

Colorado West Slope Mule Deer Strategy

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Introduction

Across the West, state wildlife agencies are observing declines in a number of mule deer populations. In recent years, mule deer populations in portions of western Colorado have declined significantly, causing concerns within Colorado Parks and Wildlife (CPW) and its many constituencies who depend upon or enjoy mule deer. Western Colorado supports some of the largest mule deer herds in Colorado and the West, such that these declines are of both statewide and regional significance. Colorado's statewide deer population estimate declined from roughly 600,000 deer in 2006 to approximately 390,000 in 2013. Deer populations fluctuate naturally in response to changing environmental conditions but the most recent decline in the state's largest deer herds is atypical and has reduced these herds well below population objectives established by CPW in concert with the public. Recognizing the need for action, CPW embarked on a comprehensive public-engagement effort to gather input for developing the *West Slope Mule Deer Strategy* to guide future management actions.

Goal

Together with the public and stakeholders, CPW will work to stabilize, sustain and increase mule deer populations in western Colorado and, in turn, increase hunting and wildlife-related recreational opportunities.

Setting the Stage

Colorado Parks and Wildlife has a long history of studying and managing mule deer, dating back to the agency's origins. In recent decades, CPW has invested millions of dollars annually to

manage, monitor and study mule deer, with many of these efforts focused in western Colorado. To capture this history and set the stage for moving forward, CPW produced a three-page publication titled *The Story of Colorado's Mule Deer* for wide distribution to the public in advance of gathering public input. This publication provides an easy-to-read synopsis of deer population changes from the mid-to late 1800s to present and highlights some of CPW's key management efforts. CPW also held an internal summit in April 2013 involving 100 agency employees with mule deer management or research responsibilities. The purpose of this summit was to capture the insight of the professional staff charged with managing Colorado's deer. During this two-day summit, CPW employees identified a list of factors that potentially influence mule deer populations along with an assessment of potential management strategies to address those factors. Employees also identified their experiences relative to the challenges associated with implementing proposed management strategies.

Engaging the Public

In 2014, CPW contracted with The Keystone Center (Keystone, CO) to host a series of public meetings across Colorado to facilitate dialogue and obtain input from engaged residents regarding the observed declines in western Colorado mule deer herds. Meetings were held in Craig, Durango, Eagle, Loveland, Grand Junction, Gunnison and Pueblo during April and May 2014. Each public meeting was three hours in length and comprised the same agenda. Participants were provided a copy of *Colorado's Mule Deer Story* and were provided a brief overview covering the history of mule deer in Colorado and the various factors that may influence deer populations. The bulk of each meeting was focused on soliciting public input. Participants broke into small groups facilitated by CPW staff to discuss 10 management concerns that were



Strategic Priorities

Colorado Parks and Wildlife identified a list of seven strategic priorities based on input received from the public through evaluation of the 10 management concerns. Colorado Parks and Wildlife was provided input on which management concerns were considered most limiting to deer population growth and which concerns could be most effectively addressed. The public also provided higher-level input and recommendations that spanned multiple management concerns.

Colorado Parks and Wildlife synthesized these different types of input when identifying strategic priorities. For example, the public identified some management concerns as important issues that CPW had the capability to address, which translated directly into strategic priorities (e.g., declining habitat quality, predation). Other management concerns were recognized as important but inherently difficult to manage (e.g., weather, habitat loss). To address the latter, strategic priorities were crafted which may be effective to mitigate or lessen the effects of these factors realizing it is unrealistic to manage the threats directly. The seven strategic priorities are listed below, in no particular order.

Colorado Parks and Wildlife will use the best available science and information to guide implementation of each strategic priority. Colorado Parks and Wildlife will continue to involve the public in addressing the needs of mule deer by sharing information and soliciting input when making policy decisions. Finally, CPW will increase its efforts to educate and inform the public about the challenges facing mule deer and encourage broader public engagement. Colorado Parks and Wildlife is greatly appreciative to the public, to our management partners and to everyone who participated in the development of this strategy. Working in collaboration will help ensure our success in restoring and sustaining Colorado's west slope mule deer.

Landscape-scale habitat management to improve habitat quality

Components to implementation:

- Enhance coordination and partnerships with public and private land managers to improve landscape management for deer and to secure additional funding for habitat enhancement
- Create landscape management plans
- Pursue separate habitat treatments for deer and elk on the same landscapes to minimize overlap and lessen forage competition
- Continue to use mechanical treatments (e.g., hydro axe, roller-chop) and prescribed fire (when feasible) to manage habitat for deer
- Acquire and store seed for re-establishing desirable deer forage as part of habitat management, restoration and reclamation
- Work with partners to improve weed management
- Monitor effectiveness of habitat management to inform future decisions
- Create a habitat treatment and monitoring database

Predator management where predation may be limiting deer survival

Components to implementation:

- Use existing data to identify areas where predation (black bear, mountain lion or coyote) may be limiting mule deer survival and population growth



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identified and evaluated by CPW staff the preceding year during the CPW internal deer summit. The management concerns were: barriers to migration, competition with elk, disease, doe harvest and hunting demands, declining habitat quality, habitat loss, highway mortality, predation, recreational impacts and weather. Each small group rotated through all breakout stations, which were dedicated to one or more of these management concerns. For each management concern, participants shared their experiences and observations, their suggested strategies for addressing the experiences and possible barriers and concerns that CPW should be aware of in addressing the management concern. There was also an “other” station for participants’ comments and concerns that did not fit into one of the predetermined management concerns. Following the breakout session, participants reconvened to participate in a polling activity in which they answered three questions related to the management concerns. The polling activity enabled participants to see the anonymous feedback of all attendees in real time.

The Keystone Center captured all input from the seven public meetings and prepared a *Public Engagement Report* for CPW, which they presented to the Colorado Parks and Wildlife Commission in July 2014. This report was used by CPW staff in combination with accumulated management and research experience to prepare a draft of the *Colorado West Slope Mule Deer Strategy*. This draft strategy was vetted at a final, statewide public meeting facilitated by The Keystone Center Aug. 9, 2014, in Glenwood Springs. As with the local public meetings, the statewide meeting was open to all those interested. Input received during the statewide public meeting was then used to refine the draft and produce the final strategy for consideration and adoption by the Commission.

- Develop a new statewide mountain lion management strategy, explicitly incorporating mule deer survival considerations
- Increase mountain lion and bear harvest in target areas where predation is documented or suspected as limiting deer population growth based on existing data
- Identify potential sites for focused coyote control efforts to increase deer fawn survival where coyote predation is suspected as a primary contributing factor to the declining deer population
- Evaluate effectiveness of management actions

Protect habitat and mitigate development impacts

Components to implementation:

- Maintain a robust habitat-protection program for mule deer using Habitat Stamp, Great Outdoors Colorado and other funding sources
- Coordinate with municipal and county governments in land-use planning to strategize protection of critical habitat
- Collaborate with industry, federal and state agencies and private landowners to mitigate impacts of energy development

Reduce the impacts of highways on mule deer survival, movements and migration

Components to implementation:

- Enhance coordination with Colorado Department of Transportation (CDOT) and nongovernmental organizations at statewide and local levels to increase highway permeability for deer
- Identify and prioritize highway stretches in western Colorado that inhibit deer movement and/or cause significant mortality
- Where opportunities arise, collaborate with CDOT and other partners to install highway overpasses and underpasses in conjunction with appropriate fencing
- Evaluate effectiveness of highway crossings to refine future strategies

Reduce the impacts of human recreation on mule deer

Components to implementation:

- Coordinate with federal land-management agencies and local jurisdictions to seasonally close or restrict human activities in critical habitats (e.g., motorized and nonmotorized human activity in fawning habitat during early summer, antler shed hunting on critical winter ranges in mid-winter)



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Regulate doe harvest and provide youth opportunity

Components to implementation:

- Manage doe harvest conservatively in units that are well below population objective
- Provide enhanced hunting opportunities for youth, particularly in herds that are at or above the population objective
- Evaluate deer stocking rate and herd performance relative to habitat capability

Maintain a strong ungulate population and disease monitoring program and conduct applied research to improve management of deer populations

Components to implementation:

- Use established, defensible techniques to monitor, survey and estimate size of deer populations to inform harvest and other management decisions
- Conduct research on emerging management issues where uncertainty or lack of information is a direct hindrance to effective implementation of management strategies
- Use ongoing population monitoring of deer and elk to identify areas where elk may be negatively impacting deer



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