

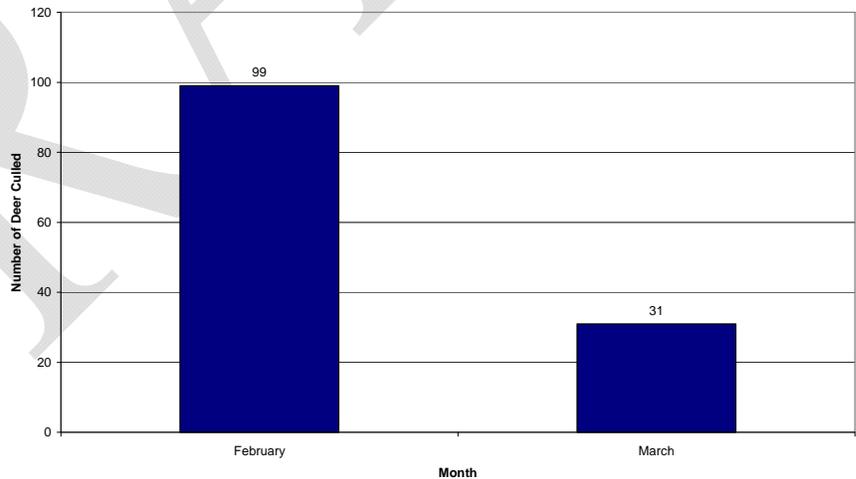
**USDA APHIS WILDLIFE SERVICES  
ACTIVITIES SUMMARY REPORT  
2009 WHITE-TAILED DEER MANAGEMENT PROGRAM  
TOWNSHIP OF UPPER ST. CLAIR  
(AUGUST 2009)**

USDA APHIS Wildlife Services (WS) was requested by the Township of Upper St. Clair (TOWNSHIP) to conduct white-tailed deer culling throughout the Township and on designated private properties. An operational control program was first implemented in 2005 and has been continued in subsequent years to reduce deer densities. The objective of this culling effort is to manage the deer population at or near 5-8 deer per square mile, as originally recommended by the Pennsylvania Game Commission (PGC). In addition, deer damage operations were conducted to decrease the vehicle/deer collisions throughout the TOWNSHIP, but especially along the State Route 19 corridor (SR 19). WS conducted operations under a PGC Special Use Permit issued to the TOWNSHIP to remove no more than 200 deer from within the Township limits. The following report includes program methodology, results, analysis, and recommendations.

**WHITE-TAILED DEER MANAGEMENT METHODS**

WS conducted deer removal activities according to the work plan established in the Cooperative Service Agreement with the collaborative effort of the TOWNSHIP and PGC. Removal operations consisted of multiple nights of activity throughout the Township from 02 February 2009 – 06 March 2009. Deer were removed primarily from elevated mobile stand units. Bait sites were strategically placed to draw deer out of dense cover and to position them for safe shooting. Shooting was conducted with suppressed rifles of different calibers (.22-.250, .223 and .243).

USDA APHIS Wildlife Services White-tailed deer culling operations by month and the associated number of deer harvested in the Township of Upper St. Clair, PA during the 2009 deer management program.



Deer observed were removed on a first opportunity basis provided safe shots could be taken. Adult does were targeted first when more than one deer was observed in a safe shooting location. Antlered deer were targeted for removal after antlerless deer had been safely removed. Selective removal allows for the removal of breeding individuals first, which also aids in the safe removal of juvenile deer at the same time or on subsequent nights. Deer were only targeted for removal on predetermined TOWNSHIP and private properties.

Removal activities, including biological data from the deer harvested were recorded on data sheets. Information collected from harvested deer included gender, relative age, tag number, location, and final disposition of the venison.

Forward Looking Infrared (FLIR) technology was used during removal operations as well as night vision and spotlights with red filters. WS utilized a hand-held FLIR unit to locate and observe deer in complete darkness. These capabilities also further enhanced WS' ability to ensure safe removal operations by detecting human activity on TOWNSHIP property from greater distances after hours. The use of night vision and spotlights is necessary to identify possible obstructions (i.e., branches, debris, etc.) in the line of fire. All deer removed by shooting were taken with the aid of spotlights.

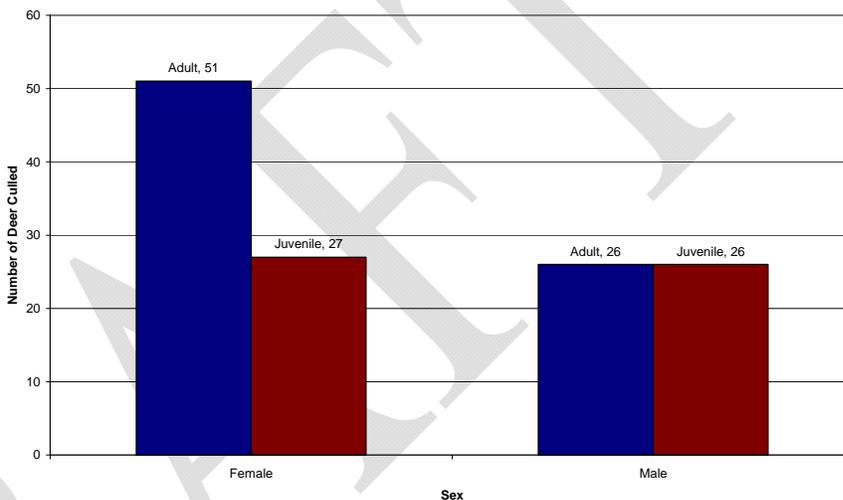
**RESULTS**

WS removed a total of 130 deer from within the Township. Of those 130 deer, 53 were juveniles and 77 were adults. This age distribution is expected for suburban White-tailed deer populations.

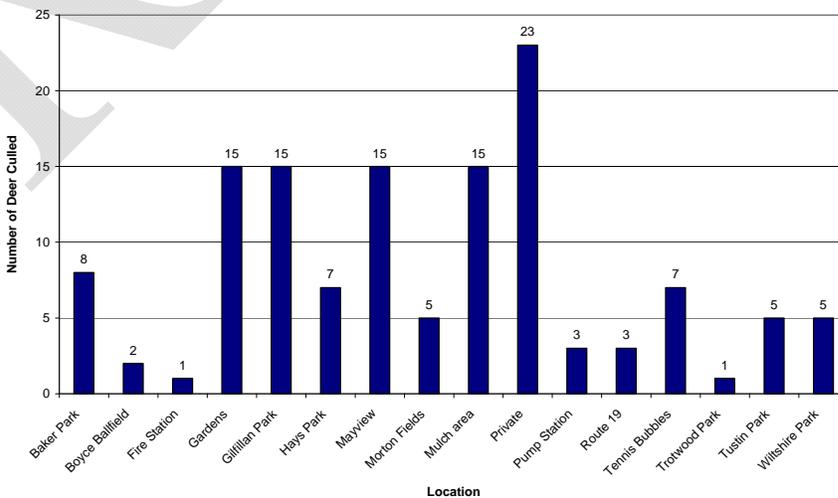
Several areas were identified by the TOWNSHIP as priority locations due to their proximity to SR 19. The areas of special concern were Gilfillan Park, the 3-hole golf course/tennis bubbles, Wiltshire Park, Township pump station, Boyce ball field, fire station and several private properties which were strategically located near SR 19. WS was able to remove 59 deer (46%) from those locations alone.

WS noted several interesting observations regarding herd health. Overall, culled deer appeared to have prime over-wintering weight and thick coats. During culling operations, WS removed six deer with broken legs and obvious signs of vehicle collisions. Several deer had multiple fractures and were extremely thin due to their injuries. WS removed all of the injured deer observed provided safe shots could be taken.

Relative age and sex distribution of deer harvested by USDA APHIS Wildlife Services in the Township of Upper St. Clair, PA during the 2008 deer management program.



Location of deer harvested by USDA APHIS Wildlife Services in the Township of Upper St. Clair, PA during the 2009 deer management program.



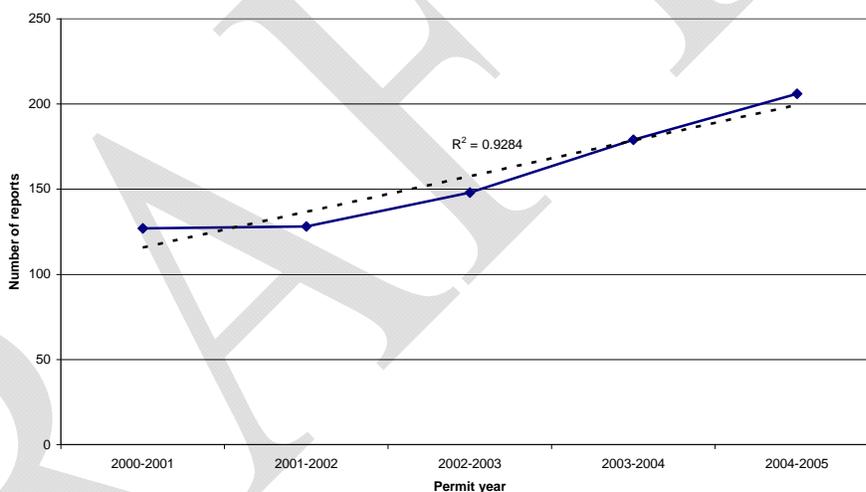
Venison from culled deer was distributed at soup kitchens and shelters in Western Pennsylvania. The Pennsylvania Game Commission also helped distribute venison to families in need. Twenty two deer were retained and/or distributed by the Pennsylvania Game Commission. Overall, approximately 6,210 pounds of venison was distributed to needy citizens in Western Pennsylvania.

**ANALYSIS**

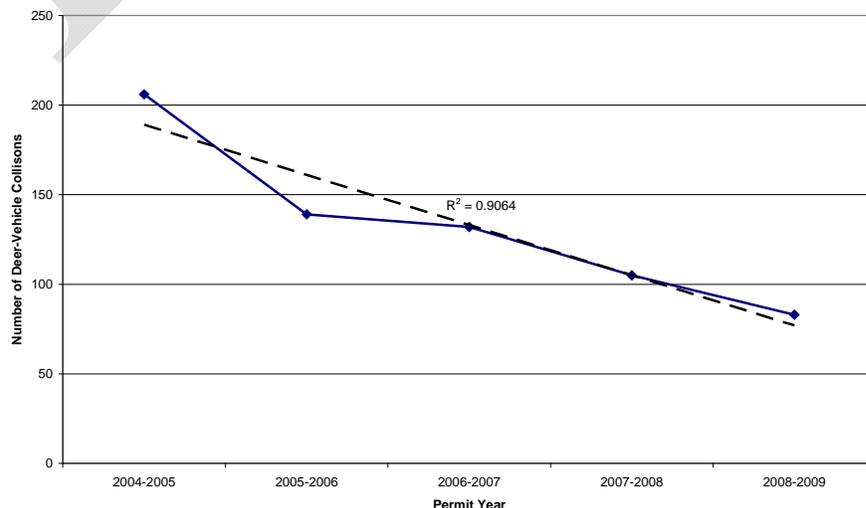
Wildlife Services has culled 742 deer from the Township since the inception of the culling program in 2005. Of those 742 deer, 438 were adults and 304 were juveniles. WS intentionally targets adult females first when safe shooting opportunities are available. The successes experienced to date are largely due to an expansive baiting program and increased private property access for culling operations.

A comprehensive and extensive analysis of the problems associated with deer within the Township has been ongoing for numerous years. WS analyzed deer vehicle collision trends prior to culling. That analysis suggests that collisions would have likely continued to increase if no deer management program was implemented. Archery hunting as the only management tool was not able to successfully reduce the population. The relatively recent implementation of culling is also well documented. Since culling activities began in Upper St. Clair, deer vehicle collisions have declined each year. A trend analysis suggests that this decline is likely to continue assuming that the deer population is continuously managed. The trend analysis clearly demonstrates that the culling program has successfully reduced deer vehicle collisions despite poor-to-no archery success and increased traffic volume.

Trends in reported deer-vehicle collisions before the inception of deer management activities by USDA APHIS Wildlife Services in the Township of Upper St. Clair, PA.

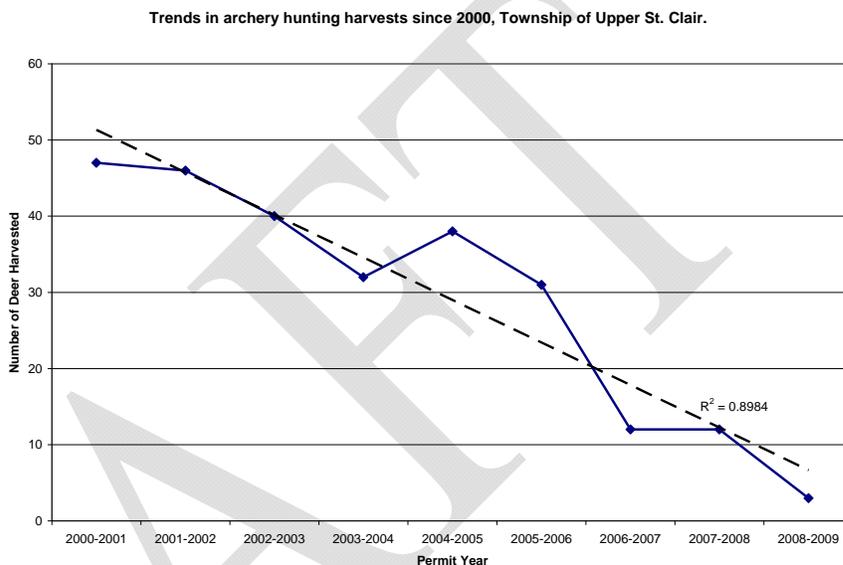


Trends in reported deer-vehicle collisions since the inception of deer culling activities by USDA APHIS Wildlife Services in the Township of Upper St. Clair.



One of the stated goals for the TOWNSHIP in 2005 was to reduce deer-vehicle collisions to fewer than 100. Deer-vehicle collisions in the permit year prior to culling activities were 206, which was steadily increasing year by year. **Last permit year, largely due to successful deer damage management, deer-vehicle collisions were at an all time low (83) since the late 1990's.**

Archery hunting has historically played an important role in the management of White-tailed deer in the Township; from 2000-2003, archery hunters harvested more than 40 deer each year. Since that time, harvests have been less than desirable with an all time low of just 3 during the 2008-2009 permit year. Archery hunting is not only an important recreation opportunity for hunters in Allegheny County, but also the most cost-effective management tool. If no more than 3 deer are taken each year by archery hunting, there is no impact from this activity on the overall deer population. Although the opportunity to archery hunt in the Township is beneficial to the hunting community, there is no management value to the TOWNSHIP unless these harvest numbers can be improved.



It is extremely difficult to determine the exact population size within the Township without conducting deer population surveys. WS has the ability to provide a FLIR/spotlight survey which can provide the Township with an estimated deer density. This deer density estimate can be used in comparative analysis for future management. Without such a density estimate, visual observations, damage complaints, and reported deer vehicle collisions are the only statistics available to measure successes or failures of current management approaches. Although this information is important, the Township will not know when they have met the goal of 5-8 deer per square mile without periodic density estimates. **Deer surveys are also critical to determine the number of deer that must be removed to maintain a desirable population size once the damage has been reduced to an acceptable amount (i.e., collisions <100 per year).**

Based on an analysis of deer accident statistics provided by the Township coupled with trend analysis and general observations, WS can say with reasonable certainty that USDA APHIS Wildlife Services deer damage management activities have halted population growth and resulted in a decrease in the overall deer population. Despite unknown rates of immigration and emigration for the Township, published literature on suburban deer population dynamics suggests that these rates are not factors in the overall management of deer. The decreased archery harvest, increased traffic volume, and decreased deer-vehicle collision rates suggests that USDA APHIS Wildlife Services deer management activities are effective at reducing the deer population within the Township. Continued culling activities utilizing sharp shooting and hunting will be necessary in future years to maintain deer-vehicle collision fewer than 100;

the absence of deer management will likely result in rapid population growth and increased deer-vehicle collisions similar to those documented in 2004. Intensive management (i.e., harvesting/culling) may be required to reach recommended population density goals.

## **RECOMMENDATIONS**

WS recommends a continuing deer damage management program each year to establish and maintain deer densities at or near 5-8 deer per square mile. After reviewing trends in the data, WS recommends that the Township continue deer management activities in 2009-2010. Continued management is necessary to maintain deer-vehicle collisions below 100 per year. WS recommends management activities consisting of at least nine nights, targeting 120 or more deer. However, the number of nights allocated to culling should incorporate the following factors: (1) nightly mobile unit observations of deer sightings; (2) weather events; (3) vehicle/deer collision rates; (4) impacts of over-abundant deer on local environments and; (5) available monetary resources.

WS once again recommends that the Township conduct a deer population survey (i.e., density estimate) before initiating culling activities in 2009-2010. Relative deer density information is a critical component in determining the overall effectiveness of deer culling operations. This information should be used in conjunction with field observations and collision data to evaluate the current program. As a result of these surveys, the culling program should be modified (if necessary) to achieve the desired deer density throughout the Township. It is impossible to know when the target goal of 5-8 deer per square mile is achieved without surveying the deer population.

Finally, WS recommends that the current archery hunting program in the TOWNSHIP be examined more carefully. At the current level, hunting is not being utilized adequately. The removal of 3 deer during the 2009 season is alarmingly low and well off the harvests established in the first half of the decade. WS will concede that there are fewer deer available for harvest and perhaps the hunting is more difficult, but there are still plenty of deer available for harvest on Township property. There is an opportunity to consider reducing the number of deer culled if archery hunting can once again be more productive.

## **ACKNOWLEDGEMENTS**

Wildlife Services would especially like to thank Walter Jarosh for his continued cooperation with this project. Walter's professionalism and attention to detail were essential to the safe and efficient management of deer within the Township. Walter has spent countless hours baiting numerous sites. He has also assisted WS with securing access to private properties. Walter is an invaluable partner without whom the culling program would not be as successful.

Wildlife Services would also like to thank our private cooperators, Mark Mansfield, and the entire Upper St. Clair Police Department for their outstanding contributions to a safe and efficient culling program. We would also like to thank the local Wildlife Conservation Officer, Beth Fife for her support of the management activities. They should be recognized for their willingness to support the deer damage management program and helping the Township reduce its over-abundant deer population.