

# Chronic Wasting Disease



## RECENT MONITORING IN COLORADO

Maintaining wildlife health is a fundamental component of sound wildlife management and is a high priority in Colorado. Colorado Parks and Wildlife is dedicated to delivering a coordinated and systematic approach for monitoring, investigating, reporting, and – where feasible – controlling health problems in free-ranging wildlife.

**Chronic wasting disease (CWD)** is a fatal neurological disease found in deer, elk, and moose that is well-established in herds throughout much of Colorado. This disease is caused by infectious proteins, called prions, which can be shed in saliva, feces, and urine, as well as in infected carcasses. Evidence suggests that CWD is spread through direct or indirect contact between animals. CWD can stay in the soil for many years, which is why it is very important to monitor and control infected herds in order to minimize long-term contamination of their ranges with CWD prions.

As of February 2020, CWD has been detected in 33 of 54 deer herds, 14 of 43 elk herds, and 2 of 9 moose herds. This prion disease also has been reported in deer, elk, moose, and reindeer in 30 other states and provinces, as well as in South Korea, Norway, Finland, and Sweden.

The rate of CWD infection (or “prevalence”) appears to be rising in many affected Colorado herds. Trends became difficult to track by 2010 because too few hunters were voluntarily submitting samples for testing. As a result, prevalence estimates for most herds became unreliable. In 2017, CPW resumed mandatory harvest submissions. For most herds included in mandatory testing, hunter submissions have increased 10-fold, yielding better data to inform herd management planning.

Reliable CWD prevalence estimates are needed to inform deer and elk conservation in Colorado. A growing body of data suggests that unchecked CWD epidemics impair the long-term performance of affected populations. Infection shortens the lifespan of deer and elk. On average, animals also become infected at a younger age as epidemics mount. If infection rates become too high, CWD can affect a herd’s ability to sustain itself.

Observed patterns in Colorado suggest cause for both hope and concern. Prevalence in the Red Feather/Poudre Canyon deer herd (D-04) has declined in the decade since CPW applied focal culling and increased harvest in the early 2000s (Figure). Relatively liberal buck and doe harvest appears to be helping to suppress prevalence in the Middle Park deer herd (D-09; Figure). In contrast, prevalence in the White River deer herd (D-07) appears to have markedly increased since 2002 (Figure).

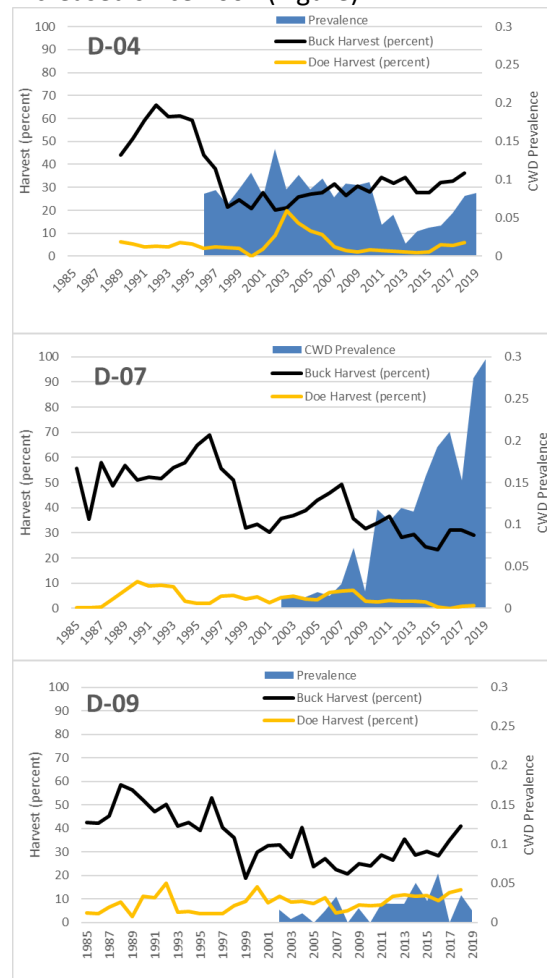
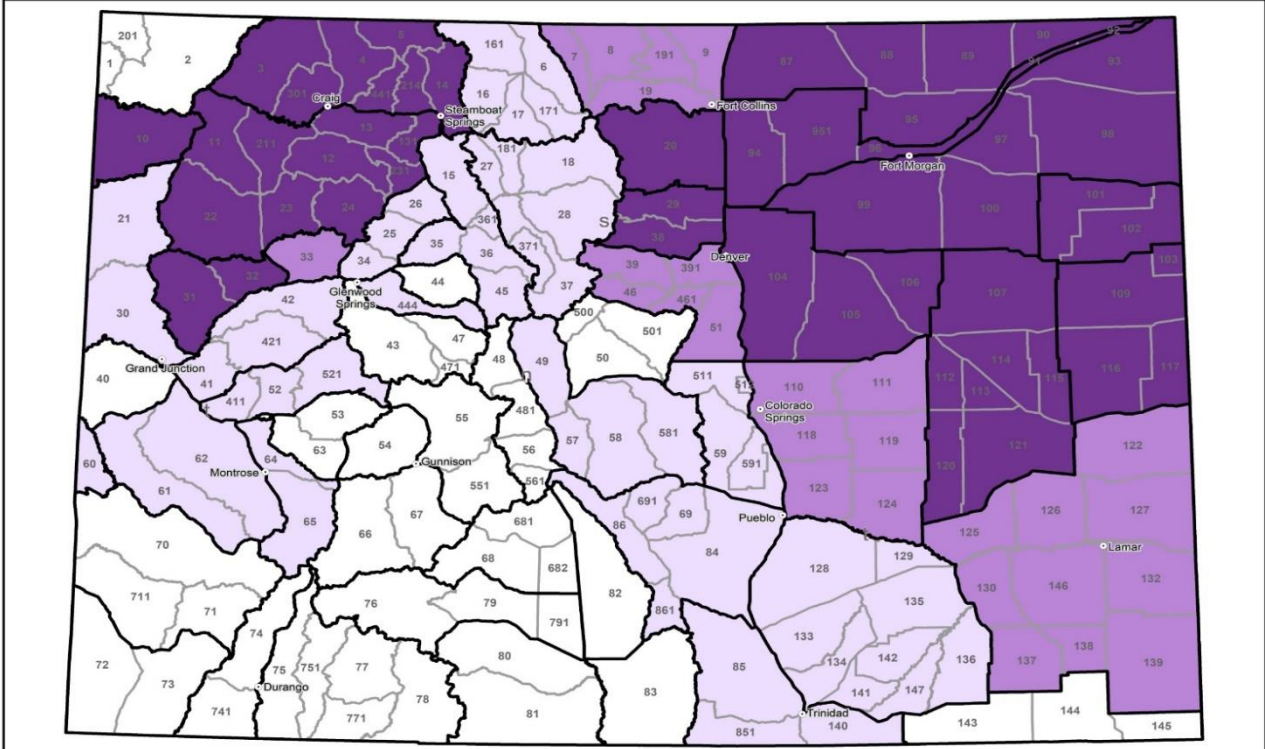


Figure. Chronic wasting disease harvest and prevalence trends in three Colorado mule deer DAUs illustrate patterns and potential relationships between harvest and disease dynamics. A sustained control program was applied to DAU D-04 during 2000–2005. Harvest rates are expressed as the percentage of estimated bucks and does harvested annually. Prevalence estimated from harvest submissions.

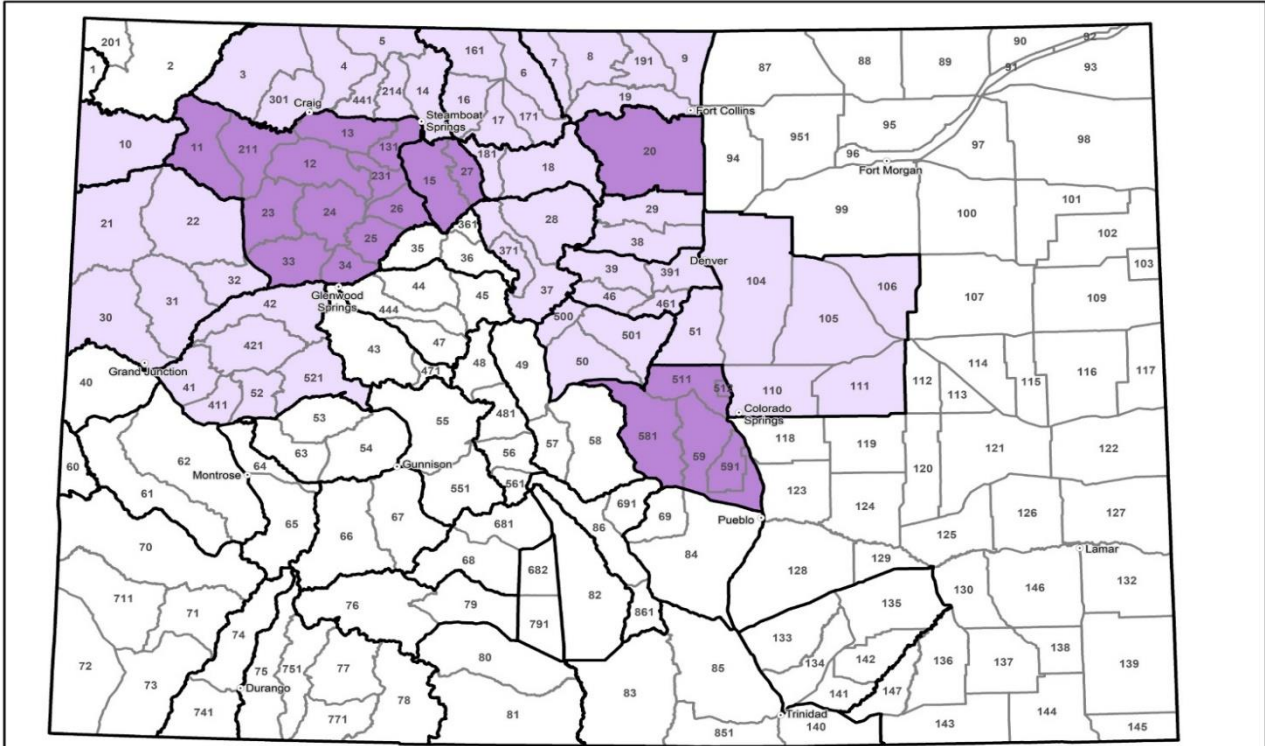
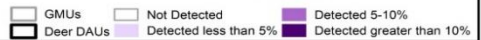


**Detected CWD in Harvested Adult Deer Bucks**

February 2020

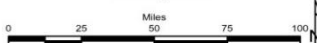


**Estimated CWD Infection Rates  
for Harvest Data in Colorado  
2015 - 2020**

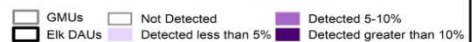


**Detected CWD in Harvested Adult Elk**

January 2020



**Estimated CWD Infection Rates  
for Harvest Data in Colorado  
2015 - 2020**



### Monitoring Summary

- 2017 CWD testing effort: 6 deer herds included in mandatory testing; over 3,800 samples tested statewide for all species.
- 2018 CWD testing effort: 6 deer herds included in mandatory testing; over 6,200 samples tested statewide for all species.
- 2019 CWD testing effort: 16 deer herds included in mandatory testing; over 7,700 samples tested statewide for all species.
- 2020 CWD testing effort: 32 deer herds will be included in mandatory testing; 8,000-9,000 samples projected statewide for all species.
- As of February 2020, CWD has been detected in 33 of 54 deer herds, 14 of 43 elk herds, and 2 of 9 moose herds.
- As of February 2020, CWD prevalence (percent of sampled animals that are infected) exceeds 5% in 18 deer herds; exceeds 10% in 13 deer herds, and exceeds 20% in 6 deer herds.
- Generally, mandatory testing has shown CWD prevalence to be higher in male deer than female deer and currently tends to be somewhat higher in mule deer than white-tailed deer.

### Management Summary

- Per CPW's 2019 CWD Response Plan, management actions will be taken in herds when prevalence exceeds 5% in adult (>2 years) males to reduce prevalence until it falls below the 5% threshold.
- Some management actions have already been included in 2018 and 2019 license recommendations. License setting for 2020 hunting season is currently underway and will continue to include disease management considerations.
- Over the last several years, sex ratios have been steadily moving towards HMP objectives. However, more than half of Colorado's deer herds still have observed sex ratios that are higher than the management objectives set in herd management plans. Increases in buck licenses for many herds are expected to be related to herd management objectives, as well as disease management.