ARKANSAS RIVER DEER HERD MANAGEMENT PLAN

DATA ANALYSIS UNIT D-28, ARKANSAS RIVER

GAME MANAGEMENT UNITS 122, 125, 126, 127, 129, 130, 132, 139, 145, 146



Created for:

COLORADO
Parks and Wildlife
Department of Natural Resources

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Approved XXXXX by the Colorado Parks and Wildlife Commission

EXECUTIVE SUMMARY

Arkansas River Deer Herd (DAU D28) **GMUs**: 122, 125, 126, 127, 129, 130, 132, 139, 145, 146
Post-Hunt Population: Previous Objective: 3,600; Estimate for 2021: 7,350 deer **Recommended Objective: 6,000-8,000 deer**
Post-Hunt Sex Ratio (Bucks:100 Does): Previous Objective: 43 **Recommended Objective: 30-35**

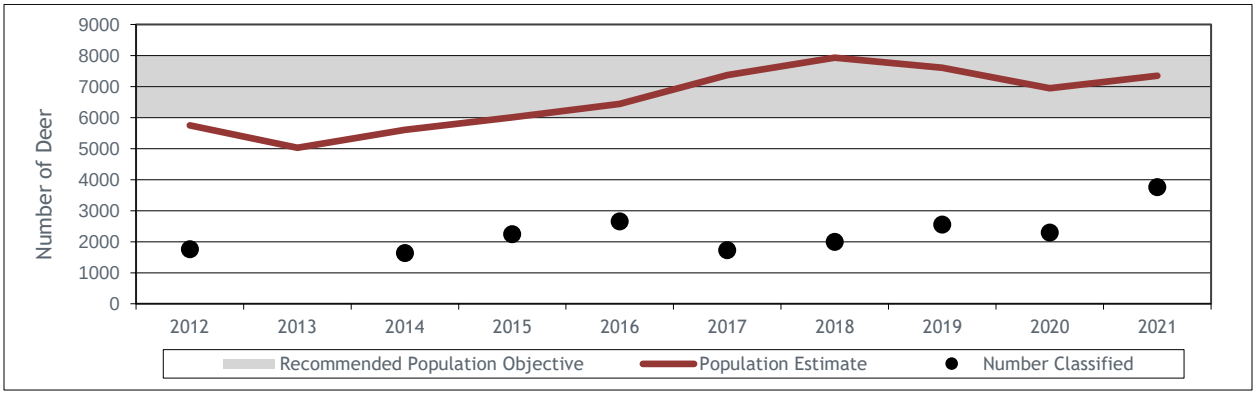


Figure 1. Arkansas River Deer Herd post-hunt population estimates, recommended population objective, and the number of deer classified from 2012 to 2021.

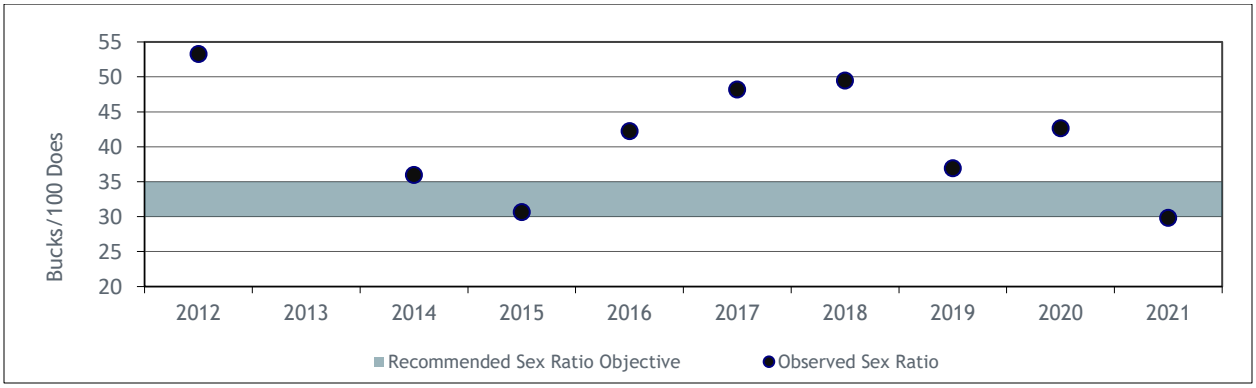


Figure 2. Post-hunt observed sex ratio and recommended sex ratio, 2012-2021.

DAU Amendments

For all previous D-28 herd management plans (HMP), the Arkansas River Deer DAU consisted of GMUs 122, 125, 126, 127, 120, 132, 137, 138, 139, and 146. CPW is adjusting the DAU boundaries for D-28 by making the following changes:

- GMUs 137 and 138 are being removed from D-28.
- GMUs 129 and 145 are being added to D-28.

- The boundary of GMU 129 is being extended, annexing the Arkansas River corridor from Highway 71 to Pueblo. (*This change is pending PWC approval. This plan and the recommended GMU boundary change will simultaneously go through the PWC approval process.*)

This plan is for the amended D-28 that contains GMUs: 122, 125, 126, 127, 129, 130, 132, 139, 145, and 146.

Background Information

The Arkansas River Deer DAU (hereafter referred to as D-28) encompasses GMUs along the Arkansas River from Pueblo to the Kansas/Colorado border (GMUs 125, 126, 127, 129, 130, 146, 132), eastern Baca County (GMUs 139, 145), northeastern Kiowa County (GMU 122), and southeastern Cheyenne County (GMU 122). Approximately 89% of D-28 is in private ownership. Most of the DAU's public access (4.5%) is on CPW State Wildlife Areas.

D-28's deer population consists of nearly equal proportions of white-tailed deer and mule deer. The estimated post-hunt population for 2021 was 7,350 deer. Over the previous ten years, CPW estimates the population ranged from 5,000 to 8,000 deer. The modeled post-hunt buck:doe ratio from 2012-2021 ranged from 31.8 bucks:100 does to 47.5 bucks:100 does (average 40.8 bucks:100 does).

In 2019, CPW conducted a mandatory sampling effort for Chronic Wasting Disease (CWD) in D-28. CWD positivity rates were 9.3% for adult white-tailed bucks and 8.3% for adult mule deer bucks. In an effort to bring D-28's prevalence rate below the 5% prevalence threshold, we recommend a reduction of the sex ratio objective from the current objective of 43 bucks per 100 does to a ratio of 30-35 bucks per 100 does.

Deer commonly cause crop damage throughout D-28, but most damage is relatively minor. Very few landowners experience damage to their crops at significant enough levels to justify filing a damage claim. D-28 averages just 1.9 claims per year, with an average claim amount of $2,227.

We conducted a mail survey prior to drafting this HMP to better understand landowner opinions regarding deer management in D-28. In June of 2021, surveys were mailed to 775 randomly selected landowners, representing ~33% of the DAU's landowners. When asked to indicate the number of deer they would like to see on their land, relative to the current numbers, the highest percentage of landowners (44%) preferred deer numbers to stay the same. When asked about their preferred buck:doe ratio, the majority of landowners (52%) indicated that they would like to see the buck:doe ratio maintained at its current level.

CPW also conducted a hunter survey for D-28, sending surveys to 550 hunters who had received at least one D-28 rifle, muzzleloader, or archery license for the 2018, 2019, and/or 2020 seasons. When asked about the number of deer they would like to see on the property they hunt, the highest percentage of hunters (45%) indicated that they would like to see an increase in deer numbers. Of those who would like to see a population increase, most would like to see a fifty percent increase in deer numbers. When asked about their preferred buck:doe ratio, the highest percentage of hunters (48%) indicated that they would like to see the buck:doe ratio maintained at its current level.

Population Objective Alternatives

Preferred Alternative: **6,000-8,000 deer**: This alternative would maintain the population at the level observed in recent years. Landowner survey results suggest that this is the preferred alternative by the majority of landowners in D-28.

Alternative 2: 9,000-12,000 deer: The hunter survey suggests that the majority of hunters would prefer this alternative. Most hunter survey respondents indicated that they would like to see a 50% increase in the D-28 population. This population increase would likely result in increased levels of game damage and higher CWD prevalence rates. To achieve this objective, doe hunting opportunity must be significantly reduced.

Alternative 3: 3,100-4,100 deer (status quo): This alternative represents a 51% decrease in the current population. This alternative is not supported by landowners or hunters.

Sex Ratio Alternatives

Alternative 1: **30-35 bucks per 100 does (preferred alternative)**: This alternative represents a decrease from the previous objective. This sex ratio is recommended to try to reduce CWD prevalence rates. In other DAUs in Colorado, a moderate sex ratio range of 30-35 has been shown to offer ample buck hunting opportunity and keep CWD prevalence rates relatively low. This alternative would increase buck hunting opportunity but would reduce the number of mature bucks available to hunters.

Alternative 2: 37-49 bucks per 100 does (status quo). The majority of surveyed landowners and hunters indicated a preference to maintain buck:doe ratios at their current level. This alternative would likely result in a continuation of CWD prevalence rates above the 5% threshold listed in the CWD Response Plan and may cause prevalence rates to continue to increase. Under this alternative, there may be more mature bucks available to hunters, but buck licenses would have to be reduced below their current levels, limiting buck hunting opportunity.