

Chronic Wasting Disease Update



Wayne Lewis



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Colorado Parks and Wildlife



Colorado Chronic Wasting Disease Response Plan



December 2018

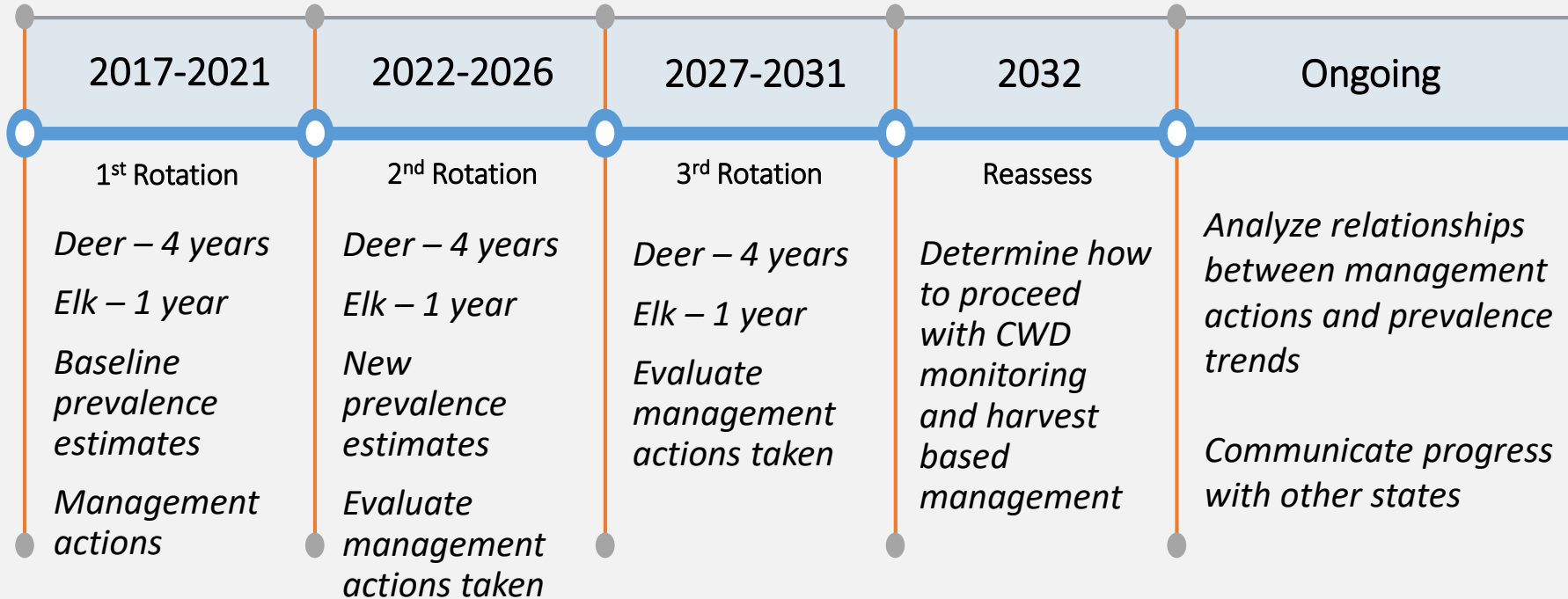
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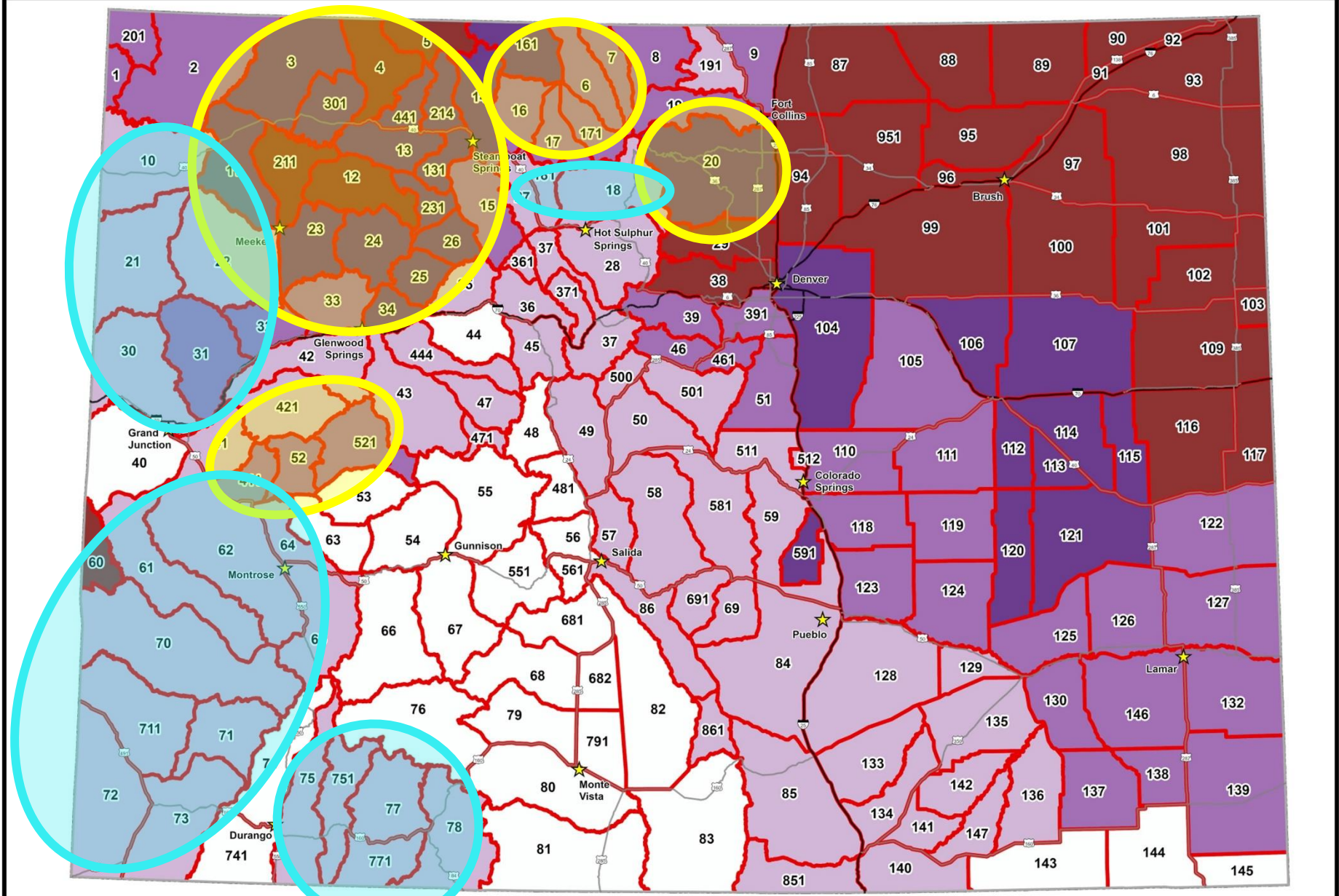
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CWD 15-Year Monitoring Plan

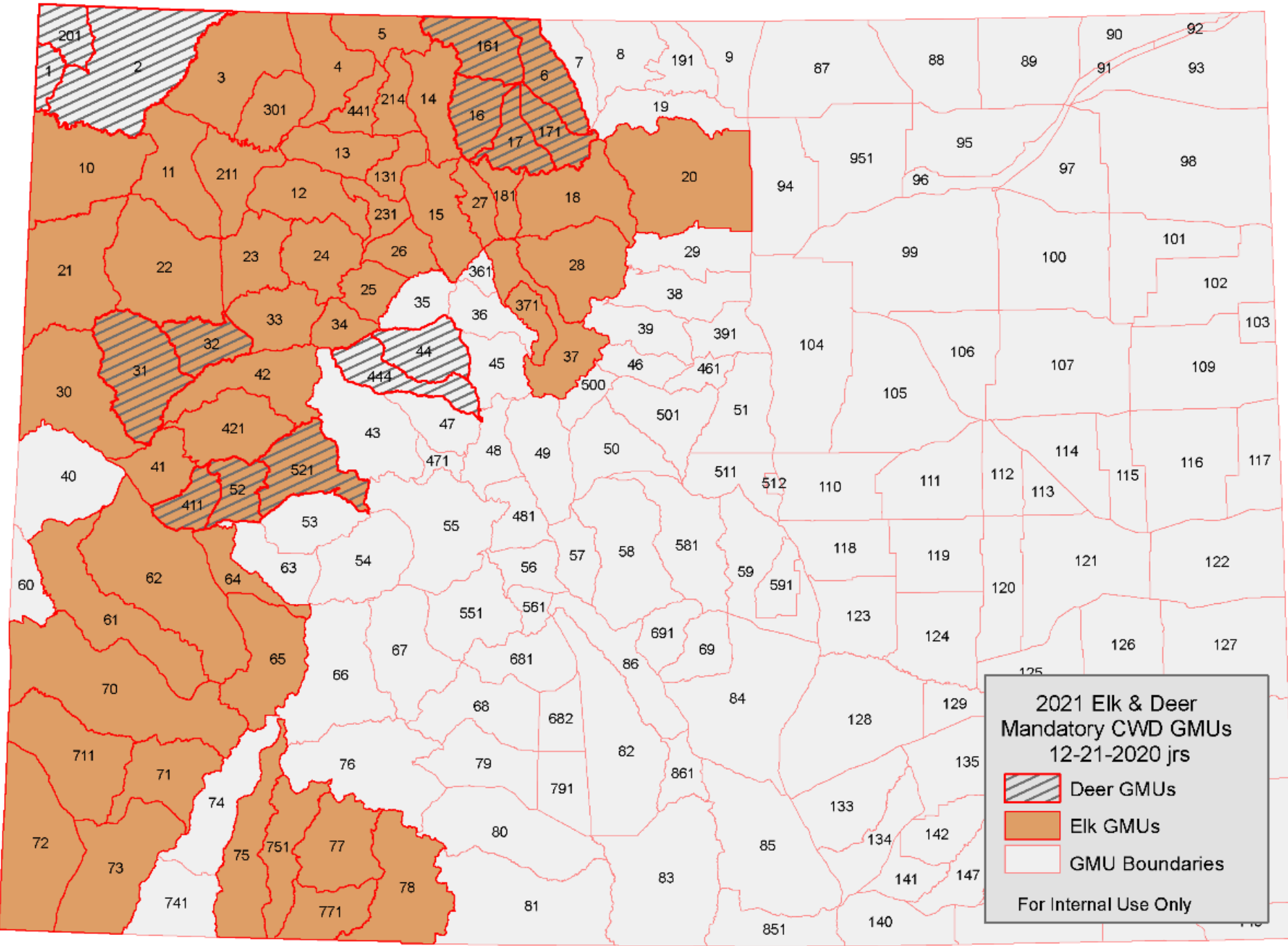


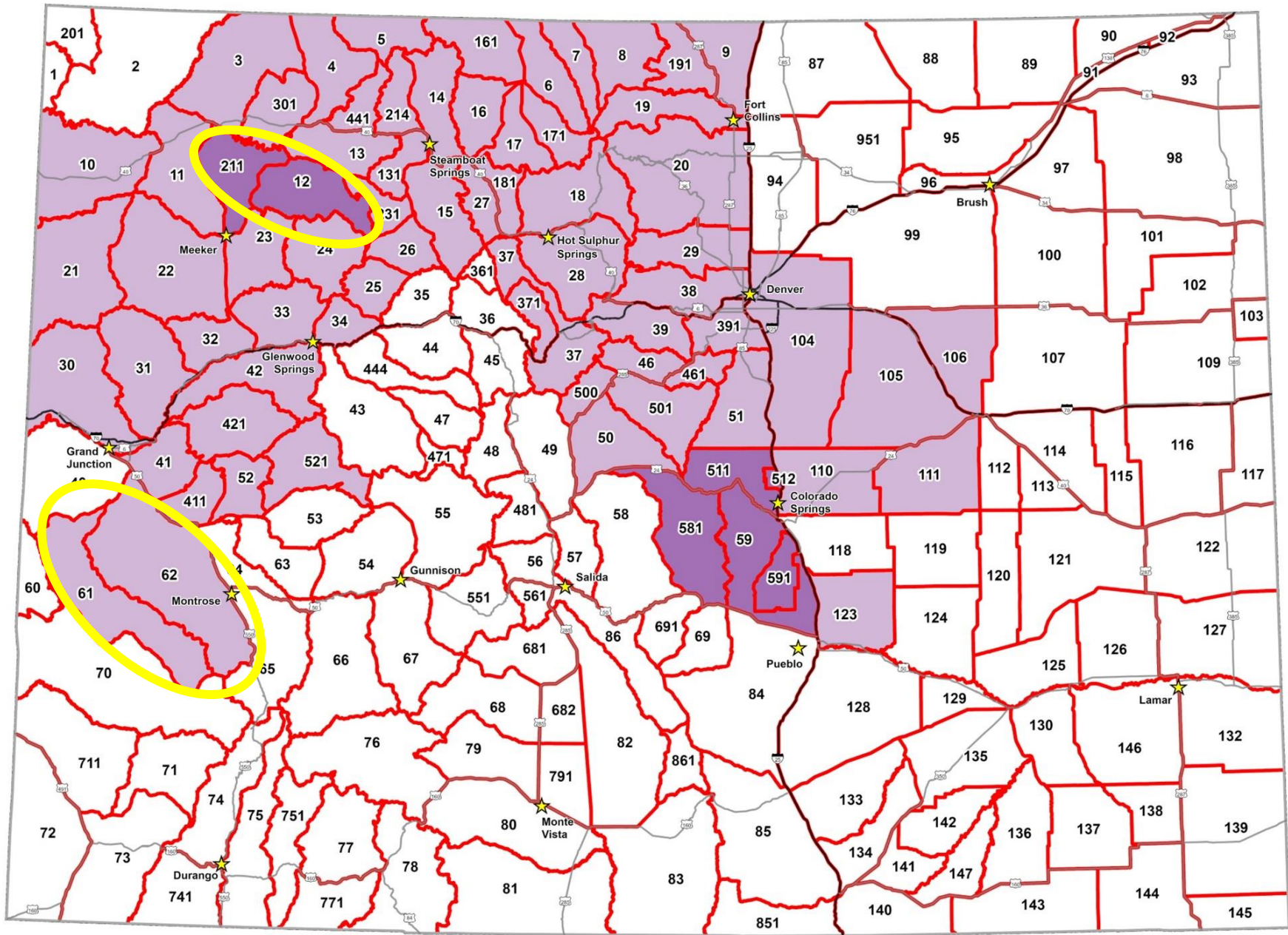


Detected CWD in Harvested Adult Deer Bucks
January 2022

Estimated CWD Infection Rates for Harvest Data in Colorado 2017 - 2021







Detected CWD in Harvested Adult & Yearling Elk

January 2022



**Estimated CWD Infection Rates
for Harvest Data in Colorado
2017 - 2021**



2021 CWD Monitoring Highlights

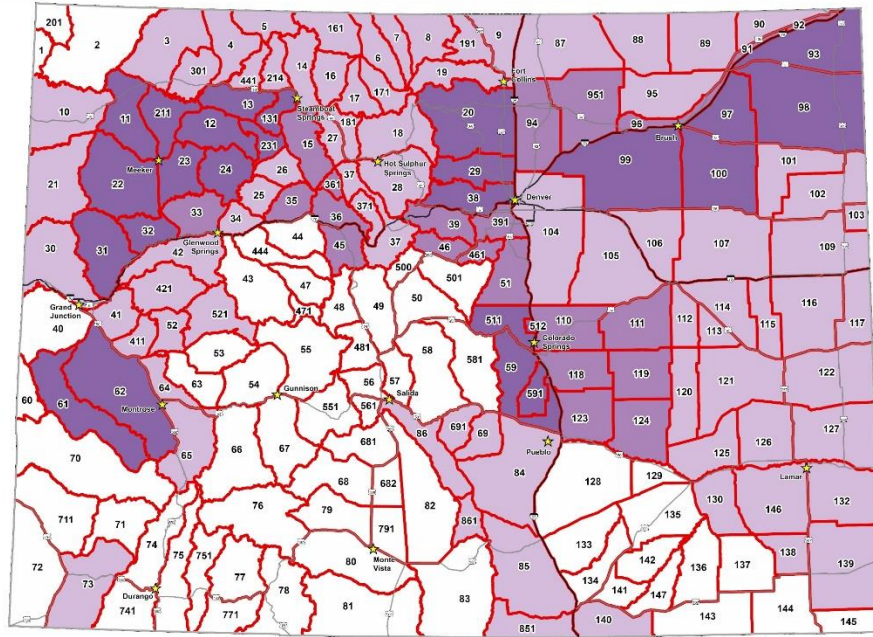
- Submissions
 - ❖ ~4300 elk and ~2400 deer from all sources
1. CWD Prevalence is still relatively low in elk herds statewide
 2. Detection of infected yearling elk is higher than expected
 3. Geographic patterns of high-prevalence areas generally overlap for elk and deer
 4. Hunter compliance with mandatory testing was lower for elk than for deer
 5. Retesting mule deer herds confirmed the herd-level prevalence estimate generated in 2000



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2017 - Before Testing Rotation

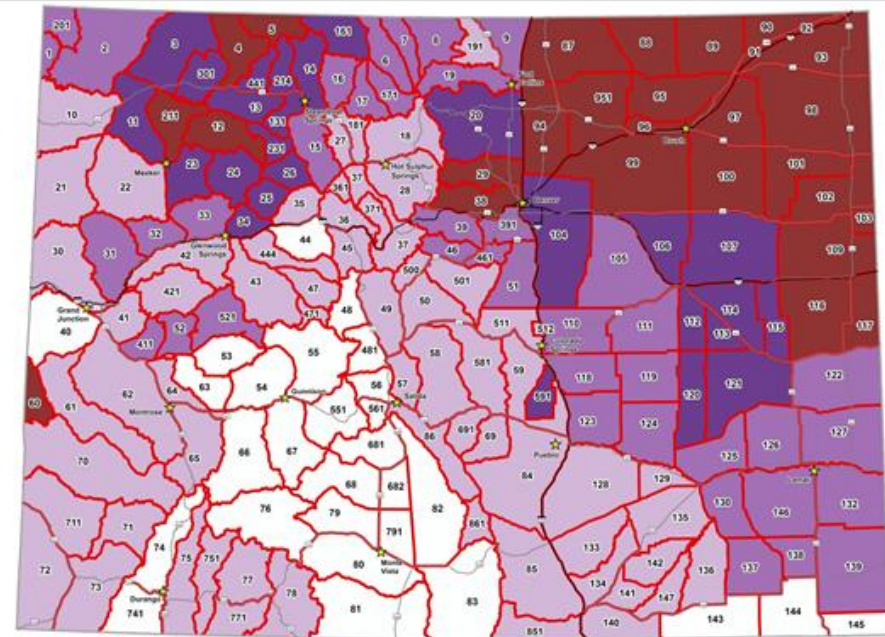
2022 - After Testing Rotation



Detected CWD in Harvested Adult Deer Bucks
August 2017

Estimated CWD Infection Rates for Harvest Data in Colorado 2014 - 2016

- Not Detected
- Detected under 5%
- Detected 5-10%
- Detected 10-20%
- Detected over 20%



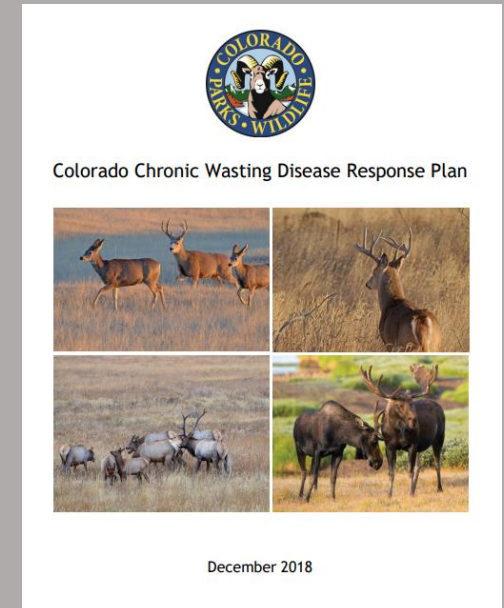
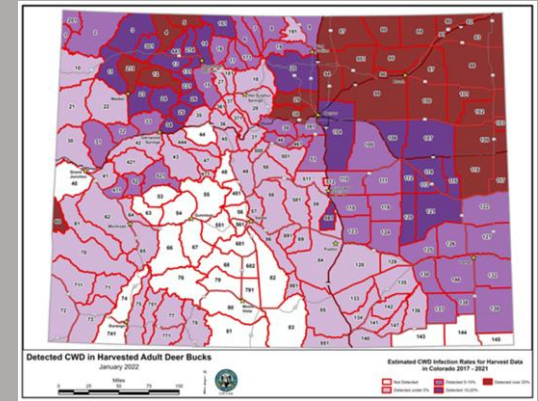
Detected CWD in Harvested Adult Deer Bucks
January 2022

Estimated CWD Infection Rates for Harvest Data in Colorado 2017 - 2021

- Not Detected
- Detected under 5%
- Detected 5-10%
- Detected 10-20%
- Detected over 20%

5-Year Review of CWD Monitoring Highlights

1. Clearer statewide understanding of CWD distribution and occurrence
2. 5-year rotation of mandatory testing can serve as a foundation for sustainable, long-term CWD monitoring
3. Set ourselves up to assess harvest-based CWD control strategies (license setting)
4. Identified targets for most immediate management attention
5. Effectively implementing Colorado's CWD Response Plan



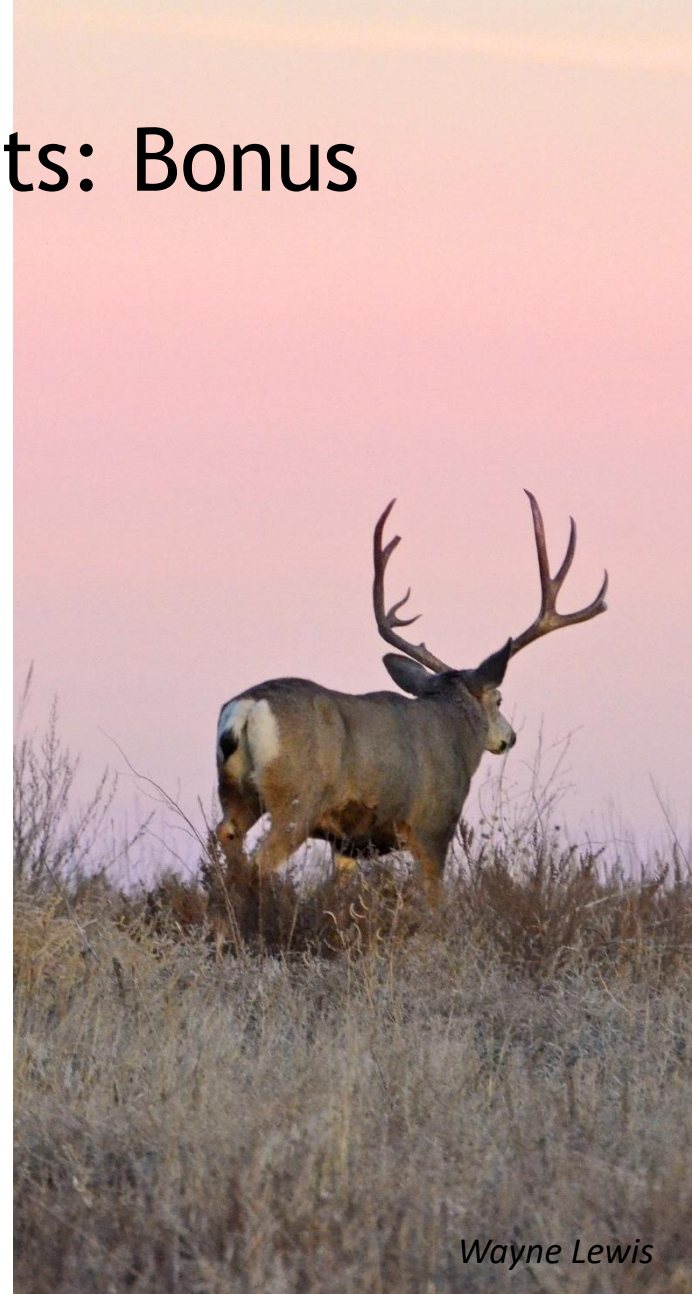
5-Year Review Highlights: Bonus

6. Current, reliable CWD prevalence estimates have increase buck license quotas

...which has helped bring herds towards the sex ratio objectives set in herd management plans.



Current statewide sex ratio at 29 bucks:100 does
(statewide average range is 27-31:100)



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What to Expect Next Year

Prevalence Trends – Exciting!

- All 2017 deer herds included in mandatory sampling will be retested in 2022 (+4 more)

Management Review

- Herd by herd breakdown of management actions and prevalence trend



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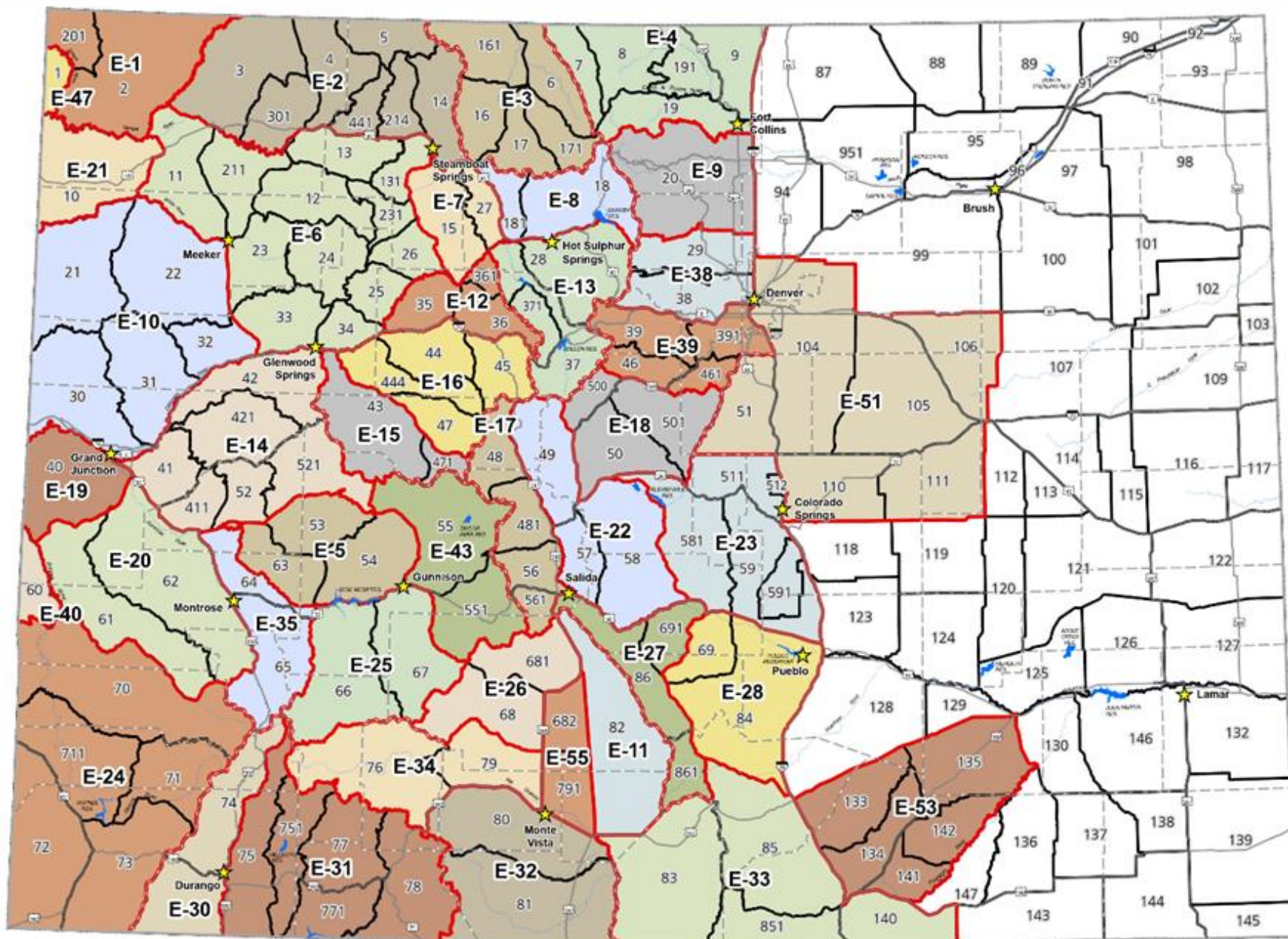
5-Year Review (cont.)

- **10 Chronic Wasting Disease Research Publications 2018-2022**

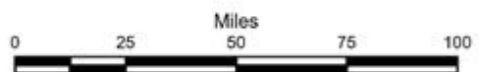
1. Mountain lions resisted exposure to CWD despite eating over 400 infected deer and elk carcasses in captivity over 18-year period
2. Cattle showed no evidence of CWD after oral inoculation or after prolonged exposure to CWD environments.
3. Bighorn sheep showed no evidence of natural susceptibility to CWD
4. Prion passage through a mountain lion's digestive track reduced the original amount of ingested CWD prions by over 95%
5. Harvest pressure and CWD dynamics – analyses indicate that increasing licenses lowered subsequent risk of harvesting a CWD infected deer, and vice-versa.
6. Relationship between CWD infection risk and prior amount and timing of mule deer harvest supports hunting as a potentially useful tool to control CWD.



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2022 Elk DAU and GMU



April 2022

★ CPW Office

□ GMU (Game Management Unit) Boundary

□ DAU (Data Analysis Unit) Boundary