



**Site 2 - Dickerson, MD
Deer Management Summary 2017-2018**

*Prepared by Dustin Prievo
18, January 2018*

As the 2017-2018 Maryland Regulated Hunting Season comes to a close and a new hunting season is on the horizon, *Patriot Natural Resources (Patriot NR)* would like to share with the Montgomery County Department of Environmental Protection, Division of Solid Waste Services the results of deer management efforts performed on the Future Landfill Site in Dickerson, MD during Year 8 of the management effort. Thorough analysis of hunter harvest records, trail camera analysis and observation logs is what drives our measure of success or failure, and what guides our management objectives for the following year. Below you will find information regarding results, notable events, and goals for the future.

Pre-Management Efforts

New for the 2017-2018 hunting season, the Patriot Whitetail Removal Team (PWRT) of Patriot Natural Resources had a change in leadership. Dustin Prievo, a 3-year veteran with the Patriot Whitetail Removal team and long time advocate of quality deer management, with over 250 published articles pertaining to hunting and proper management of whitetail deer, became the new PWRT Coordinator. It has been a long time effort of Patriot NR to provide quality management practices and Dustin was excited to continue in those efforts.

Prior to engaging in hunting efforts for this season, the members of the PWRT met on January 18th, 2017 to discuss the 2017-2018 management plan. This meeting was a way to gather fresh information from the hunters on the efforts of the 2016 season. The team discussed and projected dates to coordinate property initiatives.

The property initiatives took place where a few members of Patriot NR met with some of the neighbors and spoke with the farmers who lease Dickerson Site 2. These events provided the neighbors with information of ongoing deer management practices that would be occurring in the 2017-2018 season and obtain any information from the farmers of any changes that may occur for 2017-2018 season. Members also walked the boundary line while checking key interior points for existing “posted” signs. Additional signs were hung, visible for the general public to convey our purpose and ensure restriction to the general public. Patriot NR also continued to utilize an interlocking cable system at 5 different locations to remove access to a significant portion of the property from the general public, while still allowing access to the farmers.

Patriot NR relocated a lock-protected display box from an off-site location and moved it onsite at the Dickerson Property. This box contains a detailed map of the Property, including boundary lines, safe zones, parking areas, etc., and continued to require PWRT members to first check-in and place a magnet on the map where they planned to hunt before continuing to the property to hunt. At the conclusion of the hunt, the PWRT member would return to the display box, remove their magnet, and leave any notes for other PWRT members. This allowed the PWRT to better manage itself and the property, as well as provide a layer of safety to the management effort. By moving the box to the property, the lock code was also provided to the farmers to provide them with information as to where, and if, any hunting practices were occurring that they wanted to be informed of. Simply by checking the map at anytime, the farmers could be made aware of any hunters from PWRT located on the property.



Property Analysis

This year Patriot conducted a trail camera survey in accordance with the QDMA (Quality Deer Management Association) practices. A trail camera survey is one of the best ways to provide information in regards to your deer herd. This information can assist with our hunters' observation logs and harvest numbers, in providing an estimated deer density, sex ratio, buck age structure, fawn recruitment and more. This information can be used to guide in achieving Quality Deer Management to ensure the best possible practices for the property and the habitat.

Ten trail cameras were set up with bait piles over the course of 21 days and all information was gathered to help monitor our efforts for years to come. Although a slight variation of the trail cameras will need to be conducted to gather an estimated total herd population, the trail camera information gathered was very useful. The results showed a deer herd that was consistent with previous harvest numbers, yet also provided us with an idea of the buck to doe ratio on the property. According to the Quality Deer Management Association a healthy and balanced deer herd, sports a ratio of 2:1 or better, does to bucks. Our information obtained showed a better than 2:1 ratio and was estimated to be closer to a 1.5:1, does to buck ratio. This information will be verified with a full trail camera analysis in 2018 if Patriot NR obtains the contract. This ratio obtained shows a healthy deer herd, but also shows that the efforts to the deer management over the past several years has been extremely successful. Balanced sex ratios and complete age structures have many benefits when moving forward in Quality Deer Management. These numbers let us know we were on the right track for 2017-2018 and supplemental information, provided by the PWRT observation logs and harvest numbers from years prior, provided us with a ballpark goal of 40-50 deer for the year.

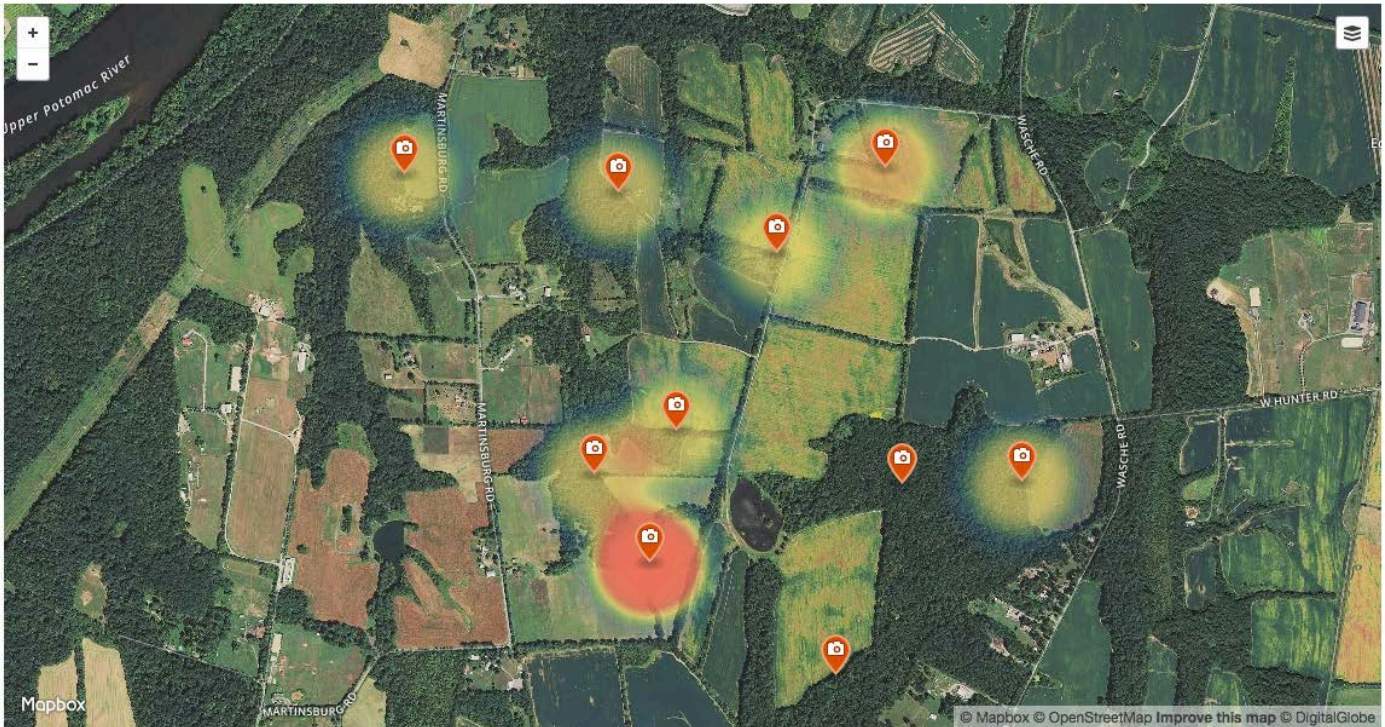
DEER ACTIVITY [EDIT](#)

[NEW PROFILE](#) [TAG MORE PHOTOS](#)

[OVERVIEW](#) [WIND](#) [MOON](#) [HEAT MAP](#) [PHOTOS](#)

SIGHTINGS BY CAMERA LOCATION

[FILTER](#)



The above map shows the activity surrounding the baited trail cameras. This heat map represents a time period of two weeks with a total images of 1470. The results continue to show heavy deer activity being held on Mr. Webbs' property where Patriot is only allowed to hunt the border of Martinsburg Rd, although not represented in this map, also held a great number of deer earlier in the season. This information provides us with areas we need to concentrate on to ensure our time spent on the property is being put to the best use.

DEER ACTIVITY [EDIT](#)

[NEW PROFILE](#) [TAG MORE PHOTOS](#)

[OVERVIEW](#) [WIND](#) [MOON](#) [HEAT MAP](#) [PHOTOS](#)



DEER ACTIVITY

Tagged as "deer"

[WATCHING](#)

424 Sightings / 1,470 Tagged Photos

LAST SEEN

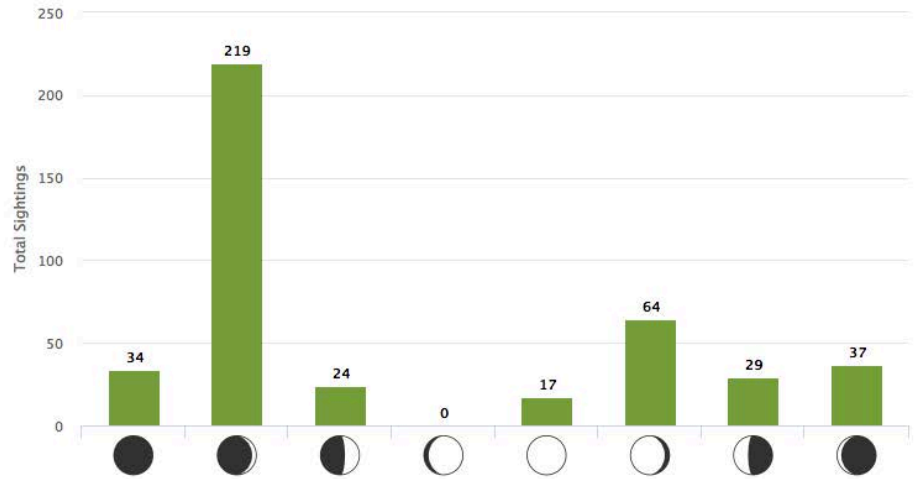
2 months ago on
Fri, Nov 10 2017 at 12:31pm

TIME MOST ACTIVE

6PM to 10PM

MOON PHASES FOR ALL CAMERAS [?](#)

[FILTER](#)

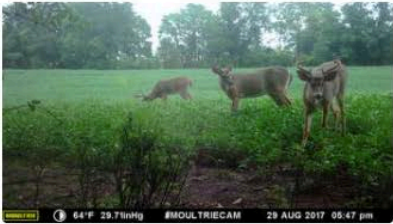


The heat map is not the only tool we are able to put together based off of our property analysis. With the information gathered, we were able to see that the majority of deer movement on the property occurred when the moon phase was in a Waxing Crescent. This information is very helpful in deciding dates to focus on hunting, without overpressuring the property. When a property is hunted and overpressured, deer can often leave the property until the pressure subdues, which is usually the end of the hunting season, only to return in the spring and feed on the farmers crops.

DEER ACTIVITY [EDIT](#)

[NEW PROFILE](#) [TAG MORE PHOTOS](#)

OVERVIEW [WIND](#) [MOON](#) [HEAT MAP](#) [PHOTOS](#)



DEER ACTIVITY

Tagged as "deer"

[WATCHING](#)

424 Sightings / 1,470 Tagged Photos

LAST SEEN

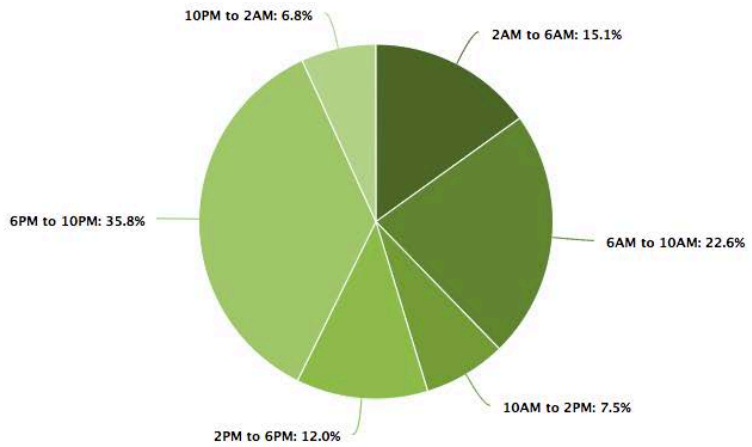
2 months ago on
Fri, Nov 10 2017 at 12:31pm

TIME MOST ACTIVE

6PM to 10PM

SIGHTINGS BY TIME OF DAY FOR ALL CAMERAS [?](#)

[FILTER](#)



SIGHTINGS BY CAMERA [?](#)

DEER ACTIVITY [EDIT](#)

[NEW PROFILE](#) [TAG MORE PHOTOS](#)

[OVERVIEW](#) [WIND](#) [MOON](#) [HEAT MAP](#) [PHOTOS](#)



DEER ACTIVITY

Tagged as "deer"

[WATCHING](#)

424 Sightings / 1,470 Tagged Photos

LAST SEEN

2 months ago on
Fri, Nov 10 2017 at 12:31pm

TIME MOST ACTIVE

6PM to 10PM

MOST ACTIVE CAMERA

WGI360

MOVEMENT BY WIND DIRECTION & SPEED FOR ALL CAMERAS [?](#)

[FILTER](#)



The above two images are just additional information we gathered from our trail camera survey ultimately leading us to hunt more efficiently this year.

Herd Analysis:

In addition to our property analysis, utilizing the trail cameras, we were able to see and notice a large number of bucks on the property. This is due to the fact that Patriot NR has focused their attention on doe management for the past several years. Although this is a dream come true for a big buck club, it's important to note that these bucks, with a 1.5:1, doe to buck ratio, account for 40% of the total population. In turn, this means that 40% of the crop damage is being done by bucks. As we focus our attention on does for herd reduction, it is important to focus on the entire herd management and be sure to focus on the goal of our original proposal.



Figure 1 - A Bachelor group of bucks on the South East side of the property.

Our analysis showed several groups of bucks from the late summer that maintained their core area on the property well throughout the end of the year. It is our recommendation again, for 2018-2019 season, to allow for the harvesting of bucks to be conducted on the property. No changes will have been made to our agenda, our focus will be mature does as years past, but by allowing the harvesting of mature bucks, you continue to work towards a healthy herd management strategy, while allowing a reward for your hunters. With the population being reduced to the size that it has since Patriot NR began the deer management on the property, hunters are spending longer hours on the property to harvest even one deer. Good Quality Deer Management will allow the harvesting of 2.5 to 3.5 year old bucks. Although that can be rewarding, it can deter hunters from focusing on herd management and harvesting mature does, especially with a large population of bucks on a property like the Dickerson Property. Patriot NR has our own rules that are much more strict maintaining the focus on harvesting does. Patriot NR enforces all hunters must harvest two does before they are allowed to kill a buck. The buck must be a minimum age of 3.5 years old and have 130" (Boone and Crockett Scoring system) or greater. This will ensure the hunters are focused on killing does with the rarity of harvesting a mature buck during the year.



Figure 2-Three bucks on the South West part of the property.



Figure 3-A bachelor group of 5 bucks near the center of the property.



Figure 4-A group of 7 bucks on the small field, west of Martinsburg Rd.



Figure 5-A random collection of bucks captured from several different trail cameras during the same evening.



Results Analysis:

Patriot NR has maintained its volunteer hunting group known as the *Patriot Whitetail Removal Team (PWRT)* for use with large or small scale management efforts on properties that demand both discretion and production. The PWRT was utilized on the property with great success, as can be realized from the results below.

The PWRT has successfully removed 44 white-tailed deer from the Property between June 2017 and Dec 2017. Through the implementation of the PWRT, 84% of all deer harvested were does (female). Since 2010 Patriot NR has removed a total of 548 deer.

Most female deer possess reproductive potential by 1.5 years of age, with older deer accounting for the highest reproductive potential, often bearing twins, and in some cases triplets. Therefore the targeting of this upper age structure in a population will further expand on this *effort vs. result* equation. Harvesting 3 deer of lower reproductive potential is not as effective as harvesting 3 deer with a high reproductive potential, although the exact same amount of effort is expended in both cases. Of the 37 does harvested, 57% were 2.5 years old or older while 31% were 1.5 years old. Of the total harvest, 8% were less than 1.5 years of age. Three button bucks were harvested along with three 4.5 year old bucks and one 3.5 year old buck. These buck were harvested in accordance with strategic management strategy for proper whitetail deer herd management as outlined by the Quality Deer Management Association (QDMA). QDMA used scientific research to develop a strategy that covers the harvesting of antlerless deer as well as managing the age structure of the herd. Patriot NR uses these QDMA strategies to not only reduce deer numbers, but to also restore the population dynamics to a fashion in which the herd itself is healthy, sustainable and can regulate its self.

Hours spent hunting were recorded for each successful outing from our PWRT members, on average, it took 6.5 hours for hunters to harvest a deer. As we move forward this number should continue to increase and plateau with the outings recorded. This will suggest less deer on site as hunter hour's increase for a successful hunt.

According to the **Maryland Annual Deer Report**, during the 2016-2017 season 62% of the total State hunter harvests were antlerless (deer without antlers) and 35% were antlered bucks. When you factor in the total number of button bucks (male antlerless) that were recorded during this time, the actual antlerless deer harvest is 56% (does only), with antlered deer making up the other 44%. These numbers are above the 84% antlerless deer harvested by the PWRT which shows that there still is need for a population reduction as is recommended by many State wildlife managers but also shows that the main focus of the program in place, is on mature does.

2017-2018 PWRT Results (Site 2)
Dickerson Property (~850 acres) – 44 whitetail deer removed
[37 Does – 3 BB – 4 Bucks – 0 fetus’] 84% Does – 7% BB – 9% Bucks
Population reduction equivalent for 2018 = 111 deer removed *based on targeting of reproductive age of mature does*
66 actual tons of forage saved - - - 177 potential tons saved for 2018 *considering reproductive potential*
Economic loss reduction of \$26,202 in actual crop damage saved; \$70,092 in potential crop damage saved (\$397 per ton Sept 2017 US Average)



Measuring the reproductive potential of a population is not an exact science; many factors weigh into the debate including herd health, climate, weather conditions, predators, etc. For demonstration purposes we will offer a few assumptions so that the client can better visualize how specific harvest requirements weigh into the *effort vs. result* equation explained previously. If we assume that based on age structure, some deer would have had triplets, some twins, others 1 or none at all, the following are an example as if the reproductive-aged does would have had twins. The combined harvest of these 37 antlerless deer, plus their reproductive potential which was not realized, accounts for up to 92 deer that will not be on the Property in the spring/summer of 2018 to feast on agricultural crops, landscapes, and ground nesting bird habitat. An adult deer consumes on average 1.5 tons of forage a year, so the "44" (antlerless deer + bucks) deer harvested immediately results in 66 tons of actual forage saved and up to (antlerless deer +bucks+ predicted offspring) 177 tons of potential forage saved for 2018.

In 2016, Montgomery County Police reported 3,676 deer/vehicle collisions in Montgomery County. In the USDA White-tailed Deer Damage Management report for Maryland in 2013, it was reported that the North Central Region of Maryland (includes Montgomery County) suffered estimated crop damage losses of \$4.3 million (the highest in Maryland), out of an estimated \$10 million statewide, with deer responsible for 77% of that damage. It is estimated that farmers spent \$410,000 on preventative measures. These figures help to demonstrate the effectiveness of a qualified deer management group such as the PWRT.

Overall Experience:

Patriot NR considers this ongoing deer management effort very successful. A substantial number of deer were removed from the property, immediately reducing the economic damage suffered to agricultural crops, and hopefully, easing the concerns of the property's farmers as they look towards their future agricultural investments with the property. Patriot has undergone a new coordinator and the transition has been exciting. New data has been collected and used to compare for future years.

Notable Events:

-Patriot had 1 trail camera stolen during the property analysis

-ATVs were seen riding through the property a few times by PWRT members during hunts. Montgomery County Police and Department of Natural resources were notified and increased patrol has occurred on the property.

-Two hunters (non PWRT) wearing orange were seen hunting on the Southwest corner of the property. It was unsure if they were trespassing onto the county property or hunting a bordering property but it was noted for future reference.

-Shortly after posting additional no trespassing signs, we were informed of a complaint from Mr. Howell. Mr. Howell was made aware of his own property line and was told by the county that we would be willing to meet with him in order to go over the tax map for further clarification. The next time we had heard from Mr. Howell was in regards to what he claims sounded like a "shooting range" by the hunters on the property. Hunter logs and our hunter sign in data showed no hunters in the area for several months prior to the dates of his complaint. Even though Patriot was not at fault for this "shooting range", we decided to avoid the entire South East of the property. Furthermore, Patriot hunters also reported what sounded like a "shooting range" in the area and it is believed to be a neighbor of Mr. Howell shooting on their own property. Shots of well over 200 rounds have been heard being shot and Mr. Howell will be informed of this if the issue should rise again.



Patriot NR has maintained a steady presence on the Property throughout the management effort, including PWRT members who are County Police Officers, regularly inspecting the portions of the Property visible from the road for poachers, spotlighting, and anything out of the ordinary. Patriot NR has also continued to work proactively with DNR conservation officers to catch trespassers and poachers. This year we have had an increase with the DNR conservation officers and have built a very good relationship with them, including Officer Caw who lives and borders the West side of the property.

Overall, utilization of the PWRT for deer removal has been beneficial for the property, its' farmers, and the surrounding community. The PWRT operated with utmost professionalism and discretion, and the majority of the deer removed from the property were donated by PWRT members to the Montgomery County Deer Donation Program, which Patriot NR manages. There is a donation cold-box in Poolesville and the donated meat goes to food banks to help feed the needy and homeless in the local area.

Site 2 to date:

LOA 55393 is currently in effect. Patriot Natural Resource has agreement to serve the LOA until 2/28/18. At that point, Patriot NR will be submitting a proposal to try to obtain the permit for future management practices, however if not Patriot NR, the LOA will still be in effect with whatever company is contracted. Patriot NR accounts for the biological activities of white-tailed deer (bucks lose antlers and can be mistaken for does, and does are pregnant and will be raising fawns) and operates in such a way as to create a healthy and balanced deer herd. Typically, Patriot NR ceases hunting activities from March until June/July to allow for the natural biological activities of white-tailed deer to occur. PWRT members are still permitted to continue the management effort, but have been briefed to take special care as to harvesting does without young fawns, and to identify antlerless bucks as non-targets.

Deer Disposition Plan

For Year 8 of the management effort, Patriot NR would like to outline some goals and details.

-Reflecting on Year 8, based on the harvest and observation reports from the PWRT, the herd is less in population than Years 1, 2, 3, 4. Since beginning deer management operations, the PWRT has removed 548 deer from the Property (Year 1 – 128, Year 2 – 95, Year 3 – 75, Year 4 – 59, Year 5 – 54, Year 6 – 53, Year 7 – 45, Year 8 – 44). While the overall abundance of deer has certainly decreased, there are still reports of “larger” groups of deer utilizing Mr. Webbs’ property during daylight hours, where hunting is prohibited. This area has been safely holding a large number of deer throughout the duration of the year. This will continue to happen allowing the deer only utilizing the exterior of Mr. Webbs’ property to be hunted and harvested.

-Year 9 Harvest goal = 45 deer

-PWRT will be briefed on Year 9 goals at our yearly management meeting and then will resume management efforts on property if so granted.

-Harvested deer will be kept by PWRT hunters or donated to Montgomery County Deer Donation Program cold-box in Poolesville, MD where we PWRT has donated over 450 deer to feed the hungry, an effort everyone can be happy about.

Total Deer Harvest vs. Year

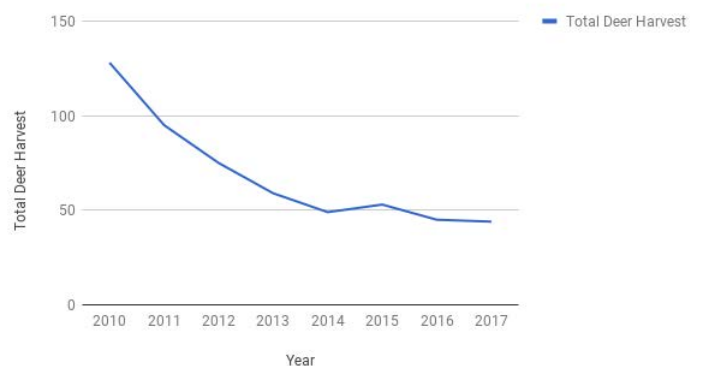


Figure 6- Total deer removed annually since 2010.



Patriot Natural Resources and the Patriot Whitetail Removal Team wish to thank the Montgomery County Department of Environmental Protection, Division of Solid Waste Services, and the counties local residential advisory group, and all other interested parties for allowing us the opportunity to assist in the deer management efforts during the 2017-2018 season, and we look forward to future successes in the years to come. Thank you for your consideration and selection of Patriot NR to continue to engage in deer management operations at this site.