



MONTANA FISH, WILDLIFE & PARKS

MEMO

Date: January 19th, 2022
To: Montana Fish and Wildlife Commission
From: Brett Dorak – Region 7 Wildlife Manager
Subject: Region 7 Mule Deer Survey and Management Data

Adaptive Harvest Management Plan (Approved by Fish and Wildlife Commission during October 28th, 2021, meeting)

Prairie/Breaks Population Management Unit

Standard Hunting Regulation

The Standard Hunting Regulation is implemented during those years when population size is at or near LTA and recruitment is moderate.

A Standard Hunting Regulation may be recommended if triggers do not suggest changing to a restrictive or liberal season type.

Hunting Season (See Exceptions):

- Five-week general rifle season for either-sex
- Low to moderate numbers of antlerless B licenses.
- Six-week archery-only season for either-sex.

Restrictive Hunting Regulations

A Restrictive Hunting Regulation may be recommended if both trigger 1 **AND** trigger 2 (a **OR** b) are met. If aerial surveys are not conducted in a HD, recruitment data from nearby HDs where surveys are flown should be used for assessing trigger 1.

1. Recruitment is less than 30 fawns: 100 adults

AND

2. a) Total number of mule deer counted on the survey area is at least 30% below LTA

OR

- b) In absence of long-term survey data: Buck harvest is at least 25% below the LTA. Adjacent, representative HD survey data may be used in addition to buck harvest data.

Hunting Season (See Exceptions):

- Five-week general rifle season for antlered bucks.

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- Localized game damage complaints on private land may require limited numbers of antlerless B licenses for specific portions of HDs.
- Six-week archery-only season for antlered bucks.

Liberal Hunting Regulation

The Liberal Hunting Regulation is used during periods of favorable environmental conditions when population size is substantially above LTA and recruitment is high. Doe harvest rates should be higher in those areas where population decreases are necessary. If a HD does not have an established trend survey area, adjacent, representative HD survey data may be used in addition to buck harvest data. If buck harvest is limited by season type, adjacent, representative HD(s) with unlimited buck hunting on the general deer license may be used as another measure of population status.

A Liberal Hunting regulation may be recommended if both trigger 1 AND trigger 2 (a OR b) are met. If aerial surveys are not conducted in a HD, recruitment data from nearby HDs where surveys are flown should be used for assessing trigger 1.

1. Recruitment is greater than 60 fawns: 100 adults.

AND

2. a) Total number of mule deer counted on the survey area is more than 20% above the LTA

OR

b) In the absence of long-term survey data: Buck harvest is more than 25% above the LTA. Adjacent, representative HD survey data may be used in addition to buck harvest data.

Hunting Season (See Exceptions):

- Five-week general rifle season for either-sex
- Liberal numbers of antlerless B licenses with option for issuing multiple licenses either through the drawing or over-the-counter. Licenses may be valid for an individual HD or groups of HDs.
- Six-week archery-only season for either-sex.

Many factors, other than hunting can affect mule deer populations. If liberal or restrictive season structure is in place for ≥ 5 years and the population has not moved towards LTA and back to a standard season type, then a season type other than those suggested by the triggers could be considered.

Region 7 Mule Deer Survey Data

Mule deer survey data presented in the Figures 1 and 2 show post season and spring survey trends observed across the deer trend areas (DTAs). Observed mule deer numbers were high prior to population level impacts from a combination of disease and severe climactic events during the 2008-2011 seasons. Following those years through management decisions, habitat improvement, and moderate weather events the observed numbers increased. In recent years, counts have decreased due to drought conditions during the summer of 2020 and 2021. Additionally, mule deer survey data in Tables 1-3 provide a finer look at how the regional observed counts compare to the long-term average (LTA), 10-year average, and specific thresholds outlined in the Adaptive Harvest Management Plan.

Drought conditions impacted deer numbers and can be observed in the recruitment level (defined as fawns that survive the first year and enter the adult segment of the population; expressed as the ratio of fawns per 100 adults observed in spring [March and April]) from recent surveys. Observed numbers and ratios during the 2020 spring mule deer surveys prompted the region to adjust the mule deer B license (007-03) quota from 11,000 licenses to 5,500 licenses for the 2021 hunting season (this adjustment was made after the hunting regulations were printed, which still state 11,000 B licenses). Post season surveys observed a slight decrease in the total observed number of deer and the fawn: 100 does ratio, but the buck ratio remained similar. Spring survey data will provide the information required for any additional license changes for the 2022 hunting season.

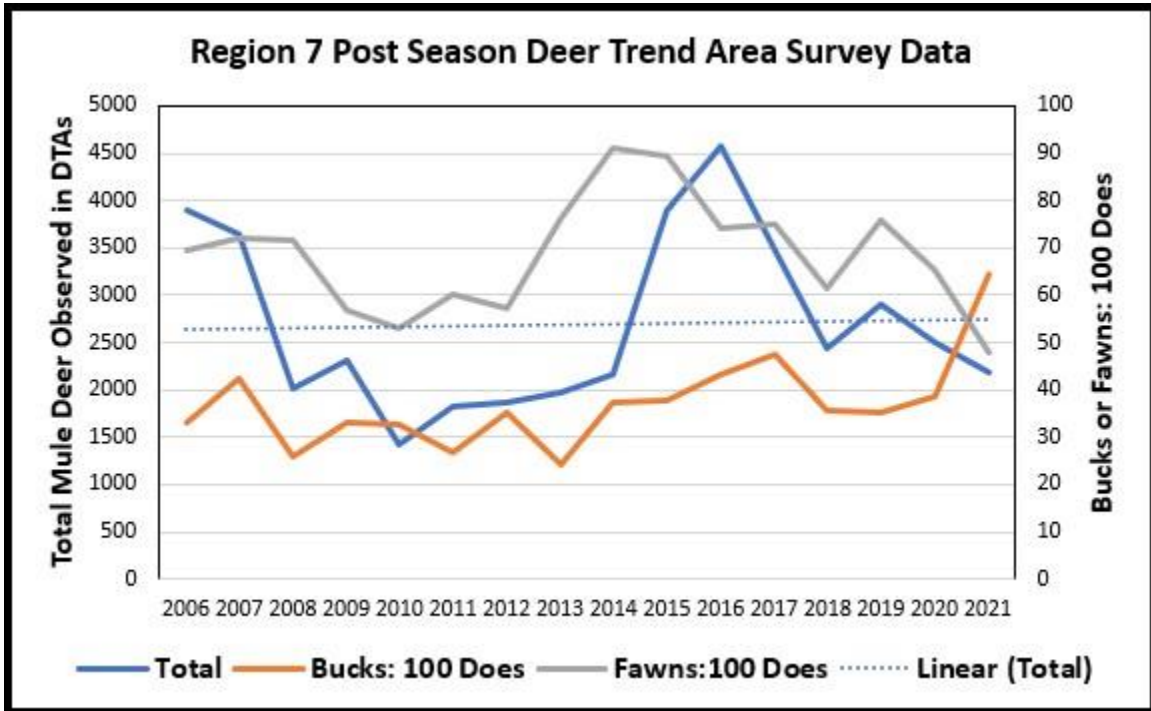


Figure 1. Post season survey data representing total mule deer observed, bucks:100 does, fawns:100 does, and total observed mule deer trend line for 13 of the 15 deer trend areas from 2006 through 2021. The Fort Keogh and Tongue River DTAs are omitted from this figure as those DTAs were established in 2012 and 2014, respectively, and their shorter temporal dataset does not align with the other DTAs longer datasets for adequate trends to be determined yet.

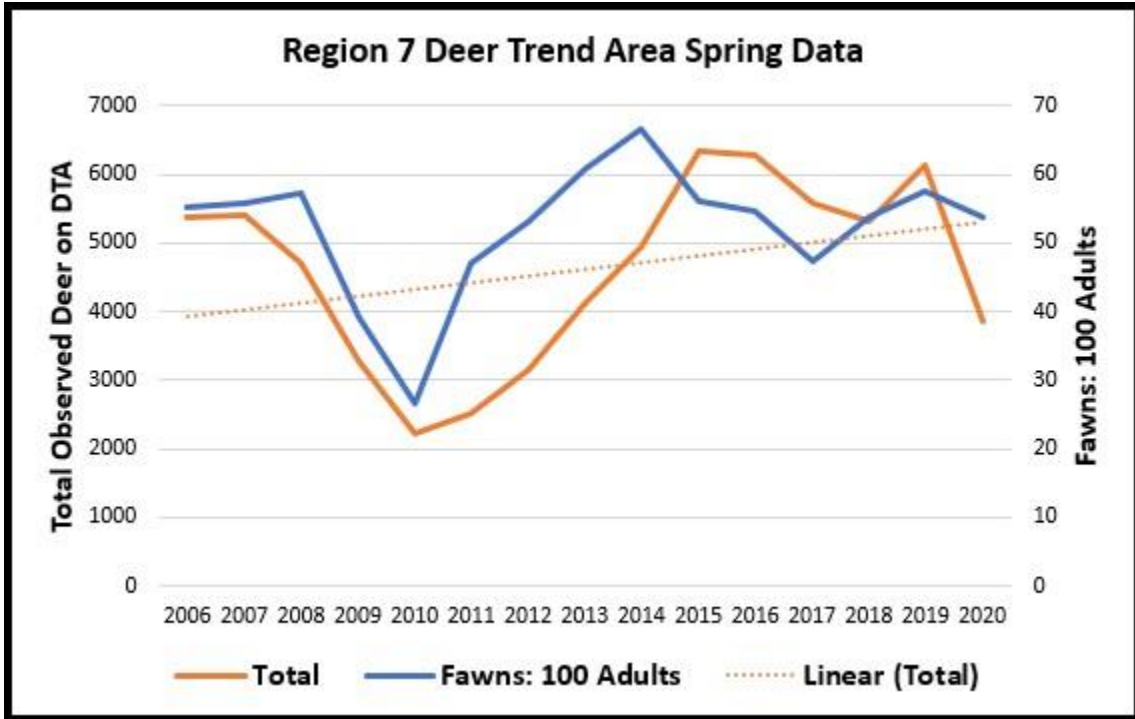


Figure 2. Spring survey data representing total mule deer observed, fawns:100 adults, and total observed mule deer trend line for 14 of the 16 deer trend areas from 2006 through 2020. The Fort Keogh and Tongue River DTAs are omitted from this figure as those DTAs were established in 2012 and 2014, respectively, and their shorter temporal dataset does not align with the other DTAs longer datasets for adequate trends to be determined yet.

Table 1. Regional totals and ratios from the 2020 post season surveys.

Region 7	2020 Post Season Survey Total Count	10-year Average	Long-term Average (LTA)	2020 Bucks: 100 Does	2020 Fawns: 100 Does	30% Below LTA	20% Above LTA
Total*	2525	2777	2679			1877	3218
Average*				39	65		

*Does not include Fort Keogh or Tongue River DTAs due to shorter temporal dataset

Table 2. Regional totals and ratios from the 2020 spring surveys.

Region 7	2020 Spring Season Survey Total Count	10-year Average	Long- term Average (LTA)	2020 Fawns: 100 Adults	30% Below LTA	20% Above LTA
Total*	3864	4854	4621		3233	5544
Average*				55		

*Does not include Fort Keogh or Tongue River DTAs due to shorter temporal dataset

Table 3. Regional totals and ratios from the 2021 post season surveys.

Region 7	2021 Post Season Survey Total Count	10-year Average	Long- term Average (LTA)	2021 Bucks: 100 Does	2021 Fawns: 100 Does	30% Below LTA	20% Above LTA
Total*	2219	2901	2656			1921	3292
Average*				40	52		

*Does not include Fort Keogh or Tongue River DTAs due to shorter temporal dataset

Region 7 Mule Deer B License Quota and Estimated Harvest

From 2006 through 2013 there were three mule deer B licenses valid in Region 7, each with separate quotas. One was specifically for nonresidents (797-00) and two B licenses for residents, the single region B License (007-13) and a second resident B License (007-14), which would allow resident hunters to hold two B licenses for antlerless mule deer harvest in the region. These B license opportunities were summed for this table. There were no B licenses available during the 2014 and 2015 seasons. Then, in 2016 a single B license (007-03) was created on a quota system and was available for resident and nonresident hunters and when surplus after the drawing existed then hunters could purchase additional B licenses. Antlerless mule deer licenses are used to help manage population levels as well as address specific concentrations that may be problematic (i.e., game damage and CWD management) and provide additional opportunities. During the 2021 general season the Region 7 office received multiple requests for hunters to come to their properties to assist with mule deer harvest and having hunters who currently held B licenses assisted with managing those issues and potentially reduced game damage complaints received later in the winter.

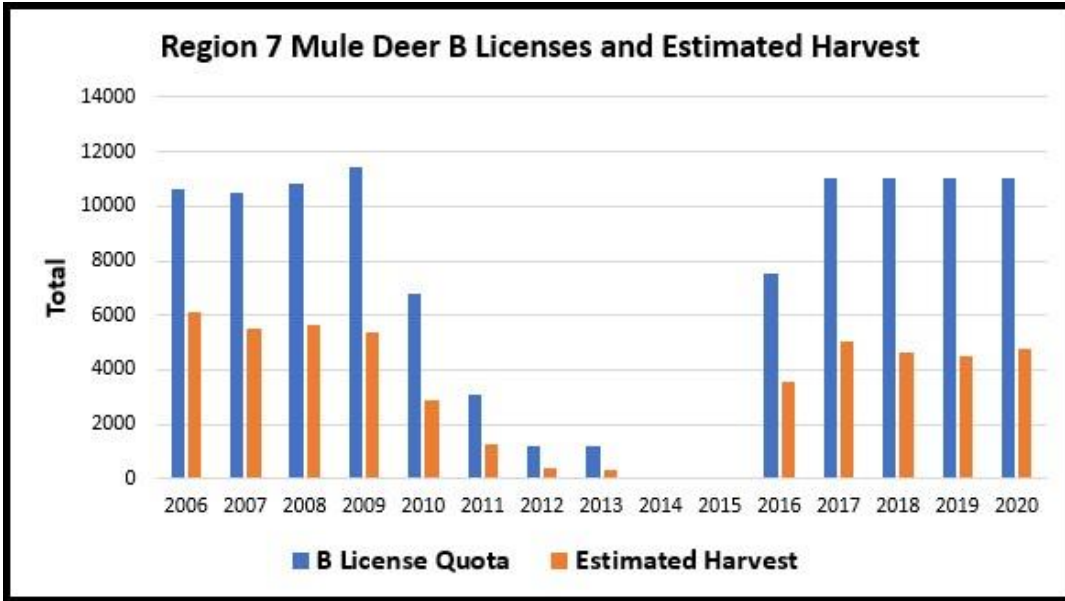


Figure 3. The number and estimated harvest for antlerless mule deer B license in Region 7 from 2006 through 2020.

Region 7 Mule Deer Estimated Buck Harvest

From 2006 through 2020 estimated annual mule deer buck harvest obtained from hunter harvest surveys has typically ranged from 8,000 – 10,000 individuals. Of those mule deer bucks that are harvested, most bucks taken have at least 4-points on one antler. Approximately 72% of the mule deer bucks harvested within Region 7 from 2006 – 2020 were ≥ 4 points on an antler.

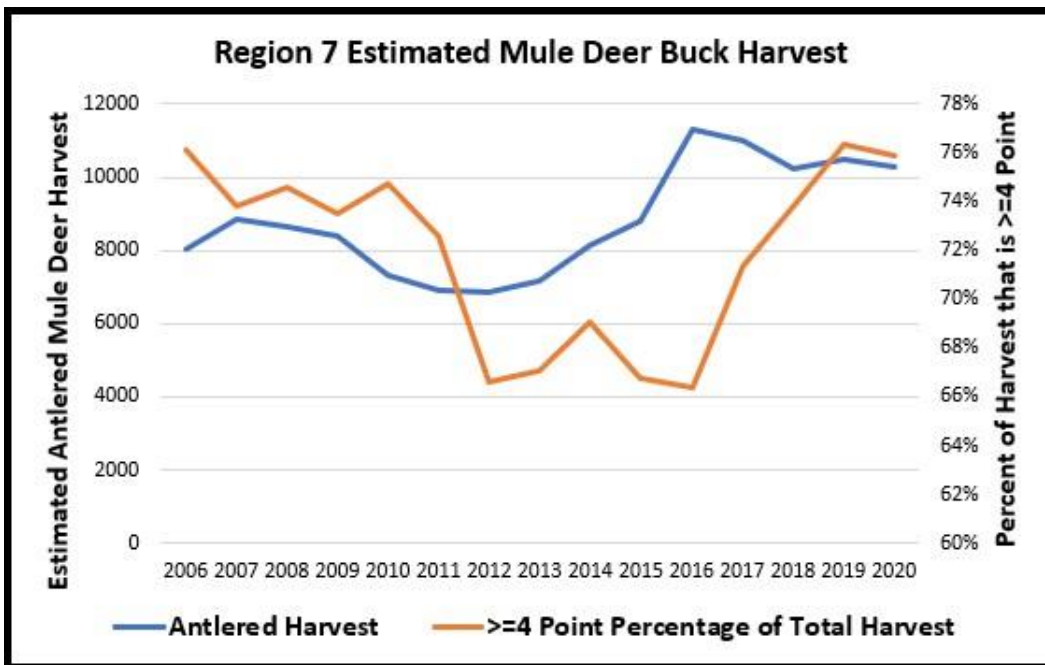


Figure 4. Region 7 estimated annual harvest of mule deer bucks for 2006 – 2020 and percentage of that harvest that has ≥ 4 points on at least one antler.

Region 7 Game Damage Complaint Trends

Figures 5-7 provide an in-depth breakdown of game damage information for the region from 2015 through early January of 2022. Multiple factors impact the number of game damage complaints annually and a trend can be observed with an increase in complaints as deer numbers increased. Weather and forage conditions impact complaints and due to moderate winter conditions and low snow levels complaints were low in 2019 and 2020 and then increased for 2021 with drought conditions and limited forage. Two complaints have already been received for 2022 as of January 12th. Most years mule deer associated complaints (mule deer specifically and both deer species complaints) account for roughly half of the regional game damage complaints received.

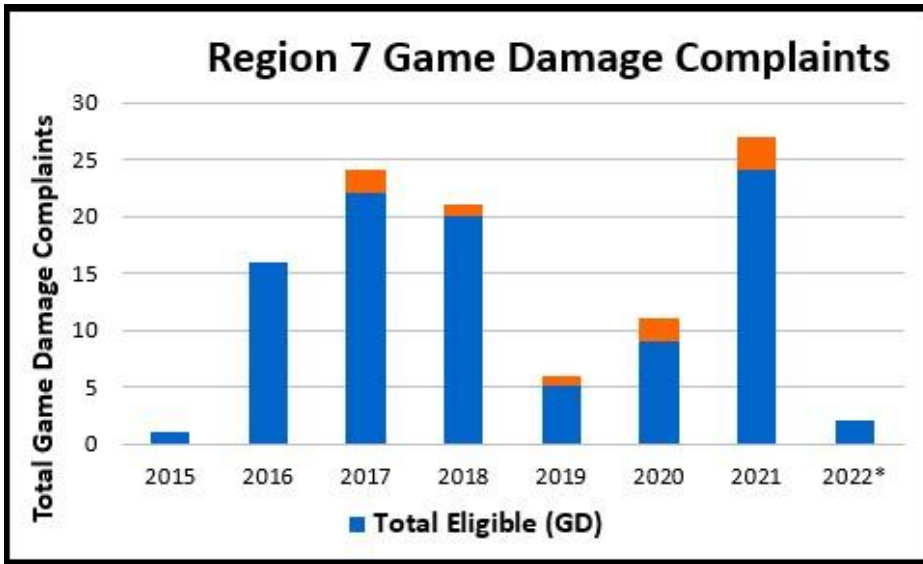


Figure 5. Region 7 total game damage complaints from 2015-2022 that are broken down into complaints that were determined to be eligible based on MCA 12.9.802 Game Damage Policy. *Only account for game damage complaints received by January 12th, 2022.

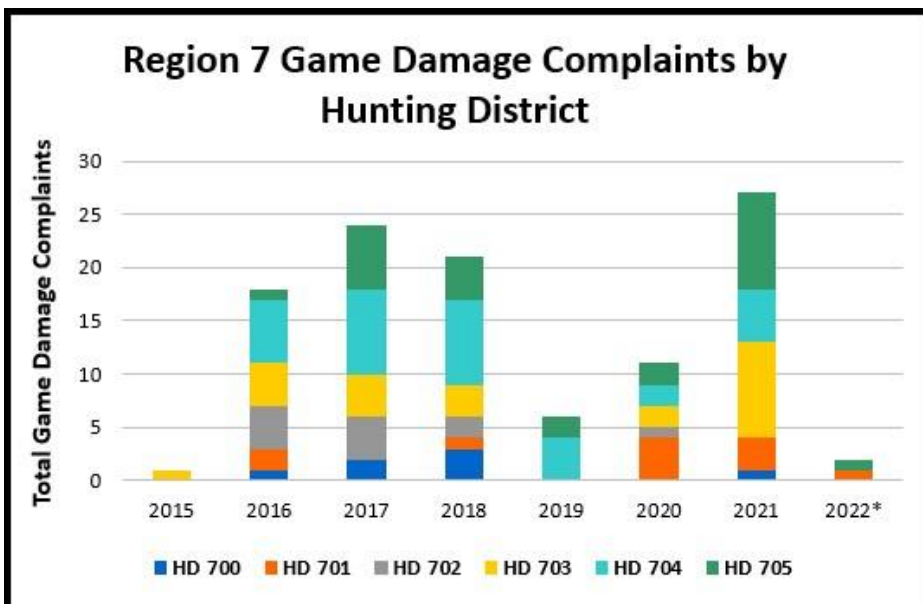


Figure 6. Region 7 game damage complaints broken down by Hunting District for 2015-2022. *Only account for game damage complaints received by January 12th, 2022.

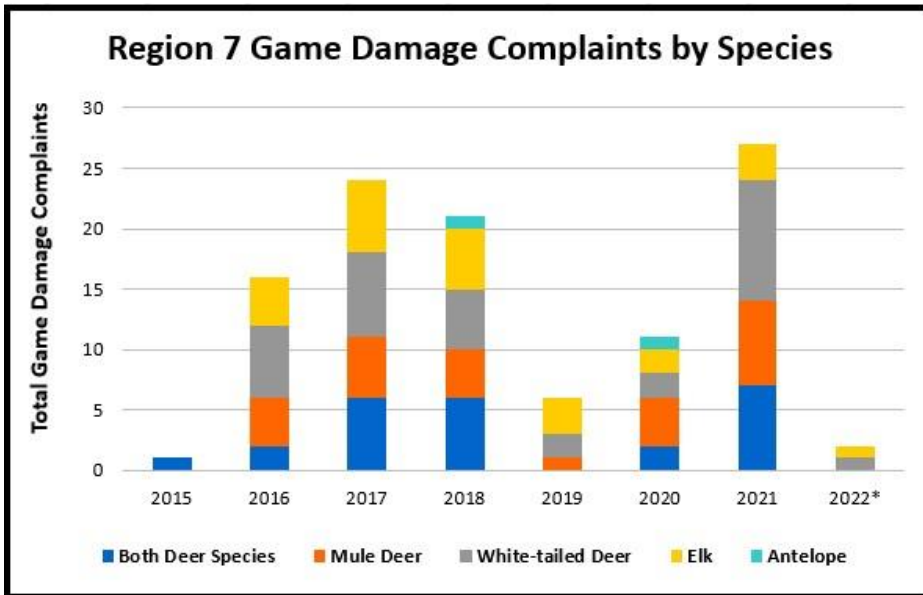


Figure 7. Region 7 game damage complaints broken down by big game species for 2015-2022. *Only account for game damage complaints received by January 12th, 2022.

Region 7 Mule Deer Check Station Data

Region 7 operates check stations in Hysham, Ashland, and Glendive on the opening and closing weekends of the general season to obtain biological and social data to aid in managing mule deer, as well as other species of game, within the Region. Figures 8 and 9 show the age breakdown of harvested male and female mule deer that came through the check station on those weekends.

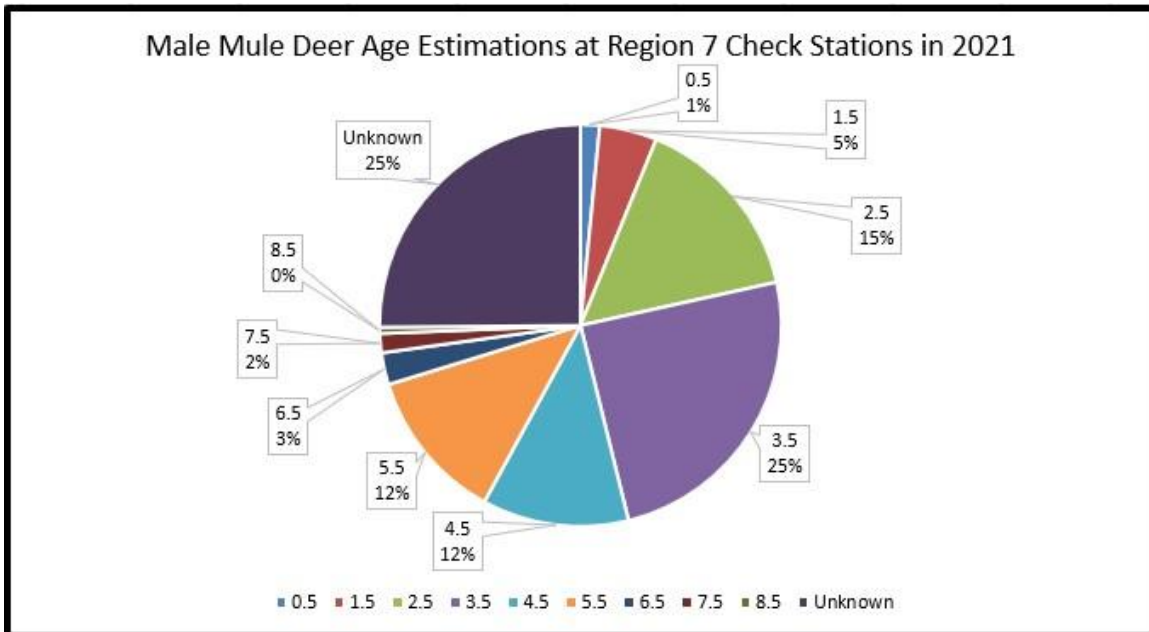


Figure 8. Region 7 check station data showing the age breakdown of male mule deer for the 2021 hunting season.

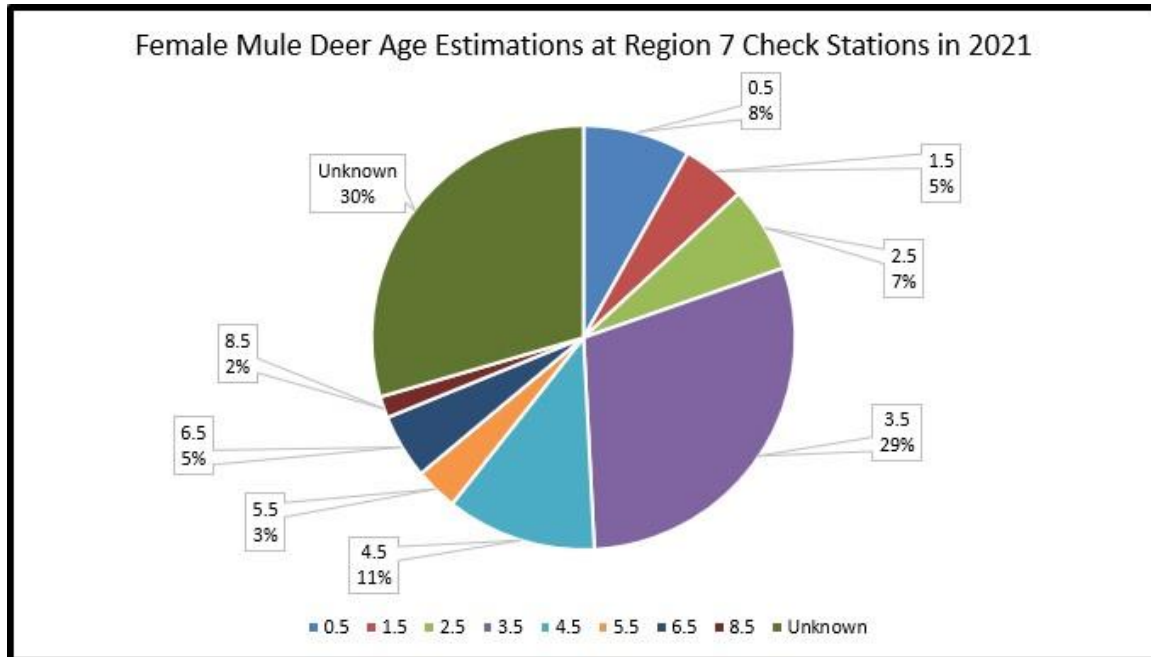


Figure 9. Region 7 check station data showing the age breakdown of female mule deer for the 2021 hunting season.