

**USDA APHIS WILDLIFE SERVICES
ACTIVITIES SUMMARY REPORT
2011 WHITE-TAILED DEER MANAGEMENT PROGRAM
TOWNSHIP OF UPPER ST. CLAIR
(MAY 2011)**

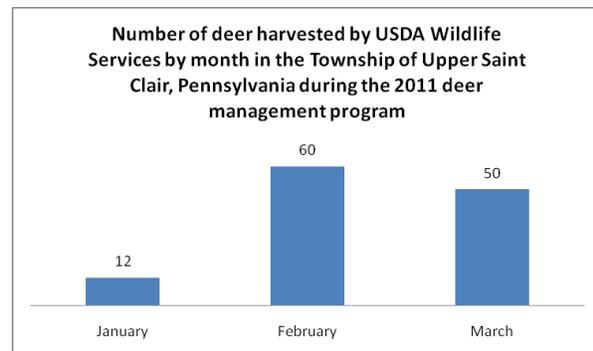
USDA APHIS Wildlife Services (WS) was requested by the Township of Upper St. Clair (TOWNSHIP) to conduct white-tailed deer culling on designated public and private properties. The operational control program to reduce deer densities was first implemented in 2005 and has been continued in the subsequent years. The objective of the program was 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 culling was conducted to decrease the amount of property damage, nuisance complaints, and deer-vehicle collisions throughout the township, with special emphasis along the SR 19 corridor. WS conducted operations under a PGC Special Use Permit issued to the TOWNSHIP to remove deer. The following report includes program methods, results, analysis, and recommendations.

METHODS

WS conducted deer removal activities according to the work plan established in the Cooperative Service Agreement, and with a collaborative effort from the TOWNSHIP and PGC. Multiple public and private properties were selected as target culling areas according to their proximity to high deer-vehicle collisions and resident-reported property damage. Areas were also selected due to their proximity to State Route 19. WS obtained written permission from all involved property owners prior to culling. Deer removal operations consisted of multiple nights of activity beginning 27 January 2011 and ending 22 March 2011. Prior to the removal operations, WS baited culling areas in a manner to draw deer out of dense cover and to position them in safe shooting locations.

Deer removal consisted of using elevated mobile stand units and a suppressed .243 rifle. A hand-held Forward Looking Infrared (FLIR) unit was used to locate and observe deer in the complete darkness. The FLIR also enhanced WS' ability to ensure safe shooting practices by detecting human and domestic animal activities in the dark. In addition to FLIR, night vision and spotlights were used to identify possible obstructions (i.e., branches, debris, etc.) in the line of fire. All deer removed via shooting were taken with the aid of spotlights.

Deer observed on permitted culling properties were removed on a first opportunity basis provided safe shots could be taken. Adult does were targeted first when more than one age/sex class was observed in a safe shooting location. Antlered deer were targeted afterwards with the largest antlered bucks being left for archery opportunities. This selection process allowed for the removal of breeding individuals first, and often aided in the safe removal of juvenile deer at the same



time. Population rarities, such as albino or piebald deer are also not targeted for removal since their presence and individual uniqueness are largely known by the general public. Upon harvest, the deer’s age, sex, tag number, location, injuries, and final disposition were recorded. WS also collected blood, fecal and tissue samples, when possible, for research examining tick-borne diseases and parasites such as toxoplasmosis.

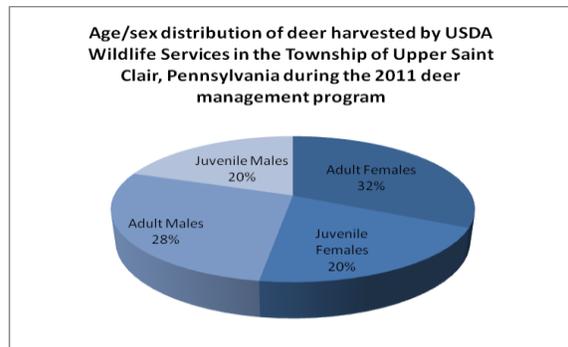
RESULTS

WS successfully removed a total of 122 deer from the TOWNSHIP during the 2011 deer management program. Deer were harvested on both public (n=106) and private (n=16) properties, and were comprised of 39 (32%) adult females, 34 (28%) adult males, 25 (20%) juvenile females, and 24 (20%) juvenile males. Of the 122 deer culled, 32 (26%) were taken from the properties selected due to their proximity to SR 19 (i.e. Gilfillan Park, Wiltshire Park, Boyce ball field, the tennis bubbles, pump station, post office and fire station). Eight (7%) of the 122 culled deer had injuries, one with back injuries and severely emaciated. Approximately 4,270 pounds of venison was processed and distributed to citizens in Western Pennsylvania via soup kitchens, shelters, and PGC personnel.

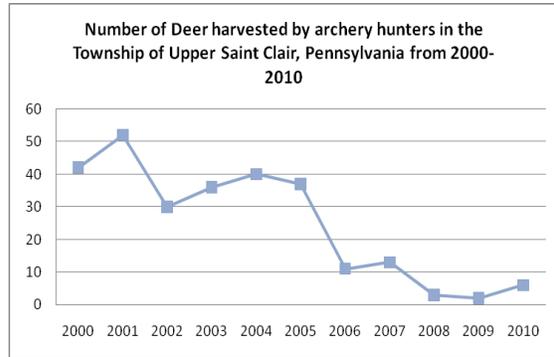
Property / # deer culled	
<i>Baker Park</i>	6
<i>Boyce Ballfield</i>	6
<i>Byrnwick Park</i>	7
<i>Fire Station</i>	4
<i>Gardens</i>	4
<i>Gilfillan Park</i>	10
<i>Hays Park</i>	9
<i>Mayview</i>	8
<i>Mulch</i>	33
<i>Post Office</i>	2
<i>Private</i>	16
<i>Pump Station</i>	7
<i>Tennis Bubbles</i>	1
<i>Trotwood Park</i>	2
<i>Tustin Park</i>	5
<i>Wiltshire Park</i>	2

ANALYSIS

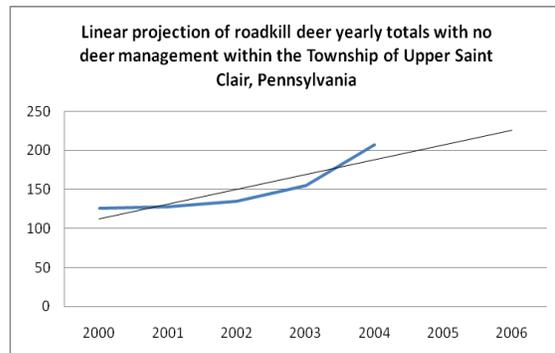
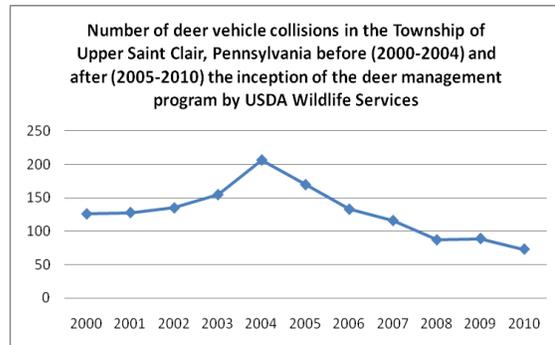
WS has culled 991 deer (591=adults, 400=juveniles) from the TOWNSHIP since the inception of the deer management program in 2005. WS intentionally targeted adult female deer first, and hence, this strategy likely explains the larger amount of adult females versus any other categories culled. The program successes experienced to date are largely due to an expansive baiting program and private property access.



An extensive analysis of the problems associated with deer in the township has been ongoing for numerous years. WS analyzed deer-vehicle collision trends prior to 2005 and concluded that collisions would likely continue to increase if no action was taken. The number of deer-vehicle collisions had steadily increased each year, and during 2004, prior to the culling program, there were 206 deer-vehicle collisions. Archery hunting, the only deer removal tool used by the TOWNSHIP, historically played an important role in managing white-tailed deer. From 2000-2005, archery hunters harvested greater than 30 deer per year. Since 2005, harvests declined from greater than 30 per year to a total of six harvested in 2010. Archery hunting is an important recreation opportunity for hunters in Allegheny County and also the most cost-effective management tool. However, if few deer are culled by archery hunters, this activity will have little to no impact on the overall deer population. Currently, archery hunting offers minimal management value to the TOWNSHIP unless harvest numbers can be improved.



One of the stated goals for the TOWNSHIP in 2005 was to reduce the number of deer-vehicle collisions to less than 100 per calendar year. Since WS deer culling activities began, deer-vehicle collisions have declined, and there have been less than 100 collisions per year since 2008. Only 73 collisions were reported for 2010, making it the third consecutive year deer-vehicle collisions held below the goal of 100 per calendar year. These results clearly demonstrate that the culling program has successfully reduced deer-vehicle collisions despite very low archery success and increasing traffic volume.



While WS deer culling efforts have been successful in the township, it is still extremely difficult to determine the exact deer population size without conducting population surveys. WS has the ability to conduct a FLIR/spotlight survey which would provide the TOWNSHIP with an estimated deer density. This estimate could then be used in comparative analyses for future management. Without a deer 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 the above 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. Furthermore, population surveys are critical to determine the number of deer that must be removed in order to maintain a desirable deer population.

Based on an analysis of deer complaint statistics provided by the TOWNSHIP, coupled with collision trends and general observations, WS can say with reasonable certainty that USDA APHIS Wildlife Services deer damage management activities have halted population growth and decreased the overall deer population size. Despite unknown rates of deer immigration and emigration in 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, decreased sightings by mobile units, increased traffic volume, and decreased deer-vehicle collision rates suggests that WS 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 levels at fewer than 100 per year. The absence of deer management will likely result in rapid population growth and increased deer-vehicle collisions, similar to those documented in 2004.

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 2011-2012. 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 2011-2012. 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 carefully. At the current level, archery hunting is not being utilized adequately. Although the removal of six deer during the 2011 season is three times what was removed in 2010, the number still remains extremely 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 on township property. The TOWNSHIP would have an opportunity to consider reducing the number of deer culled by WS if archery hunting can once again be productive.



ACKNOWLEDGEMENTS

Wildlife Services would like to thank Walter Jarosh for his cooperation and seven years of dedication with this project. Walter handed over the reins and taught Gary Schaffer proper bait placement and procedure after retiring from the TOWNSHIP. We wish Walter well in his retirement.

Wildlife Services would like to also thank Gary Schaffer for his professionalism, observations and attention to detail, which were essential to the safe and efficient management of deer within the TOWNSHIP. Gary has spent countless hours baiting and assisting WS with an outstanding attitude and willingness to help.

Wildlife Services would also like to thank our private cooperators for allowing us on their property, 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 local Wildlife Conservation Officer Beth Fife for her support of the management activities. All participants should be recognized for their willingness to support the deer damage management program and helping the TOWNSHIP reduce its deer population to acceptable levels.