



COLORADO WEST SLOPE MULE DEER STRATEGY

PUBLIC ENGAGEMENT REPORT JUNE 2014

**Submitted to Colorado Parks and Wildlife
by The Keystone Center**



Table of Contents

Executive Summary	3
Background and Purpose of the Colorado West Slope Mule Deer Strategy Public Meeting Process	5
Methodology	5
Meeting Discussions & Key Findings by Management Concern	7
Barriers to Migration	8
Competition with Elk.....	9
Declining Habitat Quality	10
Disease	11
Habitat Loss	12
Highway Mortality.....	13
Hunting Demands and Doe Harvest	14
Predation	15
Recreational Impacts	17
Weather	18
Other	19
Summary of Participant Polling on Management Concerns	20
Cross-Cutting Themes and Conclusions	27
Next Steps	29

Appendices

Appendix A Agenda from Public Meetings	30
Appendix B Table of Breakout Session Comments By Management Concerns	31
Appendix C Opening and Closing Session Comments, Questions and Answers	141

Tables

Table 1	Number of Participants by Location	6
Table 2	Top three management concerns contributing to mule deer population declines (weighted average).....	22
Table 3	Top three management concerns contributing to mule deer population declines (by location)	23
Table 4	Top three management concerns that participants believed CPW managers could most effectively address (weighted average).....	24
Table 5	Top three management concerns that participants believed CPW managers could most effectively address (by location)	24
Table 6	Management concerns that participants believed CPW managers could least effectively address (weighted average)	26
Table 7	Management concerns that participants believed CPW managers could least effectively address (by location)	26



EXECUTIVE SUMMARY

Across the West, state wildlife agencies are seeing declines in mule deer populations. In recent years, mule deer populations in Colorado have decreased in several areas on the West Slope. Some of the notable declines have been seen in the White River National Forest, where populations are down almost 50 percent from their peak about 25 years ago. The Colorado West Slope Mule Deer Strategy Summit public engagement process brought together Colorado Parks and Wildlife (CPW), sportsmen, conservation groups, outfitters, landowners, biologists, wildlife managers, elected officials, other state and federal agencies, and other interested citizens and stakeholders to discuss experiences, recommendations and concerns related to declining mule deer populations on Colorado's West Slope.

Seven public meetings were conducted across the state in April and May, 2014; locations included Craig, Durango, Eagle, Grand Junction, Gunnison, Loveland, and Pueblo. A total of one hundred and sixty-nine (169) members of the public attended the seven meetings across the state. Each meeting lasted approximately three hours and included a presentation from Colorado Parks and Wildlife, breakout sessions, a polling activity, and plenary questions and comments. The meetings were facilitated by The Keystone Center.

This report summarizes the public feedback received during the meetings, including breakout session feedback on experiences, management suggestions, and barriers and concerns related to ten pre-determined management concerns contributing to mule deer population decline: barriers to migration, competition with elk, disease, doe harvest and hunting demands, declining habitat quality, habitat loss, highway mortality, predation, recreational impacts, and weather. The report also includes all breakout session comments as an appendix.

The report also summarizes results of the polling activity. On a weighted average basis considering all responses across the State, predation, declining habitat quality, habitat loss, and weather were selected as the top management concerns contributing to mule deer population decline. Predation, doe harvest and hunting demands, declining habitat quality and recreational impacts were selected as the management concerns that CPW managers can most effectively address through the Colorado West Slope Mule Deer Strategy. Weather was selected as the management concern CPW managers can least effectively address through the Colorado West Slope Mule Deer Strategy, followed by disease, habitat loss, and highway mortality. Variability of results by locations is discussed in the report.

Cross-cutting themes across all locations include:

- **Interconnectivity of management concerns.** Participants described interrelationships among barriers to migration, recreational impacts, and highway mortality, between predation and habitat loss, and between weather and habitat quality.

- **Ability of CPW to Address Management Concerns.** Management concerns believed to be most contributing to mule deer population decline were not always believed to be concerns that could be most effectively addressed by CPW. For example, while habitat loss and weather were frequently selected in polling as top management concerns contributing to decline, habitat loss did not rank as highly as a concern that CPW could address, and weather ranked as the concern that CPW could least address. Conversely, while doe harvest and hunting demand did not frequently rank as a top concern contributing to decline of mule deer for most meeting locations, it consistently ranked as a top management concern that CPW could effectively address.
- **Barriers of Funding, Policy and Politics, Education, and Jurisdiction.** Participants frequently cited similar concerns and barriers across management concerns, including lack of money/funding, inadequate policies, politics, and need for education. The challenges implementing management approaches on private lands was also noted as a barrier, as was the difficulty to implement management approaches involving lands managed by other public agencies that are managing for various objectives.
- **Coordination of Colorado Parks and Wildlife with other Agencies and Organizations.** Participants across the meetings frequently suggested that many management concerns need to be addressed in coordination with other state and federal agencies that have authority over land and wildlife management, land use decisions, and transportation.
- **Requests for Additional Information and Education.** Participants often noted that they desired more information from CPW about trends in mule deer decline and the factors impacting the deer, as well as information about the efficacy and impact of management approaches that have been implemented in various locations.
- **Public Involvement in the Mule Deer Strategy Process.** Participants frequently expressed appreciation for opportunity to provide input through the public meetings and that they felt that their experiences and suggestions were being heard and valued through the process. At the same time, many participants emphasized that CPW should rely on scientific evidence in developing the Colorado West Slope Strategy. Participants also commonly expressed an interest in ongoing opportunities to provide input to CPW and to hear from CPW about the implementation and impacts of the strategy as well as the trends for mule deer populations across the state.

The input gathered through these seven public meetings will be used by CPW to develop a draft of the West Slope Mule Deer Strategy that will guide the agency's efforts to work towards increasing mule deer populations in Western Colorado. Following release of the draft, a Statewide Summit will provide further opportunity for the public to give input on the Strategy.

1. BACKGROUND AND PURPOSE OF THE COLORADO WEST SLOPE MULE DEER STRATEGY PUBLIC MEETING PROCESS

Across the West, state wildlife agencies are seeing declines in mule deer populations. In recent years, mule deer populations in Colorado have decreased in several areas on the West Slope. Some of the most notable declines have been seen in the White River National Forest, where populations are down almost 50 percent from their peak about 25 years ago. The Colorado West Slope Mule Deer Strategy Summit public engagement process brought together Colorado Parks and Wildlife (CPW), sportsmen, conservation groups, outfitters, landowners, biologists, wildlife managers, elected officials, other state and federal agencies, and other interested citizens and stakeholders to discuss experiences, recommendations and concerns related to declining mule deer populations on Colorado's West Slope. Seven public meetings were conducted across the state in April and May, 2014. The input gathered through these seven public meetings will be used by CPW to develop a draft of the West Slope Mule Deer Strategy that will guide the agency's efforts to work towards increasing mule deer populations in Western Colorado. Following release of the draft, a Statewide Summit will provide further opportunity for the public to give input on the Strategy.

2. METHODOLOGY

Colorado Parks and Wildlife, in coordination with The Keystone Center (Keystone)¹, held seven public meetings across the state of Colorado (Craig, Durango, Eagle, Grand Junction, Gunnison, Loveland, and Pueblo) throughout April and May of 2014. Meetings were held to seek input on experiences, strategies, and barriers to implementation related to management concerns contributing to mule deer population declines.

Colorado Parks and Wildlife and Keystone coordinated efforts to identify key community contacts and organizations for email recruitment. Moreover, a press release and meeting announcements were placed in newspapers across the state and electronically through CPW's website and Keystone's website. All meetings were open to the public and registration was not required.

Each meeting was facilitated by The Keystone Center and lasted a maximum of three hours. The agenda was consistent for each of the seven meetings (Agenda found in Appendix A). One hundred and sixty-nine (169) members of the public attended the seven meetings across the state.

¹ The Keystone Center (Keystone) is a Colorado-based non-profit organization founded in 1975 to drive actionable, shared solutions to contentious environment, energy, education and public health issues. Keystone bid on this work through an open bid process and was hired by CPW to hold seven public meetings and one statewide summit between April and August 2014.

Table 1: Number of Participants by Location, Colorado West Slope Mule Deer Strategy Public Meetings

Location	Loveland	Durango	Pueblo	Gunnison	Eagle	Grand Junction	Craig	Total # of participants
Number of Participants	9	15	15	27	26	59	18	169

Upon arrival, attendees were greeted by members of the CPW and Keystone staff and were asked to sign in and pick up provided materials, including an agenda and a handout, “The Story of Colorado’s Mule Deer,” describing trends in Colorado mule deer populations over time.

Each meeting included both plenary and breakout sessions in order to allow for comments and questions as well as small group discussions and individual feedback on management concerns. Specifically, the meetings included the following sessions:

1. Each meeting started with a general session consisting of a brief presentation by the Regional Manager of the meeting location² followed by an open comment and question/answer period.
2. Subsequent to the plenary open comment period, the participants broke into small groups facilitated by CPW staff to discuss ten pre-determined management concerns: barriers to migration, competition with elk, disease, doe harvest and hunting demands, declining habitat quality, habitat loss, highway mortality, predation, recreational impacts, and weather. (These management concerns were pre-determined by CPW as leading concerns contributing to mule deer population declines that they wanted the public to discuss.) 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 for each management strategy, 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 they felt did not fit into one of the pre-determined management concerns. All comments were recorded on flip charts (all participant comments from the breakout sessions can be found in Appendix B)³.

² The Regional Managers’ presentation is posted on The Keystone Center’s website at <https://keystone.org/muledeer>

³ Comments that were sent in via email or through the toll-free number were not included in this report; these comments were forwarded to CPW for review and consideration. However, some comments align with what was said during the seven meetings and would be found in Appendix C.

3. Following the breakout session, participants re-convened as a full group 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. It was followed by a final plenary comment and question/answer session.

This report has been developed independently by The Keystone Center and is a compilation of comments, questions, and polling results from the seven public meetings that occurred throughout the state. The report is organized into the following sections: 1) a summary of meeting discussions, including a) opening session comments and questions and b) a summary of feedback provided for each management concern (including experiences, management strategies, and concerns/barriers to implementation), 2) a summary of the polling results, and 3) an overview of next steps. This report will be used by CPW to complete a draft of the Colorado West Slope Mule Deer Strategy which will be available to the public in August of 2014.

3. MEETING DISCUSSIONS AND KEY FINDINGS

Opening session question, answers and comments

During the opening session, CPW Regional Managers gave a brief presentation on the history of mule deer in Colorado as well as the management concerns regarding mule deer population decline. Participants were then given the chance to ask questions of CPW staff or vocalize comments or concerns about mule deer population declines. In the majority of the meetings, participants articulated that they would like more data and information and some participants questioned why CPW would use the public as data points rather than scientific data. CPW explained that the meetings were designed to gather data on public experiences and feedback, and explained that it would be considering CPW science as well as information from all seven meetings across the state as it drafts the Colorado West Slope Mule Deer Strategy.

Furthermore, participants wanted to know what the outcome of the process would be as well as what the strategy may look like. CPW and The Keystone Center facilitators explained that the outcome of the public meeting process would be a report from the seven meetings completed by Keystone which CPW would use -- along with CPW science -- to draft the Colorado West Slope Mule Deer Strategy. CPW noted that the Strategy would not, at this time, be a policy, but the strategy will be taken to the Colorado Parks and Wildlife Commission for approval. CPW will then have to determine how to implement management strategies for long term use, and this could include policies where appropriate. It was also noted at most meetings that the Strategy would not affect the 2014 hunting season but could be used to inform future seasons.

Participants also often asked whether the Strategy would consider regionally- and locally-specific issues and CPW confirmed that the Strategy would consider themes from across all

meetings as well as feedback that was specific to certain locations. Participant questions also frequently asked about differences and similarities in mule deer population trends in various parts of Colorado as well as in other states.

Participants also sought more in-depth explanations of the trends and management concerns presented; for example, questions often referred back to specific graphs that were shared in the presentation or asked CPW to elaborate on management concerns that were mentioned. Participants often asked about existing studies on management concerns and also asked about CPW's management approaches in response to population declines; doe hunting was often a subject of these questions. Some participants also shared their own feedback and perspectives on specific trends and issues, and these perspectives were ultimately captured in the breakout sessions. A summary of comments and questions for each location is provided below in Appendix C.

Breakout group discussion comments and questions

Participants broke into smaller groups to discuss the following ten management concerns pre-determined by CPW. Each station of management concerns was facilitated by a CPW staff member(s). Participants provided feedback on their experiences with each management concern, how they believe CPW could best address those experiences or management concerns, and barriers or concerns in implementing strategies to address the management concerns. Comments were captured on flip chart paper. Below is a summary of participants' comments for each management concern. The summary highlights the range of comments provided as well as comments that were frequently made, e.g., across many locations and/or many times within a single location. Given the volume of comments received, not all individual comments are cited below; however all individual, non-attributed comments made during the meetings can be found in Appendix B.

Barriers to Migration

Experiences

Across the state, participants' experiences and observations regarding barriers to migration of mule deer included the increased number of subdivisions, increased number of fences, and the increased number of roads and highways. The increase of developments and roads has led to fragmentation of the land. Railroads were also noted as creating fragmentation of land, thereby also impeding migration. Participants also observed that not all fences are wildlife friendly, such as woven wire fencing, thereby affecting the migratory behavior of mule deer even more. Participants also mentioned oil and gas development in migration corridors and stopover habitats as a barrier to migration. Finally, a participant noted that ranching for wildlife is a barrier to migration for mule deer.

Management Strategies

Strategies suggested by participants to manage barriers to migration included two main topics; 1) fencing, and 2) crossing structures. Fencing was also a topic frequently raised in the discussion of highway mortality. As related to fencing, participants suggested “adopt a fence” programs or matching funds to change fences to “wildlife friendly.” Participants also suggested mandates for wildlife friendly fencing, increased fencing in Eagle County, and education for developers, landowners, the general public and local government on wildlife- friendly fencing. Along with fencing, participants suggested that an increase in crossing structures would help neutralize some of the barriers to migration. Participants suggested that bridges over canyons and overpasses in narrow crossing points would help migration, as would over- and underpasses at points throughout I-70, especially on the West Slope.

Other strategies suggested by participants included collecting more data on migration and use of stopover habitats before taking action, and coordinating with other wildlife management organizations to preserve lands, e.g., conservation easements, strategic planning for developments to allow for migration areas, and no winter motorized travel except for maintenance in migration areas.

Concerns and Barriers

Participants suggested the following concerns and barriers that CPW may face if implementing strategies to address barriers to migration: Political desire of towns for more tax revenue for allowing subdivisions to be approved, current policies for the BLM and US Forest Service (USFS), lack of data on migration and stopover habitats, funding, different management strategies in states across the west, the slow process of creating change, demands and pressure from the increase in population growth, lack of coordination and communication between CDOT and CPW to ensure that any fencing is deer friendly, local county government, and cost of migration projects.

Questions that arose for CPW with regards to barriers to migration included:

- Do we have an understanding of the impact barriers to migration have on mule deer?
- Do summer sheep/cattle grazing affect deer utilization of forage?
- Are fences better or worse for mule deer?

Competition With Elk

Experiences

Comments varied across the meeting locations as to whether participants believed mule deer were in direct competition with elk. Some believed that mule deer were competing with many

other animals and livestock for habitat. Many participants also stated that they have seen an increased number of elk and competition on both summer and winter range. A few participants have noticed that mule deer tend to yield to elk when both are present in an area. Others believe there is no competition between the two species.

Management Strategies

While there was uncertainty among participants as to whether mule deer and elk compete, participants did suggest that CPW should get elk populations down to objective and they suggested strategies such as late season hunts concentrated on elk in winter on public and private lands, removal of fences on federal land, pulling livestock off earlier, and increasing youth tags for elk. There was also a suggestion to increase elk harvest in areas where elk numbers are high and mule deer numbers are low by offering a combined license that permits a hunter to pay double to hunt elk with archery and allows the hunter, if he or she is successful, to use the same license for 1st, 2nd, or 3rd hunting season. Participants also suggested conducting pilot programs to manage mule deer and elk habitat differently in a Grazing Management Unit (GMU).

Concerns and Barriers

Concerns and barriers related to implementing strategies that could affect mule deer-elk competition included comments from participants including the lack of adequate habitat to support population objectives for both mule deer and elk especially during extreme winters, funding, elk being a primary money-maker for the state, landowners, outfitters, etc., timing of ranching for wildlife, public approval, enforcement, and water laws.

Suggestions that crossed management concerns were also provided; these included increasing habitat improvement projects for all big game, helping manage habitat to separate the elk that graze from the deer that browse, and coordinating with public land management agencies to develop habitat treatments at landscape scale.

A question that arose for CPW with regards to competition with elk was, does white tail breeding affect mule deer populations?

Declining Habitat Quality

Experience

Across the seven meetings, participants frequently discussed experiences with three main issues with regards to declining habitat quality. First, participants stated that drought across the state was affecting habitat quality and the deer populations. Second, there was concern regarding the issue of weeds and invasive plants taking the place of nutritious forage that the

mule deer eat. Finally, fire suppression and lack of burning was discussed by participants as impacting the quality of habitat that mule deer graze and migrate in. Other participant experiences regarding declining habitat quality included the belief that there is a lack of habitat monitoring and improvements by land management agencies, human impacts on deer habitat quality, oil and gas development in critical habitat, and overgrazing by livestock. Finally, some participants believe that other management concerns (e.g., predation) would be mitigated by addressing habitat quality, while others believe that habitat quality has not changed drastically over the years and is not a driving factor in mule deer population declines.

Management Strategies

Participants suggested management strategies that CPW could use to address the declining habitat quality across Colorado. Strategies suggested were prescribed burning, habitat restoration and treatments, setting aside land for migration, partnerships with other land management agencies, incentives for private landowners to rehabilitate habitat, re-evaluation of grazing practices, earlier season road closures, large-scale vegetation management, cloud seeding, development of water sources, and less development in critical habitat areas.

Concerns and Barriers

Consistent with other management concerns, participants recognized that implementation of management strategies could be impacted by politics, lack of funding, lack of support for these strategies including public concern regarding controlled burning, lack of staff, difficulty coordinating with other agencies, and enforcing regulations with conflicting purposes.

Other barriers discussed included changes in the soil composition, county zoning, fire cycles as well as the fear of fire, demand of mule deer herd numbers that may not be sustainable with the habitat available, and barriers to improving habitat quality on private lands.

Disease

Experience

Disease such as chronic wasting disease (CWD) was reported in the past, but participants stated it is not a concern at this point. However, when there was disease in the past, it was stated that Colorado Department of Wildlife (now CPW) would cull animals and the numbers never recovered. While CWD may not be a concern, a participant raised the issue that Epizootic Hemorrhagic Disease (EHD), or bluetongue, is becoming more of a concern. Participants also mentioned the increased number of ticks, locoweed and beetle kill trees.

Participants also mentioned pollen affecting the health of mule deer as well as illegal feeding which could be contributing to disease.

Management Strategies

Management strategies for disease included increased monitoring, testing and better record keeping, displaying data more routinely, requiring or incentivizing hunters to participate in research to determine location and spread of disease, mass vaccines during the winter, dispersing animals by developing water sources, no winter feeding, banning imported feed, testing water quality, increasing public education, culling or removing sick deer and adjusting tag numbers if disease is discovered.

Concerns and Barriers

Even though participants felt that disease was not a large problem throughout the state, participants expressed the following concerns and barriers that CPW would face in dealing with disease affecting mule deer populations: financial barriers, difficulty gaining public support for feedings, the high cost of having animals tested could prevent people from bringing in deer, the need for more public education, the lack of understanding as to what causes CWD, parasites, decline in the quality of habitat making mule deer more susceptible to disease, and not having realistic population objectives to keep range conditions healthy and animals out of close proximity to avoid epidemics. Some participants mentioned that there should be more monitoring of disease, while on the other hand, others commented that the current amount of monitoring is adequate or too expensive for the current rate of disease in the state.

Questions raised by participants included, does winter feeding promote the concentration of animals and therefore help spread the disease?

Habitat Loss

Experience

A number of participants across the seven meetings thought that habitat loss was the most influential management concern. However, in some areas, participants stated that habitat loss was not a factor at all in the mule deer population decline. For those who did believe habitat loss was a concern, they stated that they had seen fragmentation due to subdivision development, oil and gas development, commercial development and the increase in the number of roads. Furthermore, loss of trees and forage in developed areas was a concern of many throughout the seven meetings. Finally, fire suppression was mentioned across many meetings as a factor in the long-term loss of habitat.

Management Strategies

In order to mitigate the effects of habitat loss on mule deer populations, participants suggested multiple strategies. First, to mitigate the effects of fragmented land, participants suggested that

there needs to be zoning at the municipal and county levels to protect the land that is not currently being developed and encourage conservation easements. Participants also suggested that CPW needs to strengthen its relationships with federal agencies, NGOs and private landowners to implement habitat management and encourage master leasing plans that consider habitat when making decisions about oil and gas development. And finally, participants suggested that CPW needs to protect mule deer winter range, waterfront areas, and critical habitat. It was suggested that habitat areas need to be prioritized to ensure the right habitat is protected first.

While habitat quality was listed as a separate management concern during the breakout exercise (summarized elsewhere in this section), participants often discussed the interrelationship of habitat quality and quantity. Participants discussed the need to protect the quality of the habitat that is currently used by the mule deer across the state and suggested management strategies including prescribed burns, recruiting volunteers to help cut pinyon-juniper, mechanical treatments, and removal of dead trees.

Concerns and Barriers

Participants stated that lack of agency coordination and communication was a large barrier to mitigating habitat loss, as were lack of funding and politics. Public perception and certain groups who want to develop or use critical habitat was also suggested to be a barrier. Finally, participants stated that the lag times between habitat treatments and recovery are long and may be a barrier to the urgent needs.

Questions that arose for CPW with regards to habitat loss included:

- Does agricultural grazing remove habitat from deer use?
- Do various agencies and governments (i.e., the BLM, US Forest Service, Counties, Tribal, etc.) collectively accept and agree to the same good management strategies?

Highway Mortality

Experiences

Across the state, participants commented that they had seen an increase in mortality of mule deer along roads even with the increase in highway fencing and decreased speed limits in certain areas. Some participants mentioned that highway mortality was higher in winter months in areas across the state. On the other hand, some participants stated that highway mortality was down due to the decrease in mule deer population. Specific highways mentioned as having increased mule deer mortality were Highway 9, Highway 13, Highway 50, Highway 67, Highway 69, Highway 96, and Highway 160, as well as Interstate 70 and Interstate 80.

Management Strategies

Management strategies suggested by participants to decrease highway mortality included tunnels, overpasses and more wildlife crossings, vegetated overpasses, planting undesirable forage along highways to discourage deer near roads, better signage near high population deer areas, motion detector signs, lower speed limits, wildlife-friendly fencing, education on speed reductions and mule deer mortality, requirement to report a deer collision with a penalty if not reported and caught, and collecting better data on highway mortality.

Concerns and Barriers

Concerns and barriers as suggested by participants to decrease highway mortality of mule deer included lack of enforcement of speed limits, public ignoring speed limits, lack of funding for crossing structures, and the need for greater agency coordination, especially with Colorado Department of Transportation (CDOT).

Questions that arose during the Highway Mortality breakout session included:

- Do slow zones work?
- Does any agency collect data on deer mortality?
- Is mortality higher by car or by hunting?

Hunting Demands and Doe Harvest

Experiences

Experiences related to hunting demands and doe harvest varied across the state, however there were some similar themes related to concerns that doe harvest and low doe populations contribute to mule deer population decline. Participants in Durango stated that they see fawns dropping later in the year and doe harvest on the Southern Ute Reservation is low. Participants in Durango have seen deer with small or low antler production. Participants in Eagle stated that there have been a reduced number of deer where historically there were high numbers and participants believe that doe harvest can reduce multiple generations. Participants from Craig also mentioned the lower doe numbers and some correlated the low doe numbers to the total mule deer population decline.

However, one participant from Craig did mention the opposite experience in the Axial Basin, in which there were a large number of does in the basin and mortality was low. Participants in Pueblo mentioned that there needs to be more tags available because there has been a dramatic increase in population numbers, especially in restricted hunting areas including parks, developments and municipalities. The same increase was also experienced by participants in

Gunnison. Those in Gunnison also suggested that when areas are below objectives in a unit, there should not be doe permits.

Participants in Grand Junction suggested that does and fawns were more stressed due to changes in their environment which is a cause of mortality.

Management Strategies

Across all meetings, participants suggested that CPW limit doe tags except for use in recruitment of youth hunters. Others suggested that doe tags be eliminated. Other suggested management strategies included prohibiting auction and raffle hunters in December, mandatory harvest and data reports, changing draw dates to match with surrounding states, reducing the length of season, limiting environmental stressors, delaying the start to archery season, and utilizing antler restrictions.

Concerns and Barriers

As with many other management concerns, participants commented that money, politics, and lack of education were barriers and concerns to doe harvest and hunting demands management. Other concerns and barriers included hunters wanting to hunt deer every year, the need for youth recruitment, public versus private land ownership, triggering a Tax Payers Bill of Rights (TABOR) amendment if the fees get too high, and the late ending date of the season affecting bucks.

Questions that arose for CPW in the Hunting Demands and Doe Harvest station included:

- Are fewer tags helping or hurting mule deer populations?
- Are there differences in survival of does between the different areas of the state?
- How much of doe harvest is driven by game damage?
- What percentage of success is due to doe tags?

Predation

Experience

There were diverse and divergent perspectives on the contributions of predation to mule deer population decline: some participants believed it was the largest contributor to mule deer population decline, others were unsure of the impacts it had on the total population, and others thought predation had little to no impact. Many participants across the state commented that they were seeing more coyotes, lions and bears. Participants commented that particular Colorado legislative amendments, specifically 10 and 14, which have banned the use of certain traps, snares, leg holds, and poison, have led to the increase in predators in many

areas around the state. Participants also stated that they had seen deer carcasses that have been killed by predators while hunting. Other participants commented that it may be humans that are the predators, while others thought that predation in combination with loss of habitat and a decrease in food for the predators was leading to more mule deer deaths by predation.

Management Strategies

There were many management strategies suggested in order to mitigate the problems associated with predation. Because of the large number of suggestions, management strategies are divided in this section by strategies for specific predators, followed by general predation strategies.

Participants across the seven meetings stated that they had seen an increase in coyotes throughout the state. Strategies to manage the increase in coyotes included offering bounties on coyotes, using aerial control of coyotes, continuing to allow big game hunters to harvest coyotes, allowing non-residents to hunt coyotes for free, emphasizing youth hunting for coyotes, and no feeding of coyotes.

Suggested approaches to manage lion predation included increasing female lion harvest in units where quotas were not filled, increasing lion license availability during deer and elk seasons (expanded lion hunting season), implementing a bounty on lions, increasing the quota for lions, open lion season during rifle seasons (i.e., no license required), and providing better access for lion hunting on U.S. Bureau of Land Management (BLM) lands.

To better control the number of bears, participants suggested changing the season for bear hunting, allowing a spring bear hunting season, providing over-the-counter bear licenses in September, allowing bait hunting, allowing unlimited bear tags, allowing landowners to shoot bears, increasing the quota for bears, allowing non-resident hunters to obtain a discount bear tag with elk or deer tag, allowing hunters to buy a second bear tag if successful, and removing the mandatory check requirement for bears.

Management strategies suggested for general predation control included making predator licenses more affordable, using predator control commercials and education for public on predation, recruitment of youth hunters for predators, aerial gaming, donation for predator control (voluntary or tax), habitat work to help avoid predators and deer from being pushed onto the same small area with limited food, providing bounties for incentive, bringing back recreational trapping, creating a wolf management strategy, and getting a better estimate on the number of predators so CPW can do better control management.

Concerns and Barriers

Many participants recognized the challenges in implementing predator control strategies. Concerns and barriers mentioned were public perception of predator control, the cost of predator control, restrictions on private lands, lack of access and difficulty to hunt certain predators, politics, limited predator seasons, and barriers within CPW.

A few questions arose regarding predation; questions included:

- Does the amount of predation on mule deer go up or down with mule deer population changes?
- How healthy is the lion population?
- Do bears target fawning grounds?
- How does the weather impact predator populations?

Recreational Impacts

Experiences

Certain experiences regarding recreational impacts were described across the seven locations; however, like other management concerns, many participants also discussed observed recreational impacts on mule deer populations that were specific to certain regions of the state. Experiences that were described at many meeting locations included issues with dogs off leashes chasing deer, increased motorized vehicle use, and increased year-round recreation. Experiences that were mentioned at specific locations included: hikers, bikers, people on ATV's, bikes and other vehicles going off trails in both Loveland and Eagle, camping sites in Pueblo, mule deer habitat reduced by recreational use areas in Gunnison, shed hunting starting too early in Eagle, and hunting seasons (shed hunting and ranching for wildlife) too long in both Grand Junction and Craig. While certain experiences were voiced only in specific locations, they may also be occurring elsewhere in the state.

Management Strategies

While different experiences were described for specific regions, management strategies that were suggested may be broadly applicable to help work towards increasing the mule deer populations across the state. Public awareness and education was recommended in almost every location. Participants suggested continuing with the “hug a hunter” campaign as well as informing the public of impacts of recreational use. Fee for use (all recreational users and not just hunting and fishing) also came up in multiple locations along with increased enforcement and regulations.

Participants in Loveland suggested seasonal restrictions at fawning times, while those in Durango suggested that CPW work with the BLM and USFS to develop a more comprehensive travel plan as well as seasonal closing of recreation areas including rock climbing areas. Gunnison participants suggested moving bike and trail systems from critical winter range, road closures starting in December or January instead of March, and awarding Off Highway Vehicle grants that provide habitat improvement to off-set recreational impacts. Participants in Eagle suggested confiscating vehicles and bikes when used on closed routes, increasing funding for the BLM for enforcement, increasing fines for violators, and requiring that all bikers have a license, register their bikes and carry liability insurance when on the road or public lands. Participants in Grand Junction recommended applying CPW's route density/habitat modeling across the state as well as changing the season for shed hunting. Finally, participants in Craig specifically mentioned that there should be greater enforcement of ATV laws (such as higher fines) and suggested changing hunting days to occur only Saturday to Wednesdays during the season.

Concerns and Barriers

Comments related to concerns and barriers in managing recreational impacts included lack of funding, enforcement issues, public not heeding warnings of closures, negative perception of the non-hunting public against the sportsmen who pay to help manage wildlife, multiple interests wanting to use public land (i.e., growing public demand), government politics, habitat fragmentation, use of drones during hunting, the public's lack of knowledge in understanding that recreation can have negative impacts on wildlife, and lack of coordination with other agencies.

Weather

Experiences

Three experiences related to weather came up multiple times throughout each of the seven meetings. First, participants have experienced the extremes in the weather over the past few years, including heavy winters and extreme droughts throughout the state. Second, participants stated that climate is less predictable which may impact migration routes and timing of migration. Finally, some participants believed that the harsh winter of 2007-2008 had a dramatic impact on mule deer populations. Those same participants commented that weather impacts population more than other management concerns.

Management Strategies

Management strategies for weather concerns across meetings were difficult for participants to address. Some participants related weather management strategies to another management concern (e.g., improving winter habitat quality) while others stated that there was no way to control the weather. Nevertheless, participants did suggest mitigation projects especially to improve winter habitat quality, including projects to manage weeds and enhance sage, thereby helping mule deer populations in tough conditions. Other suggested management strategies included better management of winter range and a season for shed hunting with a license requirement. Participants also suggested that CPW take a proactive approach to cloud seeding as well as feeding and nutrition supplements in times of crisis before conditions trigger laws that mandate how, when and where to feed. However, other participants mentioned that instead of saving a few deer in harsh weather conditions through feedings, they believed that the money should be spent on habitat and building or restoring wildlife water guzzlers.

Other suggested management strategies addressed the correlation between habitat quality and quantity as a way to mitigate the effects of extreme weather conditions. Examples included increased habitat that would allow for flexibility to respond to weather events and prevent deer from being bottlenecked into small areas. Increase in drought-tolerant plants and soil amendments to soften the soil and increase moisture absorption were also suggested. Also, prescribed natural burns to push and pull herds into and out of habitat were mentioned in relation to weather and habitat.

Concerns and Barriers

Concerns and Barriers in addressing weather related concerns included inadequate (quality and quantity) winter habitats during extreme winter conditions, lack of public support for agency actions, political and public concern about burning getting out of control, funding and revenue concerns, lack of flexibility in adjusting license numbers after extreme weather events, and managing for the uncertainty.

Other

Experiences

Other experiences participants saw that could be affecting the mule deer populations included competition with feral horses, poaching as impacting the mule deer population and the need to collect more data on poaching, understanding the historical fluctuations of the mule deer populations, changes in the built environment, decrease in other food for predators (including rabbits) resulting in increased predation on mule deer, and educating the general public on what CPW knows about mule deer. Finally, participants noticed that the youngest person at the

meetings was around 30 years of age and the large majority was men, which raised concern about the future of deer management and hunting.

Management Concerns

General management strategies included allowing CPW biologists to use their knowledge for decision making. Regarding competition with feral horses, a participant suggested monitoring the impact on range conditions and working with the BLM on population numbers. A participant suggested allowing large landowners to charge to have people hunt their lands to help manage poaching as well as increase fines and punishment for poaching.

Concerns and Barriers

Finally, barriers and concerns within the “other” category included lenient judges in the case of increased fines and punishment, as well as exceptions that allow hunting of mule deer during the rut.

SUMMARY OF PARTICIPANT POLLING ON MANAGEMENT CONCERNS

Following the small group breakout session, participants completed a polling activity to express their opinions on three questions. Participants were asked to pick:

1. The top three management concerns that they believed were contributing to mule deer population decline
2. The top three management concerns that they believed CPW managers could most effectively address through the Colorado West Slope Mule Deer Strategy, and
3. The three management concerns that they believed CPW managers can least effectively address through the Colorado West Slope Mule Deer Strategy.

The same list of management concerns was used as response options for each question, and these management concerns were the same as those that participants discussed during the breakout sessions. Results of each meeting as well as averages across meetings are summarized below.

Top three management concerns contributing to mule deer population declines

Participants across the seven meetings were asked to pick the top three management concerns that they believed were contributing to mule deer population declines. After taking the weighted average of all responses from all seven meetings,⁴ the top three management

⁴ In order to reflect the varying number of participants at each meeting, the weighted average is used rather than a simple average of the percentages calculated for each location. For each of the three polling questions, participants could select up to three management concerns. The weighted average for the state is calculated

concerns as polled by participants were predation, declining habitat quality, and habitat loss. Weather polled as the fourth top concern on a weighted average basis.

The weighted average results are generally consistent with the results from each individual location. Declining habitat quality and predation each polled among the top three responses in all but one location as top management concerns contributing to mule deer population declines, and predation polled among the top four in all locations. Habitat loss polled among the top three in all but two locations, and polled among the top four in all but one location. Weather polled among the top four concerns in all locations and among the top three in three locations. Disease and competition with elk did not poll among the top four concerns in any location.

Other variations on these trends were location-specific. For example, highway mortality was the top concern in Durango but was not among the three in any other location. Similarly, doe harvest and hunting demands was among the top concerns in Craig and recreational impacts was among the top three concerns in Gunnison, but neither were among the top three in any other location.

Other location-specific variability was seen in the actual percentages of polling responses associated with the management concerns at each location. For example, most locations had one or two concerns each poll with more than 20% of responses; in Pueblo, the percentage of responses assigned to each management concern ranged from 0% to 29%. However, in Gunnison the distribution of polling responses was much tighter, ranging from 3% to 16%.

The following tables display the polling results on top management concerns contributing to mule deer decline on a weighted average and by-location basis.

based on the total number of responses to each question, regardless of whether some participants chose less than three responses, rather than the number of participants answering the question.

Table 2: Top three management concerns contributing to mule deer population declines (weighted average), in descending order by polling percentage.⁵

Colorado West Slope Mule Deer Strategy Summit Public Meetings Weighted Average Polling Results	
Top Management Concerns Contributing to Mule Deer Population Decline	
	Weighted Average of all Responses, All Locations
Predation	20%
Declining Habitat Quality	17%
Habitat Loss	15%
Weather	12%
Recreational Impacts	9%
Doe Harvest & Hunting Demands	8%
Highway Mortality	7%
Barriers to Migration	5%
Competition with Elk	4%
Disease	4%

⁵ Due to rounding, totals for tables 2-7 may not sum to 100%.

Table 3: Top three management concerns contributing to mule deer population declines (by location), in alphabetical order by location and management concern. Green denotes that the concern polled among the top three in the given location.

Colorado West Slope Mule Deer Strategy Summit Public Meetings Polling Results by Location Top Management Concerns Contributing to Mule Deer Population Decline							
	Craig	Durango	Eagle	Grand Junction	Gunnison	Loveland	Pueblo
Barriers to Migration	8%	7%	2%	5%	2%	22%	6%
Competition with Elk	8%	0%	2%	5%	3%	0%	3%
Declining Habitat Quality	15%	20%	25%	14%	11%	17%	29%
Disease	0%	3%	0%	7%	3%	0%	6%
Doe Harvest & Hunting Demands	18%	3%	4%	9%	10%	6%	0%
Habitat Loss	5%	20%	28%	12%	14%	17%	10%
Highway Mortality	8%	23%	4%	4%	13%	0%	3%
Predation	23%	10%	13%	26%	16%	17%	16%
Recreational Impacts	5%	3%	11%	7%	14%	6%	10%
Weather	13%	10%	11%	9%	14%	17%	16%

Top three management concerns that participants believed CPW managers could most effectively address

On a weighted average basis of all polling responses in all locations, participants suggested that the top management concerns that they believed CPW managers could most effectively address were predation, doe harvest and hunting demands, and declining habitat quality. Recreational impacts polled fourth on a weighted average basis across the state.

Location-specific results were similar to the statewide trends. In all locations, predation polled among the top three concerns that CPW managers could most effectively address; doe harvest and hunting demands as well as declining habitat quality polled among the top three concerns in five locations and among the top four concerns in six locations. The only location that did not rank doe harvest and hunting demands among the top four was Pueblo; the only location that did not rank habitat quality among the top four concerns was Gunnison. Recreational impacts polled among the top three in three locations and polled among the top four in six locations. Other concerns that polled among the top three in only one location included competition with elk, habitat loss, and highway mortality.

In discussion, participants often noted that predation and doe harvest and hunting demands were most under the control of CPW due to its administration and regulation of hunting licenses. Participants also frequently commented on concerns regarding the issuance of doe tags when population numbers are below objective.

The following tables display the polling results on the top three management concerns that participants believed CPW managers could most effectively address, presented on a weighted average and by-location basis.

Table 4: Top three management concerns that participants believed CPW managers could most effectively address (weighted average), in descending order by polling percentage.

Colorado West Slope Mule Deer Strategy Summit Public Meetings Weighted Average Polling Results	
Top Management Concerns CPW Can Most Effectively Address Through the Colorado West Slope Mule Deer Strategy	
	Weighted Average of all Responses, All Locations
Predation	25%
Doe Harvest & Hunting Demands	20%
Declining Habitat Quality	14%
Recreational Impacts	11%
Habitat Loss	9%
Competition with Elk	7%
Disease	5%
Highway Mortality	5%
Barriers to Migration	3%
Weather	1%

Table 5: Top three management concerns that participants believed CPW managers could most effectively address (by location), in alphabetical order by location and management concern. Green denotes that the concern polled among the top three in the given location.

Colorado West Slope Mule Deer Strategy Summit Public Meetings Polling Results by Location							
Top Management Concerns CPW Can Most Effectively Address Through the Colorado West Slope Mule Deer							
	Craig	Durango	Eagle	Grand Junction	Gunnison	Loveland	Pueblo
Barriers to Migration	5%	3%	4%	4%	0%	0%	3%
Competition with Elk	10%	7%	10%	5%	9%	5%	3%
Declining Habitat Quality	10%	10%	18%	13%	7%	19%	25%
Disease	0%	7%	2%	6%	2%	5%	6%
Doe Harvest & Hunting Demands	24%	24%	14%	20%	27%	24%	6%
Habitat Loss	7%	7%	8%	11%	7%	5%	13%
Highway Mortality	7%	14%	2%	4%	9%	0%	6%
Predation	26%	17%	24%	27%	20%	29%	28%
Recreational Impacts	10%	10%	18%	9%	16%	14%	6%
Weather	2%	0%	0%	0%	4%	0%	3%

Management concerns that participants believed CPW managers could least effectively address

On a weighted average basis of all responses across all public meeting locations, the management concerns participants believed that CPW managers could least effectively address were weather and disease. In all locations, weather was selected as the concern that could be least effectively addressed. Disease was selected among the top three in all but two locations.

Habitat loss and highway mortality were tied for the third response statewide as a concern that CPW could least effectively address. However, on a location-specific basis, habitat loss was only selected among the top three responses in three locations, while highway mortality was only selected among the top three responses in two locations. Location-specific variability vis a vis the statewide average is also seen in the polling for barriers to migration, competition with elk, and recreational impacts, which all polled among the top three in at least one but no more than three locations.

Notably, both weather and habitat loss polled among the top concerns in the question regarding top concerns contributing to mule deer population decline. During discussion, participants often noted that they felt that CPW had less influence over these concerns. One participant commented, however, that CPW could manage for weather by mitigating impacts through licenses and habitat management. Participants throughout the meetings stated that agency coordination, private land ownership, and communication as well as habitat treatments were barriers to mitigating problems associated with habitat loss.

The following tables display the polling results on the three management concerns that participants believed CPW managers could least effectively address, presented on a weighted average and by-location basis.

Table 6: Management concerns that participants believed CPW managers could least effectively address (weighted average), in descending order by polling percentage.

Colorado West Slope Mule Deer Strategy Summit Public Meetings Weighted Average Polling Results	
Management Concerns CPW Can Least Effectively Address Through the Colorado West Slope Mule Deer Strategy	
	Weighted Average of all Responses, All Locations
Weather	31%
Disease	16%
Habitat Loss	11%
Highway Mortality	11%
Barriers to Migration	9%
Competition with Elk	8%
Recreational Impacts	7%
Declining Habitat Quality	4%
Predation	2%
Doe Harvest & Hunting Demands	1%

Table 7: Management concerns that participants believed CPW managers could least effectively address (by location), in alphabetical order by location and management concern. Green denotes that the concern polled among the top three in the given location.

Colorado West Slope Mule Deer Strategy Summit Public Meetings Polling Results by Location							
Management Concerns CPW Can Least Effectively Address Through the Colorado West Slope Mule Deer Strategy							
	Craig	Durango	Eagle	Grand Junction	Gunnison	Loveland	Pueblo
Barriers to Migration	5%	7%	8%	5%	19%	18%	13%
Competition with Elk	3%	14%	0%	9%	8%	9%	13%
Declining Habitat Quality	8%	10%	2%	3%	6%	5%	3%
Disease	20%	7%	22%	17%	8%	18%	16%
Doe Harvest & Hunting Demands	0%	0%	0%	2%	0%	0%	0%
Habitat Loss	3%	17%	18%	11%	17%	5%	3%
Highway Mortality	18%	0%	12%	14%	8%	5%	10%
Predation	3%	3%	0%	1%	4%	5%	0%
Recreational Impacts	8%	14%	2%	8%	6%	5%	10%
Weather	35%	28%	36%	31%	25%	32%	32%

CROSS-CUTTING THEMES AND CONCLUSIONS

Across all locations, throughout plenary and breakout sessions, and across all management concerns, similar experiences, management suggestions, management barriers, and other discussion themes frequently arose.

- **Interconnectivity of management concerns.**

Participants frequently noted the interrelationship of various management concerns and the resulting opportunities – as well as challenges – for addressing any one concern.

For example, participants commented that barriers to migration, recreational impacts, and highway mortality were all interconnected. For each of these concerns, it was often noted that due to recreational impacts and other barriers such as housing and oil and gas development, mule deer are forced into certain areas or have difficulty migrating. On the other hand, by increasing fencing and other barriers to prevent highway mortality, deer were forced away from traditional migration routes.

Participants also described relationships between predation and habitat loss. Participants noted decreased habitat throughout the State resulted in all animals including predators sharing smaller areas of habitat, which in turn could result in higher predation.

Participants also frequently voiced concerns about the relationship between changing or more severe weather patterns and habitat quality, the relationship between severe weather, habitat loss, and habitat quality in contributing to mule deer population decline, and the possibility that declining habitat quality could lead to an increase in disease or susceptibility to disease. While few management strategies were suggested to address these interrelated issues, participants discussed the relative benefits of larger, more comprehensive habitat projects vs. feeding during tough winters.

- **Ability of CPW to Address Management Concerns**

In breakout discussions as well as in debriefs of polling exercises, participants often noted that the management concerns believed to be most contributing to mule deer population decline were not always believed to be the same concerns that could be most effectively addressed by CPW. For example, while habitat loss and weather were frequently cited among top management concerns contributing to decline, habitat loss did not rank as highly as a concern that CPW could address, and weather ranked as the concern that CPW could least address. Conversely, while doe harvest and hunting demand did not frequently rank as a top concern contributing to decline in most locations, it consistently ranked as a top management concern that CPW could effectively address. Participants frequently explained that these trends reflect

that CPW can manage hunting licenses for multiple species but does not have authority over land use decisions that contribute to habitat loss, nor does it have the ability to control the weather – only mitigate its impacts to some degree.

- **Barriers of Funding, Policy and Politics, Education, and Jurisdiction**

Participants also frequently cited similar concerns and barriers across management concerns, including lack of money/funding, policies and politics, and the need for greater education. Participants often noted that many of the suggested management approaches are costly and some may not be feasible due to other policies and/or public perception or understanding of the issues. The ability to implement management approaches on private lands was also noted as a barrier, as was the ability to implement management approaches involving lands managed by other public agencies that are managing for various objectives.

- **Coordination of Colorado Parks and Wildlife with other Agencies and Organizations**

Related to the discussions above, participants across the meetings frequently suggested that many management concerns need to be addressed in coordination with other state and federal agencies that have authority over land and wildlife management, land use decisions, and transportation. Suggested agencies included Colorado Department of Transportation, United States Forest Service, and the Bureau of Land Management. Participants also suggested working more closely with interested foundations and associations in order to coordinate funding and project work.

- **Requests for Additional Information and Education**

Participants noted that hunters, outfitters, and other environmentalists as well as the general public needed more information on the current state of mule deer, management concerns that are affecting populations, and how recreational uses may be impacting the mule deer habitat, migration, and population numbers. Participants often noted that they desired more information from CPW about trends in mule deer decline and the factors impacting the deer, as well as information about the efficacy and impact of management approaches that have been implemented in various locations.

- **Public Involvement in the Mule Deer Strategy Process**

Participants across meetings frequently expressed appreciation for opportunity to provide input through the public meetings and that they felt that their experiences and suggestions were being heard and valued through the process. At the same time, many participants also emphasized that CPW should rely on scientific evidence in developing the Colorado West Slope Strategy. Participants across the state also commonly expressed an interest in ongoing

opportunities to provide input to CPW as well as to hear from CPW about the implementation and impacts of the strategy as well as the trends of mule deer populations across the state.

NEXT STEPS

CPW will use the information provided in this report to guide its efforts in drafting the Colorado West Slope Mule Deer Strategy that will be made available to the public in August 2014. The draft strategy will be a high level strategy document rather than a detailed management plan. CPW in coordination with Keystone will convene a state-wide summit at the Ramada Inn, Glenwood Springs on August 9, 2014 from 10:00 a.m. until 2:00 p.m. to discuss and garner input on the draft strategy. The strategy will then be submitted to the Colorado Parks and Wildlife Commission to be approved, after which CPW will begin incorporating outcomes from the West Slope Mule Deer Strategy into management processes that affect mule deer in Colorado.

Appendix A: Agenda from Seven Public Engagement Meetings

Agenda Colorado West Slope Mule Deer Summit

DIALOGUE PURPOSE: The purpose of the Colorado West Slope Mule Deer Summit meetings is to enable the public to discuss the challenges facing the mule deer population in Colorado and to provide feedback to Colorado Parks and Wildlife on a Colorado West Slope Mule Deer Strategy to guide agency efforts to work towards increasing deer populations.

SCHEDULE

- 6:00 p.m.** Welcome and overview of meeting purpose, agenda, ground rules, and how information gathered will be used in the development of the Colorado West Slope Mule Deer Strategy
The Keystone Center & Colorado Parks and Wildlife
- 6:10 p.m.** Presentation on the Mule Deer Story & the range of issues impacting mule deer populations
Participant question and answer
Colorado Parks and Wildlife
- 7:00 p.m.** Small breakout group discussions on factors affecting the mule deer populations

STATIONS/TOPICS

1. Predation
 2. Habitat Loss and Declining Habitat Quality
 3. Highway Mortality; Barriers to Migration; Recreational Impacts
 4. Disease; Weather; Competition with Elk
 5. Hunting Demands and Doe Harvest
- 8:20 p.m.** Polling activity to assess participants' perspectives on strategies
The Keystone Center
- 8:45 p.m.** Final participant comments and questions
Facilitated by The Keystone Center
- 8:55 p.m.** Next steps and timeline
Colorado Parks and Wildlife
- 9:00 p.m.** Adjourn
- Colorado Parks and Wildlife staff as well as The Keystone Center staff will remain available for approximately 30 minutes after adjourning to answer questions. Please also use the flip charts at the designated stations to record any other comments or questions during this time.*

Appendix B: Table of Breakout Session Comments By Management Concerns (Comments from each location are listed in order of meeting date)

<i>Barriers to Migration</i>				
Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	subdivisions	collect more data on migration and use of stopover habitats	political desire for more taxes (by towns), i.e. subdivisions get approved	
	roads/highways	work with other wildlife orgs to preserve lands (i.e. conservation easements- in critical areas first	BLM/USFS policy needs change- inclusion in planning manuals, handbooks, management plans, etc.	
	fences	work with wildlife orgs to "adopt a fence"	lack of data on migration & stopover habitats for most populations	
	land management agencies do not recognize big game management corridors or stopover habitats, thus rarely offer protection	consult with local government to provide recommendations and strategies for development migration	landowner push back from government involvement in private lands	
	fragmentation- roads, development, ski resorts	strengthen coordination with land management agencies to manage corridors and associated habitats to help meet overall population objectives		
Durango				
	increased human/residential development in key migration corridors	promote conservation easements, fencing, standards, zoning	funding	does summer sheep/cattle grazing affect deer utilization of forage

Barriers to Migration

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	multiple hunting seasons across various jurisdictions (CO, NM, TX)	coordination among agencies	different management strategies (CO, NM, S. Utes, jicarillas)	
	Lake Nighthorse	matching funding for changing fencing	elk ranching	
	fencing esp. bison fencing and cattle fencing	mandates for wildlife friendly fencing		
		insist county officials study all these issues concerning cell towers impact on wildlife		
Pueblo				
	fences- wildlife friendly fences are not wildlife friendly, cause direct deer mortality	cooperative interagency efforts to help each other more frequently, mitigate land use, cattle, sheep, fires (prescribed burns), development, mining, etc.	regulation, permits, encroachment, people 1st mentality on everything	do we have an understanding of impact on deer?
	highways	crossing structures	making developers care about the impacts	
	housing developments	push for wildlife friendly fences	expense	
	high fences on highways	working with developers to understand impact on deer		
	migration times are done when increase of winter traffic (skiers, etc.)	understand migration better before you take action with fencing		
	local animals vs migrating animals (resident)	study both local and migrating animal populations		

Barriers to Migration

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	barrier between Springs and Pueblo (I-25) affecting access to water source			
	quality of forage on the landscape			
Gunnison				
	Hwy 50 but do not think it is a big deal- high near Blue Mesa Reservoir	slower speed limits- 50 in wintertime from monarch pass to Montrose	slow process/lag time in getting results	
	Development of historical deer habitat-subdivisions	wildlife friendly fences	need someone truly/fully dedicated to this to ensure its done, i.e. collaboration w/ others	
	High fencing on orchards, elk ranches	Education	multi-ownership	
	oil and gas development, housing development	strategic planning for development- collaborate with other agencies, counties, etc. who are behind/involved w/management	what is the real data for basin-wide deer collisions. We should know this	
	highway 135 traffic collisions with mule deer in winters are apparently high	bridge the canyon/overpasses in narrow points	demands & pressure from population (human growth)	
	Blue Mesa Reservoir, elk migration-fragmentation/barrier	no winter motorized travel except for maintenance	funding and participation/ planning/budgeting by CDOT	
	Mortality Ice Crossing-concentration north of reservoir		money	

Barriers to Migration

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	National Park- Black Canyon, game stays on the park. Move to ranches mostly after hunting season		coordination between CDOT fencing contractors & CPW local DWM's to ensure that any fencing is deer friendly.	
	deer and elk habitat loss past 40 years		national park- tough project	
	too much development in critical habitat (times 2)			
	highways, increased traffic, extraction industry development			
Eagle				
	subdivisions	I-70 overpass/underpass	Money	Are fences better or worse?
	fence along I-70 helps but prevents migration	Not just I-70, CDOT needs to build better highway passage in important corridors. State (west slope) wide	local county government needs to step up- consult CPW	
	I-70 fence discontinuous at Eagle. This winter deer followed fence to town and then went on highway & got killed. Need cattleguards & barriers to prevent this	use "wildlife friendly" fencing whenever and wherever possible		
	Deer south of I-70 need to cross to the north side in hard winters. Need overpasses & underpasses for migration	add more fencing- Avon, 131, Vail, highway 6 w/ more underpasses		

Barriers to Migration

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Subdivisions buck and rail and wildlife impassable fences, picket fences become barriers			
Grand Junction				
	Underpasses increase migration with highway (ex I 70)	Hwy overpasses like Canada	cost of highway overpasses (times 3)	
	difficult with rail road	Require wildlife friendly fence as COA	highway 13 high fence concerns	
	Hwy 13 sheep fence not perceived to be a problem to deer population because there was more of it back when there were more deer. New high highway fences put up by CDOT maybe are	more studies and collaring to collect data for migration issues	CDOT requirement rubber sheet in culverts to deter movement	
	housing and other development impedes movement on I70 (eagle to Vail)	CDOT needs to retrofit highway fences with sections of lay-down fence for allowance of seasonal migration across highway (times 2)	way more road hunters concentrating in certain areas / spread it out split tags by regions of deer units (times 2)	
	Hwy fences = starvation	eliminate dogs		
	fragmentation of corridors	ID crossing points along HWY - build crossing		
	historic, unneeded fences	speed limits (seasonal, night vs. day)		
	loss of genetic exchange because of barriers	more research to see if deer use underpasses		

Barriers to Migration

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Private property fencing	allow hunting in refuges (ex. National parks to reduce elk)		
	high fidelity re: migration and ranges once deer lost, no reestablishment	work with CDOT for wildlife issues		
	highway fence on I80 near Rock Springs WY impedes migration (red Desert)	educate people on Migration of Deer to reduce collisions on highway		
	Fence not perceived as major issue, animals rarely found in fence	wilder the underpasses the better they work		
	domestic dogs	earlier cow seasons to control elk numbers in critical deer zones		
	elk eat deer feed in Black Canyon NP			
	Deer jump offs too high			
	Are deer really using culvert underpasses?			
	Early season elk hunters impact migration (times 2)			
	late season hunting (fewer 3rd season PLO)			

Barriers to Migration

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Craig				
	RFW (ranching for wildlife) barrier to movement	Ticket more people speeding	better communication	
	high fence areas	better communication with landowners and CDOT on future fencing		
	mile post 95 to mile post 110 on highway 13- barrier and road kills	reduce/eliminate areas that does not need woven wire/sheep fence		
	Hwy 13 & Hwy 40	use only over/under passes in key migratory areas		
	People Drive too fast	Use of woven wire only if absolutely necessary		
	High fence & woven wire			
	killing does doesn't allow fawns to find winter ground			
	woven wire catching deer fawns, see about 20-30 caught every year when deer start moving after fawning			

Competition With Elk

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	Deer are quiet and want solitude. Elk are noisy - seems to push deer away to less desirable places	increase elk harvest in areas where elk numbers high/deer numbers low by offering "combined license" to allow hunter to pay double (like \$90) to hunt elk with archery. If successful, hunter can use same license for 1st, 2nd, or 3rd season (only one rifle season) to try control elk herd and give CPW money. this is a type A license	adequate habitat to support population objectives for both SPP especially during winter extremes	
	dietary overlap could lead to competition here habitat conditions are limited	get all elk herds down to objective		
	see deer and elk utilizing the same areas			
	elk DO impact deer			
Durango				
	distribution of elk changing. Now they are wintering where deer did earlier.	take particular notice of elk populations in traditional mule deer winter range	some elk populations and annual calf crops are not doing particularly well either so putting extra pressure on elk herds may not be kosher	
	elk tend to have more of a buffer to human influence than mule deer	current elk numbers are probably optimal for deer	stop human growth in known safety areas where various animals reside	

Competition With Elk

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	current elk management numbers probably do not have an effect on deer	travel corridors from summer to winter ranges, set aside from future human development		
	notice increasing numbers of elk in traditional deer winter range. Is there direct competition?- maybe	bring in wolves to keep elk moving		
	competition in winter versus summer range			
Pueblo				
	witnessed an increase of elk and is impacting deer	remove fences on federal land	elk are the primary money makers for the state, landowners, outfitters, etc.	whitetails breeding mule deer?
	overgrazing by livestock/elk	pull livestock off earlier	how to balance deer & elk populations	
	competition with whitetails??	decrease elk & whitetail	politics	
	competing with more animals in some areas as food source has changed dramatically over last 20 years (livestock, elk, etc.)	elk forage has become better as deer forage has apparently decreased (units 58, 59, 591, 57, 49, 69, 84)	often only an issue during hard winters	
Gunnison				
	generally use same winter habitat in SW CO	more habitat improvement projects for all big game	may need more studies	
	heavy elk use can impact available deer habitat	decide what we want more of/where & manage game population accordingly	Money, Funding to create/improve big game habitat	

Competition With Elk

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	From the science, it doesn't look like they compete- different habitat & food sources, but elk populations increases, which deer across the west have been decreasing	work with public land management agencies to develop habitat treatments at a landscape scale, which might benefit animal distribution		
	observed on ranch- deer tend to yield to elk when both are present	help manage habitat to separate the elk (graze) from the deer (browse)		
	deer move away (not far- 1/4 mile ?)	I feel CPW does pretty well, however, they cannot manage a over the counter elk area- make the whole state draw		
	when elk #'s decline, deer increase (woodland park)	Winter- is it that deer are more greatly affected by severe weather or/and deer being out competed by elk in winter range/concentration areas		
	when elk numbers increase, deer decrease, typically separate from each other unless under extreme winter or limiting factor circumstances which make them compete for the same resources (Gunnison, Aguilar, Spanish Peaks)	Perhaps its what's happening in deer habitat & elk that's causing a difference? -mule deer tend to be at lower elevations- more vehicle/deer & elk collisions, more deer v. elk habitat loss?		

Competition With Elk

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Eagle				
	no competition with elk, except in severe winter (times 2)	eliminate ranching for wildlife, does not fit within CPW's goals	timing of ranching for wildlife seasons are conflicting w/ regular rifle seasons	
	have not observed any competition, even in severe winter range, these species fill different niches	eliminate late season hunts, just stick to regular rifle season dates- elk & deer need rest	public approval	
	seeing elk recently in more prime high altitude deer habitat, more than in the past, due partly to lack of hunting pressure on private ranches (times 2)	season staggering to push game off and on of public/private land does not work	needs more enforcement	
	competition on winter range (times 2)	"earn buck tag", kill cow elk to get buck tag	may be hard to get cow hunters on private lands	
	Calving and fawning time	heavy harvest on elk- lower doe harvest		
	no competition, may be beneficial for deer to follow elk trails	landowner tags should only be valid on that parcel alone		
	middle park- elk outcompete deer, including summer w/ drought conditions (times 3)	late season hunts on concentrated elk in winter, public and private	permission	
	Elk numbers are high	put pressure on big landowners for elk harvest, primarily cows	landowners right to say no or limit number of hunters	
	year round competition possibly more in winter	CPW needs to decide whether to manage for deer or elk	opposing views	

Competition With Elk

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	impact to transitional range, especially aspen stands	harvest more elk in DAU's over objective	trying to get to elk where they are available	
Grand Junction				
	Browse habitat in poor condition	reduce elk population through hunting (youth tags) (times 2)	oil and gas and private property hunting access (times 2)	
	cheat grass	more late seasons (especially youth) but not in deer critical areas (times 2)	property hunting access- less access for public especially with motorized vehicles (times 3)	
	no natural elk predators (times 2)	not specifying where youth can hunt	lost best winter range	
	plenty of natural elk predators	manage more habitat for deer than elk vegetation - pilot study in one unit	working in marginal habitat (times 2)	
	if high density of elk can push deer out	manage different DAU's for deer or elk	safe havens with no hunting (times 2)	
	more elk and less deer than historically	manage GMU for Deer habitat difference for elk (times 4)	landowners want to see elk	
	elk herds down the last 5-7 years	increase incentives for private land to be open for elk hunts'	no money for landowner habitat improvement	
	poor fawn recruitment	more youth seasons for deer	low fawn numbers	
	elk competing on winter range (times 2)	find other ways to manage elk objectives		
	competing on fawning and calving range	more fawn studies (survival)		
	more elk than in the past and too high (times 2)	better harvest strategies for elk quotas i.e.: Aug. low hunts		

Competition With Elk

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	elk populations being reduced but deer numbers are still declining			
	deer don't tolerate physical presence of elk (spatial)(times 5)			
	no cause and effect or competition between deer and elk (times 4)			
Craig				
	elk expanding and regulations impacting deer and elk populations and distributions have changed.	Improve habitat (times 2)	Elk refuge on private land- not taking enough elk	competition with domestic sheep? (times 2)
	elk will run deer off of water - limited source	develop water sources	cost of water development	
	High competition for space/habitat - not so much food	fence out horses	Water laws	
	elk seem to have an expanding range- see elk in places that had never been before	more elk licenses	Elk are more valuable to CPW than deer	
	elk have ability to "bully" since they move in large herds		Loss of hunt opportunity by decreasing elk numbers	
	Not seeing competition			
	Not intermingled			
	Elk pushing out in fall			
	elk taking prime feed- deer get poor quality forage			

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	lack of nutrition cause poor fawn survival	prescribed burning	burning is political	
	fire suppression has led to declining quality	supplemental seeding with natives	safety concerns w/ prescribed fire	
	increase in invasive species- trees, grasses, flowers (plant species)	science based reclamation	cheatgrass increases with fire	
	Drought	standards- required & monitoring	political- agency be forced to spend money on specific items such as compressed natural gas vehicles rather than management strategies	
	beetle kill/insects	removal of trees	CPW forced to waste money on rent in Denver rather than free office space at the Broadway headquarters	
	lack of monitoring of change and effectiveness of treatments	monitor- reinstate veg. monitoring	stipulation that development on a mitigation parcel cannot occur until after complete reclamation has occurred on original parcel	
Durango				
	homogeneous landscape on forest- not enough diversity	habitat restoration/rehab works wonders for decadent habitats	money/funding (times 2)	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	critical winter range habitat	chemicals work used in a responsible way to reduce invasive- but needs to be kept up on	politics	
	travel corridors	restore pre-settlement forest conditions	public perception	
	sheep grazing on mule deer summer range	setting aside lands that are crucial for deer survival during winters with more than average snowfall		
	private quality not as good	setting aside land for travel corridors that bottleneck by human influence		
	possible white tail encroachment	landowner incentives for creating and maintaining winter range		
	educate or be willing to manage private in a "better" way	partnerships w/ NRCS		
	public land habitat quality declining	cost sharing		
	invasive plants- see "loss"	reduction of livestock density both- public (summer and winter) and private (winter primarily)		
	dogs- leashed or not in the woods	partnerships with federal land management agencies		
	too many trophy houses- places in prior habitat areas			

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Pueblo				
	over grazing on private lands	rejuvenate sage brush w/ habitat treatments	political will	
	overgrazing on USFS	buy some ranches w/ water rights to raise alfalfa	lack of funding/money (times 5)	
	lack of buck brush	pray for rain	lack of staff	
	lack of habitat improvement (fire, hydro ax, chaining)	incentives for private property owners for habitat improvement	lack of education of land owners	
	lack of disturbance in all habitats	allow more fires (natural & prescribed)	more beavers	
	sage brush is dying	more hydro ax treatments	public perception (times 3)	
	drought (times 2)	heated water tanks in winter range	animal activists/environmental activists	
	summer homes- pets untended	install more guzzlers	manpower	
	fire suppression- active burns were common	allow more logging (times 2)- firewood cutting	knowledge of backbrush life history	
	loss of communication w/ agencies on what is "quality" habitat	cut more cedars	land management	
	endangered/threatened species		private property rights	
	federal land management on state wildlife issues	conservation easements- sale of smaller parcels of land to preserve larger parcels	government regulations (times 4)	
	mining, oil, gas	cloud seeding	fear of fire	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	way too much government regulation on private property management	anchor chaining	reluctance to issue citations	
	lack of weed management	reseed fires w/ beneficial plants	politics (times 2)	
	subdivision large ranches	install more water catchments		
	pinion/juniper encroachment	forest management		
		education of land managers/property owners		
		remove animals earlier		
		reevaluate grazing leases		
		propagate buck brush		
		send seeds with hunters		
		enforce state leash laws for pets		
		more active participation at capital/legislature to allow fires		
		sportsmen need better representation at capital		
		biologist/land managers need to educate public about habitat "those who know need to educate those that do not know"		

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Gunnison				
	Gunnison- Browse/Shrub is down (times 2)	limit or do not allow oil & gas development in critical habitat	public demands for deer herd numbers that may not be sustainable w/ habitat available	
	loss of aspen habitat due to sudden aspen decline, climate change, etc.	normal fire cycles should be restored, cull evasive plants	money- lack of, more money could result in larger more frequent projects (times 2)	
	Gunnison- lots of summer range but very limited winter range- especially in harder winters and people are concentrated in winter range (not just a Gunnison issue)	more funding for habitat projects (federal, state, private, non-profits like mule deer foundation)	land ownership- large percent of federal lands, additional process is required (i.e. NEPA. T&E, Archy)(times 2)	
	with increased population in CO, I have seen LOTS more human-caused pressure in important deer habitat	increase funding for habitat improvement projects in important habitat- particularly on public lands	why are there no federal land managers involved with this process?	
	pressure from grazing appears to affect habitat	of habitat = increase mule deer populations	apathy among hunters and general public in locations where deer numbers are in jeopardy	
	Eagle & in other locations- encroachment of woody vegetation (pinon/juniper) (times 2)	implement road closures starting in January	county commissioners that do not place economic importance at the top of their list.	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	lack of CPW & federal managers being on same page- i.e. same interest in raising mule deer population while other managers more concerned with other parts of multiple use	set population objectives based on what the winter range can support	ability to fully restore natural fire cycles due to development (urban & extractive)	
	oil and gas developing in critical habitat	increase prescribed fires & control fires	public values not always aligning	
	fire suppression where habitat has evolved w/ fire (reduction or complete loss of food sources)	collaborate with public land management agencies on habitat improvement work: work with USFS on designing vegetation management projects in ways that benefit deer, and other wildlife		
	invasive plant species	where winter range is graze ground up or back but not both (on rotation to/from public allotment). Each allotment maybe once a year. I have always been told habitat on forest generally is ok		
	over grazing/improper grazing that can cause harm (although	why put another trail/bike system in critical deer winter rang?		

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Eagle				
	Any of the issues brought up today could be mitigated by improving habitat quality	Restore agricultural fields (alfalfa)	Not being able to adjust DAU plans to quickly changing populations and climate (times 2)	
	Notice more noxious weeds along travel corridors in high country	Homes for deer- organization, fund raising	These are really hard problems to fix	
	habitat quality is good or improving in some areas where deer population is in decline, so it is not the only factor at play	Burn widely, burn often- control juniper invasion by any type of treatment	Habitat Stamp funds not available for habitat management improvement?	
	Browse studies were initiated when deer populations were high retroactive to declining, habitat conditions caused by deer. By the time the results came out the populations crashed (Gunnison mid 00's)	Large scale vegetation management projects across landscape to distribute habitat quality in different age classes (1000's of acres- bigger the better)	Insufficient operation and maintenance funding for wildlife properties	
	Cont from Browse studies: "healthy" populations in middle park = heavily browsed winter range. Populations seem inflated	manipulate water sources on winter range to make deer move off the summer	Can CPW utilize corporate money (donations) from Cabelas/Bass Pro etc., to improve range??	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Browse competition between Deer & elk in hard winters. Over population of elk on private lands which then winter on public with no way to control	Hayfields are a critical component that should be a priority to protect	chemicals work for weed control but not a big fan of using chemicals in wilderness areas	
	More PJ/Timber overgrowth	coordinate with public land grazing permits	government agencies stopping habitat work (EIS, ARCH Clearances)	
	treatments are few, small or non-existent	manage for specific deer foods (forbs and shrubs)	Issues are all interconnected, hard to address one at a time	
	annual weeds	Bring in sportsman/user group money	is there any money?- matches are cheap, feds are not	
	old/decadent shrubs-sagebrush (times 4)	beetle kill may provide an opportunity	Do mule deer habituate to people?- how much capability	
	large wildfires areas > 1000 acres are utilized heavily by deer & elk	reinstitute habitat treatment- particularly fire	Fire is hard to do with development (houses, etc.)	
	deer are more specific feeders than elk. Smaller stomachs so they key in on specific shrubs and forbs that have better nutrition	Provide funding (state and private) to federal agencies- cost/share to habitat improvement projects	cross boundary vegetation management projects (private, USFS, BLM) on critical habitat areas, winter range, severe winter range & transitional habitat	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	<p>Burn widely, burn often. Pinyon-juniper invasion, expansion, decadence due to oversuppression of wildlife needs to be corrected. The Ute burned and we benefitted. Now we need to burn. Please and Thank you.</p>	<p>manage deer/elk populations in DAU's to meet objectives. Habitat quality can only feed XXX number of deer and elk. Cant have high numbers of deer and elk in the same unit</p>	<p>restoration money unavailable</p>	
	<p>The limited factor on burns in this area is severe winter range. The severe winter ranges are not what is typically thought of as winter range. They are river bottoms, thick P.J. and highway rights of way. These areas were observed in Feb/March 2014. These areas should be identified and ways found to increase the access by deer as well as the productivity.</p>	<p>Forming locale cooperative groups that can spearhead vegetation management projects w/local federal agencies</p>	<p>House more money in pocket than Ag. Practices</p>	
	<p>Reduce competition on quality deer winter range with elk and domestic livestock when necessary</p>			

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Grand Junction				
	no burning=downed timer long term = obstructing fawn movement	Apply route density modeling to land management strategies consistent/cooperative implementation across agencies/counties, etc.	NEPA and arch clearances are prohibitive for real treatments, and are for pansies. Tell BLM to burn the P.J. (times 2)	
	highway fencing obstructs fawn movement	plan habitat treatments cooperatively with CPW and land management agencies - movement corridors (times 2)	get "buy in" of BLM and forest for habitat improvements and management needs for deer and other game (times 2)	
	tamarisk is displacing better quality forage/habitat	all factors considered, please burn the pinyon and Juniper at night while BLM is sleeping if necessary	funding and NEPA	
	not seeing browse lines indicating lack of feed as we had in the 70's - indicates below carrying capacity	create "fawn holes" to allow fawns to pass through highway fencing	quit using herbicides for every plant issue. Look into soil amendments microbes, minerals, and carbon to rebuild soil dynamics	
	Not enough burning - habitat quality decreases (times 3)	encourage adoption of master leasing plans on Federal lands	De sheep and cattle bring in noxious weeds?	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	drought and hard winters decrease quality of habitat	provide public pressure/politics to agencies in control of habitat manipulations i.e.: benefits of improved habitat to all users of public and private lands (times 2)	Money	
	road density increased	more controlled burns (times 2)	Do bikes spread weeds	
	no maintenance on water developments	more water projects - stock ponds spring developments, guzzlers	staffing, money, for recruiting volunteers	
	better use of forage improvement using HPP money	let it burn where appropriate (times 2)	lack of education in public sector re: wildlife management (route density modeling) (times 2)	
	focus on mechanical treatments where you can't burn	drought resistant plantings		
	burning is an expensive option	cloud seeding		
	energy development isn't all bad if re-veg is done well - short term loss then improvement	recruit volunteers for water developments		
	can be due to disturbance at critical times	create areas for deer to go (i.e.: pull off private/damage to public		
	increase human rec use (mountain biking)	more coordination with DWM to make sure HPP money goes to Best habitat		

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	lack of management by BLM and USFS - no improvement to quality	work with fed's to promote fire develop CDOW funding for habitat changes similar to Utah's WRI program		
	decrease water availability - springs drying up	Bring sheep (domestic) back = increased regeneration = increased forage		
	less alfalfa and more hay (grass)	cattle also improve regeneration of browse species		
	quality is location dependent and highly variable	increase hunting on sanctuaries (national parks) and increase elk and deer to maintain migration		
	drought related decrease in food and water	control infestation of weeds		
	habitat treatments for grouse are bad for deer - leave a mosaic	limit timing of rec use to outside critical times		
	coordinate with landowners and feds to target management towards increasing deer			
	noxious weeds and other weeds			
	domestic dog unleashed			
	no landscape changes on western slope - mountain browse aging aspen declining			

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	air pollutants falling to the soil in snow and rain is degrading soils. A soil amendment with microbes to degrade those pollutants is a (?) to change the impacts and grow higher quality plant as I have done			
	conversion of alfalfa to grass lesser quality for deer and better for elk			
	decadent sagebrush=higher pollen load, so freshly dropped fawns take first breath with increase pollen = same as hay fever/asthma//doesn't happen with younger sage			
	wheatgrass = good early forage and late winter			
Craig				
	Predator population/density may negatively impact deer habitat quality	promote positive aspects and benefits of prescribed burning to public for more support of tool	Not much information available to the public about the result/effectiveness of habitat treatments	
	lack of fire is significant	increase private landowner participation in habitat management for deer	Politics	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	overgrazing by livestock is serious issue for deer (i.e. bitterbrush)	remove non-wildlife friendly fencing within key deer migration corridors and encourage lay down/WL friendly fencing	Liability with fires	
	human population change not significant in NW Colorado	manage livestock grazing to achieve deer management goals	Hot burns take time to recover	
	Winterkill/weather very significant	treat habitat (in moderation)- brush beating, water development, etc.)	Drought/dry summers slow progress	
	habitat conditions have not changed significantly long-term in many areas, while seer numbers in those same areas have declined significantly	install lay-down fencing	Lag times for vegetation recovery	
	old timers used to use fire regularly and now fire is seldom utilized (times 2)	alfalfa fields	Need to balance deer management with other species needs (sage-grouse)	
	drought conditions negatively impact deer	limit the amount of time livestock is on deer winter range	elk are generalist feeders- disturbance may benefit elk over deer	
	habitat loss not significant in NW CO	seed more bitterbrush	Hard to know how much habitat you could/should treat	

Declining Habitat Quality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	overgrazing by livestock in some areas (California park)(times 3)	less development	fire suppression by federal agencies is counter productive to deer management (times 2)	
		more prescribed burns in certain areas (unit 2 & 3-sagebrush)	Coordination of hard labor crews	
		spending too much on habitat management and not enough on predator control	BLM policy needs to be more restrictive w/ livestock grazing on deer habitats	
		treat habitat in mosaic pattern		
		young sagebrush is beneficial to deer		
		less roads and fragmentation		
		post-burn seeding efforts and post-fire rehab is important		
		Increase elk harvest/tags in certain areas		
		Hand chainsaw crews to thin/burn beetle kill in winter (cheap PJ alternative)(prisoner crews or volunteers could be used)		
		more tall/mature sagebrush treatment		
		manage for younger sage brush		

<i>Disease</i>				
Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	no disease seen now, but Chronic wasting disease was a concern in the past & CDOW culled deer and numbers have not recovered	no more culling to resolve CWD issues	none given in Loveland	
Durango				
	EHD (epizootic hemorrhagic disease) becoming more of a concern	EHD monitoring- road kills or other opportunities that pop up. Keep good records to track spread and trends	money (times 2)	
	CWD- monitoring prevalence is important but it seems to be more of a public perception/education challenge	display data to inform- (1) make it more routine, (2) have a place to access		
	does winter feeding concentrate animals and help disease spread?	require or incentivize hunters to participate in research to determine the location & spread of disease		
		dispersed feed stations		
		continued monitoring is essential		
Pueblo				
	increase in ticks	disperse animals by developing water sources	often climate or precipitation controlled	
	locoweed	no winter feeding	public outcry about no feeding	

<i>Disease</i>				
Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	beetle kill trees	testing water quality	figure out what causes CWD	
	EHD (epizootic hemorrhagic disease) & bluetongue outbreaks	more public education of how disease impacts populations and more data research		
	CWD (591)(59)	maybe also dispersing animals by removing water developments that concentrate animals		
	In 1990 DOW told us they had it figured out. In Crystal Creek Drainage, my backyard, I told them to slow down with doe licenses. Predation would take care of the rest, now it is declining habitat.			
	culling to control CWD has lowered populations			
Gunnison				
	To my knowledge, no CWD or others here in Gunnison Basin. I also haven't seen any mule deer that look diseased	Regular and random testing	Lets be preemptive/proactive & monitor, study areas where disease hasn't been found yet as well as continuing efforts where populations are being effects	

Disease

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Observed deer in 1990's- get thin & die (have not observed recently). Mostly young bucks, a few does, June-July early	Adjust tags if disease is discovered	unknown causes	
	Over population herd, stagnation, lack of management & old herd demographics lead to heard failure. Estes Park elk 2007-2008 deer Gunnison		Cull old animals & let nature cull them for us, no feeding, etc.	
	I have not noticed any diseased deer in Gunnison Basin		Have realistic population objectives to keep range conditions healthy & animals out of close proximity avoiding epidemics	
			generally, Id encourage more studies of disease across the board. We should not wait to study disease until it hits endemic proportions	
			parasites	
			national parks protection of wildlife by certain parties outside of science for their well being- long term	
			understanding what disease exists and what the potential herd impacts are	

<i>Disease</i>				
Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Eagle				
	Blue tongue has killed entire herds of whitetail in MT	None given	none given	
	Have not seen a lot of CWD in Eagle Area (times 5)			
	Have not seen disease (times 9)			
Grand Junction				
	Blue Tongue (EHD) (times 2)	Improve deer habitat during critical seasons of nutritional needs (times 2)	Budget/funding	
	Illegal feeding contributing to disease	ban imported feed	most bang of the buck - spend money on other things (times 2)	
	livestock vaccines carried by mosquitoes	more research on disease particularly bluetongue in deer multiple years and interactions with livestock (times 3)	cost of testing animals prevents people from getting animals tested	
	dead elk at the beginning of seasons	more education to public to report sick/dead animals (times 2)	habitat quality causes them to be more susceptible	
	pollen of sagebrush affecting immune system	mass vaccines during winter		
	some diseases caused by stress	promote parasitic (wasps) insects to control other insects that cause EHO		

Disease				
Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		don't focus energy on diseases that have a natural cycle - put efforts elsewhere for example on predators (times 2)		
		monitor frequency of disease		
		remove sick deer (carriers)		
		research stress and other factors affecting animals immune system (times 2)		
		increase CWD testing opportunities		
		test more animals for disease		
		avoid mass culling of CWD animals		
Craig				
	Have observed sick deer in Craig- not common	Chronic wasting disease- testing eliminated (waste of time/money)	Limit wildlife	
	very little observed (times 2)	harvest more deer that are sick. Do more monitoring in the field		
	the runs- small amounts seen in 30 years	Chronic wasting disease was always around		
		Cull sick animals		
		Try not to concentrate the animals in winter		

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	in areas of low counts, do we need to experiment for 3-5 years by cutting doe tags 30,40,50% to get numbers back up? After 3-5 years determine if doe licenses can be increased. For loss of revenue, increase price of buck tags for resident hunters. Non-residents pay enough.	auction and raffle hunters hunting in winter range areas when deep snow present which prohibits normal deer movements resulting in a "no fair chase" situation	fee for non-consumptive wildlife users. Increased revenue can be used for programs to benefit west slope deer herds	
	antler restrictions	prohibit Auction and raffle hunters in December when deep snow is present	increase number of tags	
	impose 3 point restriction on bucks		increase cost of licenses for residents- tie to consumer price index	
			take a significant look at deer tags in all units, Buck and Doe	
			Colorado should have WTD & MD tags (separate)	
			license increases, perception change as a tax** education	
Durango				
	fawns dropping later in year	reduce private land doe tags	concerned about white tails coming to southwest region	are fewer tags helping/hurting populations?

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	a lot of private land doe tags- are they filled?	mandatory harvest reports/checks (times 2)	seasons running too late- shooting bucks in the rut	are there differences in survival of does between different areas of the state?
	doe harvest on So. Ute Reservation is low	collect age data - harvested does	examine the high-country buck hunt- evaluate impact	how much of does harvest is driven by game damage?
	see deer with low/small antler production	collect data- % of bred does	should be we hunting does?	what percent success on doe tags?
		data on how many female fawns are born (times 3)	should point restrictions be considered?	
		evaluate high-country buck hunt impacts	number of does dropped per doe?	
Pueblo				
		4 point restriction on bucks state wide (or 3 points)	tabor amendment if fees get too high	
	Hard to get a tag, may not have to change this, may be working.	eliminate 4th season deer hunts	land ownership, public vs private	
	drawings for other states do not coincide and other states are more expensive. Means more people are entering Colorado's drawing.	adjust deer season length	animal activists mentality for management issues	
	Seeing more bucks in unit 67	harvest more females (doe)	education of more non-hunting public	

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	need more tags available. Good population numbers in Westcliffe/Hillside CO herds	do harvest- increase youth tags on an area basis- reduce licenses	lack of recruitment and retention progress	
	more hunters than deer available	open more urban area archery hunting		
	dramatic increase of deer in unhunttable areas (developments, open space, parks, municipalities, etc.)	work more with landowners on issues and try to take their decades of life experience on the properties they manage and make a living at.		
		Gunnison management plan (unit 66 & 67) is available and they ask for input- have other look at it as a model (another participants believes this is an elk plan)		
		deer unit 54- it is necessary to supplement during hard winters		
		change draw dates (make Colorado's later)		
		forest management- clear cut, etc.		
		closure of deer hunting or limited		

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Gunnison				
	I have seen a great increase in the number of does in the Gunnison county	Cut numbers of hunters if you want to increase herds	youth recruitment (times 2)	
	I agree (above), I see lots of does and fawns	Give out more doe tags, increase hunting opportunity for average hunters, rather than trophy hunters	meat opportunistic	
	I see lots of does and fawns & mountain lions and Subaru's are their only predators	give out less tags overall including doe tags	DAU plans, make this a strategy that involves other agencies and private landowners	
	lose hunting opportunity, great opportunity for youth hunter recruitment	strategy after 2008 loss seemed to work quite well, contact CPW	I think we should try to involve our youth with various programs	
	kids and locals need to be able to hunt does in 54 & 55	If Doe Tags are to be, give only to youth 14 and under	public understanding herd dynamics & harvest effects on population	
	either sex tags based on population objectives	increased doe tags and increase youth tags for better recruitment of new hunters	Educate- effects of drought on deer herds- manage for drought conditions- (more tags-less deer as drought gets worse- less tags as drought ends to bring back herds)	
	75% of antlers tags should be earmarked for youth	youth and local only lotteries for doe permits- Nov & Dec for hunting opportunity w/ schools	getting to hunt deer every year	

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	when we are below objectives in a unit, we should not have doe permits (times 2)	hunts concentrated on SWA & private lands in coordination with CPW	trophy hunters that only want large bucks for harvest have disproportionate voice in management, while they are a small proportion of hunting population, which decreases access for other hunters	
	after spending money, energy, volunteers, to feed deer, how can we offer doe tags before we reach DAU objectives			
	is the age structure of the female deer population affecting birth rates and recruitment?			
	shouldn't hunt does if you cannot cull out old does			
Eagle				
	Drawing third choice doe tag	back off 4th season bucks (times 2)	science based wildlife management	
	Doe harvest reduces multiple generations	all DAU's- management plan/DAU plan	deer population response to habitat conditions	
	reduced number of deer where historically high numbers	only issue doe tags when population at or above midpoint of objective range, on 5-year rolling average basis	trophy aspect- hunting bucks 4th season	

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	lack of youth with antlered licenses	doe harvest only when population meet objectives (times 2)	elimination of opportunity for youth	
	a few doe tags is no problem	minimal number of doe tags when population at low end of objective		
		don't eliminate doe harvest entirely		
		gain support of non-traditional hunters		
		keep doe harvest, aging doe population, Inc productivity (times 2)		
		try no doe harvest for multiple years		
		youth only doe tags		
		antlered quota for youth		
		predator control		
		reduce overall season length		
		mandatory harvest reporting		
Grand Junction				
	Less does last 10 years - youth only doe tags	Limit overall license numbers - youth promotion (times 2)	education of hunters to tell difference between dry/wet does (times 2)	
	over harvest of does interruption of migratory patterns	rotating hunting seasons over units i.e.: closures rotate /year	liability releases on oil properties for general hunters	

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	stressed does decreased fertility less population (times 2)	management stressing removal of dry old does (times 2)	Money	
	stressed fawns die easily	limit motorized travel during spring	better communication or a mentor program	
	does paramount to good deer populations	limit motorized travel during spring and summer	pop. Dist. Probs.	
	going limited helped	do not harvest does	politics (times 3)	
	length/duration of seasons correlates to cumulative stress and related survivability (times 2)	priority to youth and meat hunter (times 3)	habitat fragmentation	
	also is a catalyst for migration movement - pushes patterns and dictates them	shut down of hunting for a season (times 2)	telling non-productive does vs. early loss of young	
	elk and deer "staying" in areas where very little pressure (hay fields, pastures, etc.)	transfer deer hunting or shift to elk hunting	not everyone attending are hunters - they may support hunting but they also see deer as an important part of the whole ecological system	
	Archery wounding loss is greater than other forms of take	DOW/CPW sponsored hunt mentor to address more corp. property involved in youth hunts etc.		
	preference point system (kills experience)	get more mentors involved (times 2)		

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	how big a problem is poaching especially with the high price of beef	mentor recruitment/getting the word out (times 2)		
		harvest does when at objective - base harvest on GMU not DAU		
		consider ending 4th season		
		focus on concentration areas - if not migratory - focus on areas of population overabundance		
		delayed start to archery season couple weeks		
		don't take out primebacks before Rut		
		experimental areas where take out methods or all hunting during a period - shut down of hunting in selective GMU/DAU		
		reduction of non-resident hunters on deer		
		slower reaction to population increases with regard to license allocation		

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		mandatory check on does to check on dry vs. wet and buck/ from what unit doe's - is it a mature or young buck or doe		
		new "youth" RFW program		
		management hunts especially youth to control "quality" of bucks and harvest objectives		
Craig				
	Want bucks	Doe harvest in certain areas	politics	
	All areas are different with deer numbers (some areas within a DAU are high, some are low)	Reduce Doe density before winter gets them	management by biology first, do not let opportunity override biology	
	Deer don't die old age	Do not harvest Does	limits revenue stream	
	shoot a doe means killing a fawn	Education similar to lion test	less licenses available overall	
	Indiscriminate harvest on does	more varied education	Financial- agency/outfitters	
	Low doe numbers (highway)- population cannot sustain doe harvest	special youth only season- private land only		
	No does- population decline	change rules		
	limited license versus RFW (length of season)	youth doe opportunity, doe hunting on perimeter of city		
	Other landowners manage differently between RFW properties	no doe harvest, youth doe hunting only		

Doe Harvest & Hunting Demands

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Low deer population but deer in city	limit/shut down harvest (times 2)- timing of Doe harvest similar to late elk hunts		
	youth opportunities then they grow up and have adult requirements (real world)- not preparing youth for real world			
	private property vs public land			
	too many does in area, over populated (axial basin)- mortality low , fawn produced			
	pushed from public to private land (limit public land hunter to harvest)			

Habitat Loss				
Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	significant increase in pinyon & juniper, decreased total habitat available	more volunteers to cut pinyon & juniper	communication between land manager, agency, operator, and CPW	
	oil and gas development	solicit funds to do mechanical treatment	Gaps in HB 1298- addresses oil and gas but not other quantifiable habitat loss issues (need to expand it) & requires oil and gas consultation w/ CPW	
	huge increase in houses	clustered development- I.e multiple wells per pod	Land management agency coordination and managing habitat and landscapes to meet state agency population objectives	
	habitat fragmentation via roads, subdivisions, pipelines, oil pads	zoning- municipal and county level	need more private matching dollars for federal matching programs	
	renewable energy development	master leasing plans for BLM	slow response by USFS and BLM in NEPA process to get habitat treatment done (also experience)	
	land management agencies do not focus on big game issues- barely protect winter range- do not consider migration corridors/stopover habitat/transition range	Wildlife mitigation planning/consult	lack of staff in agencies to get more treatments done in specific units	

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	grazing leases need to be enforced	Make sure CPW staff invests in community- be a part of community, know local community members		
	cattle introducing noxious weeds	strengthen partnerships w/ NGOs, private landowners to implement habitat management.		
	energy development lease stipulations need to be stronger and enforced	policy- work to get more farm bill money focused on mule deer		
	Energy companies have stepped up with dollars to mitigate	use sage- grouse and overlap to generate support with mule deer		
	poor habitat = unhealthy population	program to encourage private landowners for deer restoration 1.e grouse, cutthroat		
	we need to fix decadent habitat	private land enhancements performed under criteria established by the agency- landowners receive compensation for doing so		
		Leverage NGO dollars to get match from pittman-roberstson		

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
		If extra PR dollars are now available- use concept from Trent Verger & PF on conservation corners		
		leverage NGO volunteer hours in field doing work to get matching PR dollars		
Durango				
	Urban development	burns	private land holds a lot of winter range, hard to get landowners to do habitat improvements	does agricultural grazing remove habitat from deer use?
	oil and gas development	mechanical treatments	money (times 2)	is a good management strategy accepted to various orgs?- US Forest, County, Tribal, BLM)
	oil & gas development- support roads (times 2)	stimulate browse species	agricultural practices- new crops are sensitive to big game damage- sunflower fields	
	fire suppression- bad	different incentive programs for private landowners	noxious weed- huge, almost feels unsurmountable	
	collaboration with other jurisdictions	HPP- habitat partnership program- CPW	politics in various jurisdictions	
	deer winter in NM	fence height too high, no max control- deer get hung up		

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	Federal land management give more recognition to state input and biologist suggestions	peoples dogs controlled so they do not chase wildlife		
	beetle Kill	control invasive plants on private & public lands		
	forest conditions change- esp. winter range, also transition range, and from early successional to more mature stages	habitat banking program directed to all entities		
	lots of deer in forest lakes (considerable fawn dec. w/ cell tower invasion- does are not conceiving- radiation sterilizes)	advocate- interagency strategies & get support at higher levels		
	invasive vegetation- may not notice change in nourishment land provides)			
Pueblo				
	cutting down aspen trees	attempt to initiate habitat programs for properties that do not allow hunting or are not AG related (tax benefits etc.)	continuing development (HOA, POA, Open space, etc.)	
	developments	road closures/restrictions (hunting season	popular opinion/public perception	
	loss of pinion pine (winter habitat)- forage- (pinion nuts)	replant	money	

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	severe fragmentation of habitat- roads	remove dead trees	accessibility	
	summer homes	conservation easements	lack of funding	
	too many people, constant subdividing into smaller, smaller, tracts, ranchettes, even in developments, habitat is not pristine as people do not take care of the properties for the benefit of habitat or wildlife			
Gunnison				
	most important factor to deal with	Do not develop Oil & Gas in Gunnison County	money	
	massive increase in oil & gas development that leads to substantial habitat loss	conserve existing winter range & critical deer habitat- Gunnison, private lands, conservation easements- no subdivisions (times 3)	do not see major concerns for obstacles from public or private land owners	
	differences in farming/ranching operations, #'s & techniques state wide. Game damage issues	Void all leases in the Bull Mountain area (apply pressure to BLM to do this)(times 2)	protect the financial viability of ranching properties in Gunnison Basin- keep grazing permits	
	CRP programs	habitat islands- gas infrastructure per/sq mile, etc.	lobby efforts by resource extractors	

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	<p>in Muddy Creek basin (Gunnison County not basin), must have mitigation plan.</p> <p>Over 200 new Oil and Gas wells proposed in mule deer summer range, some even in winter concentration areas and winter range. These deer do not migrate as much.</p> <p>Fragmentation due to roads, well pad development, and drilling also tend to occur right when deer are using this habitat. This area will also be negatively affected by fire suppression- necessary as a result of the proposed development of Oil & Gas</p>	<p>Be active in voicing concern & ideas to mitigate oil and gas impacts on mule deer in Gunnison county</p>	<p>provide written comments about Oil & gas negative impacts on mule deer. We need CPW to be represented in BLM, USFS, County processes. Otherwise impacts to, may be significant and irreversible</p>	
	<p>Deer numbers along highways in winter range has increased drastically. I counted over 500 deer on a drive from Lake City to Blue Mesa Reservoir last week. (times 2)</p>	<p>Need mitigation plan for Oil and Gas proposed development. Apply pressure to halt oil and gas approved by feds and county until this is done.</p>		
	<p>SW Colorado & Spanish peaks region, gas fields well pads, roads, increase traffic, noise.</p> <p>All is considerable habitat loss/degradation</p>			

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	concentrated population equals vulnerability to increased mortality, predation, vehicle collisions, disease, etc. Severe winters			
	outward visual sightings of mule deer have dropped greatly the last 5 years. To the uneducated eye, habitat loss is not significant (east 551)			
Eagle				
	no fix	Protect riverbanks- most critical	political leadership	
	Division of parks and wildlife- more active in land management issues	what is the best vegetative components in mule deer habitat. How do we get there?	political system- elect officials concerned with habitat	
	restoration of failed developments	CRP program (times 2) (conservation reserve)	demands for use- rec- etc.	
	more "big" habitat projects on available parcels west slope wide	encourage economic model, not dependent on population growth for robust, sustainable quality of life	more people-people live in areas, depend on development for economics, revenue (times 2)	
	money- issue competition w/ private. Costs too extreme for land purchase in eagle co- other places?	trade critical wildlife areas for less critical habitat. Develop on less critical. Save critical	money available for habitat work locally (west slope)(times 3)	

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	look at what other state (Nev, VT, NM, AZ) are doing to preserve habitat (times 2)	How do we get deer to utilize, safely the I-70 median?	why cant CPW say all that needs to be said to protect wildlife? At meetings- developments, fed agencies	
	make developers mitigate impacts better	Signs for wildlife high use area	political will to stop/limit development	
	failed developments maintained (watered)	cannot fix what is developed so improve remaining habitat		
	county land management- political- stop up zoning			
	CPW stop being politically correct- say what needs to be said to protect wildlife (times 2)			
	keep undeveloped areas undeveloped (times 2)			
	indirect impacts- people-dogs out of developments onto habitat- bigger impacts than actual buildings (times 3)			
	Hay meadow project- migration corridor good, impacted forage, winter range			
	Preserve critical habitat- (calving, so facing, winter range)			

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	Development- Costco (times 2)(airport, gateway, other developments)			
	habituation to people (times 2)			
	development failures- buckhorn, golf courses, (bright water) (times 2)			
	don't develop deserted rail roads into high speed transport			
	don't build eagle river station			
	areas close to highway- important (especially hard winter)(times 2)			
	Preserve River bottom areas- most critical habitat in tough winter			
	Areas between I-70 E & W bound lanes is 100's of acres- winter range would be prime for mule deer			
	airport fence			
	Eagle area has seen the most extreme habitat loss of western Colorado. It should be used as an example for areas with future development			

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
Grand Junction				
	springs disappearing - lack of water	after a forest fire, soils need to be recolonized with hardy microbes to rebalance the high potassium of ash and sterile soil the potassium/phosphate ratios are way out of balance. Phosphates cheat sugars which create food values.	I hire hikers to apply soil amendments in 5 gallon buckets; hillside application do not stop because of poor access (times 2)	
	habitat down due to increase in human development - houses and subdivisions	Protect mule deer winter range instead of developing limited riparian habitat	uneducated landowners (10 to 100 acres) of winter range poaching, harassing and decreasing force (times 2)	
	winter range is key	prescribed burns will reduce grass and increase shrub productivity	loss of critical winter range - I 70 fence (times 2)	
	increase in road density and decrease in fawn survival	limit motorized activity in the spring through early summer	motorized folk won't like this (times 2)	
	habitat is fragmented ut not losing as much as is being re-veg/projects	keep partnership/projects going/BLM	keep habitat high priority in budget after predation is getting controlled	
	habitat loss from more roads	mule deer foundation and RMEF	public push (by some) to keep all roads/routes open (times 2)	
	fire suppression = long-term loss of habitat (times 2)	CPW coordinate with BLM on winter habitat and oil pads (times 3)	Loss of fire/chaining - other manipulation of old growth and decadent woody species (times 2)	

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	moving deer to winter range at start of hunting seasons = overuse of winter range	encourage use of master leasing plans on federal land		
	water availability has decreased (stock ponds)	start closing roads		
	pinyon mesa has little loss of habitat, still similar quantity (and grand mesa)	control burns/chaining/hydroaxe (times 2)		
	subdivision into grater than 40 acres = decrease grazing and increase height/ages of shrubs less regrowth /regeneration especially on winter range (times 2)	change BLM seed mix to more palatable		
	elk are out competing with deer and ruin habitat for deer	Cross agency/county application of CPW's route density/habitat modeling increase education		
Craig				
	Cannot blame deer population declines on habitat loss in this area	Less Development	Deer very sensitive to human disturbance and impact	
	human population change not significant in NW Colorado	Water Development	Lack of County Zoning/Planning to reduce/mitigate impacts	

Habitat Loss

Location	Experience	Management Strategies	Concerns and Barriers	Questions and Comments
	Habitat loss not a significant factor in Moffat County and Rio Blanco and other NW Counties	Restoring lands to offset development/mitigation		
	Never saw an oil well or gas pad kill an elk, a deer, or a sage-grouse, sometimes the workers do	Cluster and phase energy development to leave some areas undeveloped		
	Loss does not have to be subdivision (other types of development are happening in NW Colorado)			
	Believes habitat loss is an issue in NW Colorado (Ex: Piceance Basin)			

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	road killed deer (time 2)	tunnels/overpasses (times 2)	not enough enforcement of speed limits (wildlife zones)	
	right of way fence mortality	public information flashing signs to alert motorists		
	road construction in past years without considering human population growth & impacts to wildlife, mitigations, transitional range	better signage overall		
		ad campaigns (to make aware of speed limits and effects on deer)		
		provide wildlife friendly fencing info to CDOT		
Durango				
	noticed more effort to mitigate mortalities	develop more wildlife crossings (pursue federal highway funds)	money	
	increased mortality	birth control for humans	get control of the wireless industry- cell tower radiation is killing reproduction in deer)	

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	increased traffic with increased human population	right of way clearance for better view/visibility for drivers (coordinate with fish/wildlife, deer foundation, CPW, CDOT, S. Ute tribe, Sportsman		
	deer sensors work part of the time, fact that it is there and blinking can help	clubs have funds (matching funds) that can be put towards projects		
	no dedicated wildlife crossing structures between Bayfield and pagosa springs which sees a high percentage of all hits between Cortez and south fork	deer sensors- monitor effectiveness		
		deer whistles on vehicles		
		contact wildlife offices in Canada (Banff)(they will come and help)		
Pueblo				
	reduced speed limit might limit mortality	enforcement of speed limits on highways- higher tickets	Role of C-DOT (highway 9-kremling, speed limits at night, should be state wide, CDOT not having time, small budget to implement)	how can you collar 100% of deer
	highway 9- proposal miles between Silverthorne & kremmling- wildlife crossings	overpasses/underpasses	public acceptance of dead animals on the road	

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	highway fencing- keep animals off road	change in speed limits	funnel animals into one location- sometimes dangerous area	
	speed reductions need to be enforced	wildlife friendly fencing	no possible way to enforce on large scale, so higher fines when caught may help	
	overpasses/underpasses (not possible everywhere)	fencing/crossing structures	expense, maintenance (fences)	
	extensive road kill removal (Hwy 9, 50, 67, 69, 96)- every year (100's)	fence reduces collisions (times 2)	money (times 4)	
	localized problem- fence between Co Springs & Pueblo- used to see deer but not now	highway 50- sergeants to Gunnison make a tunnel/cut thru the dips	people will ignore speed limits, not enough officers to enforce	
	movement detecting lights- how well does it work	reduce speed at night/higher fines	communication with CDOT on Wildlife friendly fences	
	have not seen as much in Sergeants/Gunnison	addressed locally	CDOT- funding for cross structures	
		vegetated overpasses	CDOT regulations	
		study effectiveness of fences, overpasses, etc.		
		movement/motion detectors- (1) alert drivers, (2) scare animals		
		do not pick up the animal right away- send message to other drivers		

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		share information on number of deer being hit- put up signs		
		reduced speed limits		
Gunnison				
	I have seen a lot of dead deer on the side of highway 50, including a few really nice bucks. One day we counted about 100 plus deer from Gunnison to Montrose (times 2)	overpasses/underpasses to facilitate migration (times 2)	enforcement and/or funding (times 2)	
	huge mortality issues esp. in migration corridors and limited winter range. Worse in high traffic volume regions. U.S. Highway 160 Pagosa-Bayfield	Lower highway speeds to 55 in winter	communication between agencies/entities involved, particularly CDOT (times 2)	
	Also lots of dead deer between Gunnison to monarch pass but especially Gunnison to Sargents	find a way to get this done-partner with other to push for legislation/mobilize popular support	money (times 3)	
		CDOT maintenance of existing high fences (times 2)		
		State nighttime speed (slow them down)		

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		more nighttime speed reductions & more consistent enforcement (make an important point of focus in driving classes for 16 yr. old kids)(times 2)	no problem to do. Cost to wildlife & human fatality/vehicle damage is far greater than prevention programs and structures	
		Determine the real data for wildlife collisions in basin and COLO		
		possibly add more wildlife crossings with winter night time speed reductions		
		highway fencing with game areas they can pass through (times 2)		
		better collaboration with CDOT to identify HWY mortality hot spots, and opportunities for developing highway crossings. Use CDOT road kill database- "actual data"- not fabricated (times 2)		
Eagle				
	Water-I-70 migration-water source (cannot get to river b/c of fences)(times 2)	Highway 9-underpass/overpass project (times 2)		
	water needs to be shut off so deer migrate or they will stay on winter range	Overpass/underpass- CDOT	Other government agencies	

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Railroad mortality	learn from Hwy 9 project	money	
	HWY 40- heavy mortality in heavy winter	Education to general public & young children- understanding wildlife & not just hunting	get people who want to see the change to get the funding- general public does not understand	
	Hwy 9- significant mortality in (especially) heavy winters	Lower night time speed limits in core winter areas	private money donations (corporate- cabelas/bass pro, etc.) for over/underpass	
	In Feb/March 2014 the biggest mortality on deer in Eagle County was road kill. Highway 6 has critical habitat for severe winter condition. Also deer followed I-70 fencing to Eagle where they got around the fence & got killed on I-70	In Eagle County Highway 6 needs large flashing warning signs in late winter & early spring. I-70 at Eagle needs fence to continue to cattle guards at Eagle		
		Statewide there should be a requirement to report a deer collision with an automatic careless driving ticket. Failure to report a deer collision should be as severe a penalty as any other hit and run. There is no reason to hit a deer.		
Grand Junction				
	Hwy 13 speeds in the 80's were 55 but still had to go slow	flashing lights at night in heavy crossing areas (times 2)	so many motorists, cant do anything	

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Hwy65 lots of mortality due to deer coming down to water and feed - Hwy 330 as well	mule deer signs instead of white tail deer signs (times 2)	public perception	
	Hwy 550 improve water on west side/would have less mortality	plant undesirable feed along highway to discourage use		
	I70 west of Debeque no deer fence	education for motorists - TV, schools etc. (times 2)		
	Hwy 64 Picence energy traffic hurting deer Hwy 139	in high mortality area post numbers on a sign ex: \$5000 car bill when you hit a deer or 10 people killed in car / deer collisions		
		Require semi's to have smaller grills to be safer		
		night time reduced speed limits		
Craig				
	road-kill issues not significant	pick specific high density spots for road crossings over/under pass	over/underpasses cost prohibitive	mortality higher by car than hunting?
	Highway mortality underestimated	elk use also on over/under pass	money	Do slow zones work?
	incredible numbers hit I-80 to Craig, even higher Baggs-Craig	key migration areas- collar use over time		data on speed decrease? - CDOT collects?
	milder winters have higher highway mortality because the deer stick around on highway	Colorado state patrol collect data on impact		

Highway Mortality

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	more dead deer than rabbits	slower speeds further from town		
	less road kill now with lower deer numbers	possible use of under/overpass structures		
	has CDOT/state patrol shown with data that a decrease MPH resulted in decreased road kill?			
	lots of dead deer on highway 13			
	not this year- low mortality			
	high mortality on roads before deer decline			
	people oblivious to deer/elk			
	people attempting to hit deer on purpose			
	deer hanging out edge of Craig			
	drop in bucket on amount killed- no enforcement on mph decrease			

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	seeing more coyotes (times 2), wonders if its an impact	timing change for bear hunting	limited bear hunting b/c of no spring bear hunting	
	bears could be an influence- eating fawns	encourage harvest (mountain lion) in areas below quotas	habitat quality is a barrier to managing predators	
	coyote hunting is liberal, people can utilize current management	look at mountain lion hunting during big game seasons	bad habitat contributes to effect of predators	
	least of the worries	let CPW manage predators not public	better habitat leads to less predation	
	big bucks vulnerable to mountain lions	increase quota for mountain lion and bear	poor habitat = increased predation (times 2)	
	mountain lion hunting is weather dependent	we can hunt coyotes yearly- keep it like this. Continue to allow big game hunters to harvest coyotes	public push back on increase licenses for bear and lion	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	seems like certain units habitat is great- elk numbers ok. Is there a predator problem? Does quota for mountain lion need to increase?			
	1992 ballot issues are bad precedent- start amendment to allow CPW to have control over wildlife issues			
Durango				
	coyotes- predation (esp on fawns)	make information available about predator impacts- especially to urban/front range	public perception of predator hunting	how healthy is the lion population
	coyotes- predation on adults as well as fawns	use museums for wildlife management education	predator control- cost- barrier (times 2)	there are lion bounties in AZ, NM, TX
	trapping ban, less coyote control, higher predation	encourage more opportunity	fewer predator hunters due to: ammo, fuel costs	do bears target fawning grounds

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	more habituated to humans, less fear (times 2)	encourage hunters to use opportunities (to control predators)	restrictions on private lands	
	coyotes- greater numbers, more pack behavior	walk-in access for predator hunting on private lands	non-hunters do not understand hunting/predators	
	since too many cell towers- coyotes in animas valley are decreasing, just like fawns	acquire preference points as a coyote bounty "ears for deers"	population management input of non-hunters	
	lions- increased numbers observed	non-resident hunt coyotes for free	difference in attitudes between front range and western slope	
	bears- having impact on deer numbers	simplify caliber restriction during big game seasons, other states do not restrict	private landowners do not allow coyote hunters, many prevent coyote hunters from participating	
	greater number of bears seen	more female lion harvest in units where quotas are not filled	lack of access for mountain lion hunters to state wildlife areas during winter closures	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		non-resident hunter discount bear tag with elk or deer tag		
		relax participation restriction- must have elk/deer tag during rifle seasons		
		predator control- bounty coyotes		
		emphasize youth hunting for coyotes		
		no feeding of coyotes		
		we have ability to control predators		
		connect hunters to private lands willing to allow predator hunters		
		educate private land owners about benefits of predator hunting- CPW could facilitate		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		raise awareness of impacts of lions on mule deer		
		increase quotas for lions		
		increase female harvest of lions		
		wolf management strategy needed		
		provide a pie chart (graph) of predators and affect on mule deer		
		spring bear season needed		
Pueblo				
	lions kill deer in rugged areas that are not hunted	for areas w/ predator pit- focus control. Focus predator control in areas with predator pit	average age of hunter is increasing- so difficult hunts are a problem (times 2)	how does weather impact predator populations

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	compensatory mortality	make licenses more affordable	legislature would be required to change bear seasons	how do we get 12-21 years in the field & provide them w/ successful experience
	coyotes cycle (population)- when population of coyote is high, fawn survival is lower	revisit how we set quotas (both male and female lion quotas). Lion quotas are not set according to population size	public input against active control measures to diminish predation	what do service men think about hunting? Recruit service men (times 2)
	predator populations are not too high	bring back dogs & bait for bear hunting	although many predators are killed annually, some areas of problem (deer) still have little or no deer	
	cars	put bounty on coyotes in Gunnison	legislature would be required to change game damage	
	lion numbers are up but coyotes may not be higher	improve habitat- better habitat reduces predation- especially fawns		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	while performing predator control work, on working ranches over many years (58, 581, 59, 69, 84, 57, 511), local deer population is not like 1960's & 70's, but is much better than many other areas	implement some level of coyote control when needed		
	observed hundreds of predation kills from lion, bear, coyotes, bobcat, etc. especially when other food sources are diminished	give elk & deer hunters a bear license in certain areas during seasons		
	predator pit theory- having some areas like NW Colorado where more active predator cuccing could be warranted	lion hunters need to be able to pursue lion through private property- give lion hunters more flexibility		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	license costs are too high so hunters don't buy licenses- rich mans sport reduces management options	legalize use of electronic calls for lions		
	game damage payments for predator damage (predation on livestock)	game damage payments for predation on livestock reduce amount of money available for management		
	Lion predation is a problem on the pueblo side of the divide- lion hunters are limited by permits to run dogs	lion licenses need to be available during deer & elk seasons		
	Gunnison basin- problem is coyotes	loafing sheds for deer that live in Gunnison for severe winters		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	steel jaw traps have been banned	lion hunters should be encouraged to harvest females		
	we need to do scientific research to determine if predation is additive or compensatory. Is predation part of the ecosystem cycle or additive? Is predation out of whack w/ ecosystem?	Give out lion license during big game season (expand lion seasons). This would be a good time to hunt lions		
		predation is not a problem- lack to other factors		
		increase lion licenses (over the counter)		
		bounties to pay for gas/more economical		
		increase participation of service men in hunting (these people are young and fit)		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		Do not agree with bounties		
Gunnison				
	plenty of lions- quotas not met 54,55, 551	shoot them- when you buy a deer tag, you buy a lion tag	access to lions further in the wilderness- need motorized vehicle to be successful	
	too many coyotes	implement lion pursuit season	special no dog season then open to dog chase	
	hard to kill without tools of snares and leg holds	earlier season for lion hunting- before trail conditions get too tough (winter)	nobody is running dogs for lions in Gunnison	
	watched coyotes try to take down fawns- not in Gunnison	hunting with dog quota needs to go up	snaring is illegal except for private land with depredation permit	
	lions kill 1 deer or elk every 7-10 days	site specific application of predator management if it will be used. (specific for offending predator v. broad license to kill any predator	educate public on how much of an impact predators have on deer populations	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	found where coyotes tried to take on elk in Gunnison	to increase deer herds-yes lion, bear, coyote, & eagle contribute, the one we have control of is man- limit licenses	encourage more studies- how successful is predator culling v. other things that may benefit mule deer (like habitat restoration/preventing degradation/fragmentation- does it work in the long term?	
	realize that predator effects on mule deer are negative only when population is suffering from other issues i.e. habitat degradation	extend lion season until quota filled		
	not clear that predators always cause harm or that predator culling mean better mule deer populations	implement public coyote snaring in special season/area with permit		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	bear predation on neonate deer and elk (times 2)			
	mountain lions are increasingly visible to hikers-hunters			
	predator hunters (coyote) can disturb deer herds in the winter even more			
	54- physical mountain lion increase & increase of mule deer carcass			
	huge problem- lions killing at least 2 mule deer a week			
	lions feeding on elk carcass the day after it was killed			
	lions are very hard on mature bucks			

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Eagle				
	People should be held accountable on amendment #10- those that voted for it. They should know what amendment #10 and #14 are doing to help predators	no quota on lions and unlimited tags for "boot "hunters (general hunter w/out hounds) during sept-oct-nov, prior to hound season	too much political influence on CPW to do anything about it (times 11)	politically could we do bounties in Colorado?
	Obamas Fault	need hug a predator hunter commercial	aerial gunning of coyotes too expensive	
	First 30 years lived here didn't see bears, now common	bear license (Sept) good in any regular rifle season	predators can be a non factor with quality habitat (times 3)	
	Ranchers no longer controlling like they used to	bear licenses- List B	environmental factors- drought	
	Walt Disney has done us more harm than anything to the public	do not want trophy status on Big Tom Lions which would lower quotas	money to do habitat improvement	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	too many coyotes (times 11)	Sept. Bear over counter	no darn wolves (times 2)	
	too many lions (times 11)	bring back recreational trapping	Refuges or private lands for coyotes, bear, lions- cant get hunted due to no access	
	too many bears (times 11)	bring back bait- bears	amendment #10 (prohibit spring bear season & dogs)- hard to change legislative action	
	Increased bear, lion populations over the years	Want spring bear season and baiting back, and hound hunting	difficult to estimate lion population, not good science	
	Predators concentrate on weaker animals- someone disagrees but they do eat babies	management strategies should be based on sound science not politically based		
	Predators may or may not be a factor- dependent on other factors (habitat quality)	unlimited bear tags (in 5 years you will see a difference)		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	first 30 years I lived here, I never saw a lion, now I do (times 13)	bounty on coyotes		
	Loves September bear season	Bounty on lions		
	1080 cyanide guns, government trappers, we used to have help, now we don't	make small game (Grouse) and bear season concurrent opening		
	Proposition /amendment 14 killed trapping (times 6)	why restrict hunters to the September season? Make the tag good all fall (all rifle seasons)		
		options for more coyote harvest (private land)		
		Would throw money toward habitat improvement, not bounties etc.		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		Better Buck/Doe ratios w/out predation management		
		can have productive deer populations w/o predation control		
		higher quotas on lions		
		allow use of electronic cells for bear and lion		
		valid tag for deer on elk (should allow take of Lion or bear on Big game tag)		
		habitat concerns- squeezing prey populations into small islands of available habitat. Making easy prey to predation		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		educate general public about predation (specifically the younger generations (times 7)		
		need to teach Peruvian sheep herders how to shoot something other than a 30-30 rifle		
		encourage more youth hunting of predators- recruitment		
Grand Junction				
	Deer down dramatically/habitat same as lions and bears	Lion quotas increase (times 3)- inc quota by 8	Money, Legislation/Politics agriculture practice that benefit deer also bring predators	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	same number of sheep and cattle	open lion season during rifle seasons - no license required	voters taking over wild management in spring bear season	
	same habitat last 30-40 years, Southeast & West of Montrose	must check them in	hard to manage predators	
	increase in lion kills and sightings	spring bear season - summer season and include use of dogs	since westerners generally hate predators hard to use science to manage them	
	increase in bears	in addition to providing more hunting opportunity, DPW or Wildlife seniors could spend time and money on control for the sake of deer	private land access (energy companies)	
	lack of coyote hunters	baiting bears in the fall	agriculture practice that benefit deer also bring predators	
	birds of prey and secondary predators eating lion and bear kills	better access for lion hunting - BLM	lack of money to pay APHIS	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	lazy hunters	Decrease raptors	trophy bear hunting - passing up small bears	
	loss of sheep and herders equals lack of ability to control predators - poison and trapping	bounties on coyotes and other predators	limited bear season	
	many times predators blamed for population decline when studied however, the population decline caused by human activity ex: wolves and caribou	lower cost of bear/lion tag with purchase of Deer /elk	media anti-bear hunting	
	eagles killing fawns	Lion / bear - small game, year round season	not allowed to put out bounties	
	nothing else matters if they get eaten as fawns (no other species)	use APHIS for predator control (aerial gaming)	Politics	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	crows and ravens lead other predators in	voluntary donation for predator control		
	relocated bears especially hard on fawns	use hunters for problem predator outside of seasons (times 2)		
	for years Canadian government thought wolves were the biggest problem for caribou - but they finally learned that was wrong. Don't get carried away with blaming predators without proper study	sportsman license and elk or deer and bear or lion tags thrown in (pay for lion or bear if you kill)(times 2)		
		One strike for predators		
		open up trapping/snares year round		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		increase sheep (domestic) growing		
		refuse to take problem bears - force Aspen/Vail to deal with them		
		easier for landowner to shoot bears		
		allowed to buy tag at any time		
		educate bear hunters		
		better PR on bear hunting		
		allow hunters to buy second bear license if success		
		state wide bear tag		
		don't move bear to areas where deer are hurting		
		fall lion season - running through April		
		control raven and crows		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		bear license valid Sept 2 - end of 3rd rifle		
		contract coyote hunting		
		consult with BLM on their experiences		
		bear/lion tag for the fall		
		remove the mandatory check requirement for bears and lions, which will encourage more hunters of the species resulting in a higher harvest of these predators		
		establish an archery lion season- valid from September 2-September 30 and November 1 thru April 15- license valid until quota filled		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
		reduce non-resident bear and lion license to same cost as resident.		
		allow hunters to take problem lions/bears. Provide a lion/bear conflict/hunt roster		
		in units where bear numbers conflicts are high, if hunter is successful, let them purchase another tag		
Craig				
	rabbit population dynamics is very important to deer population via predator dynamics	manage population at a level to account for predation in addition to hunting	Funding- should be long term funding & broad landscape	Does amount of predation on mule deer go up or down with mule deer population changes

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	predators affecting fawn survival & recruitment	aerial control of coyotes	Public opinion	
	predator population increases- 10 year time frame (bears specifically) (times 2)	increase bear licenses	CPW barrier- CPW needs to better present the facts	
	predation factor at birth sites/new borns	do habitat work but spend some money to control predators	increase public awareness- post more facts for public to see whats been tried and what hasn't	
	fox not as much of factor on predation on deer	Use different strategies in different areas	politics (times 3)	
	if no domestic sheep- fewer coyotes. Domestic sheep are attractive to coyotes	Bounty for incentive	Citizen ballot initiatives	
	decrease in small mammal population = increase predation on fawns	Use proper grazing management and do not overgraze	Don't temper field staff in speaking the "facts"	

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Increased bear predation on calves	way to donate for predator control (tax season or otherwise)(also during application period)		
	Increase coyote predation on fawns	be more relaxed with managers of take regulations		
	predation bigger issue than people give it credit for	Manage by the facts		
	Avian scavengers, magpies, crows, ravens, eagles	minimize politics in management... use a fact approach		
	predators at highest level in recent history	use poison to control coyotes		
	50's/60's domestic sheep- predator control-1080 poisons meant increased mule deer populations (times 3)	multiple species licensing		

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	less sheep- less predator control	run lion season also during archery, ML & reg rifle (times 2)		
	Early 70's bounty coyotes, lions	better estimate predator populations- more emphasis		
	today= sheepman neighbors- fly for coyote control = increased fawn ratios			
	winter 83-84 major die off- Rangely county compared to Craig- Rangely didn't recover but Craig did with predator control but Rangely did not have die off due to better winter range			
	Guard dogs now with sheep because mortality without poison			

Predation

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Coyotes are a concern for deer			
	lions managed well			
	predator interaction bears/lions scavenging and increased predation due to scavenging			
	raptors- scavenging and direct predation- competition to increase predation on other animals in population			

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	ski areas- enlarging, associated development, year round recreation	continue to educate public through "hug hunter" campaigns but lets provide more stats, tell the real story about wildlife conservation and economic impact	negative perception of non-hunting public against the sportsman who pay the bills	
	more year round recreation- no rest for deer	public awareness of what their (recreational users) impacts are	lack of appreciation of recreation based economy and sportsmen's contribution to economy & wildlife conservation	
	dogs (esp. off leash)	seasonal restrictions at fawning times	what is non-hunting public doing for wildlife? Need sales tax- 1 penny/\$10	
	people off trail- vehicles, hikers, more and more people, mountain bikes	enforcement of road closures		
		habitat fee for non-hunting/fishing recreational use		
		OHV I.D. plates		

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Durango				
	dogs out of control chasing deer	we need a cultural change to make it cool to have fewer dogs and train them to behave. Incentives or rewards	limited resources	
	increase activity disturbance in winter range	ability to enforce or volunteers pseudo enforcing/education	enforcement issues	
	humans in winter wildlife closures	have fewer hunting licenses for does	public not heeding warnings	
	trails- # of people & increase in # of trails	BLM/forest service have a more comprehensive travel management plan (times 2)		
	people not understanding the implications of dogs off leash	no warning enforcement		
	increase in outdoor activity on summer ranges	more enforcement personnel		
Pueblo				
	road closures- atvs, bikes but then people cannot get to where they want, there is no access	road closures	signage and education- push back from dirt bikers (game retrieval)	
	hunting recreational impact	limit hunting	enforcement/fines	
	noise of dirt bikes	restrictions- primitive sites open	can be done by CPW	
	not a huge impact, impact hunters more	seasonal closures (times 2)(of mountain biking trails	multiple interests	

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	camping sites	close rock climbing areas for a period of time to bring deer back	public demand	
	aggregate hunters	same regulations for motorbikes, motorcycles, atvs etc.	political closures	
	single track mountain bikes	limiting to trails/roads already there	government politics prevent reopenings	
	rock climbing closes certain areas			
	general increase in recreational use			
	impacts of recreation on winter range			
Gunnison				
	have seen habitat use dictated by recreational use (times 4)	do not put bike/trail systems in critical winter range (times 3)	the public ignoring closures or timing restrictions	
	shed antler collecting disturbs animals when they are still using winter range	road closures start in December/January rather than March	demand for more trails, when do we have enough trails?	
	concentrated recreation use displaces animals from some areas and affects movement patterns	need more studies and determine if dispersed recreation creates more impacts or concentrated recreation is better. Maybe it is site specific, we should figure this out	upsetting a passionate subset of the public (recreators) in order to implement area closures or timing restricted recreation for wildlife	

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	impacts of dogs chasing deer during winter	work with local conservation groups to get more beneficial habitat work, monitoring and feedback	growing population looking for recreational opportunities in CO	
	have not really noticed recreational impact to be a huge issue- yes extremes are always an issue	award OHV grants that provide habitat improvement even fund things that specifically improve habitat to off-set recreational impacts (I.e. grants just for habitat improvement)- necessary to ensure balanced management. This is also a great way to affect habitat on federal lands- work with local conservation orgs to achieve this	public realization and understanding that recreation can have negative impacts on wildlife	
	moves game. Some do adapt.	quit building bike/bicycle trails in critical deer use areas	wildlife department needs to be more vocal to ensure our wildlife-mule deer- are properly protected from negative recreational impacts (habitat fragmentation)	
	witnessed motorized use stress groups of deer many times	collect data on various activities that impact wildlife. Or look at the data that exists		

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	OHV (off highway vehicle) funds go just to trail development- rec use dominates- looks like CPW mission not being realized as wildlife takes back seat continually.	Admit or accept that declines in populations may be related more to weather i.e. drought, than human development, recreation, management and humans		
	illegally created trails can cause substantial damage to habitat and fragment habitat	perhaps regulate recreation		
		outlaw irresponsible motorized use in key habitat areas (times 3)		
		area closures or timing restrictions in important big game habitat		
		educate public about potential impacts to deer from recreational activities		
		use data (GPS collars, etc.) to help formulate policy in high use areas		
Eagle				
	snowmobiles on winter range	need more research on recreation impacts	more agreement between agencies- closures	
	ATV on closed routes (times 2)	confiscate ATVs when used on closed routes	other agencies will fight the fee	

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Dirt bikes on former sheepherders trails	take their bikes away	retail stores related to outdoor activities may resist & loose money	
	riding motorized on single tracks	Bikes and hikers registration fee (times 2)	political will to implement fees/limits on mountain bikes	
	blatant violations of road closures by dirt bikes, mountain bikes	fee for rec use go to wildlife impact mitigation	summer recreation is the fastest growing season of use and should be managed for	
	recreation year round	BLM needs better funding	motivation of BLM/USFS LE (times 2)	
	shed hunting too early	Better law enforcement by BLM/USFS personnel (times 2)	Motivation-lack of LE of BLM/USFS	
	Dogs (times 4)	When people violate make it hurt (times 2), take away the violators toys. Large fines.	Government red tape interfering with what needs to be done	
	Shed Season	education of recreation uses of the winter/spring demands on elk and deer		
	illegal users- off road/off trail (times 4)	better management & law enforcement (times 2)		
	mountain bikers change migration timing	make all land users buy a habitat stamp or user fee (times 4)		
	day hikers with dogs off leash and dogs in winter habitat	Manage shed/antler hunting season state wide (times 5)		

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	mountain bike making own trails & causes habitat impact on a negative (times 2)	season for recreation on public lands- mountain bikers (e.g. Mt. Evans wildlife)		
	non-hunter recreation users do not understand winter/spring time demands on wildlife. Use areas regardless of closure etc. (times 2)	biking on the road, have to have a license or register the bike & have liability insurance when on road or public lands		
	different uses have dramatically different impacts to wildlife (disturbances). Non-motorized use is harder on displacing wildlife than conventionally thought (times 2)	motorized and mechanical use may need to register for habitat stamp		
	recreational use is rarely a big problem. Deer are much smarter than commonly thought. When hunting season is over, deer adapt to all kinds of disturbance. They know what is a threat.	limit the time or year mountain bikers can use trails. Detour times during hunting seasons		
		Register Mountain bikes		
Grand Junction				
	Increased ATV use everywhere (times 2)	Allocate funding specifically for patrol	manpower	

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	protect important deer fawning areas in high use recreation areas (times 2)	state license and registration bikers on public land	funding	
	Shed hunting restrictions seasonal closures (times 3)	limit travel e.g.: no travel in spring and early summer	agency cooperation	
	oil/gas restrictions for management of wells and pads (times 2)	apply CPW's route density/habitat modeling across state, federal, county land (as recently presented to Dominquez Escalante NCA) and increase public education about this tool and the benefit to the hunting economy and populations generally	motorized group don't like to close roads	
	off leash dogs	How do motorized affect fawns and pregnant does?	make sure no hunting with drones reg also includes friends not allowed to radio in info from drones	
	ATV (average)use not impacting deer	increased patrol during non- hunting periods for other users	keep drones out of hunting areas completely	
	well-pads provide good deer habitat	protection of important deer areas timing	limit access for traffic during migration and fawn times	
	too many hunting seasons	restrictions on mnt biking areas		
	New shed hunters chase deer sooner	timing of shed hunting (times 3)		

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	mountain bikers go places others cant	educate bikers/hikers etc. about impacts to wildlife disturbance - dog walkers as well (times 3)		
	drones are coming - how will they impact deer? (times 2)	less hunting seasons - shorter seasons		
	dirt bikes cause more noise and corrosion	regulated and licensed shed hunting (times2)		
	CPW aerial flights in winter	education for hunters on elk on uncompadre plateau		
	motorcycle races on uncompadre July-Aug prior to archery 300-400 bikes	require license for hikers and bikers - fees (times 3)		
	seasons on shed hunting (times 2)	coordinate between agencies (BLM and CPW) (times 2)		
	route densities on federal land			
	want to see a recovery permit to retrieve animals form the field			
Craig				
	Hunting seasons going too late (times 2)	license to shed hunt on public- more revenue for mule deer studies	public concern over loss of easier hunts	Overall survival rates calf/fawns
	Bird hunting in limited units during hunt	shut down shed hunting till June	not enough people to enforce laws	
	lots of people come to see deer (watchable wildlife)	Hunt seer earlier		

Recreational Impacts

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Lots of opportunity for non-consumptive wildlife use	Saturday-Wednesday Seasons		
	Ranching for wildlife seasons too long (times 2)	enforce ATV laws/higher fines		
	ATV traffic (times 2)			
	going down closed roads			
	private land- no issues			
	BLM/USFS has to maintain trails regularly			
	Division collaring deer in winter when deer are recovering from hunting and rut			
	Increased truck traffic (all traffic)			
	oil/gas/coal			
	Increased ATV use, camping, increased trails and roads			
	hunting pressure on migration routes			
	private/public pressure gradient from hunters RFW			
	refuge areas			
	seeing new trails made by OHV's especially Routt National Forest by Steamboat Lake			
	Stricter penalties for being off trail (times 2)			

Weather				
Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	extremes affecting population- drought & winter	if mortality increases in weather extremes, are licenses reduced enough?	adequate (quality and quantity) winter habitat during extreme winter conditions	
		do emergency license like seen in 2002 to reduce elk herd work in drought conditions? Obviously not needed for der?	do the land management agencies respond adequately to provide for those conditions?	
		winter feeding		
Durango				
	dryer winters resulting in drought effects to winter range, forage reduction (times 2)- compounded by increased livestock competition	project to protect and improve winter habitat quality (e.g. P/T reduction, weed management, sage enhancement)	public perception	
	fire suppression leading to overgrown forest, altered habitat and catastrophic fire (times 2)	mitigation	climate change may impact migration timing and routes	
	migration and routes are currently fairly predictable	policy- inhibits burns	public support is critical	
	responsible logging activities w/ reclamation			

Weather

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Pueblo				
	winters drive deer populations	proactive approach to when to feed in times of crisis before weather actually mandates when, how, and where to feed	not easy to control	
	climate less predictable/warmer/drier than it used to be			
	increase in drought			
	rollercoaster/variability in moisture patterns			
	decrease in brush/browse			
Gunnison				
	Decrease in grass/Forbs and increase in pinyon/junipers	reduce human activity in winter areas. Sage grouse closures also help deer	uncertainty-predicting future weather. However, we should be able to take some action knowing habitat may change (move to higher elevations as food sources move higher)	After 08 lots of fawns, twins naturally, what causes this?

Weather

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	We know that weather- drought, hard winters- negatively affects mule deer populations. As we get more abnormal or harsh weather due to climate change, our mule deer may be affected more often & decline ever more	proactive approach- how can we mitigate/prevent negative climate change impacts so Gunnison continues to have thriving mule deer populations for years to come? - likely need to ensure viable habitat remains intact & rehabilitate habitat that's degraded. More habitat should mean more flexibility for response to weather events like drought and severe winters	Plan/Manage for uncertainty and realize that there are unpredictable events- 5 ft. snow storms will happen again (at least one)	
	Middleton et al 2013 ecology found subtle effects of climate change in elk birth & recruitment in Yellowstone area	better management of winter range to buffer for weather fluctuations	agencies (state & federal) reacting slowly to climate change & the impacts this is having to habitat	
	climate change could play a major role in changing deer populations and migration patterns	manage herds at appropriate numbers since we have limited non-human predation. Allow hunter harvest, not just trophy buck harvest	increased fire activity, how to maintain habitat in light of large catastrophic fires	

Weather

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	winter 07-08- also lost deer Hotchkiss. Lost more deer than we realized	one rock dams- gunny improve sage habitat. Spread out hunting pressure. More even harvest & pressure changing deer/elk movement & habitat & prescribed natural burns- push/pull herds into & out of habitat		
	need fewer animals than carrying capacity- not too many so when extreme weather drought and snow and compounding weather occurs a stronger sparser population survived better (times 2)			
	We were far above carrying capacity in 2007/2008			
Eagle				
	Deer populations respond to weather, but historical rebounds appear dampened by other factors in recent times	big snow will increase deer killed during hunting season	make winter feeding process quicker	
	see guys shed hunting when winter habitat is limited, pushing animals	need season for shed hunting- license requirement	getting regulations passed and enforced	

Weather

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	some locations leave deer less vulnerable to weather impacts, but are limped in DAU's, perhaps exaggerating magnitude of weather response as perceived by unit data	if the need to do winter feeding, it should be streamlined, make process quicker	funding, prime winter range bought up	
	during winter warm weather hunting, see more recreators out- disrupts hunting/harvest	feeding can save a few deer- would rather spend money on habitat	agency cooperation (BLM)	
	heavy winters & drought years	build new guzzlers and restore old guzzlers (times 5)		
	lack of winter sources (times 5)			
	during certain winters, deer are bottlenecked into small areas			
Grand Junction				
	weather effecting migration patterns	burn to increase habitat on winter range	political / concerns about burning getting out of control	
	drought weather /warmer weather = late born fawns	cloud seeding	budget / money issues	
	bad winters effect populations	nutritional supplements (vitamins)	politics of predator control and feeding	
	late bad winters especially bad	feeding in winter especially in early spring late winter	hard to know what scale (time line) to look at past conditions	

Weather

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	bad winter effects 3 years of production	decrease doe tags/kill less animals when bad winters or drought	can't control the weather	
	weather controls populations more than other factors	predator controls		
	water availability during drought years	soil amendments to soften soil and absorb moisture		
		reduce populations to where the habitat can support it		
		projects to enhance water storage (example: more water guzzlers)		
		improve and maintain existing sources		
		more drought tolerant plants for feed		
		manage populations in different parts of the state differently based on different weather		
Craig				
	Drought- weed (times 4)	Change hunting season start/end dates to deal with later-starting winters	not being able to adjust license numbers quickly after a hard winter but before the draw deadline	
	Poor forage (times 2)	maybe reserve hay/feed each year in case a hard winter hits	revenue concerns	

Weather

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	Later winter	flexibility on license numbers based on weather events (hunter numbers)	cost of feeding increase disease	
	Warmer winter	shut all season down by mid-November and leave the animals alone. Specifically RFN or ranching for wildlife	climate change- more drought, less precipitation	
	Winter Kill (times 3)			

<i>Other</i>				
Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
Loveland				
	Competition with Feral Horses	Monitor impact on range conditions and work with BLM on population numbers		
Durango				
		Public should rely on CDOW(CPW) biologist knowledge for decision making.		
			Natives taking of deer during rut should be further mitigated	
Pueblo				
	poaching (times 2), collect poaching data	allowing large landowners to charge to have people hunt their land	lenient judges	
		increase fines/punishment for poaching		
Gunnison				
	we don't seem to have a good handle on historic fluctuations in mule deer populations- the processes driving fluctuations			
	probably landscape-level effects and probably multiple, subtle effects			

Other

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	lose a lot of deer when they start eating green cheat grass in spring (especially pinyon-juniper) grass too rich			
	educate the public about what CPW knows about deer			
Eagle				
	Good turnout, but the youngest person here was about 30. Very few women and no youth. This poses a problem for the future of deer management (and hunting)			
Grand Junction				
	Release the soil phosphates to create sugars in plants. So many plants require more energy to digest that they possess. This makes weeds and invites herbicides			
	maintain realistic population objectives. CDOW has done best job in the west			
	plot time series of deer population vs. time series of cumulative hunting season days per year			

Other

Location	Experiences	Management Strategies	Concerns and Barriers	Questions and Comments
	do not overgeneralize problems or solutions; enact different measure in different areas, since main problems in one may not be same as in another			
	better population estimates. Monitor body mass changes of deer for general idea of health of herd			
	point balancing; law on what size bucks to kill. Not spikes or forked horns			
Craig				
	Rabbit numbers are down, predators are eating mule deer instead			

Appendix C: Opening and Closing Session Comments, Question and Answer By Order of Meeting Date

Loveland

Opening Session

Participants in Loveland asked why the strategy focuses only on the West Slope and not the rest of the state. CPW responded that the greatest population of mule deer and the largest decline in mule deer populations is on the West Slope. It was noted that the threats are different on the West Slope than on the Front Range.

Participants also asked if there is a significant difference in the decline in the Northwest and Southwest part of Colorado and in other surrounding states. CPW staff informed the participants that they are about the same. Declines have been the greatest in the far third western part of the State. Other states have seen a decline as well as declines in Canada, with the exception of Alberta.

Furthermore, participants wanted to better understand what is happening in the middle third of the state where mule deer populations have not seen as drastic of a decline. CPW staff responded that in the intermountain regions there are higher elevation areas and the mule deer are thriving. The population numbers declined after the winter of 2007, but have bounced back better than the far western third of the State. It was noted that habitat and other factors are different in the middle third of the state.

Closing Session

Participants in Loveland recognized that CPW cannot have influence on all management concerns. Many cross multiple jurisdictions and therefore coordination with multiple agencies and organizations is vital to help manage the concerns. Moreover, participants wanted to better understand why CPW would solicit comments from people which they believed who do not have all the facts, information, or resources that CPW has. CPW staff responded stating that they do not have all the information and that it is important to hear the experiences of those who are on the ground as well as suggestions to best work towards increasing mule deer populations. One participant suggested the CPW should hold similar meetings with land management agencies and other state and federal agencies to ensure that feedback is garnered from all sources. Finally participants wanted to better understand what the strategy may look like and how CPW will balance public sentiment with science and research. CPW staff stated that public input and science would be brought before the Colorado Parks and Wildlife Commission. CPW and the Commission will take a deeper look at those management concerns that have overwhelming sentiment and science behind them.

Durango

Participants in Durango, like in other areas, also wanted to know which areas in the State are doing especially well or especially poorly and they compare to the Southwest part of the State. Participants also questioned how the West Slope Mule Deer Strategy will impact the 2014 hunting season strategy. To that question, CPW responded stating that it was too late to implement any changes for this year but specific strategies could be implemented the following year.

One participant asked CPW staff if highway mortality had increased, to which CPW responded that it had but we are all paying more attention to it, so it is hard to quantify the amount. When speed limits went from 55 to 65, studies showed that it killed more deer. CDOT is working to build more crossings, and has incorporated mitigation ideas for wildlife crossing and fencing into the Southwest region. Another participant asked in what ways do elk and deer compete, to which CPW answered that no one study has shown that elk and deer compete directly for any one resource, but there is anecdotal evidence. Elk socially are more dominant and deer are naturally more timid. Therefore, if elk move into an area, deer may get displaced. Also, the elk populations have been increasing since the 90's, creating a different environment for mule deer.

Other questions included, what are the data on fawn declines, have there been any studies relative to the decrease of habitat, and what is causing that decrease in habitat.

Closing Session

Many participants wanted to better understand how CPW was involved in mitigating the declining habitat and habitat loss management concerns. Participants asked how CPW contributes to land swap and to the Environmental Impact Statement (EIS) process. CPW commented stating that anything which happens on federal lands, CPW has an opportunity to make comments but does not have enforcement over that land. CPW also noted that federal lands are a challenge because of the multiple use mandates on both the BLM and the USFS. As for the EIS process, CPW's involvement varies by district, as does the receptiveness of input from CPW.

Furthermore, participants discussed others who needed to be involved in the conversation about population declines. Participants suggested that other state and federal agencies should be involved in the conversation and in deciding management strategies. A participant also commented that there may be underutilized federal highway funding that could be used for federal wildlife crossings.

Pueblo

Opening Session

As in other locations, some participants in Pueblo also wanted more data prior to the breakout sessions. Questions included what is the impact of forest clear cuts on deer population, how much grass is in a deer's diet, what is the impact of water quality on the mule deer population, what is CPW doing to add more food plots, and what are the most important factors in mule deer decline? CPW staff responded stating that wildlife typically responds well to cuts and burns and that deer cannot live on grass only, they need other things to sustain. As for the impact on water quality, staff stated that they were not currently aware of any specific impacts of water quality on the mule deer populations. As for the food plots, CPW only feed after 40% mortality, otherwise Colorado is considered a non-feeding state. Finally, CPW staff commented that fawns are dying from multiple factors such as predation and malnutrition which varies regionally across the state.

Closing Session

In the closing session, participants in Pueblo reiterated many comments that arose in the opening session and in the breakout sessions. Some participants emphasized communication between states, land management agencies and the public. Other participants stressed that money and funding would be a limiting factor in working to correct the decline in population numbers. The issue of funding raised more comments as to how CPW could get more funding such as using the lottery to help purchase conservation easement. Finally, participants spoke to the need for CPW to get information out about the meetings and the issue of mule deer population declines out to other interested stakeholders.

Gunnison

Opening Session

Gunnison participants also asked how the strategy will look once drafted and what information will be used in writing the strategy. CPW stated that public input from the seven public meetings, stakeholder input and science data would be included. Furthermore, participants wanted to know if there would be opportunity for public input once the strategy was drafted. Keystone will be hosting a statewide summit on August 9th in Glenwood Springs to allow public comment on the draft strategy. The draft strategy will also be made available to public review and comment before and after the statewide summit. Finally, participants wanted to understand how this process would impact hunting season structure if at all, and, as stated at other meetings, CPW noted that it is too late to include input from these meeting in the 2014 hunting season.

Other comments from participants included that CPW should take a closer look at what it did after the hard winter of 2008 to turn around the deer populations in the Gunnison area and use that elsewhere; a participant also wanted to know why CPW was lowering deer objectives if they are trying to bring more deer back.

Closing Session

In the closing session, participants acknowledged the challenges CPW faces trying to manage more than just game and fish in Colorado. CPW must also take into consideration of parks and the public's wants and needs in other activities that may impact wildlife. Some participants also acknowledged that a portion of the park users do not understand the impacts on wildlife by using park land. Other participants noted that it was not only CPW's issue, the public has to make changes in order to mitigate the harmful impacts on wildlife, such as finding different ways to travel to decrease highway mortality and barriers to migration.

Moreover, participants stressed the need to coordinate with other agencies and organizations in order to address issues that CPW may not be able to do on their own. Finally, participants stated that they would like CPW to share more data and information especially data specific to the Gunnison Basin

Eagle

Opening Session

Participants in Eagle wanted to better understand how accurate the population numbers are and if the drop in population in the mid- to late- 2000s correspond with a high number of doe tags without knowing the hard winter was coming. CPW responded that population estimates are more accurate than they were in the past, but they are estimates, not counts. Regarding the doe tags in relation to population declines, CPW stated that in certain herds, aggressive hunting in the mid- 2000s led to the perfect storm and the effects are still being felt today. Participants also asked what has happened with doe harvest and tag numbers in the declining years? CPW stated that it has decreased the number of doe licenses over the past seven years. In D2 and D7, there were thousands of doe licenses that could not be given away, but in D10 there were no doe licenses available.

Closing Session

Participants in Eagle stressed two take away messages for CPW. First, they were gracious for the opportunity to give feedback but they stressed that they hoped the information did not "fall on deaf ears." Second, participants stressed that the strategy may need to be site specific, even though some information will be the same when collected in the aggregate.

Grand Junction

Opening Session

Participants in Grand Junction, like other locations, wanted to better understand how CPW was working with other states and agencies. CPW responded that they are monitoring what other states are doing since there is an overlap in the issues. Wyoming and Utah are holding similar meetings. Utah has done a lot of habitat work and claims that population numbers are getting better. Another participant asked what years were drought years in Western Colorado. CPW stated that in the western part of Colorado 1999 to 2000 were extreme drought years and bad winter years were 1983 to 1984, 2007, and 2011.

Participants wanted to better understand what the studies have shown regarding mule deer populations in Colorado, why does are still being hunted, how disease has affected the population, how predation has affected the mule deer population, when the State stopped using poison to control the predators, and how habitat has changed the nutritional content of the food that mule deer eat. As in other locations, CPW staff commented that does are only being hunted in places where does are over the objective numbers. Regarding disease, CPW staff commented that Chronic Wasting Disease (CWD) is being monitored but CPW has not seen a change in the number of cases. As for predation and habitat, poisoning of predators for control purposes was stopped in about 1970 and habitat loss has changed the availability of forage.

Closing Session

Some participants in Grand Junction had similar concerns as in other locations regarding coordination with other states to mitigate the issue of declining mule deer populations. A participant urged CPW not work as an individual but look at the issue across states. One participant wanted to know if CPW has the political will to make the necessary changes. CPW responded that all decisions are driven by politics one way or another at the highest levels, but CPW will make recommendations to the Colorado Parks and Wildlife Commission through the draft strategy. Finally, there was a discussion around the CPW budget and how hunting license revenue is incorporated into the budget, if at all. CPW stated that the legislature determines the CPW budget and that money from licenses goes into a game cash fund.

Craig

Opening Session

As with other locations, participants in Craig asked for more data prior to breakout sessions. One participant asked if there are any studies available that decisively showed that one factor

contributes to the decline in mule deer populations. CPW responded that it depends on who you talk to because there are a lot of studies out there. Habitat loss can affect mule deer populations as well as predator populations and predatory action. Other states have issues as well, and they are using a lot of strategies to manage, but there is no “silver bullet” yet to fix the problem. Participants also wanted to better understand how the Colorado Parks and Wildlife Commission would respond to the recommendations by CPW, and if CPW had any say moving forward in the process. CPW stated that it has some flexibility in making recommendations but all recommendations must be approved by the Commission. Recommendations to the commission would be determined by the information that is derived from the seven meetings as well as CPW staff input and science and possible additional stakeholder input.

Another participant wanted to know more about managing mule deer populations from a Game Management Unit (GMU) level rather than a Data Analysis Unit (DAU) Level. As in other locations a participant wanted to better understand why there is doe harvest when populations have been declining. CPW commented that they look at different units to better understand populations across the state and that doe harvest continues for youth recruitment but the majority units have cut doe harvest by different percentages if not entirely across the state. Participants in Craig also offered comments and perspectives on a variety of the management concerns and these were ultimately captured in the breakout discussion notes and summaries.

Closing Session

Participants in Craig, like other locations, wanted more data about mule deer in the Northwest part of the state. Participants and CPW discussed the rate of decline in the Northwest part of Colorado, tags issued in the White River area, elk population numbers, and weather related killings in the Northwest. Finally participants wanted to know more about the research done on predation and the data CPW has on predation. CPW noted that it was hard to get exact data on numerical and distribution of predators but there is a little information on bears and lions in the state. The data CPW has indicates that bear predation accounts for about 15 percent of mule deer predator mortality. Finally CPW stated that mule deer are resilient but the combination of management concerns has been affecting populations across the state.

