

AGE AND SUCCESS ON LIMITED-ENTRY ELK UNITS



Utah Division of
Wildlife Resources



ELK AGES ON LIMITED-ENTRY UNITS

INFORMING DECISIONS

- Almost 76,000 applicants
- 3,117 limited-entry permits
- The DWR makes permit recommendations annually
- These recommendations must be informed by data, rather than opinion

If we have data, let's look at data. If all we have are opinions, let's go with mine.

James L. Barksdale

AVAILABLE METRICS

- Bull:cow ratio
- Average age
- Hunter success
- Calf:cow ratio
- Size measurements



BULL:COW RATIO

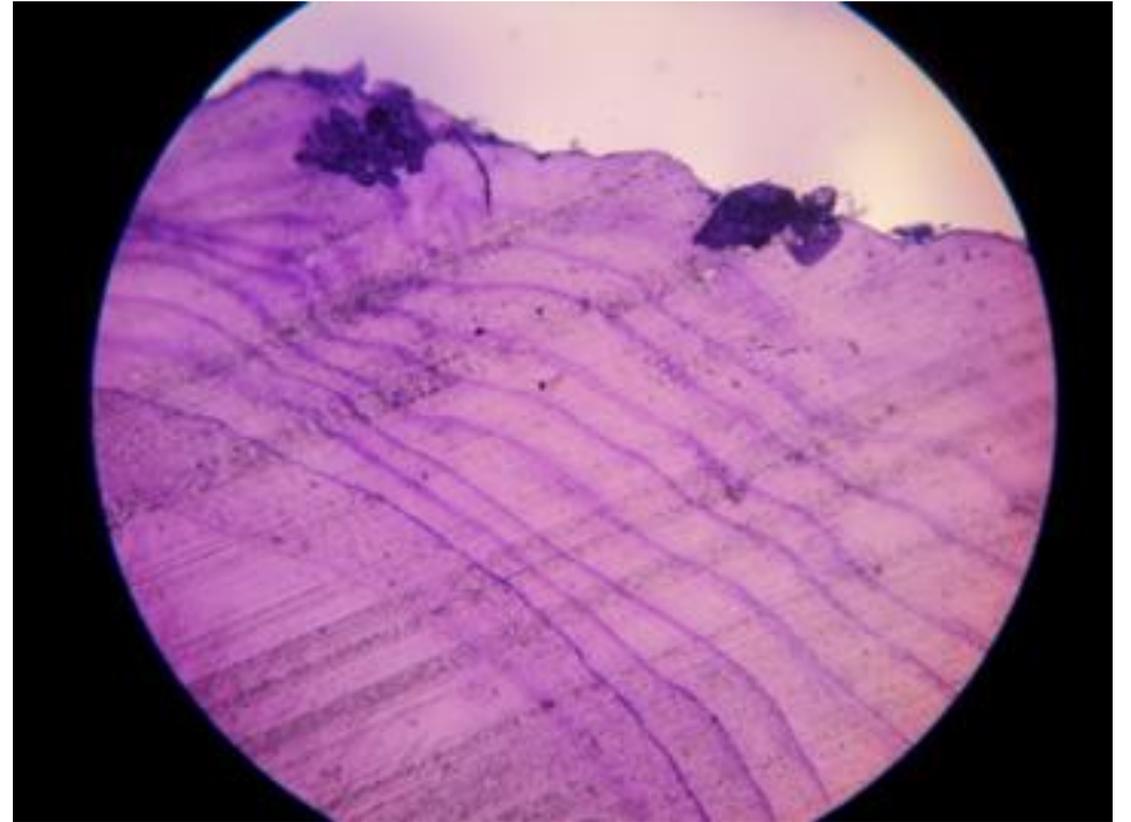
- Pre-season classification (August)
- Post-season flights (February)
- Difficult to obtain reliable data

Year	Type	Bull:cow ratio
2019	Flight	29:100
2022	Flight	84:100
2022	Classification	45:100



AVERAGE AGE

- Average age of the bulls harvested during the previous hunting season
- Hunters submit front incisor teeth
- Tooth is sent to an independent lab
- Root of the tooth has annual rings in the cementum, known as annuli
- Rings represent nutritional stress (winter)



AVERAGE AGE (CONT.)

For example, let's look at the Beaver, East unit:

- 36 bull elk harvested in 2021
- 27 bull elk aged
- Age range 5 to 15
- Average 8.4 years old
- Objective 7.5-8 years old



7 yr old, 2021

AVERAGE AGE (CONT.)



ANTLER SIZE

- Age
- Nutrition
- Genetics



POPULATION STRUCTURE

- Surrogate for mature bulls on the landscape
- Older average age = more older bulls



DATA-INFORMED DECISIONS

- Reliable
- Consistent
- Impacted by management decisions

4.5 – 5.0

We manage the following units for an average of 4.5-5.0 years old bulls:

- Box Elder, Grouse Creek
- Box Elder, Pilot Mtn
- Paunsaugunt



5.5 – 6.0

We manage the following units for an average of 5.5-6.0 years old bulls:

- Central Mtns, Manti
- Central Mtns, Nebo
- La Sal
- North Slope, Three Corners
- Plateau, Fishlake/Thousand Lakes
- Wasatch Mtns



5 yr old, 2021

6.5 – 7.0

We manage the following units for an average of 6.5-7.0 years old bulls:

- Book Cliffs/Bitter Creek/South
- Cache, Meadowville
- Cache, South
- Monroe
- Mt Dutton
- Panguitch Lake
- South Slope, Diamond Mtn
- Southwest Desert



7.5 – 8.0

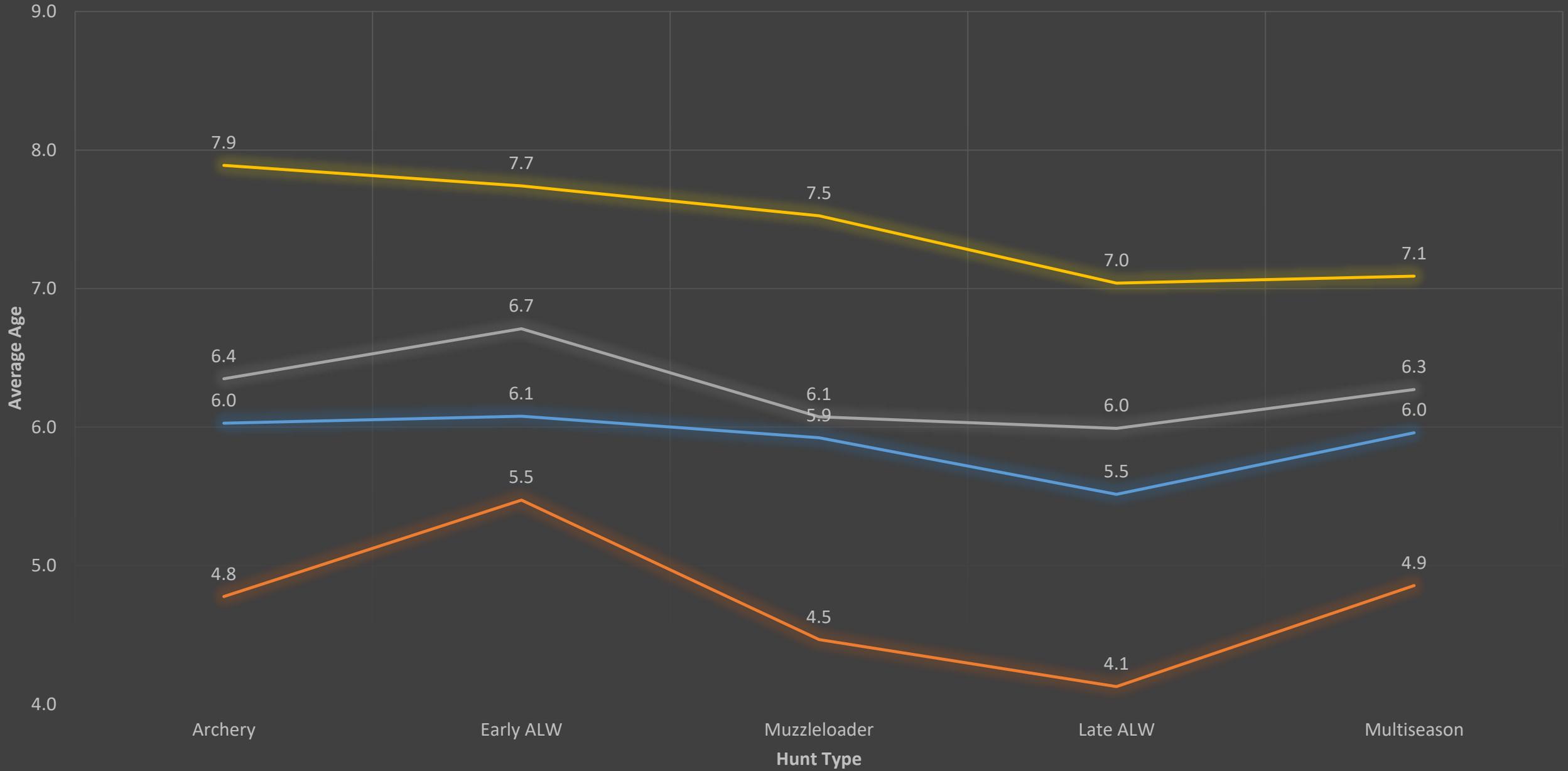
We manage the following units for an average of 7.5-8.0 years old bulls:

- Beaver, East
- Book Cliffs, Little Creek Roadless
- Fillmore, Pahvant
- Plateau, Boulder
- San Juan



Average Age by Weapon Type and Objective

4.5-5.0 5.5-6.0 6.5-7.0 7.5-8.0



THE TRADE-OFFS

- Not optimizing harvest in oldest age objectives
 - To reach an average of 8 years old, we are wasting bulls
- Having dual objectives can lead to skewed sex ratios
 - Population objective
 - Overall population
 - Includes cows and calves
 - Average age objective
 - Bull population only
 - Beaver Unit example
 - Population objective is 1,050
 - Age objective is 7.5-8
- Need additional metrics



SUCCESS ON ELK LIMITED-ENTRY UNITS

SUCCESS RATE

- Success rate is the percentage of hunters who harvested an elk.
- It informs the biologist how many elk were harvested.



Fillmore, Pahvant	Archery	Early ALW	Muzzleloader	Late ALW	Multiseason	Total
Hunters	12	24	8	11	3	58
Harvested	5	24	5	10	2	46
Success Rate	46%	100%	63%	91%	67%	79%

DATA SOURCE

← UDWR 2022 Harvest Survey Reminder 13293278-671

 DoNotReply@sci-nevada.com
To: You

← ↶ ↷ ...
Fri 8/12/2022 11:54 AM

Dear Michael:

Our records indicate that you received a permit for Limited-entry Bull Elk in 2022. Completing a harvest survey is important – and required – **EVEN IF YOU DO NOT HUNT OR HARVEST AN ANIMAL**. A harvest survey takes only a few minutes to complete and provides crucial information to help manage and maintain healthy wildlife populations.

Please submit your survey within 30 days of the final day of the hunting season listed on your permit. You can complete and submit the survey at wildlife.utah.gov/harvestreporting or by calling 800-221-0659.

In addition to your required harvest survey, we are also conducting age sampling for this hunt. This age data will help give our biologists a better understanding of Utah's wildlife populations and their overall health. If you are successful in your hunt, please submit a tooth using the provided pre-paid envelope.

Important: Submitting a tooth packet for sampling does **not** satisfy your requirement to complete a harvest survey. You must still complete your harvest survey online or by phone.

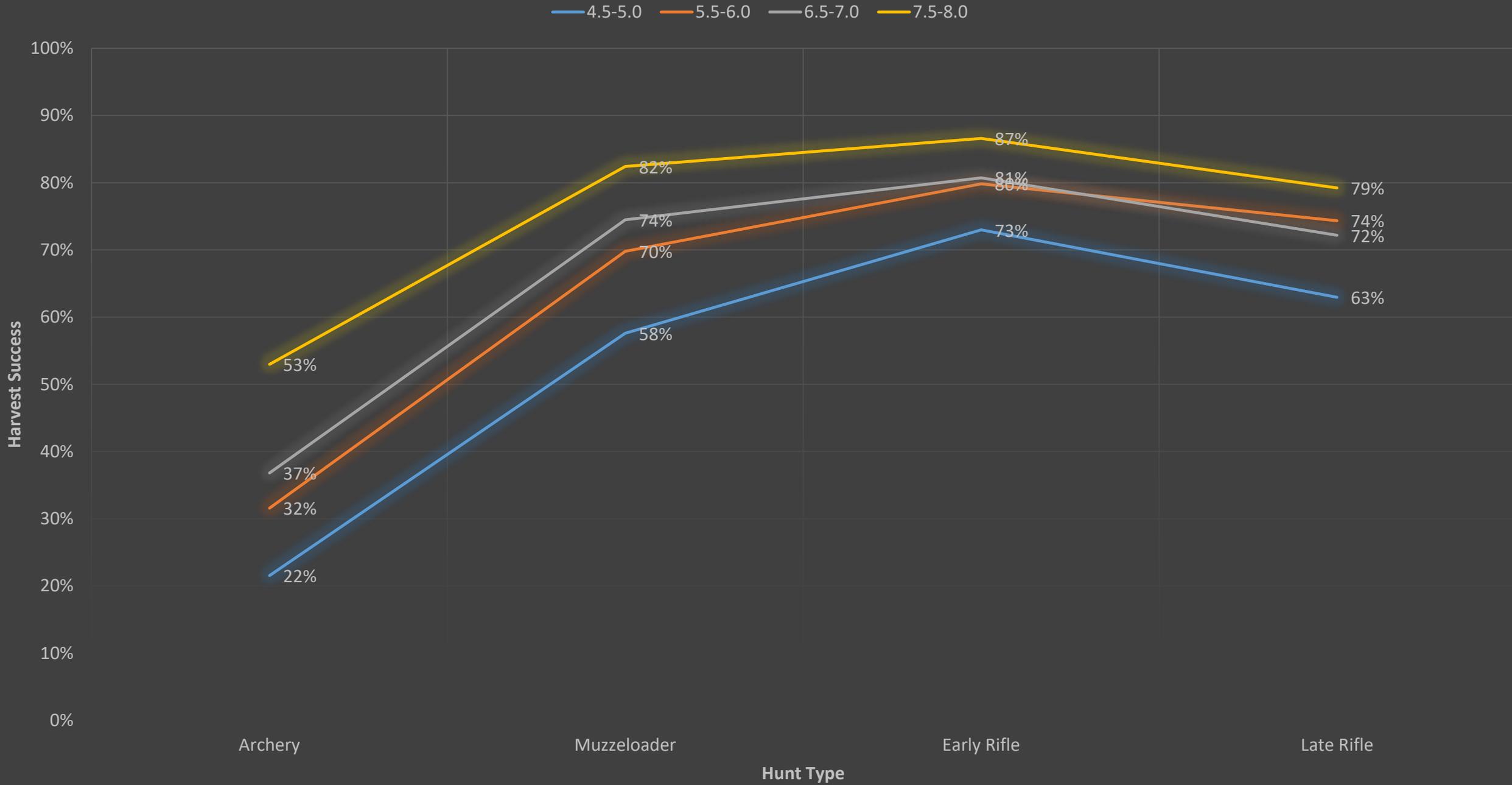
If you don't submit your harvest survey on time, you will not be able to apply for any once-in-a-lifetime, premium limited-entry, limited-entry or CMWU permits or their related bonus points in 2023. You can restore your eligibility to apply for these 2023 permits by paying a \$50 late fee, but we highly encourage you to complete your harvest survey within the 30-day window.

To learn more about Utah's harvest reporting requirements, please visit wildlife.utah.gov/harvestreporting or call 800-221-0659.

Sincerely,

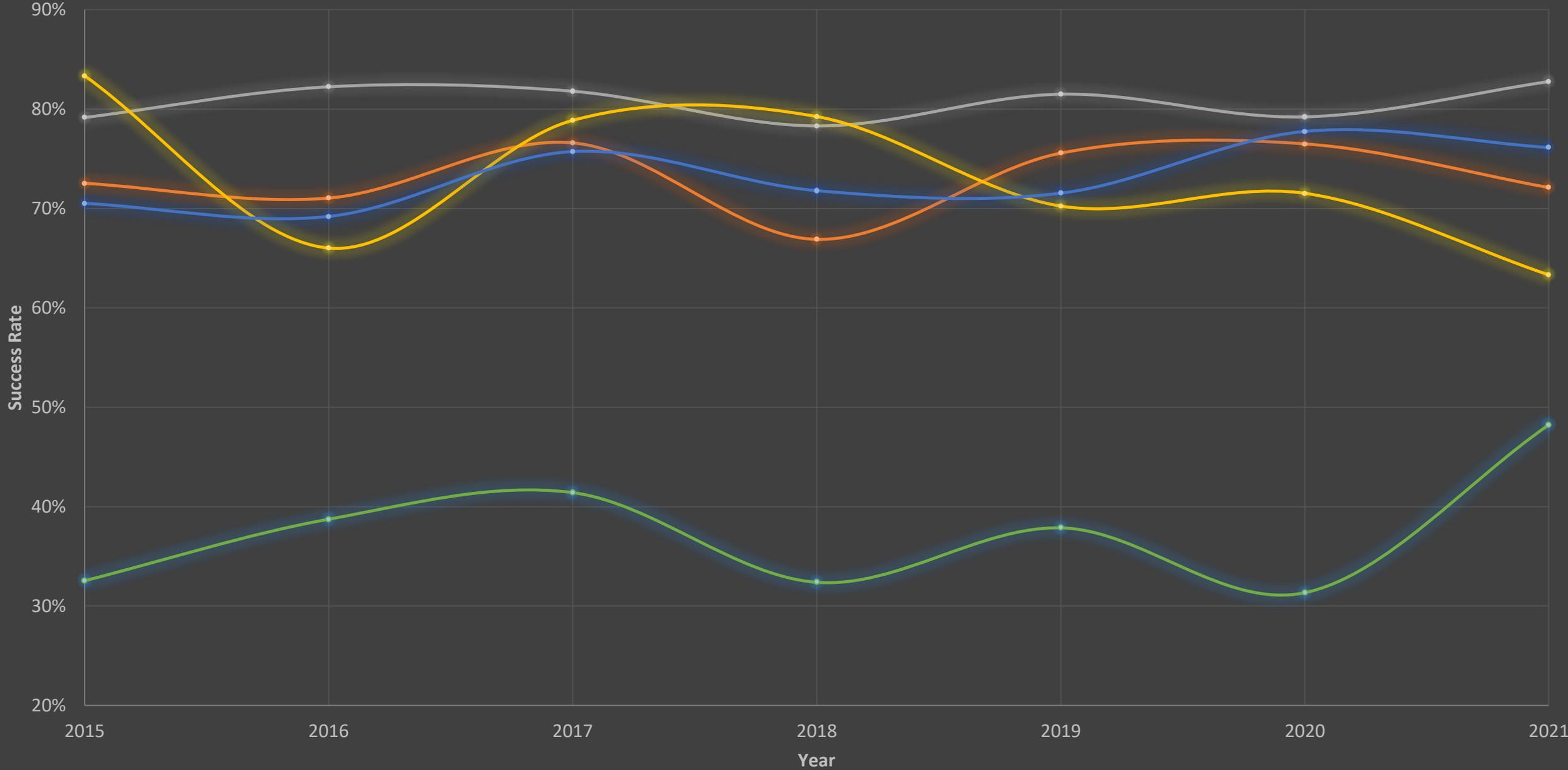
Utah Wildlife Administrative Services Office

Success by Weapon Type and Age Objective



LE Elk Success by Weapon Type

Archery Muzzleloader Early Rifle Mid-Season ALW Late ALW



SUMMARY

AVERAGE AGE

- Age is our most reliable metric for managing Limited-Entry bull elk
- It's not perfect

HARVEST SUCCESS

- Success increases with the proportion of available bulls on the landscape
- Helpful metric for making decisions regarding permit numbers

THANK YOU



Utah Division of
Wildlife Resources

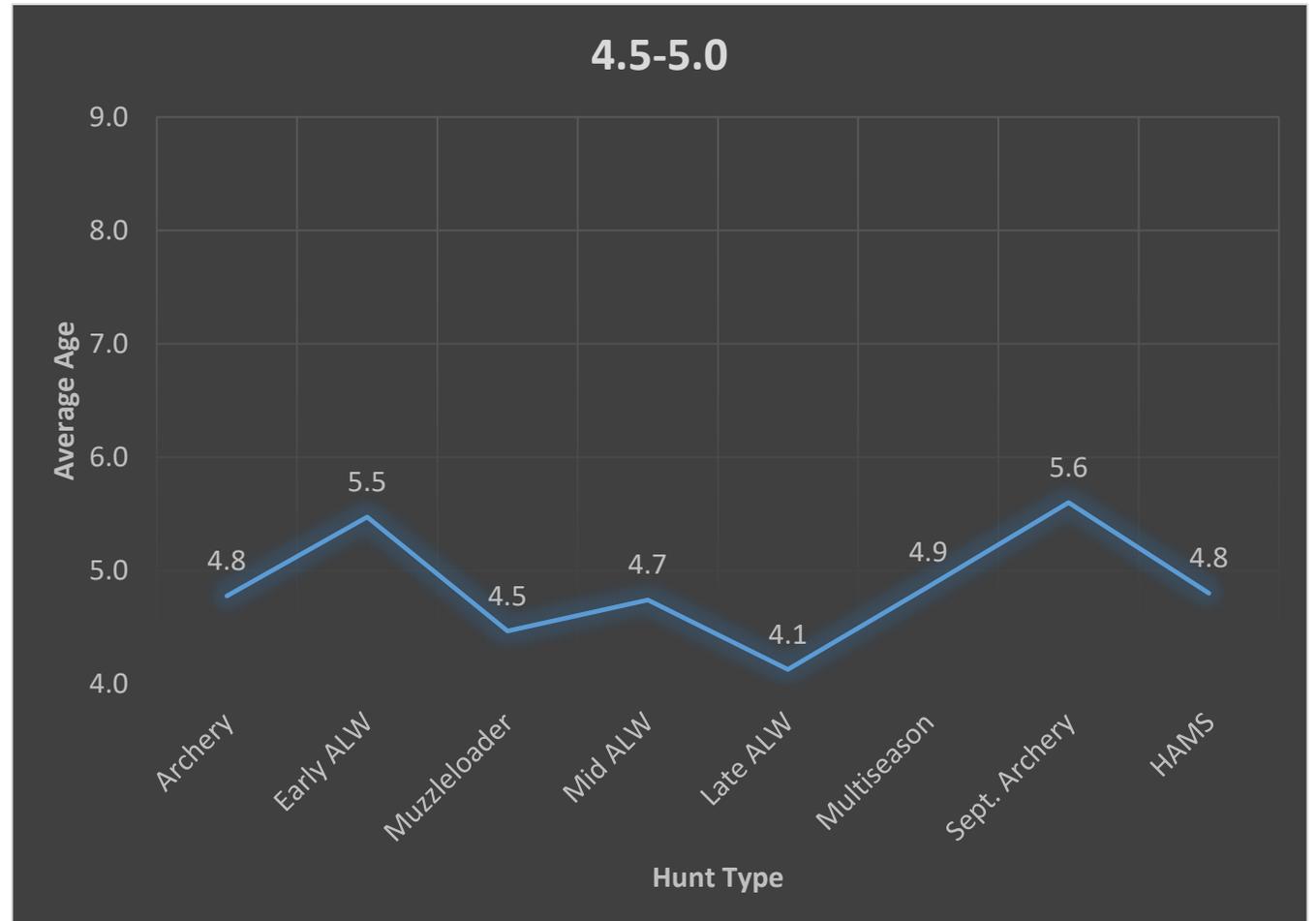




Age data w/ HAMS

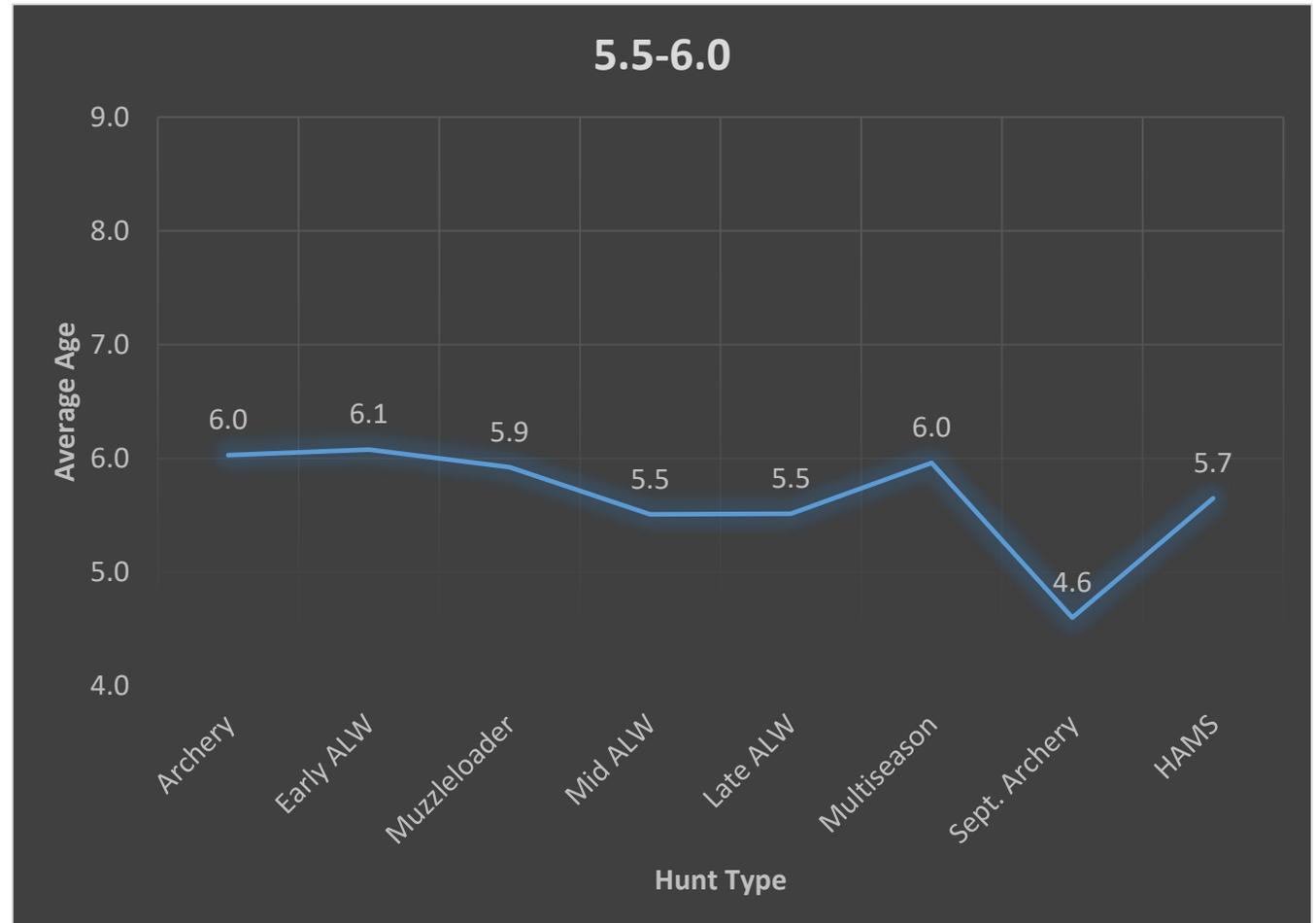
4.5-5.0

- Box Elder, Grouse Creek
- Box Elder, Pilot Mtn
- Paunsaugunt



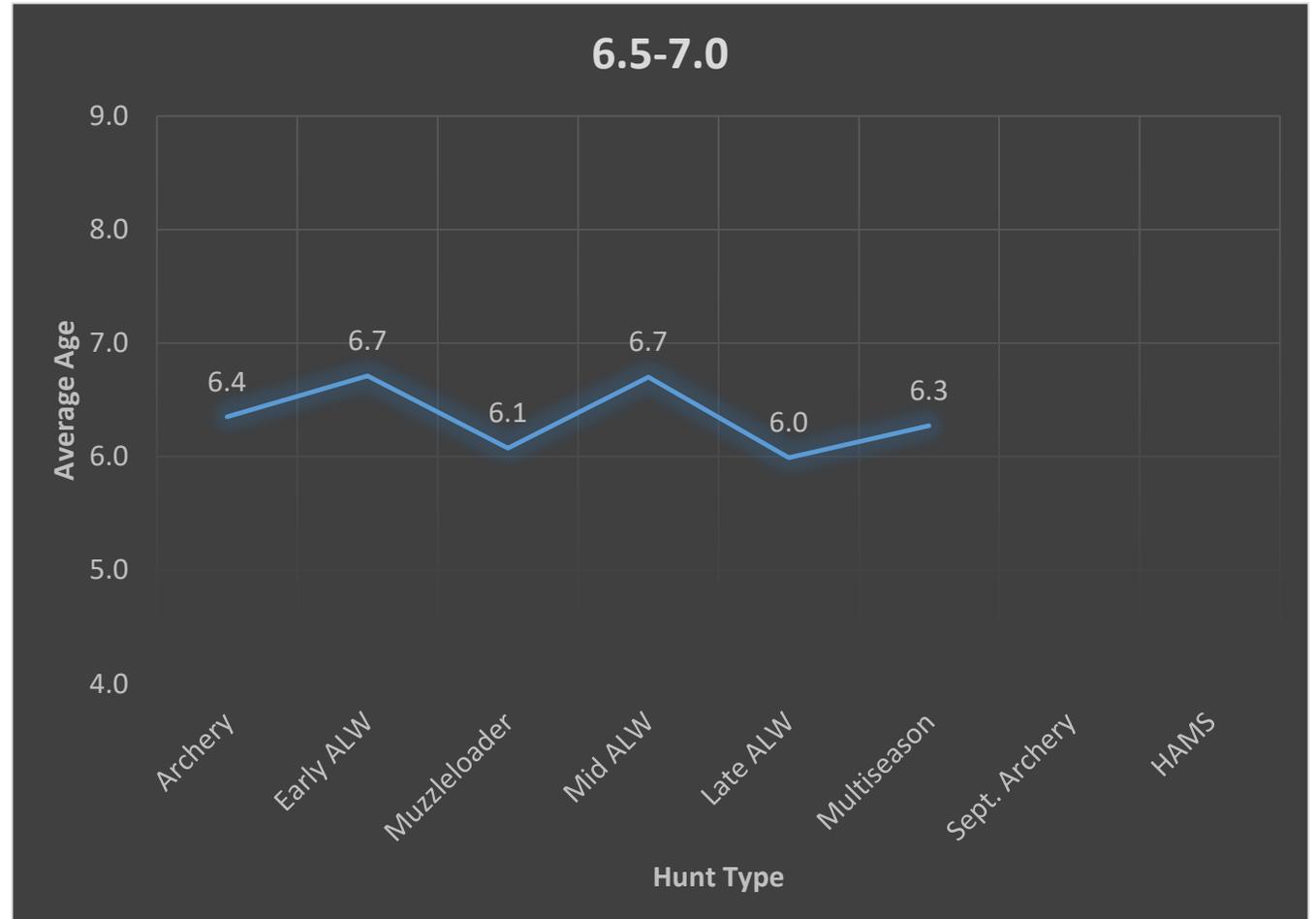
5.5-6.0

- Central Mtns, Manti
- Central Mtns, Nebo
- La Sal
- North Slope, Three Corners
- Oquirrh-Stansbury
- Plateau, Fishlake/Thousand Lakes
- Wasatch Mtns



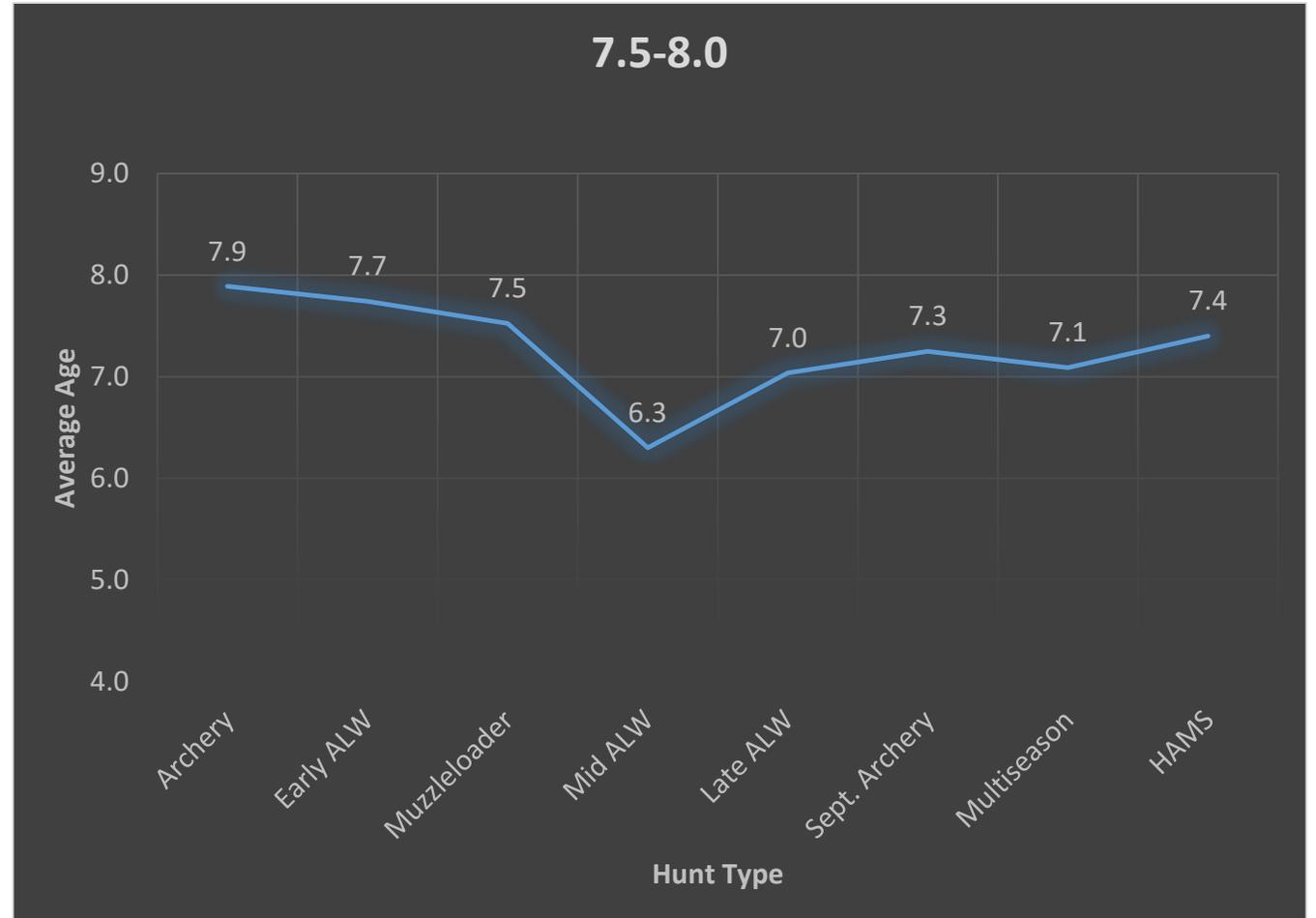
6.5-7.0

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- Cache, Meadowville
- Cache, South
- Monroe
- Mt Dutton
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- South Slope, Diamond Mtn
- Southwest Desert

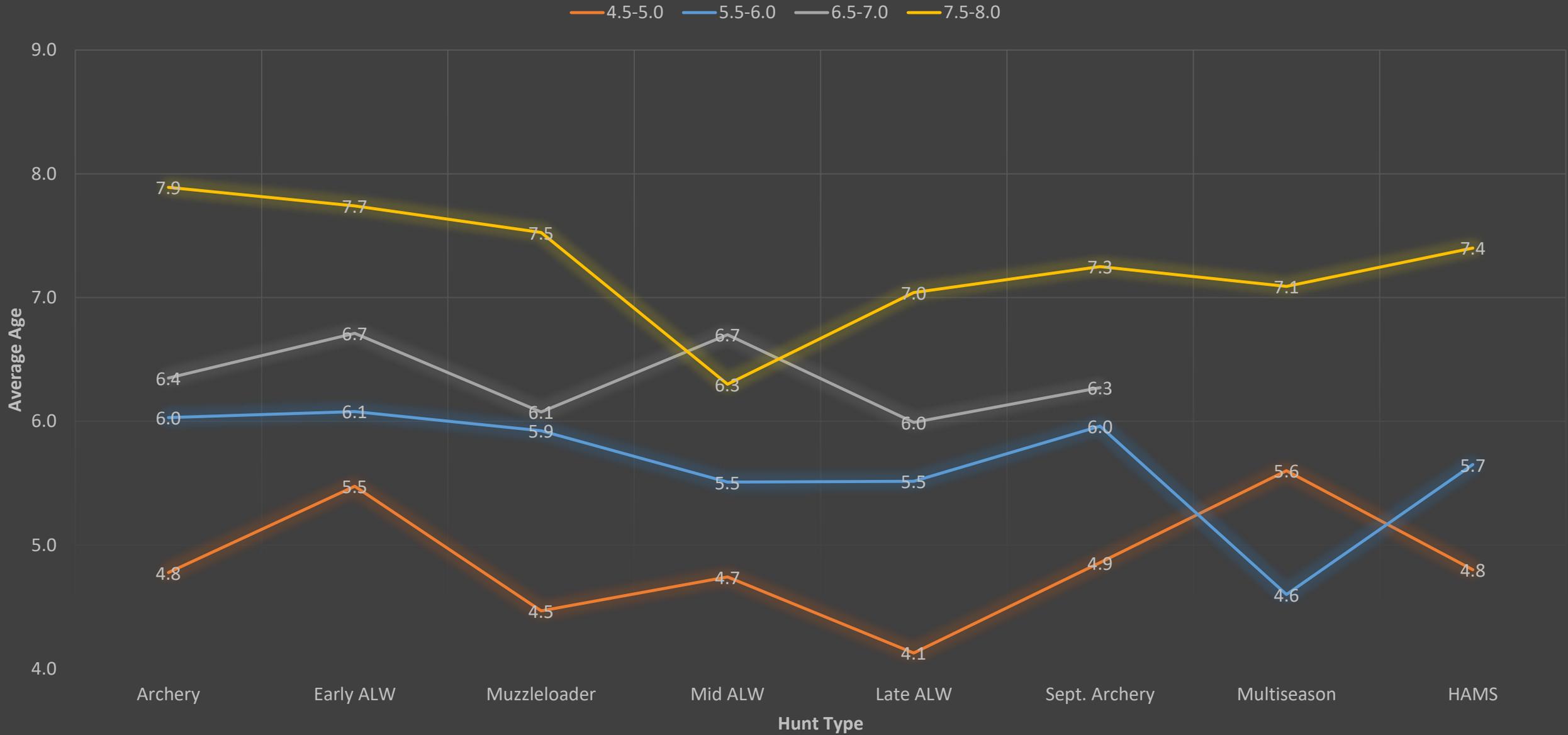


7.5-8.0

- Beaver, East
- Book Cliffs, Little Creek Roadless
- Fillmore, Pahvant
- Plateau, Boulder
- San Juan



Average Age by Weapon Type And Age Objective

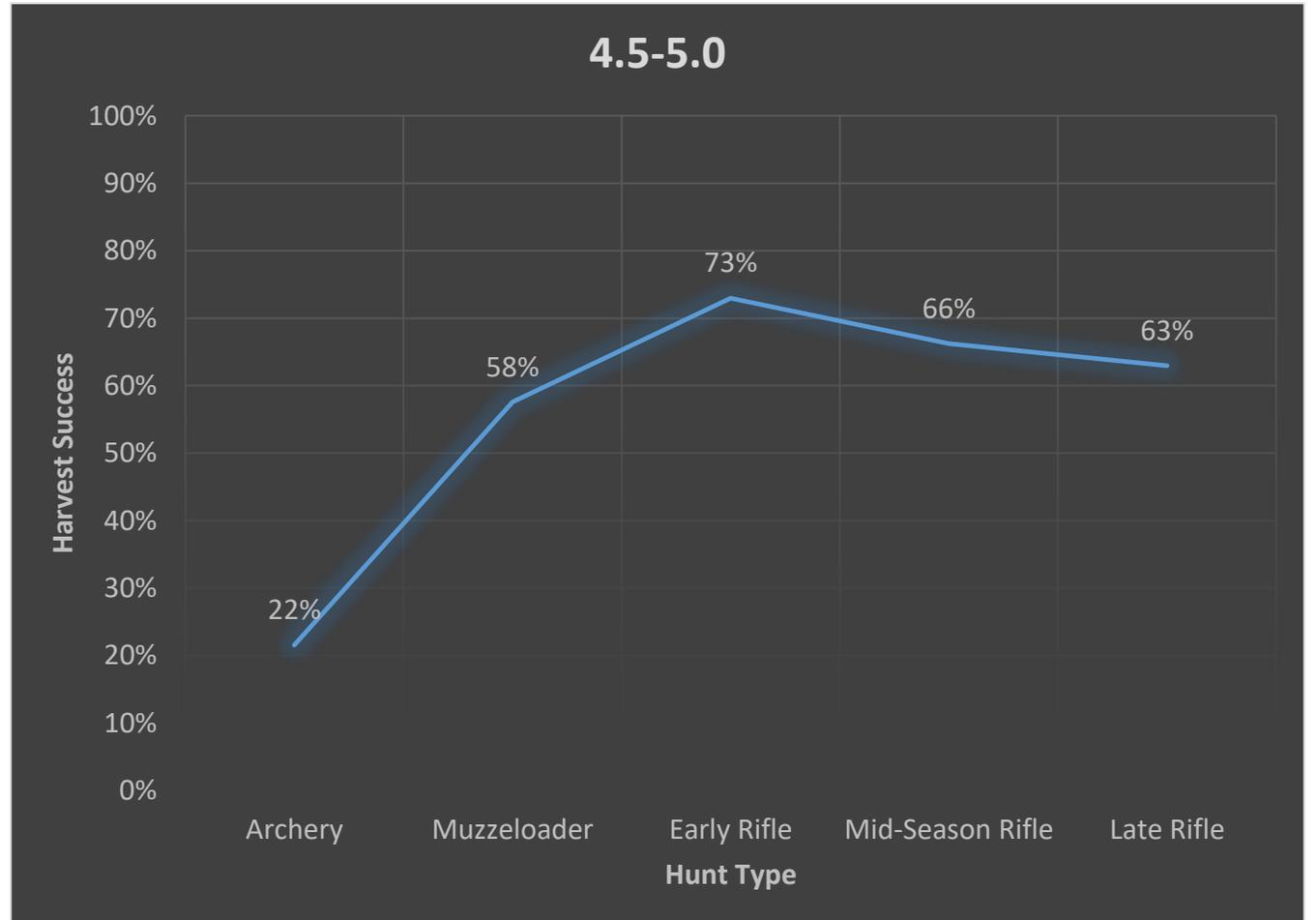




Success data w/ Mid ALW

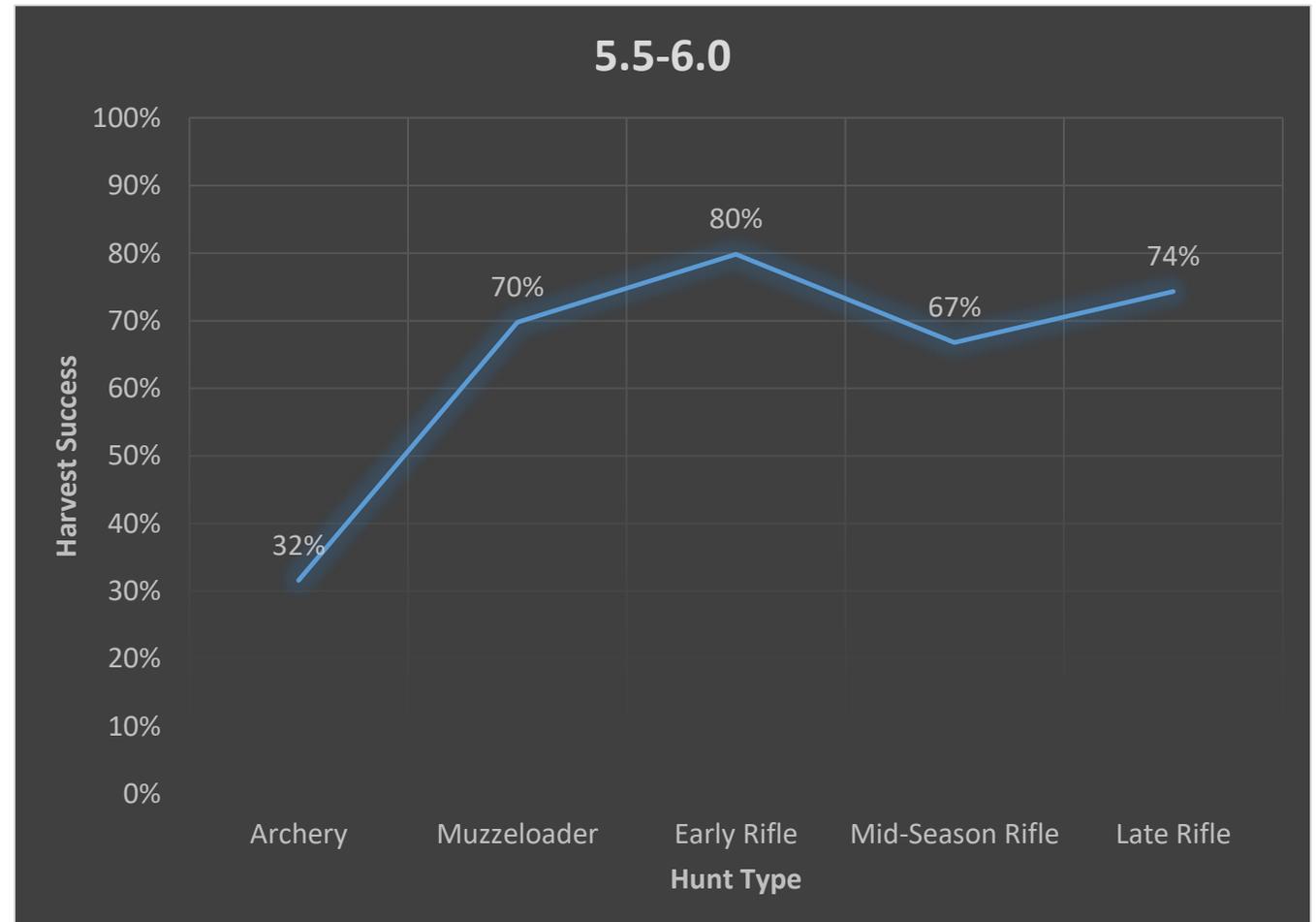
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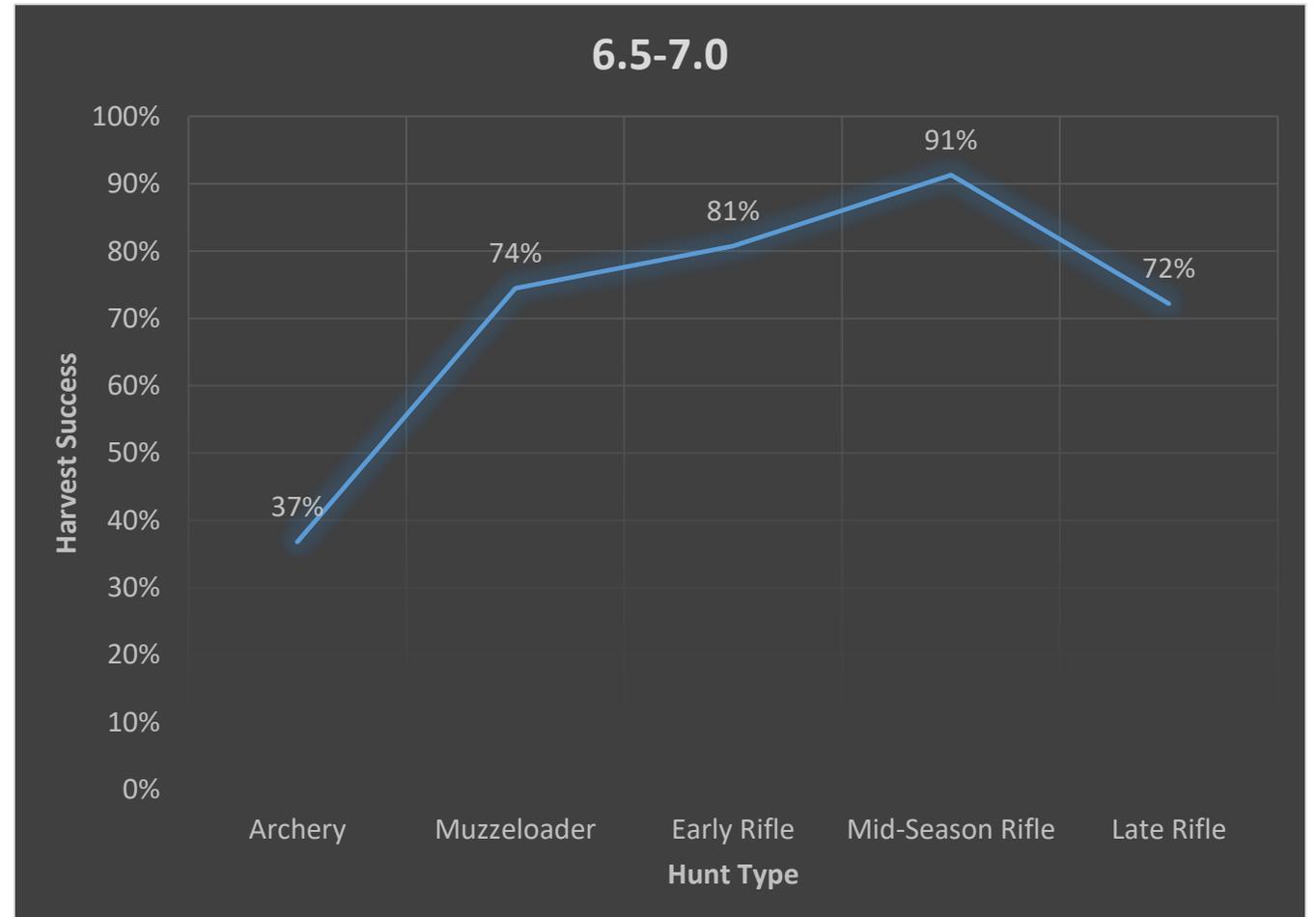
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- Central Mtns, Nebo
- La Sal
- Nine Mile, Anthro
- North Slope, Three Corners
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- Plateau, Fishlake/Thousand Lakes
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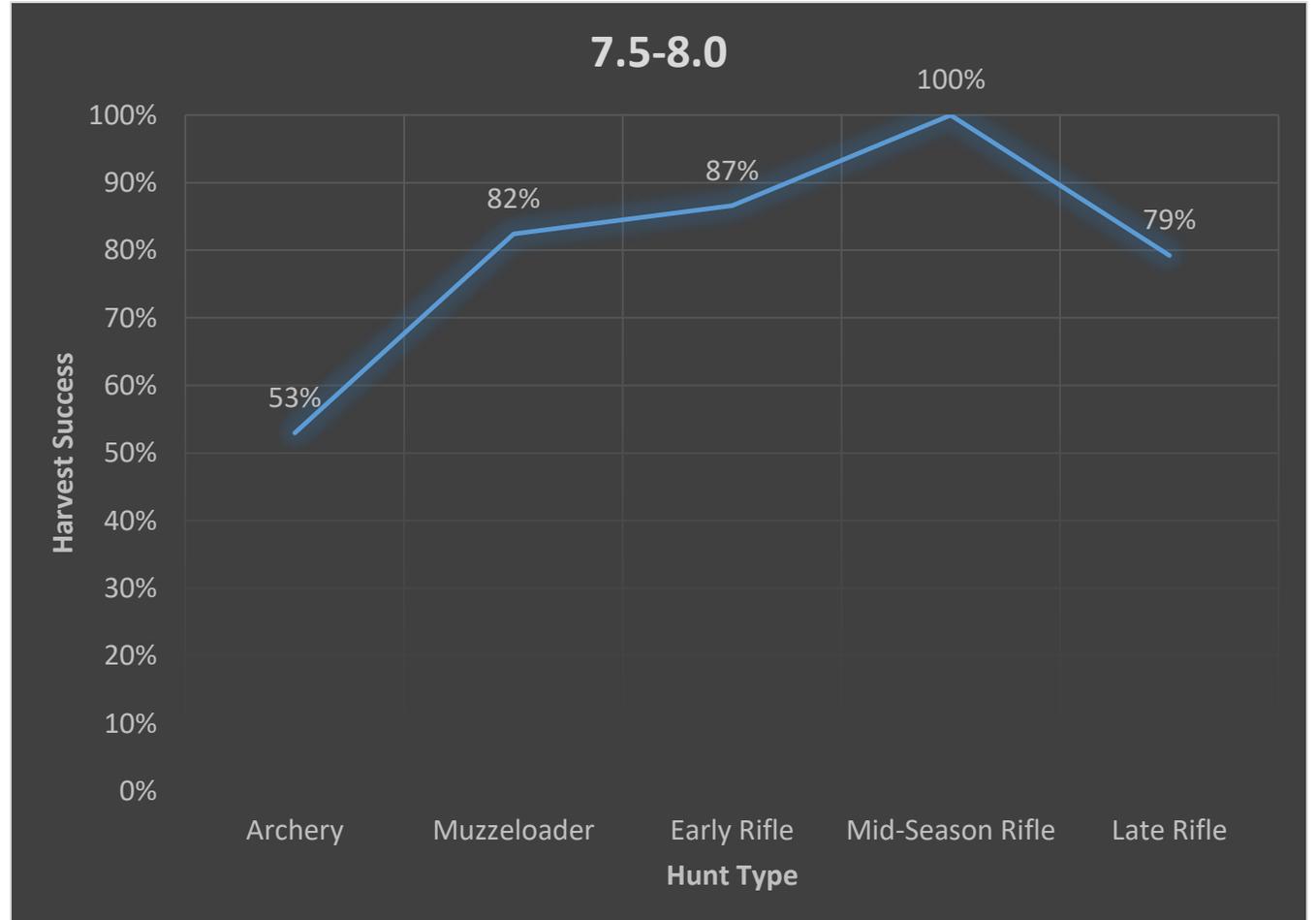
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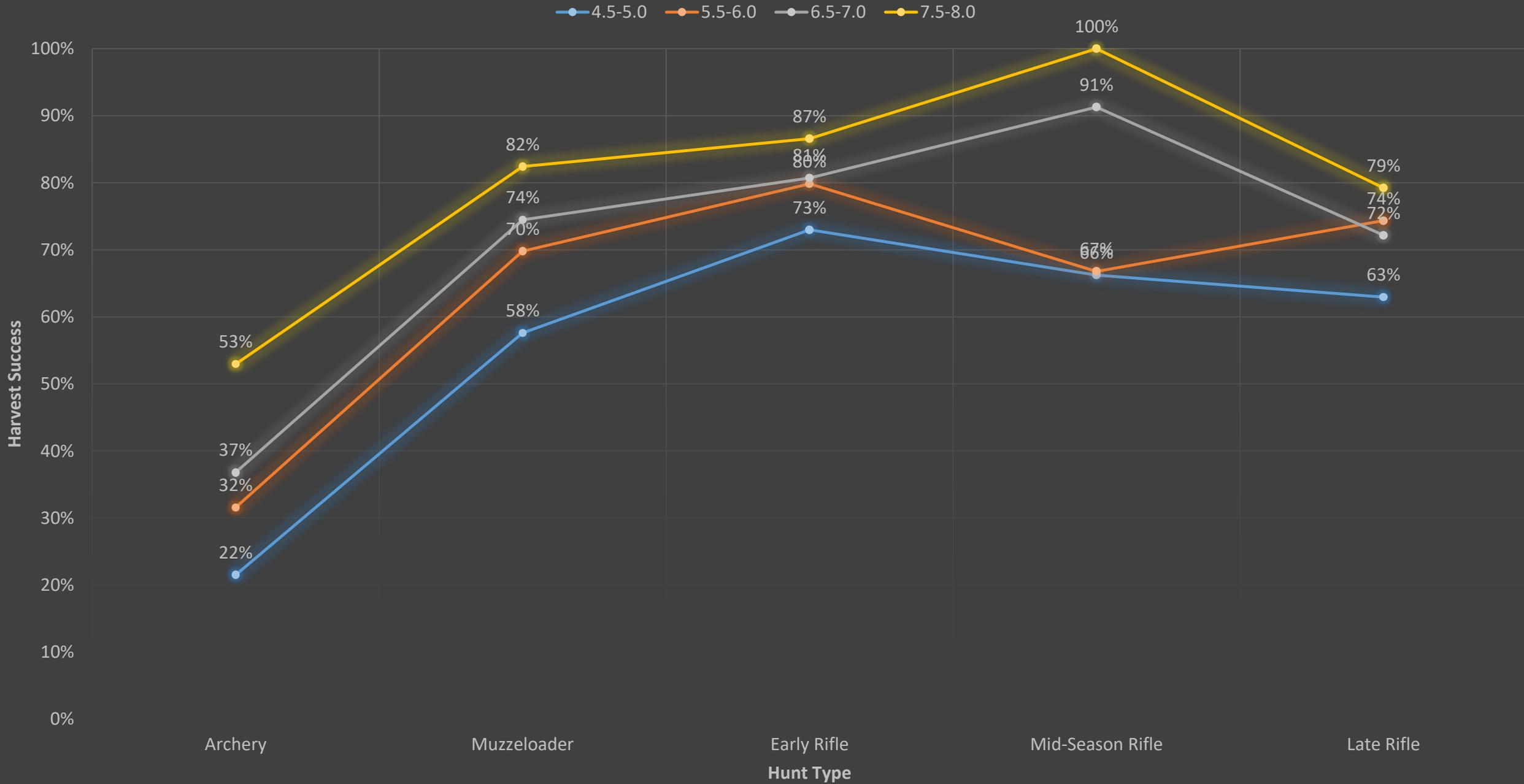


7.5-8.0

- Beaver, East
- Book Cliffs, Little Creek Roadless
- Fillmore, Pahvant
- Plateau, Boulder
- San Juan
- West Desert, Deep Creek



Success by Weapon Type and Age Objective



LE Elk Success by Weapon Type

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