

UNCOMPAHGRE PLATEAU DEER HERD MANAGEMENT PLAN

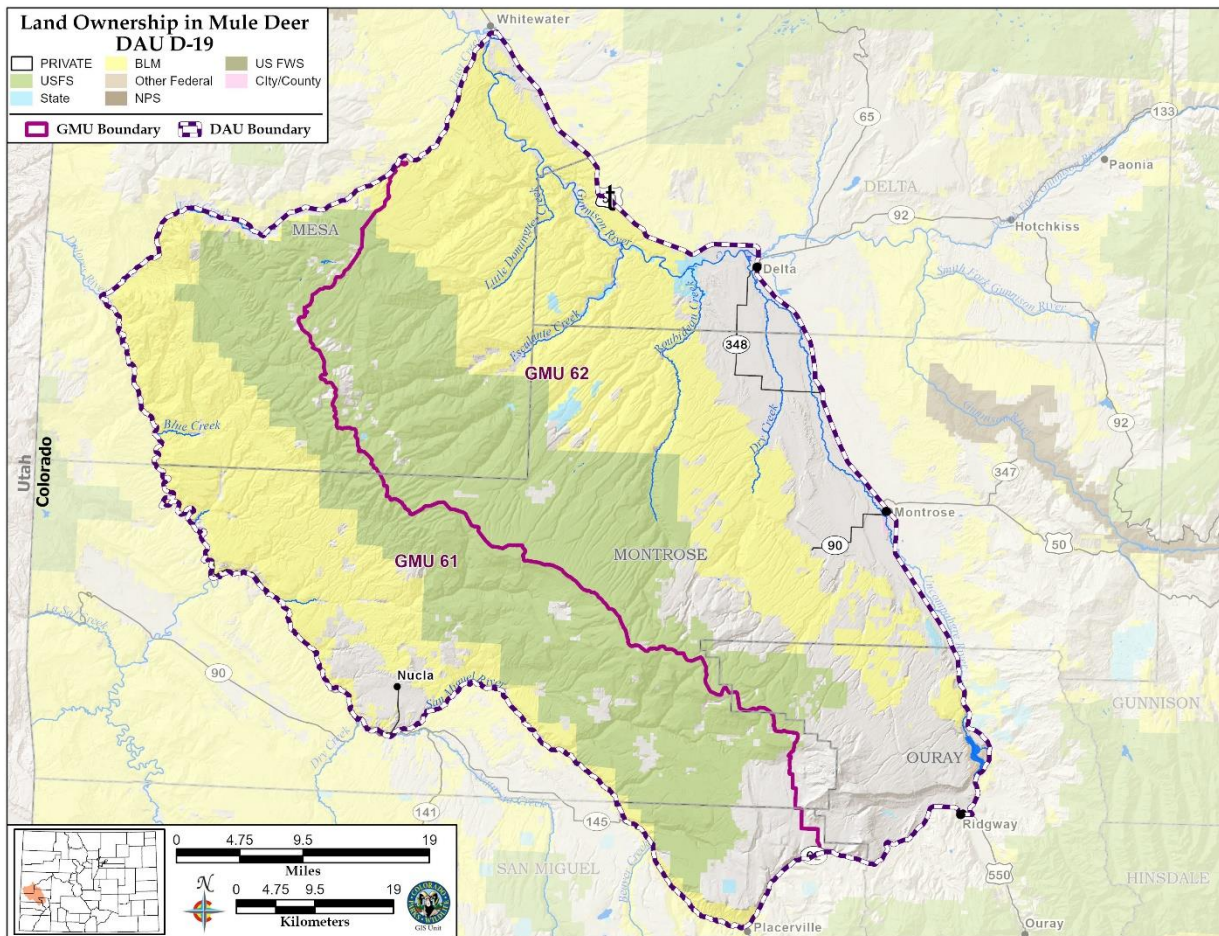
DATA ANALYSIS UNIT D-19

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GMUs: 61 and 62
 Last HMP Approval Year: 2006

Post-hunt Population: Previous Objective: 36,000-38,000; 2022 Estimate: 10,300.
Preferred Alternative: Decrease the current population objective to 12,000-15,000 deer

Post-hunt Observed Sex Ratio (bucks:100 does): Previous Objective: 34-36;
 2022 observed: 31; modeled: 33.
Preferred Alternative: Amend the current sex ratio objective to 30-35 bucks:100 does



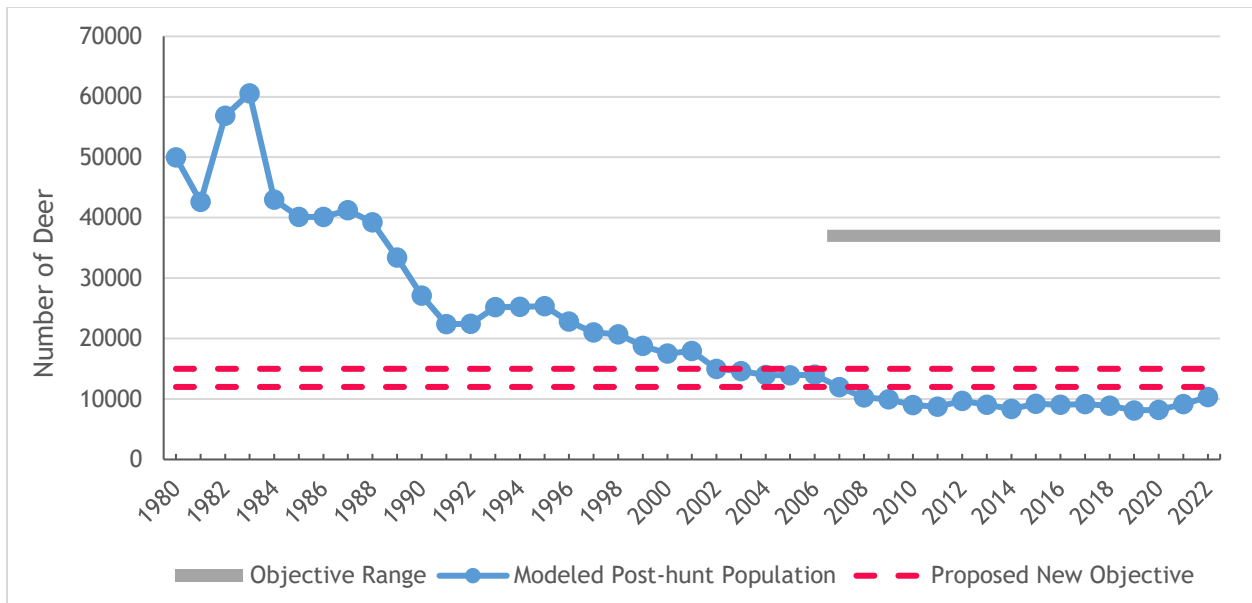


Figure D19-1. Deer DAU D-19 modeled post-hunt population and objective range, years 1980-2022.

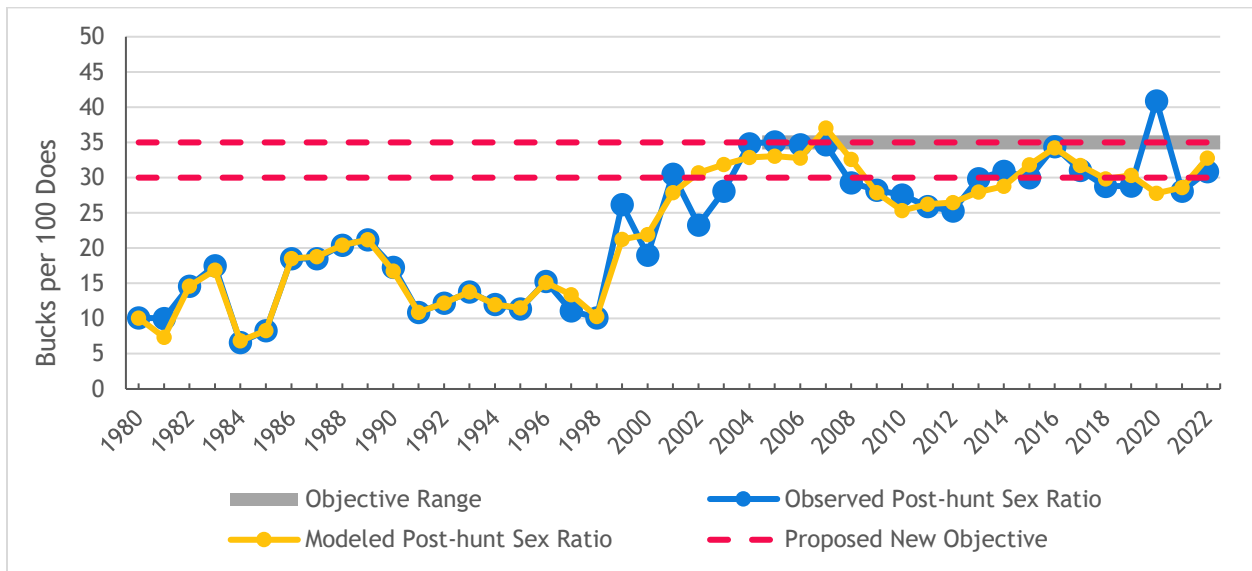


Figure D19-2. Deer DAU D-19 observed and modeled post-hunt sex ratio (bucks:100 does), years 1980-2022.

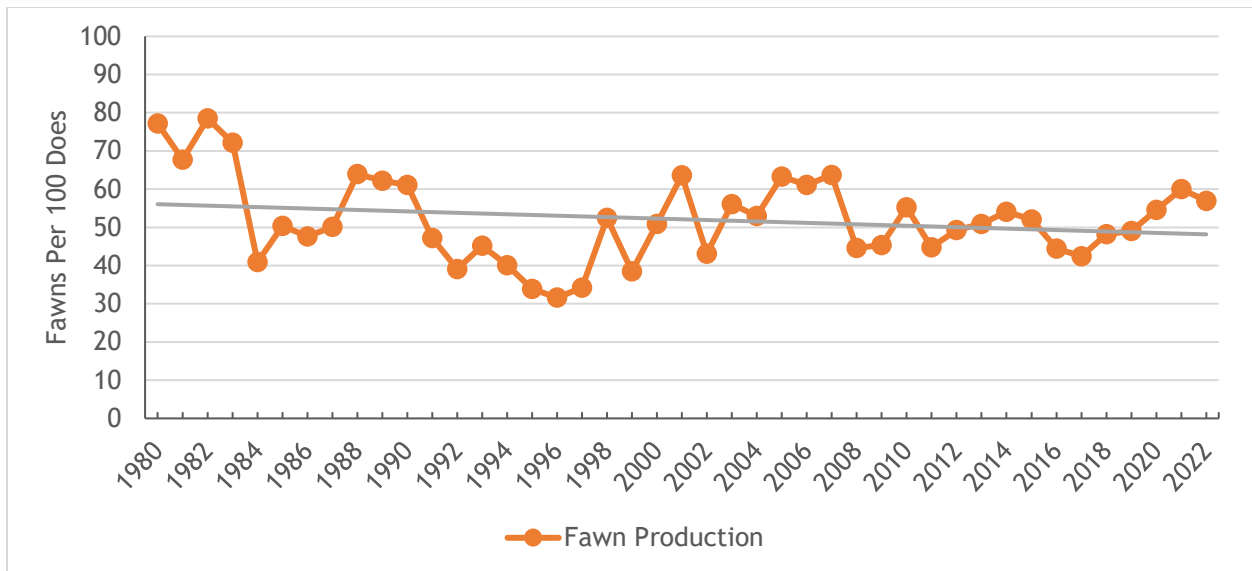


Figure D19-3. Deer DAU D-19 fawn production (observed post-hunt fawns:100 does ratio, years 1980-2022).

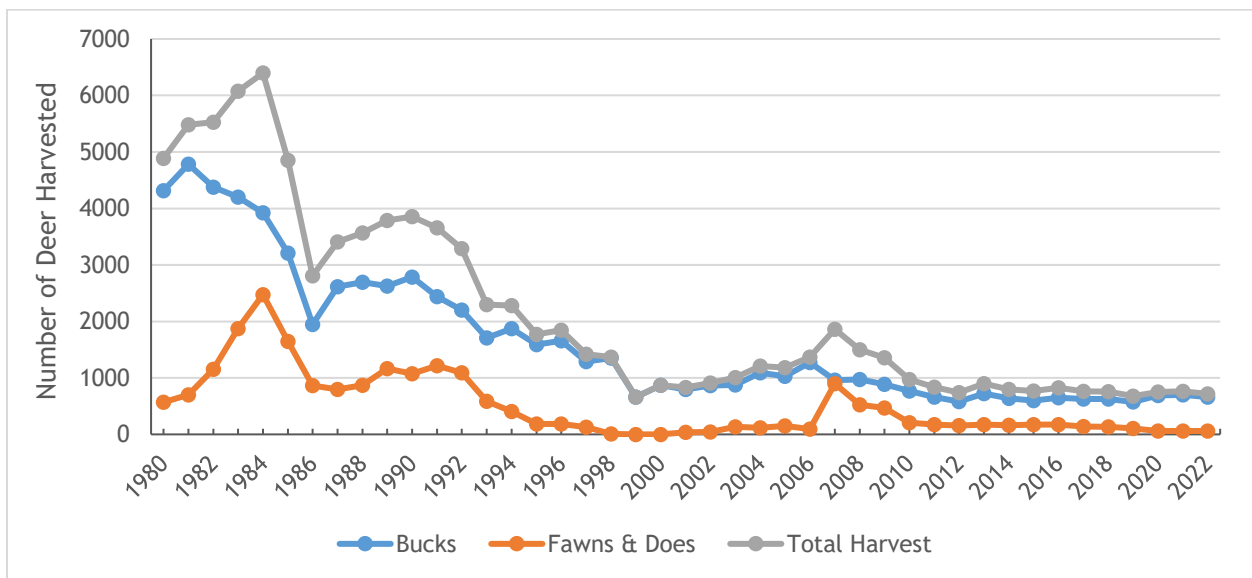


Figure D19-4. Deer harvest estimates in D-19, years 1980-2022.

Background Information

Deer Data Analysis Unit (DAU) D-19 encompasses 2,301 square miles of the Uncompahgre Plateau in southwestern Colorado, including parts of Delta, Mesa, Montrose, Ouray, and San Miguel Counties. DAU D-19 consists of Game Management Units (GMUs) 61 (923 mi²) and 62 (1,378 mi²). The Uncompahgre Plateau consists of a relatively flat summit that runs northwest from Ridgway to the Unaweep Canyon. The terrain is steeper on the western unit 61 side than on the eastern unit 62 side. Elevations range from 4,570 feet along the Dolores River near Gateway to 10,338 feet at the summit of Horsefly Peak on the southeast end of the Plateau. Landownership in the unit consists of 37% U.S. Forest Service, 38% Bureau of Land Management, 24% private land, and 1% state land. Vegetative communities in D-19 range from pinyon-juniper woodlands, ponderosa/mountain shrub, and aspen and mixed spruce-fir forests at the highest elevations on the Plateau. Agricultural use in D-19 includes cultivated crop production and orchards on irrigated private lands below 6,000 feet in the Uncompahgre Valley and Nucla area, alfalfa and grass hay production primarily on irrigated private lands below 7,500 feet, and livestock grazing throughout most of the DAU on private and public lands. Additional land use includes recreation, mining reclamation, and timber harvest.

Deer are found throughout the DAU, but occur in the summer months in their highest densities in higher elevations comprised of aspens, spruce, Douglas fir, and Gambel's oak. In the winter months, deer use the lower elevations and more arid environments of the DAU with pinyon-juniper forests and agricultural fields where the climate is milder. Important wintering areas for deer in GMU 61 include Tenderfoot Mesa, Blue Mesa, Atkinson Mesa, Third Park, and Pinto Mesa. Deer from GMU 61 occasionally winter on Mailbox Park in GMU 70. In GMU 62, important wintering areas include Steamboat Mesa, Shavano Valley, Dry Creek Mesa, Government Springs, and Sims Mesa. There is a growing population of deer in GMU 62 occupying agricultural fields and residential areas in the Uncompahgre Valley near Delta and Montrose year-round. There is also a growing residential population in Nucla and Gateway on the GMU 61 side. The deer in D-19 tend to stay within the boundaries of the DAU, but there is occasional movement to Piñon Mesa in GMU 40 and over to the higher elevations surrounding Telluride (GMU 70) and Ouray (GMU 65).

DAU D-19 has been on a large declining trend since the early 1980s. Populations have started stabilizing over the last few years, but current population estimates are far below the historic high of 60,000 deer in 1983. Additionally, current population estimates are far below the 2006 DAU plan population objective. The 2006 DAU plan population objective was 36,000-38,000, with an estimated 35,800 deer.

The 2022 population estimate is 10,300 deer. Based on surveys in 2021 and 2022, CPW staff and public stakeholders desire an increase in deer populations. CPW acknowledges that the previous objective range of 36,000-38,000 deer does not seem feasible based on the changes in herd dynamics and landscape conditions over the last 15+ years. Therefore, CPW proposes a new objective range of 12,000-15,000. This population objective is higher than the 2022 population estimate and reflects the agency and stakeholder goal of increasing the number of deer on the landscape in this DAU.

The five-year average observed post-hunt buck ratio is 32 bucks:100 does. The five-year average modeled post-hunt buck ratio is 30 bucks:100 does. The 2006 DAU plan buck:doe ratio objective is 34-36 bucks:100 does. The buck ratio objective CPW prefers for this updated 2023

plan is a decreased objective ratio of 30-35 bucks:100 does. CPW stakeholders have stated a desire for a higher buck ratio; however, this desire must be considered against the threat of Chronic Wasting Disease (CWD), which is present in the DAU. The highest CWD prevalence is in the Uncompahgre Valley where deer concentrate year-round in the agricultural lands and residential areas. The proposed buck:doe ratio of 30-35 bucks: 100 does would balance the public desire for a higher buck ratio, but also allow for management flexibility.

The five-year average observed post-hunt fawn ratio is 54 fawns:100 does. Fawn-to-doe ratios have been increasing slightly since 2016. There was a slight drop from 60 fawns:100 does in 2021 to 57 fawns:100 does in 2022.

Harvest in DAU D-19 has remained stable over the last 10 years, averaging approximately 770 deer per year. This is a significant decrease compared to about 4,600 deer harvested per year from 1980-1990 when this population peaked and deer licenses were not yet limited statewide. Preference point minimums for licenses for residents in D-19 are drawn out at five points or less. Preference point minimums for nonresident licenses range from 0-15 points, with some licenses drawn as second choice or in the leftover draw. Antlerless licenses are only available as private-land-only and game damage licenses to control resident deer populations and minimize game damage in the Uncompahgre Valley. In 2022, 661 bucks, 58 does, and one fawn were harvested by 1,474 hunters with a success rate of 49%.

As a result of persistently declining deer populations on the Uncompahgre Plateau and across the west, CPW and other agencies and organizations have searched for solutions. CPW limited license numbers and established the Uncompahgre Plateau (D-19) as an intense deer study area beginning in 1997 to monitor winter fawn survival and annual doe survival to better inform management of deer populations on the Plateau and in similar habitats across southwestern Colorado. Additional studies have also been completed on the Plateau to investigate declining deer populations, including a summer fawn mortality study, a research project to assess the effects of habitat improvement projects on overall doe and fawn survival, and a mountain lion project that looked at the predator/prey dynamics between mountain lions and mule deer.

Significant Issues

The long-term population decline of this deer herd and low fawn recruitment (survival of a fawn from birth to one year of age) over the previous 30-40 years is likely attributed to an overall decrease in carrying capacity across the landscape for various reasons. Suitable winter range habitat has diminished due to land conversions and human development. Additionally, outdoor recreation has increased dramatically over the last decade. Recreation can have many impacts, including loss of adequate habitat (including changes in land use and decline in agricultural lands), changes in seasonal migration patterns, and potentially lower survival rates. Historical and current overgrazing by domestic livestock, persistent drought, and competition with elk have all contributed to decreased habitat quality across the landscape.

Crop damage by deer is a major concern in the Uncompahgre Valley due to an increasing non-migratory deer herd residing year-round on agricultural land. Frequently, prevention materials and game damage distribution management hunts are requested and given to landowners to proactively deal with damage before a claim is made. These methods also increase landowner tolerance for wildlife on private properties. Additionally, a recent influx of new homeownership in the Loghill Village subdivision has decreased social tolerance for the high concentration of deer in the southern portion of the DAU.

Additionally, Chronic Wasting Disease (CWD) is present in D-19. This disease occurs in deer, elk, and moose. CWD is an infectious prion (misfolded protein) disease that affects the nervous system over approximately three years. CWD can spread from the host by direct contact or through resources shared with an infected individual. To add to the complexity, prions can last for many years in the environment, further challenging management. This disease is 100% fatal and a treatment has not yet been developed. CWD was first detected in D-19 in 2017 and the current estimated prevalence rate is 13.8%. CPW created an August private land disease management hunt in portions of 62, 64, and 65 when only resident deer are located in the Uncompahgre Valley. This hunt allows hunters to target deer that are more likely to be infected with CWD and to transmit CWD to high elevation deer when they migrate to the valley during the winter months. Additionally, this hunt helps focus on residential and agricultural areas where prevalence is greatest locally. Out of all harvested deer that tested positive for CWD in the 2020 mandatory testing period in D19, 55% came from the private land disease management hunt boundary, with several other CWD-positive harvests just to the outside of the designated border. Moreover, CPW has increased buck licenses to decrease CWD spread since adult male deer are more likely to contract CWD. Proactive CWD management will be a crucial part of the D-19 Herd Management Plan.

Management Alternatives

Post-hunt population and buck ratio objective alternatives considered for the 2024 D-19 HMP:

Table D19-1. Proposed population and buck ratio objective ranges for the 2024 D-19 HMP.

Population Objective Alternatives:		Buck Ratio Objective Alternatives:	
8,000 to 10,000 (midpoint 9,000)	(1) 13% decrease in the current population estimate to the middle of the proposed objective range.	25 to 30 bucks per 100 does	(1)
12,000 to 15,000 (midpoint 13,500)	(2) Preferred- 31% increase in the current population estimate to the middle of the proposed objective range.	30 to 35 bucks per 100 does	(2) Preferred
36,000 to 38,000 (midpoint 37,000)	(3) Status Quo- Approximately 259% increase in the current population estimate to the middle of the proposed objective range.	34 to 36 bucks per 100 does	(3) status quo from 2006 HMP

Management Objectives

CPW is attempting to reverse population declines and increase deer populations to meet stakeholder and CPW staff desires. Overall, the DAU’s carrying capacity has decreased compared to historic plans and it is likely that current habitat could not support historic deer numbers. Increasing this herd slightly would be beneficial to the habitat and stakeholders (alternative 2). Because CWD is concentrated to the lower elevations in this DAU and primarily exists in residential herds, increasing the overall herd population slightly should not change CWD prevalence dramatically. Decreasing this deer population would increase opportunity and potentially increase antlerless licenses in the short term, but this would not consider CPW and stakeholders desires (Alternative 1). It would also make encountering animals on public lands more difficult since increased pressure could cause deer to move onto private lands that do not allow hunting. Based on the challenges described above, the status quo population objective is likely not possible for this herd (Alternative 3). To achieve a population estimate of 36,000-38,000 deer would require a 259% increase over the current population estimate. CPW feels this objective range is not attainable with the current

population without large-scale habitat management projects, reduced predator populations, or increased social tolerance. Higher deer densities may also not be desirable, as increased deer densities could potentially increase CWD prevalence.

CPW would like to decrease the buck ratio slightly to better reflect how current buck ratios are trending, despite stakeholders' desires for more mature bucks on the landscape (Alternative 2). The preferred objective overlaps the current objective range and would allow for a slight increase in the number of bucks:100 does from current observed and modeled ratios. This objective still allows for a balance of opportunity for hunters, while simultaneously allowing CPW to keep CWD prevalence in check. The current buck ratio has not been achieved since 2020 (41:100) and the 10-year average has hovered around 31 bucks per 100 does. Keeping the buck:doe ratio to 34-36 bucks:100 does would be difficult to achieve since the buck ratio has been below this objective range for a decade and population growth has been slow (alternative 3). Increased buck ratios could potentially increase CWD prevalence (since mature bucks are more likely to have CWD), so it would not be a preferred alternative. Decreasing the buck ratio to 25-30 bucks:100 does would help reduce CWD prevalence and increase hunting opportunities (Alternative 1).

Strategies for addressing management issues and achieving objectives

The population in D-19 has low fawn recruitment and faces reduced habitat availability from an increase in development and recreation, an increase in agricultural land conversions developed areas, a decline in habitat quality due to drought, and competition with livestock and elk. These impacts have contributed to slow population growth for the last decade.

CPW manages for sex ratios and population objectives by increasing or decreasing licenses by total quota, by season, and by sex, depending on the objectives for each herd. This herd has historically been managed to balance hunting opportunity and population growth, and CPW would like to continue this management strategy. Additionally, the last several years have been managed proactively to limit CWD spread and staff sees this as an important strategy to continue into the future. Antlerless game damage licenses would still be available for landowners to deter deer from causing more damage and to increase landowner tolerance, but antlerless licenses are not anticipated to be available in the draw for the near future until populations recover to at least the bottom of the objective range. Buck licenses will continue to be offered to manage CWD concerns and allow for moderate hunting opportunities. Additionally, predator and competing ungulate management will continue.

In addition to license management, CPW recognizes the importance of habitat conservation and habitat quality improvement. CPW regularly communicates with land management agencies such as the USFS and BLM, landowners, county governments, CDOT, and NGOs and will continue to collaborate with these government agencies and organizations to achieve management goals. These agencies can help with large-scale habitat management projects to improve carrying capacity and regulate recreation and grazing on public lands, which could bolster struggling deer populations such as D-19.

Stakeholder Outreach

Hunters were randomly selected to complete the 2022 Deer Hunter Attitude Survey after the completion of their hunting seasons. There were 373-439 respondents (depending on the question) who answered the opt-in questions for D-19. Overall, hunters desire a slight to

moderate increase in the deer population and were generally satisfied with their hunting experience. Hunters also preferred hunting bigger bucks (higher buck ratio) than hunting more often (lower buck ratio). The majority of respondents also did not feel crowded while deer hunting.

The draft HMP for D-19 will be sent to local county commissioners in Delta, Montrose, Mesa, San Miguel, and Ouray Counties. Draft plans will also be sent to the HPP, USFS, the BLM, and Backcountry Hunter and Anglers (BHA). The HMP will be posted on the CPW website for 30 days, allowing stakeholders to comment on the alternatives in the plan.

CPW Commission Approved Objectives:

Post-hunt Population: pending

Post-hunt buck ratio: pending

APPENDIX D19-A: Deer Survival Study

In 1997, CPW began a deer survival study investigating doe and 6-month fawn survival rates as a result of persistently declining deer populations. The study began with Uncompahgre Plateau (D-19) and Red Feather (D-4) mule deer populations and later expanded to the White River (D-7), Middle Park (D-9), Upper Arkansas Valley (D-16), and the Gunnison Basin (D-25) herds. D-4 was removed from the study because it was thought that CWD prevalence was skewing survival rates. A sample size of 70-90 does and 60 fawns are maintained each year to obtain accurate estimates. Survival for does is measured annually, while over-winter fawn survival is only monitored from December 15th to June 15th. Shortly after the six-month fawn survival period ends, the tubing holding the collars together rots off so the collar can be used again the following year. These estimates are used as a parameter in population models and help inform license-setting decisions annually. In addition to survival estimates, location data and cause-specific mortality information are collected to be used in further analyses. This long-term data set will continue to prove invaluable for mule deer management in Colorado.

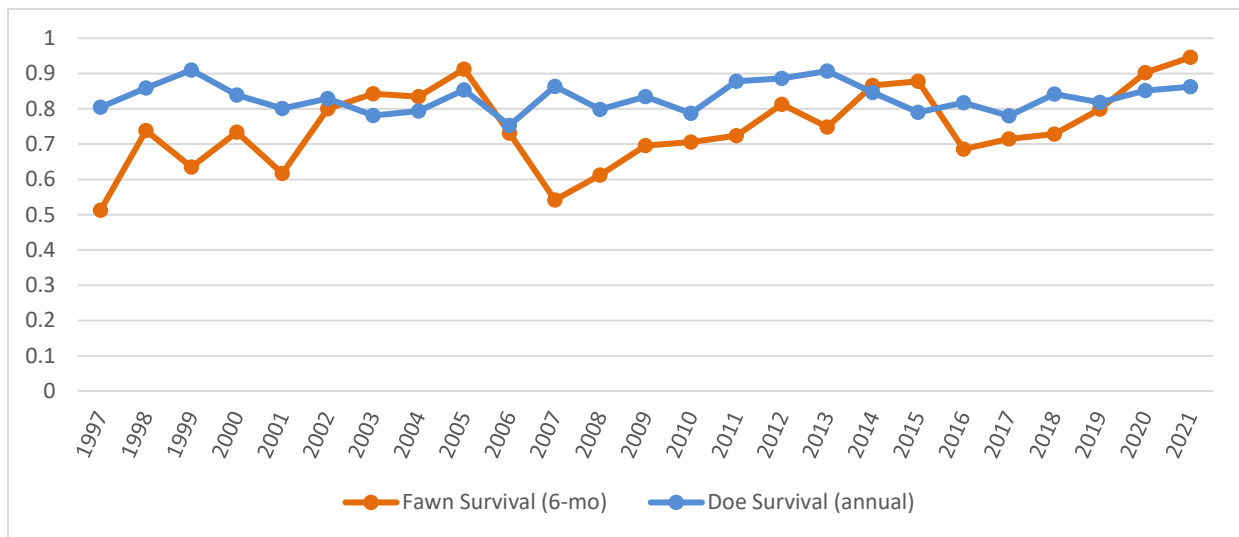


Figure D19-5. Survival rates for 6-month-old fawns and does on the Uncompahgre Plateau (D-19) from 1997 to 2021.