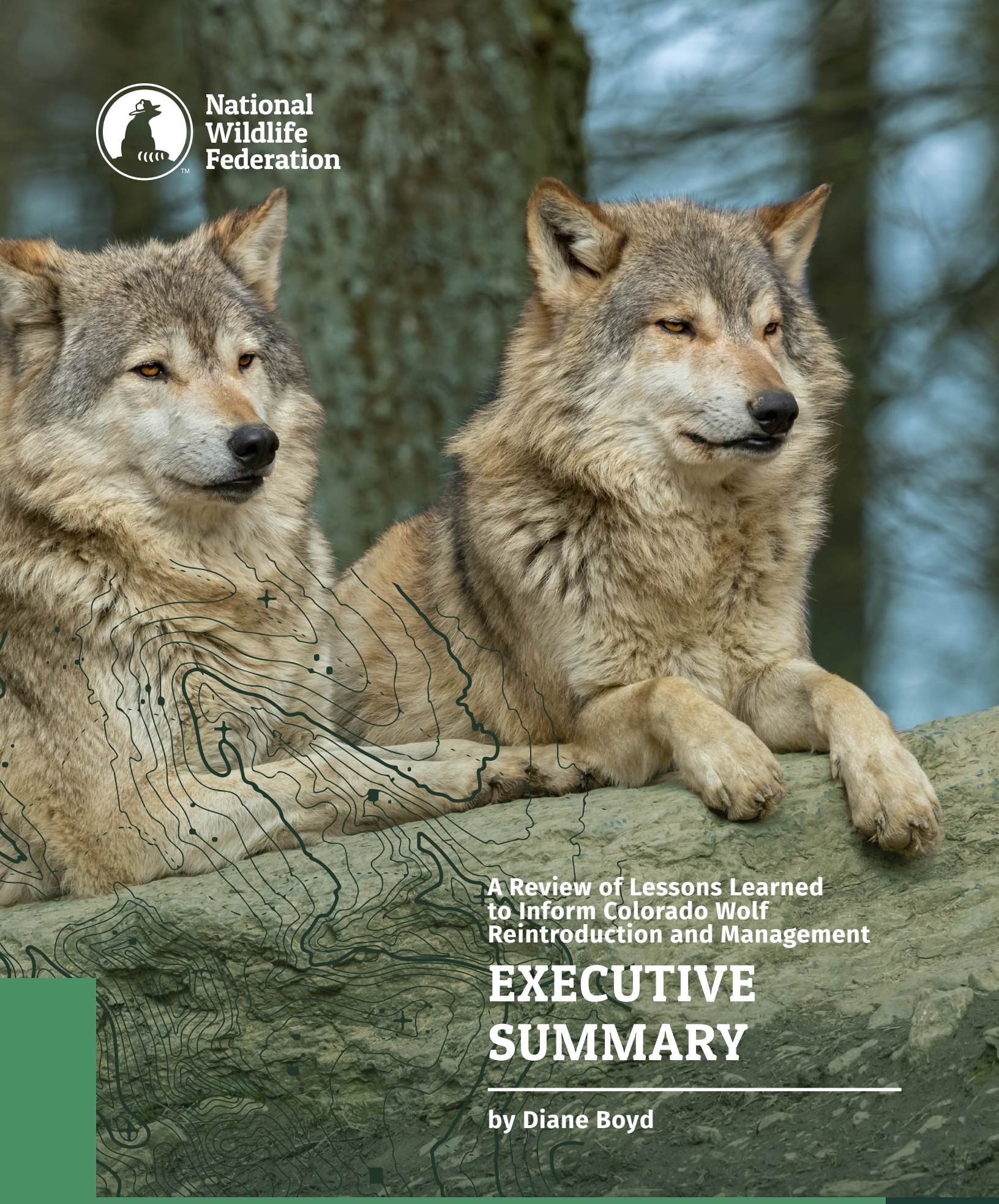
National Wildlife Federation



A Review of Lessons Learned to Inform Colorado Wolf Reintroduction and Management

EXECUTIVE SUMMARY

by Diane Boyd

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Introduction

This review will provide science-based information to the Colorado Parks and Wildlife Commission (PWC), stakeholders, agencies and the general public on gray wolf reintroduction, management and the human-driven processes necessary to help wolf recovery succeed. Based on the best biological and social information available, this review provides a thorough analysis of the processes involved and lessons learned in other states: what worked, what didn't, and why. The goal is to encapsulate experience from gray wolf restoration processes across the U.S. to enrich present and future wolf recovery efforts in Colorado. Wolf recovery and associated management has been ongoing in a number of states for four decades, and Colorado Parks and Wildlife (CPW) can benefit from the lessons learned and the experience gained in other states where wolves are recovering. The sections below summarize top trends, themes and lessons learned through extensive expert interviews, review of gray and scientific literature, analysis of wolf management plans and other outreach.

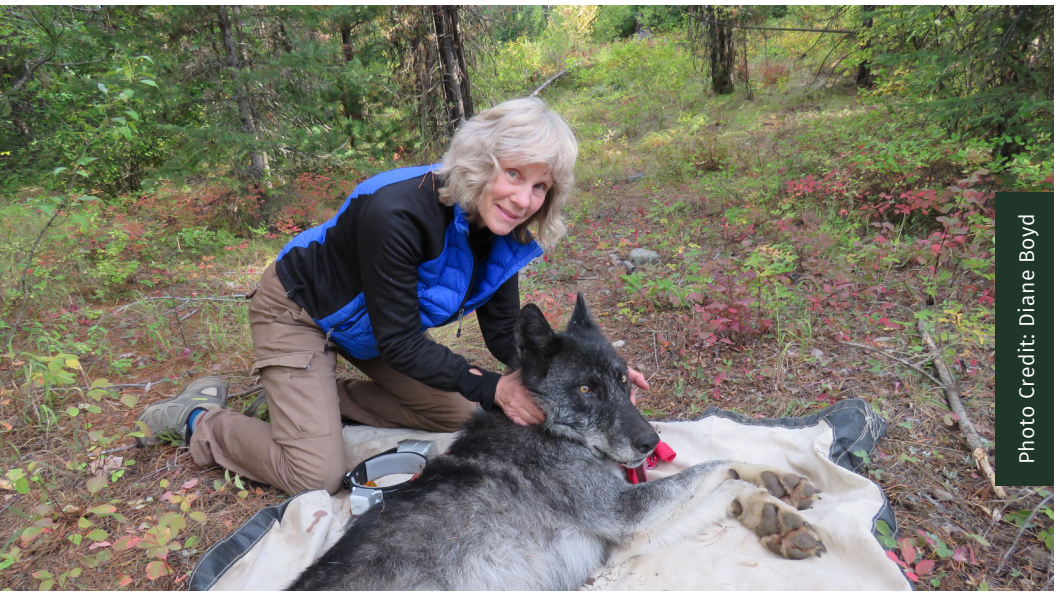


Photo Credit: Diane Boyd

Wolf Biology

Wolves are highly adaptable, habitat and prey generalists who need three main things to survive and thrive: 1) adequate wild prey, 2) refuge for reproduction and pup rearing and 3) freedom to survive on the landscape. The social, not biological, challenges are by far the greatest challenge for wildlife managers to address. Wolves are excellent long-distance dispersers and will travel extensive distances and rapidly recolonize a landscape. Managers should expect them to expand their range relatively rapidly and prepare for them to be in areas outside reintroduction areas. All of these traits combine to make wolves a resilient species and very successful colonizers that, biologically, would be expected to have a relatively swift recovery with human social tolerance as the main limiting factor. Where wolves have recovered, there are still sustainable, huntable big game populations, but predicting the effects of wolf predation on their prey is very challenging. Wolves may impact some ungulate herds at a local scale, so close monitoring of ungulate populations is needed to discern whether wolves are a primary factor and help managers evaluate if management actions are appropriate. Presence of wolves may reduce some predator populations (e.g., coyotes) and have far-reaching ecological benefits such as trophic cascades in some locations. However, these ecological affects are not consistent across the landscape and should not be expected to occur wherever wolves are present. Additionally, there is currently no conclusive research regarding the effects of wolf presence on ungulate diseases such as Chronic Wasting Disease (CWD).

Wolf Reintroduction Logistics

It is important to select source wolves for reintroduction that have similar habitat and prey requirements that they will encounter in Colorado. Both soft and hard releases for reintroductions were successful in establishing wolf populations in Wyoming and Idaho, so CPW should determine which method to use based on desired biological and social outcomes, while also considering financial investments that would be necessary. Wolves that are reintroduced by soft release are somewhat more likely to remain in the area they are released. If avoiding immediate dispersal of wolves is a concern, soft release may have benefits, though requiring a substantially greater investment in financial and staff resources. With either release method, managers must expect reintroduced wolves to disperse outside the reintroduction area over time. Biologically-suitable wolf reintroduction sites are found throughout western Colorado, and social concerns are paramount in determining the success of wolf recovery. Therefore, wolf reintroduction site considerations should prioritize the social and logistical considerations such as what permits would be required on various land jurisdictions and efforts to address local community concerns, avoid creating deeper resentment and foster long-term social tolerance.

Photo Credit: Kira Cassidy

Addressing Livestock Depredation

Colorado would benefit from a comprehensive approach to managing wolf-livestock conflict that includes various strategies for conflict reduction, compensation for loss and, when warranted, wolf removal, as has been demonstrated in other western and midwestern states. Compensating ranchers for confirmed and probable livestock losses, validated by highly-trained professionals, is a critical strategy. Compensation programs should be developed with ranchers and wolf advocates to find an acceptable compensation plan that addresses the actual economic impacts of wolf depredations on Colorado ranchers while building as much goodwill with the ranching and rural communities as possible, which may include some compensation for missing livestock and production losses. Ranchers must have trust in the agency tasked with implementing the compensation program and that agency must have adequate capacity and funding available to implement a compensation program in a timely manner. A compensation process that moves quickly from validation to payment is a critical element of those compensation programs that are more well-received by the ranching community. Success may be dependent on having adequate funding, a clearly defined and relatively straightforward compensation plan, a trusted agency to implement the program and regular monitoring and auditing of the program to ensure confidence.

Photo Credit: David Hiser

A robust and proactive conflict reduction program is critical as a companion to livestock compensation to address wolf-livestock conflict. Supporting ranchers with adequate resources and technical assistance to identify and employ methods tailored to their ranching situation may result in greater adoption and success of conflict reduction tools. A collaborative approach between agencies, local ranching communities and nonprofit organizations to build an alliance to fund and implement conflict reduction techniques will be important to build lasting relationships, which also may increase social tolerance. Several notable examples where this model has been effective include the Blackfoot Challenge and Tom Miner Basin Association in Montana, and the Wood River Wolf Project in Idaho. Most non-lethal conflict reduction techniques are locally effective for short periods in pasture settings, while human presence (e.g., range riders) are particularly valuable in open range grazing operations.

Based on experience in other lower 48 states where wolves are present, it is key for Colorado to consider lethal control guidelines and methods early in the planning process to prepare for the time when wolves present chronic depredation challenges, even if affected ranchers and agencies have made consistent and credible efforts to proactively deter livestock depredation. Colorado would benefit from the development of a detailed decision framework that identifies any necessary conflict reduction measures by affected ranchers and agencies, as well as agreed-upon thresholds for lethal wolf removal and expectations for carrying out any lethal removal. While not socially palatable to some, wolf removal may address some acute impacts of wolves to Coloradans most negatively affected by growing wolf populations. These decisions will be scrutinized, so a clear decision framework that first considers non-lethal options, then potential wolf removal, will be critical to aid in decision-making, public relations and any efforts to increase the potential for rural communities to live and work with wolves. It is also critical to invest in social science research that will examine the causal impact of various management strategies on the reduction of wolf-livestock conflict and the level of social tolerance for the presence of wolves and wolf removal.

Wolf Management

The North American Model for Wildlife Conservation can provide guidance on wolf management goals and critical considerations. This model is based on using science-based policies to manage wildlife, which, with wolves, can be challenging based on strong public opinions and resulting politicization of wolf management. Colorado should make every effort to produce a plan that lays out management strategies that proactively address inevitable conflicts to reduce the impacts of wolves on rural communities while prioritizing the collection of extensive data to inform science-based decision-making and reduce the politicization of wolf management.

The status of wolves and associated management in Colorado should adapt as populations grow to assure adequate management flexibility that can address conflict situations that arise while supporting wolf recovery. Colorado's criteria used for down-listing, delisting or deciding on other changes in wolf management should be wary of relying solely on single population objectives, as these may be viewed as population targets. Recovery based primarily on single population numbers sets the stage for political struggles, frustrated stakeholders on all sides of the issue, and wolf managers being asked to manage outside of the best science in an effort to manage toward one specific number of wolves. Colorado may consider setting recovery and management objectives based on a variety of viable population metrics or benchmarks (as CPW did to gauge the success of Canada lynx reintroduction) based on a growing set of conservation biology species recovery recommendations.

Whether wolf status is blanketed across the state or divided into management zones will depend on whether certain geographical zones warrant distinct management prescriptions or whether there is an advantage to maintaining consistent status across Colorado. A decision on zoning should be made early in the planning process given that adjusting these in the future would create substantial challenges for public expectations and enforcement.

Essentially all professional wolf biologists and managers interviewed for this report stated that some form of wolf harvest will be a critical future management tool in Colorado, only after wolf populations meet specific recovery criteria. It is recommended that the Commission, agency and stakeholders discuss potential for post-recovery wolf harvest early on in the planning process, even though any potential harvest may be a long time in the future and ultimately may remove very few wolves.

Social Factors, Outreach & Public Engagement

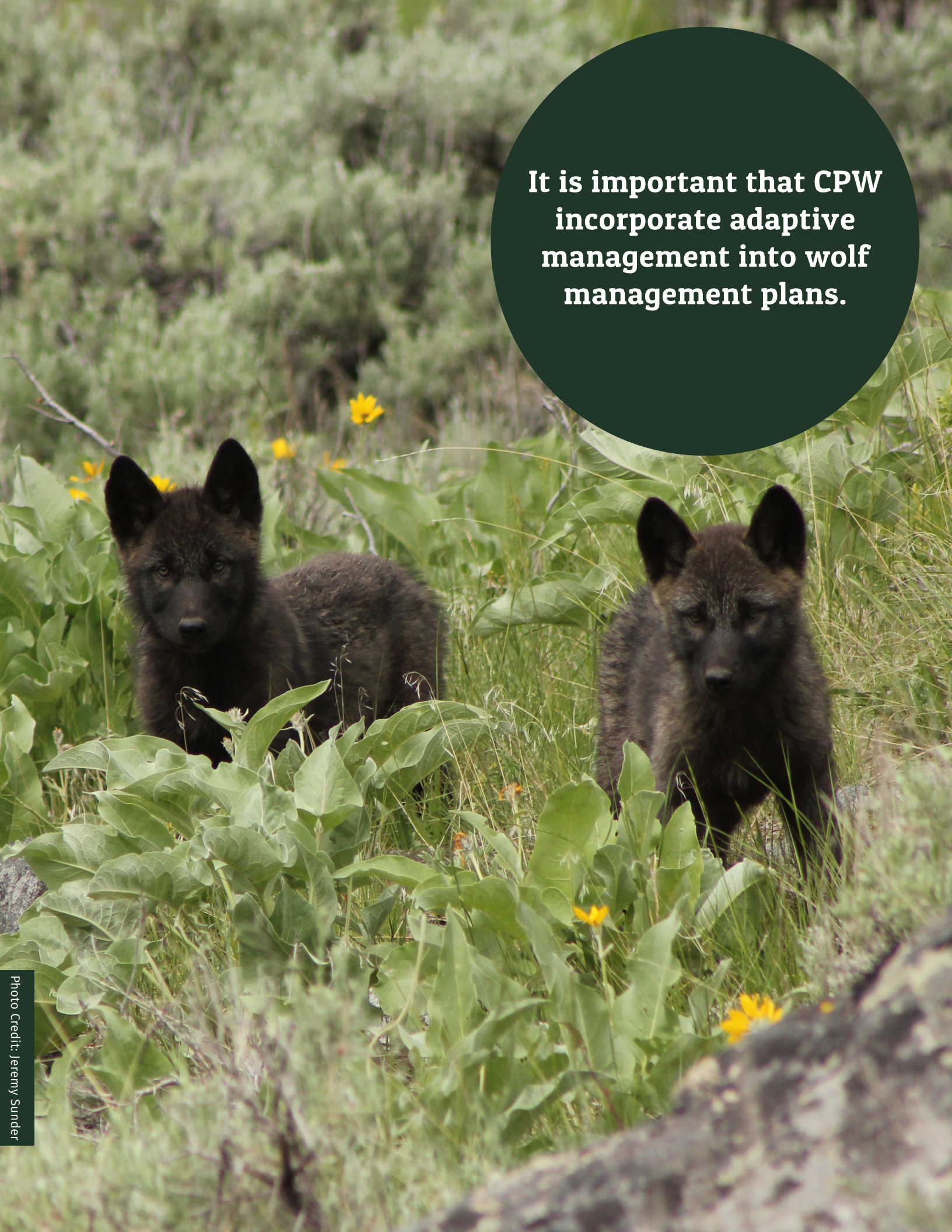
People's beliefs about wolves are often value-laden, passed down for generations, and/or not easily swayed by scientific data. However, it is still critical for the ongoing Colorado public engagement effort to creatively and consistently convey scientifically accurate data and to proactively counter common myths, combined with active resolution of conflicts, extensive outreach to all stakeholders and clear and transparent planning and adaptive management that builds trust and relationships. Listening is critical to authentic engagement, so CPW field staff must have the capacity to hear people out as part of a process that can then lead to the business of resolving conflicts. Wherever possible, it is important that local field staff that have local trust are the face of this work with the public. CPW must make substantial and consistent efforts to truly hear people who are being impacted the most by the return of the wolf (e.g., ranchers, hunting outfitters) and involve them in the planning process early on, as well as in the adaptive management process that should be driven in part by robust social data. In addition, it is important that annual wolf reports and regular website updates are written in a manner that is accessible and understandable to the general public with active efforts to hear public feedback.

Planning and Implementation

Critical wolf management planning components involve: setting measurable, agreed-upon goals; proactively identifying core activities needed to improve social tolerance; making detailed plans to address conflicts adequately over time with extensive monitoring and adaptive management; assuring adequate long-term funding; and building trust between agencies and stakeholders that could achieve long-term wolf sustainability.

It is important that CPW incorporate adaptive management into wolf management plans to adjust as the wolf population grows. Based on recent history, once wolves become established, it requires approximately 15 years before there is a substantial increase in wolf conflicts and the associated social and political struggles that can marginalize science and best management practices. It is critical that CPW draft a durable plan based on the best science available, and incorporate regular milestones to revisit the plan with stakeholders. CPW should commit to stick to the plan, and be prepared to adapt implementation of the plan based on monitoring results, no matter what political pressures appear. This plan will offer the public very clear expectations of the measures CPW will undertake as wolf numbers increase or decrease. It is critical that CPW not let the outreach process fade after adoption of the plan. The plan needs to maintain its momentum coupled with regular public outreach so that people maintain or build trust in the agency that the plan is working, using the best data and adapting to address important issues.

For plan implementation, it will be critical to hire good people and let them do their job, preferably from within local communities, be available to answer all calls, have excellent listening skills, go on site to address concerns/problems and build trust with local groups.



It is important that CPW incorporate adaptive management into wolf management plans.

Photo Credit: Jeremy Sunder

Monitoring & Research Considerations

Wolf monitoring will be essential, and can be accomplished using a suite of heavily-tested methods that can be tailored to fit budgets and the specific biological or social questions asked about wolf populations and behavior. The selection of wolf monitoring methods should follow best scientific practice learned from decades of testing in other states, and may evolve with Colorado's wolf population as methods continue to improve. Being clear with the public about what data will, and will not, be available on wolf individuals and populations is critical to avoid unrealistic expectations.

While wolf monitoring captures public attention, it is critical that biological monitoring of other species is also supported over time, particularly the population monitoring of deer, elk, or moose that are most likely to overlap with wolf packs. Assuring the robust gathering of ungulate data at the Game Management Unit or Data Analysis Unit level, not just statewide, will be essential to help CPW proactively address concerns of hunters, outfitters and others interested in big game populations and associated economies. Long-term monitoring of ecological conditions in areas where wolves are and are not present may also shed light on whether and how the presence of wolves might be affecting biodiversity and other ecological systems.

It is critical to assure that funds are dedicated to learning the trajectory of social attitudes toward wolves.

By auditing and monitoring the effectiveness of any livestock compensation programs, conflict reduction techniques and wolf removal activities, CPW can also ensure that they are adjusting wolf management and livestock programs appropriately to address livestock conflicts.

It is critical to assure that funds are dedicated to regular, geographically-targeted social surveys and other means of learning the trajectory of social attitudes toward wolves. Such efforts should have the ability to identify trends in attitudes toward wolves by ranching, hunting and rural communities, along with general perceptions on wolf management, to identify potential social issues before they become critical and to inform outreach priorities and adaptive management needs.

CPW is presented with a unique opportunity that may serve as a living laboratory for multiple research projects such as the interaction of wolves and ungulates, livestock, other wildlife, etc., coupled with social attitudes and effectiveness of public involvement. If agencies, universities and nonprofits proactively seek funding for research projects, this can ensure that CPW has adequate information to support the long-term success of Colorado's wolf population and reduce societal conflicts around wolves.

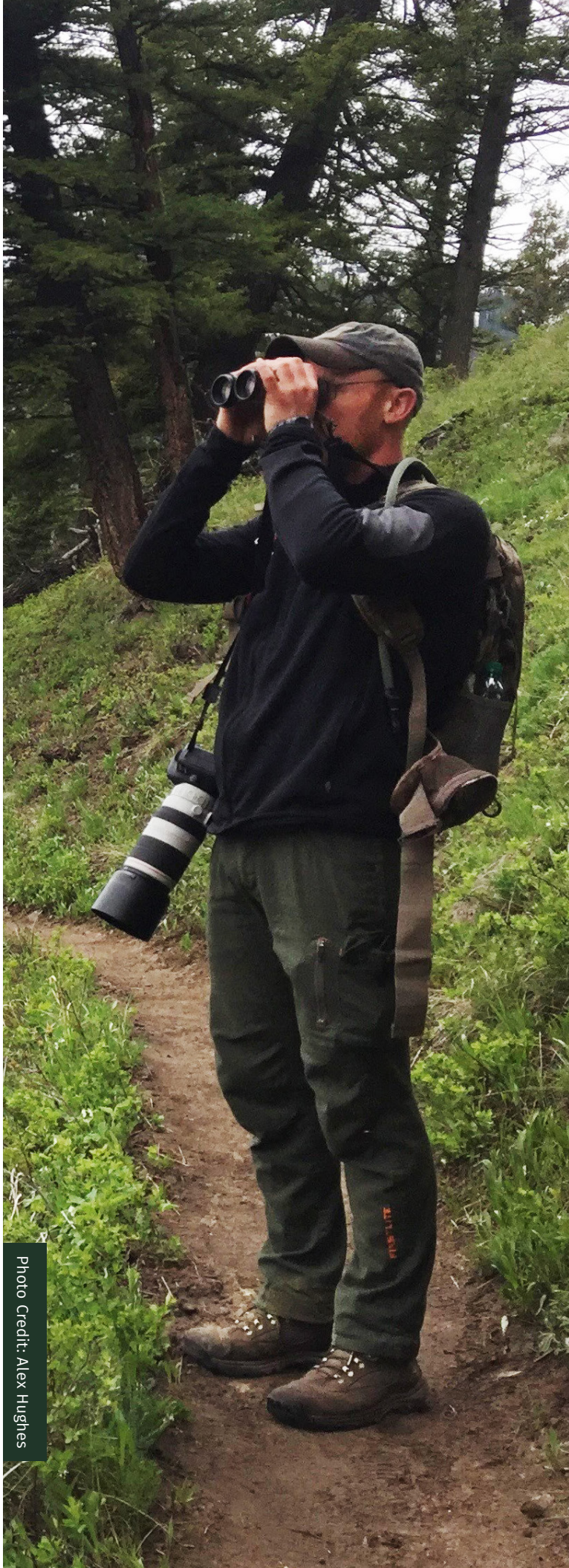
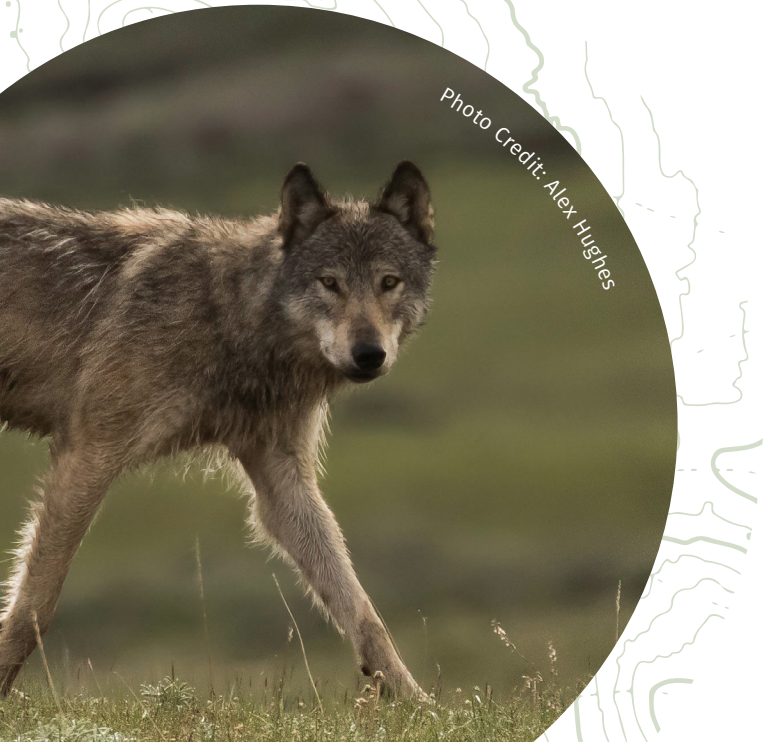


Photo Credit: Alex Hughes

Funding

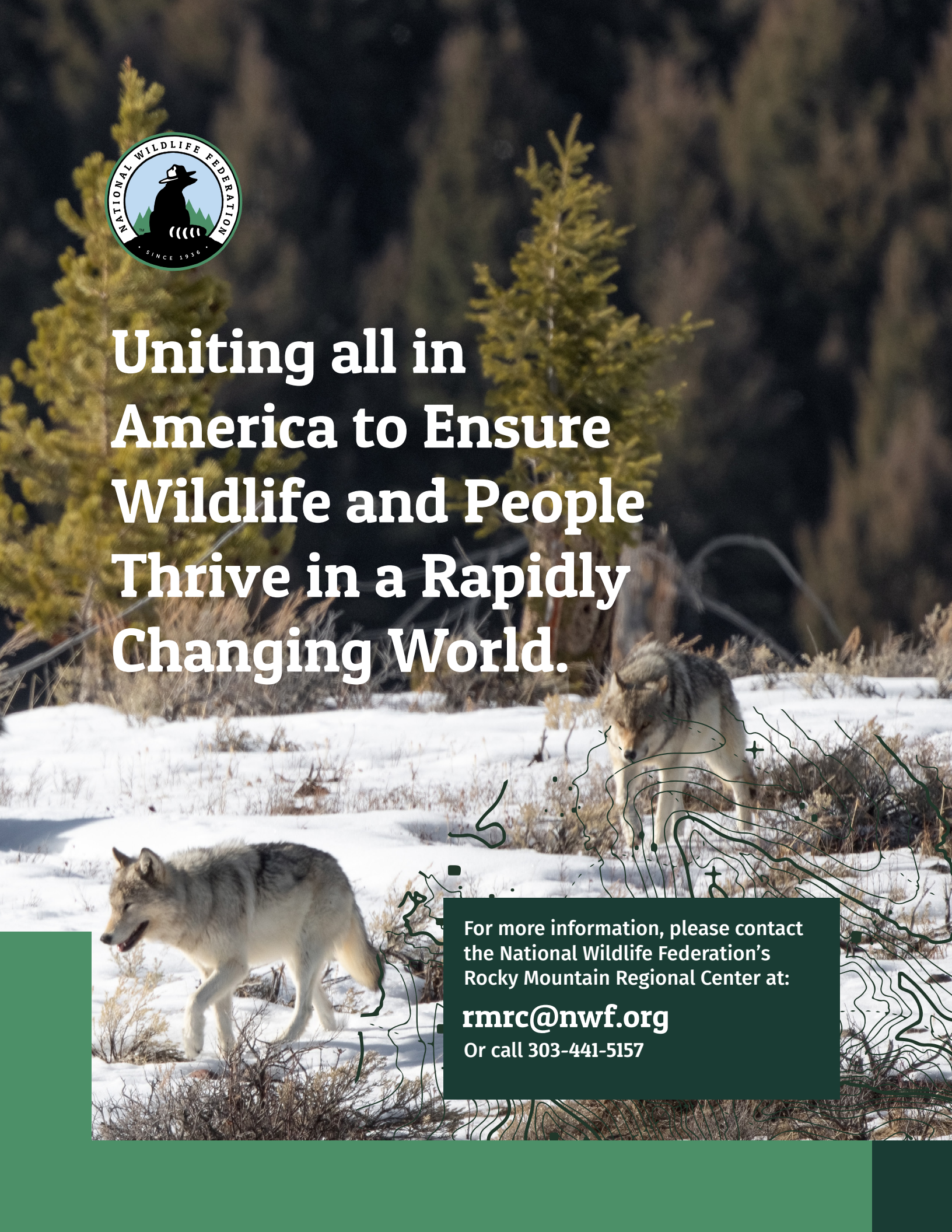
Based on the various lessons learned highlighted in this report, the potential costs for Colorado to set the standard for wolf recovery over time is likely to exceed $1-2 million annually as has been invested in other states. Not all of the costs would necessarily need to be managed by or funneled through CPW, but could be collaboratively raised and utilized with federal, state, university or nonprofit partners. Colorado has already identified some dedicated sources of funding for wolves, including appropriations from the general fund budget ($1.1M in FY22). The bipartisan bill, HB 21-1243, prohibits using funds raised through hunting and fishing license fees to support wolf reintroduction, but also identifies four other potential sources of funding. With the public support of Prop 114, and strong relationships among CPW, universities and various nonprofit organizations, Colorado has an opportunity to raise adequate funds to assure long-term investment and success of its wolf recovery efforts. Federal investments in state non-game wildlife, such as the Recovering America's Wildlife Act, and other federal grants may also play a critical role in Colorado's efforts.



Conclusion

Wolves are staging a successful comeback in several western and midwestern states. Successful recovery of wolves is attributable in part to their adaptable and resilient nature, and in part to agency management efforts and steps taken to proactively address conflicts that erode social acceptance.

Colorado has the benefit of lessons learned from states that have already contended with wolf recovery and subsequent management challenges for several decades. One major takeaway from 40 years of learning is the need for a robust and adaptable plan that addresses livestock depredation and hunter concerns, assures that adequate and consistent funding is available to implement the plan, invests in monitoring, and includes efforts to build and maintain social tolerance for long-term wolf recovery. Inclusion of the public in stakeholder processes and outreach efforts is a critical step toward creating social tolerance and ultimately the success of wolf reintroduction. Future funding for research and monitoring of wolves, ungulate population, social attitudes, all aspects of depredation reduction and mitigation, and hunter conflict resolution will be needed. It is essential that these data are used to develop and implement adaptive management strategies so that wolf recovery is not hindered by what may have been foreseeable and manageable social issues. The costs associated with this level of research and monitoring may be significant, but critical to the long-term sustainability of the wolf program in Colorado. CPW is well on its way to building a collaborative stakeholder process that should help navigate the biological, social and political pitfalls on the path to wolf recovery. Wolves, similar to other wildlife resources, should be held in trust for all people, and managed based on sound science by agencies for long-term sustainability. If done correctly, this missing piece of Colorado's wild landscape will soon be restored and remain viable for future generations. While credible scientific data and sound biological research is critical to wolf management, sustainable wolf recovery is, and always will be, more about people and social dimensions than it is about wolf biology.



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For more information, please contact the National Wildlife Federation's Rocky Mountain Regional Center at:

rmrc@nwf.org

Or call 303-441-5157