

LOWER RIO GRANDE DEER HERD MANAGEMENT PLAN REVISION DATA ANALYSIS UNIT D-35

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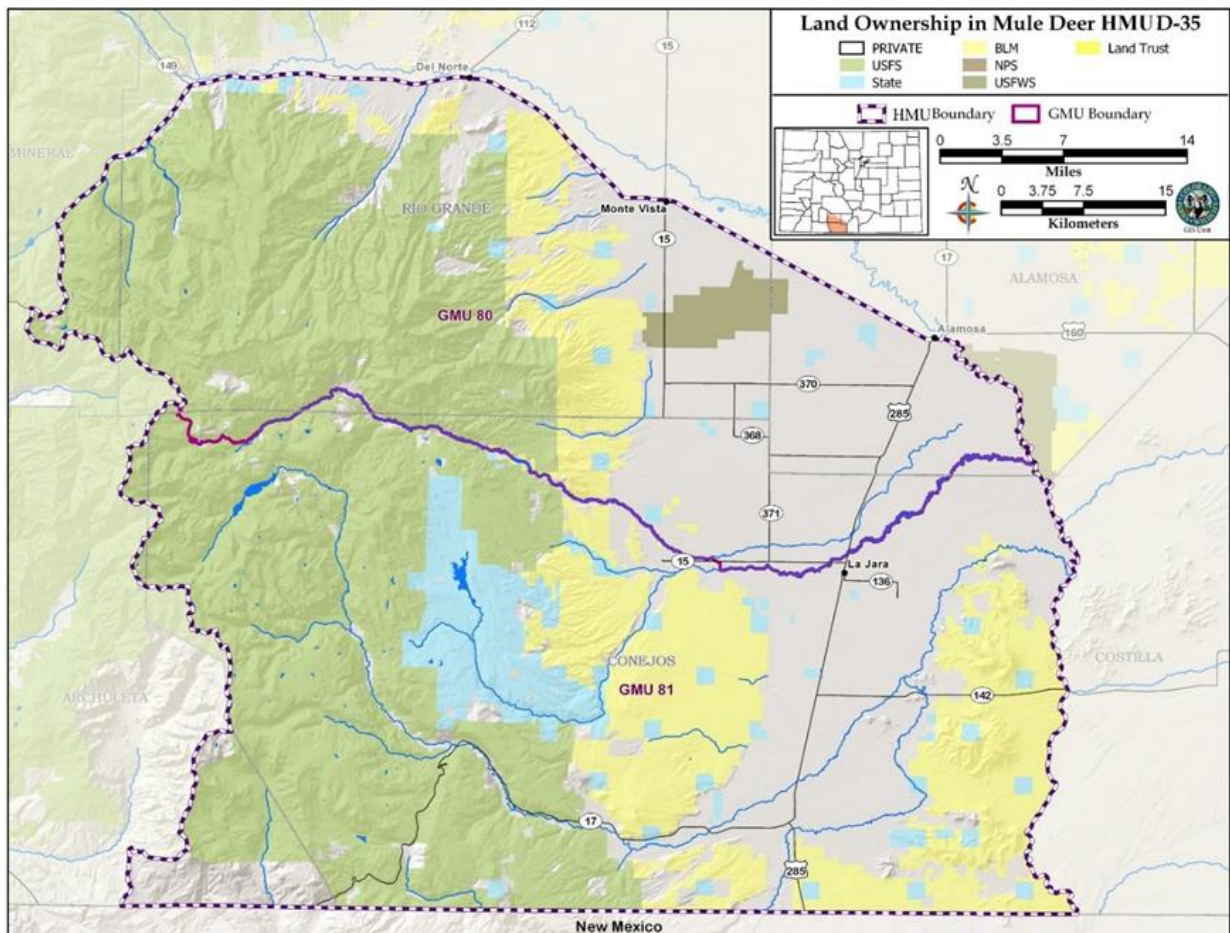
GMUs: 80 and 81

Last HMP Approved Year: 2018

Post-hunt Population: Previous Objective: 5,500-6,500; 2022 Estimate: 6,800 deer
Preferred Alternative: Increase the population objective to 6,000-8,000 deer

Post-hunt Sex Ratio (bucks:100 does): Previous Objective: 23-25;
 2022 observed: 31; 3-yr average modeled: 30.

Preferred Alternative: Increase to 25-30 bucks:100 does



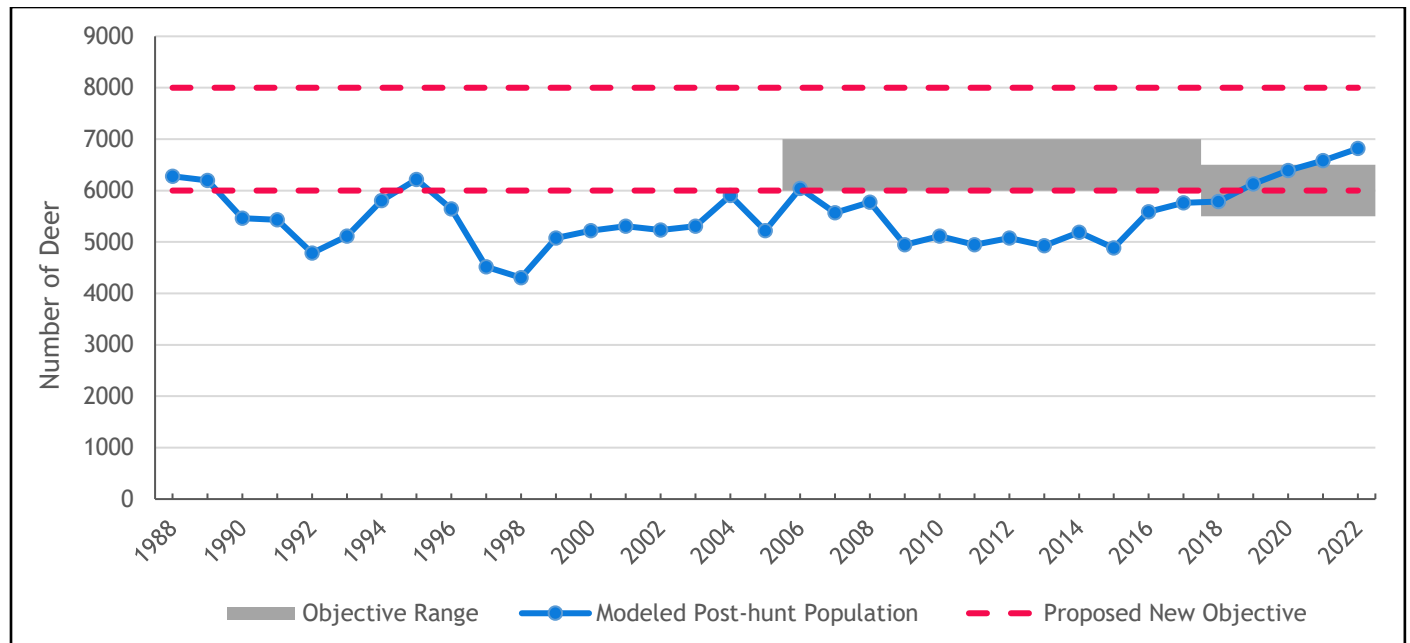


Figure D35-1. Deer DAU D-35 modeled post-hunt population and objective range, 1988-2022.

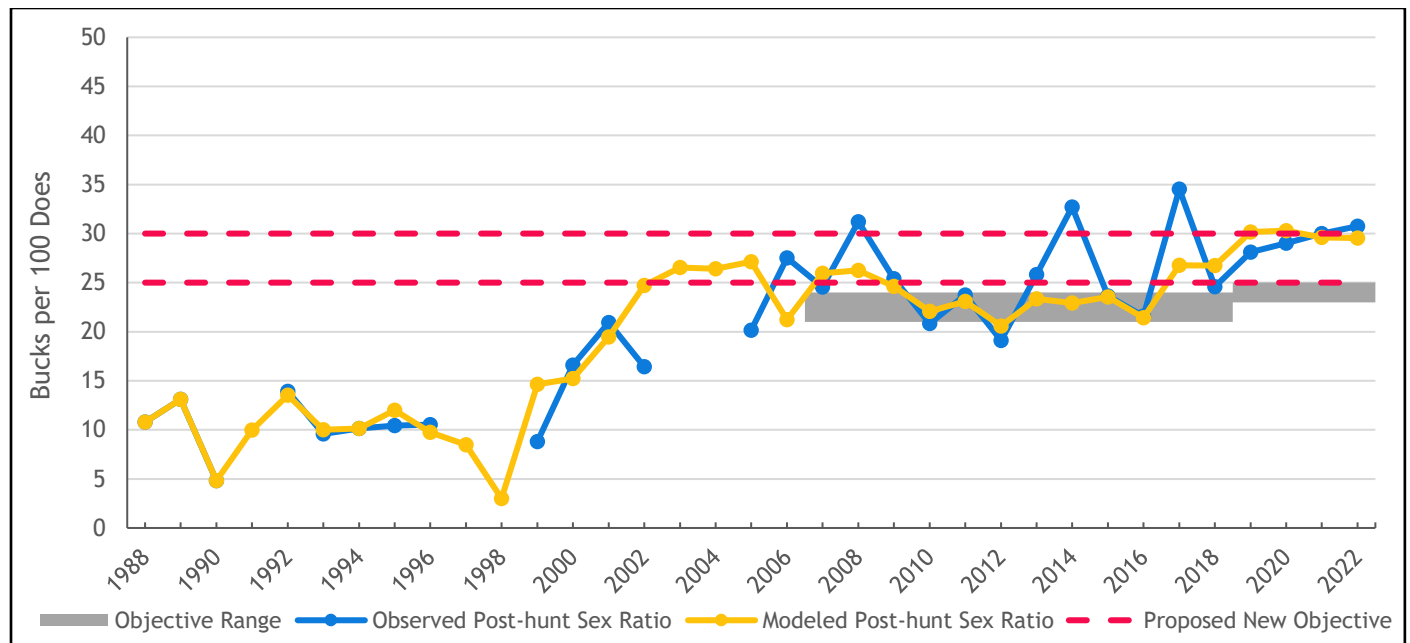


Figure D35-2. Deer DAU D-35 observed and modeled post-hunt sex ratio (bucks:100 does), 1988-2022.

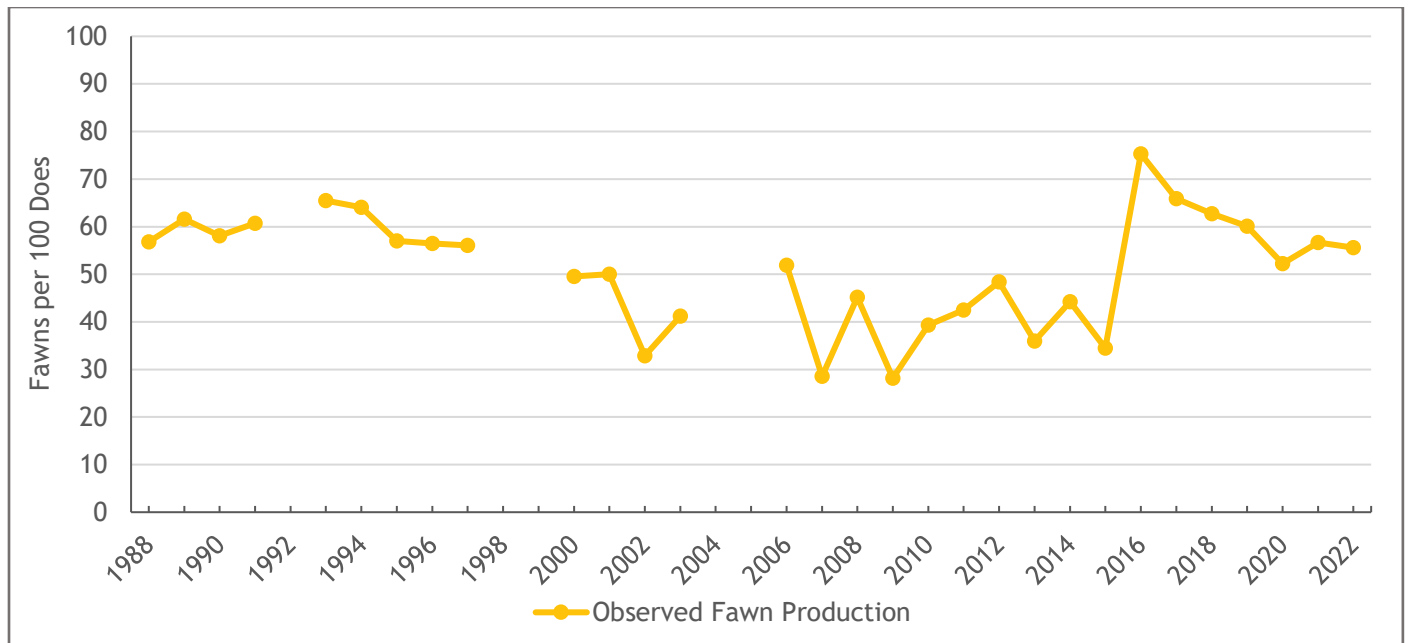


Figure D35-3. Deer DAU D-35 fawn production (observed post-hunt fawns:100 does ratio), 1988-2022.

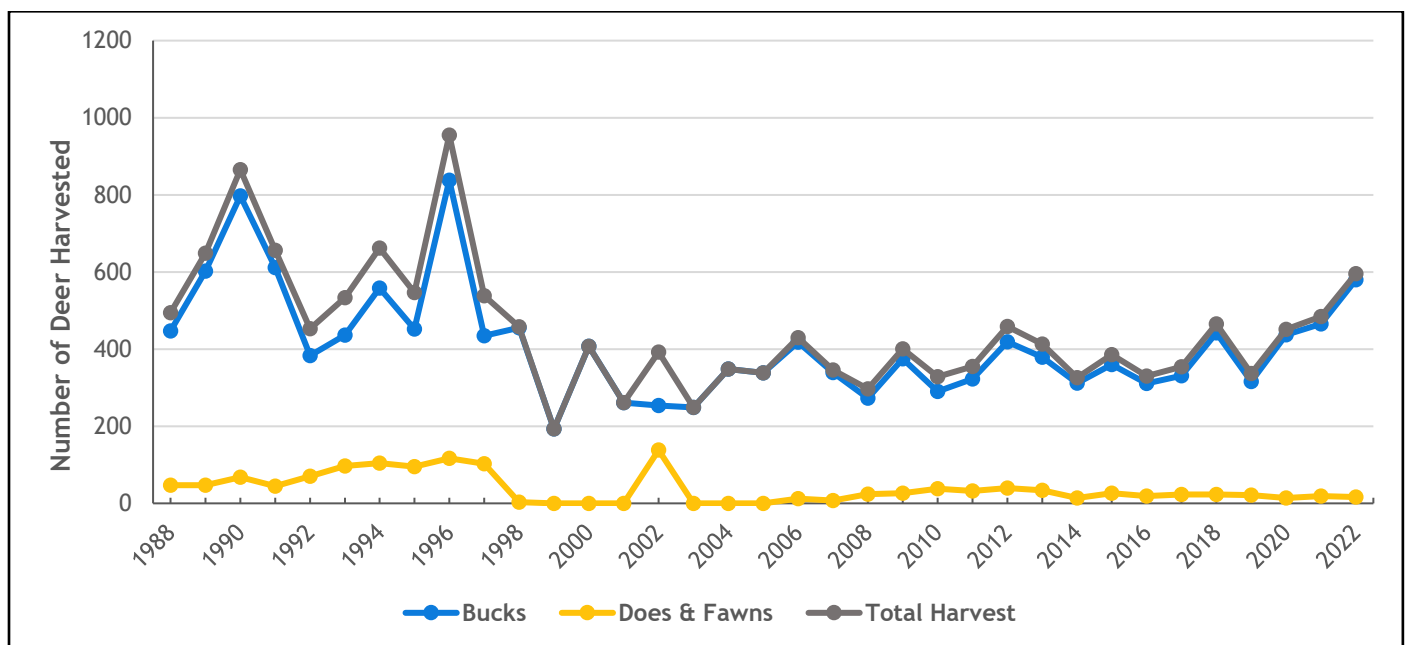


Figure D35-4. Deer harvest estimates in D-35, 1988-2022.

Background Information

The D-35 mule deer herd is in the southwestern region of the San Luis Valley. The geographic area of the Data Analysis Unit (DAU) comprises Game Management Units (GMUs) 80 and 81, totaling approximately 2,100 square miles. The mule deer winter range within the DAU includes roughly 692 square miles, whereas the summer range encompasses about 1,214 square miles. Portions of Alamosa, Archuleta, Conejos, Mineral, and Rio Grande counties make up the entire area. Public land constitutes about sixty-five percent of the DAU, while almost thirty-five percent is privately owned.

The objectives for the post-hunt population for D-35 were last revised in 2018 and set at 5,500-6,500 mule deer. At the time, the objectives were adjusted slightly to account for the perceived stability of the herd population over the preceding 20 years, allowing for a modest level of growth. From 1999 to 2018, the estimated population fluctuated between 5,000 and 6,000 animals. However, since 2018, the estimated population has continued on an upward trend, rising above the objective range to roughly 6,800 animals in 2022. The last time the herd was estimated to be greater than 6,000 animals was in the late 1980s and mid-1990s, with relatively sharp declines after both periods, the lowest estimate being at almost 4,000 mule deer in 1998. In 2023, CPW proposed antlerless licenses on public land to help address the growing population trend and stabilize the population within the proposed objective range. CPW has recently reassessed the population objective range and suggests broadening it to incorporate the trend more efficiently within management goals.

The D-35 observed post-hunt sex ratios have increased since CPW limited antlered licenses in 1999. Before the implementation of limited licenses, the observed sex ratio averaged less than ten bucks per 100 does. From 1999 to 2008, the average observed sex ratio rose to almost 21 bucks per 100 does. However, since 2008, the observed sex ratio has fluctuated considerably, averaging 27 bucks per 100 does. The modeled sex ratio has also fluctuated but appears to have leveled off over the past few years.

Before CPW limited buck licenses in 1999, the annual buck harvest averaged approximately 550 animals in the DAU. Since the limitation, the average buck harvest has been around 350 animals, which has increased to more than 390 animals over the past ten years. With the rising observed sex ratio, CPW shifted the buck licenses between seasons and raised them in 2017, 2018, and 2020 to curb the trend. Nonetheless, the observed and modeled sex ratio continued above the objective range. Harvest in the DAU is primarily affected by the number of licenses, the season structure, and weather conditions during the hunting seasons.

Before 1999, doe harvest averaged about 70 animals annually. However, CPW removed the doe licenses in 1999. Over the past ten years, doe harvest has only occurred as a management tool to mitigate game damage conflicts, averaging approximately 21 animals. The game damage licenses are not used to manage the overall population and thus have minor effects on the population trend. In 2023, CPW proposed an Issue Paper to implement doe licenses on public land. Pending Colorado State Wildlife Commission approval, the doe licenses will be available beginning in 2024. The limited doe licenses provide CPW with more management options. Harvest from these licenses should help sustain the herd population within the proposed objective range more effectively.

Over the past ten years, the combined hunting-season success rates have averaged approximately forty-one percent. However, harvest success rates are skewed between the archery, muzzleloader, and rifle seasons. The average archery success since 2013 is around twenty-eight percent. Comparatively, the second and third rifle seasons have averaged approximately fifty percent, and the fourth rifle season's success has averaged about fifty-six percent over the past ten years. Contrastingly, the muzzleloader season has averaged almost thirty-one percent.

Management Concerns

The quantity and quality of winter range habitat may limit the D-35 mule deer population carrying capacity. The winter range continues to diminish slowly, with increased development on private land and competition with domestic livestock. Similarly, summer recreational activities continue to expand throughout the DAU. The various anthropogenic impacts may affect distribution, reproduction, and fawning efforts restricting population growth. Since the previous HMP, CPW continued efforts to increase the population size of the D-35 herd. Although the population increased, it has done so beyond the objective range set at the time. Much of the population growth is likely due to improved fawn recruitment.

Mule deer are not a significant problem on agricultural land in the DAU, and depredation concerns are minimal. CPW continues to provide game damage and dispersal licenses to private landowners to address issues. Localized problems may result from restricted mule deer distribution during the winter months. Private landowners who experience mule deer depredation issues can access various management tools CPW offers.

Management Alternatives

For this HMP, CPW considered three alternatives for the post-hunt population size objectives and three alternatives for the post-hunt sex ratio objectives in Data Analysis Unit D35:

Table D35-1. Proposed population objective ranges for the 2024 D-35 HMP.

Post-hunt Population Objective Alternatives:	
5,500 to 6,500	(1) Status Quo
6,000 to 8,000	(2) Approximately 10%-20% increase in objectives - PREFERRED
7,000 to 9,000	(3) Approximately 25%-35% increase in objectives

Table E35-2. Proposed buck ratio objective ranges for the 2024 D-35 HMP.

Post-hunt Buck Ratio Objective Alternatives:	
20 to 25 Bucks per 100 does	(1) Status Quo
25 to 30 Bucks per 100 does	(2) Increase buck ratio objective by approximately 5 bucks per 100 does - PREFERRED
30 to 35 Bucks per 100 does	(3) Increase buck ratio objective by approximately 10 bucks per 100 does

Public Involvement

In the fall of 2023, CPW will offer a presentation online, available to the public to view at their discretion. In addition, CPW will provide an initial draft document online to the public for 30 days for review and commentary. CPW will also send the draft to the BLM, local county commissioners, the Habitat Partnership Program (HPP) committee, and the U.S. Forest Service for commentary and feedback. The draft will allow all constituents to participate in the public process, including non-consumptive recreationists, hunters, landowners, local stores, or business owners. CPW has examined and considered biological herd capabilities and social-political tolerance for this updated HMP.

Preferred Management Objectives:

Post-hunt Population

The preferred management objective for D-35 is Alternative 2, a post-hunt **population of 6,000 to 8,000 mule deer**. Alternative 2 aims to curb the population growth steadily, maintain management, and sustain the herd at its current estimated population level, allowing for a slight increase. This objective range provides the best balance for managing the deer herd, hunting recreational opportunities, minimizing agricultural conflicts, and maintaining habitat-carrying capacity. Conversely, Alternative 1 may result in CPW issuing additional licenses to rapidly reduce population growth, resulting in greater hunter competition and more people in the field during the hunting seasons. In contrast, Alternative 3 may result in CPW reducing licenses for the herd to increase in size; however, resulting in greater competition for the limited licenses and hence potentially increasing preference points requirements.

Post-hunt Sex Ratio

The preferred post-hunt sex ratio objective range for the D-35 mule deer herd is also Alternative 2, by increasing the objective to **25-30 bucks per 100 does**. The range supports most stakeholder desires, preferring a slightly higher sex ratio objective in the DAU. A higher objective from the previous HMP reduces the need for an aggressive harvest from what CPW has observed. However, higher sex ratios may increase CWD risk. The preferred range allows for the best balance between satisfactory hunting experiences and the desired hunting opportunities. With Alternative 1, CPW is likely to increase license numbers, which increases people in the field during the hunting seasons, potentially reducing success rates. Conversely, Alternative 3 may result in CPW reducing buck licenses and potentially increasing preference points, hence, longer wait times to draw. The higher the sex ratio, the greater the risk of the area becoming more exclusive, conceivably increasing demand for licenses and possibly raising preference point requirements.

Strategies for Achieving the Preferred Objectives:

Post-hunt Population - CPW will continue collecting annual inventory data and managing to the preferred mule deer population objectives. The population should persist as long as fawn recruitment remains strong. CPW will provide limited doe licenses to enhance management flexibility while ensuring that the population trend remains within the desired range. Tools to control private land depredation issues will stay in place. CPW will implement additional doe

harvest measures if the population estimate exceeds the preferred objective range or if there is a notable deterioration in habitat conditions.

Post-hunt Sex Ratio - CPW may need to increase buck-hunting opportunities until the observed sex ratio falls within the preferred objective range. After that, CPW will monitor the herd to balance buck-hunting opportunities and the mature buck level relevant to the objective range. Expected harvest from the buck licenses should sustain an acceptable adult buck population and stakeholder satisfaction. The preferred objective should also help to reduce the risk of CWD.

CPW Commission Approved Objectives:

Post-hunt Population: Pending

Post-hunt bull ratio: Pending