behavior*, 12(1), 19–40. JOUR. Retrieved from <http://link.springer.com/article/10.1007/BF00992330>

- Johnson, K. (2008, April 13). In the West, fierce battle over wolves. *New York Times*. New York, NY.
- Jones, M. D., & McBeth, M. K. (2010). A narrative policy framework: Clear enough to be wrong? *Policy Studies Journal*, 38(2), 329–353.  
<http://doi.org/10.1111/j.1541-0072.2010.00364.x>
- Jones, M. D., McBeth, M. K., & Shanahan, E. A. (2014). Introducing the Narrative Policy Framework. In M. D. Jones, E. A. Shanahan, & M. K. McBeth (Eds.), *The Science of Stories* (1st ed., pp. 2–25). New York: Palgrave Macmillan.
- Jones, M. D., & Radaelli, C. M. (2015). The Narrative Policy Framework: Child or monster? *Critical Policy Studies*, 9(3), 339–355.  
<http://doi.org/10.1080/19460171.2015.1053959>
- Katzenberger, D. (2012). News, information, and recovery status reports: Gray wolves in the Northern Rocky Mountains. Retrieved May 2, 2012, from <http://www.fws.gov/mountain-prairie/species/mammals/wolf/>.
- Kingdon, J. W. (2011). *Agendas, Alternatives, and Public Policies* (2nd ed.). Boston, MA: Longman.
- Koshmrl, M. (2012, December 12). 2 Teton collared wolves killed. *Jackson Hole News & Guide*. Jackson, WY.
- Krannich, R. S., & Smith, M. D. (1998). Local perceptions of public lands natural resource management in the rural west: Toward improved understanding of the “revolt in the west.” *Society & Natural Resources*, 11(7), 677–695.  
<http://doi.org/10.1080/08941929809381111>
- Krippendorff, K. (2013). *Content Analysis: An Introduction to Its Methodology* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- Lybecker, D. L., Mcbeth, M. K., Husmann, M. A., & Pelikan, N. (2015). Do new media support new policy narratives? The social construction of the U. S.–Mexico border on YouTube. *Policy & Internet*, 7(4), 497–525.
- Lybecker, D. L., McBeth, M. K., & Kusko, E. (2012). Trash or treasure: Recycling narratives and reducing political polarisation. *Environmental Politics*, 4016(November 2014), 1–21. <http://doi.org/10.1080/09644016.2012.692935>
- Madden, F. (2004). Creating coexistence between humans and wildlife: Global perspectives on local efforts to address human–wildlife conflict. *Human Dimensions of Wildlife*, 9(4), 247–257.  
<http://doi.org/10.1080/10871200490505675>



- Madden, F. M. (2008). The growing conflict between humans and wildlife: Law and policy as contributing and mitigating factors. *Journal of International Wildlife Law & Policy*, 11(2–3), 189–206. <http://doi.org/10.1080/13880290802470281>
- McBeth, M. K., & Shanahan, E. A. (2004). Public opinion for sale: The role of policy marketers in Greater Yellowstone policy conflict. *Policy Sciences*, 37(3–4), 319–338. <http://doi.org/10.1007/s11077-005-8876-4>
- McBeth, M. K., Shanahan, E. A., Anderson, M. C. A., & Rose, B. (2012). Policy story or gory story? Narrative policy framework analysis of Buffalo Field Campaign's YouTube videos. *Policy and Internet*, 4(3–4), 159–183. <http://doi.org/10.1002/poi3.15>
- McCombs, M. (2005). A look at agenda-setting: Past, present and future. *Journalism Studies*, 6(4), 543–557. <http://doi.org/10.1080/14616700500250438>
- Nelson, P., Krogman, N., Johnston, L., & St. Clair, C. C. (2014). Dead ducks and dirty oil: Media representations and environmental solutions. *Society & Natural Resources*, 28, 345–359. <http://doi.org/10.1080/08941920.2014.948241>
- Nielsen, R. K. (2015). Local newspapers as keystone media: The increased importance of diminished newspapers for local political information environments. In R. K. Nielsen (Ed.), *Local Journalism: The Decline of Newspapers and the Rise of Digital Media*. London: I.B. Tauris. <http://doi.org/10.3386/w19846>
- Rohlinger, D. A., Pederson, J., & Valle, G. (2014). Inclusive discourse? Local media coverage of the Terri Schiavo case. *Sociological Spectrum*, 35(1), 1–25. <http://doi.org/10.1080/02732173.2014.978427>
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The Advocacy Coalition Framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (1st ed., pp. 117–166). Boulder, CO: Westview Press.
- Scheufele, D. A., & Tewksbury, D. (2007). Framing, agenda setting, and priming: The evolution of three media effects models. *Journal of Communication*, 57(1), 9–20. JOUR. Retrieved from <http://doi.wiley.com/10.1111/j.1460-2466.2006.00326.x>
- Schlickeisen, R. (2001). Overcoming cultural barriers to wolf reintroduction. In V. Sharpe, B. G. Norton, & S. Donnelley (Eds.), *Wolves and Human Communities* (pp. 61–73). Washington, D.C.: Island Press.
- Shanahan, E. A., Jones, M. D., & McBeth, M. K. (2011). Policy narratives and policy processes. *Policy Studies Journal*, 39(3), 535–561. <http://doi.org/10.1111/j.1541-0072.2011.00420.x>

- Shanahan, E. A., Jones, M. D., McBeth, M. K., & Lane, R. R. (2013). An angel on the wind: How heroic policy narratives shape policy realities. *Policy Studies Journal*, 41(3), 453–483. <http://doi.org/10.1111/psj.12025>
- Shanahan, E. A., McBeth, M. K., & Hathaway, P. L. (2011). Narrative policy framework: The influence of media policy narratives on public opinion. *Politics and Policy*, 39(3), 373–400. <http://doi.org/10.1111/j.1747-1346.2011.00295.x>
- Shanahan, E. A., McBeth, M. K., Hathaway, P. L., & Arnell, R. J. (2008). Conduit or contributor? The role of media in policy change theory. *Policy Sciences*, 41(2), 115–138. <http://doi.org/10.1007/s11077-008-9058-y>
- Stone, D. (2012). *Policy Paradox* (3rd ed.). New York, NY: W.W. Norton & Company.
- Taylor, P. (2011, April 13). Budget's wolf delisting opens Pandora's box of species attacks, enviro groups warn. *New York Times*2.
- U.S. Fish & Wildlife Service. (1987). *Northern Rocky Mountain Wolf Recovery Plan*. Denver, CO.
- Wyoming Game & Fish Commission. (2011). *Wyoming Gray Wolf Management Plan*. Cheyenne, WY.
- Wyoming Game & Fish Commission. (2012). *Addendum: Wyoming Gray Wolf Management Plan*. Cheyenne, WY.

## CHAPTER 4

### CHOOSING TEAMS: THE LONG-TERM NATURE OF ADVOCACY

#### COALITIONS IN WYOMING'S WOLF POLICY<sup>1</sup>

##### 4.1 Introduction

Following the reintroduction of wolves to Yellowstone National Park (YNP) in 1995, after a protracted policy process influenced by passionate supporters and detractors, the animals made a perhaps unexpectedly rapid recovery. This recovery prompted efforts to delist the species and turn management over to the states. Numerous stakeholders clamored for standing in the decision-making process to delist wolves, and the policy arena, not surprisingly, grew increasingly contentious. Guided by the Advocacy Coalition Framework (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007), this chapter seeks to understand how coalitions of actors involved in this policy arena change over time, with lends insight into the evolution of the policy problem. First, stakeholder coalitions that advocate for particular policy outcomes are identified. Then, the question of if and how the dynamics between coalition members change over time is considered. Two primary coalitions are present in the period from 2008 through 2012, when the delisting process in Wyoming was particularly contentious: the wolf-expansion coalition and the wolf-management coalition. First, the wolf-

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<sup>1</sup> A previous version of this chapter was presented at the 2016 Midwest Political Science Association Meeting in Chicago, IL.

expansion coalition is analyzed, which is characterized by actors at both local and national geographic scales; this diversity of geographic representation may prompt long-term instability within the coalition over time. Next, the nature of intra-coalition dynamics is investigated in the coalition advocating for intensive wolf management; this coalition appears to exhibit more long-term cohesion in comparison to its wolf-expansion counterpart. The wolf case is illustrative of a long-term policy conflict with coalition formation and engagement at multiple scales, and this geographic distinction may be one important consideration to research further in understanding coalition change and internal dynamics over time.

To the first point above, using data collected through semi-structured interviews of individuals supportive of wolf recovery in Wyoming, the researcher investigated how local actors view the strategies of the non-local pro-wolf coalition, as well as how they seek to address the problem of ongoing conflict over wolf management decisions. Particularly relevant in this case is the influence of litigation on coalition dynamics. Preliminary findings indicate that local coalition actors may secure advantages over their non-local counterparts, particularly in terms of their ability to identify contextually-nuanced policy angles and to utilize local information regarding wolf management issues. Local pro-wolf coalition actors appear more reserved in their support for litigation regarding wolf policy, in contrast to the coalition supporting state wolf management. They also exhibit in-depth knowledge of

wolf management that can provide unique insight into moving forward in addressing this long-term policy conflict. However, the wolf-management coalition, which is less affected by broader interests beyond the geographic boundary of the state, do not appear to exhibit similar intra-coalition dynamics. Further investigation into the role of local coalition members in affecting broader coalition dynamics and their influence on policy outcomes is warranted.

#### **4.2 Theoretical Orientation: The Advocacy Coalition Framework**

At its foundation, the Advocacy Coalition Framework (ACF) focuses on policy subsystems as the primary unit of analysis. Policy subsystems are geographically- and topically-bounded policy issues or problems involving an array of actors, or stakeholders, who organize into coalitions to advocate for their preferred policy outcomes (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). A policy subsystem may contain up to five coalitions competing for a successful outcome in the policy process for their constituency. The ACF is useful to study policy problems that have spanned significant time periods, such as a decade or longer, and yet remain intractable. These long-standing “wicked” policy conflicts are referred to as “mature” subsystems (Sabatier & Weible, 2007).

##### *4.3.1 Beliefs*

Key to the formation of coalitions are the beliefs of the individual actors within the policy subsystem. Individuals’ deep core, normative beliefs

likely will not change, no matter what new information is unveiled about a particular policy subsystem. Examples of deep core beliefs may include the role of government, or the relationships of humans to nature. Policy core beliefs are unique to the policy subsystem and reflect an individual's values as related to the policy topic at hand, including seriousness of the problem, causes, and solutions, the latter of which are referred to as policy core policy preferences. These beliefs are more likely the foundation for the formation of coalitions. Finally, secondary beliefs are narrower in scope than either deep core or policy core beliefs, and may dictate the specific actions or rules that should govern a policy issue in a particular place; examples include details regarding rule-making, such as the parameters for setting hunting seasons and hunt areas (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). Again, policy beliefs translate into advocacy coalitions, where “policy participants strive to translate components of their belief systems into actual policy before their opponents can do the same” (Sabatier and Weible, 2007, p. 196).

#### *4.3.2 Behavior of Coalitions*

Policy subsystems are also characterized by a suite of policy actors who coalesce to advocate for particular policy outcomes. Coalition members may be politicians, government officials, and interest groups or thought leaders, business and non-profit representatives, as well as researchers, consultants, and media (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007; Weible et al., 2009). Furthermore, policy participants will endeavor to reach policy

elites who have similar policy core beliefs in order to gain power and advance their policy preferences. A policy subsystem contains at least one coalition, where actors coordinate based on their policy beliefs and tactics (Jenkins-Smith et al., 2014). The ACF defines two types of policy subsystem: adversarial and collaborative. Subsystems that exhibit little to no learning across coalitions, due to the polarity of beliefs of each coalition, are considered adversarial. In this case, coalitions look to secure the upper hand in the policy conflict however possible, and policy outcomes have clearly identified winners and losers. Coalitions utilize whatever venues are at hand in order to outcompete their rival coalitions, including the court system. In contrast, collaborative subsystems may have coalitions that share some beliefs and seek outcomes that secure common-interest solutions (Weible et al., 2010; Weible & Sabatier, 2009).

Coalitions also use resources and tactics to advocate for their preferred policy outcomes. Several studies have evaluated the importance of six identified critical resources (e.g., legal authority, public opinion, information, mobilizable troops, financial support, and leadership) (Sabatier and Weible, 2007, pp. 201-203). Tactics include litigation, lobbying, research, and engaging the public (Elliott & Schlaepfer, 2001b), and may be engaged across different venues (Weible, 2007). Researchers also have analyzed the efficacy of strategies on achieving policy change. For example, Crow (2008) found that a collaborative approach to lobbying in the state legislature among

stakeholders supporting a change in water policy in Colorado successfully achieved their preferred policy outcome. Pierce (2016) linked the use of resources to strategies in an analysis of fracking policy in Colorado, finding that the winning coalition used resources of leadership and information technology across a variety of strategies to its advantage. This paper analyzes resources, with particular attention to the strategy of litigation in contributing to changes in coalition structure and does not discuss resources overtly; it also considers the resource of local knowledge (as part of the “information” category) as an advantage that can be utilized by members of local coalitions.

#### *4.4.3 Coalition Dynamics*

Coalitions are characterized by a “non-trivial degree of coordination” (Sabatier & Jenkins-Smith, 1999; Sabatier & Weible, 2007; Weible, 2005, p. 462). Policy core beliefs, as discussed above, provide the impetus for coalitions to coordinate their behavior in order to achieve their preferred policy solution or outcomes (Sabatier & Jenkins-Smith, 1999; Zafonte & Sabatier, 1998). Thus, even if coalitions differ fundamentally on deep core beliefs, if they share a commitment to a particular policy outcome, they may still form coalitions and coordinate to address the policy problem. Sabatier and Weible (2007) argue coordination within a coalition can range from weak to strong. Weak coordination is exemplified through non-engaging, passive activities, such as monitoring the actions of another coalition member, whereas strong



coordination necessitates active engagement with coalition members, such as by co-designing a management plan (Sabatier and Weible, 2007).

Furthermore, actors within coalitions may be principal or auxiliary. Principal actors are “central and consistent” to the coalition, whereas auxiliary actors may drift in and out of coalition activities and are considered “peripheral” (Jenkins-Smith et al., 2014, p. 197).

Coalition membership is generally stable over time, though not without some defections or disruptions (Zafonte & Sabatier, 2004). Intense policy conflict may actually serve to cement stability, with only external events that are not controllable within the subsystem affecting coalition membership (e.g., elections) (Jenkins-Smith, St. Clair, & Woods, 1991). Furthermore, litigation may also play a role as a focusing event that influences the break-up of coalitions (Jenkins-Smith et al., 1991). Though Nohrstedt (2011) proposed that changes in advocacy coalition membership may be a prelude to major policy change, findings indicated that this idea did not hold true in the case of Swedish intelligence policy.

Despite the lack of change over time in coalition membership, particularly in cases of entrenched conflict, sub-coalitions have emerged in some cases. In a sub-coalition, members may share beliefs regarding the outmaneuvering of a singular opponent; however, unrelated policy core beliefs and secondary beliefs may differ (Weible et al., 2009). Presumably, sub-coalitions may form based on differences in policy beliefs (Sabatier &

Weible, 2007). For example, Weible & Sabatier (2005) analyzed the actors in California's marine policy subsystem and found two anti-marine protected area sub-coalitions: recreational and commercial fishermen, who diverged on cause and severity of the problem as well as whose welfare counts.

Though sub-coalition analysis has found that coalitions may diverge on policy core policy preferences, less is known as to how actors working at different geographic scales influence coalition dynamics. Local groups and regional or national groups may share similar policy core beliefs, but, because they work on different aspects of a policy issue or have alternative perspectives based on the vantage from which they view the problem, they may differ on their policy core policy preferences or secondary beliefs. Scale has been acknowledged as an important factor in policy and political history, evident even in as simple of an example as the federalist structure of the U.S. government, where states and the federal government conflict over allocation of power and the design and implementation of policy. Attention to scale as a dynamic factor influencing policy has been explored through the idea of "politics-of-scale," which illustrates that "actions that constitute the political construction of scale are by no means confined to circumstances attending to the allocation or re-allocation of formal state power...a more expansive and productive conception of 'politics' requires an examination of the connections between power, practice and scale among a wider universe of actors"

(Delaney & Leitner, 1997, p. 95).<sup>2</sup> This conception of scale as a significant factor in political outcomes, and the recognition of the diversity of actors engaging in the political process at different scales, are important to consider when analyzing coalitions of policy actors.

In that vein, one area in which the ACF may benefit from further exploration is how the geographic scale at which actors operate affects coalition dynamics, particularly relating to local-national tensions. This understanding is highly relevant when considering issues of natural resource management and implementation of federal law at the local level. Examples include forest health initiatives, wildlife management (as mandated by the Endangered Species Act), wilderness designation (as directed by the Wilderness Act), and other contested issues with different problem representations at different scales. Of particular relevance to the ACF, Jenkins-Smith et al. (2014) identified a future need to “[refine] the theory of coalition formation and maintenance” and note that [efforts] to understand coalition structure and the reasons for defection and stability should continue” (p. 205). This chapter offers that geographic scale at which coalitions operate may be a factor contributing to coalition instability over time.

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<sup>2</sup> Delaney and Leitner (1997) note that early pre-Constitutional politicians were involved in a “construction of scale” through the “fundamental debate about scalar allocations of political and economic power” (p. 94) – the Federalists v. anti-Federalists.

### 4.3 Case Study: Wyoming's Wolf Management

The policy subsystem analyzed here is the wolf management subsystem in Wyoming, USA, and the coalition members and other relevant stakeholders will be discussed below. In 1995, wolves returned to the Northern Rockies. With their reintroduction into YNP by the U.S. Fish and Wildlife Service (USFWS), a decades-long reintroduction planning process, initiated in 1974 by the passage of the Endangered Species Act and subsequent designation of the gray wolf (*Canis lupus*) as endangered, transitioned to management. The biological recovery goal for the nascent wolf population was ten breeding pairs and a minimum of 100 individual wolves in each of three recovery zones: central Idaho, southwest Montana, and the Greater Yellowstone Ecosystem (GYE) (the bulk of which lies in Wyoming) (USFWS, 1987). By 2002, wolf packs had established outside of YNP, moving east and south into Grand Teton National Park (GTNP). The first delisting rule was proposed in late 2007; with its publication in 2008, wolves were removed from the Endangered Species List in all three recovery zones (50 CFR Part 17). Subsequent lawsuits prompted several relisting and delisting decisions. (See Table 4.2 for details on the lawsuits).

As a condition of delisting, each state managing a recovery zone (Montana, Idaho, and Wyoming) was required to prepare a wolf management plan and have it approved by USFWS (USFWS, 1987). Wyoming's plan was particularly challenging in that wolves held a "dual-status" designation, as

either trophy game or predator depending on the animal's geographic location within the state. Wyoming was the only state intent on implementing this management approach. In areas assigned to predator status, a wolf could be shot on sight at any time without a license. Following the legal take of a wolf in the predator zone, the individual responsible for removing the wolf had to report it to the state management agency, Wyoming Game & Fish Department (WGFD). In northwest Wyoming, however, wolves outside of Yellowstone and Grand Teton National Parks were declared trophy game, similar to other hunted wildlife species, where a hunting season was established. Hunters had to possess a valid wolf tag in order to harvest an animal (Wyoming Game & Fish Commission, 2011). Wolves were protected from hunting within the national parks.<sup>3</sup> In Montana and Idaho, wolves were and are today designated as trophy game throughout the state (Idaho Legislative Wolf Oversight Committee, 2002; Montana Fish, Wildlife, & Parks, 2002). Initially, USFWS rejected Wyoming's management plan on the grounds of the dual status designation. However, a similar plan was subsequently approved in early 2012. The major difference between the new and previous plans was with the addition of a "flex zone," where wolf designation volleys between predator and trophy game status depending on

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<sup>3</sup> The John D. Rockefeller Memorial Parkway, which connects Grand Teton and Yellowstone National Parks, is federally managed by the National Park Service, though without a "national park" designation. The state wildlife management agency, Wyoming Game & Fish Department, retains authority to manage wildlife in the region of the Parkway. In theory, a wolf hunting area could be legally established here.

the time of year. This compromise was intended to provide for increased genetic connectivity between the wolf populations in western Wyoming and eastern Idaho (Wyoming Game & Fish Commission, 2011). The USFWS approved this plan, and Wyoming's wolves were delisted in 2012. Wyoming was the last state of the three recovery areas in the Northern Rockies to achieve delisting. Environmental groups subsequently filed another lawsuit challenging this decision, and won their case in September, 2014 (*Defenders of Wildlife, et al., v. Jewell, et al.*, 2014). Wyoming's wolves once again returned to the federal Endangered Species list, where they remain today.<sup>4</sup>

The case of wolf management and policy in Wyoming is the policy subsystem as per the parameters of the ACF. Conflict over wolf management exemplified by frequent litigation and policy volleying, or litigation-forced decisions regarding the status of the wolf as an endangered species, has been occurring for nearly a decade. This subsystem is clearly adversarial given the reliance on the court system to negotiate policy decisions listing or delisting the wolf as a federally-protected Endangered Species. The beliefs of the coalitions are discussed below.

Because of the history of litigation and deep-seated conflict over wolf management, we would expect to see little change in coalition structure over time (Jenkins-Smith et al., 1991). However, the unique nature of this case study, where the effects of wolves are felt locally but decisions over

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<sup>4</sup> Refer to Figure 2.1 in Chapter 2 for a map of Wyoming's wolf management areas.

management are of national interest, presents an opportunity to analyze how the scale at which actors in advocacy coalitions may play a role in long-term coalition make-up as well as how coalitions members working at different scales contribute to overall policy goals.

#### *4.3.1 Role of environmental non-governmental organizations (ENGOS)*

Environmental organizations have been active in garnering support for and attention to wolf issues nationally prior to and since reintroduction in 1995. In fact, Mech (2001) suggests that the livestock compensation program developed and funded by Defenders of Wildlife, a national NGO, greatly facilitated the feasibility of wolf reintroduction to the Northern Rockies. However, environmental organizations have also fostered the spread of false information and inflammatory rhetoric over wolf management, which serves to perpetuate conflict and polarize opinion, making it difficult for management agencies to move forward (Mech, 2001). This analysis lends further support to the idea of addressing the geographic scale at which coalition members operate. National organizations may not see acute effects of using these types of divisive tactics, and therefore have little to lose, while local organizations may bear the brunt of resentment and backlash of ongoing litigation.

#### *4.3.2 Geographic Scale and Coalition Operation*

Following the questions proposed by Jenkins-Smith et al. (2014) regarding coalition change over time, here, it is posited that the geographic

purview of coalition members may be one such influence. The geographic scale at which coalition members participate in the policy process has not been examined in-depth through the ACF. The data analyzed in this chapter offer insight into these dynamics based on the nature of the policy conflict. The anti-wolf coalition operates primarily at the local and state level, while the scalar dynamics of the pro-wolf coalition are more complicated. Locally-based environmental organizations and engaged citizens with histories of participating in the policy process or engaging with leading organizations primarily make up the local pro-wolf coalition; however, national and regional conservation non-governmental organizations (NGOs) also participate in Wyoming's wolf policy subsystem, primarily through the litigation of decisions based on the status of the wolf as an Endangered Species.

#### **4.4 Hypotheses**

First, the following research question will be addressed in order to empirically establish the presence of coalitions in the ACF sense:

*RQ1: What advocacy coalitions exist in the wolf policy subsystem in Wyoming?*

Furthermore, the beliefs upon which coalitions are differentiated are important to understanding how and why different coalitions emerge. Based on the ACF literature:

*H1: Differences in deep core beliefs between the coalitions help explain the adversarial nature of the subsystem (Weible et al., 2010).*



The literature on the ACF presented above describes that coalitions in intractable policy conflicts tend to remain stable over time, barring the effect of exogenous events (Jenkins-Smith et al., 1991). However, in the case of wolf management in Wyoming, the narrative presented earlier in this chapter alludes to potential fissures in coalition structure, which may be due to the geographic scale at which coalitions focus their efforts. Furthermore, local coalitions also play a unique role in changing the narrative regarding the policy problem.

Based on the distinction between strong and weak intra-coalition coordination described in the literature above, filing a lawsuit as co-plaintiffs is indicative of stronger coordination among pro-wolf coalition members (Sabatier & Weible, 2007). Changing participation in key lawsuits may be an early indicator of future coalition splintering between the local/community-based coalition members and those members predominantly acting at regional or national scales. Therefore, a decreasing readiness to join in litigation over delisting decisions in the wolf case indicates a transition to weaker coordination among coalition actors:

*H2: Within the wolf-expansion coalition, changing perceptions on the strategy of litigation signal a transition from stronger to weaker coordination between coalition actors at the national and local scales.*

Furthermore, local environmental organizations can play an integral role in furthering our understanding of the context of a policy problem by employing diverse strategies (Kempton, Holland, Bunting-Howarth, Hannan,

& Payne, 2001) and building partnerships (Klyza, Isham, & Savage, 2006). If these characteristics of local organizations can be applied to local coalitions (which, by nature, include multiple organizations and other actors), local-level wolf-expansion coalition actors may provide insight into the changing nature of this policy problem, as well as find creative ways to move forward on a seemingly-intractable, or “wicked,” issue. Their ability to be more adaptable and familiar with the issue at the ground level may contribute to coalition fissuring if the actions of the national coalition negatively impact local efforts to gain traction on a policy issue:

*H3: Members of coalitions at the local level utilize the resource of local knowledge of the policy context to advance progress on policy conflict.*

Finally, because the wolf-management coalition does not have as complex geographic representation, the nature of their intra-coalition dynamics may be different:

*H4: The complexity of the scale at which coalitions operate influences long-term coalition stability.*

## **4.5 Methods**

This study employs an in-depth single case study approach (Yin, 2009) which is appropriate because of the importance of the process and outcomes of wolf management and delisting for future Endangered Species Act decisions. Wyoming’s situation is highly unique, even among the other western states with recovering wolf populations, given its alternative management structure of classifying the wolf as either trophy game or

predator depending on an animal's location geographically within the state (and the time of year in the case of the flex zone). Thus, it is a rich case study from which to glean theoretical insight, particularly on the role of local information and participation in the policy process, and provide practical suggestions as to address conflict between people over wolf management.

#### *4.5.1 Semi-Structured Interviews*

Stakeholders and organizations involved with wolf policy in western Wyoming were identified through personal knowledge of the researcher, media coverage, and participation in lawsuits. Additional potential interviewees were based on recommendations from other study participants using a snowball-sampling approach. In-depth, in-person semi-structured interviews (Rubin & Rubin, 2012) were conducted with stakeholders between May 2014 and September 2015. This chapter reports on the results of interviews with thirty-three subjects representing interests including hunting, ranching, tourism, photography, state politics, and environmental groups. All but three interviewees lived or worked in Wyoming at the time. Kempton et al. (2001) defined a local group as one based on “the social criteria of communication, direct participation, and shared venue, which typically but not necessarily imply geographical proximity of members (p. 561). A locally-based organization includes both autonomous groups and chapters:

- An autonomous group is a self-formed and self-governed group that, though it may be part of larger networks or coalitions, is not subject to the formal by-laws of a non-local group.
- A chapter is typically but not necessarily a self-formed and self-governed group that, in addition to possibly being part of larger networks or coalitions, is subject to the formal by-laws of a non-local group of which it is a branch. (Klyza et al., 2006, p. 908)

Within the conservation community in this area, several individuals have worked for multiple organizations and thus have additional insights beyond those related to their current positions. Other interviewees were long-term (often lifelong) Wyoming residents involved in the outfitting and livestock industries and several currently or previously held political positions within interest groups and state government.

Because wolves in Wyoming were returned to the Endangered Species List by a district court decision in Washington, D.C. in September 2014, most subjects interviewed prior to this date were asked follow-up questions regarding this major policy decision.<sup>5</sup> These follow-up interviews took place both in person and over the phone. Total interview time with each subject ranged from one hour to three hours. All interviews were digitally recorded. Interview questions focused on analyses of Wyoming's wolf management plan, appraisal of the policy process by which management and listing/delisting decisions occurred, communication and collaboration within and among coalitions, resources used to advocate for preferred policy outcomes, political factors surrounding wolf management and policy, and

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<sup>5</sup> Several could not be reached for follow-up.

preferred policy and management outcomes. (See Appendix 2 for the interview protocol.) The researcher transcribed all of the interviews and coded them using NVivo qualitative data analysis software (2015), where qualitative data are extracted from interviews and categorized into relevant “bins” associated with codes. Codes were created based on ACF literature as well as other research on social and political aspects of wolf management. Emergent codes based on interview content were allowed as well (Miles & Huberman, 1994). Beliefs were coded strictly using ACF literature: deep core beliefs (DEEPCORE), policy core beliefs (POLCORE) and policy core policy preferences (PCPPREFS), and secondary beliefs (SECOND). Examples of codes relevant to intra-coalition dynamics included COALIT (coalition formation, splintering, or other coalition dynamics), LITIG (lawsuits or legal decisions), NNGO (communication with regional or national NGOs), and NICHE (unique topic or idea covered by a local group). (When data from interviews are presented in the findings, they are cited according to a broad-scale “field” identifier (e.g., NGO (non-governmental organization), IND (individual), BUS (business interest), or GOV (governmental agency employee) and a subject ID number (e.g., NGO-1). See Appendix 3 for the interview codebook.

#### *4.5.2 Other Data Sources: Litigation Documentation*

Data were gathered on each of the three lawsuits argued in federal court regarding wolf management and policy in Wyoming, beginning in 2008

when the first delisting rule was published. These data, based primarily on an organization's participation as a plaintiff in federal lawsuits which challenge delisting decisions in Wyoming, illustrate potential changes in the pro-wolf advocacy coalition.<sup>6</sup> These data are presented in Table 4.2.

#### **4.6 Identification of Coalitions and Beliefs**

In this section, the following research questions will be addressed:

*RQ1: What advocacy coalitions exist in the wolf policy subsystem in Wyoming? Subsequently, how have advocacy coalitions influenced the policy process for wolf management in Wyoming in the past decade?*

Two coalitions emerged from coding of the interview data: wolf-management advocates and wolf-expansion proponents. These groupings map onto previous literature; though not specifically called coalitions in the ACF sense, Taylor and Clark (2005) identified the contrasting views of "Old West" localists and "New West" environmentalists. The former group includes, for example, ranchers, hunters, and states'-rights advocates – people who represent the tradition and culture of the frontier era in Wyoming and adhere to the idea of the "rugged individualist." This group may engage in extractive or land based industries, such as livestock grazing, hunting, or mining. The "New West" environmentalists tend to be relatively recent transplants to the region, and exhibit values supporting wildlife conservation and other environmental initiatives. They exhibit “ecologistic values” which

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<sup>6</sup> Other legal challenges, including injunctions and dropped lawsuits, also took place during this time and are not included as they either did not result in a decision or did not reference Wyoming's management plan.

“[emphasize] the biophysical patterns, structures, and functions of nature” (D. Taylor & Clark, 2005, p. 34). The first group tends to be less supportive of wolf reintroduction and remains leery of having wolves on the landscape, with strong support for state management. The latter group is supportive of wolf recovery and expansion. These same coalition delineations were later used in ACF-related research on this topic as well (Shanahan et al., 2008).

H1, which stated that *differences in deep core beliefs between the coalitions help explain the adversarial nature of the subsystem* (Weible, Pattison, & Sabatier, 2010), is supported here. A more simplistic typology would be to name these the “pro-wolf” and anti-wolf” coalitions, similar to the designations above; however, due to changes in each coalitions’ perspective and preferred policy over the course of the existence of this policy subsystem, the names of “wolf-expansion” and “wolf-management” are now more appropriately descriptive. Several interviewees in the latter category acknowledged that, though there are still constituents in their respective organizations that are staunchly “anti-wolf,” the leadership and many members recognize this position is untenable based on the mandates of the Endangered Species Act, and have moved beyond it to perhaps determine how to live with wolves in the areas of the state where they are present. They advocate for wolves to be “managed” according to the recovery goals set forth in the original recovery plan. Surplus wolves, therefore, should be removed,

and there are areas in Wyoming where wolves simply cannot persist, primarily due to conflicts with livestock.

In contrast, the wolf-expansion coalition holds a deep-core belief that wolves should be permitted to play their role in ecosystem health, as a top predator and moderator of trophic cascades.<sup>7</sup> Generally, the former coalition would prefer more wolves across the state, and the latter, fewer.

Table 4.1 presents an analysis of the dominant beliefs for each coalition as per the ACF. This table generalizes observations based on interview data; there are nuances within each coalition that are not necessarily captured here. Chapter 5 discusses briefly the potential for the lessening of the adversarial nature of the coalitions at the local level given changes in policy beliefs within the local wolf-expansion and wolf-management coalitions in recent years.

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<sup>7</sup> See chapter 2 for a discussion of research describing the ecological role of wolves in ecosystems.



Table 4.1: Typology of ACF beliefs of coalitions acting in the wolf policy subsystem in Wyoming

<i>Type of Belief</i>	<i>Wolf-Expansion</i>	<i>Wolf-Management</i>
<b><i>Deep Core Beliefs</i></b>		
<b>Role of Govt</b>	Distrust of state	States' rights advocates
<b>Relationship to Nature</b>	Biocentric – humans as part	Anthropocentric – humans as dominant
<b>Science</b>	Science is paramount	Science is politics
<b>Value of Nature</b>	Intrinsic	Economic
<b>Worldview</b>	Represent national/global interests; more aligned with “urban” attitudes	Old West – rural, individualist, loyal to community/local preferences
<b>Wolf</b>	Iconic	Predator
<b><i>Policy Core Beliefs</i></b>		
<b>Wolf Recovery</b>	Recovery goals insufficient; should be revisited with new science	Recovery goals are reached; “pact” with the state to be upheld
<b>Role of Litigation</b>	To be used “as a last resort”	Wildlife should not be managed in the courts
<b>Endangered Species Act</b>	Uphold/ “Protect”	Revise/ “Fix”
<b><i>Policy Core Policy Preferences</i></b>		
<b>Wyoming's Plan</b>	Should be trophy game statewide	Dual status
<b>State Management</b>	Yes with reservations to no	Yes
<b>Hunting</b>	Trophy-game hunting can be tolerated	Supports hunting

<i>Secondary Beliefs</i>		
<b>Compensation Program</b>	Yes	Yes
<b>Private Lands Flexibility</b>	Yes	Yes
<b>Lethal Control</b>	Yes, on private lands	Yes
<b>Protection of Park Wolves</b>	Yes	Unclear if aware of this issue

## 4.7 Intra-Coalition Dynamics

This section describes the findings related to the dynamics within each of the coalitions, and their long-term tactics.

### 4.7.1 *Wolf-Expansion Coalition*

Because of the complexity of the wolf-expansion coalition, this chapter first focuses exclusively on its intra-coalition dynamics. I examine the influence of scale in coalition longevity, and offer observations on the role of local coalition members in multi-scalar coalitions.

#### 4.7.1.1 Findings: Changes in Coalition Structure

Sabatier and Weible (2007) argue that policy core policy preferences “might be the stickiest glue that binds coalitions together” (p. 195). Several interviewees said that they did not support Wyoming’s plan as it currently stands, with wolves managed under the “dual status” classification of trophy game/predator; however, they acknowledged that state management may be workable if wolves were designated as trophy game statewide.<sup>10</sup> In other words, state management of wolves was not a complete anathema to some local coalition members. However, given the litigation against the USFWS over their approval of Wyoming’s plan by larger NGOs outside of Wyoming, these organizations would prefer that wolves remain protected under the

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<sup>10</sup> “Trophy game” status allows for limited, regulated hunting of wolves in a geographically-delineated area of the state. “Predator” status means that wolves can be lethally removed at any time; a hunting license is not necessary. Wyoming’s “dual status,” where wolves are trophy game in the northwest corner of the state and predators elsewhere, is unique among states with wolf populations.

auspices of the Endangered Species Act, and thus under the auspice of the USFWS.

In terms of describing the intra-coalition dynamics, two observations emerged. First, interviewees critiqued the tactics that other (non-local) organizations use to solicit support for the wolf recovery cause.

...there are numerous groups working on wolves, and I think that some groups realized that people's positions are a little bit different. So I think groups are aligning in litigation, or [making] sure they are working with groups that have somewhat similar positions, or more than somewhat similar. (NGO-5)

...some of the groups have become more entrenched that the states should not manage wolves. And I think there likely will be petitions to relist, or efforts to get wolves back on the Endangered Species list. (NGO-1)

Wolves, for the most part, in northwest Wyoming, are doing pretty ok. They're fine. I think the general sort of tone that you hear, and the more conservation environmentally green group [says] these wolves are endangered, look at these pups, these pups are going to be killed if you don't send me \$25...it's sort of a play to... fundraise and get people revved up. I don't think it's the reality. (NGO-2)

Second, there was frustration with non-local organizations' lack of connection to the issues on the ground.

... those people that live very far from the issue have misperceptions of what's really going on out here... the issue of compromise in the environmental world, is I think difficult for individuals, and it's really some entire organizations that have uncompromising advocacy platforms that don't allow for the day-to-day on the ground management that occurs out there...for us to accept that wolves would be killed because they would kill livestock, this non-native species that doesn't belong here, is inflammatory to some groups. (NGO-1)

This observation illustrates the perception that there is disconnect between the beliefs and tactics of some environmental groups with the on-the-ground

reality, which could be exacerbated by a lack of familiarity with local context.

#### 4.7.1.2 Views on Litigation

Moving more specifically into litigation as a strategy to achieve policy outcomes, H2 stated: *Within the wolf-expansion coalition, litigation acts as a trigger to initiate a transition from stronger to weaker coordination between coalition actors at the national and local scales.*

All of the non-profit organizations (n=8) represented in the “NGO” category of the wolf-expansion coalition have used or consider using litigation to achieve their goals (not specific to wolves).

Well, litigation in and of itself is, to me, a last resort. It is when everything else fails. And when you go to litigation, it says the system has broken down... But I think, the downside of going to the court is that even casual supporters sometimes get tired of that. And they don't quite understand the battles that led up to that decision to go to court. Because they just haven't been that involved in it. But like I say, it's a last resort, and that's sad. (IND-2)

Solutions that you can get without litigation tend to be more sustainable. I could be wrong about that but I think litigation is something you do if you desperately want something but don't have any other means of power to achieve it...But that doesn't say, I think we shouldn't use it, I think we should just know when to use it and do it strategically. I think I'm not convinced it was always done that thoughtfully in the past. Maybe it was in hindsight, but maybe not always. (NGO-2)

I think there's some groups that have less of an appetite for litigation, who are willing to, who sort of looked at Wyoming's plan, and said, it's not great, but they have at least this minimum number of wolves, and we can live with it... (NGO-6)

Local organizations also have dropped out of participating in major lawsuits on wolf issues in Wyoming. Table 4.2 displays each lawsuit involving

Wyoming's wolves since February 2008, when the first delisting rule was published. Both qualitative data and participation in lawsuits provide strong support for H2, which states that: *Within the wolf-expansion coalition, changing perceptions on the strategy of litigation signal a transition from stronger to weaker coordination between coalition actors at the national and local scales.* In other words, the transition from strong to weak coordination between local and national coalition members may be a result of both the changing views on the effectiveness of litigation in achieving long-term, sustainable policy outcomes over wolf management and the willingness of local organizations to participate in litigation.<sup>11</sup>

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<sup>11</sup> The plaintiffs in all three major wolf cases between 2008 and today were successful in their arguments to return federal protection to wolves in the Northern Rockies.

Table 4.2: Primary litigation on Wyoming's wolves from 2008-2016. Note that the plaintiff (green) was successful in every case. Local organizations are highlighted in purple text in the "plaintiff" column.

Case No.	Date	Name	Court	Plaintiff	Defendants	Premise
565 F. Supp. 2d 1160	7/18/2008	Defenders of Wildlife v. Hall	U.S. District Court, Missoula, MT	Defenders of Wildlife, Natural Resources Defense Council, Sierra Club, Center for Biological Diversity, Human Society of the United States, <b>Jackson Hole Conservation Alliance</b> , Friends of the Clearwater, Alliance for the Wild Rockies, Oregon Wild, Cascadia Wildlands Project, <b>Western Watersheds Project</b>	H. Dale Hall, U.S. Fish and Wildlife Service Director; Dirk Kempthorne, Secretary of the Interior; and United States Fish and Wildlife Service	Challenged 2008 delisting of wolves in Idaho, Montana, & Wyoming
729 F. Supp. 2d 1207	8/5/2010	Defenders of Wildlife V. Salazar	U.S. District Court, Missoula, MT	Defenders of Wildlife, Natural Resources Defense Council, <b>Sierra Club</b> , Humane Society of the United States, Center for Biological Diversity, <b>Jackson Hole Conservation Alliance</b> , Friends of the Clearwater, Alliance for the Wild Rockies, Oregon Wild, Cascadia Wildlands, <b>Western Watersheds Project</b> , Wildlands Network, and Hells Canyon Preservation Council; <b>Greater Yellowstone Coalition</b>	Ken Salazar, Secretary of the Interior, Rowan Gould, Acting U.S. Fish and Wildlife Service Director, and United States Fish and Wildlife Service	Challenges partial delisting of wolves in Idaho and Montana, but not Wyoming
68 F.Supp.3d 193	9/23/2014	Defenders of Wildlife v. Jewell	U.S. District Court, Washington D.C.	Center for Biological Diversity, Defenders of Wildlife, Fund for Animals, Humane Society of the United States, Natural Resources Defense Council, and Sierra Club	Sally Jewell, Secretary of the Interior, and United States Fish and Wildlife Service	Challenged removal of Wyoming's wolves from the Endangered Species List

#### 4.7.1.3 Local Wolf-Expansion Coalition Adaptability

Local NGO actors within the wolf-expansion coalition identify and work on issues that are diverse and context-sensitive. Examples include efforts to expand coalition membership, such as to wildlife-watching businesses, as well as to implement “coexistence” projects to minimize conflicts between livestock and cattle. They may also identify unique policy problems related to wolf management of which other coalition members at regional or national scales may be less aware. H3 states: *members of coalitions at the local level utilize the resource of local knowledge of the policy context to advance progress on policy conflict.*

First, NGOs are endeavoring to enlarge the scope of their coalition at the local level and include stakeholders who have not historically (pre-2008) been engaged in the policy process. In particular, they are allying with some wildlife-watching businesses to provide support to them as they seek to influence hunting quotas in specific areas where they take visitors who hope to see wolves. These efforts were described by three respondents, with an example provided below:

So, [redacted] have helped some of these wildlife watching companies better organize and provide them an opportunity to comment on this, help them understand how this process works. So we just sit down and talk with them and say, “This is something you might want to think about. This is what you can do if you organize.” ...And that’s more and more I think how I’d like the [redacted] to work is... being an organization that empowers people that care, either small businesses or individuals, to push the decision makers and to express their views in the right way so that we can actually move policy.  
(NGO-2)

Second, local wolf-expansion coalition members may also recognize and attempt to act on specific issues that are relevant locally but also have implications for policy-



making at the national scale,<sup>12</sup> or those that are specific to the context, geography, or politics of the area that may not be addressed at regional or national scales because of their specificity. The interviewee below describes an example of the first case:

...there appears a lack of consistency throughout the [U.S. Fish & Wildlife] Service in how specifically high-profile predators such as wolves are managed. And one of the things we've brought to the attention to the upper levels of the Service is this inconsistency. And, so if you have one thing done in one area, one thing done in another area, you're creating problems - management problems - basically across the board... it would be nice to have an across the country policy ... that really directs superintendents and regional directors as to how they need to manage these conflicts with state agencies. (NGO-3)

At least three respondents identified unique angles related to wolf policy on which they worked as their primary focus.<sup>13</sup> In this way, locally-based organizations display the flexibility and the knowledge to identify issues that may not reach the agenda of coalition members working at national or regional scales who do not have a local presence in a particular community.

Finally, some wolf-expansion coalition members articulated an alternative vision to addressing conflicts over management.

I think the bigger question is how we can empower a larger group of people to have a say in how Game and Fish fundamentally thinks about these issues. And from that perspective I would like to work on wolves, because I think it's a way to build relationships, it's a way to understand sort of the wider politics and policy around this. And also, a way to try to understand how we can prod Game & Fish, and Game & Fish's constituency. (NGO-2)

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<sup>12</sup> This characteristic is likely more prevalent with "chapter" organizations, as described by Klyza et al. (2006).

<sup>13</sup> Because these issues are unique to each of the organizations, I refrain from describing them here in order to preserve participant anonymity.

I'd just say that I think that the more the more that the pro-wolf community can be self-reflective, constantly re-evaluating what, what they're doing, how they're working on wolves, and just continually ask themselves, "what is in the best interest long-term for wolves in the Northern Rockies?" I think that if that's the lens through which people work or view the issue, I think that'd be a great thing. If you're constantly [asking], what's best long-term for wolves? And I think sometimes folks can get away from that, and get caught up in near-term fights and sensationalism and battles and that sort of thing. And I think the more we can do that the better, for wolves and the region. (NGO-5)

In summary, locally-based coalition actors appear to be more nimble and adaptable in their approach to working on wolf issues. They identify opportunities to diversify the coalition membership at the local level, as well as to address unique, contextual problems that may have broader implications. Finally, as illustrated in the final quote, their proximity to issues on the ground may provide nuanced insight into the nature of the problem – in this case, that wolf management is not the primary issue, but rather is related to understanding and changing the mentality and wildlife management approach of the Wyoming Game & Fish Department. Contextual knowledge, in their case, is a resource.

Local wolf-expansion coalition members have the advantage of developing a deeper understanding of the issues facing wolf conservation practically, and then identifying the steps necessary to achieve those goals. H3 is supported by this evidence in the case of the wolf-recovery coalition. However, it is not yet clear the degree to which increased adaptability may influence how local coalitions interact with the national counterparts, other than a reticence to engage in litigation.

#### *4.7.2 Wolf-Management Coalition*

The wolf-management coalition members do not span the geographical scales that those in the wolf-expansion coalition represent. There appears to be less intra-coalition angst, most likely related to a singular goal to secure wolf management at the level of the state, and the lack of coalition membership outside the state.

##### 4.7.2.1 Views on Litigation

The wolf-management coalition has a single-issue focus: primarily, to secure state management of wolves and secondarily, maintain the population at the required targets of the recovery plan. The coordination across this coalition, in contrast to the wolf-expansion coalition, seems to be most organized over litigation through a loosely-organized group. The Wyoming Wolf Coalition has allies of primarily local county commissions, livestock, and hunting interests across the state. Though members of the coalition discuss pending lawsuits, the Coalition has little other formal active engagement with one another:

I don't think it's a group that's ever met... it was a lot of county government, county-level officials, some outfitters, some private entities as well. But just all individuals who would prefer Wyoming manage wildlife. (NGO-6)

We formed this coalition – the original group was about 30 some members, it was [stockgrowers], farm bureau, wool growers, it was a number of predator animal districts, it was several of the sportsmen groups in the state, pretty diverse group, to defend...the Wyoming management plan and the delisting, which we did successfully in federal district court here in Wyoming. Then once that was over, it sort of didn't function for a while, until the lawsuit that was filed in the D.C. court. And when that one was filed, and the state of Wyoming intervened in that, [the Coalition] came back together and felt that it needed to have a presence there to make sure [the] perspectives were in front of the judge. (NGO-8)

In the case of the wolf-management coalition, litigation efforts are the “glue” that binds it together, in contrast to the wolf-expansion coalition. However, this coalition represents local and state interests, and does not have the additional layer of a national interest to consider (such as the integrity of the Endangered Species Act) or national organizations advocating for policy outcomes within the state. Thus, returning to H2 regarding the impacts of litigation on coordination strength within coalitions, the wolf-management coalition does not appear to be experiencing any change in strength of coordination.

That being said, there is communication within coalition interests with other like-minded interests across the region and the country. Two examples are worth noting. First, stockgrowers’ associations work with each other across the western states through national meetings and other methods of information sharing periodically throughout the year; the wolf is always on the agenda. Second, outfitters within Wyoming have created a website in order to garner support from hunters living across the country to have a voice in Wyoming policies on sportsmen’s issues. The Wyoming Hunter Defense Fund “was founded to protect the ability of sportsmen to access their hunting opportunities in Wyoming” (Wyoming Hunter Defense Fund, 2016). Though these two examples are not directly related to litigation, they do provide some insight into the nature of intra-coalition communication and structure for this coalition.

#### 4.7.2.2 Local Coalition Adaptability

H3 states, *Members of coalitions at the local level utilize the resource of local knowledge of the policy context to advance progress on policy conflict.* Though this phenomenon is seen in the wolf-expansion coalition, it is less evident in the wolf-management coalition. The key difference for the wolf-management coalition is a transition from a staunch “no wolf” preferred policy outcome to more of a reluctant acceptance that wolves will be present on the landscape for the foreseeable future in northwest Wyoming, and thus, it is more productive to address the problem from this orientation:

There are [individuals] today who would say the only answer is we shouldn't have wolves. But...we recognize that we've moved beyond that point. And the issue now is how can we manage for viable population and at the same time protect our property interests. (BUS-9)

However, this change appears to have taken place more on an individual level and less collectively across the coalition:

I just, I don't see the animosity. I've gone to a lot of meetings in Jackson, and with a lot of different environmental groups, and I don't see the anger over grazing that I once did probably ten years ago. Or against ranchers.... Now, ranchers don't know that. It's hard for me to try to articulate that because they think everybody's out to get them because...we kind of like to crawl down into our little badger hole and bare our teeth. We don't really like to stick our head out. But I really do think there has been so much development – that people are starting to understand that in order to hold these ecosystems, these habitats together, you have to have working landscapes, and that's us. (BUS-4)

Some ranchers are considering changes to grazing practices as well as non-lethal approaches to reducing practical conflicts, but again, these changes are not a concerted coalition-wide effort. However, members of the wolf-management

coalition have intimate knowledge of the landscape and long-term investment in the region, and so establishing cross-coalition communication and trust would certainly be one step in addressing policy conflict from the local/state level.

#### *4.7.3 Coalition Stability and Scalar Dynamics*

H4 stated: *The complexity of the scale at which coalitions operate influences long-term coalition stability.* When reviewing the internal dynamics of the coalitions, the wolf-expansion coalition seems to experience intra-coalition challenges. This coalition encompasses members working at varying geographic scales, who appear to diverge on the strategies for achieving outcomes. There is also some disagreement as to the preferred policy outcome. Local coalition members (though not all) would prefer trophy game statewide, with management turned over to the state, while national coalition members generally advocate (through litigation) for continued USFWS management and Endangered Species listing.

In contrast, the wolf-management coalition primarily operates at the local/state level, and, similar to the wolf-managers, has a clearly defined goal of state management. Thus, with increasing complexity of geographic representation in an advocacy coalition, intra-coalition stability may be challenged as the policy subsystem ages and policy beliefs change.

### **4.8 Discussion**

This chapter explored the role of geographic scale in affecting coalition stability. Wolf management in Wyoming exemplifies a multi-scalar problem of local and national interest. Findings first indicate that the local wolf-expansion coalition

in Wyoming may be moving from a model of stronger to weaker coordination with its national counterpart, primarily (though likely not exclusively) as a result of continued reliance on the part of the national members to use litigation to achieve policy outcomes, and disagreement at the local level with the use of this tactic.

Second, local wolf-expansion coalition members have several significant advantages related to their knowledge of the context of the wolf management problem “on-the-ground.” This knowledge is manifested through their ability to adapt to changing context, where they can identify additional coalition members, gaps in policy, and opportunities to address problems locally (such as through coexistence work, or endeavoring to reduce conflicts between wolves and people (Clark, Rutherford, & Casey, 2005)). This phenomenon was observed for the other primary coalition as well, though to a lesser degree. This understanding of how local coalition members may contribute in a unique way to developing a deeper understanding of both a policy problem and its potential solutions highlights the importance of recognizing the scale at which members operate for two reasons. First, describing the similarities and differences of coalition members in a multi-scalar policy problem can reveal intra-scalar dynamics that hint at the future direction, in terms of policy preferences, of the policy subsystem. Second, paying attention to how local coalition members act within a policy subsystem may illuminate opportunities to redefine the nature of long-term policy problems.

#### *4.8.1 Coalition Structure*

The descriptive review of possible changes in coalition structure for the wolf-expansion coalition provides a basis from which to address the hypotheses on litigation and local adaptability. The ACF suggests that coalition structure, particularly in an adversarial subsystem characterized by entrenched conflict, will remain stable for a decade or so. Based on the evidence from participation in litigation as well as qualitative data collected from interviewees, it appears that the dynamics between local and national members of the wolf-expansion coalition are at a turning point. Though there is not clear evidence of a “local” sub-coalition emerging, there is dissatisfaction and critique of “outside” pro-wolf environmental groups that work at a national level. Furthermore, evidence suggests minimal engagement between Wyoming coalition members and others working regionally or nationally, with the exception of intra-organizational efforts (i.e., between a chapter and its regional or national office). For the “chapter” organizations, it is possible that this type of coordination occurs, though not as readily at the local level.

#### *4.8.2 Future of Litigation?*

Jenkins-Smith et al. (1991) argued that extreme conflict results in little change in coalition structure. In the case of wolf management in Wyoming, this appeared to be the case up to the point where Wyoming took over management in 2012. Prior to this date, some local groups participated in lawsuits with plaintiffs from a multi-scalar network of organizations. Following the transition to state management, though the local wolf-recovery coalition was disappointed both in the



actions of the U.S. Fish and Wildlife Service that allowed for delisting in Wyoming as well as the dual status of the wolf in the state, they refrained from joining the most recent lawsuit.

The 2014 decision on the lawsuit filed in 2012 (*Defenders of Wildlife, et al., v. Jewell, et al.*, 2014) returned wolves to the endangered species list in Wyoming. The filing of the lawsuit (and not the decision, per se) may be seen as a “focusing event” that began to affect coalition structure and intra-coalition dynamics. Litigation that is not widely supported within a coalition may indicate a transition from strong to weaker intra-coalition coordination (Sabatier & Weible, 2007). Interestingly, local interviewees expressed that conservation groups “lost” the wolf battle in Wyoming, despite the successful litigation outcomes. Some local organizations may be hesitant to continue participating in ongoing litigation efforts spearheaded by outside, national groups because of the potential for jeopardizing local relationships with members of other coalitions, if they intend to attempt to work across coalitions to address policy problems. To some degree, thus, they may exhibit policy learning (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). There is some evidence that this change is occurring, as noted in the coexistence work described above. Further research on the presence of policy learning at the local level is warranted.

In contrast, the wolf-management coalition does not have the same national participation as the wolf-expansion coalition, and continues to rely on litigation as the primary tool through which they act together to negotiate for preferred policy outcomes. The reasons for this dynamic are not explored here, but future research

may examine in more depth the dynamics of such coalitions with specific, localized interests and concerns.

#### *4.8.3 Local Coalition Members and Adaptability*

Local organizations are diverse in their approaches to policy problems and are key to long-term sustainable outcomes (Kempton et al., 2001; Klyza et al., 2006). As conflict over a particular policy problem becomes somewhat stagnant, demonstrated by the wolf case in Wyoming, some local groups who are part of the wolf-expansion coalition are seeking alternative ways to address the problem. In addition, they have stepped back from a litigious approach to achieving their preferred policy outcomes. Others seek out context-specific issues to address, which may or may not involve litigation in the future—but it is important to note that these organizations working on specific aspects of the wolf issue are attempting to utilize other channels first, leveraging relationships and knowledge.

Though views differed on the effectiveness of and motivations behind state management, many interviewees in the wolf-expansion coalition exhibited “disappointed pragmatism.” They were not able to achieve their preferred outcome (at a minimum, trophy game status throughout the state), and they felt disenfranchised from the policy-making process for Wyoming’s management plan. As a result, they are looking for alternative ways to move forward. As mentioned earlier, a few environmental groups are beginning to work with the wolf-management coalition as well on a project-by-project basis locally to address conflicts with wolves. If these activities continue with success, we may see a slight

shift to a collaborative policy subsystem at the local level, possibly “keep[ing] the conflict at intermediate levels, which enable political rivals to engage in collective behavior” (Weible & Sabatier, 2009, p. 207). Research on human-carnivore conflicts in the west has found that “...symbolic projections by participants, whether of their identities or worldviews, often have a strong inflammatory effect on conflict in management of large carnivores. Gains in the common interest are likely to be made by refocusing participants on solving practical problems that are of limited scope and scale” (Mattson, 2014, p. 51). Some locally-based NGOs may have the capacity to bridge beliefs to address specific conflicts, and utilize their access to context-specific, place-based knowledge to provide critical insight into policy problems. A policy recommendation would be to create and foster dialogue among organizations working at these multiple scales to both articulate concerns – for example, with the practical impacts of long-term litigation on local wolf-expansion coalition members’ attempts to build bridges – and to increase knowledge-sharing among actors. This willingness to work across coalitions was tentatively expressed in the wolf-management coalition, though primarily in regards to livestock conflict issues.

The division in strategy between local and national coalition members in terms of litigation, coordination, and adaptability to local contexts may actually be a benefit to addressing long-term conflict, as local organizations may appreciate the distance to differentiate themselves from the efforts of national groups who continue to litigate. This distance (geographically and tactically) may provide them

more opportunity to build trust and cooperation among different stakeholders at the local level and evolve to a more cooperative policy subsystem. Berkes (2009) observes that “trust appears to be a determinant of success in many cases of co-management, as a prelude to building a working relationship” (p. 1694) – and so, finding ways to move beyond the entrenched litigation conflict to work at the local level may incrementally begin to move the dialogue related to wolf management in a positive direction.

#### **4.9 Conclusion**

Disagreement among people regarding wildlife management is fundamentally an conflict over beliefs and values (Madden & McQuinn, 2014). In this case, local organizations may be better equipped through their contextual knowledge of the problem or conflict to work across coalitions as well as bring attention to under-represented or unknown policy problems.<sup>2</sup> In this way, the scale of intra-coalition dynamics is an important consideration to continue to investigate for a better understanding of how it might be useful in the ACF, as well as if and where it affects the stability of long-term coalitions.

This chapter provides an investigation of intra-coalition stability and change in the context of a multi-scalar policy issue of wolf management in Wyoming. Findings indicate that local members of the wolf-expansion coalition have characteristics unique to their scale. However, it is unclear whether local-level coalitions serve as unique “sub-coalitions” in the existing definition of the ACF, or if

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<sup>2</sup> One area for future research would be to test this finding in contexts where fewer local organizations operate.

they deserve separate consideration. Future research should test these findings across other case studies of challenging policy problems with scalar dimensions. Questions include: How do changes in coalitions at the local level (in terms of resources and tactics) affect long-term coalition stability? Are there external factors at play here as well, such as political turnover or demographic transitions in the conservation workforce (Weible et al., 2009)? Other than litigation, what tactics and strategies are utilized by members of coalitions working at different scales? How is local and contextual knowledge integrated (or not) with scientific information (Jenkins-Smith et al., 2014)? These findings should also be tested with other policy subsystems which have similar scalar dynamics in at least one coalition.

## References

- Berkes, F. (2009). Evolution of co-management: Role of knowledge generation, bridging organizations and social learning. *Journal of Environmental Management*, 90(5), 1692–1702. <http://doi.org/10.1016/j.jenvman.2008.12.001>
- Clark, T. W., Rutherford, M. B., & Casey, D. (Eds.). (2005). *Coexisting with Large Carnivores: Lessons from Greater Yellowstone*. Washington, D.C.: Island Press.
- Crow, D. A. (2008). Stakeholder behavior and legislative influence: A case study of recreational water rights in Colorado. *The Social Science Journal*, 45(4), 646–658. JOUR. Retrieved from <http://linkinghub.elsevier.com/retrieve/pii/S0362331908000888>
- Defenders of Wildlife, et al., v. Jewell, et al. (2014). 68 F.Supp.3d 193. U.S. District Court for the District of Columbia.
- Delaney, D., & Leitner, H. (1997). The political construction of scale. *Political Geography*, 16(2), 93–97. [http://doi.org/10.1016/S0962-6298\(96\)00045-5](http://doi.org/10.1016/S0962-6298(96)00045-5)
- Elliott, C., & Schlaepfer, R. (2001). Understanding forest certification using the Advocacy Coalition Framework. *Forest Policy and Economics*, 2(3–4), 257–266. [http://doi.org/10.1016/S1389-9341\(01\)00043-0](http://doi.org/10.1016/S1389-9341(01)00043-0)
- Endangered and threatened wildlife and plants; Final rule designating the Northern Rocky mountain population of gray wolf as a Distinct Population Segment and removing this Distinct Population Segment from the federal list of endangered and threatened wil (2008). 50 CFR Part 17.
- Idaho Legislative Wolf Oversight Committee. (2002). *Idaho Wolf Conservation and Management Plan*.
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In P. A. Sabatier & C. M. Weible (Eds.), *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.
- Jenkins-Smith, H. C., St. Clair, G. K., & Woods, B. (1991). Explaining change in policy subsystems: Analysis of coalition stability and defection over time. *American Journal of Political Science*, 35(4), 851–880.
- Kempton, W., Holland, D. C., Bunting-Howarth, K., Hannan, E., & Payne, C. (2001). Local environmental groups: A systematic enumeration in two geographical areas. *Rural Sociology*, 66(4), 557–578. <http://doi.org/10.1111/j.1549-0831.2001.tb00084.x>

- Klyza, C. M., Isham, J., & Savage, A. (2006). Local environmental groups and the creation of social capital: Evidence from Vermont. *Society and Natural Resources*, 19, 905–919. <http://doi.org/10.1080/08941920600902070>
- Madden, F., & McQuinn, B. (2014). Conservation's blind spot: The case for conflict transformation in wildlife conservation. *Biological Conservation*, 178, 97–106. <http://doi.org/10.1016/j.biocon.2014.07.015>
- Mattson, D. J. (2014). State-level management of a common charismatic predator: Mountain lions in the West. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 29–64). Chicago, IL: The University of Chicago Press.
- Mech, L. D. (2001). Wolf Restoration to the Adirondacks: The Advantages and Disadvantages of Public Participation in the Decision. In *Wolves and Human Communities* (pp. 13–22). Washington, D.C.: Island Press.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis* (2nd ed.). Washington, D.C.: Sage Publications.
- Montana Fish Wildlife and Parks. (2002). *Montana Wolf Conservation and Management Planning Document - DRAFT*.
- Nohrstedt, D. (2011). Shifting resources and venues producing policy change in contested subsystems: A case study of Swedish signals intelligence policy. *Policy Studies Journal*, 39(3), 461–484. <http://doi.org/10.1111/j.1541-0072.2011.00417.x>
- Pierce, J. J. (2016). Advocacy coalition resources and strategies in Colorado hydraulic fracturing politics. *Society & Natural Resources*, 29(10), 1154–1168. <http://doi.org/10.1080/08941920.2015.1131876>
- Rubin, H. J., & Rubin, I. S. (2012). *Qualitative Interviewing: The Art of Hearing Data* (3rd ed.). Washington, D.C.: Sage Publications.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The Advocacy Coalition Framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (1st ed., pp. 117–166). Boulder, CO: Westview Press.
- Sabatier, P. A., & Weible, C. M. (2007). The Advocacy Coalition Framework: Innovations and clarifications. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (2nd ed., pp. 189–220). Boulder, CO: Westview Press.
- Shanahan, E. A., McBeth, M. K., Hathaway, P. L., & Arnell, R. J. (2008). Conduit or contributor? The role of media in policy change theory. *Policy Sciences*, 41(2), 115–138. <http://doi.org/10.1007/s11077-008-9058-y>

- Taylor, D., & Clark, T. W. (2005). Management context: People, animals, and institutions. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 28–67). Washington, D.C.: Island Press.
- U.S. Fish & Wildlife Service. (1987). *Northern Rocky Mountain Wolf Recovery Plan*. Denver, CO.
- Weible, C. M. (2005). Beliefs and Perceived Influence in a Natural Resource Conflict: An Advocacy Coalition Approach to Policy Networks. *Political Research Quarterly*, 58(3), 461–475. <http://doi.org/10.1177/106591290505800308>
- Weible, C. M. (2007). An advocacy coalition framework approach to stakeholder analysis: Understanding the political context of California marine protected area policy. *Journal of Public Administration Research and Theory*, 17(1), 95–117. <http://doi.org/10.1093/jopart/muj015>
- Weible, C. M., Pattison, A., & Sabatier, P. A. (2010). Harnessing expert-based information for learning and the sustainable management of complex socio-ecological systems. *Environmental Science and Policy*, 13(6), 522–534. <http://doi.org/10.1016/j.envsci.2010.05.005>
- Weible, C. M., & Sabatier, P. A. (2005). Comparing policy networks: Marine protected areas in California. *Policy Studies Journal*, 33(2), 181–201. <http://doi.org/10.1111/j.1541-0072.2005.00101.x>
- Weible, C. M., & Sabatier, P. A. (2009). Coalitions, science, and belief change: Comparing adversarial and collaborative policy subsystems. *Policy Studies Journal*, 37(2), 195–212. <http://doi.org/10.1111/j.1541-0072.2009.00310.x>
- Weible, C. M., Sabatier, P. A., & McQueen, K. (2009). Themes and variations: Taking stock of the Advocacy Coalition Framework. *Policy Studies Journal*, 37(121–140), 121–140. <http://doi.org/10.1111/j.1541-0072.2008.00299.x>
- Wyoming Game & Fish Commission. (2011). *Wyoming Gray Wolf Management Plan*. Cheyenne, WY.
- Wyoming Hunter Defense Fund. (2016). Wyoming Hunter Defense Fund. Retrieved September 4, 2016, from <http://www.wyominghunterdefensefund.com/>
- Yin, R. K. (2009). *Case Study Research* (4th ed.). Washington, D.C.: Sage Publications.
- Zafonte, M., & Sabatier, P. A. (1998). Shared beliefs and imposed interdependencies as determinants of ally networks in overlapping subsystems. *Journal of Theoretical Politics*, 10(4), 473–505.



Zafonte, M., & Sabatier, P. A. (2004). Short-term versus long-term coalitions in the policy process: Automotive pollution control, 1963-1989. *The Policy Studies Journal*, 32(1), 1963–1989. <http://doi.org/10.1111/j.1541-0072.2004.00054.x>

## CHAPTER 5

### HOW WILL IT ALL END?

#### POLICY OUTPUTS AND OUTCOMES IN WYOMING'S WOLF MANAGEMENT

##### 5.1 Introduction

In September of 2014, a judge in Washington, D.C. returned Wyoming's wolves to the Endangered Species list. After two years of management by the Wyoming Game and Fish Department (WGFD), once again the U.S. Fish and Wildlife Service (USFWS) assumed responsibility for the state's wolf population and perpetuating the management ping-pong match that has been ongoing since 2008 in Wyoming. Wolf populations in the state have biologically rebounded – and certainly have surpassed the recovery goals of the 1987 Northern Rocky Mountain Wolf Recovery Plan, which called for at least 100 individuals and ten breeding pairs in each of the three recovery areas (USFWS, 1987). At the end of 2015, USFWS estimated that at least 382 wolves lived in the state, with approximately 264 individuals outside of Yellowstone National Park and the Wind River Reservation (Jimenez & Johnson, 2016).<sup>1</sup> With the return of wolves to the Endangered Species list, USFWS resources – in terms of personnel and funding to address problem wolves – are limited. The staff associated with wolf recovery have since retired or moved on, leaving USFWS employees who have other responsibilities beyond wolves to cover conflicts. Because wolves have recovered according to both court decisions

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<sup>1</sup> Wolves within Yellowstone National Park and the Wind River Indian Reservation do not count towards the state of Wyoming's quota in the recovery plan.

and biological evidence, USFWS funding for management has been restricted as well. Furthermore, the hunting season in the state has been suspended. These conditions increase frustration among citizens and state lawmakers who have been less supportive of wolves throughout the reintroduction and recovery processes. Conflict at the political level influences tolerance for addressing conflict at the practical level, such as between wolves and livestock. In the Midwest, similar “pendulum swings” between state and federal management may result in increased poaching, as well as negative impacts on overall public tolerance for the species (Olson et al., 2014).

One of the cruxes of policy analysis is defining problems in a way that presents opportunities for implementation of creative policy outputs. Unfortunately, the current policy and management situation for wolves in Wyoming is unsustainable socially and politically. It is characterized by ongoing litigation, decreased social tolerance, frustration, and – on the part of the environmental groups – concern as to the potential repercussions for the Endangered Species Act given the challenges that have faced delisting. According to Clark (2002), an ideal solution to a policy problem is one that is integrative, balancing competing stakeholder interests to achieve an outcome where everyone’s interests can be met. A compromise is a more common outcome, where competing interests have to give up particular preferences in order to achieve a common goal. Finally, and least ideal, is a win-lose situation, where one side is clearly disadvantaged by the final outcome, while the other achieves its policy preferences (Clark, 2002).

The current situation with wolf management in Wyoming is neither integrative, nor a compromise. More so, it is unclear if the return of the wolf to the Endangered Species list constitutes a win for some advocates, as it eventually may force a defense of the Endangered Species Act itself from politicians frustrated with inconsistent management of a recovered species. Furthermore, at this point, the state is on the “losing” end of this political battle as wolf management has been returned to the hands of the USFWS, whereas their preference would be to have the Wyoming Game and Fish Department in charge. The question remains as to how to manage wolves in Wyoming for the benefit of the species to encourage growing (instead of declining) social tolerance, and political cooperation instead of conflict.

This chapter assesses the preferred policy outputs of the range of stakeholders affiliated with different coalitions acting in the wolf policy subsystem. First, an overview of the literature on coalitions within policy subsystems is presented, with particular attention given to how coalitions influence policy outputs. Then, methods by which data were collected, including interviews and an expert survey, are presented. Findings discuss the range of preferred outputs presented by respondents, as well as the reactions of coalitions to policy outputs and their use of “intangible” resources, such as trust and leadership. It concludes by offering predictions of future trajectories for wolf management in the state based on evidence and theory, in terms of whether the policy subsystem is likely to converge on acceptable outputs, or remain in divided conflict.

## 5.2 The Advocacy Coalition Framework and Designing Policy Outputs

The Advocacy Coalition Framework (ACF) was conceptualized as a means to analyze the dynamics of “wicked” policy problems, or those that are characterized by long-term policy stagnation or entrenched conflict. Typically, a problem must be characterized by a period of at least ten years with little movement in terms of policy change (Sabatier & Weible, 2007). Foundational to the analysis of a policy problem using the ACF is the “policy sub-system,” which has both a geographical and topical constraint (e.g., Wyoming’s wolf policy) and consists of the relevant actors that coalesce in order to advocate for their preferred policy outcome or outcomes. Policy participants can include the following: interest groups, agency officials or managers, legislators, journalists, and researchers (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). Policy change occurs with the influence of “policy-oriented learning.” Change can occur as a result of new information or experiences which influence how an individual perceives a problem, external shocks, or events and conditions that are unrelated to the policy problem, (Sabatier & Jenkins-Smith, 1999; Sabatier & Weible, 2007) and internal shocks, where an event of significance directly influences the policy subsystem (Sabatier & Weible, 2007). Finally, “negotiated agreements” may emerge through collaborative efforts among adversarial coalitions (Jenkins-Smith et al., 2014). ACF posits that coalitions form around their preferred policy outcomes for a particular policy problem, and that change can be influenced by the factors described above. Policy outputs are those programs that emerge at the “operational level” and subsequently have some kind

of impact on the policy problem (Sabatier, 1993). Examples of policy outputs would be management plans or rules implementing statutes.

For clarity, ACF “policy outputs” are similar in nature to the idea of a “policy solution” offered by other scholars (e.g., Clark, 2002; Kingdon, 2011; Stone, 2012). A “durable” policy output would be one that is palatable to all stakeholders and has both the flexibility to accommodate change as well as the processes in place to exercise that flexibility. Clark’s approach to defining problems and the decision process for natural resource management issues reflectively assesses outputs, and argues that ineffective policies adopted to address a particular issue point to problematic processes or inadequate problem definitions (Clark, 2002).

Coalitions, particularly in policy subsystems characterized by persistent conflict, work to secure resources (e.g., power and influence) to affect the policy output (Ingold, 2011). The satisfaction of involved coalitions with the policy output is one indicator to utilize in evaluation of the policy; another is whether it achieves the goals of the governing law (e.g., the Endangered Species Act). Presumably, if coalitions are satisfied with the policy output in place, the policy subsystem may shift to focus on a different problem definition, or it may dissolve. If they are not satisfied, however, conflict will persist and alternative pathways to resolving policy stagnation could result, such as shifting jurisdictional venues. In order to understand whether a policy output is durable or not, it should be examined in the context of the beliefs held by policy advocates about appropriate ways to address the problem, with a higher concordance leading to more stable long-term outcomes

(Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). Weible, Pattison, and Sabatier (2010) have found “a more hospitable setting for learning and sustainability in the management of natural resources in collaborative compared to adversarial subsystems” (p. 522). Those subsystems, by extension, that are characterized by signs of conflict, such as prolonged litigation or inconsistent management authority, will have more difficulty settling on a long-term policy solution that is satisfactory to all involved interest groups. The case of wolf management and policy is one such policy arena characterized by its adversarial nature, where the policy solution, or the management plan designed by the state, has caused problems for nearly a decade.

### **5.3 Wyoming’s Wolf Management Plan**

In 2012, the USFWS approved Wyoming’s wolf management plan, which is the current policy output in the context of the literature above. This process to secure approval from the USFWS was fraught with conflict. It took several years of discussion between the state and the federal agency to agree to its components, which were unique in comparison to the other management plans proposed by Idaho and Montana, the other two states with designated recovery zones. The sections below describe several of the distinctive characteristics of Wyoming’s plan. These sections illustrate two aspects of Wyoming’s plan that cause ongoing political conflict between coalitions (dual status), and second, a relatively uncontroversial but important component of the plan, illustrating that common-interest outcomes are not impossible (compensation).

### 5.3.1 Wyoming's "Dual Status" Designation

Wyoming's wolf management plan differentiates itself from those in Montana and Idaho on its establishment of two separate wildlife management designations depending on the location of the wolf within the state. Wolves are considered trophy game in northwestern Wyoming, where there is a regulated hunting season in the designated Trophy Game Management Area (TGMA). In the rest of the state, however, wolves are considered predators, which means that the WGFD does not govern their lethal removal. According to the Wyoming Animal Damage Management Board, predators "may be taken year round and no license is required. However hunters must still abide by other laws pertaining to the taking of wildlife, i.e., prohibition of shooting from roads, fulfilling hunter safety requirements, hunting using artificial light, etc." (Wyoming Animal Damage Management Board, 2015).

This plan, perhaps unsurprisingly, did not appeal to the coalition advocating for wolves' expansion in the Northern Rockies. Though the USFWS delisted wolves across all three states in 2008, a subsequent court decision, *Defenders of Wildlife v. Hall*, reinstated Endangered Species protection to wolves in the Northern Rockies. Judge Donald Malloy of the U.S. District Court in Missoula, MT, found that the USFWS was arbitrary and capricious in approving Wyoming's wolf management plan. The decision was justified by the critique that the plan was not substantively different than the one USFWS had rejected just a year before (*Defenders of Wildlife et al. v. Hall et al.*, 2008). The USFWS endeavored to work with Wyoming in



subsequent years to fine-tune the plan so it might better withstand a legal challenge. The revised plan included a compromise in the form of a “flex zone,” or “Seasonal” Trophy Game Management Area (TGMA), south of Grand Teton National Park, whereby the TGMA would be expanded on October 15<sup>th</sup> of each year, and would retract to the permanent TGMA on March 1<sup>st</sup> of the following year (Wyoming Game & Fish Commission, 2011). The flex zone intended to address the issue of ensuring genetic connectivity among the recovery areas by giving wolves in the southern reaches of the GYA additional protection during the time of year when they may be dispersing, though the scientific evidence for the effectiveness of this approach is not yet documented.

Early in the process of developing the management plan for Wyoming, a diverse group of stakeholders led by a regional environmental NGO proposed a bill to designate wolves statewide as trophy game – an alternative policy output to the less popular existing management plan. A local Teton County politician sponsored House Bill 21 in 2009, which, according to one interviewee, had the support of other NGOs as well as some hunters, ranchers, and outfitters. WGFD officials, including a WGFD commissioner, also testified to the House Travel, Recreation and Wildlife Committee that the trophy game designation across the state “would be a step toward satisfying a federal judge’s reluctance to give Wyoming its own authority” (Thuermer Jr., 2009, para. 6). Despite the support for adopting trophy game status across the state by WGFD officials, the bill was defeated. The dual status designation stands.

### *5.3.2 Wyoming's Livestock Depredation Compensation Program*

Wyoming's wolf management plan includes a compensation program for ranchers that have lost livestock to wolf depredation in the TGMA.<sup>2</sup> The rates for cattle lost to wolf predation are seven-to-one for calves and one-to-one for yearlings, cows, and bulls (the latter of which are rarely lost to predation). Research in central Idaho found the detection rate for wolf-killed calves was one to eight; in other words, for every calf killed and found, an additional seven calves were likely lost to wolves as well (Oakleaf et al., 2003). These results subsequently informed the compensation ratio that the state has adopted. Only livestock losses located in the TGMA are eligible for compensation. Under Wyoming's management plan, those stockgrowers who sustain livestock losses in the predator zone cannot receive compensation; however, predator status allows any individual to lethally remove a wolf without any agency oversight other than a requirement to report the mortality to the state within ten days.<sup>3</sup>

Perhaps critical to the maintenance of the compensation program is long-term and secure funding. At the time the management plan was drafted, wolf compensation funds were allocated from the state's general fund. Though wolves returned to the Endangered Species List in 2014 and are managed again by

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<sup>2</sup> Information regarding the details of the compensation program has been gathered from interview data as well as public documents. Public documents are cited where appropriate; due to the sensitivity of the interview data and IRB requirements, names of interviewees who provided information on the compensation program are redacted.

<sup>3</sup> In 2016, Wyoming passed legislation creating a program through the state Department of Agriculture to compensate livestock operators who sustained losses in what would be the predator zone under Wyoming's management as the ability to lethally remove problem wolves was abrogated with the return of the species to the Endangered Species List in 2014.

USFWS, the state of Wyoming still pays compensation to ranchers who sustain livestock losses.

#### **5.4 Research Questions**

In September 2014, a federal district court returned Wyoming's wolves to the Endangered Species List (*Defenders of Wildlife, et al., v. Jewell, et al.*, 2014), after two years of state management. The plaintiffs in this case identified three points on which they requested judgment:

...they maintain that the decision was arbitrary and capricious because Wyoming's regulatory mechanisms are inadequate to protect the species, the level of genetic exchange shown in the record does not warrant delisting, and the gray wolf is endangered within a significant portion of its range.  
(*Defenders of Wildlife, et al., v. Jewell, et al.*, 2014)

Of these three premises, the Court found only the first to hold. In application, a decision in favor of the latter two criteria regarding genetic exchange and the "significant portion of its range" may have forced an examination of Wyoming's dual status approach to managing wolves. The judge's decision requires Wyoming to commit formally to maintaining a buffer population of wolves in order to avoid falling too close to the recovery goals – at least fifteen breeding pairs and 150 individuals. In practice, through the two years that WGFD managed wolves, they had managed to a population size that included this buffer. However, without an "adequate regulatory mechanism" in Wyoming's management plan to formalize this approach, the Court found that the Service was "arbitrary and capricious to rely on the state's nonbinding promises to maintain a particular number of wolves when the availability of that specific numerical buffer was such a critical aspect of the

delisting decision” (*Defenders of Wildlife, et al., v. Jewell, et al.*, 2014). With this decision, wolf management in Wyoming was returned to the USFWS.

The first research question explored in this chapter investigates how members of coalitions respond to the implementation of a policy output; in this case, Wyoming’s wolf management plan, in 2012. The central hypothesis in relation to this question is directed by the ACF’s hypotheses on policy change:

*H1: A policy output as directed by a government agency or program will not change significantly as long as the coalition associated with that preferred policy output continues to hold power and influence in that jurisdiction – unless the “change is imposed by a hierarchically superior jurisdiction” (Jenkins-Smith et al., 2014, p. 204).*

The ACF does not address what the “losing” coalition will do in the case of the implementation of a policy output that does not align with policy core beliefs. Thus,

H1a posits:

*H1a: Members of the “losing” coalition in an adversarial subsystem will respond in two ways to a focusing event such as the implementation of a policy output: circumvention of the policy venue to force a return to the previous policy scenario (e.g., through litigation), or acceptance of the policy and a re-orientation of the problem definition.*

Chapter 4 addresses H1a to some degree, investigating the role of the geographic scale at which coalition members operate as one avenue through which coalition instability may occur and addresses the tactic of litigation as a factor. This chapter will briefly address H1a as it builds on the findings of Chapter 4.

The second research question asks if and how tangible progress can be made to address the ongoing polarization over wolf management in Wyoming. To do so, specific factors, or resources, in the parlance of ACF, are evaluated for their

potential to reduce conflict (e.g., transparency, leadership, trust). The ACF calls for increased research into the hierarchy of resources used by coalitions to advance their preferred policy outcomes; however, most of the proposed future research questions focus on “competing” (not necessarily adversarial) coalitions (Jenkins-Smith et al., 2014), and less on improved collaboration and stakeholder engagement, as advocated by Clark (2002, 2005, 2014). Because “redistribution of political resources is an important step in explaining policy change” (Jenkins-Smith et al., 2014, p. 205), this chapter will endeavor to address how resources can contribute not to securing a preferred policy outcome for one coalition, but how these resources, instead, can be leveraged to achieve a common-ground, long-term policy output – and associated sustainable outcomes for both communities and wolves – that is characterized by less political conflict.

## **5.5 Methods**

This study analyzed Wyoming’s wolf management policy subsystem. To do so, an in-depth case study approach was utilized (Yin, 2009). Wyoming was selected for this study because of its unique management plan (described above), as well as its importance as a recovery zone for reintroduced wolves. Furthermore, the state contains both Yellowstone and Grand Teton National Parks, which are iconic national treasures and destinations for national and international tourism.

The researcher gained preliminary orientation to the case through document review and media analysis (see Chapter 3). The primary method of data for this chapter was through semi-structured interviews with individuals involved in the

wolf management policy subsystem in Wyoming. These interviews took place between May 2014 and September 2015 (n=33). Interviewees were identified using the researcher's personal knowledge of the subsystem, as well as snowball sampling to identify other potential participants. Stakeholders included private citizens and business owners as well as representatives of non-profit organizations, interest groups, and government agencies. Interviews focused on topics related to policy and management, including variables such as preferred solutions, outcomes, and beliefs (discussed in chapter 4). The interview protocol is included in Appendix 2. Time spent with each interviewee ranged from one to three hours. Interviews were recorded and transcribed by the researcher. Data were then analyzed using NVivo qualitative analysis software (2015) using an a priori codebook, with codes developed from the literature. Emergent patterns were also coded inductively (Miles & Huberman, 1994). The codebook is found in Appendix 3. Examples of supercodes relevant to the analysis presented in this chapter include: OUTCOME and SOLUTIONS, with sub-codes to the latter being FEDMGT (federal management), NOPRED (trophy game status only), HUNTING, STATEMGT (state management), NOWIN (no satisfactory outcome), NOWOLF (remove all wolves), LETHAL (lethal control of problem wolves), FEE (institute a fee system to pay for wolf management), NEWPROC (new process for decision-making), and PROJ (coexistence projects). Examples of codes for the second half of this chapter included those related to RESOURCES (e.g., LEAD (skilled leaders) and AUTH (legal authority to make decisions)) as well as DECISION (e.g., POWER (level of power in

decision-making process), TRANS (transparency/openness in decision-making) and TRUST (trust/distrust between members of coalitions/government/etc.). Interview data were organized into “bins” created for each code and then analyzed variation and similarities among interviewees, particularly as related to their coalition membership.

## 5.6 Findings

Following the implementation of Wyoming’s management plan in 2012, the policy subsystem remained unsettled. As discussed in Chapter 4, two coalitions dominated the wolf policy subsystem in Wyoming for over a decade: *wolf-expansion*, which advocated for increased wolf protection (i.e., statewide trophy game status) or continued protection under the Endangered Species Act, and *wolf-management*, which prefers that wolves be managed by the state to the specified biological goals outlined in the recovery plan. In 2012, however, when the USFWS approved Wyoming’s wolf management plan (the policy output), this wolf-expansion coalition assumed the role of the “losing coalition,” as their preferred policy output would have enacted trophy management across the state. H1 posits that as long as the “winning” coalition maintains power and access to the jurisdiction in charge of the policy output (i.e., the Wyoming Game & Fish Commission), it will not change significantly. Because power to make significant changes to the plan (e.g., abolishing the dual status designation and adopting trophy game statewide) lies with the state legislature, in the period during which Wyoming managed wolves, it was unlikely that major “policy core” revisions to the plan would take place:

And the Game and Fish, not that I'm trying to defend them in any way, in many ways their hands are tied. There's a limit to how much flexibility they have in management. They can't change the trophy game area without state legislation. They can't change the hunting areas without state legislation. And they're mandated from the state legislature to keep the numbers low. Whatever the Game & Fish might want to do, they are limited by the political system. It's very unfortunate that wildlife management is being decided through legislation. (IND-2)

...some powerful landowner's [whose] cow gets eaten, or some powerful outfitter [whose] elk are getting eaten, I'm sure he calls up the governor, and I'm sure it happens. And you know, likewise, if I could, as an environmental lobby, call up Matt Mead, and be like, "Hey dude, you've got to make sure this quota is done" then I would do it. Unfortunately right now I don't have any of that power at all, so it's pointless. (NGO-2)

As the first quotation illustrates, any major changes to Wyoming's wolf management policy have to be made through the legislature. The state of Wyoming is an agricultural state, and politicians are beholden to their constituencies. The environmental groups working on wolf issues are concentrated (for the most part) in the northwest corner near Jackson and in reality, hold little sway in state politics. Furthermore, the power structure within the state inherently resists change from the wolf-expansion coalition. The Wyoming Game & Fish Commission oversees policies put in place in the associated Department, and the Governor oversees the appointment of Commissioners. In the case of wolves, management decisions (including annual hunting quotas and seasons) are approved at the level of the Governor. Thus, the only way major policy change can occur to affect the policy output is by circumventing the state venues all together. The 2014 court decision is an example of "change imposed by a hierarchically superior jurisdiction" (Jenkins-Smith et al., 2014, p. 204). H1 is supported by the analysis in the policy subsystem of Wyoming's wolf management policy.



H1a suggested that the “losing coalition” in a policy output will respond by shifting venues (e.g., litigation) or, alternatively, redefining the problem. Managers at the state and federal level generally agreed that once the wolf populations had achieved recovery goals, management needed to be turned over to the state. Some local and regional members of the wolf-expansion coalition recognized this “new reality” of state management, and began to revise their own problem definitions to focus on how wolf management was actually working “on-the-ground.”

Wyoming Game and Fish Department really did a good job doing what they were supposed to do, as they managed the hunts. They kept the population where it should be. The hunts were very conservative. They ended up actually moving some of the hunt quotas away from the park, even though they didn’t really trumpet that, that was the practical effect of some of the changes that they did....I think aside from the reality of having the predator zone, Wyoming Game and Fish did a pretty good job. And hopefully this court case doesn’t jeopardize that if wolves are hunted in the future. (IND-1)

And we said this to Wyoming Game and Fish through the process and then after the court’s decision, Wyoming actually did one of the best jobs in managing wolves...We had quotas, we had pretty conservative hunting season... hunters were only allowed to take one wolf, there was no trapping, no electronic calling....mandatory reporting. All of that stuff was actually really good compared to Idaho and Montana. (NGO-1)

In some ways, there was common ground between the two primary coalitions regarding Wyoming’s actual management, as exemplified by sentiment expressed by several members of the wolf-management coalition:

I felt like, not being totally prejudiced as a hunter and an outfitter, taking everybody into consideration, we were there.... In my personal opinion we were a little long on wolves but it was there. We were maintaining wolves for what might be the non-paying, non-consumptive person. (BUS-8)

This doesn’t have to be all or nothing with this. I think that we have enough information, we’ve done enough studies...I think we can have it all.... we can

have so many bears, so many wolves, and so many hunting licenses. I think everybody can have everything they want. (BUS-5)

Nonetheless, members of the local wolf-expansion coalition still viewed Wyoming's management plan (the "policy output") with dissatisfaction:

But the continued problem with Wyoming's plan... from our perspective is this dual classification. And Wyoming biologists should have the authority to manage wolves on a statewide basis, even if there aren't any wolves in most places. (NGO-1)

There are some non-functional portions of that plan that just really represent bad wildlife management. The predator zone and other issues. (NGO-3)

However, as discussed in Chapter 4, no environmental groups based in or with offices in Wyoming participated in the 2012 lawsuit against the delisting decision.<sup>4</sup> Instead, attention turned to alternative problem definitions, or niche issues, such as working on protecting wolves that travel between the national parks and public lands, or considering projects that use non-lethal deterrents (as discussed in Chapter 4).

Other individuals aligning with the wolf-expansion coalition also indicated that they believed the state was best suited to manage wolves, primarily in regard to improving tolerance

We know that long-term success for wolf recovery is not having them listed. It's having them managed by the state because hunting wolves enhances public tolerance of them. (GOV-5)

In summary, some local members of the wolf expansion coalition indicated that they are willing to accept state management and would like to work across coalitions to

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<sup>4</sup> The Sierra Club since has hired a local representative who is based in Jackson, WY.

address concerns of the wolf-management coalition.<sup>5</sup> In fact, during the summer of 2016, members of the Upper Green Cattlemen’s Association, working with two environmental groups, piloted an alternative husbandry technique to avoid livestock depredation (primarily from bears, but with ancillary wolf conflict-mitigation benefits) (Koshmrl, 2016). To summarize the findings regarding H1a, the responses of the losing coalition to a policy output do seem to follow two alternative paths: pursuing litigation to overturn the policy output (i.e. through the order of a higher jurisdictional authority hierarchy), or adaptation to a new reality, which, perhaps inspires cross-coalition collaboration.

A further consideration for the groups working locally in the wolf-expansion coalition, despite the shortcomings of Wyoming’s policy output, was the impact of continued litigation on the Endangered Species Act – an unanticipated outcome.<sup>6</sup> Though the overarching goal of the environmental groups who filed the 2012 delisting lawsuit against the USFWS was presumably to uphold the integrity of the Endangered Species Act, the decision prompted concerns from the wolf-expansion coalition about political outcomes that could result. Interviewees expressed nervousness about repercussions to the Endangered Species Act from the ongoing litigation over wolves. The delisting of wolves in Montana and Idaho in May of 2011 via a budget rider had already sparked concerns about political influence on the

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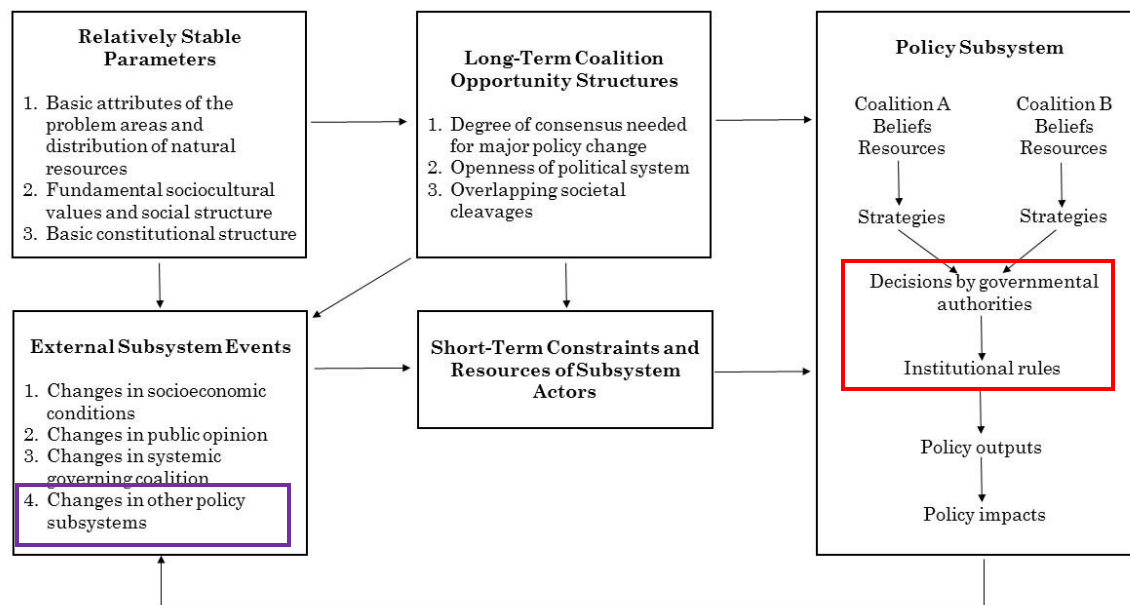
<sup>5</sup> Primarily, the focus has been on addressing livestock conflict and hunting seasons, which are secondary core beliefs as per the ACF. However, managers in general are less enthusiastic about, for example, non-lethal methods to address livestock conflict given the geographic context in which conflict takes place – on expansive tracts of public land that are difficult to monitor.

<sup>6</sup> Outcomes are differentiated from outputs in that the latter “are the effects of outputs on environmental and social conditions” (Koontz & Thomas, 2006).

delisting process. This “Congressional delisting” was of great concern to advocates for the Endangered Species Act as it essentially forced a delisting of an endangered species via legislation, an unprecedented move in ESA history (Cathcart, 2013). Furthermore, any additional litigation regarding wolf management in the two states was essentially prohibited for the five-year period following the delisting. As required by the Recovery Plan, the USFWS continued to monitor management in both states to insure management decisions would not facilitate precipitous population declines.<sup>7</sup> Going forward, it would be useful to examine if this event is an example of an internal/external shock to the broader endangered species – beyond only wolves – subsystem wherein this could potentially alter the broader set of issues associated with governing species in the US. (See Figure 5.1 for a map of the ACF.)

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<sup>7</sup> In March of 2016, as the termination of the USFWS’s five-year monitoring period draws closer, environmental groups filed a notice of intent to sue the USFWS in order to extend the monitoring period for an additional five years (CBD, 2016).



Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, Evolution, and Ongoing Research. In *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.

Figure 5.1: Diagram of the ACF (Jenkins-Smith et al., 2014). Consider this a representation of the wolf policy subsystem. The question for future research is if the “delisting by Congressional rider” event, as an *internal* shock to the wolf policy subsystem (red), may, in turn, affect the Endangered Species policy subsystem as a whole (purple).

Regarding this most recent lawsuit, interviewees remarked on their concerns for future Endangered Species Act delisting decisions.

... with the political climate the way it is now, in the last five years, I’ve become much more considerate of that point...because of the history of legislative action overriding system approach to management (i.e., the bill that delisted wolves [in Montana and Idaho])...the potential for weakening if not entirely destroying the entire Endangered Species Act. What is the pushback that we could be seeing here?...I have to give it more thought than I did five years ago. Right now I think the climate is such that we could lose a lot. (IND-2)

...we didn’t say this obviously, because...it’s hard for an organization to say this, but we all knew this [court decision] was probably not necessarily a great thing because now they’re going to make a legislative end run around this. (NGO-2)

And it’s unfortunate because that sets a precedent for political involvement in the Endangered Species Act....And I put that squarely on the responsibility of the environmental groups. That was an unnecessary

direction to push.... The rhetoric behind the environmental groups has been, we think biology and science should do that, and then when we do science and biology, and we use... accepted wildlife management, they take issue with it, and bring in politics, and it's very two-sided, disingenuous. And the result has been Congress is probably going to jump in the middle and get involved in the Endangered Species Act and that's unfortunate... And instead, the movement behind it has brought Congress and lawmakers into it, the governors – they're going to act. And all that is bad for endangered species.” (GOV-6).

The ESA lacks mechanisms regarding firm listing and delisting processes, which essentially guarantees that the USFWS will be sued in high-profile cases for being “arbitrary and capricious,” and furthering the cycle of litigation:

...if you look cases dealing with endangered species, that's almost always the foundation of the overturning of the U.S. Fish and Wildlife Service's decision-making process: arbitrary and capricious. To me, that points not so much at the U.S. Fish and Wildlife Service. It points more – and I'm not attacking the Endangered Species Act at all – I just think that the Act itself has places in it that are arbitrary and capricious. And therefore every decision made can be challenged. There's not a good framework for delisting a species, or listing a species for that matter. (GOV-5)

This lack of specificity is one reason for the continuation of lawsuits over gray wolf management and policy, but also has implications for other high-profile ESA cases (e.g., grizzly bears). A stakeholder who disagrees with the action of the USFWS will always have the option of legal recourse, and circumvention of any alternative policy processes in place (Klyza & Sousa, 2013). This ambiguity in the statute does ensure that the decisions of the USFWS regarding endangered species are closely monitored and reviewed, but it also begs the question of how effective the process of constant litigation is in securing the long-term conservation of species.

For example, the gray wolf case partially spurred Governor Matt Mead (R-WY), Chairman of the Western Governors' Association, to convene a task force in

June of 2015 to evaluate the ESA. The Western Governors' Species Conservation and Endangered Species Act Initiative, in its 2016 report, details three points on which the task force has made progress. It has "created a mechanism for states and stakeholders to share best practices in species management; promoted the role of states in species conservation; and explored options for improving the efficacy of the Endangered Species Act" (Western Governors' Association, 2016, p. 6).<sup>8</sup> Thus, the reflections on the ESA articulated by interviewees above are legitimate, in that the relisting of a species that has achieved recovery goals has garnered attention regionally among state leaders for addressing what some see as an ongoing problem in implementing the ESA.

In summary, policy changes to Wyoming's wolf management plan are unlikely to occur given the power of the wolf-management coalition in this policy subsystem. With its implementation in 2012, the losing coalition pursued two separate avenues of adjustment: litigation, and re-orientation of the problem definition (discussed further in Chapter 4). Though the 2014 court decision imposed a return to the previous federal management regime, as predicted by the ACF, Wyoming has not revised its management plan. Instead, they are appealing the U.S. District Court decision in the U.S. Court of Appeals.<sup>9</sup> The adversarial nature of this subsystem is likely to continue. Congressional action may be the only

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<sup>8</sup> I will not address the Western Governors' ESA report in greater depth in this dissertation; however, I am interested in researching the process and outcomes of this initiative in a future project.

<sup>9</sup> Arguments were heard in the U.S. Court of Appeals on Friday, September 23, 2016. A decision is expected in the next several months.

“terminus” – either directing Wyoming to rewrite its management plan, or delisting wolves and returning management to the state, as was the case with the 2011 rider to a Congressional appropriations bill. The question remains as to how the lessons from this hyper-adversarial policy subsystem can be useful for other policy contexts.

### **5.7 Key Emergent Themes Regarding the Wolf Policymaking Process**

Given that Wyoming’s wolf policy subsystem is characterized by ongoing political conflict, this section endeavors to address this polarization, with the assumption that a common-interest policy output will benefit wolves and people living in communities near them (Watters, Anderson, & Clark, 2014; Wilmot & Clark, 2005). Furthermore, collaborative subsystems tend to have more successful policy outputs, and less ongoing conflict (Weible & Sabatier, 2009).

Coalitions use resources tactically to influence the policy process. The resources identified by the ACF include: authority (or access to authority) to make policy decisions, public support, information, “mobilizable troops,” financial resources, and skillful leadership (Jenkins-Smith et al., 2014). As Jenkins-Smith et al. (2014) argue, the creation of a “hierarchy” of resources to determine when certain ones should be utilized, as well as the importance of resources in different political systems. Because space limits inhibit an in-depth discussion of each specific resource, those mentioned in interviews as influencing the degree of conflict within the wolf policy subsystem are discussed in more detail below.<sup>10</sup> To that end,

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<sup>10</sup> A future paper elaborating on these resources in more depth is planned. The intent is to draw on the ACF and other literature to establish the necessary resources for coalitions to promote their policy goals. Each topic (e.g., leadership, trust, etc.) will be explored and fleshed out with additional interview data, including more quotations or, perhaps, a table that explores each topic.



additional resources are suggested that may help to secure more long-term, and less conflict-ridden, policy outputs. The section concludes with policy recommendations for better policy outputs.

#### *5.7.1 Power & Authority*

The question of who has power in a policy subsystem to affect change and influence outcomes is, in some ways, directly correlated with the winning and losing coalitions. A winning coalition likely has more access to, for example, legislators, or other legal authority to make decisions (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). One problem with this approach to thinking about policy outcomes, however, is that there is always a losing coalition – and thus, most likely a lack of a common ground, long-term solution. Coalitions may step back, regroup, and re-organize to figure out how to re-engage with the policy subsystem, as well as how to secure more power in the future. This response ultimately does not facilitate the implementation of sustainable policy and perpetuates the cycle of conflict:

... there's kind of a schizophrenic response by states and agencies when these things happen, and there's also that same kind of schizophrenic response by people that view the agencies on both sides...And so everybody inflames the situation that's taken decades to calm down. So...the state jumps in because they're outraged, the pro-wolf groups jump in because they're outraged - you can't trust the state, you can't trust the feds - and the anti-wolves jump in - you can't trust the state, you can't trust the feds. So...it has to do with power clustering – who has control over their agenda, and who can push it the hardest. (GOV-6)

This scurrying for power acquisition – as well as “troop mobilization” (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007) actually impedes real progress on

finding ways to conserve wolves and facilitate a reduction in conflict between interest groups over how wolves should be managed.

### *5.7.2 Leadership*

Strong leadership is critical to securing satisfactory policy outcomes; leaders can be seen as “policy entrepreneurs” who help shepherd a coalition’s preferred policy outcome to fruition (Kingdon, 2011; Sabatier & Weible, 2007). Leadership has been identified as a critical resource within coalitions, particularly for the “winning” coalition, as seen in the Colorado fracking subsystem (Pierce, 2016). However, the ACF views leadership as a resource for the coalition, and not necessarily as a bridge to facilitate a transition to a more collaborative policy process and approach, or to diffuse adversarial policy subsystems. Leadership can also be seen as a unifying force, as seen in the case of co-management of sustainable fisheries, where the “presence of at least one singular individual with entrepreneurial skills, highly motivated, respected as a local leader, and making a personal commitment to the co-management implementation process was essential” (Gutiérrez, Hilborn, & Defeo, 2011, pp. 387–388).

The role of effective leadership as a means of securing sustainable policy was mentioned by only one interviewee on several instances. This interviewee identified a lack of strong leadership as one area that characterized not only wolf policy, but natural resource policy in the GYE:

Establish principled leadership, and be clear about that. Be a thought leader for the region? Totally lacking them here....We clearly don’t have any leadership either at the national level or regional level to help facilitate that transition....But you need that kind of high-level leadership... (IND-3)

Clark and Rutherford argue that effective leadership is imminently necessary to address wildlife management in the Greater Yellowstone region; specifically, leaders should be “critical thinkers, holistic observers, skilled managers of people, and users of a host of technical tools, all designed to aid in finding common ground” (2005, p. 245). Nonetheless, even with the emergence of such a leader, he or she will still face challenges in brokering more widely-tolerated wolf policy in western Wyoming given the constraints of the power structure for wildlife management in the state. Specifically, an emergent leader or leading organization would need to work to develop trust and buy-in from the state Game and Fish Commission, as well as bridge stakeholder interests and establish communication among a diversity of actors.

### *5.7.3 Additional Resources Necessary to Reduce Conflict*

The following discussion focuses on “intangible resources,” or those that are not easily counted or measured, in contrast to the ACF resources listed above. Nonetheless, they are critical in the interest of securing long-term policy outputs that reduce political conflict. Below, those mentioned in interviews are highlighted; similar to the discussion above, the focus is on the case at hand. This list could be expanded with further research.

#### 5.7.3.1 Transparency

Transparency is a pillar of democratic processes, and contributes to building trust between political entities and the public. Public participation also increases transparency, and may help the public and invested stakeholders to better

understand why decisions are made (Hogl, Kvarda, Nordbeck, & Pregernig, 2012). Endeavoring to improve transparency may also facilitate trust-building among stakeholders, even in highly emotional and conflicted policy arenas such as those involving wolves (Lute & Gore, 2014). Unfortunately, there are barriers to transparency in place in Wyoming's wolf management policy subsystem. Interviewees found the process problematic by which the state and the USFWS established Wyoming's management plan, as well as other decisions made regarding wolf management:

Transparency is slim to none. But we do our best, and we try to collaborate. We've tried what we could. (NGO-7)

The one area where there's kind of a gap is where Wyoming said, "No, we're not going to do that." Then...we don't have a clear record of the decision where Fish and Wildlife said, "Ok we won't make them do that." So Wyoming got a lot of what they wanted. The map of the predator area is pretty much the map Wyoming presented as their first bid. And the federal government said, "No, you need to go further south for this reason, and promote connectivity with Idaho." And then the map that ended up in the rule is the one Wyoming proposed. (NGO-6)

Aside from questions regarding process and decision-making, there is formal legislation that is problematic from a government transparency standpoint. Title 23 governs WGFD, and Article 3 outlines the duties of the Game and Fish Commission. Section 23-1-304(d)(iv) reads:

Any information regarding the number or nature of wolves legally taken within the state of Wyoming shall only be released in its aggregate form and no information of a private or confidential nature shall be released without the written consent of the person to whom the information may refer. Information identifying any person legally taking a wolf within this state is solely for the use of the department or appropriate law enforcement offices and not is a public record for purposed of W.S. 16-4-201 through 16-4-205. (*Title 23: Game and Fish*, 2016)

In sum, no information on lethal control measures for livestock depredation, nor on wolves taken in trophy game or predator zones, can be released with any geographic identifying information. Information is released at the end of the year in annual reports. The rationalization for this approach is to reduce the risk for backlash to individuals who hunt wolves, as was seen in Idaho after the first wolf hunt there, as well as to protect private property rights for livestock operators who have lethal control measures enacted due to livestock depredation. Others felt this restriction on information access and timing of release is problematic from both the perspectives of the media and the public. Furthermore, the law prohibits WGFD from sharing information not only with the public, but also with federal agencies. This policy disadvantages the National Park Service which shares managerial jurisdiction for wolf packs that traverse Park boundaries by withholding information and inhibiting research efforts, such as determining the impacts of legal harvest on Park wolves.

The justification to protect the identities of those individuals affected by or participating in lethal control of wolves is understandable; however, the lack of coordination with federal land management agencies as well as the lack of detail in the aggregated information released on legal wolf take annually is a barrier to research and analysis, as well as public access to management decisions. Coalitions cannot necessarily “force” government transparency unless it is a coalition with power and access to decision-makers, as noted above. However, coalitions with a policy core policy preference that aims to reduce animosity over a policy problem

could leverage transparency with their own goals, information, funding sources, etc. as a means to create more openness in the policy process and facilitate cross-coalition learning.

#### 5.7.3.2 Trust

An improvement in transparency can help facilitate trust-building among stakeholders, which is another key component of achieving sustainable policy outcomes in natural resource management (Stern & Coleman, 2015). Berkes (2009) observes that “trust appears to be a determinant of success in many cases of co-management, as a prelude to building a working relationship” (p. 1694). With the transition to state management, it followed that individuals aligned with the “management coalition” trusted WGFD to manage wolves in a way that wasn’t perfect from their standpoint, but was acceptable:

And so, I feel like we’re gaining trust, and people are becoming more accepting that wolves aren’t going away, and we’re going to be able to coexist, and the elk populations aren’t going to fall off the planet...And as time goes on, I think it’ll just continue to get better. (GOV-1)

Recall from the earlier discussion as well that local wolf-expansion coalition members felt that WGFD was also managing appropriately; the lack of trust was more apparent between this coalition and the state legislature. One of the shortcomings expressed by an NGO representative was the lack of continuity and investment into building trust with those landowners and business interests, such as outfitting, where there traditionally may not have been much interaction. Particularly relevant to addressing conflicts between human interests and wolves, one respondent acknowledged that the ideal institution for taking on the challenges

of mitigating conflicts with wolves would be the state agency, in part because of the trust that has already been established or expected between the hunter/outfitter and livestock operator constituencies and the state WGFD employees. Another logistical and under-emphasized shortcoming in establishing trust is turnover in staff.

And there's a lot of pitfalls there for an environmental organization to come in and say, "Oh we'll do this for you..." I mean, they've heard it from like every organization that's come in and made this pitch to them. And most of the time there isn't any follow through. Actually, most of the time the person they talk to now works for another organization. And so the state agency is really better equipped – they have the trust, they have the funding, they have the staffing - they are better equipped to try these things than the non-profit community. (NGO-1)

...like so many other resource issues, we always are more comfortable with state management, simply because we know the people better because they're mostly long-time citizens of Wyoming. Some federal managers are, a lot are not. They come and go a lot more. (NGO-8)

Trust between government officials and the public is an important variable of analysis to address in order to reduce conflict, particularly in western natural resource management problems (Krannich & Smith, 1998) Research has identified a "lack of trust" as a barrier to resource management planning in other cases as well (Lachapelle, McCool, & Patterson, 2003).

One theme that carried throughout coalitions operating at the local/state level, both in the wolf-expansion and wolf-management groups, was their trust in local field biologists and managers. Declining trust in agencies increased as the distance grew between the public and the decision-makers. This finding is not unique in carnivore policy (Sjölander-Lindqvist, Johansson, & Sandström, 2015).

However, it does point to a need to increase lines of communication between decision-makers at the state and federal level and local communities impacted by those decisions, instead of relying on a trickle-down effect through various channels in each agency.

Building trust within and between coalitions is a long-term process that proceeds in tandem with increasing transparency. Again, similar to the discussion of transparency, if a coalition's policy core policy preferences are such that a long-term, common-interest solution is less preferable to a special-interest driven output, this intangible resource may be of less value.

## **5.8 Discussion & Conclusion**

Given the ongoing conflict over wolf management at more distant levels of politics (e.g., between the state and USFWS, and between environmental groups in the court system and the USFWS), attempts to establish a more cooperative and collaborative approach to policy-making are likely going to be thwarted by issues of mistrust and lack of transparency, as well as unequal balance of power, as discussed above. Nonetheless, with the policy process essentially in gridlock outside of the local level, alternative pathways to policy change could emerge, similar to that which has happened nationally with gridlock in Congress (Klyza & Sousa, 2013). Most likely, however, as argued above, future policy change is not likely to occur without intervention from a higher jurisdiction (Elliott & Schlaepfer, 2001a; Jenkins-Smith et al., 2014). The opportunities in this policy subsystem exist at the local level, where cross-coalition learning may already be occurring. In this case, if a



collaborative policy subsystem emerges, it may be the unusual case of a collaborative policy subsystem at one geographic scale, operating in the context of an adversarial system at the political decision-making level. However, as it currently stands, Hypothesis 1 holds, which found that policy change was unlikely as long as the dominant coalition (the wolf-management coalition) continues to hold power over the government authority (Wyoming Game & Fish Commission) that could effect change. Today, the reason that the USFWS continues to manage wolves in Wyoming is due to the decision of a higher jurisdictional authority. H1a built on these findings to posit as to the reactions of coalition members to policy change, and found divergent strategies of litigation (or, in the case of the wolf-management coalition, appeal of the order from the higher jurisdictional authority), or, alternatively, working to address the problem given the constraints of the policy output.

Madden (2008) advocates for a co-management strategy to address conflict between people and wildlife, and between people over wildlife:

Although HWC [human-wildlife conflict] responses must draw on relevant expertise, they should not be defined unilaterally by experts or higher-level authorities. Rather, the policy and legal framework should provide for co-management involving not only government authorities but local people as well. The public, particularly local affected communities, should be fully involved in the development and implementation of HWC policies. The authority to define mechanisms to address HWC should be devolved to the lowest, most local level appropriate, to maximize creativity and flexibility to respond to local conditions. (p. 204)

If more decision-making authority had been delegated to local communities at the time of reintroduction, it's likely it would not have occurred. Federal intervention

via the Endangered Species Act was necessary to achieve that conservation goal. Klein (2002) asked, “Would a more conventional community-based initiative have done a better job of advancing the common interest than the complex of governance structure actually involved in wolf recovery? [Perhaps]...because people who live, work, and recreate in wolf habitat would have had more opportunities to talk across different sides of the issue” (p. 122).

The idea of stakeholder collaboration has gained traction as an approach to finding paths through entrenched natural resource management problems. McLaughlin, Primm, and Rutherford (2005) proposed a framework to establish a participatory process for addressing conflict over carnivore management that proceeds stepwise through engagement, collaboration, and then formalization. However, in Wyoming, these efforts are unrealized. The lack of a structured yet neutral venue where interested parties and stakeholders could civilly discuss issues and concerns – and begin to build trust among participants – could be one step towards reducing the persistent conflicts over wolf management.

By establishing these efforts at the local level, prototypical projects could be implemented to mitigate conflict between people and wolves (e.g., livestock conflict) as well as people *over* wolves (e.g., new processes for local citizens to engage in decision-making). Prototypes are “a proven strategy to enhance performance...a trial or model, official or unofficial, from which something can be learned or copied. Prototypes are not fixed in structure or procedure in advance of beginning a project, but instead are designed and adapted to encourage learning and creativity as the

project unfolds” (Clark & Milloy, 2014, p. 310). The ACF would characterize this transition as one from an adversarial to a collaborative subsystem, where some convergence in terms of policy core beliefs may be observed (Weible & Sabatier, 2009). Furthermore, collaborative subsystems also exhibit characteristics in-line with the more democratic, participatory collaborative process advocated by Clark, including: “cooperative coalitions, scientists who are not principal coalition allies or opponents, diverse analytical approaches, cross-coalition policy-oriented learning, low political use of expert-based information, and high instrumental use of expert-based information” (Weible, 2008, p. 532).

How can balance be achieved between the wolf-expansion coalition and the wolf-management coalition – and, in turn, how can coalition resources be used to facilitate this transition? Perhaps investing, at the management institution level (be it WGFD or USFWS), into increasing trust in the decision-making process through transparency as well as power-sharing, and engaging in small, prototypical projects at the local level to increase participation and democratic principles in wolf management, could help to alleviate some of the ongoing conflict over wolf management. However, this approach has been proposed by Clark (2005, 2014) for many years, and still little progress has been made. Here, the current policy output (Wyoming’s management plan) is deficient to many of the wolf-expansion coalition members, because the state refuses to make any concessions. On the other hand, the current federal management regime is unpalatable to the wolf-management coalition, who would prefer to have more flexibility in wolf management,

particularly to address problem wolves. There exists common ground between the two coalitions in terms of trophy hunting, lethal control of problem wolves on private land, and establishment of a fee for non-consumptive wildlife users. If a capable organizational leader emerges and takes the requisite steps to establish trust among stakeholders – with the first step being communication – perhaps incremental positive steps towards a more collaborative policy subsystem could take place at the local level, circumventing the state venue all together. The state of Wyoming, though hamstrung today because of the 2014 court decision, still wields the power to either look for opportunities to improve the dialogue among stakeholders over wolf management, or perpetuate the conflict for years to come.

## References

- Berkes, F. (2009). Evolution of co-management: Role of knowledge generation, bridging organizations and social learning. *Journal of Environmental Management*, 90(5), 1692–1702. <http://doi.org/10.1016/j.jenvman.2008.12.001>
- Cathcart, E. (2013). All bark and no bite: Nonspecific magic words sweep aside Constitutional concerns and remove the Northern Rocky Mountain gray wolf from Endangered Species Act protection in *Alliance for the Wild Rockies v. Salazar*. *Villanova Environmental Law Journal*, 24, 253–285. <http://doi.org/10.1525/sp.2007.54.1.23>.
- Clark, S. G., & Milloy, C. (2014). The North American Model of Wildlife Conservation: An analysis of challenges and adaptive opportunities. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 289–324). Chicago, IL: University of British Columbia.
- Clark, T. W. (2002). *The Policy Process: A Practical Guide for Natural Resources Professionals*. New Haven, CT: Yale University Press.
- Clark, T. W., & Rutherford, M. B. (2005). The institutional system of wildlife management: Making it more effective. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 211–253). Washington, D.C.: Island Press.
- Defenders of Wildlife, et al., v. Jewell, et al. (2014). 68 F.Supp.3d 193. U.S. District Court for the District of Columbia.
- Defenders of Wildlife et al. v. Hall et al. (2008). 565 F. Supp. 2d 1160. U.S. District Court, Missoula, Montana.
- Elliott, C., & Schlaepfer, R. (2001). The Advocacy Coalition Framework: Application to the policy process for the development of forest certification in Sweden. *Journal of European Public Policy*, 8(4), 642–661. <http://doi.org/10.1080/13501760110064438>
- Gutiérrez, N. L., Hilborn, R., & Defeo, O. (2011). Leadership, social capital and incentives promote successful fisheries. *Nature*, 470(7334), 386–389. <http://doi.org/10.1038/nature09689>

- Hogl, K., Kvarda, E., Nordbeck, R., & Pregernig, M. (Eds.). (2012). *Environmental Governance: The Challenge of Legitimacy and Effectiveness*. Northampton, MA: Edward Elgar Publishing, Inc. Retrieved from <http://books.google.com/books?hl=en&lr=&id=rJ5oxFcK0foC&oi=fnd&pg=PR1&dq=Environmental+Governance:+The+Challenge+of+Legitimacy+and+Effectiveness&ots=LWjKwWjcG8&sig=BM-2Rt2UkE2ajjW-1jFeJBbL6v8>
- Ingold, K. (2011). Network structures within policy processes : Coalitions , power , and brokerage in Swiss climate policy, *39*(3), 435–459.
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In P. A. Sabatier & C. M. Weible (Eds.), *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.
- Jimenez, M. D., & Johnson, A. (2016). Wyoming wolf recovery 2015 annual report. In *U.S. Fish and Wildlife Service Rocky Mountain Wolf Program 2015 Annual Report* (p. WY-1-WY-30). Helena, MT: USFWS, Ecological Services.
- Kingdon, J. W. (2011). *Agendas, Alternatives, and Public Policies* (2nd ed.). Boston, MA: Longman.
- Klein, R. A. (2002). Wolf recovery in the Northern Rockies. In R. D. Brunner, C. H. Colburn, C. M. Cromley, R. A. Klein, & E. A. Olson (Eds.), *Finding Common Ground: Governance and Natural Resources in the American West* (pp. 88–125). New Haven, CT: Yale University Press.
- Klyza, C. M., & Sousa, D. J. (2013). *American Environmental Policy: Beyond Gridlock* (2nd ed.). Cambridge, MA: The MIT Press.
- Koontz, T. M., & Thomas, C. W. (2006). What do we know and need to know about the environmental outcomes of collaborative management? *Public Administration Review*, *66*(s1), 111–121.
- Koshmrl, M. (2016, July 13). Stemming grizzly bloodshed. *Jackson Hole News & Guide*. Jackson, WY.
- Krannich, R. S., & Smith, M. D. (1998). Local perceptions of public lands natural resource management in the rural west: Toward improved understanding of the “revolt in the west.” *Society & Natural Resources*, *11*(7), 677–695. <http://doi.org/10.1080/08941929809381111>
- Lachapelle, P. R., McCool, S. F., & Patterson, M. E. (2003). Barriers to effective natural resource planning in a “messy” world. *Society & Natural Resources*, *16*(6), 473–490. <http://doi.org/10.1080/08941920309151>

- Lute, M. L., & Gore, M. L. (2014). Knowledge and power in wildlife management. *The Journal of Wildlife Management*, 78(6), 1060–1068. <http://doi.org/10.1002/jwmg.754>
- Madden, F. M. (2008). The growing conflict between humans and wildlife: Law and policy as contributing and mitigating factors. *Journal of International Wildlife Law & Policy*, 11(2–3), 189–206. <http://doi.org/10.1080/13880290802470281>
- McLaughlin, G. P., Primm, S., & Rutherford, M. B. (2005). Participatory projects for coexistence: Rebuilding civil society. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 177–210). Washington, D.C.: Island Press.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis* (2nd ed.). Washington, D.C.: Sage Publications.
- Oakleaf, J. K., Mack, C., & Murray, D. L. (2003). Effects of wolves on livestock calf survival and movements in central Idaho. *The Journal of Wildlife Management*, 67(2), 299–306. <http://doi.org/10.2307/3802771>
- Olson, E. R., Stenglein, J. L., Shelley, V., Rissman, A. R., Browne-Núñez, C., Voyles, Z., ... Van Deelen, T. (2015). Pendulum swings in wolf management led to conflict, illegal kills, and a legislated wolf hunt. *Conservation Letters*, 8(5), 351–360. <http://doi.org/10.1111/conl.12141>
- Pierce, J. J. (2016). Advocacy coalition resources and strategies in Colorado hydraulic fracturing politics. *Society & Natural Resources*, 29(10), 1154–1168. <http://doi.org/10.1080/08941920.2015.1131876>
- Sabatier, P. A. (1993). Policy change over a decade or more. In P. A. Sabatier & H. C. Jenkins-Smith (Eds.), *Policy Change and Learning: An Advocacy Coalition Approach* (pp. 13–39). Boulder, CO: Westview Press.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The Advocacy Coalition Framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (1st ed., pp. 117–166). Boulder, CO: Westview Press.
- Sabatier, P. A., & Weible, C. M. (2007). The Advocacy Coalition Framework: Innovations and clarifications. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (2nd ed., pp. 189–220). Boulder, CO: Westview Press.
- Sjölander-Lindqvist, A., Johansson, M., & Sandström, C. (2015). Individual and collective responses to large carnivore management: The roles of trust, representation, knowledge spheres, communication and leadership. *Wildlife Biology*, 21(3), 175–185. <http://doi.org/10.2981/wlb.00065>

- Stern, M. J., & Coleman, K. J. (2015). The multidimensionality of trust: Applications in collaborative natural resource management. *Society & Natural Resources*, 28(2), 117–132. <http://doi.org/10.1080/08941920.2014.945062>
- Stone, D. (2012). *Policy Paradox* (3rd ed.). New York, NY: W.W. Norton & Company.
- Thuermer Jr., A. (2009, January 31). Gingery wolf bill garners support. *Jackson Hole Daily*. Jackson, WY.
- Title 23: Game and Fish, Pub. L. No. 23 (2016). State of Wyoming.
- U.S. Fish and Wildlife Service. (1987). Northern Rocky Mountain Wolf Recovery Plan. Denver, CO: U.S. Fish & Wildlife Service.
- Watters, R., Anderson, A., & Clark, S. G. (2014). Wolves in Wyoming: The quest for common ground. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 165–107). Chicago, IL: The University of Chicago Press.
- Weible, C. M. (2008). Expert-based information and policy subsystems: A review and synthesis. *Policy Studies Journal*, 36(4), 615–635. <http://doi.org/10.1111/j.1541-0072.2008.00287.x>
- Weible, C. M., Pattison, A., & Sabatier, P. A. (2010). Harnessing expert-based information for learning and the sustainable management of complex socio-ecological systems. *Environmental Science and Policy*, 13(6), 522–534. <http://doi.org/10.1016/j.envsci.2010.05.005>
- Weible, C. M., & Sabatier, P. A. (2009). Coalitions, science, and belief change: Comparing adversarial and collaborative policy subsystems. *Policy Studies Journal*, 37(2), 195–212. <http://doi.org/10.1111/j.1541-0072.2009.00310.x>
- Western Governors' Association. (2016). *Western Governors' Species Conservation and Endangered Species Act Initiative: The Chairman's Initiative of Wyoming Governor Matthew H. Mead*. Retrieved from [westgov.org/initiatives/esa-initiative](http://westgov.org/initiatives/esa-initiative)
- Wilmot, J., & Clark, T. W. (2005). Wolf restoration: A battle in the war over the West. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 138–173). Washington, D.C.: Island Press.
- Wyoming Animal Damage Management Board. (2015). Frequently asked questions. Retrieved July 28, 2016, from [http://www.wyadmb.com/Frequently Asked Questions.htm](http://www.wyadmb.com/Frequently%20Asked%20Questions.htm)



Wyoming Game & Fish Commission. (2011). *Wyoming Gray Wolf Management Plan*.  
Cheyenne, WY.

Yin, R. K. (2009). *Case Study Research* (4th ed.). Washington, D.C.: Sage  
Publications.

CHAPTER 6

ADDRESSING LOCAL POLICY PREFERENCES FOR

WOLF CONFLICT MANAGEMENT:

A CASE STUDY OF A RURAL COMMUNITY IN NORTHWEST WYOMING<sup>12</sup>

## 6.1 Introduction

In 1995, the U.S. Fish and Wildlife Service (USFWS) reintroduced grey wolves (*Canis lupus*) into Yellowstone National Park (YNP). Wolves had been extirpated in the lower 48 states by the early part of the twentieth century; the last wolf was shot in Yellowstone National Park in 1926 (National Park Service, n.d.). After the passage of the Endangered Species Act (ESA) in 1973, gray wolves were listed as an endangered species. Under the mandate of the ESA, the USFWS was directed to assemble a recovery team to analyze options for population recovery. Two decades of work on a recovery plan culminated in the reintroduction of the wolf to two recovery areas: Yellowstone National Park in 1995, and central Idaho in 1996. Wolves were considered an “experimental, non-essential” population under section 10(j) of the ESA, though still listed as an endangered species. The endangered species listing of the wolf and the subsequent reintroduction ensured that YNP became a safe haven for wolves to recover and thrive. By 2002, wolves moved south and east into Yellowstone’s neighbor, Grand Teton National Park, as

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<sup>1</sup> A version of this chapter was presented at the 2016 Western Political Science Association Conference, March 25, 2016, San Diego, CA.

<sup>2</sup> The Teewinot Institute in Wilson, WY, provided financial support for the survey mailing described in this chapter.

well as on to other federal and private lands in Wyoming. Their expansion was not unexpected as wolves are fecund, and are considered habitat generalists (Oakleaf et al., 2006). Specific habitat requirements for wolves are governed predominantly by the presence of prey populations, which are predominantly wild ungulates. In the Northern Rockies, these primary prey species include elk (*Cervus elaphus*), moose (*Alces alces*), mule deer (*Odocoileus hemionus*), and more occasionally bison (*Bison bison*) and beaver (*Castor Canadensis*) (Arjo, Pletscher, & Ream, 2002; Peterson & Ciucci, 2003). However, livestock (e.g., sheep, cattle, goats) are also present on both federal and private lands outside of the parks and provide an easy and vulnerable food source for wolves (E. Bangs & Shivik, 2001).

In the Northern Rocky Mountain Wolf Recovery Plan, the USFWS set forth a goal of ten breeding pairs in each of the three recovery areas (southwest Montana, central Idaho, and the Greater Yellowstone Ecosystem, much of which falls in northwestern Wyoming) for three consecutive years (USFWS, 1987).<sup>3</sup> Wolf populations met the original biological objectives in 2002. The first delisting rule for the Northern Rocky Mountains Distinct Population Segment (DPS) was published in 2008, and a volley of litigation ensued, with the status (i.e., listed or not listed) of the wolf under scrutiny. By 2012, wolves in the three recovery states of Montana, Idaho, and Wyoming were delisted and management was turned over to state game and fish agencies (with the requirement that the USFWS would oversee and

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<sup>3</sup> Given the vagueness of the original definition of a breeding pair as two wolves “capable of producing offspring,” the 2009 delisting rule redefined it as a pack containing at least one adult male and female, as well as two or more pups, on December 31 of a given year (50 CFR Part 17, 2009, p. 15130).

monitor state management for five subsequent years). However, a lawsuit contesting the decision of the USFWS to delist wolves in Wyoming lingered, and in September of 2014, a U.S. District Court decision in Washington, D.C., returned Wyoming's wolves to the endangered species list and federal management resumed (*Defenders of Wildlife, et al., v. Jewell, et al., 2014*).

Despite this most recent lawsuit, wolf recovery has been lauded as a success by the USFWS (Ashe, 2013). However, decisions over management continue to be closely watched by stakeholders and citizens holding a spectrum of beliefs on how wolves should be managed. Management policy is primarily directed by litigation decisions and negotiations between the U.S. Fish and Wildlife Service and state game and fish agencies. At least in Wyoming, little systematic research has inquired as to the wolf management preferences of local citizens, particularly in areas frequented by wolves. In these areas, the potential for human-wildlife conflict (HWC) is high and local knowledge of wolves and wolf activity is also significant.

HWC is defined by the World Parks Congress as “[occurring] when the needs and behavior of wildlife impact negatively on the goals of humans or when the goals of humans negatively impact the needs of wildlife. These conflicts may result when wildlife damage crops, injure or kill domestic animals, or threaten or kill people” (World Parks Congress, 2004, p. 259). If conflict remains unchecked or unaddressed, it can escalate into a deeper social conflict between people about how to manage wildlife (F. Madden, 2004). Managing conflict between people and carnivores is critical to long-term conservation goals (Treves & Karanth, 2003). Understanding

how property owners perceive conflict and prefer it to be addressed can potentially help managers in developing appropriate policies to target conflict mitigation and reduction. Wolves have returned to the Northern Rockies, and given this fact, it is prudent to better understand how to address the inevitable conflicts that can and will continue to occur between wolves and human interests.

This chapter presents a summary of literature on the role of local input on management and policy decisions, particularly as related to addressing conflict with polarizing wildlife species such as wolves. The central research question is: how can local policy preferences be acknowledged and addressed in the policy process surrounding wolf management? Results of a survey mailed to property owners in two small and neighboring communities in Teton County, WY, Buffalo Valley and Pacific Creek are reported.<sup>4</sup> Survey questions assessed respondents' tolerance of living with wolves, experience of conflicts, and preferred approaches for addressing conflict with wolves. Finally, challenges and opportunities for incorporating these data sourced from local property owners into policy and management decisions are discussed.

## **6.2 Using Social Knowledge in Management and Policy Decisions**

Social science research can play a beneficial role in wildlife management decisions, particularly in the case of the gray wolf in the Northern Rockies, but it has been under-utilized (Bruskotter et al., 2010). Nearly twenty years ago, following the reintroduction of wolves into Yellowstone, Fritts et al. (1997) wrote: “The

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<sup>4</sup> See Figure 6.1 in the methods section for a map of this area.

comments [from public input on the Environmental Impact Statement] reflected the strong polarization that has plagued management of wolves and were consistent with our belief that most wolf recovery issues have more to do with deeply held personal values about government, influences of people living outside the region, people's relationships to nature and the political role of special interest groups, than with wolves themselves" (p. 11). Following this observation, it is clear that a better understanding of values and beliefs – even if they are rigid – may improve efforts to develop policy and management that is socially palatable. Even so, beliefs and values are not easily accepted as legitimate sources of knowledge due to their inability to be quantified or ground-truthed.<sup>5</sup> Despite some efforts to incorporate local knowledge or policy beliefs into wildlife management decisions, scientific and technical expertise are typically prioritized (Lute & Gore, 2014). Perspectives and knowledge from local communities who live in close proximity to a resource, such as wildlife, can help augment and complement scientific research used in management decisions (Berkes, Colding, & Folke, 2000). Finding effective and long-term ways to address management issues can be improved by understanding the values and beliefs of those directly affected by the presence of large carnivores (Mattson et al., 2006).

Fischer (2000) posits that when “formal academic knowledge works in a dialectical tension with the popular knowledge of ordinary citizens [it can] produce

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<sup>5</sup> In the wolf case, negative behaviors are not simply imagined by advocates that do not support wolf expansion, but rather wolves do engage in such conflicts (e.g., livestock depredation). Thus, local knowledge can be grounded in factual events.

a deeper contextual understanding of the situation” (p. 179). In this case, knowing the policy preferences and experiences of local residents can benefit managers in developing ways to address residents’ concerns about living with wolves. It is important to acknowledge that incorporating local policy and conflict mitigation preferences may prove especially challenging, however, as conflict over wolves and wolf management is firmly entrenched in fundamental social and political tensions over values (Nie, 2003). Watters, Anderson, & Clark (2014) advocate for “attention to social and community identities” as well as “cross-cultural dialogue” (p. 88) in addressing conflicts over wolf management. These approaches suggest the engagement of local citizens in the policy process would be of long-term benefit to carnivore management. Furthermore, this engagement may help to address notions of power disparity, where “carnivore skeptics, regardless of social position, claim that ‘the power elites’ do not respect local knowledge. Politicians, managers, biologists, and conservationists are frequently perceived as one alliance that possesses a great deal of power” (Skogen & Thrane, 2007, p. 22). This perception can alienate local citizens who may not have a clear and effective way of engaging in discussions over management and policy decisions.

Community-based conservation (CBC) is one approach to create buy-in and include local stakeholders, particularly in rural areas, in conservation-related decisions. CBC has two primary objectives: “to enhance wildlife/biodiversity conservation and to provide incentives, normally economic, for local people” (Campbell & Vainio-Mattila, 2003, p. 421). However, it has also been critiqued as a

means of “diluting the conservation agenda” (Berkes, 2004, p. 622). In the case of conservation of large, charismatic carnivores, community-based conservation efforts in the United States can be challenging to implement given the national attention and resources focused on ensuring the sustainability of these species. Specific to wolves, impacts of their presence are local, but there is a broader, national interest in decisions over their management. This tension between local preferences and national interests in wolf conservation precludes the adoption of a traditional CBC effort. As Berkes (2004) notes,

After all, “communities” do not conserve or despoil; at least, they do not act as simple, isolated agents. Rather, they are embedded in larger systems, and they respond to pressures and incentives. It may be more useful to rethink community-based conservation as shorthand for environmental governance and conservation action that starts from the ground up but deals with cross-scale relations. To ground conservation effort, we need a more nuanced understanding of the nature of people, communities, institutions, and their interrelations at various levels. (p. 628)

Examples exist where the direct involvement of locals in management helped to reduce conflicts, though few of these have been in the western United States with large carnivores. Primm and Wilson (2004) found that including local residents in the research and planning process through small-scale projects helped to facilitate buy-in to policy and management goals. With these efforts, they intended to foster coexistence, or living with wildlife in a way that conserves both species and ecosystems as well as supports and fosters human endeavors (Clark, Rutherford, & Casey, 2005). Their work in the Blackfoot Valley, Montana, reduced conflicts between bears and people to near zero, in part due to the collection of information from local citizens on how and where incidents of livestock depredation or beehive



raiding occurred (Primm & Wilson, 2004). These types of efforts can be resource intensive for managers, but in this case, a local organization, the Blackfoot Challenge, stepped in to shoulder many of the responsibilities necessary for a successful community-based conservation effort.

Typically, however, state and federal managers are responsible for the management of carnivores and conflict mitigation. Often, trust in the managers responsible for dealing with management and conflicts is weighed heavily as a proxy for acceptance; the greater the trust in the managing agency, the more likely that the species will be accepted by the public (Krannich & Smith, 1998). Furthermore, communicating both the benefits and risks associated with a species should also lead to increased tolerance (Bruskotter & Wilson, 2014). Researchers in Sweden also recognize the importance of trust in negotiating large carnivore management decisions, including trust among interested individuals and stakeholder groups, in addition to management agencies (Sjölander-Lindqvist et al., 2015). Echoing Watters et al (2014), Sjölander-Lindqvist et al. (2015) argue for expanding representation and participation in decision processes, better communication, and facilitated leadership as well as the use of ecological, social, cultural and economic knowledge. In summary, finding ways to integrate local citizens, particularly in places where large carnivores and human land use overlap, may help to alleviate acrimony over management decisions and mitigate potential conflicts.

### **6.3 Attitudes towards Wolves**

Understanding attitudes towards large carnivores is important when trying to create policy that acknowledges and accounts for the diversity in values and beliefs about wolves. Given the polarization over wolf management and policy within stakeholder coalitions, determining whether this polarization exists in the general citizenry can help determine support for particular policy outcomes. Public attitudes towards wolves and wolf reintroduction have been assessed in numerous studies over the past several decades (e.g., Bath & Buchanan, 1989; Bruskotter, Schmidt, & Teel, 2007; Houston, Bruskotter, & Fan, 2010). Prior to their reintroduction to Yellowstone National Park in 1995, researchers assessed attitudes of Wyoming residents and interest groups (including Defenders of Wildlife, the Wyoming Wildlife Federation, and the Wyoming Stockgrowers' Association) towards wolf reintroduction and found that factors such as education, group membership, and geographic proximity to the target wolf restoration zone influenced attitudes (Bath & Buchanan, 1989). A meta-analysis of 38 studies on attitudes towards wolves found that people who lived "closer" to wolves in terms of livelihood or rural residency, and thus were more likely to have direct encounters, exhibited less favorable views of wolves. Individuals who lived in urban areas or supported environmental groups, on the other hand, held stronger support for wolves (Williams, Ericsson, & Heberlein, 2002). Similarly, research in Norway found that rural sheep farmers hold negative views towards wolves (Kaltenborn & Bjerke, 2002). Generally, attitudes towards wolves appear to be determined by cultural,

rather than demographic or “structural,” factors, such as residence in an urban or rural area, and respondents who exhibited negative attitudes towards wolves also tended to trust informal knowledge sources over institutional (Skogen & Thrane, 2007).

The amount of knowledge an individual holds about a certain species can play a role in affecting attitudes. In a survey of residents living within Abruzzo Lazio and Molise National Park in Italy, researchers found that affect, or emotional attachment, to a species played a more significant role in predicting positive attitudes towards the presence of large carnivores compared to knowledge or risk perception. Residents were not strong supporters of lethal control, or the removal of animals to reduce conflicts (Glikman et al, 2012).

Assessing and integrating policy preferences of local residents, to the degree that they are deemed to be acceptable, may help to find both creative and sustainable ways to manage conflicts. This research asks how tolerance for wolves varies across property owners in a rural community, as well their preferred methods for addressing management and conflict. The underlying premise is that local knowledge and policy preferences can provide insight to managers who are tasked with ensuring a sustainable wolf population and addressing inevitable conflicts.

## **6.4 Hypotheses**

In prior chapters, the complexity of perspectives regarding wolf management and policy were investigated through the lenses of media analysis and coalition

actors. Here, individual attitudes and their policy preferences are integrated as another layer in the wolf policy subsystem in Wyoming.

Based on the literature above, it is expected that views on wolf management may vary among part-time and full-time residents, the latter of whom are full-time rural residents and are more likely to have economic interests that could be affected by wolves:

*H1: Full-time residents in the Buffalo Valley/Pacific Creek will be less tolerant of living in close proximity to wolves due to the rural nature of the area, while part-time residents are more likely to be more tolerant.*

Conflicts are considered one of the central issues to address in order to achieve conservation goals for wildlife (Treves & Karanth, 2003), as well as to reduce socially-divisive discourse over wolf management (Clark et al., 2005; Madden, 2004; Madden & McQuinn, 2014). Understanding how residents define and experience conflicts, and then how they prefer them to be addressed, may help managers who are working to improve coexistence and mitigate conflicts:

*H2: Residents who have experienced a conflict with a wolf will be less likely to exhibit tolerance for wolves and will be more likely to prefer more intensive conflict mitigation measures, such as lethal control.*

*H3: Residents who have not experienced conflicts will be more likely to prefer more collaborative methods of addressing conflicts between people and wolves.*

Finally, based on the literature regarding trust in agencies (Bruskotter & Wilson, 2014; Sponarski, Vaske, Bath, & Musiani, 2014), as well as the preference for state management by “localists,” or those individuals with values traditionally associated with the Old West (e.g., ranching, hunting) (Wilmot & Clark, 2005), it is posited that:

*H4: The preferred entity for dealing with conflicts in a rural community will be the state management agency, Wyoming Game & Fish (WGF) Department.*

## **6.5 Methods**

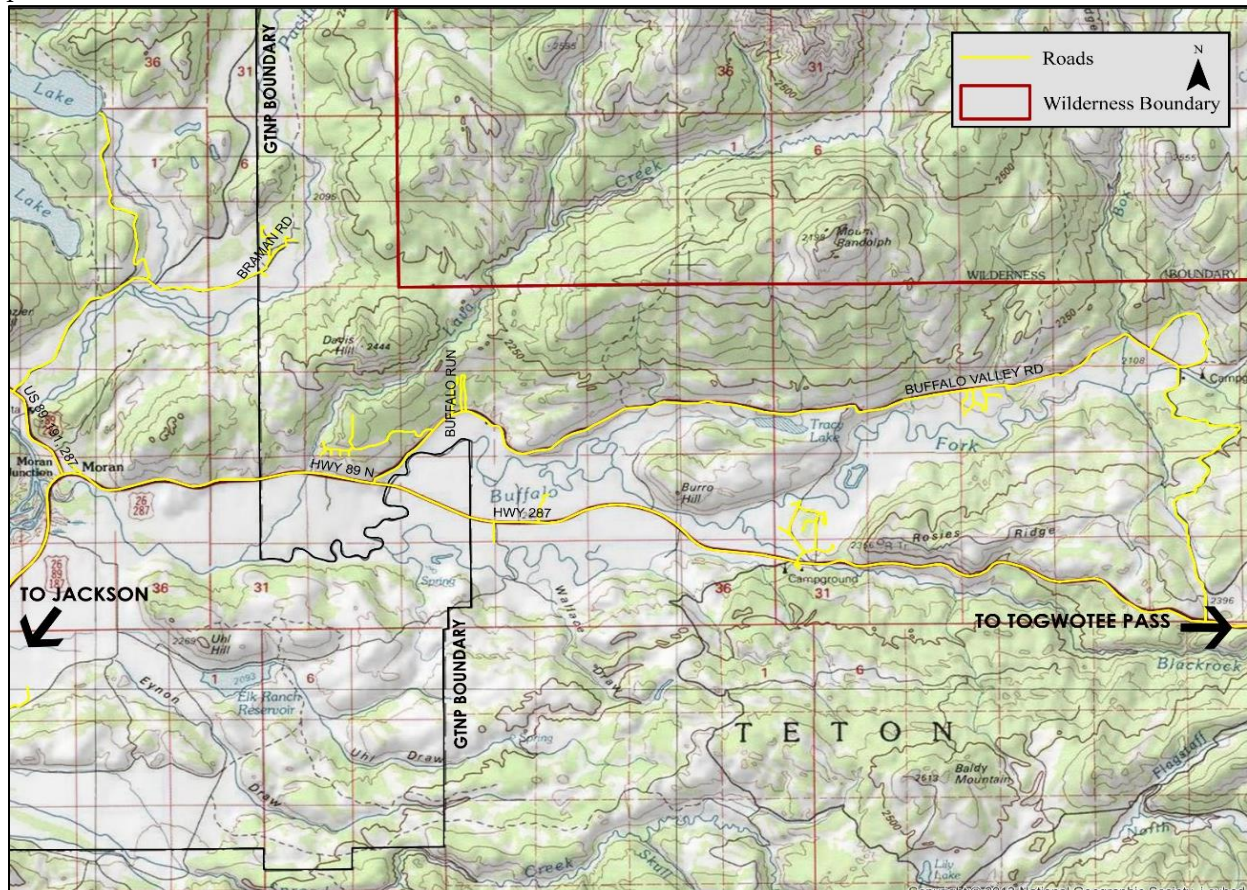
In order to address these hypotheses, a survey was mailed to residents and property owners in two rural and adjacent communities, the Buffalo Valley and Pacific Creek, located in northwest Teton County, Wyoming, on their experiences with wolves and preferences for management and conflict mitigation. Survey questions were informed by the author's previous research, including semi-structured, in-person interviews on wolf policy and management with engaged citizens as well as representatives of non-governmental organizations (NGOs), government agencies, and private interests in this region. The survey questions were also reviewed by several experts and non-experts in wolf management prior to distribution for question clarity, thoroughness, and terminology.

### *6.5.1 Case Study Community*

The Buffalo Valley is a remote community in northwest Wyoming, approximately 40 miles north of Jackson, WY and 50 miles northwest of Dubois, WY. A swath of private land parcels sits on either side of the Buffalo Fork of the Snake River, surrounded by public lands that are managed by either the National Park Service (Grand Teton National Park) or the U.S. Forest Service (Blackrock Ranger District of the Bridger-Teton National Forest) (Figure 6.1). Pacific Creek is a smaller subdivision approximately two miles due north of the Buffalo Valley, or six miles driving distance. It is included here given its proximity to the Buffalo Valley and the presence of a subdivision here surrounded by public lands. Teton

County, WY, Geographic Information System (GIS) maps indicate there are ~240 individual parcels of land in the Buffalo Valley and Pacific Creek ranging in size from less than one to several hundred acres (“Teton County Geographic Information System,” n.d.). This area is unique in that the potential for conflict between wolves and people is diverse. Land use includes livestock and hunting outfitters, which are more common areas of focus in conflict reduction due to the potential or real economic impacts of wolves. However, rural land development here, with established subdivisions where dogs and children play, adds another dimension to conflict management and a broader range of potentially affected stakeholders. The communities here are comprised of full-time and part-time residents. Associated business development is relatively sparse, with two gas stations, a restaurant and motel, several guest ranches, and smaller livestock operations. The area was selected for study due to the clearly delineated geographic boundaries, the size, and the presence of a suite of wildlife species endemic to this area, including ungulates such as elk, moose, and mule deer, as well as the three apex predators native to Yellowstone: grizzly bears (*Ursus arctos horribilis*), mountain lions (*Puma concolor*), and wolves. Two wolf packs, the Pacific Creek Pack and the Phantom Springs Pack, were known to frequent this area in 2014, the most recent year for which data is available (U.S. Fish and Wildlife Service et al., 2015; Wyoming Game & Fish Department et al., 2015).

Figure 6.1: Map of the Buffalo Valley and Pacific Creek. This map was included in mailed survey packets.



### 6.5.2 Survey

In August 2015, mailed surveys (Dillman et al., 2009) were sent to all property owners (n=174) in the Buffalo Valley and Pacific Creek communities using the publicly-accessible Teton County GIS server to identify recipients based on land ownership of private parcels. The survey included a letter of invitation, a paper copy of the survey, and a map where participants were asked to identify places where they had seen wolves. The survey instrument is included in Appendix 4. Recipients returned their responses via a postage-paid envelope. There was also the option to fill out an identical version of the survey online using Qualtrics survey data collection software (2015).

Survey questions focused on four categories: tolerance for wolves, conflict experiences, conflict management preferences, and demographic variables. Respondents were asked to report their tolerance of living in an area with known wolf packs on a Likert scale of one (extremely tolerant) to five (not at all tolerant). Respondents were then asked whether they had experienced a conflict with wolves, and the details of this conflict. Types of conflict that could be selected included livestock and hunting issues as well as those that would be more likely to occur in residential areas, including death or injury to household pets and horses as well as threats to safety or well-being, such as encountering a wolf in one's yard or on a walk. Methods to address conflict were compiled based on existing practices and efforts by NGOs and managers. Respondents could check all methods that they preferred.

In the past eight years, wolf management in Wyoming has flip-flopped between state and federal management, depending on the status of wolves under the Endangered Species Act. Many residents (though not all) likely have familiarity with management structures under both agencies. With this in mind, respondents were asked to choose no more than two agencies or alternative leaders (collaborative effort, community group, NGOs, private citizens) who they feel would be best suited to lead efforts to reduce conflicts. Open-ended comment boxes provided respondents with space to add qualitative responses as well.

Recipients had approximately six weeks to complete the survey. Given budgetary constraints, no reminders were sent, although several reminder posters



were hung in community areas (e.g., post office, gas station) in the area. Four undeliverable mailings were returned, for a total potential respondent pool of 170 distributed surveys. Sixty-six surveys were completed and returned. Seven respondents submitted their surveys online; one respondent returned responses via email. The response rate was 38%.<sup>6</sup> Once the survey responses were received, responses were recorded in Microsoft Excel (2013) spreadsheets, with qualitative notes transcribed as well. Data were analyzed using STATA (2015). Chi-square ( $\chi^2$ ) tests of independence were used to determine if relationships existed between categorical variables. Fisher's exact test (given that several cell values had frequencies of less than two) was used in order to look more closely at collaborative preferences and tolerance. The tolerance variable was collapsed into two bins: more tolerant (including extremely, very, and moderately tolerant categories) and less tolerant (slightly and not at all categories) for the purposes of the chi-square and Fisher's exact tests.

In the survey question regarding tactics to reduce conflict, several of the options presented human-centered tactics that modified or informed human behaviors (in contrast to wolf-centered approaches, such as lethal control or non-lethal deterrents). These options included: educating residents and visitors on what to do in the event of a wolf encounter, such as with dogs; using communication methods, such as listservs or homeowners' associations, to share knowledge of wolf

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<sup>6</sup> It is possible that additional individuals could have taken the survey based on the reminder posters hung in the community and therefore affected the response rate. However, given the low frequency of online responses, the effect on response rate is likely negligible.

activity; improving coordination among state and federal managers; and enlisting the help of non-governmental organizations to address conflict areas. These methods are all somewhat linked to the concept of improved collaboration and participation in the policy process. Therefore, an additive variable, “collaboration,” was created in order to further explore how these preferred methods are correlated with experience of conflict. An ordered logistic regression model was then used in an effort to better understand the factors that predict support for the new variable “collaboration.” Independent variables tested included experience (conflict, sighting), opinions/beliefs (tolerance and support for lethal control) and demographics.

## **6.6 Results**

### *6.6.1 Demographics*

Demographic characteristics of respondents, including age, gender, residency status (part-time/full-time), length of time spent at one’s property annually, and time of year when the property is visited, are presented in Table 6.1.

Table 6.1: Demographics of survey respondents

Variable	Categories of Responses					Totals	
Age	18-44	45-64	65+				
	2%	40%	58%			100%	
	(1)	(24)	(35)			(60)	
Gender	Male	Female					
	61%	39%				100%	
	(38)	(24)				(62)	
Residency	Full-time	Part-time					
	33%	67%				100%	
	18	37				(56)	
Length of Time			6-10	> 10			
	< 1 year	1-5 years	years	years			
	2%	11%	3%	85%		100%	
	(1)	(7)	(2)	(55)		(65)	
Time of Year			Summer	Fall			
	Winter	Spring					
	13	14	26	15			
Amt of Time/Year	Weekend		1 wk-1		3-6	> 6	
	s	< 1 wk	mo	1-3 mos.	mos.	mos.	
	2.7%	5.4%	18.9%	32.4%	32.4%	8.1%	100%
	(1)	(2)	(7)	(12)	(12)	(3)	37

### 6.6.2 Tolerance

Out of 65 responses, 20 respondents (30.8%) reported being not at all tolerant or slightly tolerant of living in an area with known wolf packs, while 30 respondents (46.1%) indicated that they were extremely or very tolerant of living with wolves. The remaining 15 (23.1%) identified themselves as moderately tolerant. Qualitative comments in response to open-ended survey questions illustrate the diversity of views on wolves in this area:

*I am happy to see wolves restored to the Yellowstone Ecosystem. Too much emphasis is placed on keeping elk numbers artificially high so that [Wyoming] Game & Fish [Department] can issue high numbers of tags to hunters. There needs to be much more acceptance that predators are a natural and necessary part of this ecosystem.*

*I know my parents see them ... with some regularity and that's an amazing change from when I was growing up... I hope I can someday show my kids these amazing animals.*

*I have no problem with having wolves in the Buffalo Valley, but they definitely have had an impact on the moose & elk population there. I also worry about my dog.*

*Adding another top lone predator to the ecosystem was a very poor decision. Mtn. lions, bears, man. All top lone predators. To add the fourth was based on junk science and the net result has no other option than to reduce the elk, deer, moose pop.*

These examples illustrate a range of perspectives – from being wholly supportive, to supportive with reservations, to resentful of the reintroduction 25 years ago and critical of the science used to support that decision. This latter perspective was illustrated by other respondents as well.

Residence status was tested against tolerance using a chi-square ( $\chi^2$ ) test of independence. In this case there was no significant difference in tolerance between part-time and full-time residents ( $n=54$ ,  $\chi^2=0.837$ , ns; Table 6.2).

Table 6.2: Residence status & reported tolerance for living with wolves

	Tolerance	<i>Not at All</i>	<i>Slightly</i>	<i>Moderate</i>	<i>Very</i>	<i>Extremely</i>	Total
Residency							
Status	<i>Part-Time</i>	7	3	10	7	9	36
	<i>Full-Time</i>	5	1	4	2	6	18
	Total	12	4	14	9	15	54

$\chi^2(df = 4) = 1.4429, ns$

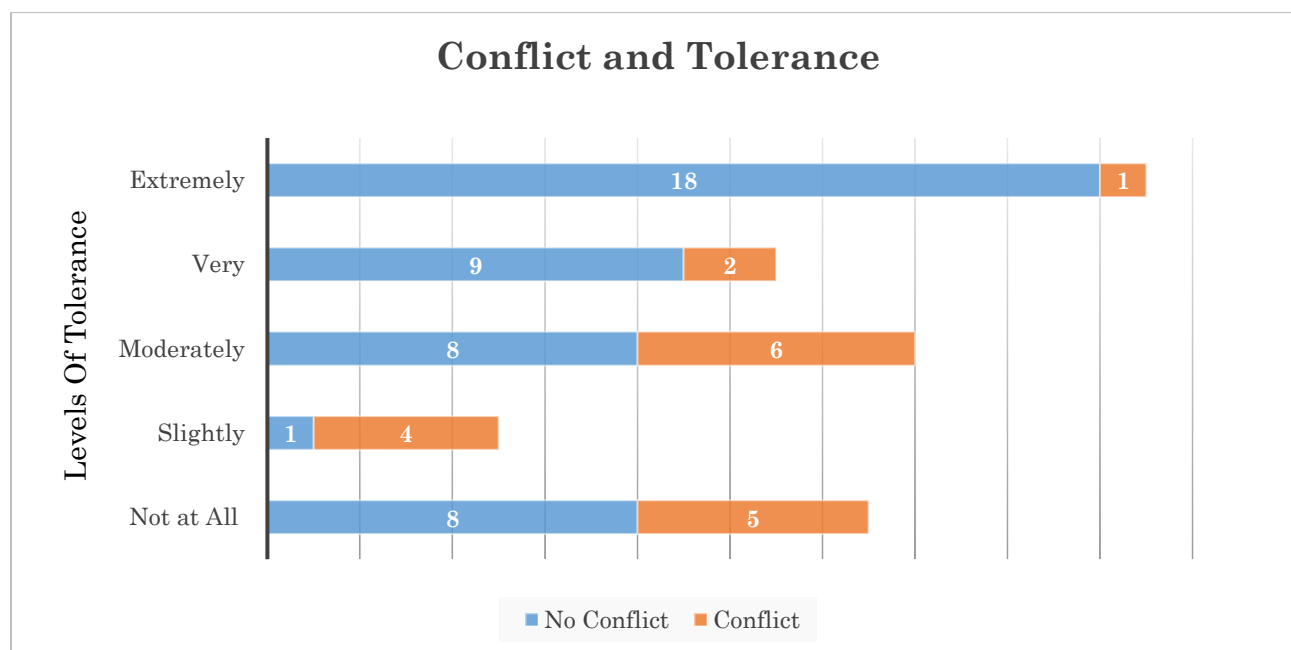
In sum, H1, which states that *full-time residents in the Buffalo Valley/Pacific Creek will be less tolerant of living in close proximity to wolves due to the rural nature of*

*the area, while part-time residents are more likely to be more tolerant* was not supported by the data.

### *6.6.3 Conflicts*

Nineteen respondents (28.8%) reported having experienced a conflict. Types of conflicts included: livestock depredation (n=3), decreased hunting opportunity for clients (n=2), unsuccessful personal hunt (n=4), death or injury to a horse (n=3), death or injury to a dog (n=2), and threat to personal security or well-being (n = 8). Of the 19 respondents, 14 answered the question about their willingness to work with government agencies or NGOs to reduce the threat of conflict. Eight indicated that they would be “very willing”; the additional six respondents split evenly between somewhat (n = 3) or not at all (n = 3) willing to do so. Figure 2 displays the tolerance levels reported by all respondents, segmented by experience of a conflict. Of note, which will be discussed in more depth below, those who reported being “moderately tolerant” were nearly evenly split in terms of reporting a conflict (Figure 6.2).

Figure 6.2: Tolerance for wolves in the Buffalo Valley and Pacific Creek, Wyoming



Qualitative data provided additional insight on the challenges inherent in defining a conflict. The following comments were made by individuals who indicated that they had not had a conflict with wolves:

*No conflicts but numerous encounters. I do a lot of hiking in the wilderness areas and have had several encounters with packs. No problems - my dog hikes with me.*

*Not conflict but my neighbor had 7-9 in his yard about 100 yards from my property. Not safe for my grandkids or our pets.*

*Several instances of wolves along Buffalo Fork River tributary of the Snake. Also, we've found dead moose along the river that we attribute to wolves.*

In contrast, respondents who indicated that they had experienced a conflict with wolves provided the following comments:

*Pack surrounded our house for two weeks - wolves have been by our house several times. They stand and stare at you.*

*Saw wolf in back part of property*

*The wolves have killed all of the moose.*

Here, similar circumstances (seeing wolves on property or otherwise; concerns with moose population) were viewed both as conflicts and non-conflicts by the respondents.

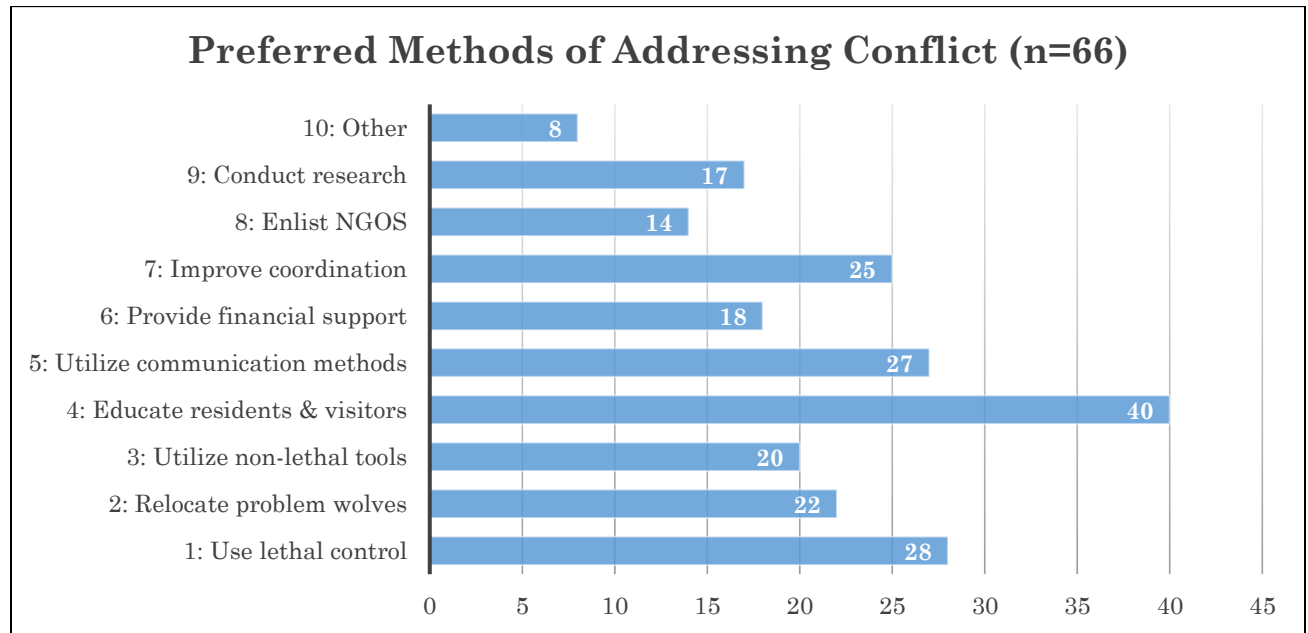
The number of “traditional” conflicts ( $n = 10$ ), in the form of livestock depredation/horse encounter or failure to harvest an elk (assuming the individuals who reported the failure to harvest an elk held tags for this area) marginally surpassed the number of respondents reporting “threat to well-being” ( $n = 8$ ) as a conflict. Respondents’ comments to threat of well-being included:

*Perhaps the greatest problem - no peace of mind*

*Threat to horses and cattle*

Moving beyond the experience of a conflict, respondents were asked to choose their preferred method(s) of addressing issues with wolves (Figure 6.3). The preferred method to address conflict selected most frequently was “educate residents and visitors on how to react in the event of a wolf encounter, such as with dogs” (60.6%,  $n=40$ ). “Use lethal control” was the second-most frequently selected (42.4%,  $n=28$ ). The utilization of non-lethal tools, such as fencing or rubber bullets, was selected by 30.3% ( $n=20$ ) of respondents, which is fewer than the number that expressed that they were extremely or highly tolerant ( $n=30$ ) of living with wolves.

Figure 6.3: Preferred methods of addressing conflict between people and wolves in the Buffalo Valley and Pacific Creek, WY.



Not surprisingly, respondents with less tolerance for wolves exhibited a preference for lethal control more so than those with higher tolerances (Fisher's exact = 0.00). Those respondents who had experienced a conflict also preferred lethal control ( $\chi^2 = 5.4122$ ,  $df = 1$ ,  $p < 0.05$ ). Furthermore, approximately one third of the respondents ( $n=9$ ) who preferred lethal control did not select any other methods of reducing conflict. Other respondents provided alternative perspectives on lethal control:

*Shoot some not all. This helps maintain respect. We do not need to [waste] \$ on programs to that do not work.*

*[Use lethal control] only when absolutely necessary.*

These responses acknowledge that there are places where wolves may cause problems and that lethal control is an option, though the specific conditions under which would be deemed necessary (as articulated by the second respondent) need



further exploration. In sum, H2, which states that *residents who have experienced a conflict with a wolf will be less likely to exhibit tolerance for wolves and will be more likely to prefer more intensive conflict mitigation measures, such as lethal control*, were supported based on the results of the Fisher's exact test and chi square test of independence reported above.

Table 6.3 shows the results of the correlation between the additive variable "collaboration" with experience of conflict (-0.1580, ns) and tolerance (0.5505,  $p < 0.001$ ). Preference for collaboration does appear to be significantly related to tolerance (Fisher's exact = 0.00) in that those respondents who had a higher "collaboration preference" score also exhibited higher tolerance for wolves.

The strong preference for education and outreach efforts (n=40, 60.6%) warrants further consideration. Of those individuals who indicated moderate tolerance (n=15), 11 (73.3%) selected education and outreach as a means of addressing conflict. This finding indicates managers, community organizations, or NGOs may have the potential to work to address the concerns of those residents in the moderate category in order to preemptively address their concerns.

Table 6.3: Correlation between experience of conflict, level of tolerance, and preference for collaboration as well as a test of significance between collaboration and tolerance

	Conflict	Tolerance	Collaboration
Conflict	-		
Tolerance	-0.3616**	-	
Collaboration	-0.1580	0.5505***	-

*Note: N's range from 62-66 due to missing data. For conflict, 0=no conflict, 1 = conflict.*

\*\*\*p<0.001, \*\*p<0.01

Collaboration Score		1	2	3	4	5	Total
Tolerance	<i>Less</i>	15	0	4	1	0	20
	<i>More</i>	6	9	11	12	7	45
	Total	21	9	15	13	7	65
Fisher's exact = 0.00							

The results of the ordered regression model indicate that demographic variables do not predict support for collaborative approaches, nor do experiences with wolves, whether negative (conflict) or passive (sighting). Only two variables appeared significant: low tolerance and support for lethal control.

Conflict did not appear as a significant predictor variable in the correlation test or in the regression analysis. This result is probably due in part to the larger number of “moderately” tolerant respondents who reported having experienced a conflict. Regression results are displayed in Table 6.4.

Table 6.4: Ordered logistic regression of preference for collaborative tactics.

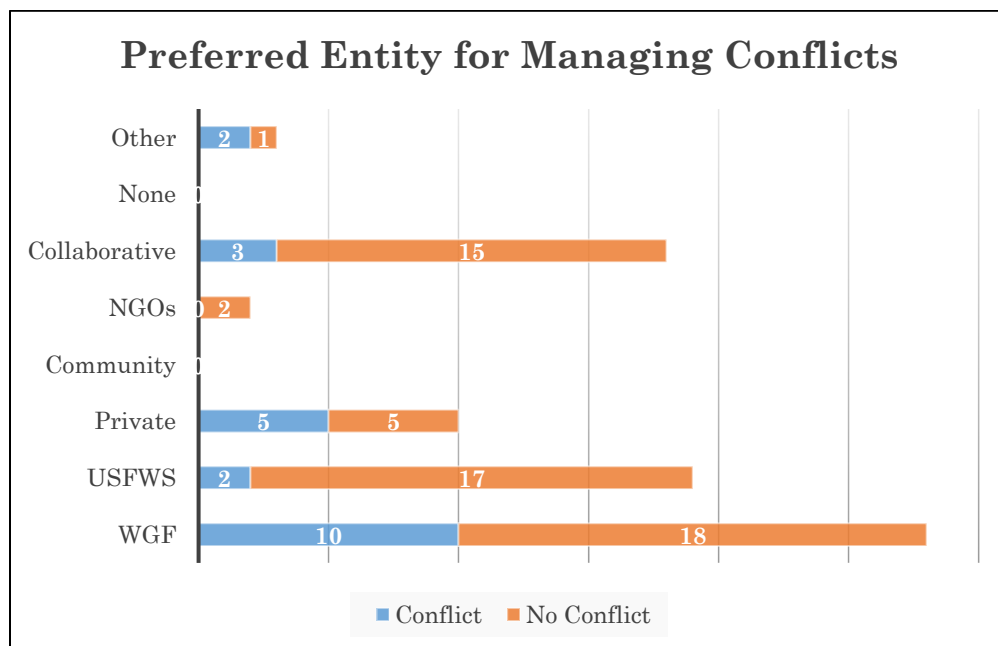
Collaborative Tactics	Coef.	Std. Err.	z	P<z	95% CI	
Experience						
Conflict	-0.6054568	0.9810299	-0.62	0.537	-2.52824 -1.720408	1.317326
WolfSight	-0.4107944	0.6681825	-0.61	0.539	.8988192	
Opinions						
Tolerance						
Slightly Tolerant	3.277856	1.474276	2.22	0.026**	.3883293	6.167383
Moderately					-.6978656	
Tolerant	1.449636	1.095684	1.32	0.186	3.597137 -1.656124	
Very Tolerant	0.9021389	1.30526	0.69	0.489	3.460402	
Extremely					-.7311977	
Tolerant	1.901581	1.343279	1.42	0.157	4.534361	
Pref. Lethal Control	-2.052354	1.092962	-1.88	0.06*	-4.19452	.089811
Demographics						
Residence Status					-2.270828	
(ref: part-time)	-0.8990988	0.6998749	-1.28	0.199	.4726307	
Length of Residency						
(ref: <10 years)	0.6250984	0.8069136	0.77	0.439	-.9564232 -1.745175	2.20662
Gender (ref: male)	-0.4361961	0.6678585	-0.65	0.514	.8727825 -1.734622	
Age (ref: <65)	-0.4069164	0.6774133	-0.6	0.548	.9207893	
Number of obs: 49						
LR chi2(df =11) = 24.03		** p<0.05				
Prob > chi2 = 0.0126		* p<0.1				
Pseudo R2 = 0.1558						
Log likelihood = -65.094082						

In sum, H3, which states that *residents who have not experienced conflicts will be more likely to prefer more collaborative methods of addressing conflicts between people and wolves* is indirectly supported. Conflict is not correlated with collaboration; however, those individuals reporting higher tolerance did support collaboration.

### 6.6.3 Conflict Managers

The Wyoming Game & Fish Department was the most frequently selected entity to manage conflicts with wolves (44.4%) with the USFWS and collaborative efforts as the second and third most frequently selected managers (30.2% and 28.6%, respectively). Results are displayed in Figure 6.4.

Figure 6.4: Preferred entity for managing conflicts



Hypothesis 4 states: *The preferred entity for dealing with conflicts in a rural community will be the state management agency, Wyoming Game & Fish Department, which was supported.* The frequency with which respondents selected collaborative efforts, even among those who had experienced conflicts, was unexpected, however, and deserves further attention.

## 6.7 Discussion: Local Input into the Policy Process

RQ4 asks how the process by which local stakeholders access and participate in the policy process can be improved. The importance of gathering and integrating

local property owners' policy preferences when making management decisions for wildlife, particularly in communities living with challenging species such as wolves, should not be undervalued. Locals can provide information on locations, activities, migrations, interactions, and conflicts with wildlife. Furthermore, they may act as ambassadors beyond their communities for not only wolves and other wildlife, but also for management decisions and actions. However, in the Buffalo Valley and Pacific Creek, tolerance for living with wolves is polarized. Residents who were more tolerant of wolves preferred collaborative approaches to conflict management, while those expressing less tolerance supported lethal control. It may be necessary for managers to implement a multi-faceted approach to addressing real and perceived conflict in order to address local concerns.

#### *6.7.1 Tolerance*

It was expected that full-time residents are more likely to have economic interests (such as livestock or hunting outfitting businesses) and thus may be expected to be less tolerant of wolves (Williams et al., 2002). Furthermore, previous research indicates that rural residents tend to be less supportive of wolves (Kaltenborn & Bjerke, 2002; Williams et al., 2002). However, residence status (part-time v. full-time) does not appear to be correlated with tolerance in the study area. It is possible that the divergence between the data in this case and previous research could be resolved by investigating whether primary residence of less tolerant part-time residents is rural or urban, and assessing their primary occupation. Nonetheless, there still exists polarity among respondents on the

tolerance scale, which makes creating management policies difficult for decision makers, as it is nearly impossible to satisfy all constituents while still ensuring that the wolf population meets biological targets.

### *6.7.2 Nature of Conflict*

Experience of a conflict does seem to strongly influence residents' tolerance levels, though there was disparity among perceptions of what constitutes a conflict. Reported conflicts did fit within the broader definition of the World Parks Congress (2005), but certainly encompassed issues broader than livestock and hunting opportunity, which are most commonly heard. Furthermore, similar circumstances (seeing wolves on property or otherwise; concerns with moose population) were viewed both as conflicts and non-conflicts by the respondents. Conflict itself is a construct of individual beliefs, and efforts by managers or conservation groups to “reduce conflicts” and increase tolerance should be aware of how conflict is construed by local citizens. Other research in central America found that attitudes towards and tolerance of pumas (*Puma concolor*) and jaguars (*Panthera onca*) are more closely related to stakeholder affiliation, rather than experience of a conflict (Soto-Shoender & Main, 2013). Though the survey reported in this chapter did not ask questions on affiliation, this effect may be present here as well.

Qualitative data provided more insight as to the difficulties in assessing tolerance. Those individuals whose beliefs are firmly anti-wolf are more likely to report conflicts and take a broader view of what a conflict is. These views were clearly articulated in concluding comments in the survey:

*Wolves, like griz, are used to leverage the environmental agenda to lock up our public lands. Wolves and griz are to blame for livestock reductions..., locking up motorized use (close [roads]), the downturn of Forest Health (timber sales), the attack on trapping and hunting, and other attacks on private land ownership and personal freedoms. The solution is to manage predators (scientifically) in concert with all resource values (hunting, forest health, fire, recreation, all wildlife, livestock grazing, etc.)*

*The wolf reintroduction plan was a bad idea and was done so in a way that was reckless and unfair to the private sector of the states of Idaho, Wyoming and Montana.*

These comments illustrate that tolerance for wolves is predicated on broader beliefs regarding the role of government and private property, akin to the deep core beliefs explained by the ACF, and perhaps less so on the actual animal, as Fritts and Bangs (1997) observed as well. One respondent remarked:

*I rarely see wolves or wolf signs. Have never had a conflict with a wolf. But I have had conflict with wolf haters. Am puzzled by the extreme and inflexible attitudes of the anti-wolf crowd. Seems to be tied in with the “tea party” anti-government philosophy.*

Mattson (2014) remarks “symbolic projections by participants, whether of their identities or worldviews, often have a strong inflammatory effect on conflict in management of large carnivores. Gains in the common interest are likely to be made by refocusing participants on solving practical problems that are of limited scope and scale” (p. 51). This suggestion, of course, assumes that those individuals espousing extreme views would be willing to participate in a more public process, and that an appropriate “refocusing project” could be identified.

Regardless, the Endangered Species Act, through the Northern Rocky Mountain Wolf Recovery Plan, requires a minimum number of wolves outside of Yellowstone and Grand Teton National Parks (USFWS, 1987). Comments reflecting

long-standing resentment towards wolves as a proxy for federal government intervention are valid but not constructive. Despite polarizing views on wolves, the Endangered Species Act mandates that they are here to stay. Therefore, finding ways to minimize conflicts is essential.

### *6.7.3 Managing Conflict*

Those respondents who experienced a conflict and/or displayed lower tolerance for living with wolves preferred lethal control as a means of controlling conflict – while those who expressed medium to high tolerance did not select lethal control nearly as frequently. Researchers have assessed the efficacy of lethal control as a means to address livestock conflict with mixed results, depending on pack size, number of wolves removed, timing, and other variables (Bradley et al., 2015; Poudyal et al., 2016; Wielgus & Peebles, 2014). In some situations, the removal of wolves associated with livestock depredations may reduce the future likelihood of recurrence (Bradley et al., 2015). However, it is important to point out that these studies do not address the social side of lethal control, in that it may be seen as evidence that the managers are “doing something” to address a conflict. Thus, utilizing lethal control judiciously to address confirmed livestock depredations, particularly on private property, is likely necessary in order to address the concerns of some residents – even if it is unpalatable to others.

The interpretation of conflict as a threat to personal safety or well-being alludes to the stress and psychological impacts to people of having predators on the landscape. However, there is a lack of research evaluating how fear can be



mitigated through management actions (Johansson et al., 2012). The challenges for managers in addressing residents' fear may require more skills and tools beyond those traditionally deployed to address conflicts. The Buffalo Valley and Pacific Creek communities may be appropriate areas to test small-scale, localized efforts to address this type of psychological conflict, particularly as residents seem to be supportive of education and outreach efforts. Importantly, data should be collected before and after these interventions in order to assess their success (Baruch-Mordo et al., 2011).

Non-lethal tools are available to address conflicts with wolves (Lance et al., 2010; Shivik, 2006, 2014). They are popular particularly with environmental NGOs seeking to reduce conflicts (typically between livestock and wolves). Their relative lack of popularity among respondents as a means to address conflict may reflect that they are used to address livestock conflicts and are not typically used in residential areas and so they may not have been familiar to respondents.

Finally, the lack of significant correlation between conflict and preferences for collaborative approaches was somewhat unexpected. This result bears further exploration, as it appears that experience of a conflict does not preclude willingness or preference for more human-centered strategies to address or mitigate residents' concerns.

#### *6.7.4 Managing Agency*

Based on respondents' preferences, whether the managing agency is the USFWS (if wolves remain on the Endangered Species List) or the Wyoming Game &

Fish Department (if they are delisted), there should be clear communication strategies to engage citizens both actively (e.g., through social media, HOA meetings) and passively (e.g., with website information, publications).

Communication about the hazards and risks of wildlife species has been posited to affect positive attitudes towards that species (Bruskotter & Wilson, 2014). In particular, information about wolves should be shared readily within the community when possible, particularly if wolf packs are in close proximity to livestock or residential developments. Though there are obvious risks with this approach, including poaching or disturbance by wolf-watchers, it could serve to build trust between the managing agency and the residents, which has also been identified as a key component for carnivore management (Reed, 2008; Sjölander-Lindqvist et al., 2015; Sponarski et al., 2014). Given that many survey respondents preferred a “collaborative” approach to dealing with conflicts, communication, trust, and acknowledgement of local residents’ concerns and knowledge is paramount. Managers already have working relationships with livestock operators and outfitters, but perhaps less so with property owners and residents who do not derive direct income from public lands. Finding ways to engage with residents who do not have overt economic interests is critical. Community-based conservation efforts, particularly as re-imagined by Berkes (2004) as cross-scale efforts at improving governance, where the local community works with the managing agency to secure palatable and sustainable outcomes to conflict, as well as to empower residents to act appropriately in the case of a wolf encounter, could benefit both wolves and

people in this area. Unfortunately, WGFD has been critiqued as “enforcing top-down views of problems and solutions” and having “an autocratic image and a distant, out-of-touch relationship with the public” (Taylor & Clark, 2005, p. 44). Institutional barriers could be a significant hurdle, as a community effort working on a species of national interest needs multi-scalar support.

There are other managing agencies that could be engaged in such a community-based effort, however. In research surveying residents of a national park in central Italy, researchers found that using a more inclusive management decision approach, where locals and managers could engage in dialogue over options, could improve relations between the community and the park. They also noted the importance of outreach to residents in order to increase their knowledge of wolves (Glikman et al., 2012). These recommendations could be explored here, given the proximity of the Buffalo Valley and Pacific Creek to Grand Teton National Park, where the challenges of managing wolf packs which travel between these two areas are acute.

## **6.8 Conclusion**

Addressing conflict is multi-faceted, and necessitates broadening our understanding of what constitutes a conflict. Additionally, the “toolbox” for dealing with conflict should be expanded beyond lethal management and even non-lethal approaches, which tend to focus on addressing issues between wolves and livestock. At the community scale, diverse strategies of conflict mitigation, such as

communication and education, need to be implemented and evaluated for their efficacy in addressing conflicts related to fear and threats to personal security.

This area is unique geographically, ecologically, and socially, given the human presence along with robust wolf populations. Over time, if community capacity and communication is supported, and preventative measures can be designed efficiently and effectively, conflicts between residents and wolves and with other wildlife species, may be sustainably addressed.

This chapter presents an alternative analysis of individual attitudes and preferences for wolf policy and management. It builds on previous chapters by providing an example of a context where local knowledge – and, by extension – policy preferences, can be utilized to both address community concerns, but also improve policy outputs by provided additional contextual information regarding a policy subsystem. The role of local knowledge has been understudied in public policy theory; the Advocacy Coalition Framework has called for more research into the role of local knowledge in policy subsystems (Jenkins-Smith et al., 2014). Because local knowledge has not been explicitly identified as a means of providing contextual information to policy-makers in Wyoming in the wolf policy subsystem, this type of empirical study may be of use as an example of how to better incorporate policy-relevant, citizen-generated information.

## 6.9 Future Research<sup>7</sup>

This project focuses on a small, rural community in northwest Wyoming. It provides initial data on tolerance and views on conflict management for wolves in the area, and it would be worthwhile to expand the survey to residents across Teton County, WY, which includes the town of Jackson. The unique aspect of the Buffalo Valley, however, is the proximity of residents to wildlife, including wolves. Wolf sightings within Town of Jackson limits are relatively rare. Nonetheless, given its position as a major gateway to two National Parks, and a population that values and uses its public lands, it would be beneficial to understand how residents in the broader community view conflicts and the preferred means to address them. In particular, as wolves may be present in areas heavily used by locals for recreation, understanding the local level of knowledge in dealing with conflicts may help target policies to mitigate issues before they become significant problems.

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<sup>7</sup> This project continued in summer 2016 with in-depth semi-structured GIS-based interviews on residents' knowledge of wolf and prey dispersal and movements as well as land use. To date, eight interviews have been conducted with individuals expressing the full spectrum of beliefs on wolf policy and management.

## References

- Arjo, W. M., Pletscher, D. H., & Ream, R. R. (2002). Dietary overlap between wolves and coyotes in northwestern Montana. *Journal of Mammalogy*, 83(3), 754–766. [http://doi.org/10.1644/1545-1542\(2002\)083<0754:DOBWAC>2.0.CO;2](http://doi.org/10.1644/1545-1542(2002)083<0754:DOBWAC>2.0.CO;2)
- Ashe, D. (2013, June 7). Director's Corner: Gray wolves are recovered; Next up, the Mexican wolf. Retrieved from <https://www.fws.gov/director/dan-ashe/index.cfm/2013/6/7/Gray-wolves-are-recovered-next-up-the-Mexican-wolf>
- Bangs, E., & Shivik, J. (2001). Managing wolf conflict with livestock in the northwestern United States. *Carnivore Damage Prevention News*, 3(3), 1999–2002.
- Baruch-Mordo, S., Breck, S. W., Wilson, K. R., & Broderick, J. (2011). The carrot or the stick? Evaluation of education and enforcement as management tools for human-wildlife conflicts. *PloS One*, 6(1), e15681. <http://doi.org/10.1371/journal.pone.0015681>
- Bath, A. J., & Buchanan, T. (1989). Attitudes of interest groups in Wyoming toward wolf restoration in Yellowstone National Park. *Wildlife Society Bulletin*, 17(4), 519–525.
- Berkes, F. (2004). Rethinking community-based conservation. *Society for Conservation Biology*, 18(3), 621–630. <http://doi.org/10.1111/j.1523-1739.2004.00077.x>
- Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of traditional ecological knowledge as adaptive management. *Ecological Applications*, 10(5), 1251–1262. [http://doi.org/10.1890/1051-0761\(2000\)010\[1251:ROTEKA\]2.0.CO;2](http://doi.org/10.1890/1051-0761(2000)010[1251:ROTEKA]2.0.CO;2)
- Bradley, E. H., Robinson, H. S., Bangs, E. E., Kunkel, K., Jimenez, M. D., Gude, J. A., & Grimm, T. (2015). Effects of wolf removal on livestock depredation recurrence and wolf recovery in Montana, Idaho, and Wyoming. *Journal of Wildlife Management*, 79(8), 1337–1346. <http://doi.org/10.1002/jwmg.948>
- Bruskotter, J. T., Schmidt, R. H., & Teel, T. L. (2007). Are attitudes toward wolves changing? A case study in Utah. *Biological Conservation*, 139(1–2), 211–218. <http://doi.org/10.1016/j.biocon.2007.06.016>
- Bruskotter, J. T., Toman, E., Enzler, S. A., & Schmidt, R. H. (2010). Are gray wolves endangered in the Northern Rocky mountains? A role for social science in listing determinations. *BioScience*, 60(11), 941–948. <http://doi.org/10.1525/bio.2010.60.11.10>

- Bruskotter, J. T., & Wilson, R. S. (2014). Determining where the wild things will be: Using psychological theory to find tolerance for large carnivores. *Conservation Letters*, 7(3), 158–165. <http://doi.org/10.1111/conl.12072>
- Campbell, L. M., & Vainio-Mattila, A. (2003). Participatory development and community-based conservation: Opportunities missed for lessons learned? *Human Ecology*, 31(3), 417–437.
- Clark, T. W., Rutherford, M. B., & Casey, D. (Eds.). (2005). *Coexisting with Large Carnivores: Lessons from Greater Yellowstone*. Washington, D.C.: Island Press.
- Defenders of Wildlife, et al., v. Jewell, et al. (2014). 68 F.Supp.3d 193. U.S. District Court for the District of Columbia.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (3rd ed.). Hoboken, NJ: John Wiley & Sons.
- Endangered and threatened wildlife and plants; Final rule designating the Northern Rocky mountain population of gray wolf as a Distinct Population Segment and removing this Distinct Population Segment from the federal list of endangered and threatened wildlife (2008). 50 CFR Part 17.
- Fischer, F. (2000). *Citizens, Experts, and the Environment: the Politics of Local Knowledge*. Durham, NC: Duke University Press.
- Fritts, S. H., Bangs, E. E., Fontaine, J. A., Johnson, M. R., Phillips, M. K., Koch, E. D., & Gunson, J. R. (1997). Planning and implementing a reintroduction of wolves to Yellowstone National Park and central Idaho. *Restoration Ecology*, 5(1), 7–27. <http://doi.org/10.1046/j.1526-100X.1997.09702.x>
- Glikman, J. A., Vaske, J. J., Bath, A. J., Ciucci, P., & Boitani, L. (2012). Residents' support for wolf and bear conservation: The moderating influence of knowledge. *European Journal of Wildlife Research*, 58(1), 295–302. <http://doi.org/10.1007/s10344-011-0579-x>
- Houston, M., Bruskotter, J., & Fan, D. (2010). Attitudes toward wolves in the United States and Canada: A content analysis of the print news media, 1999–2008. *Human Dimensions of Wildlife*, 15(5), 389–403. <http://doi.org/10.1080/10871209.2010.507563>
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In P. A. Sabatier & C. M. Weible (Eds.), *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.

- Johansson, M., Sjöström, M., Karlsson, J., & Brännlund, R. (2012). Is human fear affecting public willingness to pay for the management and conservation of large carnivores? *Society & Natural Resources*, 25(February 2015), 610–620. <http://doi.org/10.1080/08941920.2011.622734>
- Kaltenborn, B. P., & Bjerke, T. (2002). The relationship of general life values to attitudes toward large carnivores. *Human Ecology Review*, 9(1), 55–61.
- Krannich, R. S., & Smith, M. D. (1998). Local perceptions of public lands natural resource management in the rural west: Toward improved understanding of the “revolt in the west.” *Society & Natural Resources*, 11(7), 677–695. <http://doi.org/10.1080/08941929809381111>
- Lance, N. J., Breck, S. W., Sime, C., Callahan, P., & Shivik, J. A. (2010). Biological, technical, and social aspects of applying electrified fladry for livestock protection from wolves (*Canis lupus*). *Wildlife Research*, 37, 708–714.
- Lute, M. L., & Gore, M. L. (2014). Knowledge and power in wildlife management. *The Journal of Wildlife Management*, 78(6), 1060–1068. <http://doi.org/10.1002/jwmg.754>
- Madden, F. (2004). Creating coexistence between humans and wildlife: Global perspectives on local efforts to address human–wildlife conflict. *Human Dimensions of Wildlife*, 9(4), 247–257. <http://doi.org/10.1080/10871200490505675>
- Madden, F., & McQuinn, B. (2014). Conservation’s blind spot: The case for conflict transformation in wildlife conservation. *Biological Conservation*, 178, 97–106. <http://doi.org/10.1016/j.biocon.2014.07.015>
- Mattson, D. J. (2014). State-level management of a common charismatic predator: Mountain lions in the West. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 29–64). Chicago, IL: The University of Chicago Press.
- Mattson, D. J., Byrd, K. L., Rutherford, M. B., Brown, S. R., & Clark, T. W. (2006). Finding common ground in large carnivore conservation: Mapping contending perspectives. *Environmental Science and Policy*, 9(4), 392–405. <http://doi.org/10.1016/j.envsci.2006.01.005>
- National Park Service. (n.d.). Wolf restoration. Retrieved February 15, 2016, from Retrieved from <http://www.nps.gov/yell/learn/nature/wolf-restoration.htm>
- Nie, M. (2003). *Beyond Wolves*. Minneapolis, MN: University of Minnesota Press.



- Oakleaf, J. K., Murray, D. L., Oakleaf, J. R., Bangs, E. E., Mack, C. M., Smith, D. W., ... Niemeyer, C. C. (2006). Habitat selection by recolonizing wolves in the Northern Rocky Mountains of the United States. *Journal of Wildlife Management*, 70(2), 554–563. [http://doi.org/10.2193/0022-541X\(2006\)70\[554:HSBRWI\]2.0.CO;2](http://doi.org/10.2193/0022-541X(2006)70[554:HSBRWI]2.0.CO;2)
- Peterson, R. O., & Ciucci, P. (2003). The wolf as carnivore. In L. D. Mech & L. Boitani (Eds.), *Wolves: Behavior, Ecology, and Conservation* (pp. 104–130). Chicago, IL: University Of Chicago Press.
- Poudyal, N., Baral, N., & Asah, S. T. (2016). Wolf lethal control and livestock depredations: Counter-evidence from respecified models. *Plos One*, 11(2), e0148743. <http://doi.org/10.1371/journal.pone.0148743>
- Primm, S., & Wilson, S. M. (2004). Re-connecting grizzly bear populations : Prospects for participatory projects. *Ursus*, 15(1), 104–114.
- Reed, M. S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, 141(10), 2417–2431. <http://doi.org/10.1016/j.biocon.2008.07.014>
- Shivik, J. A. (2006). Tools for the edge: What's new for conserving carnivores. *BioScience*, 56(3), 253. [http://doi.org/10.1641/0006-3568\(2006\)056\[0253:TFTEWN\]2.0.CO;2](http://doi.org/10.1641/0006-3568(2006)056[0253:TFTEWN]2.0.CO;2)
- Shivik, J. A. (2014). *The Predator Paradox: Ending the War with Wolves, Bears, Cougars, and Coyotes*. Boston, MA: Beacon Press.
- Sjölander-Lindqvist, A., Johansson, M., & Sandström, C. (2015). Individual and collective responses to large carnivore management: The roles of trust, representation, knowledge spheres, communication and leadership. *Wildlife Biology*, 21(3), 175–185. <http://doi.org/10.2981/wlb.00065>
- Skogen, K., & Thrane, C. (2007). Wolves in context: Using survey data to situate attitudes within a wider cultural framework. *Society & Natural Resources*, 21(1), 17–33. <http://doi.org/10.1080/08941920701460408>
- Soto-Shoender, J. R., & Main, M. B. (2013). Differences in stakeholder perceptions of the jaguar *Panthera onca* and puma *Puma concolor* in the tropical lowlands of Guatemala. *Oryx*, 47(1), 109–112. <http://doi.org/10.1017/S003060531200107X>
- Sponarski, C. C., Vaske, J. J., Bath, A. J., & Musiani, M. M. (2014). Salient values, social trust, and attitudes toward wolf management in south-western Alberta, Canada. *Environmental Conservation*, 41, 1–8. <http://doi.org/10.1017/S0376892913000593>

- Taylor, D., & Clark, T. W. (2005). Management context: People, animals, and institutions. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 28–67). Washington, D.C.: Island Press.
- Teton County Geographic Information System. (n.d.). Retrieved July 15, 2015, from <http://www.tetonwyo.org/gis/>
- Treves, A., & Karanth, K. U. (2003). Human-carnivore conflict and perspectives on carnivore management worldwide. *Conservation Biology*, 17(6), 1491–1499. <http://doi.org/10.1111/j.1523-1739.2003.00059.x>
- U.S. Fish & Wildlife Service. (1987). *Northern Rocky Mountain Wolf Recovery Plan*. Denver, CO.
- U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, Montana Fish Wildlife and Parks, Wyoming Fish Game and Department, National Park Service, Nez Perce Tribe, ... USDA Wildlife Services. (2015). *Northern Rocky Mountain Wolf Recovery Program 2014 Interagency Annual Report*. Helena, MT. Retrieved from [http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL\\_NRM-Sum2\\_2013.pdf](http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL_NRM-Sum2_2013.pdf)
- Watters, R., Anderson, A., & Clark, S. G. (2014). Wolves in Wyoming: The quest for common ground. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 165–107). Chicago, IL: The University of Chicago Press.
- Wielgus, R. B., & Peebles, K. A. (2014). Effects of wolf mortality on livestock depredations. *PLoS ONE*, 9(12), 1–16. <http://doi.org/10.1371/journal.pone.0113505>
- Williams, C. K., Ericsson, G., & Heberlein, T. (2002). A quantitative summary of attitudes toward wolves and their reintroduction (1972-2000). *Wildlife Society Bulletin*, 30(2), 575–584. <http://doi.org/10.2307/3784518>
- Wilmot, J., & Clark, T. W. (2005). Wolf restoration: A battle in the war over the West. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 138–173). Washington, D.C.: Island Press.
- World Parks Congress. (2004). Preventing and mitigating human–wildlife conflicts: World Parks Congress recommendation. *Human Dimensions of Wildlife*, 9(4), 259–260. <http://doi.org/10.1080/10871200490505684>

Wyoming Game & Fish Department, National Park Service, USDA-APHIS-Wildlife Services, & U.S. Fish and Wildlife Service. (2015). *Wyoming Gray Wolf Population Monitoring and Management Interim Report*. Cheyenne, WY.

## CHAPTER 7

### CONCLUSION

Carnivore conservation is, inherently, a human problem – and begins with the fundamental assumption that the goal of conserving carnivores is widely shared, which may not always be the case. Clark et al suggested that “our success or failure at conserving carnivores will result from how we conceptualize and organize our efforts, how society directs us in this values-driven endeavor, and how well we learn, individually and collectively” (1999, p. 8). Though much scholarship has been directed towards improving wolf policy and management in the Northern Rockies over the past several decades, the policy subsystem – particularly in Wyoming – remains characterized by entrenched policy conflict. Though actors within both coalitions, wolf-management and wolf-expansion, as well as managers at the federal and state level, felt that the state should be managing wolves (though, from the perspective of the wolf expansion coalition, with a slightly altered management plan), litigation forced the U.S. Fish and Wildlife Service (USFWS) to once again take over management from the state. This long-term political ping-pong is not sustainable for wolf conservation, nor for building social tolerance or local investment into sustainable policy. This dissertation addressed the dynamics of the wolf policy subsystem in Wyoming following the first delisting rule, published in 2008, until the present day. Wolves are managed as endangered species in the state of Wyoming, despite having reached and surpassed the recovery goals of the 1987

Northern Rocky Mountain Wolf Recovery Plan (USFWS, 1987). This constant conflict between interest groups over wolf management is critical to address in order to actually make progress towards the idea of coexistence, or living compatibly, with wolves and other large carnivores (Clark & Rutherford, 2014; Clark, Rutherford, & Casey, 2005).

## **7.1 Summary**

Using the Advocacy Coalition Framework (ACF), I investigated the dynamics of stakeholder coalitions within this policy subsystem. The case, theory, and methods were described in Chapter 2.

Chapter 3 asked how media have influenced the policy process for the wolf policy subsystem in Wyoming. Through the analysis of media newspaper articles over the period from 2008-2012, when focusing events affecting policy occurred with some regularity (e.g., litigation, delisting rules), I asked how coverage of wolf narratives differed at the local and national levels. The Narrative Policy Framework (NPF) (Jones et al., 2014; McBeth, Shanahan, Hathaway, Tigert, & Sampson, 2010) provided the theoretical framework for the analysis, along with framing theory. The influences of media on policy are still being uncovered, but the NPF provides a systematic means of analyzing policy narratives (media and otherwise). In a policy subsystem characterized by polarizing conflict, media can play a role in describing problems, conflicts, and solutions, essentially shaping the policy opinions of its readers. Findings indicated that local newspaper coverage of wolf issues was much more frequent, perhaps not surprisingly, as wolves are a topic

of salience to the community. National newspaper coverage followed major policy decisions at the federal level. Local newspapers portrayed conflict less frequently than newspapers with national coverage, and explored a diversity of topics as well as the impacts of wolf policy decisions. In many ways, the coverage of wolf issues at the local level was more sophisticated, nuanced, and contextual than at the national level, contrary to expectations as the national newspapers have more resources and dedicated staff writers. These findings illustrate that local media should not be overlooked in policy studies, as they sometimes are, and that with conflicted policy problems manifesting themselves at different geographic scales, local media can be a source of policy insight as well as a resource for coalitions. In this case, local media appear to contribute less to polarizing portrayals of wolf management, in comparison to national media. Furthermore, findings contribute to the expansion of the NPF by applying it to a case where there is a bifurcated jurisdiction of local and national dimensions of a policy problem, as well as the integration of “frames” as problem referents to the theory.

Chapters 4 and 5 applied the theoretical framework of the Advocacy Coalition Framework, and intended to unpack the dynamics of coalitions over time within a policy subsystem, as well as determine the impacts of a “policy output” on the subsystem. First, Chapter 4 identifies two primary coalitions in this subsystem: wolf-expansion, which prefers an increased number of wolves and heightened wolf protection throughout the state in the form of trophy game status, and wolf-management, which advocates for keeping wolves at the population levels

articulated in the Recovery Plan (1987). These coalitions map loosely onto previous work identifying “Old West” (anti-wolf) and “New West” (pro-wolf) interests (Clark et al., 2005; Shanahan et al., 2008), with the distinction that the “anti-wolf” coalition has somewhat transitioned to accepting that wolves will be on the landscape, and they just need to be “managed;” in other words, the population needs to be kept to the numbers put forth in the Recovery Plan. One area of future research that the ACF has identified is the need for further clarification and revisiting of the beliefs typology used to identify coalitions (Jenkins-Smith et al., 2014). In particular, the origins of beliefs may be a useful and illuminating area for further expansion. Questions linger as to how identify formation contributions to the creation of policy beliefs. Exposure (to a problem, issue, or symbol, such as a wolf) may also contribute to the formation of beliefs.

Jenkins-Smith et al. (2014) called for more attention to research in intracoalition stability over time. Chapter 4 argues that within the entrenched policy subsystem of wolf management, the geographic scale at which coalition members operate influences the stability of coalitions within an adversarial policy subsystem. Particularly in a mature subsystem characterized by conflict over a long period of time, coalition members may seek alternative paths to move progress forward at the local level, while their national counterparts adhere to a traditional narrative maligning state management. Local coalition members may also identify “niche” topics on which to focus their efforts, seeing opportunities to address problems that are diverse and contextually sensitive. Because of their relationships

within communities, they may also begin to distance themselves from traditional environmental advocacy tactics – most notably, litigation. These changes do not necessarily indicate the emergence of a separate or sub-coalition “local” coalition but more likely but from strong to weak intracoalition coordination (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). The one area in which the ACF does not appear to hold in this case is in the classification of wildlife managers, particularly at the federal level, who advocated for a middle-ground compromise between the wolf-expansion and the wolf-management coalitions. In essence, their policy core beliefs straddled both of these views. However, because they did not engage in coordination with other potential coalition members sharing these beliefs, essentially they acted independently. ACF argues that managers and agency employees often affiliate with a coalition, though less strongly than other members might, or they may be resources for coalitions (Jenkins-Smith et al., 2014; Sabatier & Weible, 2007). Neither of these categorizations appeared to hold here. More research is necessary to understand how and if agency managers act as “policy brokers,” and the conditions under which this type of action emerges.

Chapter 5 addresses the question posed to me by countless participants in this project: how will it all end? Wyoming’s management plan was approved and subsequently implemented in September of 2012, with management oversight of the wolf population under the jurisdiction of the Wyoming Game and Fish Department for several years. Wyoming’s plan, or the “policy output,” was characterized by its dual status designation, where wolves were considered trophy game in the



northwest corner of the state, and predators elsewhere. Wyoming also offers compensation to livestock producers affected by wolf depredations. ACF posits that once a program or plan is in place, as long as the coalition that essentially “won,” in terms of achieving its preferred policy, remained in power, it is unlikely that any further policy change will occur barring a decision from a higher jurisdictional authority (Jenkins-Smith et al., 2014). Thus, with Wyoming’s plan in place, the “losing” wolf-expansion coalition essentially had two options: work within the new system, or circumvent it all together by pursuing legal action. Furthermore, barring an order from a higher authority, the plan is not likely to change substantially. Wyoming appealed the 2014 court decision and is currently waiting on a decision from the U.S. Court of Appeals as to whether wolves will be delisted in the state in accordance with the current management plan.

Building on the idea of geographic scale as a predictor of coalition instability in long-term policy conflicts presented in Chapter 4, Chapter 5 further illustrates that following the decision to relist wolves in the state as a result of a 2014 court decision, wolf-expansion organizations locally expressed dissatisfaction with the policy output technically, but overall admitted that Wyoming Game and Fish Department had been doing “a good job” in managing wolves. A larger concern looming on the horizon is the impact of ongoing Endangered Species Act litigation on the longevity of the Act itself. With the challenges exemplified in removing wolves from the Endangered Species List despite having met the recovery criteria,

one broader-scale policy *outcome* may be efforts to change the listing and delisting rules of the ESA.

The ACF identifies resources coalitions use to achieve their preferred policy outcomes, though these resources are described in the context of competing coalitions trying to out-maneuver one another. The one policy pathway that has not been attempted with any substantive progress in this policy subsystem is that of inclusive, stakeholder-driven collaboration for carnivore conservation, as suggested by Clark and others over the past several decades (Clark & Rutherford, 2014; Clark et al., 2005; Mattson et al., 2006; Nie, 2003). Jenkins-Smith et al. (2014) suggest that a future direction for ACF is to further refine the idea of resources, perhaps creating a hierarchical model for their use in particular situations within subsystems. The ACF resources are measurable and tangible, and do not necessarily link up neatly with the resources necessary for a more inclusive, less adversarial, cross-coalition approach in line with the Clark model. To remedy this discrepancy, I suggest creating an additional category of “intangible resources” that coalitions may draw on when working towards a common goal, instead of their preferred goal. In this case study, trust and transparency appear as “intangible” assets that would be necessary to facilitate this transition. Leadership and power, or access to decision makers, are tangible resources (as delineated by the ACF) that are also either missing (leadership) or one-sided (access to decision makers) within this policy subsystem.

Finally, chapter 6 addresses the preferences of local citizens in the policy subsystem. Jenkins-Smith et al. (2014) points to the need to better understand how local knowledge is used in policy processes, if at all. This chapter works towards that goal by providing an empirical example of how local knowledge and policy preferences can be assessed, and to what effect. The Buffalo Valley/Pacific Creek community is located just outside of Grand Teton National Park and encompasses grizzly bear and wolf habitat. Furthermore, the full range of potential problem areas for wolves coming into conflict with humans exists: livestock, elk hunting, and residential development (i.e., pets and children). A survey distributed to all property owners in this area assessed local tolerance for living with wolves, experiences with conflict, preferred management options, as well as observations on wildlife changes in the area. Local citizens expressed a reverse-normal distribution in their tolerance for living with wolves, with near equal responses at the “highly tolerant” and “not at all tolerant” poles. Wolves are unique in that they elicit these polarizing responses from people, just like abortion. Those respondents who described themselves as moderately tolerant, however, also reported having conflicts with wolves. This finding is relevant to managers, who should be targeting outreach and education efforts in these communities in order to both inform local citizens as to wildlife happenings in the area, as well as to provide guidance on how to act in the event that they encounter a wolf (or other conflict-prone wildlife). In fact, many residents preferred collaborative approaches to dealing with wolf conflicts; those with low tolerance, however, still thought lethal control should be the primary method to

address problem animals. Thus, a multi-faceted approach to dealing with conflicts that includes outreach and education as well as lethal control in appropriate situations, such as by citizens on private property, is warranted. Employing proactive strategies in addition to reactive may help to mitigate the potential for conflict at the local level. Often, those individuals bearing the brunt of conflict, usually through livestock depredation, attract the attention of managers while the needs and concerns of other citizens are overlooked. Local knowledge and policy preferences certainly bear inclusion into policy-making processes as resources; furthermore, providing a means for citizens to provide meaningful input on their perspectives builds trust and buy-in to the process and the managing agency.

## **7.2 Closing Thoughts**

Recent incidents, such as the discovery of 19 elk that had been killed by wolves on a feedground in western Wyoming, or the lethal removal of a pack of wolves that had been feeding on cattle just a few miles west of downtown Jackson, garner media attention and serve to perpetuate calls for state management. These incidents of “practical” conflict no doubt will continue regardless of which agency is responsible for managing wolves. However, the lack of a common-interest management regime, while situated in an adversarial policy subsystem, means that incidents such as these perpetuate political conflict and serve to erode trust among stakeholders, as well as promote intolerance for wolves. At a broader scale, incidents such as these further animosity towards the Endangered Species Act.

When I first began this project, after several field seasons working for the USFWS as a volunteer wolf technician, I hoped that I would find progress, respect, even hope for sustainable wolf management and improved tolerance within communities for only wolves, but also for individuals with conflicting views –“the other side.” There are inklings of this progress at the local level, perhaps due to the efforts and personalities of specific individuals, who are thoughtful, engaged, and respectful of diverse perspectives. The fact that some (not all) interviewees across a range of perspectives and affiliations expressed support for the efforts of the Wyoming Game and Fish Department is promising. However, democratic, inclusive processes are not the state’s forte. The state is also stubborn in its refusal to contemplate changes to the management plan to address persistent litigation. On the other hand, given the success that Wyoming Game and Fish was having with management, the litigating environmental groups are equally problematic with hindering progress towards a long-term, common-interest solution. There is no clear way out of this adversarial subsystem. If the cycle of litigation/relisting/delisting/litigation continues, the political grandstanding will continue to escalate, and the opportunities for meaningful progress to reduce *both* political and practical conflict will decline. As one interviewee articulated the problem:

The bigger conflict – it’s not whether wolves are killing the calves – we know they are going to kill calves sooner or later. [The conflict is that] you’re always trying to get one side that hates wolves to get in peace and come to the middle, and you’re trying to get the other side that loves wolves and is naïve sometimes to come to the middle – that’s the real conflict.

To return to the initial question which prompted this research: why is conflict over wolf management and policy perpetuated, despite the biological recovery of the species? Political conflict over wolf management is rooted in long-standing state and federal tension over natural resource management in the west, as well as the intransigent standpoints of non-local actors who are acting to secure their arguably special interests. However, at the local level, coalition members and citizens seem to be increasingly supportive of more collaborative, less adversarial means of working to live with and manage wolves. Perhaps policy learning and change, in this case, may be a bottom-up effort. Though political conflict is likely to continue, efforts to address practical conflict as well as to consider less adversarial means of achieving policy goals at the local level may be harbingers of hope for common-interest solutions to this human-wildlife conflict. Nonetheless, the fragile bridges constructed at the community level may be easily undercut by future political attacks on the Endangered Species Act, particularly as grizzly bear delisting looms.

### **7.3 Areas of Future Research**

Utilizing data collected through stakeholder interviews described in earlier chapters as well as interview data with local citizens collected this summer, I plan to further explore the role of local knowledge and participation in the policy process in this subsystem. Though local dynamics have been a theme throughout this dissertation, a future paper will consider the following question: How can ACF address the role of local knowledge as a resource and contributor to policy subsystems? The influence of scientific and technical knowledge has been

considered in other ACF studies (Weible, 2008; Weible & Sabatier, 2009), but local knowledge is, to some degree, unexplored (Jenkins-Smith et al., 2014).

Secondly, I also distributed an electronic survey to non-local expert stakeholders located throughout the country who worked on wolf issues as part of their jobs. The survey was administered via Qualtrics (2015) following Dillman et al. (2009). Its purpose was to understand how stakeholders outside Wyoming participate in the state's wolf policy processes and their view of Wyoming's wolf management, how organizations work together to achieve outcomes, and, finally, how these perspectives compare to those of local stakeholders in Wyoming. The survey is included in Appendix 5. Unfortunately, the data gathered through this survey are not ideal. Though I tried to include organizations that worked across the spectrum of sectors involved in wolf issues (government, non-profit, interest group), the responses were weighted towards the non-profit sector. Given the low response rate, conducting any statistical analysis beyond descriptive statistics is not feasible, particularly given the heavily weighted number of responses from the non-profit sector.

Several lessons emerged for me from conducting this survey. First, it was entirely too long. Though it was piloted with several individuals engaged in wolf research or advocacy who reported that it took 15 minutes to complete, with the addition of qualitative responses, most respondents took twice that amount of time. This request was unreasonable for busy professionals. Second, wolf issues are inherently polarizing, and despite reviewing and piloting survey questions, some

feedback indicated discomfort with how they were phrased. (Note, however, that respondents were permitted to skip whatever questions they chose.) The feedback made me uncomfortable with the overall integrity of the data, but I feel it was a valuable exercise in learning how to better craft surveys in the future. I intend to embark on a salvage operation of the data, however, in a paper to explore the idea of innovations in wolf policy and management.

Furthermore, one concern with policy process theory is in its pragmatic applicability to future policy conflicts. Perhaps in collaboration with other ACF scholars, I would like to explore how the ACF can be utilized by policy- and decision-makers as a practical tool in creating policy in areas of natural resources conflict (Sabatier & Weible, 2007, p. 209). Perhaps more insight from other cases will help to provide concrete, practical steps to reduce conflict in polarized policy subsystems. We can continue to strive for meaningful progress to achieve conservation goals while respecting diverse stakeholder perspectives – for the good of wildlife *and* people.



## References

- Clark, S. G., & Rutherford, M. B. (Eds.). (2014). *Large Carnivore Conservation: Integrating Science and Policy in the North American West*. Chicago, IL: University Of Chicago Press.
- Clark, T. W., Minta, S. C., Curlee, A. P., & Kareiva, P. M. (1999). A model ecosystem for carnivores in Greater Yellowstone. In T. W. Clark, S. C. Minta, A. P. Curlee, & P. M. Kareiva (Eds.), *Carnivores in Ecosystems: The Yellowstone Experience* (pp. 1–9). New Haven, CT: Yale University Press.
- Clark, T. W., Rutherford, M. B., & Casey, D. (Eds.). (2005). *Coexisting with Large Carnivores: Lessons from Greater Yellowstone*. Washington, D.C.: Island Press.
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (3rd ed.). Hoboken, NJ: John Wiley & Sons.
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In P. A. Sabatier & C. M. Weible (Eds.), *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.
- Jones, M. D., McBeth, M. K., & Shanahan, E. A. (2014). Introducing the Narrative Policy Framework. In M. D. Jones, E. A. Shanahan, & M. K. McBeth (Eds.), *The Science of Stories* (1st ed., pp. 2–25). New York: Palgrave Macmillan.
- Mattson, D. J., Byrd, K. L., Rutherford, M. B., Brown, S. R., & Clark, T. W. (2006). Finding common ground in large carnivore conservation: Mapping contending perspectives. *Environmental Science and Policy*, 9(4), 392–405. <http://doi.org/10.1016/j.envsci.2006.01.005>
- McBeth, M. K., Shanahan, E. A., Hathaway, P. L., Tigert, L. E., & Sampson, L. J. (2010). Buffalo tales: Interest group policy stories in Greater Yellowstone. *Policy Sciences*, 43, 391–409. <http://doi.org/10.1007/s11077-010-9114-2>
- Nie, M. (2003). *Beyond Wolves*. Minneapolis, MN: University of Minnesota Press.
- Sabatier, P. A., & Weible, C. M. (2007). The Advocacy Coalition Framework: Innovations and clarifications. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (2nd ed., pp. 189–220). Boulder, CO: Westview Press.
- Shanahan, E. A., McBeth, M. K., Hathaway, P. L., & Arnell, R. J. (2008). Conduit or contributor? The role of media in policy change theory. *Policy Sciences*, 41(2), 115–138. <http://doi.org/10.1007/s11077-008-9058-y>

- U.S. Fish & Wildlife Service. (1987). *Northern Rocky Mountain Wolf Recovery Plan*. Denver, CO.
- Weible, C. M. (2008). Expert-based information and policy subsystems: A review and synthesis. *Policy Studies Journal*, 36(4), 615–635. <http://doi.org/10.1111/j.1541-0072.2008.00287.x>
- Weible, C. M., & Sabatier, P. A. (2009). Coalitions, science, and belief change: Comparing adversarial and collaborative policy subsystems. *Policy Studies Journal*, 37(2), 195–212. <http://doi.org/10.1111/j.1541-0072.2009.00310.x>

## BIBLIOGRAPHY

- Albright, E. A. (2011). Policy change and policy learning in Response to extreme flood events in Hungary: An Advocacy Coalition approach. *Policy Studies Journal*, 39(3), 485–512.
- Albright, E. A., & Maguire, L. A. (2009). Policy change and policy learning in a new democracy: Response to extreme floods in Hungary. *Policy Studies Journal*, 29(3), 485–511.
- Althaus, S. L., Edy, J. A., Phalen, P. F., Phalen, P. F., & George, T. (2001). Using substitutes for full-text news stories in content analysis: Which text is best? *American Journal of Political Science*, 45(3), 707–723.
- Arjo, W. M., Pletscher, D. H., & Ream, R. R. (2002). Dietary overlap between wolves and coyotes in northwestern Montana. *Journal of Mammalogy*, 83(3), 754–766. [http://doi.org/10.1644/1545-1542\(2002\)083<0754:DOBWAC>2.0.CO;2](http://doi.org/10.1644/1545-1542(2002)083<0754:DOBWAC>2.0.CO;2)
- Ashe, D. (2013, June 7). Director's Corner: Gray wolves are recovered; Next up, the Mexican wolf. Retrieved from <https://www.fws.gov/director/dan-ashe/index.cfm/2013/6/7/Gray-wolves-are-recovered-next-up-the-Mexican-wolf>
- Askins, R. (2004). *Shadow Mountain: A Memoir of Wolves, a Woman, and the Wild*. New York, NY: Anchor.
- Ausband, D. E., Mitchell, M. S., Bassing, S. B., & White, C. (2013). No trespassing: Using a biofence to manipulate wolf movements. *Wildlife Research*, 40(3), 207–216. <http://doi.org/10.1071/WR12176>
- Bangs, E. E., & Fritts, S. H. (1996). Reintroducing the gray wolf to Central Idaho and Yellowstone National Park. *Wildlife Society Bulletin*, 24(3), 402–413.
- Bangs, E., & Shivik, J. (2001). Managing wolf conflict with livestock in the northwestern United States. *Carnivore Damage Prevention News*, 3(3), 1999–2002.
- Barringer, F., & Broder, J. M. (2011, April 12). Congress, in a first, removes an animal from the Endangered Species List. *New York Times*, p. A16.
- Baruch-Mordo, S., Breck, S. W., Wilson, K. R., & Broderick, J. (2011). The carrot or the stick? Evaluation of education and enforcement as management tools for human-wildlife conflicts. *PloS One*, 6(1), e15681. <http://doi.org/10.1371/journal.pone.0015681>

- Bath, A. J., & Buchanan, T. (1989). Attitudes of interest groups in Wyoming toward wolf restoration in Yellowstone National Park. *Wildlife Society Bulletin*, 17(4), 519–525.
- Baumgartner, F. R., & Jones, B. D. (2009). *Agendas and Instability in American Politics* (2nd ed.). Chicago, IL: The University of Chicago Press.
- Bell, A. (1991). *The Language of News Media*. Wiley-Blackwell.
- Bergstrom, B. J., Arias, L. C., Davidson, A. D., Ferguson, A. W., Randa, L. a., & Sheffield, S. R. (2014). License to kill: Reforming federal wildlife control to restore biodiversity and ecosystem function. *Conservation Letters*, 7(2), 131–142. <http://doi.org/10.1111/conl.12045>
- Berkes, F. (2004). Rethinking community-based conservation. *Society for Conservation Biology*, 18(3), 621–630. <http://doi.org/10.1111/j.1523-1739.2004.00077.x>
- Berkes, F. (2009). Evolution of co-management: Role of knowledge generation, bridging organizations and social learning. *Journal of Environmental Management*, 90(5), 1692–1702. <http://doi.org/10.1016/j.jenvman.2008.12.001>
- Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of traditional ecological knowledge as adaptive management. *Ecological Applications*, 10(5), 1251–1262. [http://doi.org/10.1890/1051-0761\(2000\)010\[1251:ROTEKA\]2.0.CO;2](http://doi.org/10.1890/1051-0761(2000)010[1251:ROTEKA]2.0.CO;2)
- Birkland, T. A. (1998). Focusing events, mobilization, and agenda setting. *Journal of Public Policy*, 18(1), 53–74.
- Boitani, L. (1995). Ecological and cultural diversities in the evolution of wolf-human relationships. In L. N. Carbyn, S. H. Fritts, & D. R. Seip (Eds.), *Ecology and Conservation of Wolves in a Changing World* (pp. 3–11). CCI Press. Retrieved from [http://www.kora.ch/malme/MALME-species-compendium/03\\_wolf/5\\_human-attitude/europe/human-attitude-wolf-europe.htm](http://www.kora.ch/malme/MALME-species-compendium/03_wolf/5_human-attitude/europe/human-attitude-wolf-europe.htm)
- Borg, B. L., Arthur, S. M., Broman, N. A., Cassidy, K. A., McIntyre, R., Smith, D. W., & Prugh, L. R. (2016). Implications of harvest on the boundaries of protected areas for large carnivore viewing opportunities. *PloS One*, 11(4), e0153808. <http://doi.org/10.1371/journal.pone.0153808>
- Borg, B. L., Brainerd, S. M., Meier, T. J., & Prugh, L. R. (2015). Impacts of breeder loss on social structure, reproduction and population growth in a social canid. *Journal of Animal Ecology*, 84(1), 177–187. <http://doi.org/10.1111/1365-2656.12256>

- Bradley, E. H., Robinson, H. S., Bangs, E. E., Kunkel, K., Jimenez, M. D., Gude, J. A., & Grimm, T. (2015). Effects of wolf removal on livestock depredation recurrence and wolf recovery in Montana, Idaho, and Wyoming. *Journal of Wildlife Management*, 79(8), 1337–1346. <http://doi.org/10.1002/jwmg.948>
- Bruskotter, J. T., Schmidt, R. H., & Teel, T. L. (2007). Are attitudes toward wolves changing? A case study in Utah. *Biological Conservation*, 139(1–2), 211–218. <http://doi.org/10.1016/j.biocon.2007.06.016>
- Bruskotter, J. T., Toman, E., Enzler, S. A., & Schmidt, R. H. (2010). Are gray wolves endangered in the Northern Rocky mountains? A role for social science in listing determinations. *BioScience*, 60(11), 941–948. <http://doi.org/10.1525/bio.2010.60.11.10>
- Bruskotter, J. T., & Wilson, R. S. (2014). Determining where the wild things will be: Using psychological theory to find tolerance for large carnivores. *Conservation Letters*, 7(3), 158–165. <http://doi.org/10.1111/conl.12072>
- Campbell, L. M., & Vainio-Mattila, A. (2003). Participatory development and community-based conservation: Opportunities missed for lessons learned? *Human Ecology*, 31(3), 417–437.
- Carrus, G. A., Cini, F. B., Bonaiuto, M. B., & Mauro, A. B. (2009). Local mass media communication and environmental disputes: An analysis of press communication on the designation of the Tuscan Archipelago National Park in Italy. *Society and Natural Resources*, 22(7), 607–624. <http://doi.org/10.1080/08941920802112734>
- Casey, D., & Clark, T. W. (1996). *Tales of the Wolf*. (D. Casey & T. W. Clark, Eds.). Moose, WY: Homestead Publishing.
- Cathcart, E. (2013). All bark and no bite: Nonspecific magic words sweep aside Constitutional concerns and remove the Northern Rocky Mountain gray wolf from Endangered Species Act protection in *Alliance for the Wild Rockies v. Salazar*. *Villanova Environmental Law Journal*, 24, 253–285. <http://doi.org/10.1525/sp.2007.54.1.23>
- Cinque, S. (2015). Collaborative management in wolf licensed hunting: The dilemmas of public managers in moving collaboration forward. *Wildlife Biology*, 21(3), 157–164. <http://doi.org/10.2981/wlb.00098>
- Clark, S. G., & Milloy, C. (2014). The North American Model of Wildlife Conservation: An analysis of challenges and adaptive opportunities. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 289–324). Chicago, IL: University of British Columbia.

- Clark, S. G., & Rutherford, M. B. (Eds.). (2014). *Large Carnivore Conservation: Integrating Science and Policy in the North American West*. Chicago, IL: University Of Chicago Press.
- Clark, T. W. (2002). *The Policy Process: A Practical Guide for Natural Resources Professionals*. New Haven, CT: Yale University Press.
- Clark, T. W., Curlee, A. P., & Reading, R. P. (1996). Crafting effective solutions to the large carnivore conservation problem. *Conservation Biology*, 10(4), 940–948.
- Clark, T. W., & Minta, S. C. (1994). *Greater Yellowstone's Future*. Moose, WY: Homestead Publishing.
- Clark, T. W., Minta, S. C., Curlee, A. P., & Kareiva, P. M. (1999). A model ecosystem for carnivores in Greater Yellowstone. In T. W. Clark, S. C. Minta, A. P. Curlee, & P. M. Kareiva (Eds.), *Carnivores in Ecosystems: The Yellowstone Experience* (pp. 1–9). New Haven, CT: Yale University Press.
- Clark, T. W., & Rutherford, M. B. (2005). The institutional system of wildlife management: Making it more effective. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 211–253). Washington, D.C.: Island Press.
- Clark, T. W., Rutherford, M. B., & Casey, D. (Eds.). (2005). *Coexisting with Large Carnivores: Lessons from Greater Yellowstone*. Washington, D.C.: Island Press.
- Coleman, J. T. (2004). *Vicious: Wolves and Men in America*. New Haven, CT: Yale University Press.
- Crow, D. A. (2008). Stakeholder behavior and legislative influence: A case study of recreational water rights in Colorado. *The Social Science Journal*, 45(4), 646–658. JOUR. Retrieved from <http://linkinghub.elsevier.com/retrieve/pii/S0362331908000888>
- Crow, D. A. (2010). Local media and experts: Sources of environmental policy initiation? *Policy Studies Journal*, 38(1), 143–164. <http://doi.org/10.1111/j.1541-0072.2009.00348.x>
- Crow, D. A., & Berggren, J. (2014). Using the Narrative Policy Framework to understand stakeholder strategy and effectiveness: A multi-case analysis. In M. D. Jones, E. A. Shanahan, & M. K. McBeth (Eds.), *The Science of Stories: Applications of the Narrative Policy Framework in Public Policy Analysis* (pp. 131–156). New York: Palgrave Macmillan.

- Crow, D. A., Berggren, J., Lawhon, L. A., Koebele, E. A., Kroepsch, A., & Huda, J. (2016). Local media coverage of wildfire disasters: An analysis of problems and solutions in policy narratives. *Environment and Planning C: Government and Policy*. <http://doi.org/10.1177/0263774X16667302>
- Crow, D. A., & Lawlor, A. (2016). Media in the policy process: Using framing and narratives to understand policy influences. *Review of Policy Research*, 33(5), 472–491. <http://doi.org/10.1111/ropr.12187>
- Defenders of Wildlife, et al., v. Jewell, et al. (2014). 68 F.Supp.3d 193. U.S. District Court for the District of Columbia.
- Defenders of Wildlife et al. v. Hall et al. (2008). 565 F. Supp. 2d 1160. U.S. District Court, Missoula, Montana.
- Defenders of Wildlife v. Salazar (2010). 729 F. Supp. 2d 1207. United State District Court, Missoula, Montana.
- Delaney, D., & Leitner, H. (1997). The political construction of scale. *Political Geography*, 16(2), 93–97. [http://doi.org/10.1016/S0962-6298\(96\)00045-5](http://doi.org/10.1016/S0962-6298(96)00045-5)
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009). *Internet, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (3rd ed.). Hoboken, NJ: John Wiley & Sons.
- Downs, A. (1972). Up and down with ecology - the “issue-attention cycle.” *Public Interest*, 287, 38–50.
- Duffield, J. W., Neher, C. J., & Patterson, D. A. (2008). Wolf recovery in Yellowstone: Park attitudes, expenditures, and economic impacts. *Yellowstone Science*, 16(1), 20–25.
- Elliott, C., & Schlaepfer, R. (2001a). The Advocacy Coalition Framework: Application to the policy process for the development of forest certification in Sweden. *Journal of European Public Policy*, 8(4), 642–661. <http://doi.org/10.1080/13501760110064438>
- Elliott, C., & Schlaepfer, R. (2001b). Understanding forest certification using the Advocacy Coalition Framework. *Forest Policy and Economics*, 2(3–4), 257–266. [http://doi.org/10.1016/S1389-9341\(01\)00043-0](http://doi.org/10.1016/S1389-9341(01)00043-0)
- Endangered and threatened wildlife and plants; Final rule designating the Northern Rocky mountain population of gray wolf as a Distinct Population Segment and removing this Distinct Population Segment from the federal list of endangered and threatened wil (2008). 50 CFR Part 17.

- Endangered and threatened wildlife and plants; Reissuance of 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 (2011). 76 FR 25590.
- Entman, R. M. (1993). Framing: Toward clarification of a fractured paradigm. *Journal of Communication*, 43(4), 51–58.
- Fernández-Gil, A., Naves, J., Ordiz, A., Quevedo, M., Revilla, E., & Delibes, M. (2016). Conflict misleads large carnivore management and conservation: Brown bears and wolves in Spain. *Plos One*, 11(3), e0151541. <http://doi.org/10.1371/journal.pone.0151541>
- Fischer, F. (2000). *Citizens, Experts, and the Environment: the Politics of Local Knowledge*. Durham, NC: Duke University Press.
- Fischer, F., & Forester, J. (Eds.). (1993). *The Argumentative Turn in Policy Analysis and Planning*. Durham, NC: Duke University Press.
- Fischer, F., & Gottweis, H. (Eds.). (2012). *The Argumentative Turn Revisited: Public Policy as Communicative Practice*. Durham, NC: Duke University Press.
- Fritts, S. H., Bangs, E. E., Fontaine, J. A., Johnson, M. R., Phillips, M. K., Koch, E. D., & Gunson, J. R. (1997). Planning and implementing a reintroduction of wolves to Yellowstone National Park and central Idaho. *Restoration Ecology*, 5(1), 7–27. <http://doi.org/10.1046/j.1526-100X.1997.09702.x>
- Fritts, S. H., Stephenson, R. O., Hayes, R. D., & Boitani, L. (2003). Wolves and humans. In L. D. Mech & L. Boitani (Eds.), *Wolves: Behavior, Ecology, and Conservation* (pp. 289–316). Chicago, IL: University of Chicago Press.
- Gehring, T. M., VerCauteren, K. C., & Landry, J.-M. (2010). Livestock protection dogs in the 21st century: Is an ancient tool relevant to modern conservation challenges? *BioScience*, 60(4), 299–308. <http://doi.org/10.1525/bio.2010.60.4.8>
- Glikman, J. A., Vaske, J. J., Bath, A. J., Ciucci, P., & Boitani, L. (2012). Residents' support for wolf and bear conservation: The moderating influence of knowledge. *European Journal of Wildlife Research*, 58(1), 295–302. <http://doi.org/10.1007/s10344-011-0579-x>
- Goffman, E. (1974). *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper & Row.
- Graber, D. (2003). The media and democracy: Beyond myths and stereotypes. *Annual Review of Political Science*, 6(1), 139–160. <http://doi.org/10.1146/annurev.polisci.6.121901.085707>



- Gupta, K., Ripberger, J., & Wehde, W. (2016). Advocacy group messaging on social media: Using the Narrative Policy Framework to study Twitter messages about nuclear energy policy in the United States. *Policy Studies Journal*, 0(0). <http://doi.org/10.1111/psj.12176>
- Gutiérrez, N. L., Hilborn, R., & Defeo, O. (2011). Leadership, social capital and incentives promote successful fisheries. *Nature*, 470(7334), 386–389. <http://doi.org/10.1038/nature09689>
- Harper, E., Paul, W. J., Mech, L. D., & Weisberg, S. (2008). Effectiveness of lethal, directed wolf-depredation control in Minnesota. *The Journal of Wildlife Management*, 72(3), 778–784. <http://doi.org/10.2193/2007-273>
- Hatch, C. (2010, April 21). Wolf controversy polarizes. *Jackson Hole News & Guide*, p. Environment Section.
- Hatch, C. (2011a, August 17). Elk to star in wolf plan. *Jackson Hole News & Guide*.
- Hatch, C. (2011b, August 26). Wolf deal could impinge on rights of landowners. *Jackson Hole Daily*. Jackson, WY.
- Hatch, C., & Rank, C. (2010, March 17). Hunters rally to disperse wolves. *Jackson Hole News & Guide*. Jackson, WY.
- Heikkila, T. (2004). Institutional boundaries and common pool resource management: A comparative analysis of water management programs in California. *Journal of Policy Analysis and Management*, 23(1), 97–117. JOUR. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/pam.10181/abstract>
- Hogl, K., Kvarda, E., Nordbeck, R., & Pregernig, M. (Eds.). (2012). *Environmental Governance: The Challenge of Legitimacy and Effectiveness*. Northampton, MA: Edward Elgar Publishing, Inc. Retrieved from <http://books.google.com/books?hl=en&lr=&id=rJ5oxFcK0foC&oi=fnd&pg=PR1&dq=Environmental+Governance:+The+Challenge+of+Legitimacy+and+Effectiveness&ots=LWjKwWjcG8&sig=BM-2Rt2UkE2ajjW-1jFeJBbL6v8>
- Houston, M., Bruskotter, J., & Fan, D. (2010). Attitudes toward wolves in the United States and Canada: A content analysis of the print news media, 1999–2008. *Human Dimensions of Wildlife*, 15(March), 389–403. <http://doi.org/10.1080/10871209.2010.507563>
- Idaho Legislative Wolf Oversight Committee. (2002). *Idaho Wolf Conservation and Management Plan*.
- Ingold, K. (2011). Network structures within policy processes : Coalitions, power, and brokerage in Swiss climate policy, 39(3), 435–459.

- Iyengar, S. (1990). Framing responsibility for political issues: The case of poverty. *Political Behavior*, 12(1), 19–40. JOUR. Retrieved from <http://link.springer.com/article/10.1007/BF00992330>
- Jegen, M., & Audet, G. (2011). Advocacy coalitions and wind power development: Insights from Quebec. *Energy Policy*, 39(11), 7439–7447. <http://doi.org/10.1016/j.enpol.2011.09.012>
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In P. A. Sabatier & C. M. Weible (Eds.), *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.
- Jenkins-Smith, H. C., St. Clair, G. K., & Woods, B. (1991). Explaining change in policy subsystems: Analysis of coalition stability and defection over time. *American Journal of Political Science*, 35(4), 851–880.
- Jimenez, M. D., & Johnson, A. (2016). Wyoming wolf recovery 2015 annual report. In *U.S. Fish and Wildlife Service Rocky Mountain Wolf Program 2015 Annual Report* (p. WY-1-WY-30). Helena, MT: USFWS, Ecological Services.
- Johansson, M., Sjöström, M., Karlsson, J., & Brännlund, R. (2012). Is human fear affecting public willingness to pay for the management and conservation of large carnivores? *Society & Natural Resources*, 25(February 2015), 610–620. <http://doi.org/10.1080/08941920.2011.622734>
- Johnson, K. (2008, April 13). In the West, fierce battle over wolves. *New York Times*. New York, NY.
- Jones, M. D., & McBeth, M. K. (2010). A narrative policy framework: Clear enough to be wrong? *Policy Studies Journal*, 38(2), 329–353. <http://doi.org/10.1111/j.1541-0072.2010.00364.x>
- Jones, M. D., McBeth, M. K., & Shanahan, E. A. (2014). Introducing the Narrative Policy Framework. In M. D. Jones, E. A. Shanahan, & M. K. McBeth (Eds.), *The Science of Stories* (1st ed., pp. 2–25). New York: Palgrave Macmillan.
- Jones, M. D., & Radaelli, C. M. (2015). The Narrative Policy Framework: Child or monster? *Critical Policy Studies*, 9(3), 339–355. <http://doi.org/10.1080/19460171.2015.1053959>
- Kaltenborn, B. P., & Bjerke, T. (2002). The relationship of general life values to attitudes toward large carnivores. *Human Ecology Review*, 9(1), 55–61.

- Katzenberger, D. (2012). News, information, and recovery status reports: Gray wolves in the Northern Rocky Mountains. Retrieved May 2, 2012, from <http://www.fws.gov/mountain-prairie/species/mammals/wolf/>.
- Kempton, W., Holland, D. C., Bunting-Howarth, K., Hannan, E., & Payne, C. (2001). Local environmental groups: A systematic enumeration in two geographical areas. *Rural Sociology*, 66(4), 557–578. <http://doi.org/10.1111/j.1549-0831.2001.tb00084.x>
- Kingdon, J. W. (2011). *Agendas, Alternatives, and Public Policies* (2nd ed.). Boston, MA: Longman.
- Klein, R. A. (2002). Wolf recovery in the Northern Rockies. In R. D. Brunner, C. H. Colburn, C. M. Cromley, R. A. Klein, & E. A. Olson (Eds.), *Finding Common Ground: Governance and Natural Resources in the American West* (pp. 88–125). New Haven, CT: Yale University Press.
- Klyza, C. M., Isham, J., & Savage, A. (2006). Local environmental groups and the creation of social capital: Evidence from Vermont. *Society and Natural Resources*, 19, 905–919. <http://doi.org/10.1080/08941920600902070>
- Klyza, C. M., & Sousa, D. J. (2013). *American Environmental Policy: Beyond Gridlock* (2nd ed.). Cambridge, MA: The MIT Press.
- Koontz, T. M., & Thomas, C. W. (2006). What do we know and need to know about the environmental outcomes of collaborative management? *Public Administration Review*, 66(s1), 111–121.
- Koshmrl, M. (2012, December 12). 2 Teton collared wolves killed. *Jackson Hole News & Guide*. Jackson, WY.
- Koshmrl, M. (2016, July 13). Stemming grizzly bloodshed. *Jackson Hole News & Guide*. Jackson, WY.
- Krannich, R. S., & Smith, M. D. (1998). Local perceptions of public lands natural resource management in the rural west: Toward improved understanding of the “revolt in the west.” *Society & Natural Resources*, 11(7), 677–695. <http://doi.org/10.1080/08941929809381111>
- Krippendorff, K. (2013). *Content Analysis: An Introduction to Its Methodology* (3rd ed.). Thousand Oaks, CA: SAGE Publications.
- Lachapelle, P. R., McCool, S. F., & Patterson, M. E. (2003). Barriers to effective natural resource planning in a “messy” world. *Society & Natural Resources*, 16(6), 473–490. <http://doi.org/10.1080/08941920309151>

- Lance, N. J., Breck, S. W., Sime, C., Callahan, P., & Shivik, J. A. (2010). Biological, technical, and social aspects of applying electrified fladry for livestock protection from wolves (*Canis lupus*). *Wildlife Research*, 37, 708–714.
- Larimer, S. (2015, February 12). The gray wolf spotted near the Grand Canyon this fall has already been killed by a hunter. *The Washington Post*. Washington, D.C. Retrieved from <https://www.washingtonpost.com/news/science/wp/2015/02/12/the-gray-wolf-spotted-near-the-grand-canyon-this-fall-has-already-been-killed-by-a-hunter/>
- Leopold, A. (1966). *A Sand County Almanac*. New York, NY: Ballantine Books.
- Lopez, B. H. (1978). *Of Wolves and Men*. New York, NY: Charles Scribner's Sons.
- Lute, M. L., & Gore, M. L. (2014). Knowledge and power in wildlife management. *The Journal of Wildlife Management*, 78(6), 1060–1068. <http://doi.org/10.1002/jwmg.754>
- Lybecker, D. L., Mcbeth, M. K., Husmann, M. A., & Pelikan, N. (2015). Do new media support new policy narratives? The social construction of the U. S.–Mexico border on YouTube. *Policy & Internet*, 7(4), 497–525.
- Lybecker, D. L., McBeth, M. K., & Kusko, E. (2012). Trash or treasure: Recycling narratives and reducing political polarisation. *Environmental Politics*, 4016(November 2014), 1–21. <http://doi.org/10.1080/09644016.2012.692935>
- Madden, F. (2004). Creating coexistence between humans and wildlife: Global perspectives on local efforts to address human–wildlife conflict. *Human Dimensions of Wildlife*, 9(4), 247–257. <http://doi.org/10.1080/10871200490505675>
- Madden, F. M. (2008). The growing conflict between humans and wildlife: Law and policy as contributing and mitigating factors. *Journal of International Wildlife Law & Policy*, 11(2–3), 189–206. <http://doi.org/10.1080/13880290802470281>
- Madden, F., & McQuinn, B. (2014). Conservation's blind spot: The case for conflict transformation in wildlife conservation. *Biological Conservation*, 178, 97–106. <http://doi.org/10.1016/j.biocon.2014.07.015>
- Matti, S., & Sandström, A. (2011). The rationale determining advocacy coalitions: Examining coordination networks and corresponding beliefs. *Policy Studies Journal*, 39(3), 385–410. <http://doi.org/10.1111/j.1541-0072.2011.00414.x>

- Mattson, D. J. (2014). State-level management of a common charismatic predator: Mountain lions in the West. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 29–64). Chicago, IL: The University of Chicago Press.
- Mattson, D. J., Byrd, K. L., Rutherford, M. B., Brown, S. R., & Clark, T. W. (2006). Finding common ground in large carnivore conservation: Mapping contending perspectives. *Environmental Science and Policy*, 9(4), 392–405. <http://doi.org/10.1016/j.envsci.2006.01.005>
- McBeth, M. K., & Shanahan, E. A. (2004). Public opinion for sale: The role of policy marketers in Greater Yellowstone policy conflict. *Policy Sciences*, 37(3–4), 319–338. <http://doi.org/10.1007/s11077-005-8876-4>
- McBeth, M. K., Shanahan, E. A., Anderson, M. C. A., & Rose, B. (2012). Policy story or gory story? Narrative policy framework analysis of Buffalo Field Campaign's YouTube videos. *Policy and Internet*, 4(3–4), 159–183. <http://doi.org/10.1002/poi3.15>
- McBeth, M. K., Shanahan, E. A., Hathaway, P. L., Tigert, L. E., & Sampson, L. J. (2010). Buffalo tales: Interest group policy stories in Greater Yellowstone. *Policy Sciences*, 43, 391–409. <http://doi.org/10.1007/s11077-010-9114-2>
- McBeth, M. K., Shanahan, E. A., & Jones, M. D. (2005). The science of storytelling: Measuring policy beliefs in Greater Yellowstone. *Society & Natural Resources*, 18(5), 413–429. JOUR. Retrieved from <http://www.tandfonline.com/doi/abs/10.1080/08941920590924765>
- McCombs, M. (2005). A look at agenda-setting: Past, present and future. *Journalism Studies*, 6(4), 543–557. <http://doi.org/10.1080/14616700500250438>
- McLaughlin, G. P., Primm, S., & Rutherford, M. B. (2005). Participatory projects for coexistence: Rebuilding civil society. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 177–210). Washington, D.C.: Island Press.
- Mech, L. D. (2001). Wolf Restoration to the Adirondacks: The Advantages and Disadvantages of Public Participation in the Decision. In *Wolves and Human Communities* (pp. 13–22). Washington, D.C.: Island Press.
- Mech, L. D. (2010). Considerations for developing wolf harvesting regulations in the contiguous United States. *The Journal of Wildlife Management*, 74(7), 1421–1424. Retrieved from <http://www.bioone.org/doi/abs/10.2193/2009-540>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative Data Analysis* (2nd ed.). Washington, D.C.: Sage Publications.

- Montana Fish Wildlife and Parks. (2002). *Montana Wolf Conservation and Management Planning Document - DRAFT*.
- National Park Service. (n.d.). Wolf restoration. Retrieved February 15, 2016, from Retrieved from <http://www.nps.gov/yell/learn/nature/wolf-restoration.htm>
- Nelson, P., Krogman, N., Johnston, L., & St. Clair, C. C. (2014). Dead ducks and dirty oil: Media representations and environmental solutions. *Society & Natural Resources*, 28, 345–359. <http://doi.org/10.1080/08941920.2014.948241>
- Nie, M. (2003). *Beyond Wolves*. Minneapolis, MN: University of Minnesota Press.
- Nielsen, R. K. (2015). Local newspapers as keystone media: The increased importance of diminished newspapers for local political information environments. In R. K. Nielsen (Ed.), *Local Journalism: The Decline of Newspapers and the Rise of Digital Media*. London: I.B. Tauris. <http://doi.org/10.3386/w19846>
- Nilsen, E. B., Milner-Gulland, E. J., Schofield, L., Mysterud, A., Stenseth, N. C., & Coulson, T. (2007). Wolf reintroduction to Scotland: Public attitudes and consequences for red deer management. *Proceedings of the Royal Society B*, 274(1612), 995–1002. <http://doi.org/10.1098/rspb.2006.0369>
- Nohrstedt, D. (2011). Shifting resources and venues producing policy change in contested subsystems: A case study of Swedish signals intelligence policy. *Policy Studies Journal*, 39(3), 461–484. <http://doi.org/10.1111/j.1541-0072.2011.00417.x>
- Oakleaf, J. K., Mack, C., & Murray, D. L. (2003). Effects of wolves on livestock calf survival and movements in central Idaho. *The Journal of Wildlife Management*, 67(2), 299–306. <http://doi.org/10.2307/3802771>
- Oakleaf, J. K., Murray, D. L., Oakleaf, J. R., Bangs, E. E., Mack, C. M., Smith, D. W., ... Niemeyer, C. C. (2006). Habitat selection by recolonizing wolves in the Northern Rocky Mountains of the United States. *Journal of Wildlife Management*, 70(2), 554–563. [http://doi.org/10.2193/0022-541X\(2006\)70\[554:HSBRWI\]2.0.CO;2](http://doi.org/10.2193/0022-541X(2006)70[554:HSBRWI]2.0.CO;2)
- Olson, E. R., Stenglein, J. L., Shelley, V., Rissman, A. R., Browne-Nuñez, C., Voyles, Z., ... Van Deelen, T. (2015). Pendulum swings in wolf management led to conflict, illegal kills, and a legislated wolf hunt. *Conservation Letters*, 8(5), 351–360. <http://doi.org/10.1111/conl.12141>
- Oregon Department of Fish and Wildlife. (2014). Oregon wolf conservation and management plan. *Oregon Administrative Rules*. Salem, OR.

- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. New York, NY: Cambridge University Press.
- Padilla, A. (2016, July 18). Gray wolf population increasing in Colorado. *Fox 31 Denver*. Denver, CO. Retrieved from <http://kdvr.com/2016/07/18/you-may-start-seeing-gray-wolves-in-colorado/>
- Peterson, R. O., & Ciucci, P. (2003). The wolf as carnivore. In L. D. Mech & L. Boitani (Eds.), *Wolves: Behavior, Ecology, and Conservation* (pp. 104–130). Chicago, IL: University Of Chicago Press.
- Pierce, J. J. (2016). Advocacy coalition resources and strategies in Colorado hydraulic fracturing politics. *Society & Natural Resources*, 29(10), 1154–1168. <http://doi.org/10.1080/08941920.2015.1131876>
- Poudyal, N., Baral, N., & Asah, S. T. (2016). Wolf lethal control and livestock depredations: Counter-evidence from respecified models. *Plos One*, 11(2), e0148743. <http://doi.org/10.1371/journal.pone.0148743>
- Prettyman, B. (2014, October 30). Wolf from Idaho-Canada pack apparently roams through Utah. *The Salt Lake Tribune*. Salt Lake City, UT. Retrieved from <http://www.sltrib.com/news/1689851-155/utah-wolf-wolves-wildlife-state-collar>
- Primm, S., & Wilson, S. M. (2004). Re-connecting grizzly bear populations : Prospects for participatory projects. *Ursus*, 15(1), 104–114.
- Quammen, D. (2003). *Monster of God: The Man-Eating Predator in the Jungles of History and the Mind*. New York, NY: W.W. Norton & Company.
- Reed, M. S. (2008). Stakeholder participation for environmental management: A literature review. *Biological Conservation*, 141(10), 2417–2431. <http://doi.org/10.1016/j.biocon.2008.07.014>
- Ripberger, J. T., Gupta, K., Silva, C. L., & Jenkins-Smith, H. C. (2014). Cultural theory and the measurement of deep core beliefs within the Advocacy Coalition Framework. *Policy Studies Journal*, 42(4), 509–527. <http://doi.org/10.1111/psj.12074>
- Ripple, W. J., Estes, J. A., Beschta, R. L., Wilmers, C. C., Ritchie, E. G., Hebblewhite, M., ... Wirsing, A. J. (2014). Status and ecological effects of the world's largest carnivores. *Science*, 343(6167), 1241484-1-1241484–11. <http://doi.org/10.1126/science.1241484>
- Rohlinger, D. A., Pederson, J., & Valle, G. (2014). Inclusive discourse? Local media coverage of the Terri Schiavo case. *Sociological Spectrum*, 35(1), 1–25. <http://doi.org/10.1080/02732173.2014.978427>

- Rubin, H. J., & Rubin, I. S. (2012). *Qualitative Interviewing: The Art of Hearing Data* (3rd ed.). Washington, D.C.: Sage Publications.
- Ruth, T. K., Smith, D. W., Haroldson, M. A., Buotte, P. C., Schwarz, C. C., Quigley, H. B., ... Frey, K. (2003). Large-carnivore response to recreational big-game hunting along the Yellowstone National Park and Absaroka- Beartooth Wilderness boundary. *Wildlife Society Bulletin*, 31(4), 1150–1161.
- Sabatier, P. A. (1993). Policy change over a decade or more. In P. A. Sabatier & H. C. Jenkins-Smith (Eds.), *Policy Change and Learning: An Advocacy Coalition Approach* (pp. 13–39). Boulder, CO: Westview Press.
- Sabatier, P. A., & Jenkins-Smith, H. C. (1999). The Advocacy Coalition Framework: An assessment. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (1st ed., pp. 117–166). Boulder, CO: Westview Press.
- Sabatier, P. A., & Weible, C. M. (2007). The Advocacy Coalition Framework: Innovations and clarifications. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (2nd ed., pp. 189–220). Boulder, CO: Westview Press.
- Scheufele, D. A., & Tewksbury, D. (2007). Framing, agenda setting, and priming: The evolution of three media effects models. *Journal of Communication*, 57(1), 9–20. JOUR. Retrieved from <http://doi.wiley.com/10.1111/j.1460-2466.2006.00326.x>
- Schlickeisen, R. (2001). Overcoming cultural barriers to wolf reintroduction. In V. Sharpe, B. G. Norton, & S. Donnelley (Eds.), *Wolves and Human Communities* (pp. 61–73). Washington, D.C.: Island Press.
- Shanahan, E. A., Jones, M. D., & McBeth, M. K. (2011). Policy narratives and policy processes. *Policy Studies Journal*, 39(3), 535–561. <http://doi.org/10.1111/j.1541-0072.2011.00420.x>
- Shanahan, E. A., Jones, M. D., McBeth, M. K., & Lane, R. R. (2013). An angel on the wind: How heroic policy narratives shape policy realities. *Policy Studies Journal*, 41(3), 453–483. <http://doi.org/10.1111/psj.12025>
- Shanahan, E. A., McBeth, M. K., & Hathaway, P. L. (2011). Narrative policy framework: The influence of media policy narratives on public opinion. *Politics and Policy*, 39(3), 373–400. <http://doi.org/10.1111/j.1747-1346.2011.00295.x>
- Shanahan, E. A., McBeth, M. K., Hathaway, P. L., & Arnell, R. J. (2008). Conduit or contributor? The role of media in policy change theory. *Policy Sciences*, 41(2), 115–138. <http://doi.org/10.1007/s11077-008-9058-y>



- Shivik, J. A. (2006). Tools for the edge: What's new for conserving carnivores. *BioScience*, 56(3), 253. [http://doi.org/10.1641/0006-3568\(2006\)056\[0253:TFTEWN\]2.0.CO;2](http://doi.org/10.1641/0006-3568(2006)056[0253:TFTEWN]2.0.CO;2)
- Shivik, J. A. (2014). *The Predator Paradox: Ending the War with Wolves, Bears, Cougars, and Coyotes*. Boston, MA: Beacon Press.
- Sjölander-Lindqvist, A., Johansson, M., & Sandström, C. (2015). Individual and collective responses to large carnivore management: The roles of trust, representation, knowledge spheres, communication and leadership. *Wildlife Biology*, 21(3), 175–185. <http://doi.org/10.2981/wlb.00065>
- Skogen, K., & Thrane, C. (2007). Wolves in context: Using survey data to situate attitudes within a wider cultural framework. *Society & Natural Resources*, 21(1), 17–33. <http://doi.org/10.1080/08941920701460408>
- Smith, D. W., Brewster, W. G., & Bangs, E. E. (1999). Wolves in the Greater Yellowstone Ecosystem: Restoration of a top carnivore in a complex management environment. In T. W. Clark, A. P. Curlee, S. C. Minta, & P. M. Kareiva (Eds.), *Carnivores in Ecosystems: The Yellowstone Experience* (pp. 103–125). New Haven, CT: Yale University Press.
- Smith, L., Hutchinson, J., & DeNesti, L. (2014). *Living with Livestock & Wolves*. Port Townsend, WA.
- Soto-Shoender, J. R., & Main, M. B. (2013). Differences in stakeholder perceptions of the jaguar *Panthera onca* and puma *Puma concolor* in the tropical lowlands of Guatemala. *Oryx*, 47(1), 109–112. <http://doi.org/10.1017/S003060531200107X>
- Sponarski, C. C., Vaske, J. J., Bath, A. J., & Musiani, M. M. (2014). Salient values, social trust, and attitudes toward wolf management in south-western Alberta, Canada. *Environmental Conservation*, 41, 1–8. <http://doi.org/10.1017/S0376892913000593>
- Stern, M. J., & Coleman, K. J. (2015). The multidimensionality of trust: Applications in collaborative natural resource management. *Society & Natural Resources*, 28(2), 117–132. <http://doi.org/10.1080/08941920.2014.945062>
- Stolzenburg, W. (2008). *Where the Wild Things Were*. New York, NY: Bloomsbury.
- Stone, D. (2012). *Policy Paradox* (3rd ed.). New York, NY: W.W. Norton & Company.
- Taylor, D., & Clark, T. W. (2005). Management context: People, animals, and institutions. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 28–67). Washington, D.C.: Island Press.

- Taylor, P. (2011, April 13). Budget's wolf delisting opens Pandora's box of species attacks, enviro groups warn. *New York Times*2.
- Teton County Geographic Information System. (n.d.). Retrieved July 15, 2015, from <http://www.tetonwyo.org/gis/>
- Thuerner Jr., A. (2009, January 31). Gingery wolf bill garners support. *Jackson Hole Daily*. Jackson, WY.
- Title 23: Game and Fish, Pub. L. No. 23 (2016). State of Wyoming.
- Traverso, J. (2015, August 20). CDFW news photo shows wolf pups in northern California. *California Department of Fish and Wildlife*. Retrieved from <https://cdfgnews.wordpress.com/2015/08/20/photo-shows-wolf-pups-in-northern-california/>
- Treves, A. (2009). Hunting for large carnivore conservation. *Journal of Applied Ecology*, 46(6), 1350–1356. <http://doi.org/10.1111/j.1365-2664.2009.01729.x>
- Treves, A., & Karanth, K. U. (2003). Human-carnivore conflict and perspectives on carnivore management worldwide. *Conservation Biology*, 17(6), 1491–1499. <http://doi.org/10.1111/j.1523-1739.2003.00059.x>
- Treves, A., Naughton-Treves, L., & Shelley, V. (2013). Longitudinal analysis of attitudes toward wolves. *Conservation Biology*, 27(2), 315–323. <http://doi.org/10.1111/cobi.12009>
- U.S. Fish & Wildlife Service. Endangered Species Act of 1973 (1973).
- U.S. Fish & Wildlife Service. (1987). *Northern Rocky Mountain Wolf Recovery Plan*. Denver, CO.
- U.S. Fish & Wildlife Service. (1992). *Recovery Plan for the Eastern Timber Wolf*. Twin Cities, MN.
- U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, Montana Fish Wildlife and Parks, Wyoming Fish Game and Department, National Park Service, Nez Perce Tribe, ... USDA Wildlife Services. (2015). *Northern Rocky Mountain Wolf Recovery Program 2014 Interagency Annual Report*. Helena, MT. Retrieved from [http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL\\_NRM-Sum2\\_2013.pdf](http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL_NRM-Sum2_2013.pdf)
- U.S. Fish and Wildlife Service, Idaho Department of Fish and Game, Wyoming Game and Fish Department, Montana Fish Wildlife & Parks, Nez Perce Tribes, Service, N. P., ... USDA Wildlife Services. (2016). *Northern Rocky Mountain*

*Wolf Recovery Program 2015 Interagency Annual Report*. Helena, MT. Retrieved from [http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL\\_NRM-Sum2\\_2013.pdf](http://www.fws.gov/mountain-prairie/species/mammals/wolf/annualrpt13/reports/FINAL_NRM-Sum2_2013.pdf)

Villamor, G. B. (2006). The rise of protected area policy in the Philippine forest policy: An analysis from the perspective of Advocacy Coalition Framework (ACF). *Forest Policy And Economics*, 9(2), 162–178.

Vucetich, J., & Nelson, M. P. (2014). Wolf hunting and the ethics of predator control. *Oxford Handbook of Animal Studies*, (July), 1–15. <http://doi.org/10.1093/oxfordhb/9780199927142.013.007>

Walker, B. (2005). *The Lost Wolves of Japan*. Seattle, WA: University of Washington Press.

Watters, R., Anderson, A., & Clark, S. G. (2014). Wolves in Wyoming: The quest for common ground. In S. G. Clark & M. B. Rutherford (Eds.), *Large Carnivore Conservation: Integrating Science and Policy in the North American West* (pp. 165–107). Chicago, IL: The University of Chicago Press.

Weber, W., & Rabinowitz, A. (1996). A global perspective on large carnivore conservation. *Conservation Biology*, 10(4), 1046–1054.

Weible, C. M. (2005). Beliefs and perceived influence in a natural resource conflict: An Advocacy Coalition approach to policy networks. *Political Research Quarterly*, 58(3), 461–475. <http://doi.org/10.1177/106591290505800308>

Weible, C. M. (2007). An advocacy coalition framework approach to stakeholder analysis: Understanding the political context of California marine protected area policy. *Journal of Public Administration Research and Theory*, 17(1), 95–117. <http://doi.org/10.1093/jopart/muj015>

Weible, C. M. (2008). Expert-based information and policy subsystems: A review and synthesis. *Policy Studies Journal*, 36(4), 615–635. <http://doi.org/10.1111/j.1541-0072.2008.00287.x>

Weible, C. M., Pattison, A., & Sabatier, P. A. (2010). Harnessing expert-based information for learning and the sustainable management of complex socio-ecological systems. *Environmental Science and Policy*, 13(6), 522–534. <http://doi.org/10.1016/j.envsci.2010.05.005>

Weible, C. M., & Sabatier, P. A. (2005). Comparing policy networks: Marine protected areas in California. *Policy Studies Journal*, 33(2), 181–201. <http://doi.org/10.1111/j.1541-0072.2005.00101.x>

- Weible, C. M., & Sabatier, P. A. (2009). Coalitions, science, and belief change: Comparing adversarial and collaborative policy subsystems. *Policy Studies Journal*, 37(2), 195–212. <http://doi.org/10.1111/j.1541-0072.2009.00310.x>
- Weible, C. M., Sabatier, P. A., & McQueen, K. (2009). Themes and variations: Taking stock of the Advocacy Coalition Framework. *Policy Studies Journal*, 37(121–140), 121–140. <http://doi.org/10.1111/j.1541-0072.2008.00299.x>
- Western Governors' Association. (2016). *Western Governors' Species Conservation and Endangered Species Act Initiative: The Chairman's Initiative of Wyoming Governor Matthew H. Mead*. Retrieved from [westgov.org/initiatives/esa-initiative](http://westgov.org/initiatives/esa-initiative)
- Wielgus, R. B., & Peebles, K. A. (2014). Effects of wolf mortality on livestock depredations. *PLoS ONE*, 9(12), 1–16. <http://doi.org/10.1371/journal.pone.0113505>
- Williams, C. K., Ericsson, G., & Heberlein, T. (2002). A quantitative summary of attitudes toward wolves and their reintroduction (1972-2000). *Wildlife Society Bulletin*, 30(2), 575–584. <http://doi.org/10.2307/3784518>
- Wilmot, J., & Clark, T. W. (2005). Wolf restoration: A battle in the war over the West. In T. W. Clark, M. B. Rutherford, & D. Casey (Eds.), *Coexisting with Large Carnivores: Lessons from Greater Yellowstone* (pp. 138–173). Washington, D.C.: Island Press.
- Wilson, S. M., Madel, M. J., Mattson, D. J., Graham, J. M., & Merrill, T. (2006). Landscape conditions predisposing grizzly bears to conflicts on private agricultural lands in the western USA. *Biological Conservation*, 130(1), 47–59. Retrieved from <http://linkinghub.elsevier.com/retrieve/pii/S0006320705005343>
- World Parks Congress. (2004). Preventing and mitigating human–wildlife conflicts: World Parks Congress recommendation. *Human Dimensions of Wildlife*, 9(4), 259–260. <http://doi.org/10.1080/10871200490505684>
- Wyoming Animal Damage Management Board. (2015). Frequently asked questions. Retrieved July 28, 2016, from [http://www.wyadmb.com/Frequently Asked Questions.htm](http://www.wyadmb.com/Frequently%20Asked%20Questions.htm)
- Wyoming Game & Fish Commission. (2011). *Wyoming Gray Wolf Management Plan*. Cheyenne, WY.
- Wyoming Game & Fish Commission. (2012). *Addendum: Wyoming Gray Wolf Management Plan*. Cheyenne, WY.

- Wyoming Game & Fish Department, National Park Service, USDA-APHIS-Wildlife Services, & U.S. Fish and Wildlife Service. (2015). *Wyoming Gray Wolf Population Monitoring and Management Interim Report*. Cheyenne, WY.
- Wyoming Game and Fish Department. (n.d.). Wolves in Wyoming. Retrieved from <https://wgfd.wyo.gov/Wildlife-in-Wyoming/Large-Carnivore/Wolves-in-Wyoming>
- Wyoming Hunter Defense Fund. (2016). Wyoming Hunter Defense Fund. Retrieved September 4, 2016, from <http://www.wyominghunterdefensefund.com/>
- Yin, R. K. (2009). *Case Study Research* (4th ed.). Washington, D.C.: Sage Publications.
- Zafonte, M., & Sabatier, P. A. (1998). Shared beliefs and imposed interdependencies as determinants of ally networks in overlapping subsystems. *Journal of Theoretical Politics*, 10(4), 473–505.
- Zafonte, M., & Sabatier, P. A. (2004). Short-term versus long-term coalitions in the policy process: Automotive pollution control, 1963-1989. *The Policy Studies Journal*, 32(1), 1963–1989. <http://doi.org/10.1111/j.1541-0072.2004.00054.x>

## APPENDIX 1: CHARACTERS AND NARRATIVES CODEBOOK

Version: 5-12-15

### *Rules of Inclusion*

Wolves, Wyoming:

Date Range: January 1, 2008 – December 31, 2014

Newspapers: Jackson Hole News & Guide, Cody Enterprise, Wyoming Tribune-Eagle, Denver Post, New York Times, Los Angeles Times, Wall Street Journal, Washington Post

### *Downloading and Document Naming Instructions*

All documents stored in Dropbox folder.

Documents should be name by newspaper initials and date: NYT2314 = New York Times 2/3/14

### *Basic Document Information*

<b>Q1: Document ID: Newspaper Initials &amp; Date (MDYY): NYT2314 = New York Times 2/3/14</b>	
<b>Q2: Coder initials</b>	
<b>Q3a: Does this document primarily focus on wolves or wolf policy or management? (IF NO, STOP CODING)</b>	
1	Yes
2	No (IF NO, STOP CODING)
<b>Q3b: What is the scope of the article? Choose one:</b>	
1	The article focuses on wolves in Wyoming.
2	The article focuses on wolf management in the US, and Wyoming is mentioned.
3	The article focuses on wolf management in the US, but Wyoming is not mentioned explicitly.
4	Other (Specify)
<b>Q3c: Does this document tell a story related to wolves? (Bulleted lists, timelines, or rote information on pack sizes or other statistics do not count as storytelling.) (IF NO, STOP CODING.)</b>	
1	Yes
2	No (IF NO, STOP CODING)
<b>Q4: Date of document publication (MDYY: 010108)</b>	
<b>Q5: Publisher/Name of Newspaper</b>	
<b>Q6: Scope of Newspaper</b>	
1	Local
2	State (WY)
3	Regional (Mountain West)
4	National
<b>Q7: Document Type</b>	
1	News feature (feature-length article, in-depth piece, cover story, etc.)
2	News brief
3	Editorial, column, or other opinion piece
4	Other (e.g., letter to the editor)
<b>Document/Code Information</b>	
<b>Q8: Title of document (headline)</b>	
<b>Q9: Document author (note if AP)</b>	

<b>Q10: Number of words (count by cutting &amp; pasting into Word doc. Include only headline &amp; full text (body)).</b>	
<b>Q11: Identify the first 1/3 of the document. Use the word count to find the 1/3 – 2/3 split. For example, if the total word count = 1000, the split would be at the end of the sentence containing the 333rd word. Include headline and full text (body) in the word count. First third ends with the following sentence: _____ . (Total words/3).</b>	
<b>Q12a: Primary focus of article. Check only one.</b>	
1	Delisting
2	Hunting (wolf)
3	Hunting (other)
4	Lawsuits
5	Livestock Conflict
6	Scientific Literature (articles on published literature)
7	Demographics (# of wolf packs, disease, pups, sightings)
8	Solutions to Conflict or Management (e.g., range riders, fladry, lethal removal)
9	Policy or Management (wolf plan, meetings re: hunting quotas & areas, flex zone, predator/trophy game designation)
10	Other (specify):
<b>Q12b: Secondary focus. Check all that apply. Some in-depth treatment; more than a passing mention. More than just context.</b>	
1	Delisting
2	Hunting (wolf)
3	Hunting (other)
4	Lawsuits
5	Livestock Conflict
6	Scientific Literature (articles on published literature)
7	Demographics (# of wolf packs, disease, pups, sightings)
8	Solutions to Conflict or Management (e.g., range riders, fladry, lethal removal)
9	Policy or Management (other than re/delisting, e.g., wolf plan, meetings re: hunting quotas & areas, flex zone, predator/trophy game designation)
10	Other (specify):
<b>Q13a: Primary framing of article. McBeth et al describes frames in terms of ‘policy marketing,’ where “policy stakeholders do not just naturally possess frames. Instead, frames are constructed to sell or market to citizens and influence policy outcomes” (2004, p. 320). Select only one. Explain what a frame is – how is the issue being packaged? Different groups have competing viewpoints or problem definitions.</b>	
1	State/federal management
2	State of WY/other states (e.g., MT or ID)
3	Environmental or conservation groups/state agencies
4	Environmental or conservation groups/localists (Localists = “Old West; those who identify with the traditional values and cultures of old Wyoming” (Taylor & Clark, 2005, p. 33); examples include ranchers, outfitters)
5	Environmental or conservation groups/federal agencies
6	Pro-wolf hunting v. anti-wolf hunting (if none others apply)
7	Wolves v. livestock (practical conflict)
8	Wolves v. people (subdivision sightings, dog encounters)
9	Possible solutions & their counterarguments
10	Other (specify):
11	Balanced viewpoints (e.g., basic reporting – meetings, scientific publications, demographics)
<b>Q13b: Secondary framing of article. Check all that apply.</b>	
1	State v. federal management
2	State of WY v. other states (e.g., MT or ID)
3	Environmental or conservation groups v. state of WY
4	Environmental or conservation groups v. localists (Localists = “Old West; those who identify with the traditional values and cultures of old Wyoming” (Taylor & Clark, 2005, p. 33); examples include ranchers, outfitters)
5	Environmental or conservation groups v. federal agencies

6	Pro-hunting v. anti-hunting
7	Wolves v. livestock (practical conflict)
8	Wolves v. people (subdivision sightings, dog encounters)
9	Possible solutions & their counterarguments
10	Other (specify):
11	No frame apparent (e.g., basic reporting – meetings, scientific publications, demographics)

### *Conflict & Solutions*

<b>Q14: Conflict: political or practical</b>	
<b>Q14a: Does the headline imply conflict?</b>	
1	Yes
2	No
<b>Q14b: Does the first third of the article imply that a conflict exists between either stakeholders over wolf policy or management (political conflict) or wolves/human interests (practical conflict)?</b>	
1	Yes – Practical conflict (wolves killed livestock)
2	Yes – Political conflict (lawsuit; conflict between stakeholders over management; implied conflict on both sides)
3	No
<b>Q15: Solutions.</b> Does the article argue for a solution explicitly to defined problems or conflicts? The solution is often the moral of the story (Shanahan et al, 2011, p. 540; Jones & McBeth, 2010, p. 340). It may or may not be directly related to the primary conflict identified in Q14. Alternatively, the document may not explicitly define a problem or conflict, yet it still proposes a solution. Check all that apply.	
1	Keep existing WY plan.
2	Maintain ES listing
3	Include locals in process.
4	Collaborate with stakeholders
5	Keep WY plan, with revisions (no predator zone).
6	Conduct more research.
7	Prohibit wolf hunting.
8	Conduct more outreach/education.
9	Shoot, shovel, shut up.
10	Advocate for rule change.
11	Use lethal control for problem animals.
12	Allow hunting.
13	Institute a hunting buffer zone around national parks.
14	Use non-lethal conflict deterrents.



## Actors/Characters/Storytelling

<b>Q16a: Is the article episodic or thematic? (Pick the dominant category.)</b>			
<b>1</b>	Episodic: Event-oriented; lack of contextual material (Iyengar, 1990, 21). Examples: personal stories, organization profiles, events, etc. See list below for additional examples.		
<b>2</b>	Thematic: Provides “larger picture;” trends, policy, outcomes, etc. The focus is “abstract or impersonal” (Iyengar, 1990, p. 21). Examples include: a policy, coverage of a lawsuit (not just a recent development), etc.		
<b>3</b>	“Pulitzer Prize.” The story is well-balanced, with stories or personal accounts as well as broader contextual coverage.		
<b>4</b>	None of the above. Use this if there is an absence of storytelling.		
<b>Q16b: If the story is episodic, what is the main focus of the episode?</b>			
<b>1</b>	A person(s) and their experience		
<b>2</b>	A place (ranch, subdivision, town, protected area)		
<b>3</b>	An event (a wolf incident, a rally, a talk)		
<b>4</b>	A lawsuit		
<b>5</b>	An organization, agency, or business		
<b>6</b>	Other: (specify)		
<b>Q17-18: Characters</b> <b>A character must be identifiable to be considered here.</b> 'Environment' or 'Wildlife' is not enough, but ‘a specific wolf pack or another identifiable, anthropomorphized, or charismatic place or animal would be sufficient. <b>HERO/Fixer:</b> actor(s) who plan to or fix, solve, assist, or seek to resolve past, current or future problem. Need to possess intention and/or agency. <b>VILLAIN/Problem Causer:</b> actor(s) who create, cause, contribute, instigate, exacerbate, or plan to contribute to the problem. Need to possess intention and/or agency. <b>VICTIM:</b> actor(s) who suffers, is targeted, is affected by the problem and/or Villain. <b>OTHER:</b> Those that are proposing or taking action that are not categorized by the Villain, Hero, Victim definitions. <b>**</b> If actors are mentioned as potential or latent resources, put them in 'other'. Citizens or voters should only be listed if they are supporters or taking action on the issue. <b>***</b> List the organization name if someone is quoted who represents the organization, unless that person is an individual (like an elected representative) who has personal agency in the issue. <u>List full names of individuals and organizations.</u> <b>****</b> If an actor is portrayed as multiple characters, list the actor under multiple columns, but note whether there is a dominant character portrayal.			
<b>Q17: Identify the actors in the document according to type.</b>			
<b>Hero</b>	<b>Villain</b>	<b>Victim</b>	<b>Others</b>
<b>Q18: Characters &amp; Use of Evidence: Identify any characters and the type of evidence they use (personal narratives/stories, scientific information, economic data, etc.) Only list characters who have been quoted or paraphrased directly.</b>			
<b>Character Codes</b>			
<b>1</b>	Environmental or conservation group or individual		
<b>2</b>	Local interest (e.g., rancher, hunter, outfitter)		
<b>3</b>	Manager (state or federal)		

4	WY state politician (governor, representative)
5	Other politician (US Congressional representative, Sec. of Interior)
6	Business-owner (photographer, eco-tour operator)
7	Citizen (tourist, unaffiliated resident)
8	Other (specify)
<b>Evidence Codes</b>	
1	Science (reference to scientific study, research, expert, etc.)
2	Personal narrative or story
3	Economic information (reference to income, economic studies (e.g. tourism), monetary losses)
4	Reference to a law, policy, lawsuit
5	Appeal to values/emotion (but not explicit storytelling)
6	Other

## APPENDIX 2: INTERVIEW PROTOCOL

### *Public Agency and NGO Representatives*

1. Can you please provide your full name, professional title, and agency/organization for which you work?
2. What is your job at the agency/organization?
3. May I begin to record this conversation now?
4. Can you describe your work with wolves and/or wolf management over this time period? What specifically do you do?
5. Did you have a role in drafting the current wolf policy for the state?
6. Can you describe this policy?
  - a. What are its strengths?
  - b. What are its shortcomings?
  - c. What factors do you think contributed to the US Fish and Wildlife Service's decision to approve Wyoming's wolf policy?
  - d. Are you personally satisfied with it?
  - e. What is your impression of overall satisfaction with how it turned out?
  - f. How was the dual status designation decided?
7. Can you describe the process by which this policy was enacted?
  - a. Who was involved?
  - b. Should anyone else have been involved that wasn't?
  - c. What types of outreach occurred? (I.e., public meetings, individual interviews, focus groups, etc.)
8. Why do you think the policy passed when it did? What factors contributed to the timing of the policy?
9. What kind of information was used to come up with the state policy?
  - a. What are your sources?
  - b. How do you use scientific information?
  - c. Is there information you think would have been useful to have but it either didn't exist or wasn't available?
10. Is there anything you would change about the policy or the process by which it was passed?
11. When there is conflict over policy implementation (i.e., hunting quotas), how is it resolved?
12. How is the policy used to guide decisions about dealing with wolf conflict on-the-ground?
13. What is your perception of Wyoming in terms of tolerance for wolves?
  - a. Do you think the levels of tolerance have changed? Why or why not?
  - b. What is the responsibility of landowners/outfitters & guides, who are directly affected by wolf presence on the landscape, to mitigate conflicts on their own?
  - c. Given your experience, can you project as to whether tolerance will increase in the future?

14. *Policy-Makers*: When you receive a report of a problem wolf, what happens?
  - a. Who is responsible for making decisions about what to do about the animal(s)?
  - b. If there is fallout from those decisions, who deals with it?
15. Can you describe how people feel about the “dual status” designation of the wolf? Do people want these designations changed? How do they advocate for the change?
16. How involved do you think (locals, state representatives, federal representatives, non-profit groups) should be in managing wolves? Where should the bulk of responsibility lie?
17. *Policy-makers*: Can you talk about the groups that have been involved in the wolf issue?
  - a. What role do they play?
  - b. What have been their most/least effective tactics?
  - c. Have you seen changes in composition of groups over the past five years?
  - d. What is your impression of the communication between and among these groups?
18. *NGO Reps*: Can you talk about how your group has been involved in the wolf issue?
  - a. What have been the most/least effective tactics you’ve used to advocate for your preferred outcome?
  - b. How have alliances changed among the different groups over the course of the past 5 years?
  - c. Do you have lines of communication with groups that advocate for different outcomes? How would you describe your relationships with them?
19. Do you anticipate that changes, significant or otherwise, will be made to the current wolf management policy?
20. Hunting seems to be controversial today. Can you talk about what you’ve seen since the first wolf hunt occurred in WY in 2012? *NGOs*: What is your organization’s perspective on wolf hunting?
21. What factors do you see as threats or opportunities on the horizon to ensure sustainable wolf populations? Sustainable rural communities?
22. Do you see or hear of much illegal activity when it comes to wolves (such as poaching)?
23. How do you think Wyoming compares to other Western states with wolf populations?
24. Can you give me an example or examples about ideal wildlife management policies or programs that have worked really well?
25. From your perspective, how has the local/state/national media helped or hindered progress on the wolf issue?
26. What else can you tell me about wolves in this area that you think is important to understand?

27. Is there anyone else at your agency or organization, or someone with whom you've worked, that you recommend I speak with? If so, may I use your name?
28. (If applicable): Would you be interested in participating in a second phase of this project that using spatial analysis to investigate in more depth the nature of conflict between wolves and livestock? This aspect of the project will commence in Fall 2014.

### *Private Interests*

1. Can you please provide your full name and affiliation?
2. May I begin to record our conversation now?
3. In a nutshell, tell me your perspective on the current wolf situation.
  - a. What kinds of threats do wolves pose?
  - b. What are the benefits to having wolves around?
4. What would be your ideal management scenario?
  - a. Who would manage wolves on private property?
  - b. Who would make decisions about wolves on public lands?
5. What changes (if any) have you had to make to your business operation based on wolves?
6. How have wolves affected your business?
7. Have you had to make any changes to how you run your business since wolves were delisted in Wyoming?
8. Can you describe your impression of the wolf policy in Wyoming today?
  - a. What are its strengths?
  - b. What are its shortcomings?
  - c. How is it different from the previous (federal) management policy?
  - d. Are you personally satisfied with it?
  - e. What is your impression of overall satisfaction with how it turned out?
  - f. What factors do you think contributed to the US Fish and Wildlife Service's decision to approve Wyoming's wolf policy?
  - g. What are your thoughts on the dual status designation?
  - h. Did you play a role at all in developing this policy? (Were you interviewed? Did you provide comments?)
    - i. If yes, were you satisfied with how your perspective was incorporated?
    - ii. If no, why not? Were you given the opportunity? Would you have liked to have been involved?
9. Where might wolf policy be improved? What are its strengths? Weaknesses?
10. How do you think Wyoming compares to other Western states with wolf populations?
11. *Landowners/Ranchers/Outfitters*: When there is a problem or conflict with an individual wolf or a pack, what happens?
  - a. Who do you call?
  - b. What do they do?

- c. What is the typical outcome?
  - d. Is the problem usually resolved to your satisfaction?
- 12. What do you think the role of scientific information or research on wolves is in creating policy for wolf management?
- 13. From your perspective, how has the local/state/national media helped or hindered progress on the wolf issue?
- 14. How have you been able to contribute to decisions on how to manage wolves?
- 15. What role do you think hunting plays in wolf management?
- 16. I've heard of the "local" policy, "Shoot, shovel, and shut up." Does this actually happen? Does it appear to solve the problem?
- 17. What else can you tell me about wolves in this area that you think is important to understand?
- 18. (If applicable): Would you be interested in participating in a second phase of this project that using spatial analysis to investigate in more depth the nature of conflict between wolves and livestock? This aspect of the project will commence in Fall 2014.

*Individuals (No Official Affiliation or Business Interest)*

- 1. Can you please provide your full name and line of work?
- 2. May I begin to record our conversation now?
- 3. Can you tell me your perspective on wolves?
  - a. What kinds of threats do wolves pose?
  - b. What are the benefits to having wolves around?
- 4. Can you describe your impression of the wolf policy in Wyoming today?
  - a. What are its strengths?
  - b. What are its shortcomings?
  - c. What factors do you think contributed to the US Fish and Wildlife Service's decision to approve Wyoming's wolf policy?
  - d. What is your impression of overall satisfaction with how the state policy turned out?
  - e. What are your thoughts on the dual status designation?
  - f. Did you play a role at all in developing this policy? (Did you provide comments?)
    - i. If yes, were you satisfied with how your perspective was incorporated?
    - ii. If no, why not?
- 5. What would be your ideal management scenario?
  - a. Who would manage wolves on private property?
  - b. Who would manage wolves on public lands?
- 6. Have you seen a wolf? Can you tell me the story?
- 7. What has influenced your view of wolves?
- 8. What do you think the future of wolf management is in Wyoming? How do you think Wyoming compares to other Western states with wolf populations?

9. What is your perspective on the various organizations working on wolf issues in Wyoming?
10. How has the local/state/national media helped or hindered progress on the wolf issue?
11. What else can you tell me about wolves in this area that you think is important to understand?
12. (If applicable): Would you be interested in participating in a second phase of this project that using spatial analysis to investigate in more depth the nature of conflict between wolves and livestock? This aspect of the project will commence in Fall 2014.

## APPENDIX 3: INTERVIEW CODEBOOK

### CODEBOOK FOR INTERVIEW TRANSCRIPTION

#### Research Questions & Hypotheses

*Central Research Question:* Why is conflict over wolf management in Wyoming perpetuated, despite the purported success of wolf recovery under the Endangered Species Act?

RQ1: What advocacy coalitions exist in the wolf policy subsystem? What are their belief systems? Subsequently, have intracoalition dynamics changed as a result of long-term policy conflict?

*H1: Differences in deep core beliefs between the coalitions help explain the adversarial nature of the subsystem (Weible et al., 2010).*

*H2: Within the wolf-expansion coalition, changing perceptions on the strategy of litigation signal a transition from stronger to weaker coordination between coalition actors at the national and local scales.*

*H3: Members of coalitions at the local level utilize the resource of local knowledge of the policy context to advance progress on policy conflict.*

*H4: The complexity of the scale at which coalitions operate influences long-term coalition stability.*

Context: In terms of the types of policy subsystems, Weible, Pattison, and Sabatier (2010) classify an adversarial subsystem as one where coalitions have wildly conflicting beliefs and little communication between one another. Authority is “fragmented” to varying degrees, and coalitions utilize all available venues to secure their preferred policy outcomes (p. 524). This situation makes finding sustainably policy difficult, and inhibits progress in the policy-making process. Though the pro-wolf and anti-wolf coalitions are the most obviously identified, Sabatier & Weible (2007) acknowledge that others may exist that are differentiated from the commonly-accepted ones through alternative policy beliefs.

RQ3: What are the effects on the policy subsystem of the final “policy output” (Wyoming’s wolf management plan)? What were the policy effects of the subsequent relisting of Wyoming’s wolves in 2014?

*H1: A policy output as directed by a government agency or program will not change significantly as long as the coalition associated with that preferred policy output continues to hold power and influence in that jurisdiction – unless the “change is*



*imposed by a hierarchically superior jurisdiction” (Jenkins-Smith et al., 2014, p. 204)*

*H1a: Members of the “losing” coalition in an adversarial subsystem will respond in two ways to a focusing event such as the implementation of a policy output: circumvention of the policy venue to force a return to the previous policy scenario (e.g., through litigation), or acceptance of the policy and a re-orientation of the problem definition.*

Context: From 2008-2011, Wyoming was resistant to revising the problematic aspects of its management plan that was required for delisting under the U.S. Endangered Species Act. The primary concern was “dual status,” or designating the wolf a trophy game animal in northwest Wyoming and a predator throughout the rest of the state. It appeared that neither the USFWS nor the State of Wyoming would budge, and wolves would remain listed under the Endangered Species Act indefinitely. However, in 2011 Wyoming negotiated the creation of a flex zone, where wolves alternate between status of trophy game and predators depending on the time of the year. This state management plan was accepted by the USFWS. The decision to delist in Wyoming was litigated on several fronts, with the last lawsuit standing in a Washington, D.C. court. In September of 2014, the court’s decision once more placed Wyoming’s wolves on the Endangered Species list.

RQ4: What policy lessons can be learned from the case of Wyoming’s wolf management and policy for future conflicts over Endangered Species listing, delisting, and management?

Context: The role of local knowledge and expertise has not been widely explored in the ACF literature. Weible et al (2010) explored how coalitions used “expert-based information,” or that provided by science, to pursue policy outcomes, and acknowledged that “one important ingredient in the sustainable management of complex [socio-ecological systems] involved the integration of both expert and non-expert knowledge” (p. 522). In their research, they found that scientists tended to join coalitions when the policy sub-system was considered adversarial. In this case study, the role of local knowledge will be explored. Local citizens are often the first affected personally or economically by wolves, and may not have access to decision makers or may feel stifled by resulting policy that is not contextually specific. This research provides an opportunity to test and expand the ACF to understand in more depth the role of the “micro-scale,” or individual

RQ5: What role do local citizens play in contributing to wolf management policy? How can the process by which local citizens access and participate in the policy process be improved?

Social and cultural beliefs affect the interactions that people have with carnivores. These beliefs have not been formally incorporated into science-based management decisions. Local knowledge of the landscape, as well as awareness of traditional human uses, should complement baseline ecological information and scientific data when seeking common-interest solutions to conflict. By giving local stakeholders in the case study communities an opportunity to tell their stories about the landscape, history of the region, and their knowledge and attitudes towards wolves, a better understanding of why conflict occurs can be achieved. Fischer (2000) wrote that when “formal academic knowledge works in a dialectical tension with the popular knowledge of ordinary citizens [it can] produce a deeper contextual understanding of the situation” (p. 179). Primm & Wilson (2004) found that including local actors in the research and planning process through small-scale projects can help facilitate buy-in to policy and management schemes. Wilson conducted extensive research in the Blackfoot Valley of Montana on grizzly bear coexistence, and reduced conflicts to near zero in part due to a participatory GIS mapping component of his research (Primm and Wilson, 2004). Over time, if preventative measures can be designed efficiently and effectively based on the results of this analysis, incidents of the lethal control of problem wolves may decrease, as well as losses of livelihood (defined as livestock or revenue from outfitting) for local ranchers, outfitters, and guides.

### **Coding Instructions**

- Coders should review codebook before coding.
- Coders should read through the full transcript prior to beginning coding.
- When coding, coders should:
  - Code entire sentences, including any necessary contextual information around that sentence (when appropriate or necessary).
  - If coding for a single word using a ‘find’ search, read the entire response to the related question in order to capture any relevant contextual information.
  - Being by coding a single category, or supercode. Read through the entire document for this supercode, and then return to the beginning of the document and start coding the next supercode.
  - Code sections of text into multiple codes, if appropriate.
  - Treat the supercode (e.g. INFOSOUR) as a bin to put text that should be under the broad category but may not fit within one of the pre-established sub-codes.
  - After coding, return to this super-code to determine if additional sub-codes should be created (i.e. emergent categories of data per Corbin and Strauss)

## **Codebook**

- BELIEFS: Mentions of beliefs regarding wolf management (Sabatier & Weible, 2007, p. 194-195)
  - DEEPCORE: Deep-core or normative beliefs
  - POLCORE: Policy core beliefs
  - PCPREFS: Policy core policy preferences
  - SECOND: Secondary beliefs
- RESOURCES: Mentions of resources necessary for a coalition to advocate for policy outcomes.
  - AUTH: Legal authority to make policy decisions (or access to an actor who can do so) (Sabatier & Weible, 2007, p. 201)
  - PUBOP: Public support for position (Sabatier & Weible, 2007, p. 203)
  - INFO: Use of information (scientific, legal, or otherwise) to bolster coalition strength (Sabatier & Weible, 2007, p. 203)
  - MOBIL: “Troops” or volunteers that can advocate on behalf of the coalition position (Sabatier & Weible, 2007, p. 203)
  - FINAN: Financial standing that allows for investment into acquiring other resources (Sabatier & Weible, 2007, p. 203)
  - LEAD: Skilled leaders who can affect policy change (Sabatier & Weible, 2007, p. 203)
- PROCESS: Mentions of the components of the process by which delisting/relisting decisions occurred
  - MEET: Meetings held between or among groups
  - WEBINFO: Information conveyed to the public via website (passive communication)
  - SOCIAL: Information conveyed to the public via social media (active communication)
  - COLLAB: Collaborations with other groups
  - COALIT: Coalition formation, splintering, or other coalition dynamics
  - LITIG: Lawsuits or legal decisions
  - INSTIT: Roles and boundaries of formal institutions (Heikkila, 2004; Ostrom, 1990)
  - COMMENT: Submission of public comments submitted
  - SCIENCE: Role of scientific information
  - EXPERT: Contributions of experts in the field (via publications, testimony, letters, etc.)

- VENUE: Shift or change in venue (e.g., court to hear lawsuit)
- MISSING: Excluded or overlooked participants
- COORD: Coordination among states or USFWS
- FAIL: Failures or shortcomings
- NNGO: Communication with regional or national NGOs
- PUBLIC: Input or participation in process (generally)
- DECISION: Mentions of the characteristics of decision-making process
  - POWER: Level of power in decision-making process (Clark, 2002, p. 158)
  - TRANSP: Transparency/ openness in decision-making (Clark, 2002, p. 72)
  - ACCESS: Access to decision-makers
  - SKILL: Competence of key decision-making personnel (Clark, 2002, p. 75, 158)
  - TRUST: Trust/distrust between members of coalitions/government/etc.
  - COMM: Communication between/among coalitions (e.g., ranchers and conservation groups)
  - OPPO: Mentions of the opponent's perspective
  - SELF: Mentions of the organization's perspective
  - KNOW: Knowledge used or needed to make decisions
- PERCEPTIONS: Mentions of perceptions of Wyoming's management plan
  - COMPARE: Comparison to other states
  - ILLEGAL: Illegal activity
  - MANAGE: Management issues or decisions
- PROBLEM: Mentions of perceptions of where the problem lies
  - PARTIC: Participation in policy-making process
  - PRED: Predator designation in most of the state
  - LAW: Litigation fatigue
  - RANCH: Ranchers can't adapt
  - ENVIRO: Environmental groups continue to litigate
  - NOHUNT: Wolves should not be hunted, or hunting restrictions should be implemented.
  - PROHUNT: Wolves should be hunted with more intensity.
  - REFORM: Laws (ESA or others) need to be reformed

- SOLUTIONS: Mentions of proposed or adopted solutions to resolving conflict over wolf management
  - S-LITIG: Litigation
  - PROJ: Implementation of on-the-ground projects
  - NOPRED: Abolishment of predator status (or establish trophy game zone statewide)
  - NEWPROC: Creation of a new process to address stakeholder conflict over wolf management
  - FEDMGT: Federal management of wolves
  - STATEMGT: State management of wolves
  - LETHAL: Lethal control as a means to reduce conflicts
  - NOWOLF: Remove all wolves from the state
  - FEE: Fee-based system for non-hunters or other users (photographers, tour operators, etc.)
  - NOWIN: Wolf situation is intractable; no solutions are possible
- LOCAL: Mentions of the role of local knowledge, citizen participation, local government, etc.
  - LGOV: Role of local government (e.g., Town Council, County Commissions) in contributing to policy-making for wolf management
  - LCIT: Role of local citizens in contributing to policy-making for wolf management
  - LKNOW: Knowledge or perceptions of local people regarding wolves
  - LNGO: Relationships between local and national NGOs
  - NICHE: Niche topic or area covered by local group
- ENDANG: Mentions of the Endangered Species Act (ESA)
  - GRIZ: Grizzly bears and grizzly bear delisting
  - ESPOS: Successes or victories of the ESA
  - ESNEG: Challenges or shortcomings of the ESA
  - ESNEW: Revisions to the ESA
  - OTHWILD: Other wildlife/ESA issues
- MEDIA: Mentions of the role of media
  - MEDLOC: Local media
  - MEDPRES: Prestige press
  - HELP: Media coverage supports policy progress
  - HURT: Media coverage impairs policy progress

- **OUTCOME:** Describes an outcome, unintended or otherwise, of a political process, tactic, event, etc.
- **CONFLICT:** Mentions of conflict between people & wolves, or between people over wolves
  - **CONLETH:** Use of lethal control to remove problem wolves
  - **EDUC:** Educational efforts to address conflict
  - **LIVEST:** Livestock conflicts and/or losses
  - **ELKHUNT:** Outfitter or hunter conflicts
  - **ECOTOUR:** Concerns with wolf management for eco-tour operators' interests
  - **FENCE:** Use of fladry or electric fencing to deter wolves from livestock
  - **LGDS:** Livestock guarding dogs
  - **NONLETH:** Other non-lethal tools to reduce conflict
  - **FLAD:** Use of fladry to deter wolves from livestock
  - **GRAZE:** Changes in grazing practices
  - **LETHAL:** Use of lethal control to remove problem wolves
  - **RIDER:** Use of a range rider to monitor livestock and/or deter predators

## References

- Fischer, F. (2000). *Citizens, Experts, and the Environment: the Politics of Local Knowledge*. Durham, NC: Duke University Press.
- Heikkila, T. (2004). Institutional boundaries and common pool resource management: A comparative analysis of water management programs in California. *Journal of Policy Analysis and Management*, 23(1), 97–117. JOUR. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1002/pam.10181/abstract>
- Jenkins-Smith, H. C., Nohrsted, D., Weible, C. M., & Sabatier, P. A. (2014). The Advocacy Coalition Framework: Foundation, evolution, and ongoing research. In P. A. Sabatier & C. M. Weible (Eds.), *Theories of the Policy Process* (3rd ed., pp. 183–223). Boulder, CO: Westview Press.
- Ostrom, E. (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. New York, NY: Cambridge University Press.
- Primm, S., & Wilson, S. M. (2004). Re-connecting grizzly bear populations : Prospects for participatory projects. *Ursus*, 15(1), 104–114.
- Sabatier, P. A., & Weible, C. M. (2007). The Advocacy Coalition Framework: Innovations and clarifications. In P. A. Sabatier (Ed.), *Theories of the Policy Process* (2nd ed., pp. 189–220). Boulder, CO: Westview Press.
- Weible, C. M., Pattison, A., & Sabatier, P. A. (2010). Harnessing expert-based information for learning and the sustainable management of complex socio-ecological systems. *Environmental Science and Policy*, 13(6), 522–534. <http://doi.org/10.1016/j.envsci.2010.05.005>

## APPENDIX 4: BUFFALO VALLEY SURVEY INSTRUMENT

### **Local Perspectives on Wolves & Conflict in the Buffalo Valley & Pacific Creek, WY**

Thank you for your willingness to participate in this research! This project is part of a larger study on wolf policy and management in Wyoming, titled, "Is there harmony in the howling? Wolves, people, & coexistence." I am interested in what you think about wolves and wolf conflicts as a property owner in the Buffalo Valley or Pacific Creek. Please be sure to review the information regarding your rights as a survey participant, which was provided in the cover letter with your mailing. Here is a .pdf of that letter for your reference: Survey\_Intro\_Letter.

If you should have questions or concerns before, during, or after you have completed the survey, please contact Lydia A. Dixon, a doctoral candidate in the University of Colorado Boulder's Environmental Studies Program, 397 UCB, Boulder, CO, 80309-0488; (307) 699-1582 or [lydia.dixon@colorado.edu](mailto:lydia.dixon@colorado.edu).

If you have questions regarding your rights as a participant, any concerns regarding this project or any dissatisfaction with any aspect of this study, you may report them -- confidentially, if you wish -- to the University of Colorado's Institutional Review Board, 3100 Marine Street, Rm A15, 563 UCB, (303) 735-3702. Funding has been provided by the Teewinot Institute of Wilson, Wyoming.

Thank you!

Lydia A. Dixon, University of Colorado Boulder, PhD Candidate  
Deserai Crow, University of Colorado Boulder, PhD Faculty Advisor  
Environmental Studies Program, University of Colorado Boulder  
397 UCB, Boulder, CO 80309  
[lydia.dixon@colorado.edu](mailto:lydia.dixon@colorado.edu)  
307-699-1582



Please feel free to skip any questions you do not wish to answer. Thank you for your help!

By checking this box, I acknowledge that I have read the cover letter provided in the survey mailing and I give my consent to participate in this research project.

Q1 What is your tolerance for living and/or working in close proximity to wolves?

- ☐ Extremely Tolerant
- ☐ Very Tolerant
- ☐ Moderately Tolerant
- ☐ Slightly Tolerant
- ☐ Not at all Tolerant

Q2 Have you experienced a conflict with wolves in the Buffalo Valley or Pacific Creek?

- ☐ No
- ☐ Yes

If No Is Selected, Then Skip to What are the best ways to address con...

Describe your experience in a couple of words:

Q2a What was the nature of the conflict(s)? Select all that apply.

- ☐ Livestock depredation (killing)
- ☐ Decreased hunting opportunity for your clients
- ☐ Unsuccessful personal hunt (e.g., unfilled elk tag)
- ☐ Death or injury to a horse
- ☐ Death or injury to a dog
- ☐ Death or injury to another pet
- ☐ Feeling of threat to your personal security or sense of well-being
- ☐ Other: \_\_\_\_\_

Q2b When & where did these conflict(s) occur?

	Type of Conflict	Location	Month/Year
Conflict 1			
Conflict 2			
Conflict 3			
Conflict 4			
Conflict 5			

Q2c How willing are you to work with government agencies or non-profit organizations to reduce the threat of conflict with wolves?

- Very willing
- Somewhat willing
- Not willing

Do you have comments on wolf conflicts that you have experienced and/or your willingness to help resolve them?

Q3 What are the best ways to address conflicts between people & wolves in the Buffalo Valley/Pacific Creek areas? Check all that apply.

- Use lethal control.
- Relocate problem wolves.
- Utilize non-lethal tools, such as guns with rubber bullets to scare wolves or electric fencing to protect livestock and pets.
- Educate residents and visitors on how to react in the event of a wolf encounter, such as with dogs.
- Use communication methods, such as listservs or homeowners' associations, to share knowledge of wolf activity.
- Provide financial support to businesses affected by wolves
- Improve coordination among state and federal managers
- Enlist the help of non-governmental organizations to address conflict areas.
- Conduct more research on wolves.
- Other: \_\_\_\_\_

Do you have comments on other methods or approaches to reducing conflicts?

Q4 Who should take the lead in managing conflicts between people and wolves?

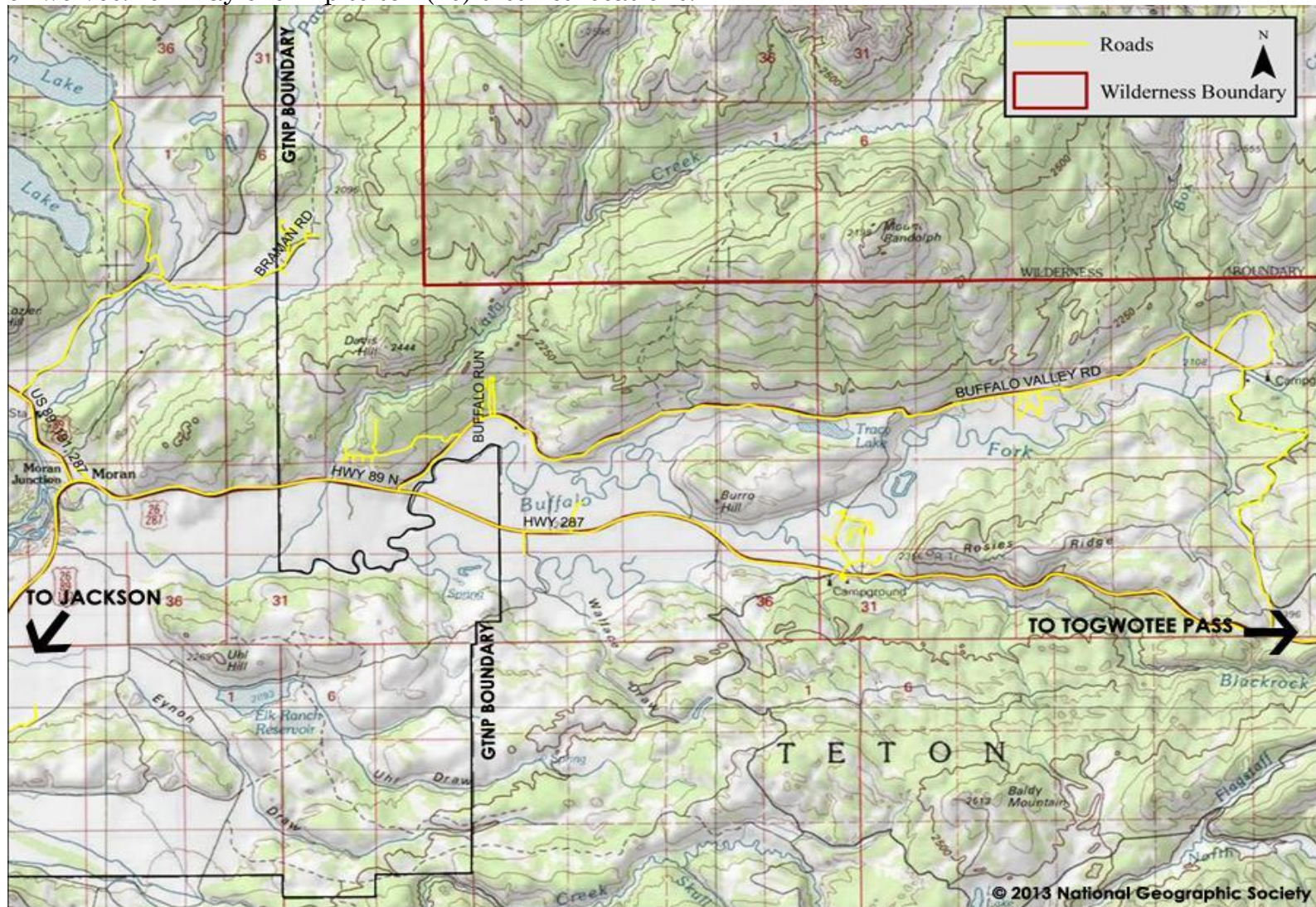
- Wyoming Game & Fish Department (state agency)
- U.S. Fish and Wildlife Service (federal agency)
- Private landowners
- Community groups
- Non-profit organizations
- Collaborative effort among agencies/groups
- None of the above
- Other: \_\_\_\_\_

Q5 Have you seen a wolf or wolves in this area?

- No
- Yes

If No Is Selected, Then Skip To Have you observed changes in elk dist...

Q5a Where have you seen wolves? Please click on the map below on specific points where you have observed a wolf or wolves. You may click up to ten (10) distinct locations.



Q5b What time of year have you seen wolves? Please specify the month, if possible.

- ☐ Spring \_\_\_\_\_
- ☐ Summer \_\_\_\_\_
- ☐ Fall \_\_\_\_\_
- ☐ Winter \_\_\_\_\_

Q5c Which wolf activities or signs have you seen? Check all that apply.

- ☐ Hunting
- ☐ Killing prey
- ☐ Howling
- ☐ Playing
- ☐ With pups
- ☐ Around livestock
- ☐ Eating
- ☐ Sleeping
- ☐ Traveling
- ☐ Wolf dens
- ☐ Carcasses of prey
- ☐ Other: \_\_\_\_\_

Q6 Have you observed changes in elk distribution and/or population in the past 10 years?

- ☐ Increase
- ☐ Decrease
- ☐ No change
- ☐ Not sure

Q6a What do you think are the main cause(s) of changes in elk distribution and/or population? (Check no more than two.)

- ☐ Disease
- ☐ Wolf predation
- ☐ Grizzly bear predation
- ☐ Hunting
- ☐ Habitat loss/land use changes
- ☐ Other: \_\_\_\_\_

Q7 Have you observed changes in moose distribution and/or population in the past 10 years?

- ☐ Increase
- ☐ Decrease
- ☐ No change
- ☐ Not sure

Q7a What do you think are the main cause(s) of changes in moose distribution and/or population? (Check no more than two.)

- ☐ Disease
- ☐ Wolf predation
- ☐ Grizzly bear predation
- ☐ Hunting
- ☐ Habitat loss/land use changes
- ☐ Other:

Q8 How long have you lived or owned property in the Buffalo Valley or Pacific Creek areas?

- ☐ Less than 1 year
- ☐ 1 – 5 years
- ☐ 6 – 10 years
- ☐ More than 10 years

Q9 Where is your property located?

- ☐ Teton Wilderness Ranch
- ☐ Pacific Creek
- ☐ Buffalo Valley Estates
- ☐ May Subdivision
- ☐ Buffalo Valley Rd.
- ☐ Buffalo Fork Ranch
- ☐ Mountain View Ranch
- ☐ North of HWY 26/287
- ☐ South of HWY 26/287
- ☐ Other: \_\_\_\_\_

Q10 In what year were you born?

Q11 What is your gender?

- ☐ Male
- ☐ Female

Q12 Are you a full-time or part-time resident of the Buffalo Valley?

- ☐ Full-time
- ☐ Part-Time

If Full-time Is Selected, Then Skip To End of Block

Q12a What time of year do you visit your property?

Q12b In a typical year, how much time do you spend at your property?

Weekends

- ☐ Less than one week
- ☐ Between one week and one month
- ☐ One – three months
- ☐ Three – six months
- ☐ More than six months

Q12c Where is your primary residence (City, State)?

Q13 Please provide any additional information you would like to share below.

Q14 I am looking for a small sample of folks from the Buffalo Valley and Pacific Creek to interview and learn more about land use and wolf activity in this area using mapping tools. Would you be willing to participate in the next phase of this project to share your knowledge? If you do not wish to be interviewed, but would like a final project report, please check the appropriate box below and include your email address.

1. YES, I am willing to be contacted regarding a possible follow-up interview.
2. NO, I do not wish to be interviewed, but I would like to receive the final project report via email. Email address: \_\_\_\_\_

If NO, I do not wish to be int... Is Selected, Then Skip To End of Survey

Q15 Please provide your contact information below. Please note that your contact information will not be shared anywhere, and will not be associated with your survey.

Q15a Name:

Q15b Email Address:

Q15c Phone Number:

Q15d I prefer follow-up via:

1. Email
2. Phone



## APPENDIX 5: EXPERT NON-LOCAL STAKEHOLDER SURVEY INSTRUMENT

The survey can also be reviewed here:

[https://cuboulder.qualtrics.com/jfe/preview/SV\\_entUMt89Apu7109](https://cuboulder.qualtrics.com/jfe/preview/SV_entUMt89Apu7109)

The password for the survey is “wolves2016”

Thank you in advance for your participation! The goal of this project, which will be part of my dissertation, is to understand how stakeholders from around the country view gray wolf management and policy, as well as what you have learned from a policy perspective from the wolf case. My case study is Wyoming, but if you have experience or lessons learned from other western states where you’ve worked on wolf issues, please do share your perspective as well! The survey should take no more than 20 minutes to complete.

Please submit your response by February 1, 2016.

As a survey respondent, please know that:

- It is entirely your choice as to whether you participate in this research project.
- There are no direct benefits to you as a participant in this project.
- Your responses will be kept anonymous; at no time will your name be associated with any data you provide.
- You may feel free to skip any questions that you do not want to answer, and you can end the survey whenever you wish.

If you should have questions or concerns before, during, or after you have completed the survey, you may contact me at 397 UCB, Boulder, CO, 80309-0488; (307)699-1582 or [lydia.lawhon@colorado.edu](mailto:lydia.lawhon@colorado.edu). If you have questions regarding your rights as a participant, any concerns regarding this project or any dissatisfaction with any aspect of this study, you may report them -- confidentially, if you wish -- to the University of Colorado’s Institutional Review Board, 3100 Marine Street, Rm A15, 563 UCB, (303) 735-3702.

In order to proceed, you’ll need to confirm that you’ve read the information regarding participation and provide your consent to take part in this research project.

By checking this box, I consent to my participation in this research project.



Please indicate in which sector you work:

- ☐ Private (e.g., business, consulting)
- ☐ Non-profit (501(c)3)
- ☐ Non-profit (501(c)4)
- ☐ Government Agency
- ☐ University or other academic institution
- ☐ Other (Please specify): \_\_\_\_\_

What is the name of the organization/entity/agency for which you work?

What is your job title?

How long have you held this position?

- ☐ < 1 year
- ☐ 1-3 years
- ☐ 4-6 years
- ☐ 7-10 years
- ☐ > 10 years

Where is your office located? (City, State).

Have you worked on wolf issues in your current job?

- ☐ Yes
- ☐ No

Did you work on wolf issues in a previous job? Please identify the organization & your previous positions.

How long have you worked on wolf issues in North America?

- ☐ Less than one year
- ☐ 1-3 years
- ☐ 4-6 years
- ☐ 7-10 years
- ☐ More than 10 years

Are you familiar with wolf policy and management in the Northern Rockies (e.g., Montana, Idaho, Wyoming)?

- ☐ Yes
- ☐ No

If No Is Selected, Then Skip To End of Survey

Are you familiar with wolf policy and management in Wyoming?

- ☐ Yes
- ☐ No

Does your organization have field office(s) in states/regions where there are wolves?

- ☐ Yes
- ☐ No

If No Is Selected, Then Skip To End of Block

Please describe the average frequency of your interactions with your field offices to discuss wolf issues.

	Travel/ visits to field office	Field staff travel/ visits to your office	Phone/ conference calls	Email	Annual meetings/ events hosted by your organization/ agency	Conferences/ meetings organized by other entities (e.g., academic conferences, Wildlife Society meetings, etc.)	Passive communi- cation (newslett ers, annual reports, etc.)
Annually	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quarterly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Monthly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Weekly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Daily	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Never	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there any other ways in which you interact with your field offices to discuss wolf issues? Please describe them here.

On a scale of one (lowest level of credibility) to seven (highest level of credibility), how credible do you consider the following sources of information on wolves?

	1 (Least Credible)	2	3	4 (Neutral)	5 (Most Credible)	Not sure
Publications produced by your organization/agency at your main office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publications produced by your	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

organization/agency's field office(s)						
Publications from other organizations/agencies with whom you work closely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publications from other organizations with whom you do not work closely	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publications from federal government agencies (e.g., U.S. Fish & Wildlife Service)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publications from state agencies (e.g., Wyoming Game & Fish Department)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research produced by university-affiliated groups or individuals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research produced by independent contractors or consultants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information offered by local organizations in areas where there are wolf populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information offered by local citizens in areas where there are wolf populations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there other sources of information on wolves that you use? Please describe them here.

Please rate your level of agreement with the following statements, with one being strongly agree and five being strongly disagree

	1 (Strongly Agree)	2	3 (Neutral)	4	5 (Strongly Disagree)	Not Sure
My organization/agency is considered a leader in working on issues associated with wolf management & policy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My organization/agency is considered a leader in conducting research on wolves.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our work is viewed favorably by other like-minded organizations working on wolf issues nationally.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our work is viewed favorably by like-minded organizations working regionally in the Greater Yellowstone area on wolf issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Our work is viewed favorably by local citizens who reside in areas with wolf populations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please rate the following tactics to address conflicts over wolf management on a scale of 1 (most effective) to 5 (least effective)

	1 (Most Effective)	2	3 (Neutral)	4	5 (Least Effective)	Not Sure
Providing field education & outreach (e.g., field courses, field trips)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizing stakeholder collaborations/meetings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Implementing on-the-ground projects (e.g., testing non-lethal deterrents, retiring grazing allotments)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lobbying the state government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lobbying the federal government	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting media outreach (e.g., press releases, press conferences, interviews)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizing events (e.g., lectures, films, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Producing non-academic materials (e.g., newsletters, annual reports, websites)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting social media campaigns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Litigating policy decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organizing conferences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Publishing academic research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there other tactics that you find effective for addressing conflict over wolf management? Please describe them here.

Please discuss any strategies/approaches/tools that you consider innovative which your organization/agency has used when working on wolf issues. (If applicable, please feel free to add a hyperlink here to another site describing the innovation.)

Please discussion any strategies/approaches/tools that you consider innovative which other organizations/agencies have used when working on wolf issues. (If applicable, please feel free to add a hyperlink here to another site describing the innovation.)

In this section, please describe the nature of your working relationship with other organizations with which you work closely on wolf issues. You may enter up to five organizations.

Please list organization/agency #1. (This question is identical for each organization.)

Please describe the nature and frequency of your work with this organization/agency.

	Daily	Weekly	Monthly	Annually	Never
Planning events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Coordinating education/outreach activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting ecological or biological research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting policy research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Conducting social science research	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lobbying	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Litigating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Implementing projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fundraising	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Managing wolves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Producing or publishing information (e.g., white papers, mailings, position statements, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Are there other areas in which you work with this organization? Please describe below.

*Would you like to add another organization?*

- ☐ Yes
- ☐ No

If No Is Selected, Then Skip To Are there other organizations that yo...

Please list the names of any other organizations with which you may interact with less closely, yet are still important to the work you conduct.

Answer If Are you familiar with wolf policy and management in Wyoming; Yes Is Selected

Does your organization currently have a position on wolves in Wyoming?

- ☐ Yes
- ☐ No

If No Is Selected, Then Skip To Please describe any lessons that your...

Answer If Are you familiar with wolf policy and management in Wyoming? Yes Is Selected

Please briefly describe your organization/agency's position on wolf management & policy in Wyoming.

Answer If Are you familiar with wolf policy and management in Wyoming? Yes Is Selected

Has your organization/agency's position on wolf management and policy in Wyoming changed since 2008, when the first gray wolf delisting rule was passed?

- ☐ Yes
- ☐ No, our position has remained consistent.

If No, our position has remain... Is Selected, Then Skip To Please describe any lessons that your...

Answer If Has your organization/agency's position on wolf management and policy in Wyoming changed since 2008, when the first gray wolf delisting rule was passed? Yes Is Selected

Briefly describe how it has changed, including if your organization/agency no longer works on wolf issues.

Answer If Has your organization/agency's position on wolf management and policy in Wyoming changed since 2008, when the first gray wolf delisting rule was passed? Yes Is Selected

Which factors influenced your organization/agency's change in position? Please check all that apply.

- ☐ Change in organization/agency leadership
- ☐ Change in governing Board perspectives
- ☐ Change in staff/employee perspectives
- ☐ Change in donor perspectives
- ☐ Change in member or supporter perspectives
- ☐ Change in partner or collaborator perspectives
- ☐ Change directed by higher levels of your organization (e.g., national office)
- ☐ National or state election results prompted change in organizational/agency priorities
- ☐ Review/evaluation of former approach prompted development of new strategy
- ☐ General organizational restructuring (new staff, other priorities, etc.)
- ☐ New ecological or biological information
- ☐ New social science information
- ☐ Wolf issue resolved in a way that is satisfactory to your organization.
- ☐ Wolf issue seems intractable.
- ☐ Fewer resources available to devote to the wolf issue (e.g., staff, budget)
- ☐ More resources available to devote to the wolf issue (e.g, staff, budget)
- ☐ Other (please describe): \_\_\_\_\_

Please describe any lessons that your organization has learned from working on the wolf case. Consider, for example, how you might approach future Endangered Species Act issues.

Answer If Are you familiar with wolf policy and management in Wyoming? Yes Is Selected

Sometime in the next couple of years, it is possible that Wyoming will resume management of wolves. Please consider your organization's perspective on Wyoming's wolf management in this section.



Answer If Are you familiar with wolf policy and management in Wyoming? Yes Is Selected

Please consider the management of wolves in Wyoming over the past decade and rate your satisfaction with the following management scenarios.

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
U.S. Fish & Wildlife Service's wolf management (Sept. 2014-today)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The state of Wyoming's wolf management (September of 2012 – September of 2014)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
U.S. Fish and Wildlife Service's wolf management (pre-Sept. 2012)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Answer If Are you familiar with wolf policy and management in Wyoming? Yes Is Selected

Do you think management decisions (e.g., hunting, lethal control, monitoring, etc.) will be made in a way that is satisfactory to your organization when the state of Wyoming resumes management of wolves?

- ☐ Very Unlikely
- ☐ Unlikely
- ☐ Undecided
- ☐ Likely
- ☐ Very Likely

Answer If Are you familiar with wolf policy and management in Wyoming? Yes Is Selected

Do you think your organization would consider any of the following responses to the decision to return management of wolves to the State of Wyoming? Please check all that apply.

- ☐ Litigating at the state level
- ☐ Litigating at the federal level
- ☐ Lobbying the state to change regulations (on hunting, status, etc.)
- ☐ Participating in stakeholder discussions or working groups regionally
- ☐ Pursuing on-the-ground projects (e.g., testing non-lethal deterrents, retiring grazing allotments)
- ☐ Conducting media outreach (e.g., press releases, press conferences, interviews)
- ☐ Conducting citizen outreach to your organization's constituents in Wyoming through events, promotional materials, social media campaigns.
- ☐ Conducting citizen outreach to your organization's constituents outside of Wyoming through events, promotional materials, social media campaigns.
- ☐ Organizing a conference on the issue for stakeholders
- ☐ Producing non-academic informational materials (e.g., newsletters, mailings, etc.)
- ☐ Other (please specify): \_\_\_\_\_

Please indicate your level of agreement with the following statements regarding the Endangered Species Act.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The Endangered Species Act should not be altered.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Endangered Species Act needs revisions in order to improve its effectiveness.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The Endangered Species Act is outdated and needs to be	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

fundamentally rewritten.					
The gray wolf is an example of an Endangered Species Act success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Congressional delisting of endangered species is unacceptable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Agency (USFWS) delisting of endangered species is unacceptable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your level of agreement with the following statements.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
We are approaching the limit of the number of people the Earth can support.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humans have the right to modify the natural environment to suit their needs.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Humans are seriously abusing the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plants and animals have as much right as humans to exist.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The balance of nature is	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

strong enough to cope with the impacts of modern industrial nations.					
Despite our special abilities, humans are still subject to the laws of nature.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The so-called “ecological crisis” facing humankind has been greatly exaggerated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If things continue on their present course, we will soon experience a major ecological catastrophe.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please indicate your gender.

- ☐ Male
- ☐ Female
- ☐ Prefer not to respond

Please indicate your highest level of education.

- ☐ Less than high school diploma
- ☐ High school graduate, diploma or the equivalent (for example: GED)
- ☐ Some college credit, no degree
- ☐ Trade/technical/vocational training
- ☐ Associate degree
- ☐ Bachelor’s degree
- ☐ Master’s degree
- ☐ Terminal graduate degree (e.g., Ph.D., M.D., J.D.)

Please indicate your age.

- Under 20
- 20 - 29
- 30 - 39
- 40 - 49
- 50 - 59
- 60 - 69
- 70 +

What is your political affiliation?

- Republican
- Democrat
- Independent
- Other: \_\_\_\_\_

Where do you live?

- New England - Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
- Middle Atlantic - New Jersey, New York, Pennsylvania
- East North Central - Illinois, Indiana, Michigan, Ohio, Wisconsin
- West North Central - Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
- South Atlantic - Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
- East South Central - Alabama, Kentucky, Mississippi, Tennessee
- West South Central - Arkansas, Louisiana, Oklahoma, Texas
- Mountain - Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
- Pacific - Alaska, California, Hawaii, Oregon, Washington

Do you have any other thoughts or comments on wolves that you would like to share?

If you would like to receive updates and/or results of this research, please include your name & email address here.

Thanks for your participation! I look forward to sharing results with you.

Please feel free to follow up with me if you have additional comments, questions, or concerns: [lydia.lawhon@colorado.edu](mailto:lydia.lawhon@colorado.edu).