

STATE OF COLORADO

Bill Ritter, Jr., Governor

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF WILDLIFE

AN EQUAL OPPORTUNITY EMPLOYER

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*For Wildlife-
For People*

Game Damage Prevention Report to the Colorado General Assembly per C.R.S. 33-3-111

**Colorado Division of Wildlife
February 11, 2010**

By statute (33-3-111), the Division of Wildlife (DOW) is required to report annually to the Senate Agriculture and Natural Resources Committee and the House of Representatives Agriculture, Livestock, and Natural Resources Committee on game damage and game damage prevention issues. Such report to include:

- The Herd Management objectives set by the Division and whether those objectives are being met. In providing this information, the Division shall supply the actual number of herd animals by game unit;
- If any of the herd management objectives of the Division are not being met, the Division shall set forth in detail its plans, strategies, and efforts that it is using or intends to use in order to achieve compliance with the objectives;
- The number of requests for game damage prevention materials, the timeliness of the Division in responding to such requests, the quantity and types of temporary and permanent materials issued, the number of requests for materials denied, and, to the extent that such information is available, the adequacy of materials in preventing game damage;
- The number of permits to take wildlife requested pursuant to Section 33-3-106, the number of permits issued, the amount of wildlife killed under such permits, the number of permits denied, and the reasons for denial;
- The number of claims for damages submitted under this section, how many of those claims were settled and the monetary amounts of the settlements, the number of claims pending at the time of the report, the number of claims denied, and the reasons for denial;
- Any other costs incurred by the Division in administering this article.

Report Summary:

The State of Colorado, through the DOW, is liable for damages by big game animals to agricultural crops, to livestock and to personal property (used in the production of raw agricultural products). In the 2009 Legislative session, SB-024 was passed and signed into law. SB-024 provided new additional statutory requirements for the DOW's Game Damage Program to include: response time limits, landowner eligibility criteria for prevention materials/claims, an increased annual appropriation to \$2.5 million for the Game Damage Program, and an annual report to House and Senate Agriculture and Natural Resource Committees. This report complies with the statutory obligation and covers Fiscal Year 2008-2009 (FY 08-09). The decision to report on a fiscal year basis allows for the most accurate and complete picture regarding budgetary issues, seasonal game damage and herd management objectives.

The Game Damage Program is responsible for providing prevention materials and paying claims. Administratively, the Game Damage Program is managed by the DOW SW region. The SW assistant regional manager supervises the 4 individuals in the program: Game Damage Program manager, 2 technicians, and a program assistant. Additionally, individual District Wildlife Managers and Area Wildlife Managers throughout the State are responsible for working with landowners on preventive measures and in investigating game damage claims.

Overall, in FY 08-09 the DOW spent \$2,027,327 for the Game Damage Program which represents 2.5% of DOW's license revenue. Salaries/benefits were \$513,382. Operating, personal/purchased service contracts were \$122,156. Neither of these expenses are part of the \$2.5 million game damage appropriations; rather this \$635,539 comes from the DOW's general operating line item.

In FY 08-09, the DOW investigated and paid 317 claims for \$826,727. The DOW/Wildlife Commission denied 13 claims (total value of \$22,903).

In FY 08-09, the DOW filled 236 requests for prevention materials totaling \$565,062. DOW provided permanent fencing/stackyards and temporary solutions such as wooden panels that can be propped against haystacks or devices to scare wildlife away like propane cannons and pyrotechnics to qualified landowners.

The legislative report also requires a summary of the number of fencing requests denied and the timeliness of deliveries. Prior to SB-024, the Game Damage Program did not track this information. Commencing July 2009, this data will be collected and will be reported with the FY 09-10 legislative report. Under the previous statutory requirements, the DOW had to make all deliveries to landowners by September 1; the DOW had 100% compliance. As a point of reference, the Game Damage Program has made all but 2 deliveries within the 45-day statutory requirement since July 2009. In both cases, the landowner did not need the materials immediately and one landowner specifically asked the DOW to delay its delivery.

FY 08-09 GAME DAMAGE PROGRAM REPORT

Overview

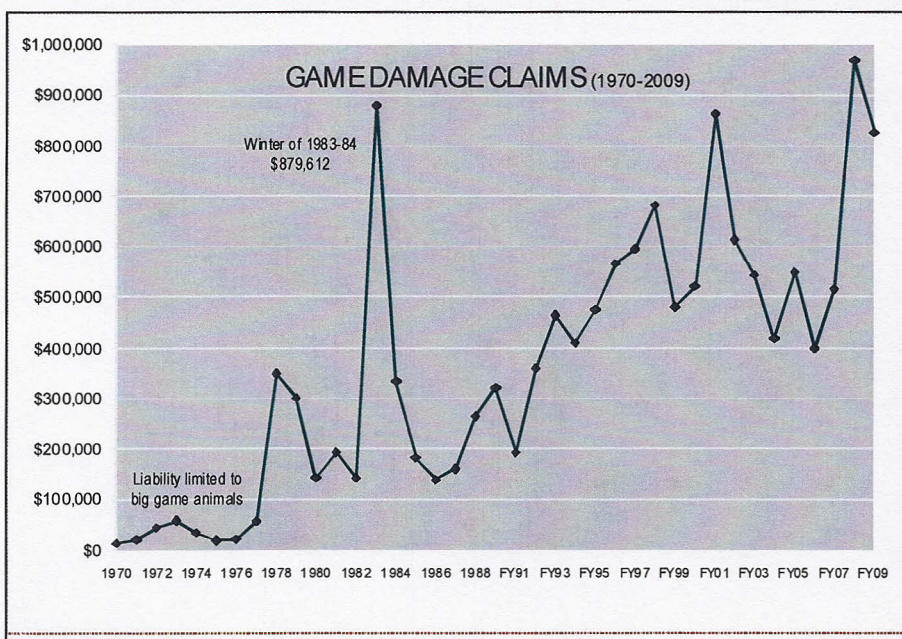
Game Damage Program: Claims, Prevention & Operating \$2,027,327 in FY08-09 TOTAL

Big game wildlife and big game hunting are integral to Colorado's economy. The State of Colorado compensates ranchers, farmers and landowners for damage by big game animals. The Game Damage Program is funded by the appropriation of sportsmen's dollars from the Game Cash Fund. Of the 10 states that address this issue, Colorado has the most liberal game damage laws in the nation. Most states have no legal responsibility to compensate for damage by wildlife.

Since the inception of the Game Damage Program in 1931, the original broad legal language has evolved to specify what is covered by game damage laws. Twenty years ago the Program expanded to include damage prevention. The Game Damage Prevention Program has significantly lessened the amount of damage and the amount paid out in game damage claims.

Game Damage Claims \$826,727 in FY08-09

Qualified ranchers, farmers and landowners may file a claim for compensation for their losses from big game animals. The claimants must meet certain legal qualifications. For example: a claimant cannot unreasonably restrict hunting, cannot charge more than \$500/person in access fees, and the claimant has a duty to mitigate damage. The regulations describe the legal conditions in detail, and are available from Division offices. In recent years, the Division pays out \$500,000-\$600,000 a year on an average of 300 claims.



The State is not liable for damage from non-big game wildlife species, such as geese, coyotes, bobcats. The State does reimburse for damages caused by elk, deer, bear, mountain lion, pronghorn, moose, and bighorn sheep. Generally, damages to livestock, commercial orchards, nurseries, growing and harvested crops, forage, fences and apiaries are covered. Livestock losses are capped at \$5000/animal. The state is liable for claims to personal property that is used in the production of raw agricultural products which includes apiaries. As of 2003, the State is no longer liable for hot tubs, tents, coolers or personal property not used in the production of raw agricultural products.

Filing a claim entails a series of steps and required paperwork and deadlines. It is imperative that the claimant contact DOW immediately upon discovery of damage. Through the process, the claimant is responsible for timely notifications, completion of forms, efforts to mitigate the damage and assisting Division personnel investigating the claim. The claimant must be able to prove that the damage was caused by big game. Some claims will not meet the necessary criteria.

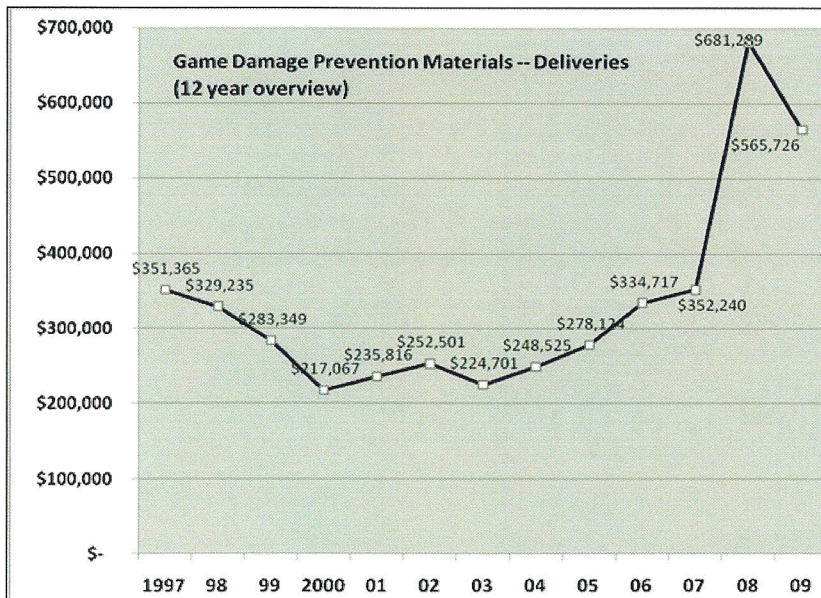
Typically, 5% of claims are denied and most of these were because the claimant could not prove that big game caused the damage. Claims over \$20,000 and all denied claims are reviewed by the Wildlife Commission. This provides an opportunity for the claimant to offer additional support for the claim.

Game Damage Prevention Materials

\$565,062 in FY08-09

This aspect of the program receives an annual appropriation, approved by the Joint Budget Committee, of \$1,000,000 from the Game Cash Fund. The annual appropriation is used to purchase bulk fencing materials and pyrotechnics through competitive bidding.

The Division anticipates the fencing needs and stockpile fencing materials centrally in Delta CO. The Division distributes materials to qualified landowners for the protection of their crops and livestock. The Division travels an average of over 60,000 miles throughout Colorado annually to deliver materials. Extensive fencing of commercial orchards, nurseries and stackyards throughout Colorado has significantly reduced the number of claims filed and hence, the amount of money paid out in game damage claims.



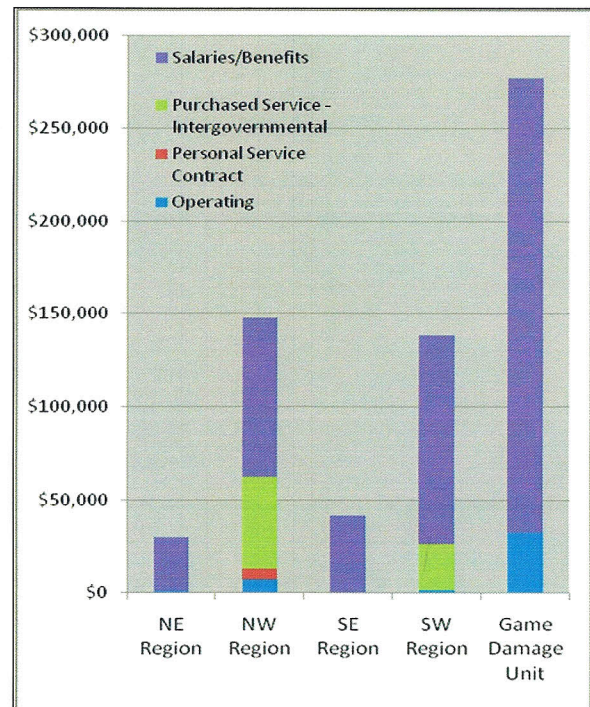
Game Damage Program Operating/Administrative Costs FY08-09

\$635,538 in

Each area office has associated costs with game damage, usually involved with claim investigations. This is reflected in the proportional amount of time spent in each area for investigations and landowner contacts under Salaries/Benefits. The "Purchased Services" is the Wildlife Services contract for predator removal. "Personal Services" represents claim adjustor fees. See Appendix-pg.28 for breakdown of data.

The Game Damage Unit is administered out of the Southwest Regional Office.

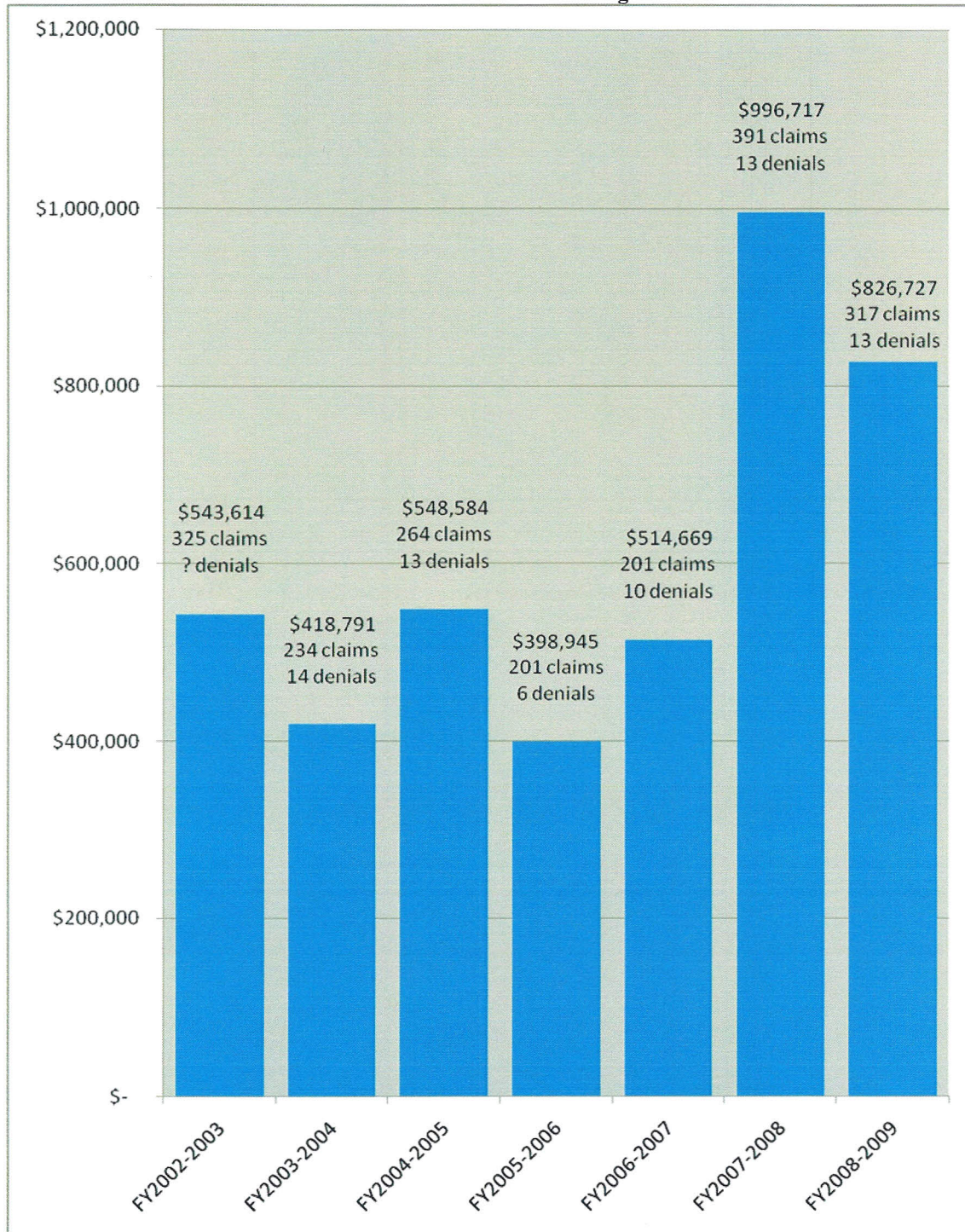
Refer to map on page 29.



FY 08-09 Game Damage Claims REPORT

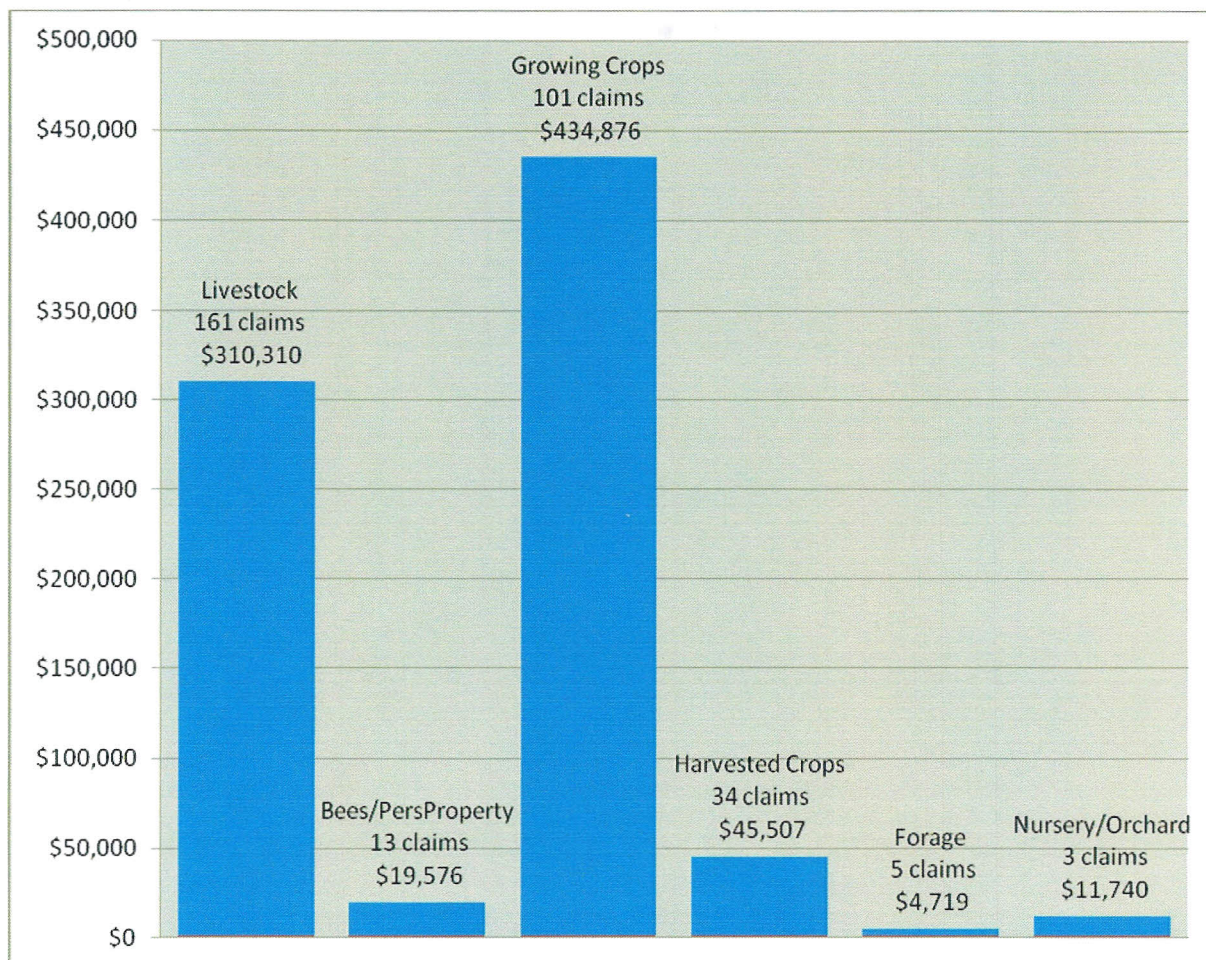
In FY08-09, the Colorado Division of Wildlife paid-out \$826,727 to settle 317 claims. Thirteen claims (valued at \$22,902) were denied.

7 Year OVERVIEW of Game Damage Claims



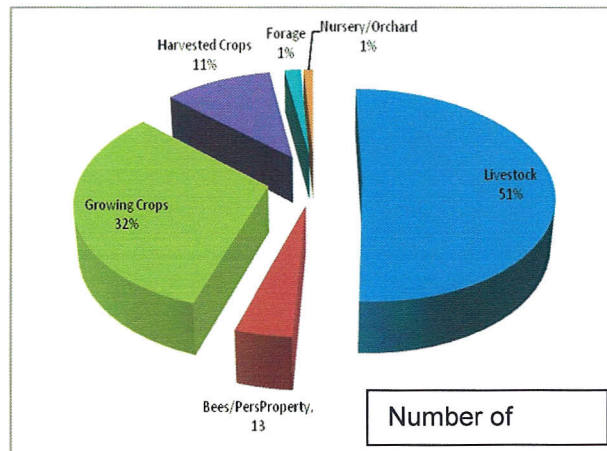
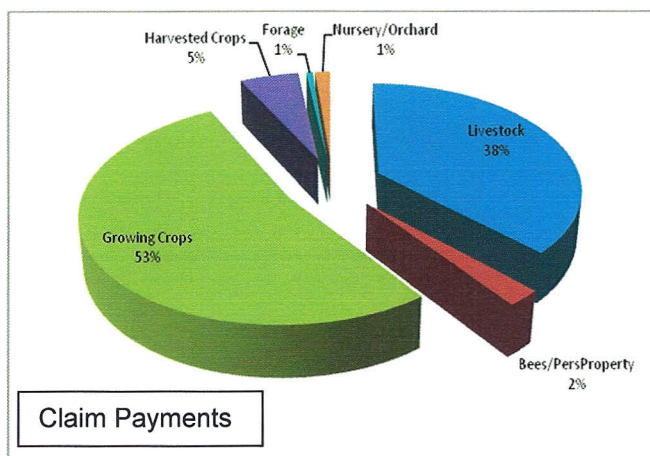
Dollar amounts do not include operating/administrative costs

FY 08-09 Game Damage Claims - Summary by Damage Target

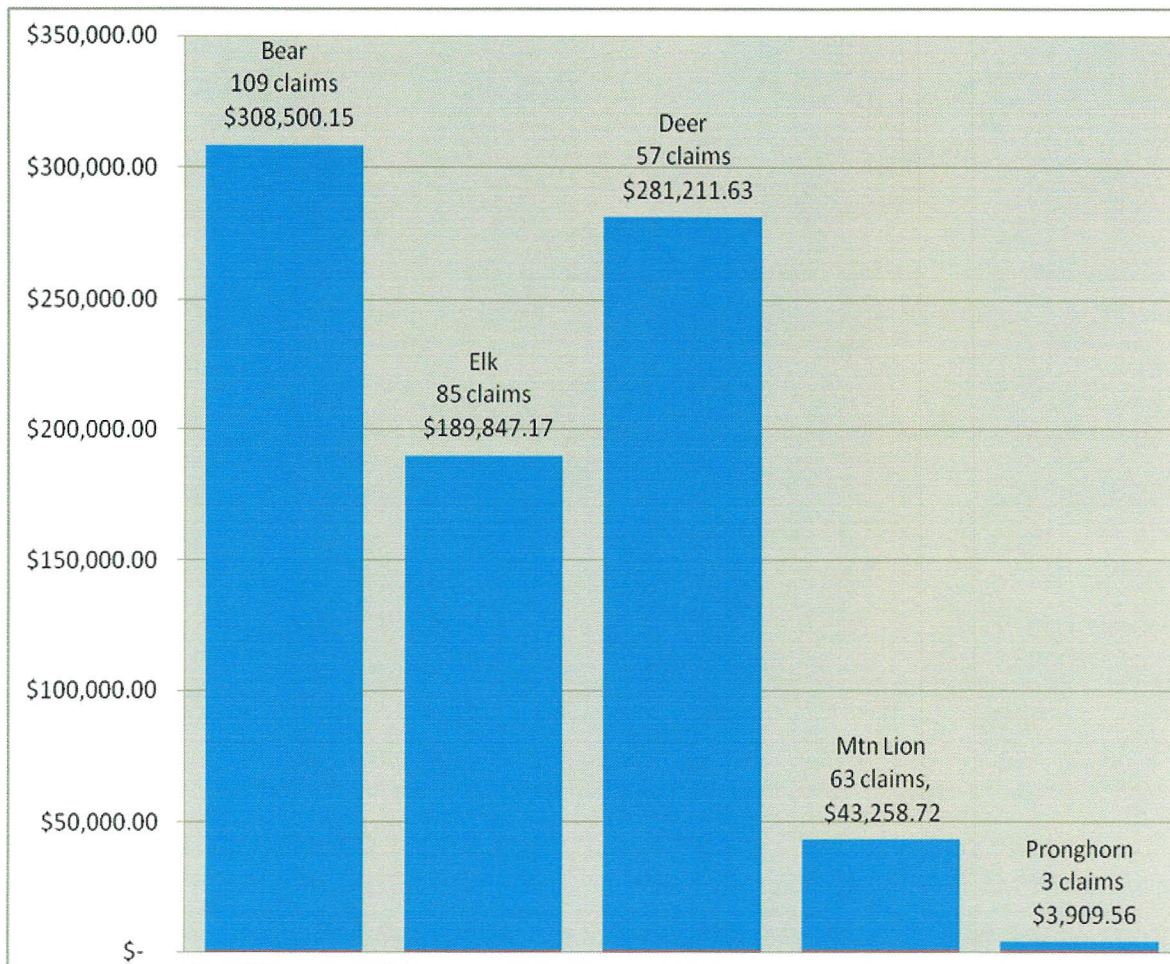


Dollar amounts do not include operating/administrative costs

Same data in pie chart views:

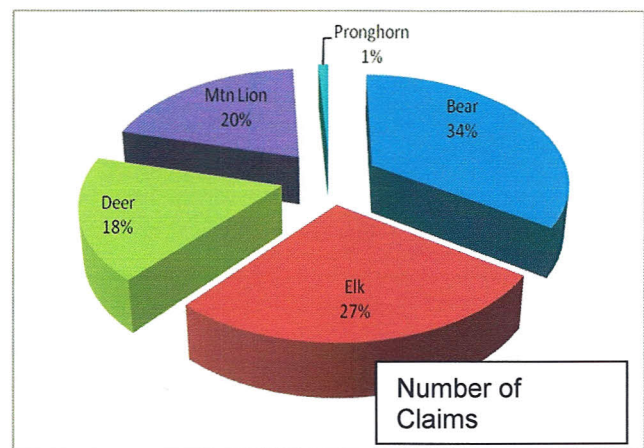
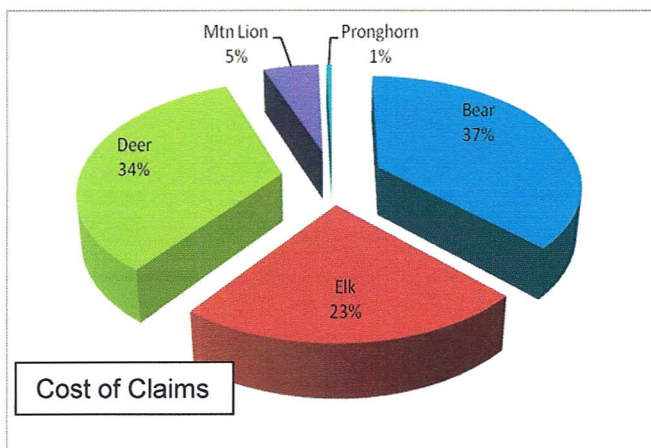


FY 08-09 Game Damage Claims - Summary by Species



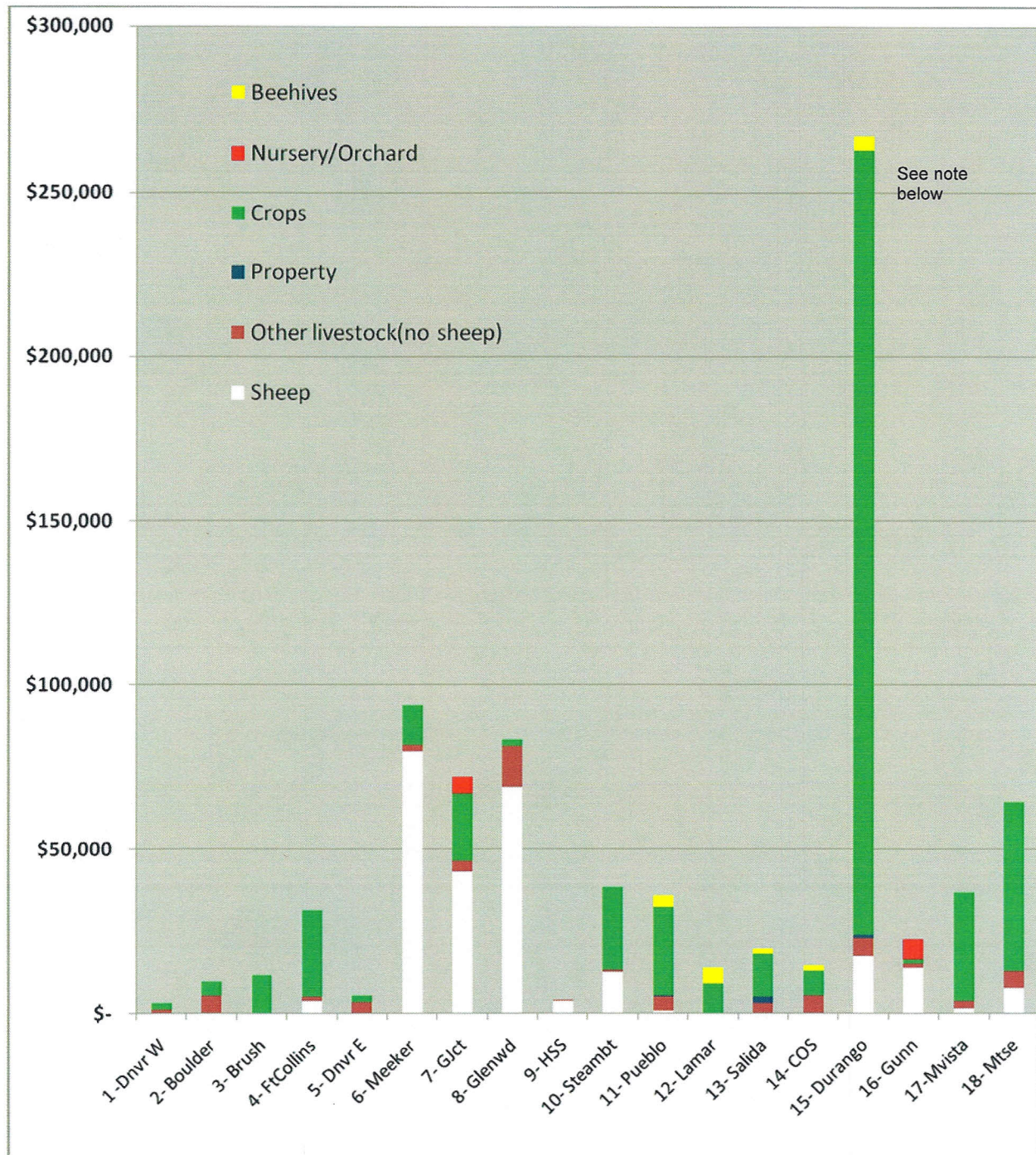
Dollar amounts do not include operating/administrative costs

Same data in pie chart views:



FY 08-09 Game Damage Claims - Summary by Area Office *(refer to map on page 29)*

Each Area Office is further analyzed under 'Payments by Area' section



Dollar amounts do not include operating/administrative costs

Note: Recently, farmers in the Dove Creek area have begun growing sunflowers and have been experiencing damage by both deer and elk. The DOW continues to work with landowners to mitigate damage through prevention materials, distribution hunts, kill permits and a liberal private-land-only licensing program.

FY08-09 Game Damage Claims - Payments by Area

(Dollar amounts do not include operating/administrative costs) Refer to map on page 29

| Area Office | Damage Target | # of Claims Processed | Amount Paid | TOTAL |
|-------------|--------------------------------------|-----------------------|--------------|--------------|
| 1 | growing crops | 3 | \$ 2,008.78 | \$ 3,059.63 |
| | livestock/beehives/personal property | 3 | \$ 1,050.85 | |
| 2 | growing crops | 1 | \$ 4,334.00 | \$ 9,659.00 |
| | livestock/beehives/personal property | 5 | \$ 5,325.00 | |
| 3 | growing crops | 4 | \$ 11,558.48 | \$ 11,558.48 |
| 4 | growing crops | 2 | \$ 26,000.00 | \$ 31,122.50 |
| | livestock/beehives/personal property | 7 | \$ 5,122.50 | |
| | DENIAL | 1 | \$ 500.00 | |
| 5 | growing crops | 1 | \$ 1,900.42 | \$ 5,455.42 |
| | livestock/beehives/personal property | 8 | \$ 3,555.00 | |
| | DENIAL | 1 | \$ 300.00 | |
| 6 | growing crops | 7 | \$ 7,081.20 | \$ 93,791.81 |
| | harvested crops | 4 | \$ 4,776.00 | |
| | livestock/beehives/personal property | 23 | \$ 81,934.61 | |
| | DENIAL | 4 | \$ 4,873.37 | |
| 7 | growing crops | 4 | \$ 9,921.88 | \$ 72,167.04 |
| | harvested crops | 3 | \$ 10,419.50 | |
| | livestock/beehives/personal property | 16 | \$ 46,475.66 | |
| | nursery/orchard | 1 | \$ 5,350.00 | |
| 8 | harvested crops | 4 | \$ 1,954.00 | \$ 83,290.80 |
| | livestock/beehives/personal property | 14 | \$ 81,336.80 | |
| 9 | livestock/beehives/personal property | 2 | \$ 3,815.44 | \$ 3,815.44 |
| 10 | growing crops | 2 | \$ 8,075.96 | \$ 38,374.15 |
| | harvested crops | 9 | \$ 17,098.38 | |
| | livestock/beehives/personal property | 11 | \$ 13,199.81 | |
| 11 | growing crops | 9 | \$ 23,358.94 | \$ 35,745.16 |
| | harvested crops | 2 | \$ 3,360.00 | |
| | livestock/beehives/personal property | 10 | \$ 9,026.22 | |
| | DENIAL | 1 | \$ 1,047.50 | |

| | | | | |
|----------------------|--------------------------------------|-----------------------|---------------|---------------|
| 12 | growing crops | 4 | \$ 8,731.47 | \$ 13,841.47 |
| | livestock/beehives/personal property | 2 | \$ 5,110.00 | |
| | | | | |
| 13 | growing crops | 11 | \$ 12,750.92 | \$ 19,529.17 |
| | livestock/beehives/personal property | 15 | \$ 6,778.25 | |
| | | | | |
| 14 | growing crops | 1 | \$ 4,000.00 | \$ 14,520.61 |
| | harvested crops | 2 | \$ 3,419.00 | |
| | livestock/beehives/personal property | 13 | \$ 7,101.61 | |
| | | | | |
| 15 | growing crops | 36 | \$ 238,038.65 | \$ 267,273.75 |
| | harvested crops | 5 | \$ 985.22 | |
| | livestock/beehives/personal property | 22 | \$ 28,249.88 | |
| | | | | |
| 16 | harvested crops | 4 | \$ 1,162.75 | \$ 22,615.23 |
| | livestock/beehives/personal property | 11 | \$ 15,062.48 | |
| | nursery/orchard | 2 | \$ 6,390.00 | |
| | DENIAL | 2 | \$ 2,442 | |
| | | | | |
| 17 | growing crops | 5 | \$ 31,224.44 | \$ 36,526.20 |
| | harvested crops | 4 | \$ 1,433.76 | |
| | livestock/beehives/personal property | 6 | \$ 3,868.00 | |
| | DENIAL | 3 | \$ 11,740 | |
| | | | | |
| 18 | growing crops | 15 | \$ 48,847.71 | \$ 64,381.37 |
| | harvested crops | 4 | \$ 2,660.00 | |
| | livestock/beehives/personal property | 14 | \$ 12,873.66 | |
| | DENIAL | 1 | \$ 2000.00 | |
| | | | | |
| TOTAL PAID IN CLAIMS | | 317 claims paid | \$ 826,727.23 | |

FY 08-09 Game Damage Claims - DENIED CLAIMS

Refer to map on page 29

| Area | Damage Type | | Species | BASIS FOR DENIAL | Denied Amount |
|-------------------------------------|---------------------------|---------------------------|----------------------|--|--------------------|
| 4 | Livestock | Cattle | Mountain Lion | Claimant stated on his affidavit: "This land is leased for cattle grazing by X. The property is owned by X and they don't allow hunting on their property. Currently they do not allow access or passage across property for any hunting". | \$500.00 |
| 5 | Livestock | Goats | Mountain Lion | DOW has previously counseled claimant on 2 occasions to night pen the goats in a lion proof enclosure and to erect exterior lighting to deter lions from entering the area. Animals were not penned in lion proof enclosure nor was there exterior lighting. | \$300.00 |
| 6 | Livestock | Cattle | Elk | The investigation and the claimant were unable to provide proof that big game caused the death/injuries to calves | \$2,146.37 |
| 6 | Harvested Crops | hay | Elk – Mule Deer | Claimant never notified the DOW of damage during alleged game damage period. | \$975.00 |
| 6 | Fence | | Elk – Deer Pronghorn | Fence wasn't in good repair prior to alleged damage. Some areas were repaired but in poor fashion such as the use of baling twine to hold 2 sections together. Charge of \$1152 for tractor use is unreasonable because he didn't need a tractor to fix fence. Claimant's repair costs don't exceed the 10% threshold required | \$1,272.00 |
| 6 | Harvested Crops | Hay | Mule Deer | Claimant failed to mitigate damage as required by waiting approximately 2 months to request game damage panels. | \$480.00 |
| 11 | Exotic Domestic Livestock | Barbados Blackbelly Sheep | Mountain Lion | Evidence shows that the deaths were not caused by mountain lion. Numerous coyote tracks, and domestic dog. | \$1,047.50 |
| 16 | Livestock | | Unk | Claimant cannot prove damage was caused by big game. Sign indicated coyote. | \$345.00 |
| 16 | Harvested Crops | hay | Elk | Claimant was offered damage prevention fencing and chose not to accept it. As a result, the State is not liable for this damage. | \$2,097.00 |
| 17 | Growing Crops | Alfalfa | Pronghorn Elk | Claimant has a long history of incomplete and late paperwork. Claim paperwork was submitted beyond the 90 day deadline. DWM conducted investigation and found damages in the amount of \$980. Claimant refused to accept amount. | \$9,975.00 |
| 17 | Livestock Forage | Forage | Elk – Deer Moose | This is a public cattle grazing allotment owned by the USFS. This damage does not qualify for compensation as the State is not liable for this type of damage by wildlife on public lands. | \$1,690.00 |
| 17 | Aftermath Pasture | | Pronghorn | No Discovery of Damage filed, late notifications, blank Itemized Loss Statement. Claimant is aware of his lack of organization with the required paperwork. | \$75.00 |
| 18 | Livestock | Corsican rams | Mountain Lion | Corsican is defined as a hybrid between a mouflon and a Barbados sheep. It is illegal to possess any mouflon hybrid. | \$2,000.00 |
| TOTAL VALUE OF DENIED CLAIMS | | | | | \$22,902.87 |

FY08-09 Game Damage Preventive Materials REPORT

The Game Damage Program filled 236 requests for Preventive Materials throughout the state. Deliveries required traveling over 68,000 miles.

Area offices received stockpiles of pyrotechnics & wood elk panels to provide landowners with immediate relief from big game damage.

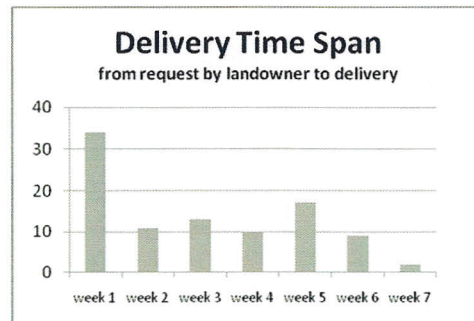
Habitat Partnership Program (HPP) requested materials for cooperative habitat projects with landowners.

DELIVERY TIME SPANS

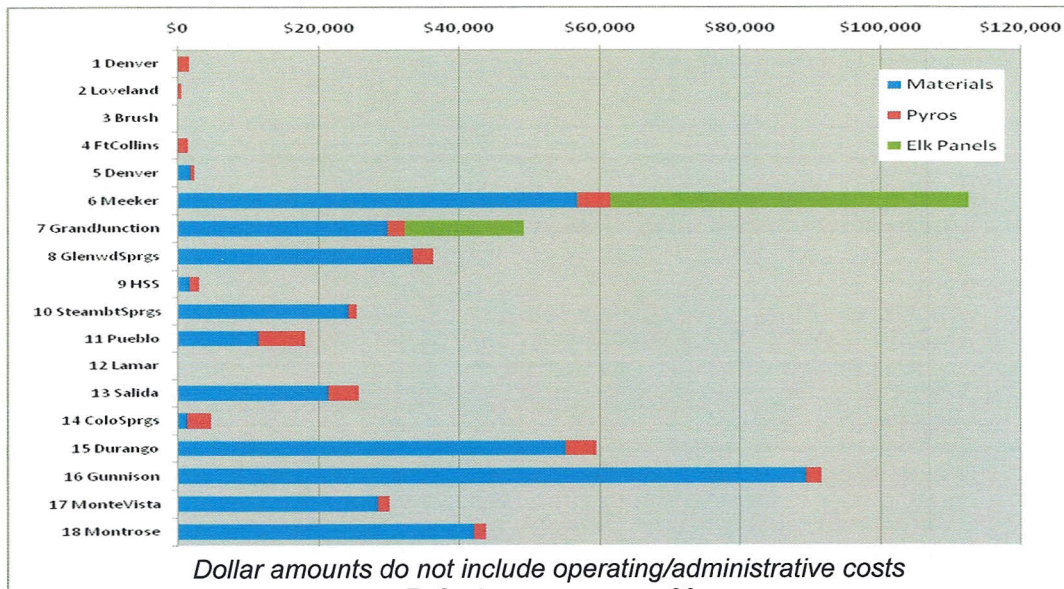
Effective July 1, 2009: new delivery deadlines were enacted by Senate Bill 09-024. Prior to SB 09-024, the Division did not track the amount of time to make a delivery to a landowner. Although the majority of this report is for FY 08-09, this graph represents delivery times since July 2009.

Two deliveries (week 7) fell outside the mandated deadline. One delay was requested by the landowner. The other was for a beeyard fence with no urgency.

| Facility Type | Number | FY08-09 |
|----------------------|--------|-----------|
| Apiary | 48 | \$43,324 |
| Garden | 4 | \$10,207 |
| Nursery | 12 | \$55,162 |
| Orchard | 15 | \$29,881 |
| Vineyard | 7 | \$21,465 |
| Stackyard | 150 | \$234,693 |
| Pyro stockpiles | | \$41,514 |
| Elk Panel stockpiles | | \$68,064 |
| HPP | | \$60,753 |
| | 236 | \$565,062 |



FY08-09 Distribution of Materials to Area Offices

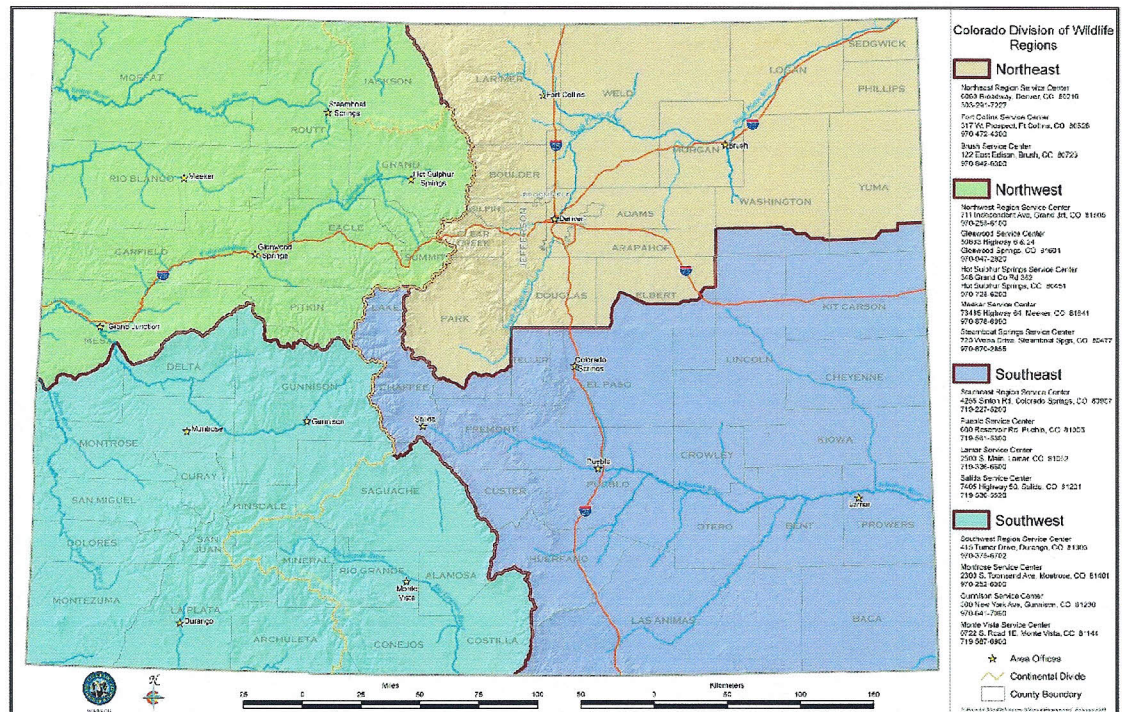
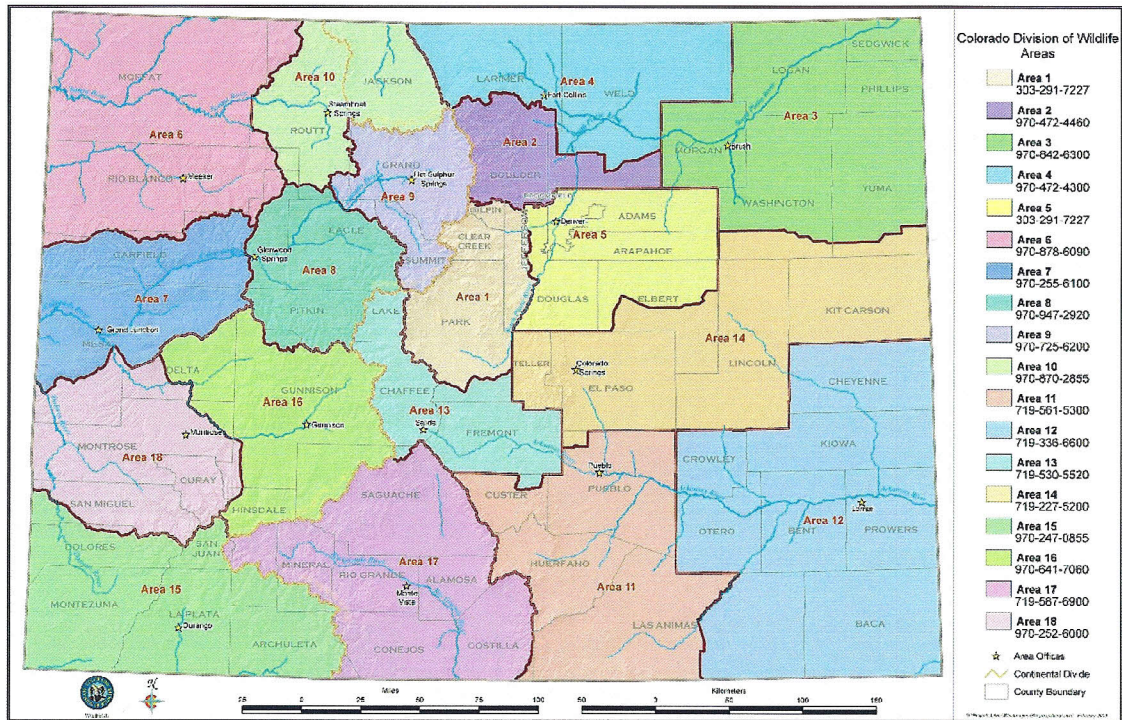


APPENDIX

Operating /Administrative Costs by Area/Region.

| | Salaries & Benefits | Operating | Personal Services Contract | Purchased Service - Intergovernmental | |
|--------------------|---------------------|--------------------|----------------------------|---------------------------------------|----------------------|
| Area 1 | \$7,492.10 | - | - | - | |
| Area 2 | \$2,225.27 | - | - | - | |
| Area 3 | \$2,966.64 | \$767.80 | - | - | |
| Area 4 | \$8,396.54 | - | - | - | |
| Area 5 | \$8,033.28 | - | - | - | |
| NE Total | \$29,113.83 | \$767.80 | - | - | \$29,881.63 |
| Area 6 | \$26,533.70 | \$1,005.06 | \$6,000.00 | - | |
| Area 7 | \$22,556.81 | \$70.35 | - | - | |
| Area 8 | \$16,682.32 | \$5,090.72 | - | - | |
| Area 9 | \$1,440.61 | | - | - | |
| Area 10 | \$17,766.51 | \$610.76 | - | - | |
| NW region | \$121.04 | - | - | \$50,000.00 | |
| NW Total | \$85,100.99 | \$6,776.89 | \$6,000.00 | \$50,000.00 | \$147,877.88 |
| Area 11 | \$9,138.25 | \$14.42 | - | - | |
| Area 12 | \$10,227.74 | \$36.49 | - | - | |
| Area 13 | \$10,956.36 | - | - | - | |
| Area 14 | \$11,185.81 | \$4.79 | - | - | |
| SE Total | \$41,508.16 | \$55.70 | - | - | \$41,563.86 |
| Area 15 | \$50,558.78 | \$1,331.88 | - | - | |
| Area 16 | \$15,891.21 | - | - | - | |
| Area 17 | \$24,191.12 | - | - | - | |
| Area 18 | \$21,617.51 | -\$85.20 | - | - | |
| SW region | \$112,258.62 | \$1,246.68 | - | \$25,000.00 | \$138,505.30 |
| Game Damage Unit | \$245,400.21 | \$32,309.79 | - | - | \$277,710.00 |
| Grand Total | \$513,381.81 | \$41,156.86 | \$6,000.00 | \$75,000.00 | \$635,538.67 |
| | | | | | Program Total |

CDOW MAPS FOR REFERENCE



Damage License Harvest - data provided by Terrestrial

| year | species | DAU | # lics approved | # lics issued | # animals harvested |
|------|------------|------|--------------------|------------------|------------------------|
| 2008 | Pronghorn | A-06 | 10 | 6 | 6 |
| 2008 | Pronghorn | A-07 | 40 | 34 | 29 |
| 2008 | Pronghorn | A-09 | 95 | 58 | 41 |
| 2008 | Pronghorn | A-14 | 34 | 25 | 21 |
| 2008 | Pronghorn | A-19 | 5 | 4 | 5 |
| 2008 | Pronghorn | A-20 | 30 | 23 | 17 |
| 2008 | Pronghorn | A-35 | 16 | 10 | 11 |
| 2008 | Pronghorn | A-99 | 6 | 5 | 3 |
| 2008 | Black Bear | B-03 | 3 | 2 | 0 |
| 2008 | Black Bear | B-11 | 50 | 6 | 0 |
| 2008 | Black Bear | B-17 | 50 | 0 | 0 |
| 2008 | Deer | D-07 | 10 | 5 | 5 |
| 2008 | Deer | D-11 | 11 | 7 | 6 |
| 2008 | Deer | D-16 | 20 | 20 | 18 |
| 2008 | Deer | D-19 | 284 | 184 | 120 |
| 2008 | Deer | D-24 | 98 | 98 | 98 |
| 2008 | Deer | D-28 | 20 | 15 | 18 |
| 2008 | Deer | D-29 | 41 | 41 | 41 |
| 2008 | Deer | D-30 | 35 | 18 | 8 |
| 2008 | Deer | D-31 | 35 | 28 | 31 |
| 2008 | Deer | D-35 | 40 | 30 | 24 |
| 2008 | Deer | D-36 | 25 | 17 | 16 |
| 2008 | Deer | D-39 | 10 | 9 | 8 |
| 2008 | Deer | D-40 | 13 | 7 | 0 |
| 2008 | Deer | D-43 | 5 | 0 | 0 |
| 2008 | Deer | D-44 | 13 | 5 | 0 |
| 2008 | Deer | D-45 | 8 | 8 | 7 |
| 2008 | Deer | D-48 | 10 | 9 | 4 |
| 2008 | Deer | D-49 | 3 | 2 | 1 |
| 2008 | Deer | D-52 | 12 | 10 | 7 |
| 2008 | Deer | D-55 | 4 | 1 | 0 |
| 2008 | Elk | E-01 | 12 | 6 | 2 |
| 2008 | Elk | E-02 | 117 | 63 | 21 |
| 2008 | Elk | E-03 | 307 | 137 | 81 |
| 2008 | Elk | E-06 | 123 | 73 | 40 |
| 2008 | Elk | E-07 | 22 | 9 | 1 |
| 2008 | Elk | E-08 | 55 | 10 | 6 |
| 2008 | Elk | E-09 | 20 | 1 | 0 |
| 2008 | Elk | E-10 | 40 | 29 | 29 |
| 2008 | Elk | E-11 | 150 | 106 | 69 |
| 2008 | Elk | E-13 | 104 | 43 | 34 |
| 2008 | Elk | E-14 | 237 | 144 | 78 |
| 2008 | Elk | E-16 | 25 | 5 | 3 |
| 2008 | Elk | E-17 | 20 | 1 | 0 |
| 2008 | Elk | E-20 | 65 | 48 | 32 |
| 2008 | Elk | E-21 | 30 | 24 | 0 |
| 2008 | Elk | E-22 | 5 | 4 | 0 |
| 2008 | Elk | E-23 | 5 | 2 | 0 |
| 2008 | Elk | E-24 | 31 | 18 | 31 |
| 2008 | Elk | E-28 | 40 | 19 | 10 |
| 2008 | Elk | E-30 | 35 | 26 | 11 |
| 2008 | Elk | E-31 | 81 | 22 | 11 |
| 2008 | Elk | E-32 | 20 | 11 | 9 |

| | | | | | |
|------|-----|------|-----|-----|-----|
| 2008 | Elk | E-33 | 389 | 316 | 310 |
| 2008 | Elk | E-34 | 6 | 6 | 6 |
| 2008 | Elk | E-35 | 20 | 17 | 7 |
| 2008 | Elk | E-39 | 30 | 2 | 0 |
| 2008 | Elk | E-40 | 7 | 7 | 7 |

STATUS OF BIG GAME POPULATIONS IN COLORADO

BACKGROUND

5-Year Season Structure

The Colorado Wildlife Commission (CWC) and the Colorado Division of Wildlife (CDOW) recently completed an 18 month long public process to establish the big game season structure for 2010-2014. A major consideration in this process was the efficacy of the 5-year season structure to achieve big game population objectives through harvest management. The CWC adopted the new 5-year season structure in September 2009 with little opposition.

Population Estimation Timeline

Population estimates for deer, elk, and pronghorn are made in March after post-hunt aerial surveys and harvest surveys have been completed. Because of the statutory requirement to provide population estimates in January, population estimates from the previous year must be used.

DAU Plans and Objectives

Big game populations in Colorado are managed on the basis of Data Analysis Units (DAUs) that represent the annual ranges of relatively discrete subpopulations. DAUs are divided into Game Management Units (GMUs) to better manage harvest and hunter numbers within each DAU.

DAU plans establish objectives for posthunt population size and sex ratio, and are locally developed with public input. Draft plans are presented to the Wildlife Commission, with opportunities for public comment, revised if necessary, then typically approved by the Commission the following month. License quotas approved by the Commission each year are used to move DAU populations towards objectives using hunter harvest. In recent years, DAU population objectives have been expressed as a range of values to provide greater management flexibility and more realistically reflect confidence in the estimates. Target population objectives are used to indicate the desired population within the objective range for a given year.

Approximately 80% of the 130 elk, deer, and pronghorn DAUs have approved DAU plans. DAUs that do not have approved DAU plans use provisional objectives established internally. Many of the DAUs with provisional objectives have relatively small numbers of animals and/or few conflicts making other DAU plans and updates a higher priority. The CDOW is continually working on completing new plans and updating existing plans.

Hunters and Harvest

Elk hunters and elk harvest peaked in 2004 and have since steadily declined (Figs. 1 and 2). This decline has been the result of fewer over-the-counter (OTC) rifle hunters and fewer limited cow licenses. Declining interest in elk hunting has caused fewer hunters to purchase OTC licenses and fewer cow licenses have been offered because more DAUs such as E-2 and E-6 are at or approaching objectives. It is anticipated that the number of elk hunters and elk harvest will continue to decline slowly the next few years as a result of an aging hunter population, low hunter recruitment, economic conditions, and reduced elk populations. Adding additional licenses in DAUs that are over objective would likely do little to reverse this trend. DOW is considering ways in which hunter recruitment and retention can be increased through marketing and other strategies to offset this trend.

Since 1985, deer hunters and deer harvest peaked in 1990. Hunter numbers and harvest then declined steadily resulting in all deer licenses becoming limited in 1999. The Wildlife Commission limited deer license availability significantly in response to hunter concerns about the size and quality (number of mature bucks) of deer populations. Since 1999, deer harvest and deer hunters have increased slightly but are still well below levels in the late 1980's and early 1990's. Doe licenses have become increasingly difficult to sell because limited buck licenses are readily available in many DAUs even though license numbers have been greatly reduced. Deer harvest declined in 2008 partly because of mortality that occurred on the west slope during the 2007-2008 winter.

Pronghorn hunters and harvest approached record numbers in 2008 and are expected to set new records in 2009. Because pronghorn licenses are relatively few in number compared to elk and deer licenses, demand is still fairly high.

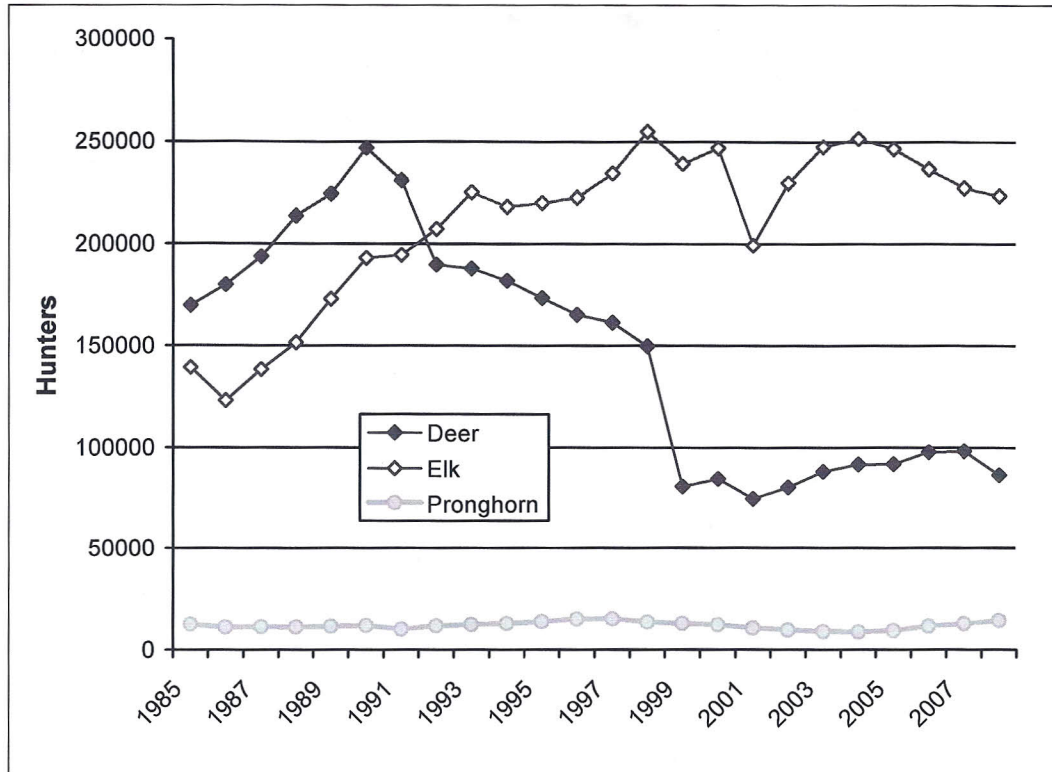


Figure 1. Deer, elk, and pronghorn hunters, 1985-2008.

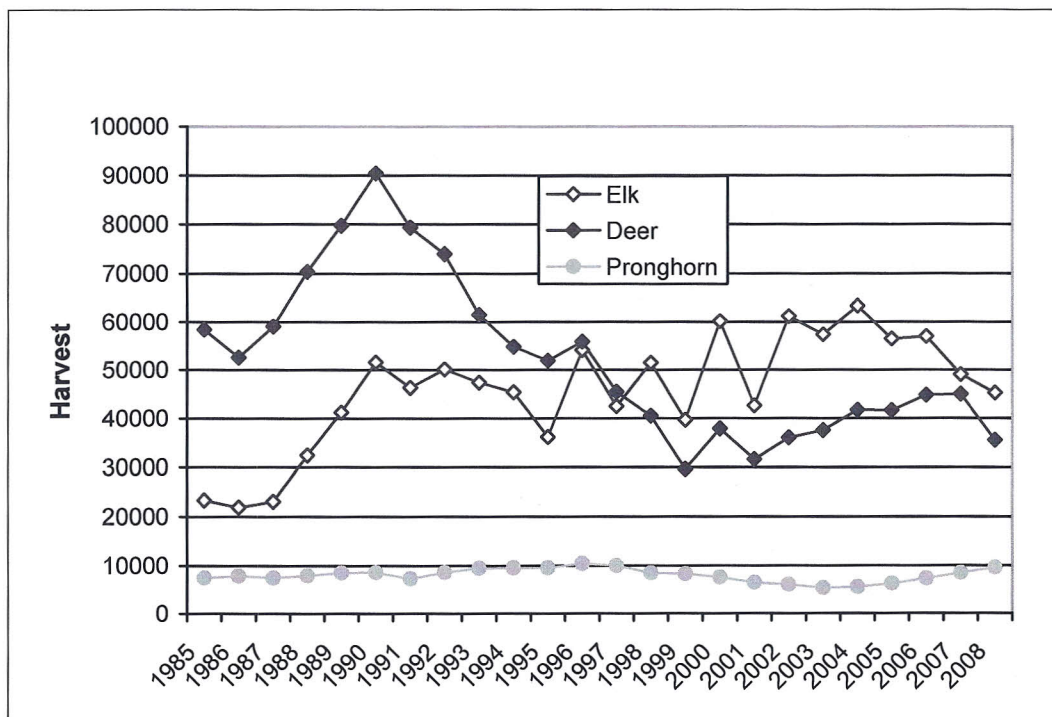


Figure 2. Deer, elk, and pronghorn harvest, 1985-2008.

2008 Big Game Population Estimates in Relation to DAU Objectives

Statewide, estimated 2008 posthunt elk populations were at 119% of the total DAU objectives, deer were at 81%, and pronghorn were at 113% (Tables 1-3).

ELK DAUS OVER OBJECTIVE

Twenty-seven out of 46 elk DAUs (59%) exceeded their population objective by more than 10% in 2008. In several DAUs such as E-2, E-6, E-9, and E-25, the CDOW has effectively reduced elk populations to objective in recent years. Several other DAUs are steadily moving towards objective and are expected to be at or very close to objective by 2012.

Based on modeled population estimates, statewide elk numbers were reduced by approximately 50,000 from 2004-2008 (Fig. 2). As populations are reduced to objective, license revenue drops because the number of cow licenses are reduced, and complaints usually increase that there are too few elk.

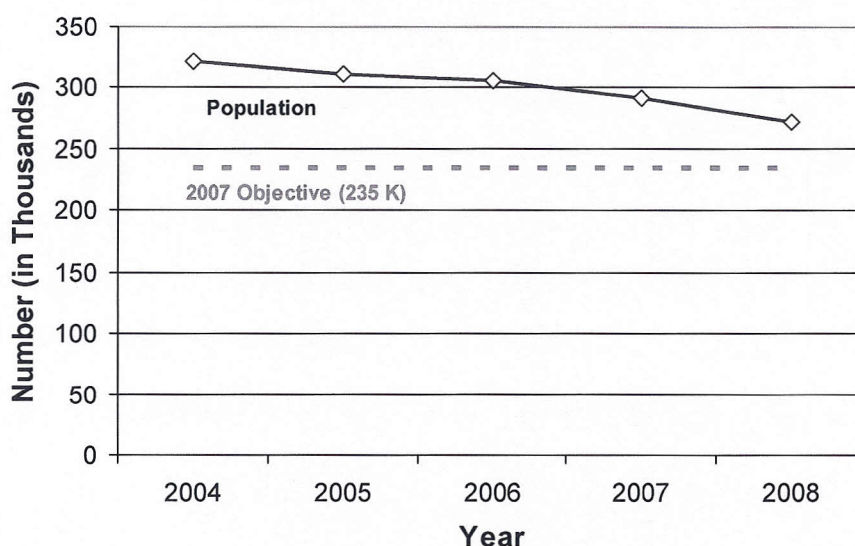


Figure 3. Estimated, statewide posthunt elk population versus total DAU population objectives, 2004-2008. Based on 2007 models.

Approximately 12 elk DAUs representing about 30% of the statewide elk population are considered problematic for achieving population objectives. In these DAUs it is not possible to reduce elk numbers simply by increasing the number of licenses available due to access limitations and license demand that directly relate to hunter success rates. There is usually a saturation point for limited licenses above which demand drops off sharply and licenses go unsold. In 2008, approximately 10% of the 232,338 limited elk licenses available statewide did not sell. Because the majority of rifle bull licenses and archery either-sex licenses are sold OTC, limited license saturation primarily relates to antlerless (aka cow) rifle licenses.

Examples: E-3, E-10, E-11, E-33, E-41

Effects of Access on Elk Harvest

Private Land

Lack of private land access is the primary factor preventing elk populations from being reduced to objective in many DAUs. Achieving elk population objectives in DAUs with large amounts of private land can be difficult. Harvest in these units is largely determined by the extent landowners will provide access to hunters. Some landowners provide little if any public hunting access whereas others only allow access to bull hunters for a substantial fee. Cow hunters are seldom willing to pay the same access fees as bull hunters so cow harvest on private land can be disproportionately low. Hunting pressure on public land is often much greater than on private land which can quickly push elk to private land where harvest is greatly reduced. Elk can also occur in more developed areas such as residential subdivisions where hunting can be controversial or prohibited.

Examples: E-33, E-51

Even in DAUs with a majority of public land, a high percentage of elk can avoid hunting pressure by congregating on private properties. In some cases, it only takes a few key landowners to restrict hunting to substantially reduce harvest. Elk movement from public to private land is hastened by a high degree of motorized vehicle access on public land.

Examples: E-54, E-55

In some DAUs the majority of elk winter on public land. Although late seasons can be effective in these DAUs, holding late seasons is sometimes resisted because they can force large numbers of elk onto adjacent private land where they are more likely to cause damage.

Examples: E-20, E-55

Government Refuges

Large refuge areas where hunting is prohibited exist in some DAUs. These areas include National Parks and Monuments, military installations, and county parks and open space. Elk quickly learn where hunting is allowed and where it is not. In some cases such as E-9, deep snow can force elk out of refuge areas where they can be hunted and seasons can be structured to take full advantage of such movements when they occur. In other cases, such as E-11, the refuge area is in winter range and elk can stay protected. The CDOW works with federal and local governments to try and coordinate harvest efforts as much as possible but the state has no authority to require hunting in these areas.

Examples: E-11, E-52

Public Land Access

Even on public land, access can be an issue in some DAUs. Cow harvest can be low in DAUs with large federal wilderness areas or rough, roadless terrain where cow hunters

are less likely to go into remote areas where the elk are. In some DAUs, snow will force elk to move into more accessible areas and harvest objectives can be achieved during late seasons. However, in other DAUs elk make the transition from remote wilderness to private land very quickly making harvest problematic during regular and late seasons.

Examples: E-35, E-54

Interstate Movements

Elk in stateline DAUs frequently move into Wyoming, Utah, and New Mexico making management of these units uniquely challenging. Coordination with adjacent states and understanding movement patterns are necessary for effective management.

Examples: E-3, E-34

Population Estimates & Objectives

CDOW has put tremendous emphasis over the years on improving our inventory and modeling efforts for big game populations. As a result, big game population models used by the CDOW have continued to evolve as better information and methods have become available. The net effect of improved modeling during the last 3 years has been an increase in elk population estimates. As a result, some DAUs that were considered to be near objective are now well above objective. In some cases, the DAU planning process should be used to better align existing objectives with the newer population estimates, when publics are generally satisfied with those population levels.

Strategies to Reduce Elk Populations to Objective

The CDOW will employ a variety of current strategies and will continue to evaluate potential new strategies to reduce elk populations to objective. Strategies to reduce elk populations to objective can be grouped into 6 categories.

1. Liberal regulations that apply to all or most elk units in the state
 - *Over- the- counter (OTC) archery either-sex licenses.*
 - *OTC List B (which can be purchased in addition to a primary, list A license) archery cow licenses.*
 - *OTC rifle bull licenses during 2nd and 3rd seasons.*
 - *Youth hunters with unfilled cow or either-sex licenses can hunt cows during any late elk season.*
 - *Cow licenses for nonresidents are substantially discounted relative to bull license fees.*
 - *Multiple seasons.* Holding 4 rifle seasons with breaks in between allows time for elk to redistribute during the break periods. Each season brings in a new wave of hunters and success rates are consistently highest at the beginning of each season.
2. Regulations commonly used to increase antlerless elk harvest.
 - *Increased rifle cow licenses during the regular seasons.* The most straightforward way to increase cow harvest is to increase the number of cow

licenses during the regular seasons. Although this approach can be very effective in some DAUs, it can have little benefit or prove detrimental to harvest in others, particularly when access is the primary issue limiting harvest. Offering too many licenses can result in unsold licenses, hunter crowding, reduced success rates, and more hunters that are dissatisfied.

- *Change limited bull licenses to either-sex licenses.* Replacing limited bull licenses with either-sex licenses has proven to be an effective way to increase cow harvest in some DAUs.
- *List B or List C regular and private land only (PLO) cow licenses.* A hunter can purchase a List B license in addition to a List A license (e.g., most bull and either-sex licenses are List A licenses) or another List B license. Hunters can purchase any number of List C licenses. In 2008, all cow licenses in 92 game management units were List B. These units correspond with most of the DAUs that are over objective. All PLO cow licenses statewide are List B or List C.
- *Extended PLO cow seasons.* Keeping pressure on elk on private land even when regular hunting seasons are closed can be an effective way to keep more elk on public land and increase harvest. Extended PLO seasons can run from August 15th until the end of February and do not need to conform to regular season dates. Hunting is generally not allowed outside of this period because of concerns about late gestation and dependent young.
- *Late cow elk seasons.* Late cow seasons that occur between the end of the 4th regular rifle season and the end of February can be very useful for achieving harvest objectives in many DAUs. Use of non-PLO late seasons must weigh the potential for increased harvest against the potential for pushing more elk to private land.

3. Regulations used to reduce agricultural damage and conflicts

- *Damage licenses and distribution hunts for cows.* Damage licenses are widely used to address elk damage issues on specific private properties. Distribution hunts are used to address elk damage on multiple properties and can include public land. Damage licenses can be approved by the local Area Manager.
- *Kill permits for bulls and cows.* In some cases the CDOW has issued kill permits to allow sharpshooters to kill elk outside of seasons and/or after legal hours. Kill permits are used to address special game damage situations where regular hunters would be ineffective.
- *Summer bull seasons.* This strategy is currently being used in E-55 to keep pressure on elk using irrigated croplands during the summer.

4. Landowner incentive programs

- *Ranching for Wildlife (RFW).* The RFW program offers transferable bull licenses to enrolled landowners with large properties (>12,000 acres) in return for allowing some public hunting. Most public licenses are for cow hunting. RFW provides some opportunity for increasing cow harvest on large properties where little opportunity would otherwise exist. Twenty-three ranches are currently enrolled in this program.

- *Non-RFW license incentives.* Pursuant to statute, license incentives to provide public hunting access have also been offered to landowners with smaller properties that do not qualify for RFW (e.g., Unit 10 Landowner Pilot Program). License incentive programs can have potential benefits but do require increased administrative oversight.
- *Private land hunt coordinators.* In some cases, the CDOW via the Habitat Partnership Program (HPP) has provided hunt coordinators to schedule hunts and accompany hunters on private property. Hunt coordinators help minimize landowner-hunter interaction and provide increased assurance that rules specified by landowners will be obeyed. Although this program can be expensive, it can be useful in certain situations.

5. Regulations occasionally used.

- *Limited archery hunting.* Studies with radio-collared elk in some DAUs have shown substantial movements of elk from public to private land during the early archery and muzzleloader seasons. OTC archery either-sex licenses and OTC List B archery cow licenses are available in most DAUs but archery harvest usually makes up only a small portion of the overall cow harvest. Rifle hunters are much more efficient at harvesting cows than archery hunters. Whereas the number of rifle elk hunters has steadily declined over the last 5 years, the number of archery elk hunters has steadily increased. Limiting archery hunting pressure can potentially result in more elk being available to rifle hunters on public land and thereby increase cow harvest. However, limited archery hunting is strongly opposed by many archery hunters including the Colorado Bowhunters Association.
- *Open state wildlife areas (SWAs) to late season hunting.* Some SWAs are closed to late season hunting to help keep elk off of private land. Allowing hunting on these SWAs can increase harvest but it can also push elk to private land where they are more likely to cause damage. The efficacy of opening SWAs to late season hunting often depends on sufficient counter hunting pressure on surrounding private lands.
- *OTC rifle cow licenses.* OTC rifle cow licenses have been issued in some DAUs in the past. In many DAUs that are over objective, leftover cow licenses are often easy to obtain making OTC licenses of little value for increasing harvest.
- *Totally limited elk licenses.* Proponents of totally limited elk licenses often claim that harvest can be increased by making all elk licenses limited and reducing the number of hunters. The CDOW has found little evidence to support this claim. Most of the limited elk DAUs on the west slope are over population objective. Although, most limited elk DAUs on the east slope are at or close to objective, these DAUs have relatively small numbers of elk and do not have a history of exceeding objectives. Recent attempts to create more totally limited elk units have been met with considerable and often times overwhelming opposition.

6. Potential new strategies and popular suggestions

Several ideas for reducing elk numbers are listed below. Some of these options have received consideration by the CWC and CDOW in the past but were not implemented for

a variety of reasons. Most of the options would be strongly opposed by some segments of the public even though they might be effective at reducing elk numbers. Some options are presented only because they are often suggested by the public even though the CDOW does not consider them to be realistic.

- *Big game walk-in access.* This option would provide big game hunting access to private land similar to the highly successful small game walk-in access program (i.e., landowners are paid a per acre fee by the CDOW to allow public hunters on their property). The CDOW has looked into this option but did not consider it tenable because of the large amount of money landowners with elk can charge for bull hunting and the fact that elk will likely quickly shift to properties not in the program. A possible derivation of this program could be to provide walk-in access during late seasons when only antlerless hunting is allowed. The Division does lease over 500,000 acres from the State Land Board for public hunting.
- *Earn-a-bull program.* Some mid-western and eastern states with overpopulations of white-tailed deer have used earn-a-buck programs to increase harvest of does. Because the demand for doe licenses is often much lower than the demand for buck licenses, earn-a-buck programs require a hunter to first shoot a doe and have it checked before the hunter can get a buck license. Resident elk hunters would likely strongly resist such a program in Colorado, nonresident participation would likely decline sharply, and logistical demands for mandatory checks and law enforcement would be considerable for the CDOW. It is doubtful that this option would increase harvest much in some of the more problematic DAUs such as E-11 and E-33.
- *Cow points.* This option would give hunters a preference point for purchasing a cow license in a DAU that is over population objective. The CDOW and the CWC has considered this option in the past but rejected it because of the high degree of preference point inflation that is already occurring and because it does little to address the issue of private land access.
- *Continued hunting opportunities.* Hunters often want to know why they can't continue hunting on an unfilled license during subsequent seasons if a DAU is over objective. This concept received considerable discussion during 5-year season structure. The primary drawback of this type of approach is that it is basically similar to having one long season and there would be little incentive for hunters to get licenses for later seasons if hunters from earlier seasons can continue hunting. Colorado went to multiple seasons for deer and elk over 30 years ago because of increasing complaints about hunter crowding. As a result of multiple seasons, hunter satisfaction and success rates increased and accidents decreased. Continued hunting opportunities would have the most potential application for PLO licenses where hunter crowding isn't usually an issue. However, in most units that are over objective, extended PLO licenses are already available which often provide even greater opportunity because hunting is allowed outside of regular seasons as well as across regular seasons.
- *Multiple hunting opportunities.* Along with continued hunting opportunities, hunters often question why there is a limit on cow licenses when a DAU is over objective. At its fullest, multiple hunting opportunities would be equivalent to OTC List C cow licenses available during all seasons. Given that many limited

elk license go unsold and there is ample opportunity to purchase List B and List C licenses in most DAUs that are over objective, the value of expanding multiple hunting opportunities to increase harvest is questionable.

- *Cow-only regular seasons.* Making some regular rifle seasons cow-only in DAUs that are over objective would take bull hunting out of the access equation and give landowners more incentive to get to objective by providing access to cow hunters. This option would be extremely unpopular with landowners and hunters. Cow only late seasons have been added in many areas over objective and proven successful in increasing cow harvest and reducing populations.
- *Early rifle cow seasons.* In DAUs where elk make early movements to private land, early rifle cow seasons could potentially increase harvest. Early rifle seasons would be opposed by many archers and muzzleloader hunters.
- *Culling.* Culling involves using agency personnel or contractors to shoot elk to reduce the population. Culling is occasionally used by the National Park Service to reduce elk numbers because sport harvest is prohibited in most national parks and monuments. The CDOW has done some elk culling to address concerns related to chronic wasting disease. Culling is seldom acceptable to the public unless there is a clear need and there is no other option. The need is usually either that habitat degradation due to overpopulation is obvious (such as the recent culling operation in Rocky Mountain National Park) or reducing animal numbers could alleviate a major threat to animal or human welfare. Culling hundreds of elk to get a DAU down to objective would be strongly opposed by the public and is not considered realistic by the CDOW.
- *Translocation.* Capturing and moving elk from high density units to low density units or out of state is commonly suggested by the public. On a DAU scale, translocation would be cost prohibitive and would be a short term solution at best. Furthermore, by Commission policy the CDOW cannot move elk from CWD positive units to areas where the disease has not been found. Most of the northern part of the state is positive for CWD whereas CWD has not been found in most of southern Colorado. There is little if any demand for elk from other states.

ELK DAUS BELOW OBJECTIVE

Only one elk DAU, E-46, was more than 10% below objective in 2008.

Strategies to Increase Elk Populations to Objective

- *Decrease limited license numbers.*

DEER DAUS OVER OBJECTIVE

Seven out of 55 deer DAUs (13%) exceeded their population objective by more than 10% in 2008. Four of the 7 DAUs were plains units in eastern Colorado that consist almost entirely of private land. Another DAU over objective is near Boulder where developed areas and open space closed to hunting make harvest management problematic.

Strategies to Reduce Deer Populations to Objective

- *Increased PLO and regular doe licenses during regular seasons.*
- *White-tailed deer only doe licenses.*
- *PLO season-choice doe licenses.*
- *Late doe seasons.*
- *Big Game Access Pilot Program.* This program offers deer and pronghorn hunting on enrolled private properties in southeast Colorado similar to the Small Game Walk-In Access Program.

DEER DAUS BELOW OBJECTIVE

Twenty-seven out of 55 deer DAUs (49%) were more than 10% below their population objective in 2008. Although a few DAUs such as D-16 have increased to objective in recent years and some other DAUs such as D-34 are steadily moving towards objective, the majority of the deer DAUs below objective are static at best (Fig. 4).

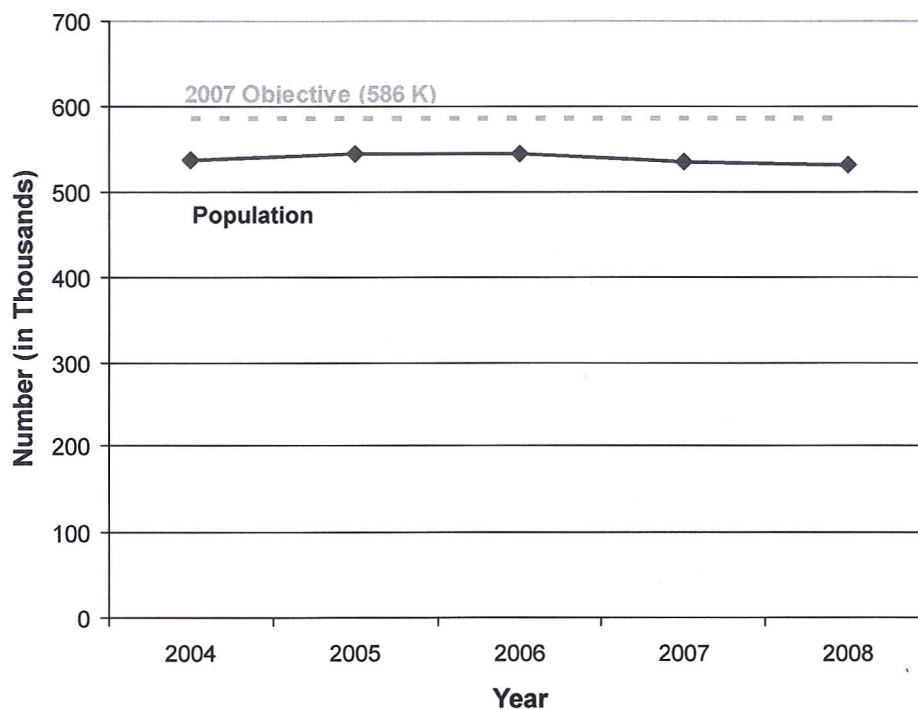


Figure 4. Estimated, statewide posthunt deer population versus total DAU population objectives, 2004-2008. Based on 2007 models.

Population Estimates & Objectives

Ostensibly low deer numbers in several DAUs are related to modeling changes that were made in 2007. The net effect of the modeling changes has been a decrease in deer population estimates. As a result, some DAUs that were considered to be near objective are now well below objective even though the actual number of deer may not have

changed. In these cases, changes in the DAU objectives should be considered because current objectives established based on prior deer population estimates are considered to be unrealistic.

Another reason for some of the low deer numbers was the winter of 2007-2008. High deer mortality occurred in parts of west slope during this winter and some DAUs have not fully recovered. In particular, the DAUs in the Gunnison basin (D-21, D-22, D-25), upper Colorado River basin (D-8, D-9, D-14, D-43), and White River (D-7) were significantly impacted.

Strategies to Increase Deer Populations to Objective

- *Reduce or eliminate regular doe licenses.*
- *Reduce PLO doe licenses to the extent practicable to still address game damage concerns.*
- *Habitat improvement projects.*
- *Reduce elk numbers to objective.*

PRONGHORN DAUS OVER OBJECTIVE

Thirteen out of 29 pronghorn DAUs (45%) exceeded their population objective by more than 10% in 2008.

Effects of Access on Harvest

Most pronghorn in Colorado occur on private land. Although harvest is often dependent on landowners providing hunting access, this usually has not been a major issue in most DAUs. Some landowners have requested relatively short pronghorn seasons, particularly late seasons, to minimize the amount of time hunters are on or requesting permission to hunt on their property. An increasing number of landowners are charging hunters for access to hunt pronghorn. If pronghorn hunting continues to become more of a commercial asset for landowners, similar to deer and elk hunting, it may become increasingly difficult to achieve harvest objectives because buck hunters are willing to pay higher fees than doe hunters.

Population Estimates & Objectives

In 2008, the CDOW implemented an improved method for estimating pronghorn numbers on the eastern plains. This method known as distance sampling provides a sample-based population estimate that can be incorporated into population models. The net effect of this change has been an increase in estimated pronghorn numbers particularly in the southeastern part of the state. As a result of the higher numbers, the CDOW undertook measures to aggressively increase pronghorn harvest in 2009 by issuing more doe licenses, creating late doe seasons, and allowing youth hunters with unfilled licenses to continue hunting during late seasons.

Strategies to Reduce Pronghorn Populations to Objective

- *Increased doe licenses during regular seasons.*
- *Youth hunters with unfilled doe or either-sex pronghorn licenses can hunt does during some late pronghorn seasons.*
- *Late doe seasons.*
- *Big Game Access Pilot Program.* This program offers deer and pronghorn hunting on enrolled private properties in southeast Colorado similar to the Small Game Walk-In Access Program.
- *Landowner incentive programs.*

PRONGHORN DAUS BELOW OBJECTIVE

Six out of 29 pronghorn DAUs (21%) were more than 10% below their population objective in 2008. Five of these DAUs are on the west slope. A-23 and A-37 declined below objective because of high mortality during the winter of 2007-2008. A-21 and A-27 have small pronghorn populations in marginal habitat that have shown long, steady declines that cannot be reversed by harvest management alone. The provisional population objective for A-11 is now considered unrealistic.

Strategies to Increase Pronghorn Populations to Objective

- *Reduce or eliminate regular doe licenses.*
- *Reduce PLO doe licenses to the extent practicable to still address game damage concerns.*
- *Close units to hunting*
- *Translocation.* Capture pronghorn in areas over objective and relocate them in areas such as the Gunnison Basin where populations have been greatly reduced by unusually high winter mortality.

Table 2. 2008 POSTHUNT DAU POPULATION ESTIMATES versus OBJECTIVES
ELK

Colorado Division of Wildlife

1/4/2010

DAUs >10% Below Objective

DAUs >10% Above Objective

| DAU | | | | | | | | POPULATION | | | | |
|------------------------|--------------------------|--|--------|---------|----------|-----------|---------|-----------------------------|-----------------------------|----------------|-----------------------------|------------------------|
| DAU | Name | GMUs | Region | Area | DAU Plan | Mgmt Type | APR | Objective Min (Provisional) | Objective Max (Provisional) | Target | 08 Post Estimate (08 Model) | 08 Post % of Objective |
| E4 | Poudre River/Red Feather | 7, 8, 9, 19, 191 | NE | 4 | 2009 | Lim | 4 pt | 3,600 | 4,200 | 3,750 | 3,750 | 100% |
| E9 | St. Vrain | 20 | NE | 2 | 2007 | Lim | Spike | 2,200 | 2,600 | 2,360 | 2,360 | 100% |
| E18 | Kenosha Pass | 50, 500, 501 | NE | 1,13 | 2007 | Lim | Spike | 1,800 | 2,200 | 2,200 | 2,550 | 116% |
| E38 | Clear Creek | 29, 38 | NE | 2 | 2006 | Mix | P Spike | 1,000 | 1,400 | 1,200 | 1,200 | 100% |
| E39 | Mt Evans | 39, 46, 391, 461 | NE | 1 | 1998 | Lim | Spike | 2,500 | 2,500 | 2,500 | 2,590 | 104% |
| E51 | Castle Rock | 51, 104, 105, 106, 110, 111 | NE | 5,14 | None | Mix | Spike | 1,200 | 1,200 | 1,200 | 1,750 | 146% |
| NE Subtotal | | | | | | | | 12,300 | 14,100 | 13,210 | 14,200 | 101% |
| E1 | Cold Springs | 2, 201 | NW | 6 | None | Lim | Spike | 950 | 950 | 950 | 2,050 | 216% |
| E2 | Bear's Ears | 3, 4, 5, 14, 214, 301, 441 | NW | 6, 10 | 2008 | OTC | 4 pt | 15,000 | 18,000 | 17,310 | 17,310 | 100% |
| E3 | North Park | 6, 16, 17, 161, 171 | NW | 10 | 2008 | OTC | 4 pt | 4,500 | 4,500 | 4,500 | 9,520 | 212% |
| E6 | White River | 11, 12, 13, 23, 24, 25, 26, 33, 34, 131, 2 | NW | 8, 9, 1 | 2005 | OTC | 4 pt | 32,000 | 38,000 | 38,000 | 38,540 | 101% |
| E7 | Gore Pass | 15, 27 | NW | 9 | 2004 | OTC | 4 pt | 3,500 | 4,500 | 4,500 | 4,520 | 100% |
| E8 | Troublesome Creek | 18, 181 | NW | 9 | 1998 | OTC | 4 pt | 2,700 | 2,700 | 2,700 | 3,900 | 144% |
| E10 | Yellow Creek | 21, 22, 30, 31, 32 | NW | 6,7 | 2006 | OTC | 4 pt | 7,000 | 9,000 | 9,000 | 11,430 | 127% |
| E12 | Piney River | 35, 36 | NW | 8 | 1988 | OTC | 4 pt | 2,950 | 2,950 | 2,950 | 4,080 | 138% |
| E13 | Williams Fork River | 28, 37, 371 | NW | 9 | 1998 | OTC | 4 pt | 3,000 | 3,000 | 3,000 | 5,220 | 174% |
| E14 | Grand Mesa | 41, 42, 52, 411, 421, 521 | NW | 7,16 | 2006 | OTC | 4 pt | 9,000 | 11,000 | 11,000 | 14,010 | 127% |
| E15 | Avalanche Creek | 43, 471 | NW | 8 | 1988 | OTC | 4 pt | 3,300 | 3,300 | 3,300 | 4,250 | 129% |
| E16 | Frying Pan River | 44, 45, 47, 444 | NW | 8 | None | OTC | 4 pt | 5,100 | 5,100 | 5,100 | 7,450 | 146% |
| E19 | Glade Park | 40 | NW | 7 | 1999 | Lim | P Spike | 2,400 | 2,400 | 2,400 | 4,440 | 185% |
| E21 | Rangely - Blue Mountain | 10 | NW | 6 | None | Lim | Spike | 1,200 | 1,200 | 1,200 | 3,930 | 328% |
| E47 | Green River | 1 | NW | 6 | None | Lim | Spike | 170 | 170 | 170 | 170 | 100% |
| NW Subtotal | | | | | | | | 92,770 | 106,770 | 106,080 | 130,820 | 123% |
| E17 | Collegiate Range | 48, 56, 481, 561 | SE | 13 | 2006 | Lim | Spike | 2,000 | 2,200 | 2,200 | 2,490 | 113% |
| E22 | Buffalo Peaks | 49, 57, 58 | SE | 13 | 2006 | Lim | Spike | 3,150 | 3,500 | 3,410 | 3,410 | 100% |
| E23 | Eleven Mile | 59, 511, 512, 581, 591 | SE | 13,14 | None | OTC | P Spike | 1,200 | 1,200 | 1,200 | 1,970 | 164% |
| E27 | Sangre de Cristo | 86, 691, 861 | SE | 11 | 2005 | OTC | 4 pt | 1,450 | 1,650 | 1,580 | 1,580 | 100% |
| E28 | Grape Creek | 69, 84 | SE | 11 | 2005 | Lim | Spike | 1,400 | 1,600 | 1,600 | 1,600 | 100% |
| E33 | Trinchera | 83, 85, 140, 851 | SE | 11,17 | None | OTC | 4 pt | 14,000 | 16,000 | 16,000 | 21,430 | 134% |
| E45 | Elkhart | 132, 139, 148 | SE | 12 | None | OTC | Spike | 50 | 50 | 50 | 50 | 100% |
| E46 | Cedarwood | 128 | SE | 11 | None | Lim | Spike | 300 | 300 | 300 | 170 | 57% |
| E53 | Apishpa | 133, 134, 135, 141, 142 | SE | 11,12 | None | OTC | Spike | 250 | 250 | 250 | 500 | 200% |
| E54 | Chacuaco | 136, 137, 138, 143, 144, 147 | SE | 12 | None | OTC | Spike | 100 | 100 | 100 | 530 | 530% |
| SE Subtotal | | | | | | | | 23,900 | 26,850 | 26,690 | 33,730 | 126% |
| E11 | Sand Dunes | 82 | SW | 17 | 1996 | OTC | 4 pt | 1,500 | 1,500 | 1,500 | 5,150 | 343% |
| E20 | Uncompahgre | 61, 62 | SW | 18 | 2006 | Mix | P Spike | 8,500 | 9,500 | 9,500 | 10,680 | 112% |
| E24 | Disappointment Creek | 70, 71, 72, 73, 711 | SW | 15,18 | 2006 | OTC | 4 pt | 17,000 | 19,000 | 19,000 | 19,580 | 103% |
| E25 | Lake Fork | 66, 67 | SW | 16 | 2001 | Lim | 4 pt | 3,500 | 4,500 | 4,500 | 4,710 | 105% |
| E26 | Saguache | 68, 681 | SW | 17 | 2008 | OTC | 4 pt | 3,500 | 4,500 | 4,500 | 4,590 | 102% |
| E30 | Hermosa | 74, 741 | SW | 15 | 1996 | OTC | 4 pt | 3,400 | 3,400 | 3,400 | 4,560 | 134% |
| E31 | San Juan | 75, 77, 78, 751, 771 | SW | 15 | 2007 | OTC | 4 pt | 17,000 | 21,000 | 18,530 | 18,530 | 100% |
| E32 | Lower Rio Grande | 80, 81 | SW | 15 | 2007 | OTC | 4 pt | 6,000 | 7,000 | 7,000 | 7,800 | 111% |
| E34 | Upper Rio Grande | 76, 79 | SW | 17 | 1996 | Lim | P Spike | 3,700 | 3,700 | 3,700 | 5,440 | 147% |
| E35 | Cimarron | 84, 65 | SW | 18 | 2007 | OTC | 4 pt | 5,000 | 5,500 | 5,500 | 5,830 | 106% |
| E40 | Paradox | 60 | SW | 18 | 2008 | OTC | 4 pt | 900 | 1,100 | 1,100 | 1,260 | 115% |
| E41 | Sapinero | 54 | SW | 16 | 2001 | OTC | 4 pt | 3,000 | 3,500 | 3,500 | 6,430 | 184% |
| E43 | Fossil Ridge | 55, 551 | SW | 16 | 2001 | OTC | 4 pt | 3,000 | 3,500 | 3,500 | 5,810 | 166% |
| E52 | Coal Creek / Fruitland | 53, 63 | SW | 16 | 2005 | OTC | 4 pt | 2,200 | 2,400 | 2,400 | 3,890 | 162% |
| E55 | Northern San Luis Valley | 682, 791 | SW | 17 | 2006 | Lim | 4 pt | 0 | 0 | 0 | 300 | |
| SW Subtotal | | | | | | | | 78,200 | 90,100 | 87,630 | 104,560 | 116% |
| STATEWIDE TOTAL | | | | | | | | 207,170 | 237,820 | 233,610 | 283,310 | 119% |

4 Pt = 4 point antler restriction on bulls

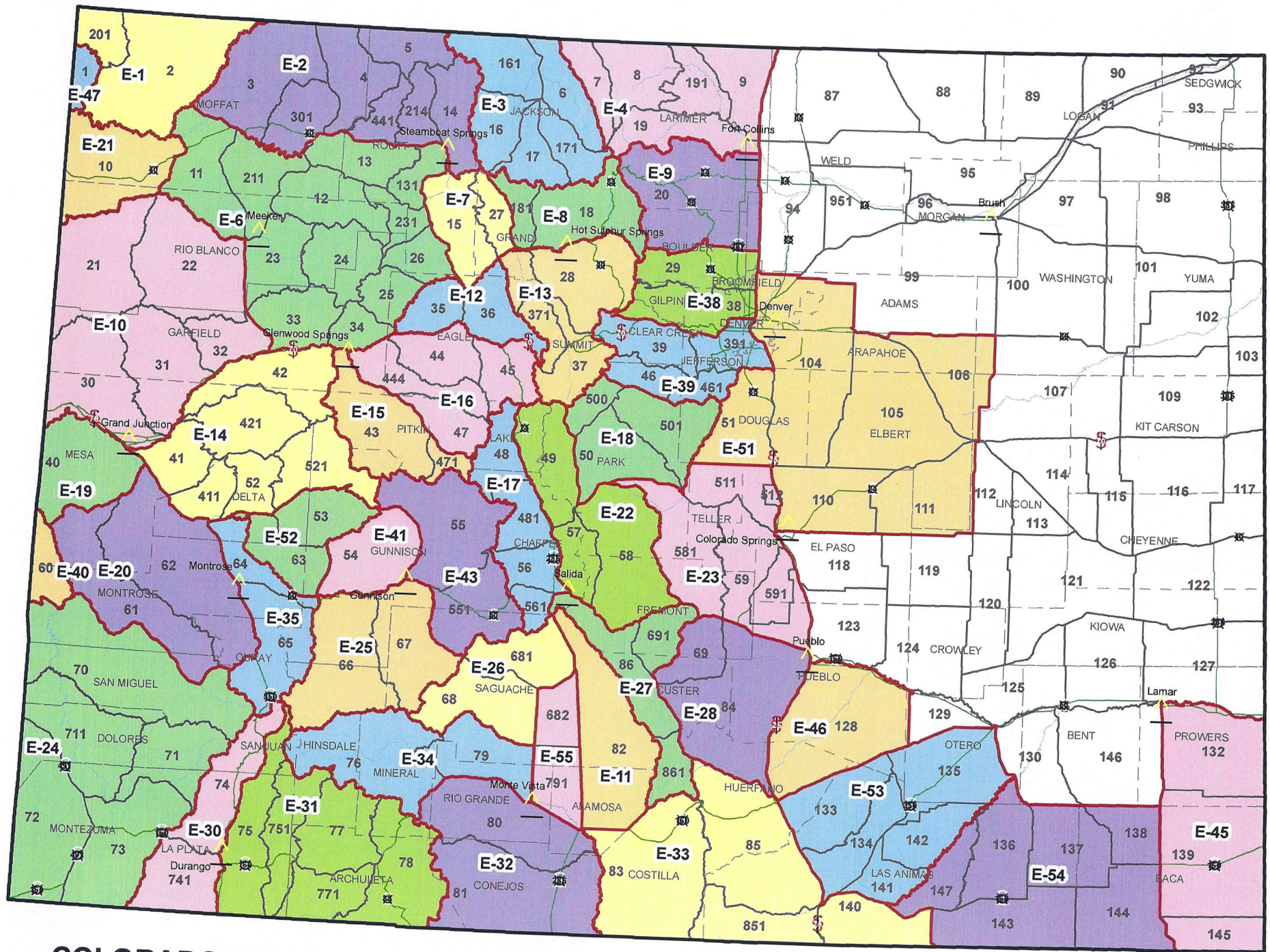
Spike = No antler point restriction on bulls

P Spike = Some GMUs in the DAU are 4 Pt and some are Spike

Lim = All elk licenses are limited in the DAU

OTC = Over the counter licenses

Mix = Some Gmus in the DAU are Lim and some are OTC.



COLORADO DIVISION OF WILDLIFE - Eik DAUs

April 2008



Table 1. 2008 POSTHUNT DAU POPULATION ESTIMATES versus OBJECTIVES

DEER

Colorado Division of Wildlife

1/4/2010

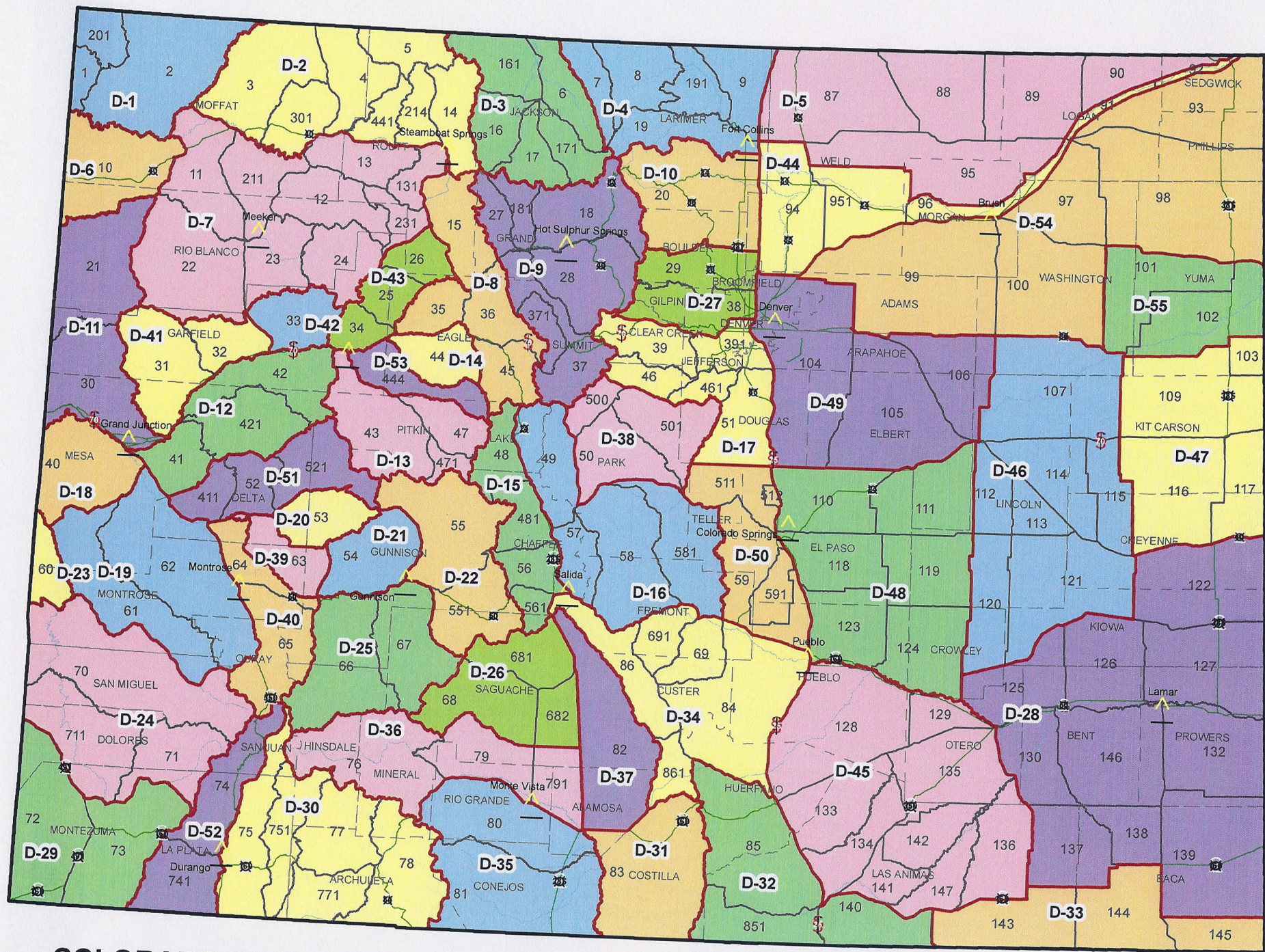
DAUs >10% Below Objective

DAUs >10% Above Objective

| DAU | | | | | | | POPULATION | | | | |
|-----------------|--------------------|---|--------|-------|----------|-----------|--------------------------------|--------------------------------|---------|--------------------------------|---------------------------|
| DAU | Name | GMUs | Region | Area | DAU Plan | Mgmt Type | Objective Min (Provisional) | Objective Max (Provisional) | Target | 08 Post Estimate (08 Model) | 08 Post % of Objective |
| D4 | Red Feather | 7, 8, 9, 19, 191 | NE | 4 | 2007 | 4th | 10,000 | 12,000 | 10,000 | 7,570 | 76% |
| D5 | Table Lands North | 87, 88, 89, 90, 95 | NE | 3,4 | 2007 | P | 2,400 | 2,700 | 2,400 | 1,870 | 78% |
| D10 | Big Thompson | 20 | NE | 2 | 2002 | 4th | 5,000 | 5,000 | 5,000 | 5,670 | 113% |
| D17 | Bailey | 39, 46, 51, 391, 461 | NE | 1 | 2006 | 4th | 7,500 | 8,300 | 8,260 | 8,260 | 100% |
| D27 | Boulder | 29, 38 | NE | 2 | None | 4th | 6,800 | 6,800 | 6,800 | 7,560 | 111% |
| D38 | South Park | 50, 500, 501 | NE | 1,13 | None | | 2,450 | 2,450 | 2,450 | 3,030 | 124% |
| D44 | South Platte River | 91, 92, 94, 96, 951 | NE | 2,4 | 2009 | P | 3,500 | 3,800 | 3,720 | 3,720 | 100% |
| D49 | Bijou Creek | 104, 105, 106 | NE | 5,14 | 2009 | P | 5,500 | 6,500 | 5,500 | 5,410 | 98% |
| D54 | South Tablelands | 93, 97, 98, 99, 100 | NE | 3 | 2007 | P | 2,900 | 3,100 | 2,900 | 2,900 | 100% |
| D55 | Arickaree | 101, 102 | NE | 3 | 2006 | P | 1,900 | 2,100 | 2,050 | 2,050 | 100% |
| NE Subtotal | | | | | | | 47,950 | 52,750 | 49,080 | 48,040 | 100% |
| D1 | Little Snake | 1, 2 | NW | 6 | None | | 13,500 | 13,500 | 13,500 | 1,840 | 14% |
| D2 | Bear's Ears | 3, 4, 5, 14, 214, 301, 441 | NW | 6,10 | 1992 | 4th | 37,800 | 37,800 | 37,800 | 36,600 | 97% |
| D3 | North Park | 6, 16, 17, 161, 171 | NW | 10 | 2002 | 4th | 5,400 | 6,400 | 5,400 | 4,570 | 85% |
| D6 | Rangely | 10 | NW | 6 | None | 4th | 7,000 | 7,000 | 7,000 | 4,160 | 59% |
| D7 | White River | 11, 12, 13, 22, 23, 24, 131, 211, 231 | NW | 6,8 | 1992 | 4th | 67,500 | 67,500 | 67,500 | 56,340 | 83% |
| D8 | State Bridge | 15, 35, 36, 45 | NW | 8,9 | 2009 | 4th | 13,500 | 16,500 | 13,850 | 13,850 | 100% |
| D9 | Middle Park | 18, 27, 28, 37, 181, 371 | NW | 9 | 2009 | 4th | 10,500 | 12,500 | 12,300 | 12,300 | 100% |
| D11 | Bookcliffs | 21, 30 | NW | 6,7 | 2005 | | 10,000 | 12,000 | 12,000 | 12,390 | 103% |
| D12 | North Grand Mesa | 41, 42, 421 | NW | 7 | 2007 | 4th | 28,000 | 30,000 | 28,000 | 20,030 | 72% |
| D13 | Maroon Bells | 43, 47, 471 | NW | 8 | 1988 | 4th | 11,100 | 11,100 | 11,100 | 5,770 | 52% |
| D14 | Red Table Mountain | 44 | NW | 8 | None | 4th | 7,000 | 7,000 | 7,000 | 2,560 | 37% |
| D18 | Glade Park | 40 | NW | 7 | 1999 | | 12,000 | 12,000 | 12,000 | 5,920 | 49% |
| D41 | Logan Mountain | 31, 32 | NW | 7 | None | | 16,500 | 16,500 | 16,500 | 7,210 | 44% |
| D42 | Rifle Creek | 33 | NW | 7 | 2007 | 4th | 7,700 | 9,400 | 8,520 | 8,520 | 100% |
| D43 | Sweetwater Creek | 25, 26, 34 | NW | 8 | 1994 | 4th | 8,100 | 8,100 | 8,100 | 4,680 | 58% |
| D53 | Basalt | 444 | NW | 8 | 1995 | 4th | 5,300 | 5,300 | 5,300 | 3,490 | 66% |
| NW Subtotal | | | | | | | 260,900 | 272,600 | 265,870 | 200,230 | 77% |
| D15 | Cottonwood Creek | 48, 56, 481, 561 | SE | 13 | 2006 | | 8,200 | 10,700 | 8,200 | 5,100 | 62% |
| D16 | Cripple Creek | 49, 57, 58, 581 | SE | 13 | 2007 | | 16,000 | 20,000 | 16,000 | 14,650 | 92% |
| D28 | Arkansas River | 122, 125, 126, 127, 130, 132, 137, 138, 139 | SE | 12 | 1999 | P | 3,600 | 3,600 | 3,600 | 4,360 | 121% |
| D32 | Trinidad | 65, 140, 851 | SE | 11 | 2008 | | 9,800 | 10,800 | 9,800 | 5,600 | 57% |
| D33 | Mesa de Maya | 143, 144, 145 | SE | 12 | 1999 | P | 2,350 | 2,350 | 2,350 | 2,430 | 103% |
| D34 | Wet Mountain | 69, 84, 86, 691, 861 | SE | 11 | 2005 | | 16,500 | 17,500 | 16,500 | 14,230 | 86% |
| D45 | Las Animas | 128, 129, 133, 134, 135, 136, 141, 142, 147 | SE | 11,12 | None | P | 3,400 | 3,400 | 3,400 | 6,750 | 199% |
| D46 | Big Sandy | 107, 112, 113, 114, 115, 120, 121 | SE | 14 | 1999 | P | 2,500 | 2,500 | 2,500 | 2,900 | 116% |
| D47 | South Republican | 103, 109, 116, 117 | SE | 14 | 1999 | P | 2,000 | 2,000 | 2,000 | 2,220 | 111% |
| D48 | Chico Basin | 110, 111, 118, 119, 123, 124 | SE | 11,14 | 1999 | P | 1,800 | 1,800 | 1,800 | 1,920 | 107% |
| D50 | Rampart | 59, 511, 512, 591 | SE | 14 | 2008 | 4th | 4,000 | 5,000 | 4,140 | 4,140 | 100% |
| SE Subtotal | | | | | | | 70,150 | 79,650 | 70,290 | 64,300 | 92% |
| D19 | Uncompahgre | 61, 62 | SW | 18 | 2006 | 4th | 36,000 | 38,000 | 36,000 | 24,660 | 69% |
| D20 | Crawford | 53 | SW | 16 | 2008 | 4th | 5,500 | 6,500 | 5,770 | 5,770 | 100% |
| D21 | West Elk | 54 | SW | 16 | 2007 | | 6,500 | 7,500 | 6,500 | 4,180 | 64% |
| D22 | Taylor River | 55, 551 | SW | 16 | 2007 | | 6,500 | 7,500 | 6,500 | 4,810 | 74% |
| D23 | La Sal | 60 | SW | 18 | 2008 | 4th | 2,500 | 3,000 | 2,500 | 1,760 | 70% |
| D24 | Groundhog | 70, 71, 711 | SW | 15,18 | 1998 | 4th | 34,000 | 34,000 | 34,000 | 27,160 | 80% |
| D25 | Powderhorn Creek | 66, 67 | SW | 16 | 2007 | | 4,500 | 5,500 | 4,500 | 4,410 | 98% |
| D26 | Saguache | 68, 681, 682 | SW | 17 | 2008 | 4th | 4,000 | 5,000 | 4,170 | 4,170 | 100% |
| D29 | Mesa Verde | 72, 73 | SW | 15 | 1998 | 4th | 11,000 | 11,000 | 11,000 | 6,760 | 61% |
| D30 | San Juan | 75, 77, 78, 751, 771 | SW | 15 | 1996 | 4th | 27,000 | 27,000 | 27,000 | 25,480 | 94% |
| D31 | Costilla | 83 | SW | 17 | 1996 | 4th | 6,000 | 6,000 | 6,000 | 2,500 | 42% |
| D35 | Lower Rio Grande | 80, 81 | SW | 17 | 2007 | 4th | 6,000 | 7,000 | 6,000 | 5,410 | 90% |
| D36 | Upper Rio Grande | 76, 79, 791 | SW | 17 | 1996 | 4th | 4,000 | 4,000 | 4,000 | 2,640 | 66% |
| D37 | Sand Dunes | 82 | SW | 17 | 1996 | 4th | 4,500 | 4,500 | 4,500 | 1,990 | 44% |
| D39 | Fruitland Mesa | 63 | SW | 16 | 2008 | 4th | 7,000 | 8,000 | 7,150 | 7,150 | 100% |
| D40 | Cimarron | 64, 65 | SW | 18 | 2007 | 4th | 13,500 | 15,000 | 13,500 | 9,260 | 69% |
| D51 | South Grand Mesa | 52, 411, 521 | SW | 16 | 2008 | 4th | 10,500 | 11,500 | 10,500 | 10,380 | 99% |
| D52 | Hermosa | 74, 741 | SW | 15 | 1996 | 4th | 11,500 | 11,500 | 11,500 | 5,730 | 50% |
| SW Subtotal | | | | | | | 200,500 | 212,500 | 201,090 | 154,220 | 77% |
| STATEWIDE TOTAL | | | | | | | 579,500 | 617,500 | 586,330 | 466,790 | 81% |

P = Plains Unit

4th = 4th deer season in 2009.



COLORADO DIVISION OF WILDLIFE - Deer DAUs

April 2008



PRONGHORN

1/4/2010

DAUs >10% Above Objective

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