

WORKSHEET FOR ESTABLISHING DEER POPULATION GOALS – DMU 081 2006- 2010

Adjacent DMU(s) used in calculating goal: 030, 046, 038, 047

2006 - 2010 goal: 17,300 to 20,200 deer (24 deer/sq mi to 28 deer/sq mi)
Estimated 2005 population 25,600 deer

1996 - 2004 goal: 16,500 deer (23 deer/sq mi):

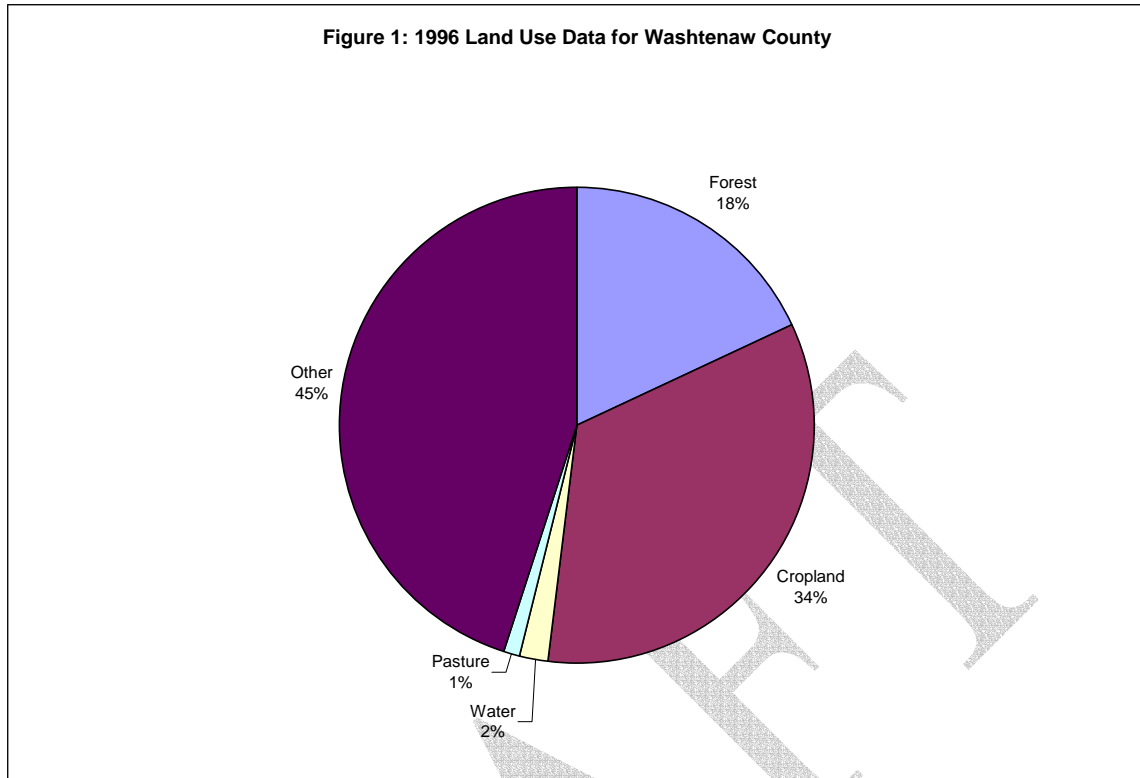
Arguments for 2006-2010 Goal:

The proposed goal for Washtenaw County (DMU 081) was determined using data collected and experiences gained since the previous goal was set in 1996. The new goal is based on current habitat conditions, the current population estimate and growth trend, social carrying capacity (the level at which deer are tolerated in society), deer-vehicle accident trends (if any), and herd health. There is now a better sense of the sustainability of deer in this county both ecologically and socially. The goal in 1996 was not the actual population in that year. The population is now higher than in 1996. The current population estimate suggests that there are 35 deer per square mile. At this level, the deer herd in Washtenaw County is healthy with some of the largest antlered deer being harvested in this county. The information provided below addresses these data and experiences relevant to the current and proposed deer numbers in Washtenaw County.

Habitat:

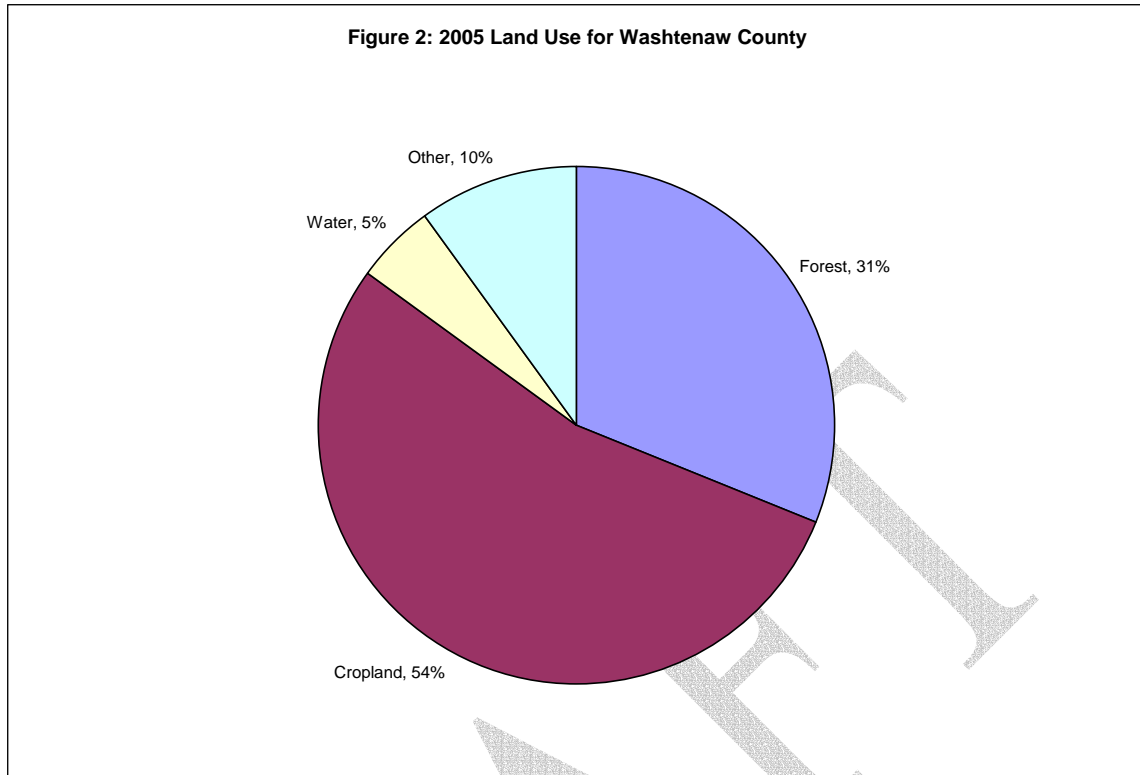
DMU 081 is comprised of all of Washtenaw County. Much of Washtenaw County offers habitat for deer. Habitat is the area or environment where a species or a population lives. Washtenaw County is located in south-central lower Michigan and is primarily private land (96%) with a few large public land state recreation areas and a few small state game areas (4%). The landscape consists of rolling hills scattered with cropland and mature forests in the western half and extensive urbanization in the eastern half. Deer utilize forested areas, crop fields, idle fields, thick shrubby areas, and large swamps in this county. Some deer are also adapted to living in relatively urban areas as well. When the previous deer goals were established in 1996, the land cover data showed that 18% of the county was forested and 34% was cropland, in addition to other cover types that have less value to deer ecologically (Figure 1).

Figure 1: 1996 Land Use Data for Washtenaw County



*Source: Michigan Agricultural Statistics Service

Today, these covertypes appear to be similar but have changed slightly by an increase in cropland and forested areas (Figure 2). With these data coming from different sources, the amount of increase is unknown; however, the trend is still the same. The increase in forested land is due to the forested category now including the covertypes of upland shrub, lowland shrub and areas with low densities of trees. The 1996 data called for a 16.7 percent stocking rate of trees of any size, which did not include brush species or understocked areas. The minimum mapping unit in both datasets is one acre. This increase in suitable food and cover for the deer herd is noticeable as the deer population in this county has shown an increasing trend for the past 14 years (see next section). Agricultural crops, such as corn and soybeans, are the main food source for deer in this county with forest vegetation available as well. Essentially, their food source is unlimited. Winter cover is also abundant via standing crops, forested areas, and large brushy lowland areas. This food/cover combination makes for a healthy, highly reproductive deer herd in Washtenaw County.

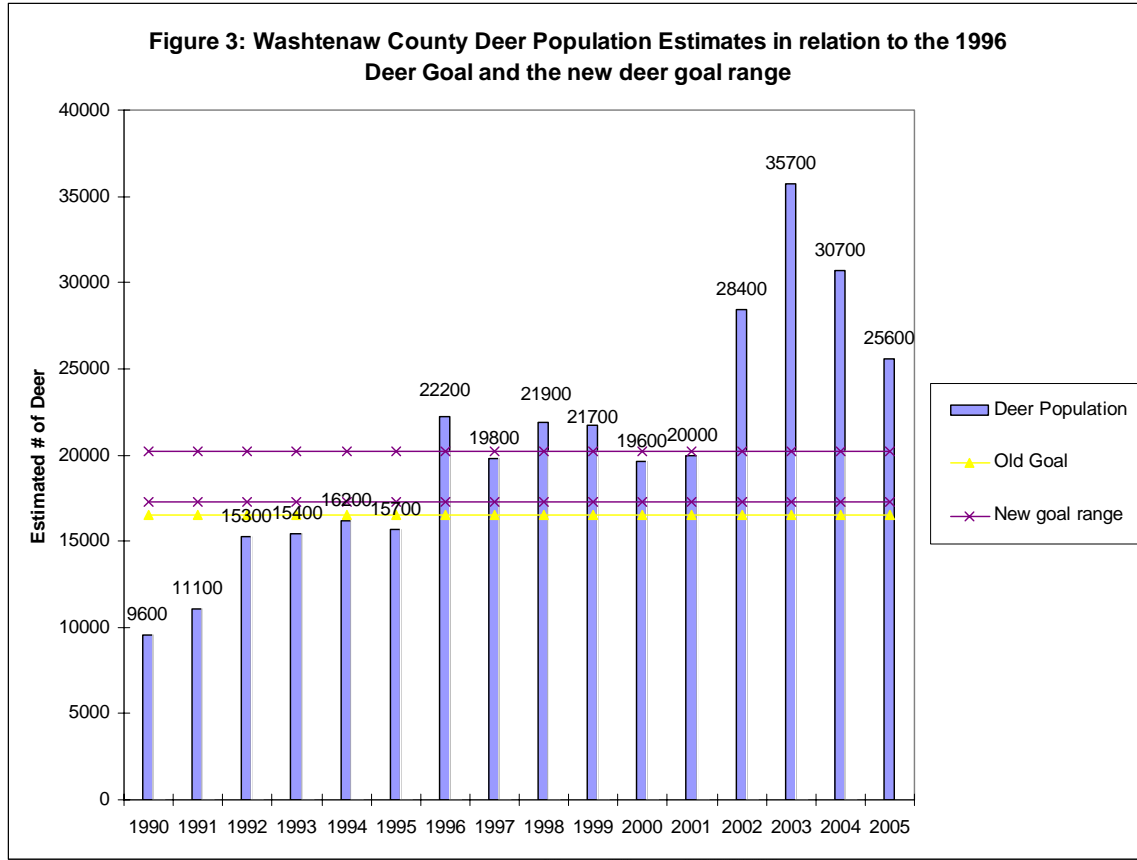


*Source: Michigan DNR, IFMAP data

Since Washtenaw County has a higher percentage of forested land than many of the adjacent DMUs, this county seems to be a habitat magnet for deer. Ecologically, forests can generally sustain a higher deer density, although this is not advised, because higher densities can cause long term negative ecological impacts to the forest flora. The deer population in Washtenaw County is estimated at 35 deer per square mile this year, and at this density landscape damage and crop damage from deer are becoming more evident.

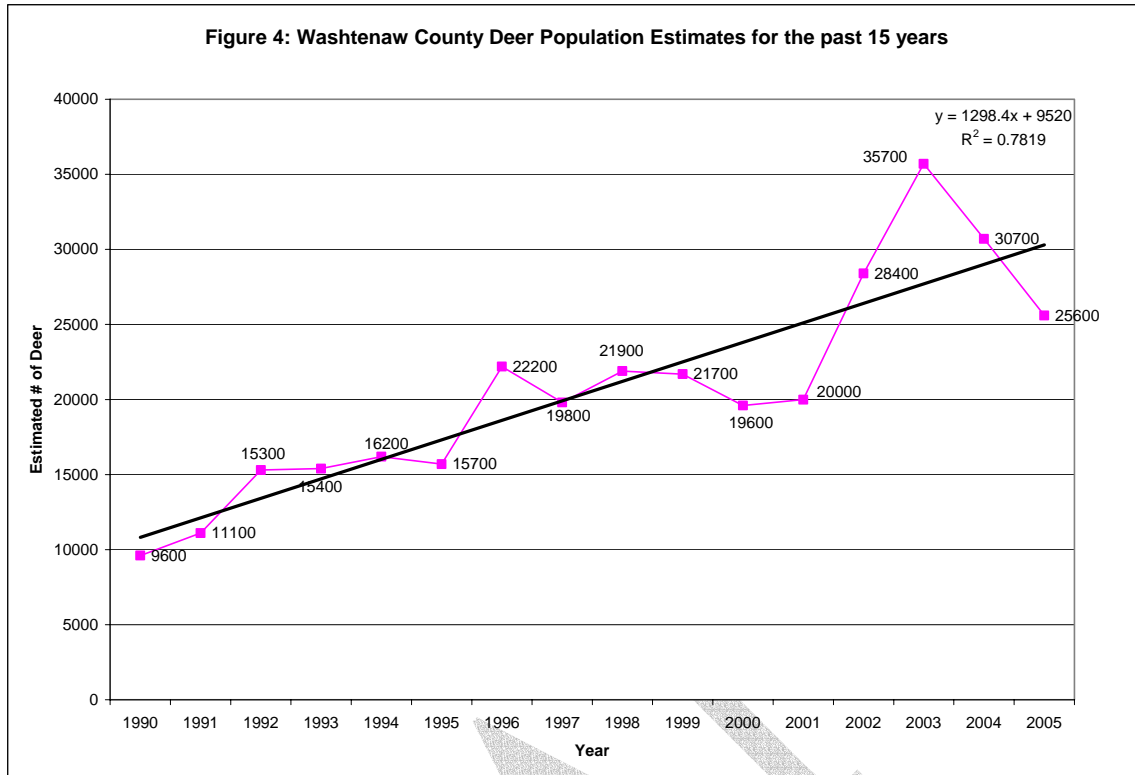
Ecological Implications via data and observation:

Currently, the Washtenaw County deer population is 55% over the goal set in 1996. As mentioned, the current estimated number of deer per square mile is 35. This occurrence of being over goal has been the trend for the past 10 years (Figure 3).



*Source: Michigan DNR, SAK Model

When developing a population estimate for Washtenaw County, it is difficult to determine the overall validity of the Sex-Age-Kill (SAK) model. To run the model with confidence, at least 100 antlered and 200 antlerless deer are needed. There are rarely enough deer checked from Washtenaw County to meet this requirement, therefore previous years data are lumped together to run the model. When data are lumped, the estimate may not reflect any given year's population, but will demonstrate the long term trend. The SAK model shows a trend for the past 15 years that the deer population in Washtenaw County is steadily increasing (Figure 4) with a 10 year average of approximately 23,800 animals (33 deer/sq. mile) and a 5 year average of approximately 30,100 animals (42 deer/sq. mile). The population appears to be continuing on an upward trend. The upward trend is supported by the continuance of excessive complaints regarding landscape damage, crop damage and deer-vehicle accidents.



*Source: Michigan DNR, SAK Model

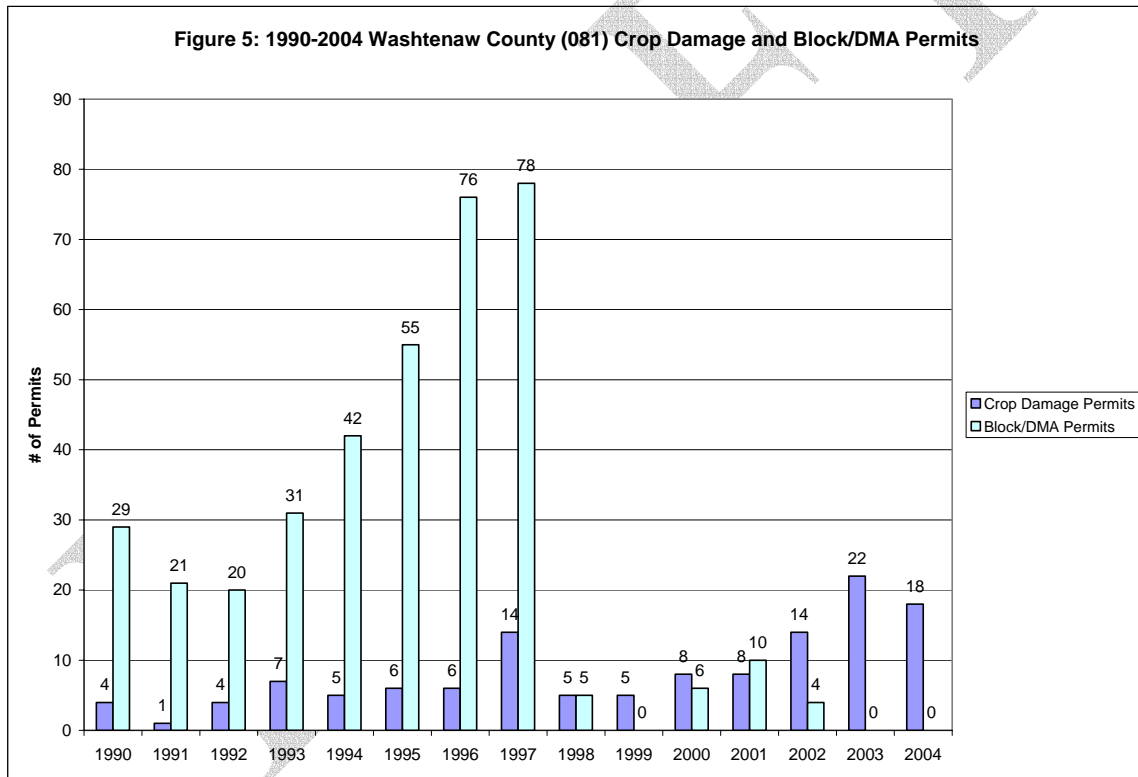
With the estimates given above, the deer population in Washtenaw County appears to be quite healthy. Reproductive rates have remained consistent with twin fawns being normal. There are also sporadic observations of triplets. The average harvested doe to buck ratio for the past 10 years was 1.8 does for every buck according to biodata from statewide deer check stations. Beam diameters for yearling antlered bucks (1 ½ years) and adult antlered bucks (2 ½ + years) have remained quite stable for the past 10 years with no significant increasing or decreasing trends. Furthermore, the average number of points for a yearling antlered buck has remained at approximately 5.7 points and the average number of points for adult antlered bucks has remained near 8 points over the past 10 years.

Biological Considerations:

As mentioned above, herd health appears to be excellent. Disease testing has been done on a sample of the Washtenaw County deer population for the past 9 years. These tests have shown no evidence of Bovine Tuberculosis in this county. In recent years, tests for Chronic Wasting Disease in this county have also been conducted and the results have shown no evidence of this disease. Furthermore, these diseases have not been detected in any other southern Michigan county.

Social Considerations:

The human population of Washtenaw County has increased 19% over the past 15 years with a current population estimate of 338,562 people (US Census Bureau). This indicates that there are approximately 455 people per square mile in Washtenaw County. The population is not evenly distributed since the large cities of Ann Arbor and Ypsilanti are located in the eastern half of the county. The rest of the county is peppered with numerous small towns, fragmented forest lands, agricultural lands, and state land on the western end. The number of crop damage complaints has been on an upward trend for the past six years and is on pace to be even higher this year (Figure 5). The number of Deer Management Assistance Permits (DMAPs, formerly Block permits) reduced significantly since more liberal antlerless regulations were started in 1998; however, Out-of-Season Kill (OSK) permits are still increasing. Washtenaw County is within the top ten counties in the state of Michigan for the number of OSK permits issued (2004). Deer damage is a major issue in this county.

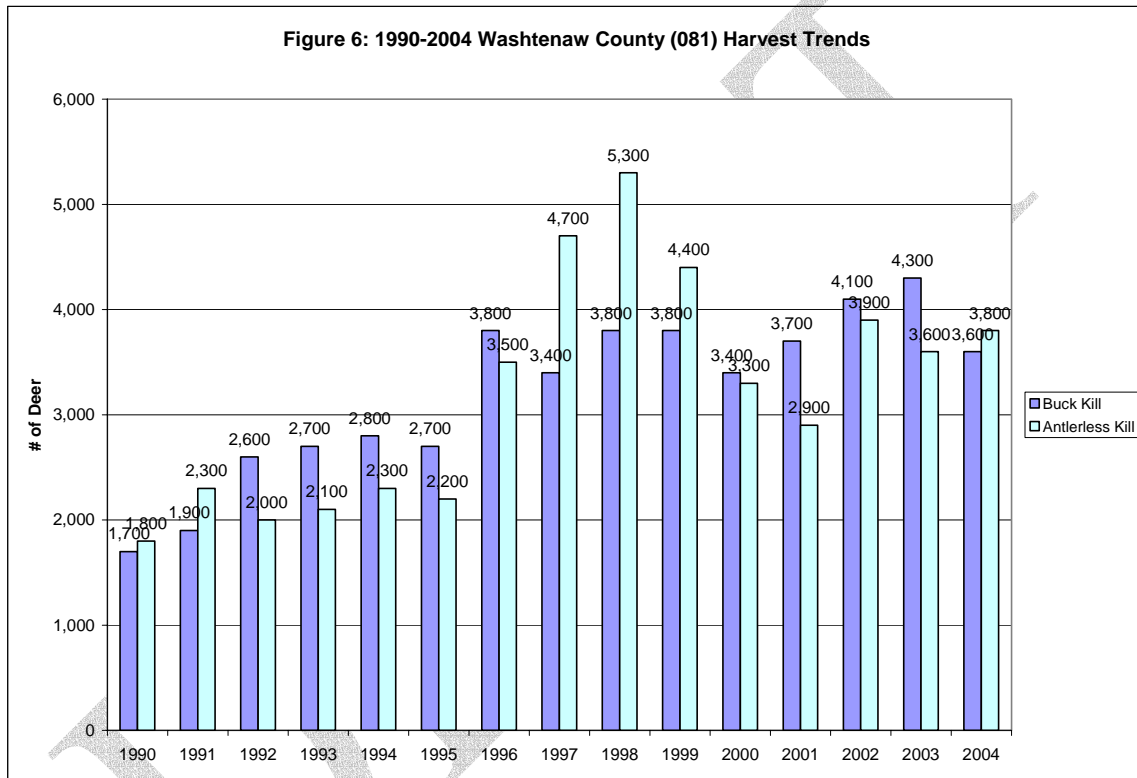


*Source: Michigan DNR

Another major issue for residents in Washtenaw County is landscape damage by deer. This county is experiencing major urban sprawl into areas that support wildlife populations. The homeowners complain about large monetary losses in landscaping from deer browsing damage. Deer damage permits are not allowed to be issued for this type of damage, therefore, the problem escalates from year to year as the deer herd grows and urban sprawl continues. As deer continue to move into these areas, management of the

deer herd becomes increasingly difficult. Options for hunting decrease as deer move into non-hunting areas including safety zones and/or areas of refuge such as parks, etc.

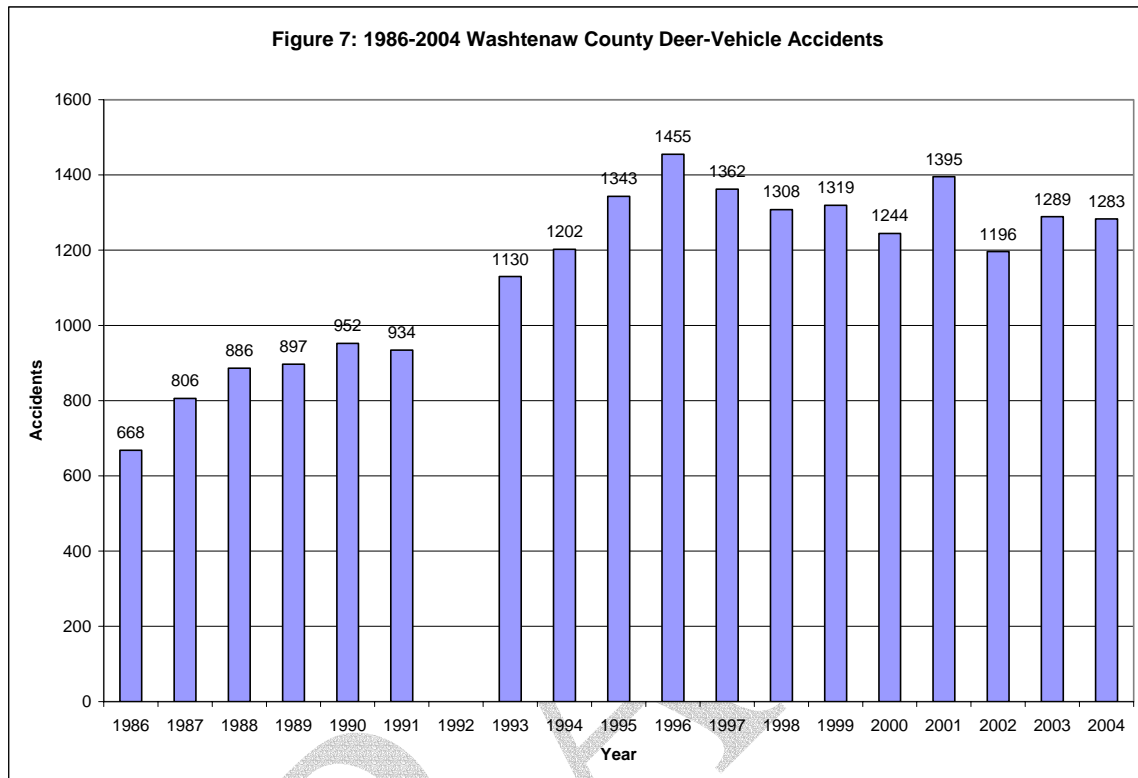
For many years, Washtenaw County has been known as a county that produces large bucks. Many hunters still come through the deer check station and voice their concerns that harvesting antlerless deer is wrong. Division employees have been working to reverse this mentality and educate hunters on deer population dynamics. The data from this county show that the majority of the deer harvested are bucks, although there was a period in the late 1990s where antlerless harvest exceeded antlered harvest due to the rise in over-the-counter antlerless licenses.



*Source: Michigan DNR, Check Station Biodata

People in Washtenaw County generally feel that there are a lot of deer in this county; however, they often like to have the luxury of seeing several deer when hunting or for recreational viewing. This mentality often holds true until they are directly negatively affected in some way such as crop damage, landscape damage, or a deer-vehicle accident. Currently there is a human dimensions study being done by Michigan State University in southeast Michigan that includes Washtenaw County and it is titled “Living with White-tailed Deer in Southern Michigan: A survey of your opinions”. This study is designed to determine how socially acceptable deer are in this area and the reasons why they are or why they aren’t acceptable.

Deer-vehicle accidents are also a concern of citizens. Figure 7 shows the number of deer-vehicle accidents for the past 18 years in Washtenaw County. Numbers rose in the mid 1990s and have averaged 1,281 accidents for the past 5 years.



*Source: Michigan State Police

Current Regulations:

Antlerless license quotas in Washtenaw County have been set liberally to encourage hunters to harvest more antlerless deer. The Public land antlerless license quota has been set at 1,500 for the past three years and has never been reached, with only 54% of these licenses being sold last year. The Private land antlerless license quota has been set at 14,000 for the past three years and has never been met, with 64% of these licenses being sold last year. The Late Antlerless season was open on private land only in 2002 but has been closed since then in this county, although it will be open again this year (2005). The fact that antlerless license quotas are not met and that there is a late season available is vital. This gives deer damage complainants and those experiencing extensive landscape damage more opportunities to reduce deer numbers on a local basis.

Proposed management strategy for moving population toward goal, + or -:

The quota for antlerless licenses for public and private land should continue to be set higher than the demand to keep promoting a liberal antlerless harvest. The late antlerless season should continue to be available even if the deer population drops to

within the goal range. Furthermore, DMAPs and OSK permits should still be issued as requested to keep the negative impacts from deer to a minimum. Other methods need to be explored to express landscape damage. Division employees should also keep reiterating the importance of harvesting antlerless deer when speaking with farmers and hunters throughout the county. The extension of the muzzleloader season this year (2005) may help to reduce deer numbers as well. In addition, the establishment of an early antlerless season may be needed to harvest as many antlerless deer as possible within this county. Even though the deer density is not as high in this county as some other adjacent DMUs, such as Livingston (047) and Jackson (038), the social carrying capacity in this county is much lower.

Proposed management strategy for maintaining population within goal:

Once the deer population in Washtenaw County has reached the goal range, then the late antlerless season may no longer be needed but should still be considered each year due to the reproductive capability of deer in southern Michigan. Antlerless license quotas for public and private land should still exceed demand in order to continually encourage antlerless harvest and special permits (DMAPs, OSK) should still be issued as needed.

Goal relative to land ownership patterns, habitat, and deer distribution:

The proposed goal of 24 to 28 deer per square mile is an averaged goal throughout Washtenaw County, meaning the western half of the county can support higher deer densities while the eastern urbanized half can support lower densities of deer, although deer do adapt well to urban areas in the county. In essence, the cities of Ann Arbor and Ypsilanti will have fewer deer per square mile. Therefore, the goal is for the rest of the county, which is mostly agriculture and forest lands, to hold deer densities towards the top of the goal range. The Waterloo and Pinckney State Recreation Areas as well as Chelsea State Game Area and other mini game areas, all in the western half of the county, have large expanses of the forested covertime. These areas will most likely attract more deer per square mile in the winter than other areas of the county. The proposed goal will aid in keeping deer numbers at ecologically and socially acceptable levels countywide.

Goal in relation to adjacent DMU's within Management Unit:

The proposed goal is based primarily on the social carrying capacity and land use patterns of Washtenaw County. This goal is higher than adjacent DMUs that have a lower percentage of forested covertime, but is closer in number to counties with more similar % cover and % openland.

	Draft	Final Draft
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