



**Michigan Department of Natural Resources
Wildlife Division Report No. 3473
September 2007**

Printed by Authority of: P.A. 451 of 1994
Total Number of Copies Printed:25
Cost per Copy:.....\$ 0.77
Total Cost:\$19.26

Michigan Department of Natural Resources



SUMMARY OF THE 2004 MICHIGAN ELK HUNT

Dave Smith and Jennifer Kleitch

ABSTRACT

In 2004, 125 elk hunt participants were randomly drawn from a pool of 40,502 applicants. During the eight day season (December 7-14), 105 elk were harvested. A majority of the elk harvested were female (58), and young elk (0.5 to 2.5 years old) comprised 41% of the total harvest. Nearly equal numbers of elk were harvested on public and private lands. No positive cases of bovine tuberculosis (TB) or chronic wasting disease (CWD) were found in the harvested animals, though one case of brain worm (*Parelaphostrongylus tenuis*) was diagnosed in a 1.5 year old female. This report summarizes the results of the 2004 Michigan elk hunt and discusses hunter success, hunter effort, hunting distribution, and elk biological data.

INTRODUCTION

The 2004 elk hunt marked the twenty-first consecutive year of elk hunting in Michigan. Michigan elk hunters have harvested 4,059 elk since the 1984 hunt, which was the first elk hunt since 1964. A total of 859,757 applications were processed over the past twenty-one years, with 4,879 permits issued (Figures 1 and 2).

2004 ELK HUNT

A quota of 125 licenses was established to take an estimated 100 elk (40 antlered bulls and 60 antlerless elk) in 2004. The elk hunt application process did not change from previous years and 40,502 applications were filed for the 125 available elk licenses (Figure 1). The main objectives of the 2004 hunt were to harvest additional elk from the fringe areas of elk range, maintain the population at goal levels, and to increase the bull to cow ratio in core management units. These objectives were met during the December season, therefore, the optional January (2005) season was not utilized.



A contribution of Federal Aid in Wildlife Restoration, Michigan Project W-147-R.

Equal Rights for Natural Resource Users

The Michigan Department of Natural Resources (MDNR) provides equal opportunities for employment and access to Michigan's natural resources. Both State and Federal laws prohibit discrimination on the basis of race, color, national origin, religion, disability, age, sex, height, weight or marital status under the Civil Rights Acts of 1964, as amended (MI PA 453 and MI PA 220, Title V of the Rehabilitation Act of 1973 as amended, and the Americans with Disabilities Act). If you believe that you have been discriminated against in any program, activity, or facility, or if you desire additional information, please write the MDNR, HUMAN RESOURCES, PO BOX 30028, LANSING MI 48909-7528, or the MICHIGAN DEPARTMENT OF CIVIL RIGHTS, STATE OF MICHIGAN PLAZA BUILDING, 1200 6TH STREET, DETROIT MI 48226, or the OFFICE FOR DIVERSITY AND CIVIL RIGHTS, US FISH AND WILDLIFE SERVICE, 4040 NORTH FAIRFAX DRIVE, ARLINGTON VA 22203.

For information or assistance on this publication, contact: MDNR, WILDLIFE DIVISION, P.O. BOX 30444, LANSING, MI 48909-7944, -or- through the internet at "<http://www.michigan.gov/dnr>." This publication is available in alternative formats upon request. TTY/TTD (teletype): 711 (Michigan Relay Center).

Approximately 250 people attended the mandatory afternoon orientation at the Atlanta High School gym on December 8, and nearly 100 attended the voluntary morning meeting at the Eagle's Club in Atlanta. Montmorency County Conservation Club assisted at the shooting range with spotting equipment and targets, allowing hunters to sight in their rifles. The Atlanta Chamber of Commerce sponsored an "elk pole" in town, providing cash awards for biggest bulls and cows.

The 2004 hunt ran from December 7-14, and incorporated both public and private lands in Alpena, Antrim, Charlevoix, Cheboygan, Emmet, Montmorency, Otsego, Oscoda, and Presque Isle counties (4,783 sq. mi.). The managed elk range (approximately 700 sq. mi.) is divided into hunt units A, B, C, D, and E (Figure 3). The surrounding 4,000 square miles was included in the legal hunting zones (hunt unit X) to remove elk that had moved outside the desired range. Permits were required to be used within the designated hunt unit; however, all permits were valid within unit X. Antrim and Oscoda counties (approximately 1,025 sq. mi.) were added to hunt zone X in 2003.

Hunters were required to take all elk to a Department of Natural Resources (DNR) check station so biological data could be collected. Biologists recorded age, sex, and location of harvest for every animal. In addition, hunters were required to submit the heads of their elk within 14 days of harvest to be tested for TB and CWD. All age data used in this report are from lab-aged animals.

ELK HUNT RESULTS AND DISCUSSION

In 2004, 105 elk were harvested (41 antlered bulls and 64 antlerless elk) during the eight day season (Tables 1 and 2). Elk were not harvested in Alpena, Antrim, Charlevoix, Emmet, or Oscoda counties (Figure 3).

Weather conditions for the season remained excellent with the exception of rain on the second day of the hunt. The 105 successful elk hunters spent 303 hunter-days afield (Figure 4). Seventy-three percent (77) of the harvested elk were taken during the first three days of the hunt, followed by 13% (14) on the fourth and fifth days. The remaining 14% (14) were taken during the final three days of hunting. All elk were harvested in Cheboygan (14), Montmorency (49), Otsego (29), and Presque Isle (13) counties.

The largest antler spread on a bull elk was 43 inches, measured from outside of left antler to outside of right antler, at the points with the widest span. This elk was 5.5 years old, had 6 points on each antler, and was field dressed at 700 pounds. The heaviest cow was 4.5 years old, and field dressed at 415 pounds. Field dressed weights of the 99 animals weighed ranged from 165 lbs. (a female calf) to 705 lbs. (a mature bull). Six animals from the harvest were not weighed.

Total harvest rates were nearly evenly divided between private and public lands but were unequal when examined by hunt unit (Table 3). Within the "core" hunt units (A, B, C, D, and E), 27% (19) of the 69 elk were taken from private lands, while 80% (29) of the 36 elk harvested were taken from private lands within hunt unit X.

Elk harvest and hunter success were not distributed evenly within units A, B, C, D, and E (Tables 1-3 and Figure 5). This may be due to an increased effort by some local private landowners in soliciting hunters to remove elk from their property with lower fees charged for guiding. Six elk, five bulls, and one cow were taken off that ranch.

Michigan's 2004 elk herd was in excellent condition with few reports of sick or injured animals. All elk collected, either by road kill, poaching, or hunting were tested for TB, CWD, brainworm, and other diseases. No positive cases of TB or CWD were found, though one case of brainworm was diagnosed in a 1.5 year old female. A research study was initiated in February 2003, when 40 elk were radio collared. One study objective was to learn more about the interaction of elk and deer on the eastern edge of Michigan elk range, where TB transmission is a management concern.

The DNR's Wildlife Disease Lab determined the age composition of the elk harvest during the 2004 season using central incisor cementum annuli counts (Figure 6). The total elk harvest was comprised of 41% young elk (0.5 to 2.5 years old), 37% prime-aged elk (3.5 to 7.5 years old), and 22% old animals (≥ 8.5 years old). Nearly all female elk harvested were young or prime-aged animals (88%), while male harvest was more evenly distributed across age classes (Figure 6).

Conservation Officers commented that there were few complaints or activities requiring investigations during the 2004 hunt. Two hunters believed they wounded an elk but were unable to retrieve it after searching the required time of one full day. At the orientation meeting, hunters were asked not to shoot radio-collared animals due to their research value. Hunter cooperation in passing up collared elk was excellent; only two radio-collared elk were harvested.

Fifty-two percent (55) of successful hunters indicated they acquired the services of a hunting guide during all or some part of their hunt. The remaining successful hunters (50) completed their hunt without the services of a guide.

MANAGEMENT ISSUES

During summer and early fall 2004, DNR staff began to receive complaints of elk damage to corn north of Hillman (Montmorency Co.) and Johannesburg (Otsego Co.). These agricultural complaints came too late to modify the 2004 elk hunting season framework, but efforts to harass problem elk and use of high-voltage portable fencing stopped further damage. Complaints about elk damage to aspen and oak regeneration were also received from the Black River Ranch and Canada Creek Ranch, both of which are in the core elk range.

Small population increases or redistributions are taking place south of Vienna (Montmorency Co.), west of the I-75 Highway corridor (Cheboygan and Otsego Co.), and south of Onaway (Presque Isle Co.). These developments, along with the forest regeneration and crop complaints, create the need for some adjustments in the 2005

hunting season framework. To manage these problem spots, modifications to the hunt unit boundaries as well as harvest quotas for 2005 may be required.

ACKNOWLEDGEMENTS

We thank Michigan's elk hunters for their continued cooperation and support, the Montmorency County Conservation Club, the Atlanta Chamber of Commerce and the Atlanta Eagles. Many Wildlife Division and other Department of Natural Resources personnel are involved and play a role in making Michigan's elk hunting program a success. Glen Matthews, Paul Friedrich, and Thomas Cooley provided background information regarding elk herd and disease issues. Cheryl Nelson-Fliearman, Mike Bailey, Rod Clute, Pat Lederle, Doug Reeves, and Bill Moritz reviewed and edited previous versions of this report. Special thanks goes to Dan Walsh, Ph.D. Candidate-Michigan State University for sharing his elk collaring research project by sharing current data and information.

Table 1. Male elk harvest by age class and hunt unit, 2004.

| Hunt Unit | Age Class (Years) | | | | | | | | | | Total |
|-------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|
| | 0.5 | 1.5 | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | >8.5 | |
| A | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| B | 2 | 1 | 0 | 1 | 3 | 1 | 3 | 1 | 0 | 1 | 13 |
| C | 1 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 4 |
| D | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| E | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 4 |
| X | 2 | 1 | 4 | 0 | 2 | 2 | 5 | 1 | 0 | 3 | 20 |
| Total Males | 6 | 3 | 6 | 2 | 8 | 6 | 8 | 2 | 0 | 6 | 47 |

Table 2. Female elk harvest by age class and hunt unit, 2004.

| Hunt Unit | Age Class (Years) | | | | | | | | | | Total |
|---------------|-------------------|-----|-----|-----|-----|-----|-----|-----|-----|------|-------|
| | 0.5 | 1.5 | 2.5 | 3.5 | 4.5 | 5.5 | 6.5 | 7.5 | 8.5 | >8.5 | |
| A | 3 | 2 | 2 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 14 |
| B | 1 | 0 | 3 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 9 |
| C | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 5 |
| D | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 4 | 9 |
| E | 1 | 1 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| X | 2 | 2 | 3 | 4 | 2 | 1 | 1 | 0 | 0 | 1 | 16 |
| Total Females | 11 | 6 | 11 | 11 | 5 | 2 | 3 | 2 | 0 | 7 | 58 |

Table 3. Elk harvest by land ownership and sex, 2004.

| Hunt Unit | Number of Elk Harvested | | | | Total |
|-----------|-------------------------|--------|-------------|--------|-------|
| | Private Land | | Public Land | | |
| | Male | Female | Male | Female | |
| A | 4 | 1 | 0 | 13 | 18 |
| B | 6 | 6 | 7 | 3 | 22 |
| C | 4 | 0 | 0 | 5 | 9 |
| D | 1 | 4 | 1 | 5 | 11 |
| E | 4 | 0 | 0 | 5 | 9 |
| X | 3 | 12 | 17 | 4 | 36 |
| Total | 22 | 23 | 25 | 35 | 105 |



Figure 1. Number of Michigan elk hunt applications (1984 – 2004).

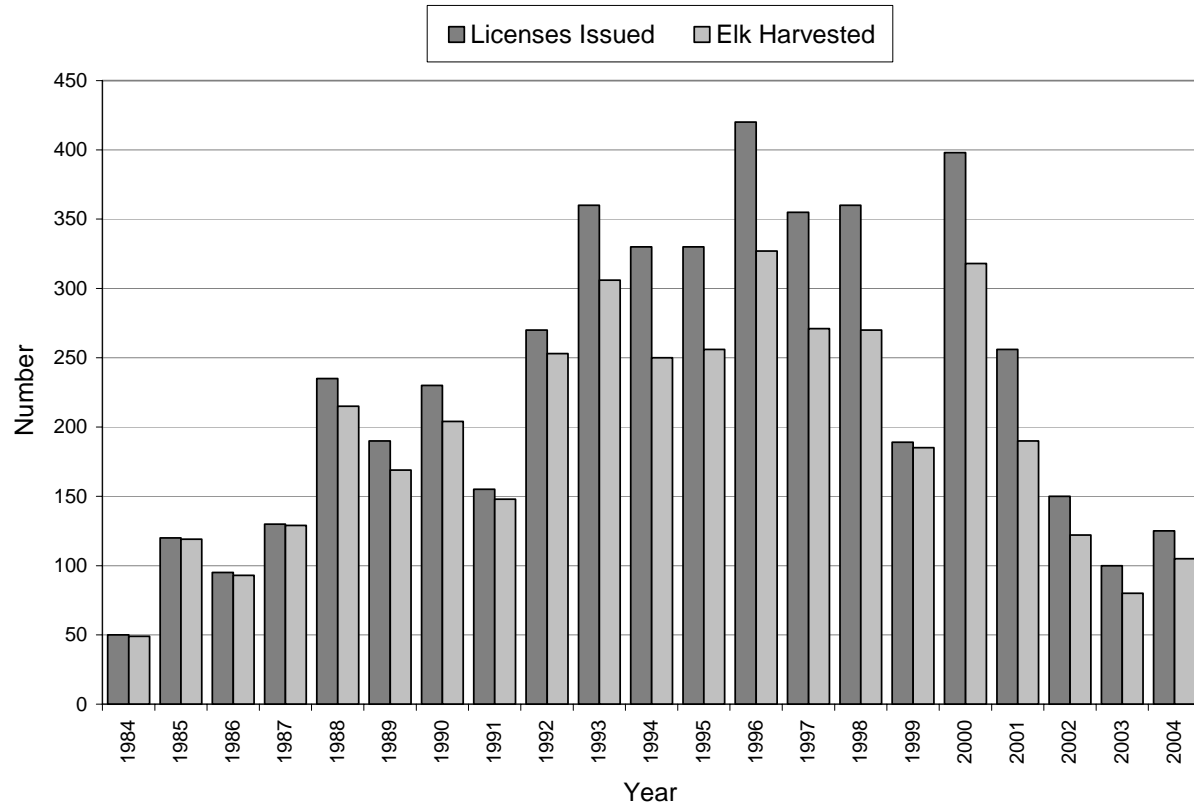


Figure 2. Number of Michigan elk licenses issued and elk harvested (1984 – 2004).

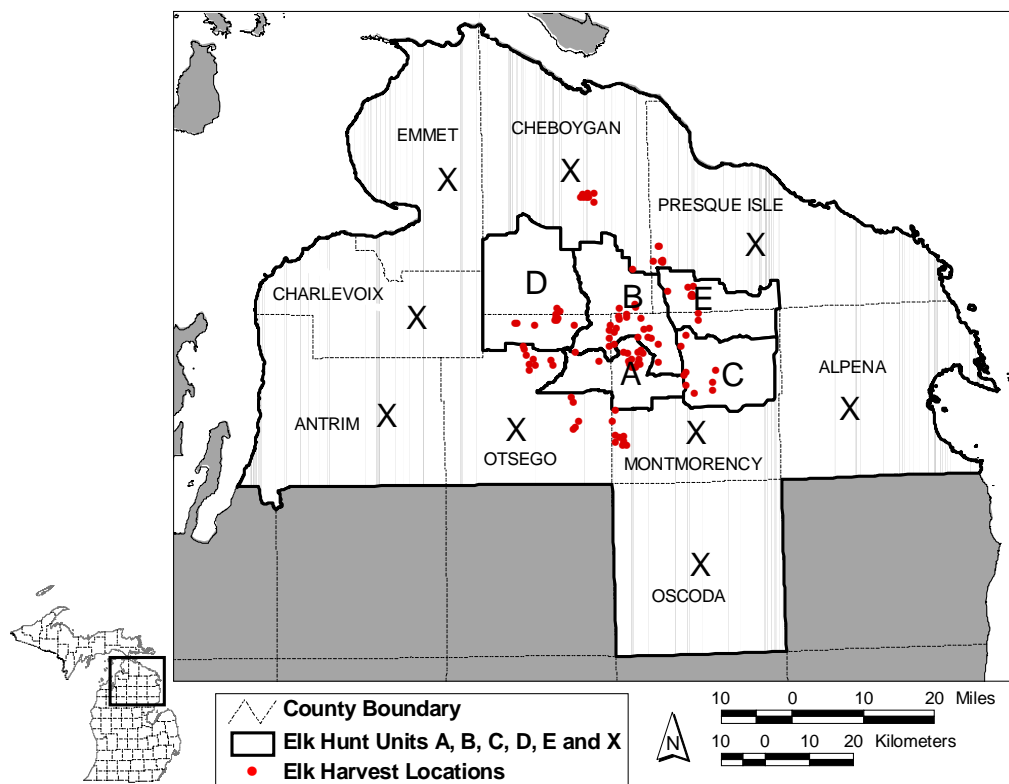


Figure 3. Locations of elk harvest within hunt units, 2004.

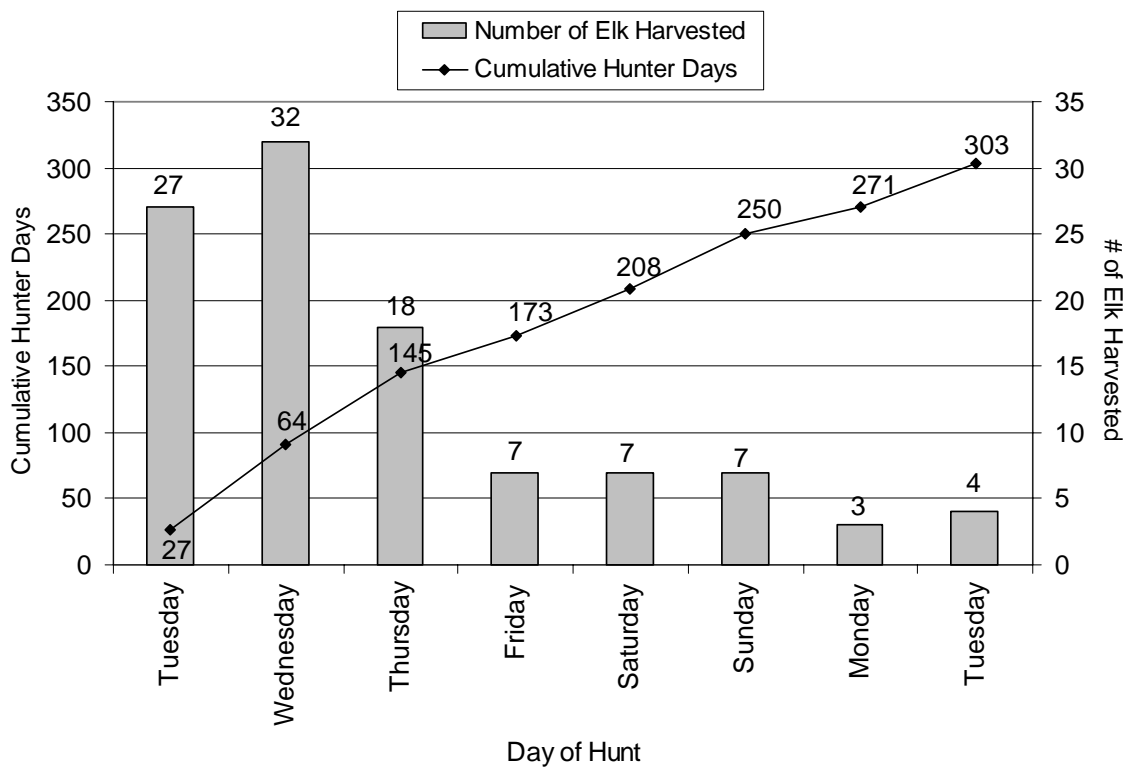


Figure 4. Michigan elk harvest and hunting effort by successful hunters, 2004.

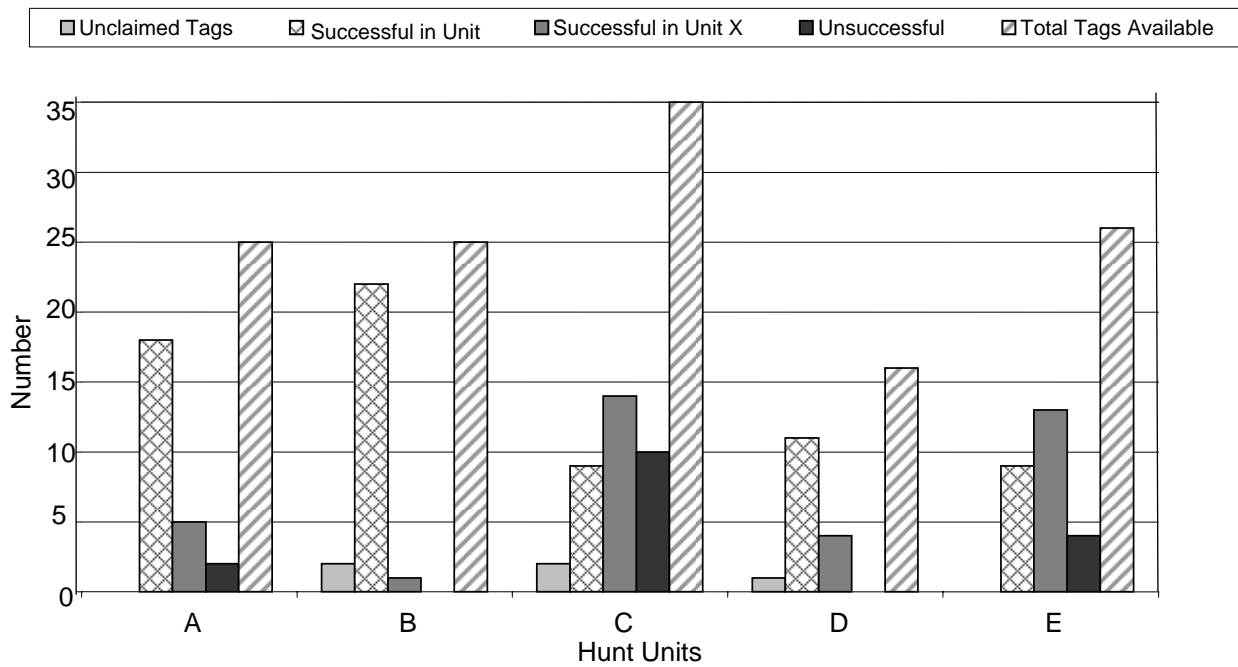


Figure 5. Elk hunting success within Michigan hunt units, 2004.

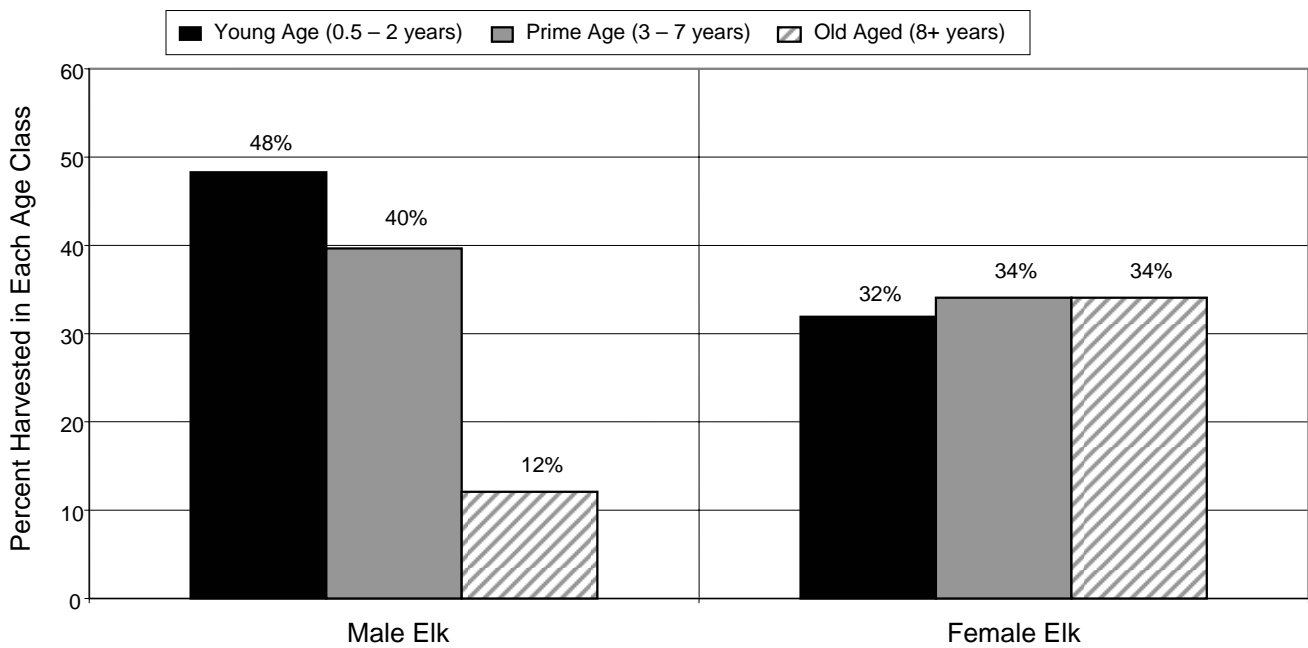


Figure 6. Percent of elk harvested in Michigan by sex and age class, 2004.