

## Chronic Wasting Disease Surveillance Management Summary

Natural resources and transportation appropriations subcommittee January 28, 2021

### 1. What is Chronic Wasting Disease (CWD)?

- CWD is a fatal neurologic disease that infects deer, elk, and moose.
- CWD is caused by infectious, mis-folded prion proteins that cause neurological damage and eventual death.
- The disease is transmitted through direct animal-to-animal contact, contact with prion-contaminated environments, and via passage from mother to offspring in-utero.
- Prions shed into the environment in urine, feces, and tissues upon death may remain infectious for up to two years or more.
- On average, infected animals die within two years. High CWD prevalence has been linked to population stagnation or declines in deer and elk.
- There has been no documented transmission of CWD to humans, but the Centers for Disease Control and Prevention recommend that deer, elk, or moose harvested from known CWD positive areas are tested, and that humans not consume known positive animals.

### 2. When and how did CWD come into the U.S. and Montana?

- CWD was discovered in 1967 in mule deer at a research facility in Colorado. Shortly thereafter it was also found in captive mule deer and elk in Ontario, Colorado, and Wyoming. By the 1990s, it was discovered in wild white-tailed and mule deer, elk, and moose in Colorado and Wyoming, and among captive animals in Saskatchewan, South Dakota, Montana, and Oklahoma.
- CWD has spread through the movement of infected captive cervids and through natural transmission among wild deer, elk, and moose.
- CWD has been detected in captive or free-ranging herds in 26 states, three Canadian provinces, Norway, Sweden, Finland, and South Korea.
- CWD was first detected in wild deer in Montana in 2017. CWD infections along our northern and southern borders likely are the result of the natural spread of the disease from Alberta, Saskatchewan, and Wyoming to Montana.
- CWD was detected in farmed Montana cervids in 1999 and 2020.
- The origins of CWD are unknown. However, one hypothesis is that CWD originated from the exposure of cervids to the scrapie agent (another transmissible spongiform encephalopathy) from domestic sheep.



### 3. What are the implications for wildlife and livestock?

- Population stagnation and declines have been documented in heavily infected deer and elk herds.
- If left unmanaged, disease prevalence is expected to increase, causing increased mortality rates, population stagnation/decline, and a younger age structure in the population.
- Research suggests that natural CWD infections are limited to members of the deer family; livestock appear to be resistant.



#### 4. What is FWP doing about CWD?

- Montana has been conducting surveillance since 1998, with renewed and increased annual efforts in 2017. Surveillance efforts have been prioritized and updated based on the presence of known positives on our borders and within the state.
- FWP offers sampling opportunities for hunters across the state and covers the cost of all CWD testing for any deer, elk, or moose harvested anywhere in the state. Testing is conducted at the Montana Veterinary Diagnostic Lab and Colorado State University's Veterinary Diagnostic Lab.
- Montana's CWD Management Plan outlines the conditions and tools for CWD management, in accordance with best practices outlined by the Western Association of Fish and Wildlife Agencies.
  - FWP is committed to implement and evaluate CWD management in affected herds to keep prevalence  $\leq 5\%$ .
  - Tools include: increasing overall harvest, especially of mule deer bucks (which are 3-4 times as likely to be CWD positive as mule deer does); using hunters to dramatically reduce densities within known CWD 'hot-spots'; minimizing large groupings of deer, especially around artificial point-source attractants like haystacks and mineral licks.
- Current CWD management in Montana includes:
  - Southcentral Montana: liberalized mule deer and white-tailed deer licenses, especially for mule deer bucks.
  - Hi-Line: increased B tags issued for mule deer and white-tailed deer.
  - Northcentral Montana: increased antlered buck permits valid for two weeks after the three-week general season.
  - Libby area: increased B tags in CWD Management Area; developing a Libby Urban Deer Management Plan.
  - Southwestern Montana: Southwestern Montana CWD Management Hunt (December 15, 2020 - February 15, 2021).
- Preventative tools to limit CWD spread, include:
  - Law prohibiting of the transport of live cervids and carcasses of cervids from CWD-positive states.
  - Carcass disposal rule, requiring that the head/brain and spinal column be left at the site of harvest or disposed of in a landfill.
  - Providing additional carcass dumpsters for public use.
  - Voter initiative ban in 2000 on new game farms.
  - Historic management emphasizing annual hunter opportunity (vs. limited trophy management) has led to higher buck harvest rates, lower buck ratios, and young age structures in much of the state. This may limit CWD spread and reduce population-level impacts.
  - Law banning the feeding of wildlife.
  - Law banning the use of cervid urine lures from CWD positive states.
  - Prohibition on use of glandular scents (FWP staff are reconfirming this commission rule with the Fish and Wildlife Commission at their next meeting on February 4<sup>th</sup>).
- FWP has engaged in significant public outreach to increase public understanding and participation in CWD surveillance and management efforts.





- FWP is conducting a USDA-APHIS funded CWD survey with private landowners and big game hunters to determine how to improve CWD messaging for greater public awareness and increase participation in our CWD management efforts.

## 5. What is the history of FWP's efforts?

- CWD surveillance since 1998, with renewed efforts since 2017.
- Between 1998 and 2016, FWP sampled and tested more than 17,000 deer, elk, and moose for CWD with no detections. Between 2017 and 2020, FWP has tested more than 18,000 samples with 421 detections (to date).
- Several iterations of CWD management planning dating back to 2005, with the most recent revision to the plan completed and approved by the Fish and Wildlife Commission in April 2020.
- Many of the preventative tools were implemented well before CWD was detected in Montana.
- CWD survey with landowners and big game hunters was conducted in 2013, prior to detection.
- Interim study of CWD completed by EQC in 2019-2020. Their final report on September 9, 2020 stated, "the EQC found that chronic wasting disease is a widespread problem across Montana and recommended that future legislatures support the provision of adequate facilities for testing and research of CWD tissue and continue to look for ways to manage and control spread of the disease." <http://bit.ly/cwdreport2020>

## 6. Are our efforts working, and to what end?

- We are seeing an annual increase in public participation in our surveillance and monitoring efforts.
- It is too soon to determine whether our CWD management interventions are working; we are committed to evaluating their efficacy.

## 7. What is the potential for CWD to spread into other areas of Montana? What can we do to prevent that spread?

It is likely that CWD will continue to spread across the state through natural transmission among deer, elk, and moose. However, we are hoping to slow that spread through our management efforts, which include emphasizing proper carcass disposal, managing infected herds, and managing those in hunting districts adjacent to known CWD positive areas.

## 8. What are we spending on CWD? What is the funding source?

- In FY2020, FWP spent \$445,516 on CWD surveillance and testing. FY2020 was the first year FWP offered free testing of harvested deer, elk, or moose to any hunter interested. Staff were hired to collect samples at FWP regional offices and to staff check stations in CWD surveillance areas.
- Total expenditures in FY2021 and beyond will be considerably greater due to an increased amount of testing, including increased staffing at more locations to help hunters collect samples.
- Funding was a combination of base funding authorized by the last legislature (\$242,343 in FY2020) and a stand-alone wildlife disease Pittman-Robertson (PR) grant that FWP applied for and received when CWD was first detected (\$203,173 in FY20). That grant will expire at the end of the biennium.
- FWP's request in PL 501 will replace and add to this funding source to enable continued widespread testing and surveillance.



- Primary expenditures were for staff to collect and process samples and testing of those samples (one base FTE and six modified). This does not include other multiple FWP base staff who also worked on various aspects of CWD.
- Demand for testing is expected to increase as hunters become more aware of CWD, and as CWD continues to be found in more areas, especially if it becomes more widespread in elk.
- In FY2021, additional staff were hired to supplement those hired the year before at regional offices and area offices in Helena, Butte, and Havre. This is in addition to check station staff hired to collect samples in surveillance areas. More samples were collected in more places, and more samples were tested.
- These figures do not include significant time and expenditures by FWP staff towards CWD response including our wildlife vet, disease ecologist, biologists, and communications and education staff, technology, and enforcement staff across the state.
- Funding comes from deer and elk license sales and auction dollars, a PR grant, a USDA-APHIS CWD grant, and donations from the Rocky Mountain Elk and Mule Deer Foundations.

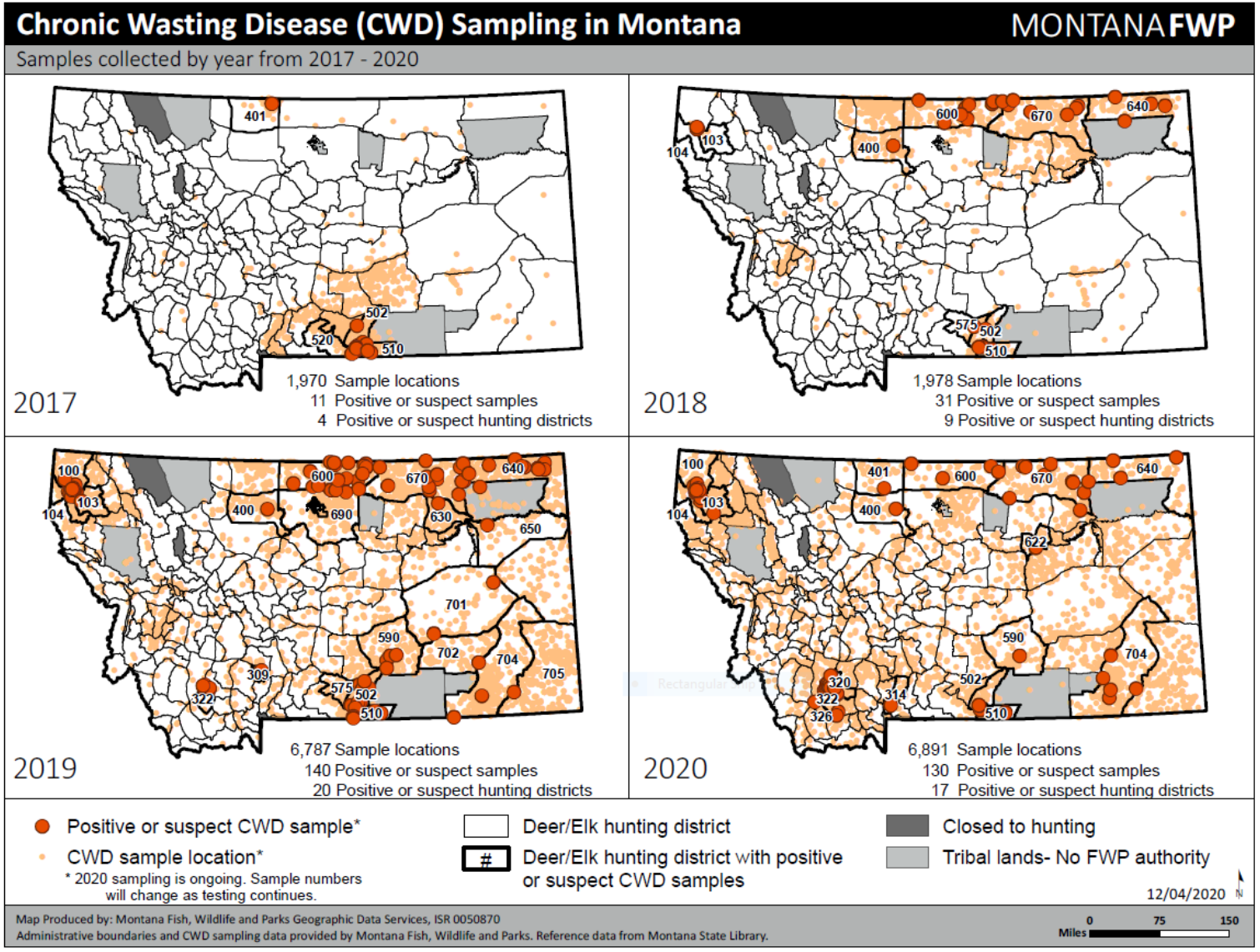
## 9. What is the path forward? What do we understand and what questions do we still have?

- What we understand:
  - CWD has been found across much of Montana. Where CWD is present, prevalence ranges from <1% to 26% (i.e., HD 322 in white-tailed deer) among deer. Hotspots (HDs with prevalence  $\geq 5\%$ ) include the Sheridan/Twin Bridges area, Libby area, southcentral Montana, and the Hi-Line.
  - Based on research and the experiences of other states and provinces, it is in our best interest to manage CWD to maintain low disease prevalence and maintain the health and resilience of our deer and elk herds.
  - Public interest in CWD sampling and testing has been increasing annually. This is expected to continue as we find more positive areas across the state.
  - Limited data from other states and provinces suggest that our current management tools (e.g., density reductions, especially for mule deer bucks; hot-spot removal; minimizing large groupings of deer) are likely to help. Multiple states and provinces are testing these tools and we hope to have better evidence of their efficacy within 10 years.
- What questions do we still have?
  - While we have sampled over 18,000 deer, elk, and moose since 2017 and identified over 25 CWD-positive hunting districts, there are many places in interior and western Montana where we have insufficient sampling to determine the presence/absence of CWD. In time, we would like to have a more complete picture of CWD's distribution in the state.
  - Through our own efforts and those of neighboring states and provinces, we hope to learn which management tools will prove most effective and sustainable at keeping CWD prevalence low.

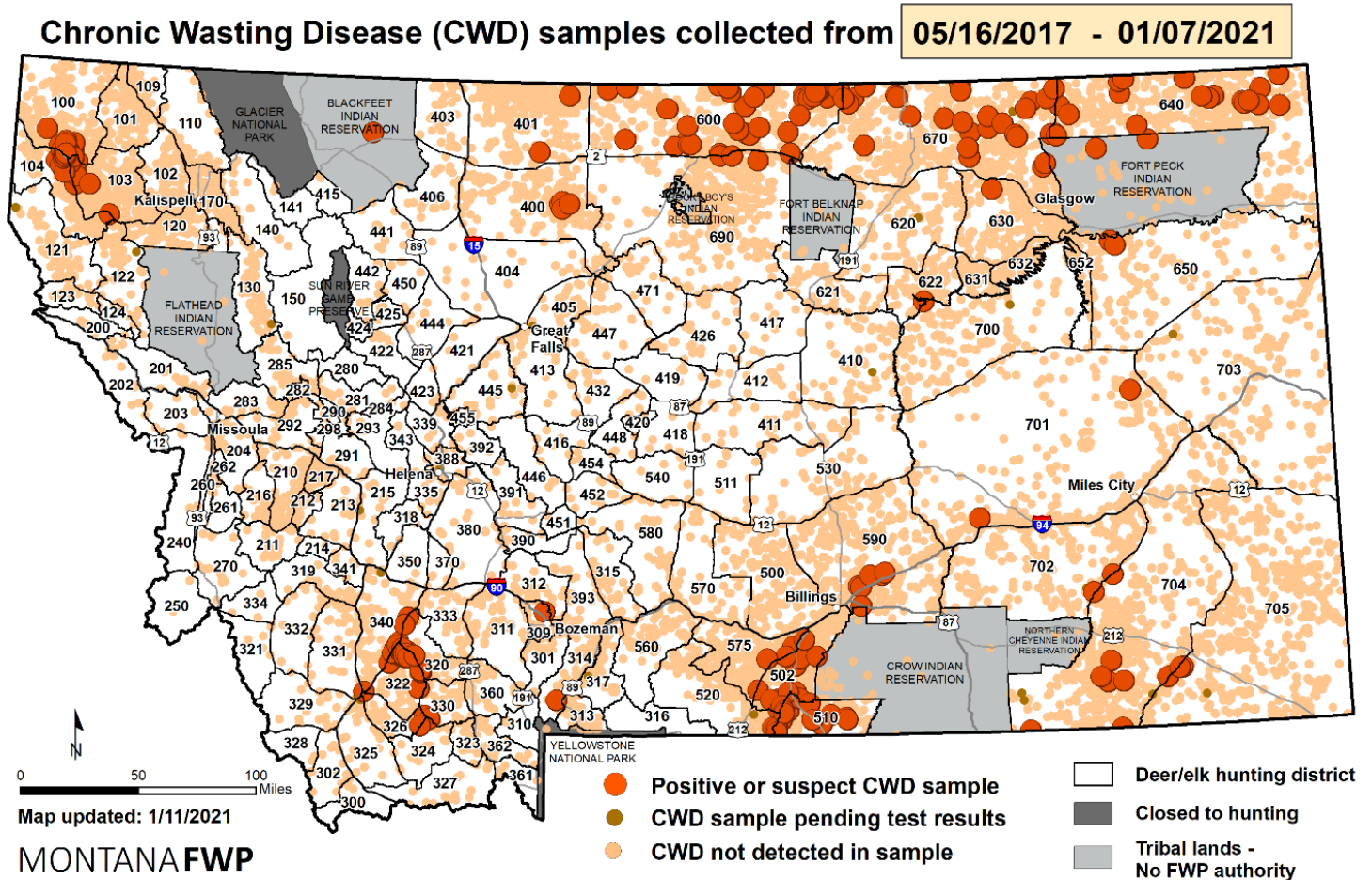




**Figure 1.** Chronic wasting disease (CWD) sampling in Montana from 2017-2020. Each map illustrates the sampling locations of deer, elk, and moose (pink dots) as well as any CWD positives (large orange dots). Note the increasing number of samples over time and expanded sample coverage across the state.

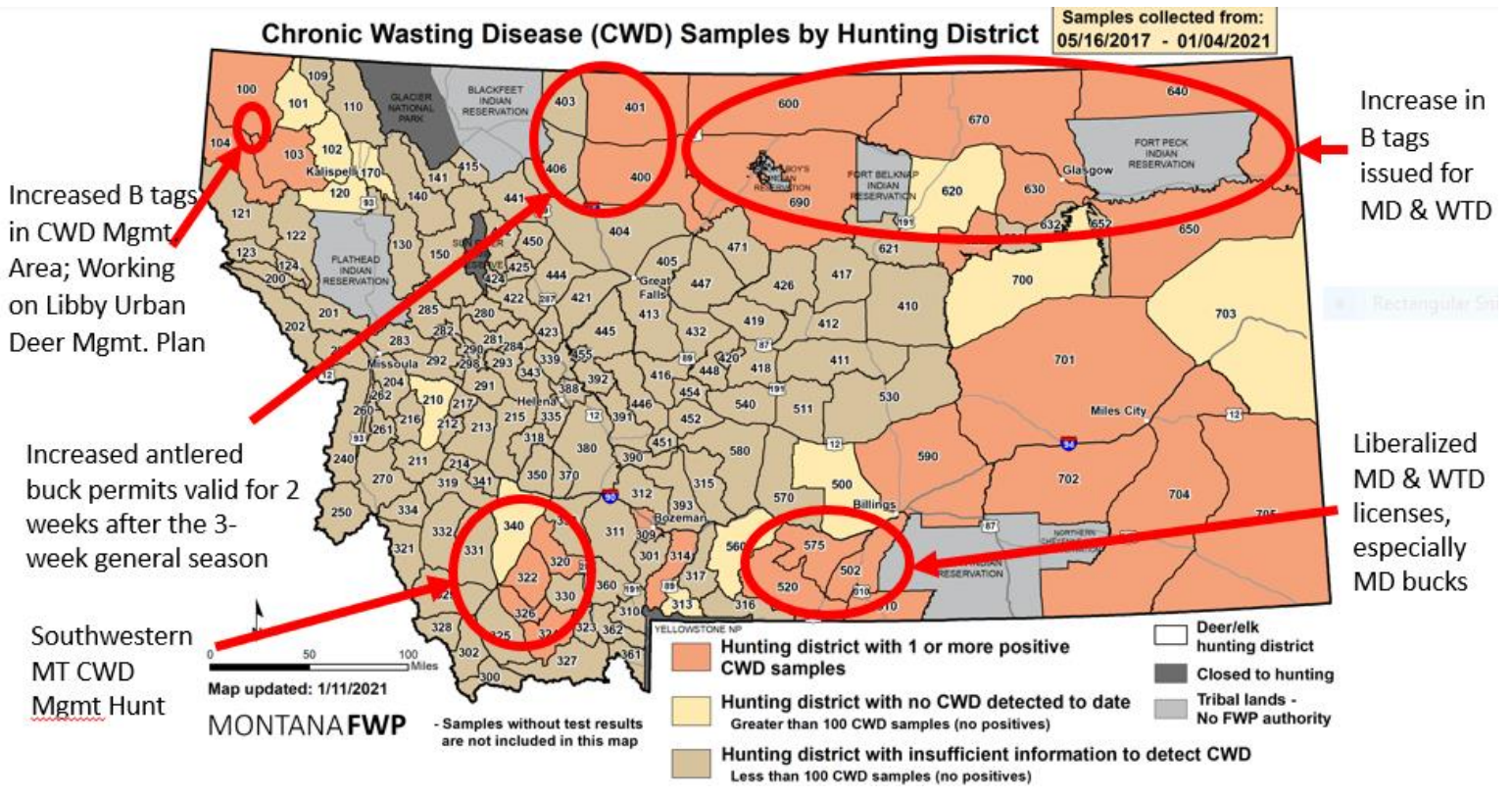


**Figure 2.** A composite map illustrating CWD positives and all samples collected from deer, elk, and moose across Montana, from 05/16/2017 - 01/07/2021.





**Figure 3.** A map of CWD status at the hunting district level, as well as ongoing CWD management efforts across the state.



**Figure 4.** A screenshot of one of FWP’s informational webpages that contains test-result data, interactive and static maps, and other information about FWP’s CWD sampling effort.

**Montana FWP Chronic Wasting Disease (CWD) Sampling Results**

If you are viewing this app on a mobile device, use the [mobile optimized view](#)

Find your CWD sample test results


CWD-00205

View results in the "Sample Test Results" window.

If you mailed in your sample and have not yet been notified of your CWD ID#, look up your hunter-submitted sample ID# in the "Hunter-Submitted Samples" window.

See the "Interpret Test Results" window for information on what each test result means.

[Click here to submit a CWD sample](#)



Sample Test Results

CWD ID#: **CWD-00205**  
**NOT DETECTED**

Updated hourly

Sample Test Results

Positive CWD Samples:

**421**

Total since CWD testing began in 2017

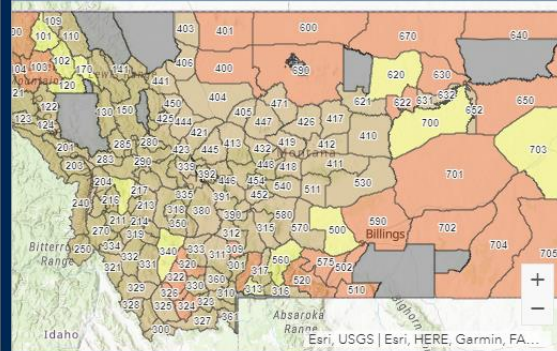
CWD Positives

Average Time to get Test Results

**7 days**

Average for 2020 season

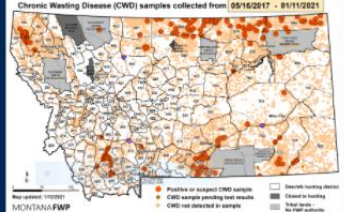
Samples Across Time    Testing Turnaround



**CWD Samples by Deer/Elk Hunting District**

- CWD detected (1 or more positive CWD samples)
- No CWD detected to date (>100 CWD samples, no positives)
- Insufficient information to detect CWD

Chronic Wasting Disease (CWD) samples collected from 05/16/2017 - 01/11/2021



Montana FWP

# PROTECT OUR HERDS:

Help prevent the spread of **CWD**  
**properly dispose**  
**of carcasses**

[fwp.mt.gov/cwd](http://fwp.mt.gov/cwd)