

DMU-174

Saint Clair Flats

Deer Management Unit

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Area Description

The St. Clair Flats Deer Management Unit (DMU) lies in St. Clair County located in the Southern Lower Peninsula (SLP) region and covers Dickinson and Harsens Islands, as well as the smaller islands associated with the “St. Clair Flats”. The majority of public hunting opportunities in this DMU are available at the 3,350 acre Harsens Island Managed Wildlife Area. Topography is relatively flat with wetland habitat and soils that provide thick cover and limited agriculture. The landscape is highly unique in the fact that many of the areas suited for deer hunting are somewhat challenging to access. Public lands in this unit are predominantly marsh, wet meadows, agriculture, prairie, or lowland hardwoods. Habitat normally associated with good cover for deer (e.g., woodlots and shrub/brush) is isolated and exists in small patches, however deer use the immense cattail and invasive Phragmites stands as escape cover.

Management Guidance

Two main goals guide the deer management in this DMU: 1) impact management; and 2) hunting opportunities. Impact management refers to reduction of undesirable effects associated with deer over-abundance. Crop damage and forest regeneration impacts due to over-browsing are examples. In an effort to find a middle-ground in which deer numbers provide ample hunting and wildlife viewing opportunities and mitigate unwanted impacts, we review data from several sources to adjust the harvest strategy as needed.

Deer Harvest Analysis

These data include deer harvest data from check stations, an annual survey, and deer-related information collected by regional wildlife biologists (e.g., number of deer harvested at Harsens Island Managed Wildlife Area, annual winter surveys, staff observations, habitat assessments, etc.).

There has been a decline of both antlerless and buck harvest over the past decade, however due to the relatively small size of this DMU there are also a relatively small number of hunters in which to survey with a statewide effort (Figure 1). Therefore data suggest that there are some years with no deer harvest, however we know this is not the case due to the number of deer witnessed during aerial winter surveys and deer that are harvested and brought to the check station for registration.

Still, the data shows a decline in harvest similar to the check station data. This decline may be due to deer utilizing the 450 acre refuge more as a result of increased hunting pressure, a reduction in deer population or changing behaviors in hunters, or a combination of the three. Hunting pressure has increased in recent years during the archery season due primarily to the introduction of crossbows.

Hunting technology has also increased the effectiveness of shotguns and muzzle-loading rifles. It is possible that this increase in hunting pressure has resulted in deer utilizing the refuge more than in the past. The liberalization of antlerless permits was intended to limit the productivity of the deer herd and may have contributed to a population decline in this DMU, but aerial surveys suggest otherwise. Other environmental factors, such as poor weather immediately preceding fawning, increased predation, and changing agricultural practices, can also impact deer numbers. Ultimately, determining a cause of any population adjustment is difficult when assessing this relatively small and remote geographic region.

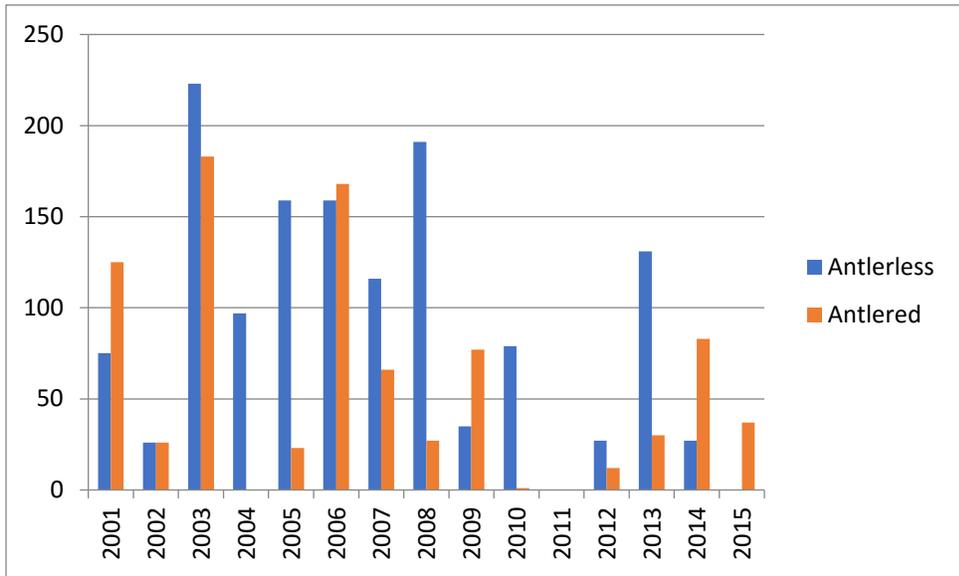


Figure 1. Antlered and Antlerless harvest-DMU 174, 2001-2015

Hunter perceptions and goals can also impact harvest numbers. A large scale shift in hunter decisions to target older deer and pass on younger bucks results in reduced harvest numbers and increased hunter effort, as there are fewer deer in older age classes. Success and harvest rates are thereby suppressed not by population decline, but by human decision-making processes.

Deer Condition

Yearling main antler beam diameter, measured just above the burr, and number of points are useful for determining deer body condition. These measurements are recorded by MDNR as hunters voluntarily present harvested deer at check stations throughout the state. When aggregated by DMU, the average antler beam diameter and number of points for yearling bucks over multiple years is calculated. An upward trend indicates improving herd condition, whereas a downward trend points to declining herd condition.

Generally, herd condition is a function of environmental and landscape factors. An abundance of highly nutritional food resources and good cover is beneficial for herd condition. Depletion of these resources through overpopulation leads to a decline in herd condition, observed as low yearling main beam diameters and antler points. In southern Michigan, winter severity is not likely to impact deer condition on a population level. Environmental factors may impact deer condition indirectly, though. A late frost or an especially rainy spring can negatively influence crop production which is a major source of nutrition in this DMU. Likewise, changes in land use practices can affect cover and food resources.

In the St. Clair Flats DMU, the average antler beam diameter has been slightly declining, similar to the statistically significant decline for the entire SLP (Figure 2).

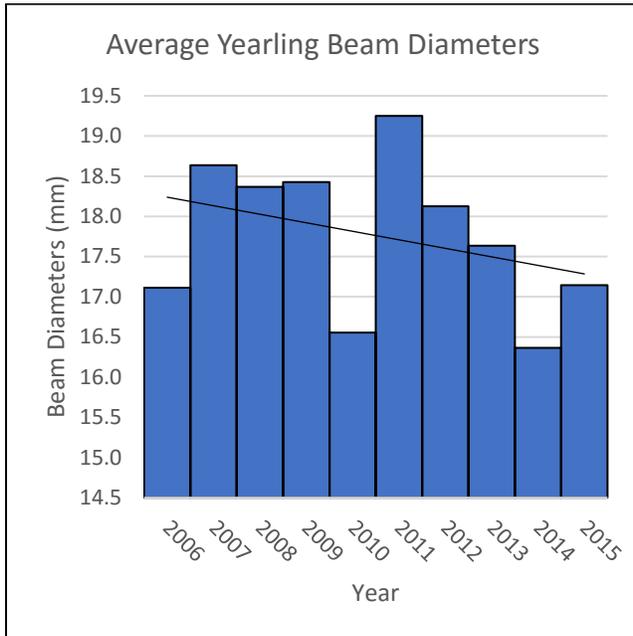


Figure 2. Average yearling beam diameters in DMU 174, 2006-2015.

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From 2006 through 2015 we have observed a declining population in DMU 174, however since 2011 that population has been somewhat stable, and that fluctuates between an estimated 150 to 250 animals. Population estimates for DMU 174 (St. Clair Flats Wildlife Area Islands) were determined by conducting field observations and aerial surveys. Complete snow coverage is needed to conduct aerial surveys, so there are some years with missing data.

Due to the remoteness of the islands and the lack of adequate biological data, population estimates are based largely upon field observations and aerial surveys. Crop damage has been experienced at the state managed waterfowl area, but has been minimized by issuing antlerless permits since the early 1990's. Highway kill information is not applicable to this small DMU. Hunter harvest tends to fluctuate, but the recent success rates have been somewhat stable. One important factor to consider is that bucks and does are born at similar rates, close to equal. In order to maintain healthy buck to doe ratios, harvest/mortality rates should also be similar to birth rates. In DMU 174, harvest rates of bucks and does are very close, and this is probably a reflection of hunter's acceptance and knowledge of this important factor. In order to maintain this trend, a goal for this DMU is to maintain the current level of antlerless harvest to closely track buck harvest.