



# COLORADO

## Parks and Wildlife

Department of Natural Resources

Director's Office  
1313 Sherman St. Suite 618  
Denver, CO 80203  
P 303.866.3203

### MEMORANDUM

TO: Parks and Wildlife Commissioners

From: Dan Prenzlöw, Director

Date: 8/22/2019

Subject: CPW Staff Review: Timing Considerations for the Plains Rifle Deer Season

This memo summarizes the biological considerations for deer management on Colorado's eastern plains. A separate document presents social considerations for deer management in this region.

#### Introduction

Colorado's deer management program strives to maintain robust deer populations within desired objective ranges, while providing quality hunting experiences and minimizing negative impacts of deer on property owners. In eastern Colorado, CPW has developed a set of hunting regulations that balance the number of deer on the landscape and the sex and age composition of deer herds with the interests of both property owners and hunters. We regulate deer harvests by limiting the number of hunters that may hunt each season. This approach allows managers to adjust harvests in response to annual changes in deer populations and eliminates concerns of overharvesting the resource.

#### Population Trends

Overall, deer herds are thriving on the eastern plains. All eastern plains deer herds are within or above the population objective range, and 10-year trends suggest herds are stable to increasing. Therefore, we must maintain or increase annual doe harvests to achieve population objectives.

#### Age Ratio Estimates

Eastern plains herds are generally more productive than the deer herds west of Interstate 25, and winters are less severe on the plains, resulting in higher average fawn ratios (the number of fawns per 100 does) and higher winter fawn survival than the rest of the state. The eastern plains 3-year average fawn ratio is 65 fawns per 100 does compared to the statewide 3-year average of 57 fawns per 100 does. Many eastern Colorado deer populations remain above population objective ranges set in CPW's herd management plans. Therefore, we need to reduce these overabundant populations to the objective ranges. For most eastern plains deer herds (both white-tailed and mule deer) CPW has increased the number of licenses of all types over the past 5 years, including antlerless, antlered and either-sex licenses. Increased licenses result in higher harvests designed to limit the size of these herds.



### **Sex Ratio Estimates**

Nearly all eastern plains deer herds are above the sex ratio objective (the # of bucks per 100 does) set in their herd management plans. In other words, there is an overabundance of bucks in these herds. For comparison, the eastern plains 3-year average sex ratio is 47 bucks per 100 does compared to the statewide 3-year average of 35 bucks per 100 does. Therefore, we have necessarily increased numbers of antlered licenses and antlered harvest to reduce the sex ratios into the objective ranges set in herd management plans. The regular rifle season contributes a significant portion of the buck harvest required to control buck numbers and meet herd management objectives. Overall, rifle hunters on the eastern plains reported an average success rate of 66% in the last 3 years.

### **Chronic Wasting Disease (CWD)**

CWD prevalence is high in the first two eastern plains deer herds included in recent mandatory testing. Testing in these herds in 2018 produced prevalence estimates of 25% and 33% in adult bucks—the highest in the state and well above the 5% threshold set for compulsory management per Colorado’s 2019 CWD Response Plan. Because adult bucks are the most infected segment of Colorado’s deer populations, increased harvest of adult bucks is likely to be a management prescription to help lower CWD prevalence. The timing of the eastern plains rifle deer season currently is set to occur after most corn is harvested, when deer are demonstrating rutting behavior, which increases hunter success. Harvest of bucks during this season will become an increasingly important contribution towards reducing sex ratios for CWD management. All eastern plains deer units will be included in mandatory CWD testing in 2019, so we soon will have a better understanding of how many units may need to prescribe management actions in an attempt to reduce the prevalence of CWD.

### **Timing of the Rut**

CPW has never explicitly studied the timing of the rut in eastern Colorado. A recent western Kansas mule deer and white-tailed deer study has identified peak fawning dates for both species. Using the data from Kansas, we back-calculated the timing of peak conception as approximately the first ten days and the first two weeks of November for white-tailed deer and mule deer, respectively. Additionally, observations from both hunters and staff suggest that rutting activity generally starts in mid- to late-October and carries into the month of November. Although the timing of the rut in Kansas and Colorado likely varies, it likely begins in mid- to late-October, and runs through the month of November.

### **Eastern Plains-Mostly Private Lands**

Much of the land on Colorado’s eastern plains is in private ownership; hunters must ask landowners for permission to hunt on their lands. Private landowners control not only when, but how many hunters can hunt on their lands. If landowners do not want hunting on their lands during a specific time of year (before agricultural crops are harvested, or during the white-tailed deer rut), they simply restrict hunting access to their property. This landowner-controlled impact on deer hunting success is profound. The timing of corn harvest on the eastern plains plays a critical role in hunter success and hunter satisfaction in the rifle season. Before harvesting the corn on their property, most landowners are reluctant to allow hunting due to concerns about damage to fields and crops. Hunters with permission to hunt standing cornfields have difficulty of seeing and harvesting deer because the standing corn provides excellent hiding cover. Therefore, staff recommends that the rifle season dates routinely occur after most corn is harvested to allow hunters the ability to gain access and the opportunity to harvest deer.

## **Game Damage**

In general, game damage on the eastern plains has been consistent since 2009, with much of this damage caused by deer. The only exception occurred in 2012, when drought led to several large claims in the NE region totaling \$138,384. Excluding 2012, game damage claims since 2009 averaged \$17,214 annually in the NE region. From 2009-2019, claims averaged \$18,788 in the SE region. From a management perspective, it is important that we maintain the ability to allocate licenses to deal with animals causing damage.

## Big Game Season Structure: Status Quo and the Proposed Alternative for the Plains Deer Season

### I. Plains Deer Seasons (East of I-25 except GMU 140) Staff's Original Recommendation

Historically season structure for deer east of I-25 (excluding GMU 140) has differed from those seasons west of I-25 and GMU 140. The timing and length of seasons in this region have been adjusted to accommodate the different pattern of land ownership, agricultural practices including the timing of crop harvesting, weather, and the size of deer populations in the eastern plains. Prior to deer licenses being limited statewide, they were limited east of I-25 excluding GMU 140. The limited Season Choice license will be retained in specified units. The Season Choice license allows hunting in any or all of the seasons in the specified plains unit(s) until the license is filled.

<b>F. Archery - Plains Deer Season Structure (Status Quo)</b>	
	<p>Plains archery deer season will open on October 1 and run through December 31; in addition, archery season will close during those time periods when a plains rifle season is ongoing and in those GMUs where a late rifle season is occurring. This could result in two or three splits within the season (3 in units with both regular and late plains rifle deer seasons) to avoid archery/rifle season overlap.</p> <p>All licenses limited, either-sex deer or antlered deer only, issued by GMU/DAU.</p>
<b>G. Muzzleloader - Plains Deer Season Structure (Status Quo)</b>	
	<p>Plains muzzleloader season for deer will start the second Saturday of October and run for 9 days.</p> <p>All licenses limited. Antlered and antlerless deer or antlered deer only, issued by GMU/DAU.</p>
<b>H. Rifle - Plains Deer Season Structure (Status Quo)</b>	
	<p>Plains rifle deer season shall start on the Saturday of the last full weekend of October and run for 11 days. Late plains rifle deer season shall start on December 1 and run through December 14.</p> <p>All licenses limited. Antlered and antlerless deer or antlered deer only, issued by GMU/DAU.</p>
<b>I. Season Dates</b>	
	<p><u>Plains archery deer season shall be the following dates:</u></p> <ul style="list-style-type: none"> <li>• 2020- 10/01- 10/23 and 11/04- 11/30 and 12/15- 12/31 OR 10/01- 10/23 and 11/04- 12/31 OR 10/01- 11/30 and 12/15- 12/31</li> <li>• 2021- 10/01- 10/29 and 11/10- 11/30 and 12/15- 12/31 OR 10/01- 10/29 and 11/10- 12/31 OR 10/01- 11/30 and 12/15- 12/31</li> <li>• 2022- 10/01- 10/28 and 11/09- 11/30 and 12/15- 12/31 OR 10/01- 10/28 and 11/09- 12/31</li> </ul>

- OR 10/01- 11/30 and 12/15- 12/31
- 2023- 10/01- 10/27 and 11/08- 11/30 and 12/15- 12/31
  - OR 10/01- 10/27 and 11/08- 12/31
  - OR 10/01- 11/30 and 12/15- 12/31
- 2024- 10/01- 10/25 and 11/06- 11/30 and 12/15- 12/31
  - OR 10/01- 10/25 and 11/06- 12/31
  - OR 10/01- 11/30 and 12/15- 12/31

Plains muzzleloader deer season shall be the following dates:

- 2020- 09/12- 09/20
- 2021- 09/11- 09/19
- 2022- 09/10- 09/18
- 2023- 09/09- 09/17
- 2024- 09/14- 09/22

Plains rifle deer seasons shall be the following dates:

- 2020- 10/24- 11/03
- 2021- 10/30- 11/09
- 2022- 10/29- 11/08
- 2023- 10/28- 11/07
- 2024- 10/26- 11/05

Late Plains rifle deer season shall be the following dates:

- 2020-2024: December 1- December 14, annually.

**Addendum 1: Alternative Plains Deer Seasons (East of I-25 except GMU 140)**

**Revised during the July 2019 Commission Meeting**

Historically season structure for deer east of I-25 (excluding GMU 140) has differed from those seasons west of I-25 and GMU 140. The timing and length of seasons in this region have been adjusted to accommodate the different pattern of land ownership, agricultural practices including the timing of crop harvesting, weather, and the size of deer populations in the eastern plains. Prior to deer licenses being limited statewide, they were limited east of I-25 excluding GMU 140. The limited Season Choice license will be retained in specified units. The Season Choice license allows hunting in any or all of the seasons in the specified plains unit(s) until the license is filled.

<b>F. Archery - Plains Deer Season Structure (Status Quo)</b>	
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	<p>Plains muzzleloader season for deer will start the second Saturday of October and run for 9 days.</p> <p>All licenses limited. Antlered and antlerless deer or antlered deer only, issued by GMU/DAU.</p>
<b>H. Rifle - Plains Deer Season Structure</b>	
<b>New</b>	<p>Plains rifle deer season shall open on October 20 and run through October 31, annually.</p> <p>All licenses limited. Antlered and antlerless deer or antlered deer only, issued by GMU/DAU.</p>
<b>I. Season Dates</b>	
<b>New</b>	<p><u>Plains archery deer season shall be the following dates:</u></p> <ul style="list-style-type: none"> <li>• 2020-2024, annually: 10/01- 10/19 and 11/01- 11/30 and 12/15- 12/31 OR 10/01- 10/19 and 11/01- 12/31 OR 10/01- 11/30 and 12/15- 12/31</li> </ul> <p><u>Plains muzzleloader deer season shall be the following dates:</u></p> <ul style="list-style-type: none"> <li>• 2020- 09/12- 09/20</li> <li>• 2021- 09/11- 09/19</li> <li>• 2022- 09/10- 09/18</li> <li>• 2023- 09/09- 09/17</li> <li>• 2024- 09/14- 09/22</li> </ul>
<b>New</b>	<p><u>Plains rifle deer seasons shall be the following dates:</u></p> <ul style="list-style-type: none"> <li>• 2020-2024: October 20- October 31, annually.</li> </ul>

	<p><u>Late Plains rifle deer season shall be the following dates:</u></p>
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- 2020-2024: December 1- December 14, annually.