

Kinzua Quality Deer Cooperative

Annual Report

January 2023 – July 2024

Dec 2, 2023 The Willows



KQDC DEER CHECK STATION - Willows - 2023														
DEER #	SEX	AGE	WEIGHT	HEAD	LEGS	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER
1	M	3	4	12 3/4	120	3.5	25	22						
2	F				80	2.5								
3	M	3	3	2.0	144	3.5	30	30						
4	F				108	2.5								
5	F				105	6.5								
6	M	4	4	18	150	2.5	50	54						
7	M	3	3	8.5	100	2.5	15	16						
8	M	3	4	12.5	115	2.5	28	19						
9	M	4	4	16 7/8	145	3.5	28	27						
10	F				65	Roam								
11	M	5	5	17	145	2.5	22	23						
12	M				75	Roam								
13	M	3	4	13 3/4	155	3.5	43	22						
14	M	5	6	16 1/4		3.5	28	52						
15	M	4	4	17 1/4	150	3.5	28	31						
16	M	4	4	17 1/4	145	2.5	24	25						
17	F				110	3.5								
18	M	4	4	15 1/4		2.5	24	24						
19	F				60	Roam								
20	M	3	4	14 1/2	125	2.5	21	21						
21	M	4	4	16 1/4	145	3.5	28	30						
22	M	3	3	12 1/2	145	3.5	25	25						
23	M	6	5	2.0	155	4.5	54	54						
24	M	4	3	16 3/4		3.5	25	26						
25	M	3	4	16 1/2	148	2.5	22	23						

KQDC DEER CHECK STATION - Marshburg - 2023														
DEER #	SEX	AGE	WEIGHT	HEAD	LEGS	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER	ANTLER
1	M	5	6	15 1/2	120	2.5	29	29						
2	M	4	4	15	150	3.5	35	35						
3	M	3	2	4 1/2	108	2 1/2	14	15						
4	F	1 1/2	1 1/2	6 3/4	110	2 1/2	21	21						
5	M	4	5	14 1/4	142	2 1/2	22	22						
6	M	4	4	15 1/4	142	2 1/2	22	22						
7	M	4	4	15 1/2	140	2 1/2	21	21						
8	M	5	5	15 1/2	160	2 1/2	24	24						
9	M	4	4	15	140	2 1/2	23	23						
10	M	1	2	2 1/2	94	2 1/2	17	15						
11	M	5	5	14	142	2 1/2	22	22						
12	M	4	4	15 1/2	141	2 1/2	21	21						
13	F	1 1/2	1 1/2	10 1/2	100	2 1/2	18	18						
14	F	1 1/2	1 1/2	10 1/2	94	2 1/2	18	18						
15	F	1 1/2	1 1/2	10 1/2	94	2 1/2	18	18						
16	M	4	4	12 3/4	120	2 1/2	23	24						
17	M				120	2.5								
18	M				77	Roam								
19	F				72	Roam								
20	M	3	5	17 1/2	158	3.5	33	33						
21	F				91	3.5								
22	F				111	3.5								
23	M	5	5	15 1/4	128	2.5	34	34						
24	F	1 1/2	1 1/2	10 1/2	114	2 1/2	18	18						
25	M	4	4	16 3/4	134	2 1/2	24	24						

November 25 2023, Marshburg



KQDC Facebook
Kqdc.com

Kinzua Quality Deer Cooperative

Annual Report for

January 2023 to July 2024

KQDC Coordinator – John Dzemyan

KQDC Partners – USFS, Allegheny National Forest; USFS, Northern Research Station; Kinzua Forests LLC/Conservation Forestry; Forecon Inc; Bradford Municipal Water Authority; Generations Forestry Inc.; Kane Hardwood (a Collins Pine Company); RAM Forest Products; Sand County Foundation of Madison, WI.; Pennsylvania Hunters; AHUG: Allegheny Hardwoods Utilization Group.; Allegheny National Forest Visitors Bureau; University of Pittsburgh at Bradford, Penn State University, Dubois Campus.

Leadership Team – Linda Ordiway, Ken Kane, Matt Gayley, Dan Ludwig, Alex Royo, Linda Ordiway, Mary Hosmer, Mike Bleech, Emily Rowan, David decal Esta, Linda Devlin, Brad Nelson, Kevin McAleese, Becky Carson, Amy Shields, Susan Stout, John Dzemyan.

Check Stations for 2023 – Marshburg RT 59 - Mary Hosmer, Emily Rowan, Mike Bleech, Matt Obrien, Jim Rowan. Willows Restaurant RT 346, Lisa Barlow, Emilee Gahan

Pellet Group Transects for 2024 – Completed by Generations Forestry, Collins Pine, Kinzua Forest LLC/Conservation Forestry/Forecon, Allegheny National Forest, USFS Lab Irvine, and KQDC Coordinator and Volunteers.

Hunter Vehicle Count Surveys for 2023 - Lisa Barlow, Matt Obrien, Jai Solis, Stephanie Fortin.

Trail Cameras- John Dzemyan

Annual Report prepared by John Dzemyan, Alex Royo and Emily Rowan

Charts, graphs, tables developed by Alex Royo, Emily Rowan and John Dzemyan

Executive Summary 2023/2024

In 2000 a group of private landowners, public land managers, scientists, hunters, and others came together to form the 74,000-acre Kinzua Quality Deer Cooperative (KQDC) in McKean County, PA. Common goals included improving deer herd quality, forest ecosystem health, and the hunting experience.

Annually, a report is issued that includes a summary of data collected that year and trends that may be evident. In 2023 no transects were completed so the annual report for 2023 that normally comes out March 2024 was delayed until September of 2024

This year's report covers the progress of work beginning in January of 2022 to June 2024.

This report includes an analysis of deer density and habitat conditions from transects that were accomplished from in April and May of 2024. Deer herd sex and age composition drawn from deer harvest information obtained from the check station in November/December 2023. In 2023 the hunter season vehicle counts were completed after not being done in 2022 due to a shortage of volunteers and workers.

The October 2023 KQDC Annual Deer Season Kick Off was held at University of Pittsburgh at Bradford. Featured speaker was Kip Adams of the National Deer Association. Kip gave a great presentation comparing Pennsylvania deer harvests, populations and management to other states.

The deer check station project was expanded to two locations in 2022 and in 2023 was operated at both locations again. The Marshburg location was for the second time held at truck company parking lot along RT 59 one quarter mile east of Timberdoodle Flats thanks to the generosity of owner John Perkins of Marshburg. The second location was held along RT 346 Willow Creek at the Willows Restaurant thanks to the generosity of owners Janet LaRoche and her husband Jim.

A sincere thanks to this year's check station staff and volunteers. A total of 73 deer were brought into the check stations. (40 at Marshburg and 33 at the Willows)

In 2023, 39 deer were brought in. and in 2022, 71 were brought in. The 73 brought in last season was the highest number brought in since 2009. Later in the report we will explain what factors may determine how many hunters bring in a deer to be checked.

Weather is always a factor, and on November 25,26,27 and Dec 2, 2023 there was no snow on the ground except for a minor dusting of snow for a few hours now and then. Hunter success is greatly affected by weather. Rain normally lowers the number of deer harvested, while snow on the ground normally increases the number of deer harvested.

For the 2023-year check stations, Emily Rowan was in charge of the Marshburg Check Station assisted by Mary Hosmer. Also assisting at Marshburg were, Matt Obrien, Larry Wise, Mike Bleech and John Dzemyan.

At the Willows site Lisa Barlow was in charge assisted by Emily Gahan with some assistance by John Dzemyan

Vehicle counts were done by Lisa Barlow, Matt Obrien, Jai Solis and Stephanie Fortis.

We also thank the 73 deer hunters who took the extra time to bring their deer into the check station for KQDC research gathering. The data collected adds to the statistical base for properly managing forests and deer on the KQDC and throughout Pennsylvania's forested landscape.

Other successful accomplishments for the KQDC in 2023 were:

KQDC personnel along with other conservation/forestry/wildlife organizations gave in person testimony at the January Pa. Game Commission January 2023 season and bag limits meeting. Written testimony was supplied to each individual PGC Commissioner along with other relevant information about deer and habitat on and around the KQDC.

Over the past three years such testimony and reports have helped the PGC Commissioners institute new programs such as the Saturday opening day followed by a Sunday to hunt deer as well as other adjustments to make more days available for deer hunting in Pennsylvania. Results so far show slight increases in numbers of hunters purchasing licenses statewide. For decades prior to these changes hunter numbers have been on a steady decline. PGC Staff, PGC commissioners and Pennsylvania hunters have all expressed their appreciation to KQDC for continuing to provide its data for their consideration.

Both deer check station buildings were repaired, modified and waterproofed prior to the 2023 season. That should keep them ready for service for more years to come. Arrangements have been made to keep them at both sites between seasons. Prior years the Pennsylvania Game Commission delivered them on its tilt bed truck from a storage parking lot at the ANF Bradford Ranger Station.

This 2023/2024 report shows that deer populations have been reduced by the spring of 2024. This reverses a trend that saw deer populations increasing since 2016. Even with the reduction indicated by the populations estimates for the 2024 transects, deer numbers are still above goals set for the KQDC to enjoy sustainable forest growth and quality deer.

The reduction in overwintering deer from the last transects in 2022 to the spring of 2024 was one of the biggest reductions in deer density on the KQDC since the 2004 to 2005 time period. In two years (2004 to 2005 it was estimated 24.7 to 14.4 dpsm. In 2022 to 2024 it is estimated to have gone from 24.6 to 17.2. (see Table #2)

Since there was a two-year gap between when transects were done, a refresher training was held for all those who were to conduct the surveys. There is also a concern that the November 2023 to April 2024 weather was unseasonably warm and rainy. That may have reduced the number of deer pellets found on the transects since cold weather and snow cover can preserve them better. (deCalesta; Chap. 17.4.1.2. Deer Management for Forest Landowners and Managers (Mike C. Eckley and David S. deCalesta)

Deer numbers on the whole KQDC over the past four years are as follows.

Deer numbers on the whole KQDC have gone from 15.7psm in 2018 to 24.6 psm in 2022 and then down to 17.8 as of spring of 2024.

(2018 = 15.7) (2019 = 19.8) (*2020 = 26.1 to 21.5) (2021 = 21.8) (2022 = 24.6) (2023 no transects or survey done) (2024=17.8)

(* In 2020 information was from only 13 transects that were completed. The lack of data collection led to a possible two population numbers estimates)

In response to the still abundant deer population and continued impacts on vegetation the KQDC maintained the number of DMAP permits as follows.

(Total DMAP permits on KQDC over the past 5 years.)

(2018 =967) (2019=1117) (2020 =1517) (2021 = 1881) (2022=1881) (2023 = 1881)

In 2023 the breakdown was as follows

DMAP UNIT 135 Kinzua Forest LLC/Conservation Forestry/portion of ANF = 440 permits

DMAP UNIT 1996 Bradford Watershed/Collins Pine = 800 permits

DMAP UNIT 1981 Allegheny National Forest = 641 permits

The number of DMAP permits for year 2024 is being maintained at the same numbers as last year. (1811 total) The reason for this is when deer populations decline the success rate for the hunters will decline. So even with the same number of DMAP permits available, the number of deer harvested may decline or just remain stable.

Forestry practices continue on all the major landowners of the KQDC in the form of thinning's, final cuts, herbicide use to control ferns and invasive plants. Fencing to restrict deer impacts has increased on some of the timber removal locations.

Check station data also shows us that deer weights, antler spreads and beam diameters are down since the high year of 2016. The good news is that last year's deer season 2023 check station show that the decline has slowed, stabilized or slightly reversed in all three of these categories.

As in years past deer hunters continue to bring in more antlered deer than antlerless. But in 2023 the percentage of antlerless deer brought in increased to one of its highest levels. In 2022 only 8 antlerless deer were brought in out of 39 deer checked. In 2023 31 antlerless deer were checked out of a total of 73 deer. That's the highest number of antlerless deer checked since 2009. Also, 2023 had the highest total number of deer checked since 2009.

We were able to have the 7th Deer Season Kick Off at the University of Pittsburgh Bradford Campus in October of 2023. Kip Adams of the National Deer Association gave an excellent program. However, attendance was light, with less than 40 people attending. Also, very few of the attendees were under 50 years old. We need to find ways to reach out to the younger hunters. The KQDC Facebook page helps inform people with numerous views during the fall hunting seasons. The KQDC Website is still up and running, but needs some attention to make additions to it easier and to increase viewer participation.

The 2023/2024 annual report covers from January 1, 2023 to the end of June 2024.

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INTRODUCTION AND FRAMEWORK OF KQDC

In 2000 a group of private landowners, public land managers, scientists, hunters, and others with the support and guidance of the Sand County Foundation (SCF) came together to form the 74,000-acre Kinzua Quality Deer Cooperative (KQDC Figure 1). Common goals included improving deer herd quality, forest ecosystem health, and the hunting experience. An extensive monitoring program was established to track changes in deer density and habitat, deer harvest, hunter satisfaction, and deer condition (body weights, buck/doe ratios, and antler characteristics). The success of the program has been enhanced by deer management regulations enacted by the Pennsylvania Game Commission that include a three-point antler restriction, presently a week of concurrent antlerless and antlered deer seasons, and the Deer Management Assistance Program (DMAP) which started in 2004, Saturday opener in 2019, and in 2020 a Saturday opener with the next day, Sunday, being open to deer hunting for the first time in Pennsylvania's modern hunting history. In 2021 thru 2023 concurrent antlered and antlerless season were again allowed for the first time since 2011.

Annually a report is issued that includes a summary of all data collected that year and trends that may be evident. Protocols have been described in detail in these past reports. In an effort to streamline the report and reduce the size, this year's report will not repeat the description of protocols and will primarily describe important trends and new findings. Protocols will be posted on the KQDC website for those interested.

This year's report includes an analysis of deer density and impact from transects that were completed, deer harvest data collected at the check station, and vehicle counts compared to prior years.

The 2023 hunting season marked the 22st year under the three-point antler restriction rule and the 20th year of DMAP. Cumulatively, these annual reports provide a record of changes in deer quality (age, weight, antler size), habitat quality (browse impact, tree regeneration), and deer density as DMAP, antler restrictions, and hunting regulations that have changed.

Presently the KQDC is made up of the following landowners as shown in Figure #1.

The KQDC initially participated in DMAP by creating north and south DMAP units as divided by State Route 59. In order to achieve a better distribution of hunters and ultimately a better distribution of deer harvest, the Bradford Water Authority and Collins Pine properties were designated as a separate DMAP unit from the Allegheny National Forest (ANF) in 2012. The result is that the KQDC is now divided into three DMAP Units each with a separate DMAP permits request (Figure 2).

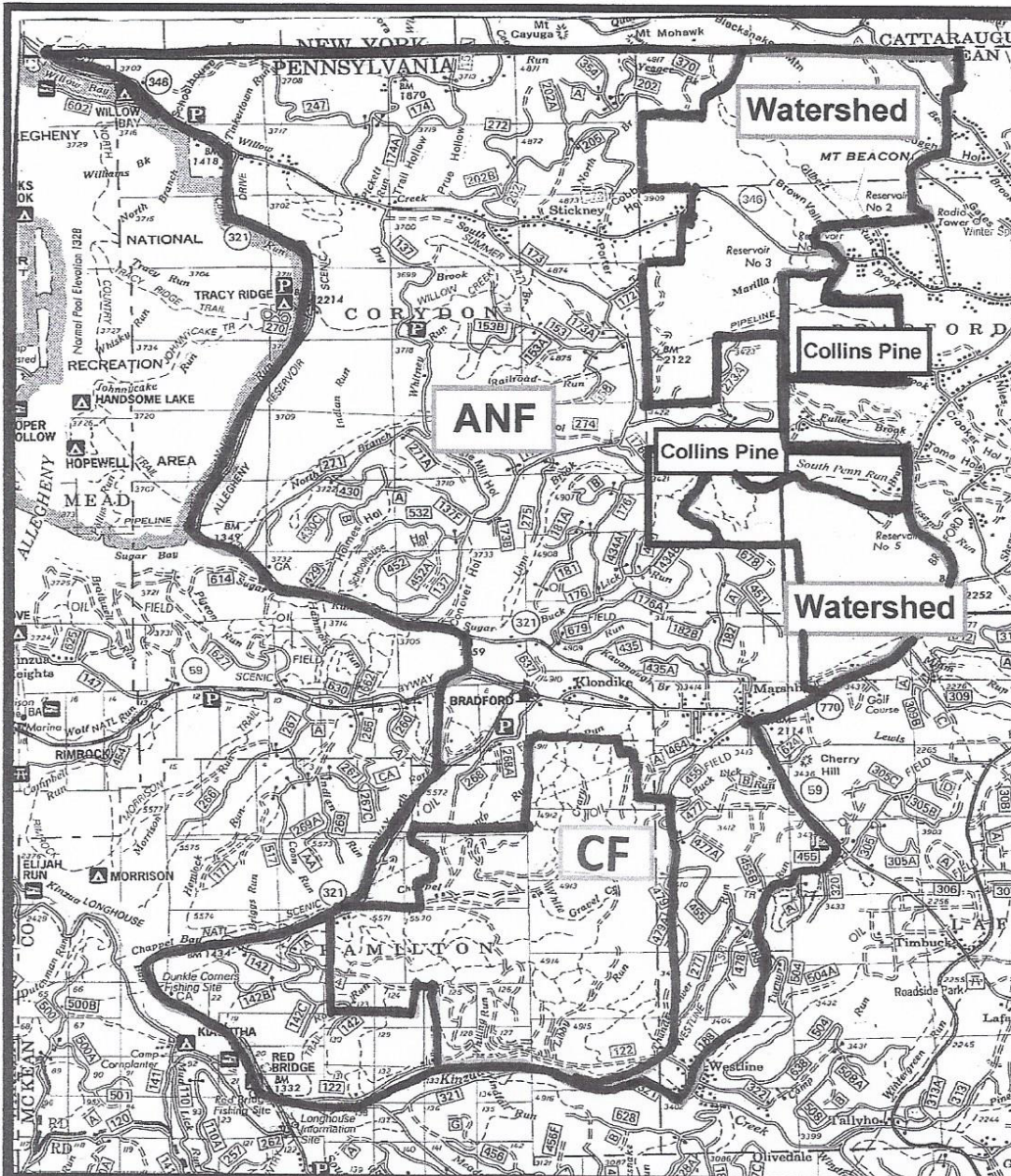


Figure 1. Landowners of the KQDC Project Area. ANF = Allegheny National Forest. CF = Kinzua Forest LLC / Conservation Forestry. Watershed = Bradford Watershed Authority. Collins Pine = Collins Pine

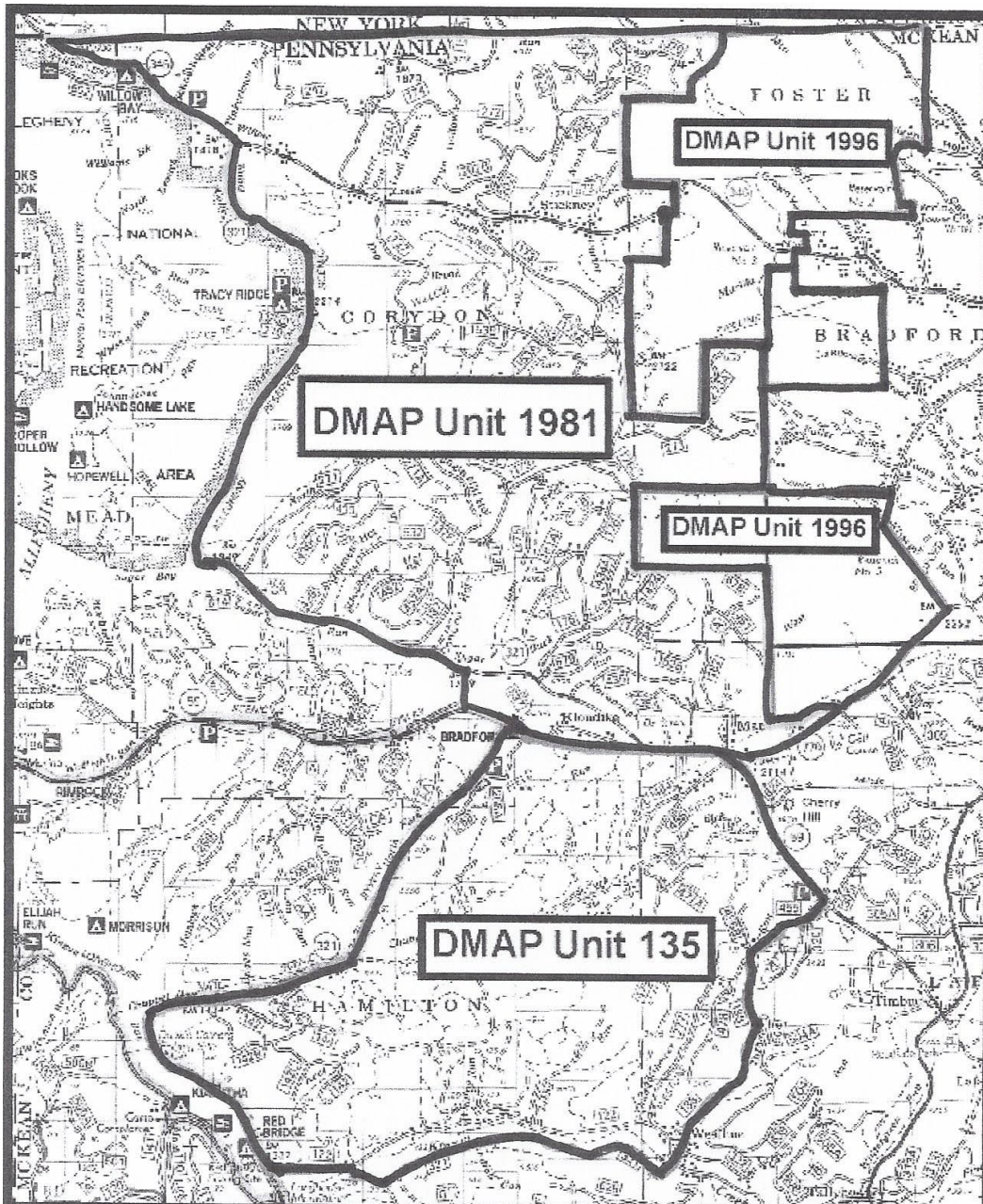


Figure 2. DMAP units within the KQDC: DMAP Unit 1981 (Allegheny National Forest- north), DMAP Unit 1996 (Bradford Water Authority and Collins Pine), and DMAP Unit 135 (Kinzua Forest LLC. / Conservation Forestry and Allegheny National Forest-south).

Deer Density and Habitat Conditions

In 2024 all 26 transects were completed to gather and document data about vegetation and deer population. The data indicates that the total KQDC deer population has been reduced over the past two years from the 2022 average of 24.6 to this spring's average of 17.4.

From 2016 to 2022 deer populations on the whole KQDC have gone from 11.4 per square mile to 24.6 per square mile. In 2023 no transects were completed to estimate the over winter deer population density. In the spring of 2024, all 26 transects were completed and for the first time since 2016 deer populations have trended downward.

For a third straight year the mast (acorns, cherries, beechnuts) crops from 2021 to 2023 were not abundant and when that occurs deer remain highly dependent on woody browse as a source of forage. During the summer of 2021 gypsy moth caterpillars had an effect on the oaks resulting in little to no acorn production for the 2021-to-2022-time span. My observations were that cherry and beech seed were not abundant either, although a few scattered spots had some, with some limited areas of abundant black cherry and a few spots with some acorns.

Deer living on the KQDC landscape are highly dependent on the plant quality and quantity for their survival and health. Deer populations and browse impacts need to be reduced to the 2016 levels for the forest and deer to thrive. To do so KQDC land managers must find a way to increase the antlerless harvest with KQDC hunters.

Forest management continues throughout the 74,350 acres with all four landowners. Thinning's, regular harvests, final harvest, herbicide treatments all continue to be used to properly harvest timber and to enhance quality regeneration of timber as well as wildlife and deer habitat. All these methods work well when deer numbers are kept at level where deer impacts on vegetation is low. Fencing some harvested areas is once again being used since deer numbers from 2020 until now were once again above levels that allow proper forest regrowth. The increase in sunlight on the forest floor will help increase the ability of native plants, trees and shrubs to sprout and grow. Keeping deer numbers low enough to ensure that the diversity, quality and quantity of these important plants is vital. This need sustained in order to maintain quality forest regeneration, to produce a quality forest with quality deer, and also to provide the proper plant structure for other species of wildlife.

Table #1 shows that deer populations are now lower in the spring of 2024 than they were the last time deer pellet counts were done in 2022. Numerous changes increasing the opportunity for deer hunters, especially antlerless deer hunters took place since 2020 and 2021. (see discussion under Graph 1) Data shows that the best years for deer health (by weight and antlers) and forest regeneration was when the populations were closer to 14 dpsm for 12 years.

Table 1. Mean deer density (deer/square mile) by DMAP Unit 2002 to 2024 with DMAP Tags, Regular Antlerless Tags, and concurrent season information.

YEAR	DMAP Unit 1981	DMAP Unit 1996	DMAP Unit 135	Whole KQDC	95% C.I.	Antlerless tags WMU 2F	DMAP Tags	2-week Concurrent seasons
2002	20.8	33.7	32.0	27.3	+ - 3.3	By county	0	Yes
2003	27.0	35.6	25.3	28.7	+ - 3.0	44,000	0	"
2004	22.9	29.1	23.8	24.7	+ - 3.7	44,000	3000	"
2005	12.1	20.3	13.2	14.4	+ - 1.4	30,000	3000	"
2006	7.4	14.0	15.1	11.6	+ - 1.8	28,000	700	"
2007	9.8	17.0	11.9	12.2	+ - 1.2	28,000	150	"
2008	9.3	24.7	15.3	14.9	+ - 1.3	28,000	300	"
2009	10.0	22.2	17.3	15.4	+ - 1.3	28,000	550	"
2010	8.4	26.8	15.8	15.3	+ - 2.7	22,148	800	"
2011	16.3	25.2	15.6	17.2	+ - 3.5	34,000	800	One week
2012	8.2	13.4	8.9	9.6	+ - 1.3	27,000	800	"
2013	12.2	22.7	10.7	13.7	+ - 2.7	29,000	905	"
2014	12.3	18.9	10.9	13.4	+ - 3.5	27,000	1067	"
2015	12.0	20.2	12.1	14.0	+ -3.1	22,000	1067	"
2016	10.3	15.2	10.7	11.4	+ - 2.7	22,000	1067	"
2017	7.7	20.6	12.4	12.2	+ - 3.0	24,000	1067	"
2018	17.9	18.4	11.2	15.7	+ - 2.5	23,000	967	"
2019	22.3	24.2	13.9	19.8	+ - 1.0	31,000	1117	"
2020	18.6	35.1	n/a	26.7	n/a	36,000	1517	"
2021	24.6	26.0	14.5	21.8	+ - 3.7	32,000	1881	2 weeks
2022	27.9	32.3	15.4	24.6	+ - 3.5	37,000	1881	"
*2023	No	transects	Done	This	year	49,000	1881	"
2024	19.6	16.4	14.5	17.2	+ - 3.6	55,000	1881	"

Table 1 shows the number of antlerless licenses and antlerless DMAP permits combined with other ways to increase or decrease hunters' opportunities can produce increases or decrease in the post season deer populations. This is documented over the 23 years and hunting seasons with the deer pellet over winter population surveys and with the vegetation impact surveys.

The concurrent season started in 2001 in McKean County when county boundaries made up antlerless license areas. Then in 2002 in KQDC became part of Unit 2F. It continued for WMU 2F until 2011 when it was changed to a split season (5 days antlered only, 7 days concurrent). It was then brought back to fully concurrent in 2021 and 2022 (in 2021 the antlerless allocation was reduced since the days to hunt were increased. In 2022 antlerless licenses were increased due to CWD detection in Unit 2F near Warren, Pennsylvania. From 2019 to 2023 DMAP permits were increased as data showed the population growing. In 2024 for the upcoming season DMAP numbers have remained the same to ensure that hunter opportunity can maintain the lower deer levels present after the 2024 surveys. Concurrent seasons appear to be necessary to lower deer populations and to maintain lower deer populations. Hunters still bring in more antlered deer than antlerless deer to the check station and have done so for 20 out of the 23 years the check stations have been operated. Does this mean that hunters actually harvest more antlered deer than antlerless deer on the KQDC. The question needs further investigation. Comparison to the Pennsylvania Game Commissions deer harvests of antlered versus antlerless for 2G can provide related information on this.

Table 2 shows the population estimates for each one of the 26 individual transect units when they were surveyed over the last 12 years. During some years an individual transect was not completed. In 2023 no transects were done to save on time and labor expenses among all the cooperators.

Discussions continue annually on whether to do transects every year versus every two years and some even though once every three years might be adequate. Each transects field work takes a minimum of 10 to 12 hours to complete. It goes best when two people work together the same day on a transect.

TABLE 2. Over winter deer density for the last 12 spring pellet counts 2013 to 2024

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
transects											NO COUNT	
A	7.3		5.6	13.6	6.2	22.7	23.5	18.5	17.0	19.4		6.2
B	9.1	11.9	17.9	4.0	8.0	28.6	40.0		23.1	8.2		14.6
C	10.9	9	10.7	6.8	14.4	19.5	25.3	24.8	21.5	24.6		28.6
D	8.6	9.5	9.7	12.3	13.0	18.2	17.9	20.0	22.8	25.5		17.8
E	9.4	4.4	18.1	4.0	5.9	18.0	20.3		14.7	18.2		6.5
F	10.6	18.9	10.2	4.9	9.6	10.9	16.9	52.8	18.4	21.5		15.8
G	24.5	11.3	5.5	5.2	10.5	6.8	7.1	6.8	13.4	14.0		23.1
H	2.4	6.2	5.1	4.6	6.8	15.6	21.2	13.4	31.4	21.8		37.5
I	34.3	15.3	22.2	8.1	22.6	16.0	16.2	36.2	19.3	20.9		11.9
J	30.8	19.8	31.7	23.2	16.0	23.9	39.0	48.1	25.1	33.0		18.8
K	29.1	28.3	22.3	27.6	37.6	27.4	37.2	33.0	32.5	44.7		22.2
L	10.4	12.7	15.6	13.3	3.0	11.7	17.9	30.7	15.7	47.7		17.7
M	18.6	22.6	18.9	7.1	5.9	15.4	31.9		48.3	47.0		22.2
N	19.6	10.5	11.3	11.2	5.3	21.3	27.9	20.9	31.9	45.7		20.2
O	14.3	18.3	21.5	29.7	10.4	23.5	14.3		26.0	27.5		12.7
P		21.5	25.3	23.9	24.9	14.0	17.8	21.3	37.9	48.1		17.8
Q	9.6	9.7	11.1	8.7	7.7	11.5	17.1		30.5	32.8		7.0
R	7.8	10.5	9.1	8.9	6.3	20.0	19.5	20.8	32.3	18.0		23.3
S	6.4	7.6	2.1	8.8	5.0	19.8	8.3		17.3	8.0		7.0
T	6.8	12.7	3.3	8.3	7.4	7.4	12.3		21.7	21.9		8.9
U	9.2	9.3	7.3	9.4	6.6	8.5	15.9		11.5	6.9		16.1
V	10	10.2	10.8	7.8	17.9	6.8	15.4		7.83	5.4		6.8
W	5.8	13.1	17.0	11.7	14.0	10.7	10.0		17.8	29.4		42.3
X	16.2	17.3		10.2	18.3	9.9	14.6		13.3	27.0		11.6
Y	14.1	14.8	11.5	8.9	16.9	5.7	13.1		7.86	17.6		24.7
Z	18.8	8.8	26.3	13.7	19.2	13.8	15.0		23.7	4.2		6.9
mean	13.7	13.4	14.0	11.4	12.2	15.7	19.8	*26.5	21.8	24.6		17.2
95% C.I.	+ - 3.2	+ - 2.2	+ - 3.1	+ - 2.7	+ - 3.0	+ - 2.5	+ - 1.0		+ - 3.7	+ - 3.5		+ - 3.6
Antlerless licenses WMU 2F	29000	27,000	22000	22000	24000	23000	31000	36000	32000	37000	49000	* 55000
DMAP	905	1067	1067	1067	1067	967	1117	1517	1881	1881	1881	*1881

FIGURE 3. TRANSECT LOCATIONS 2001 to 2022

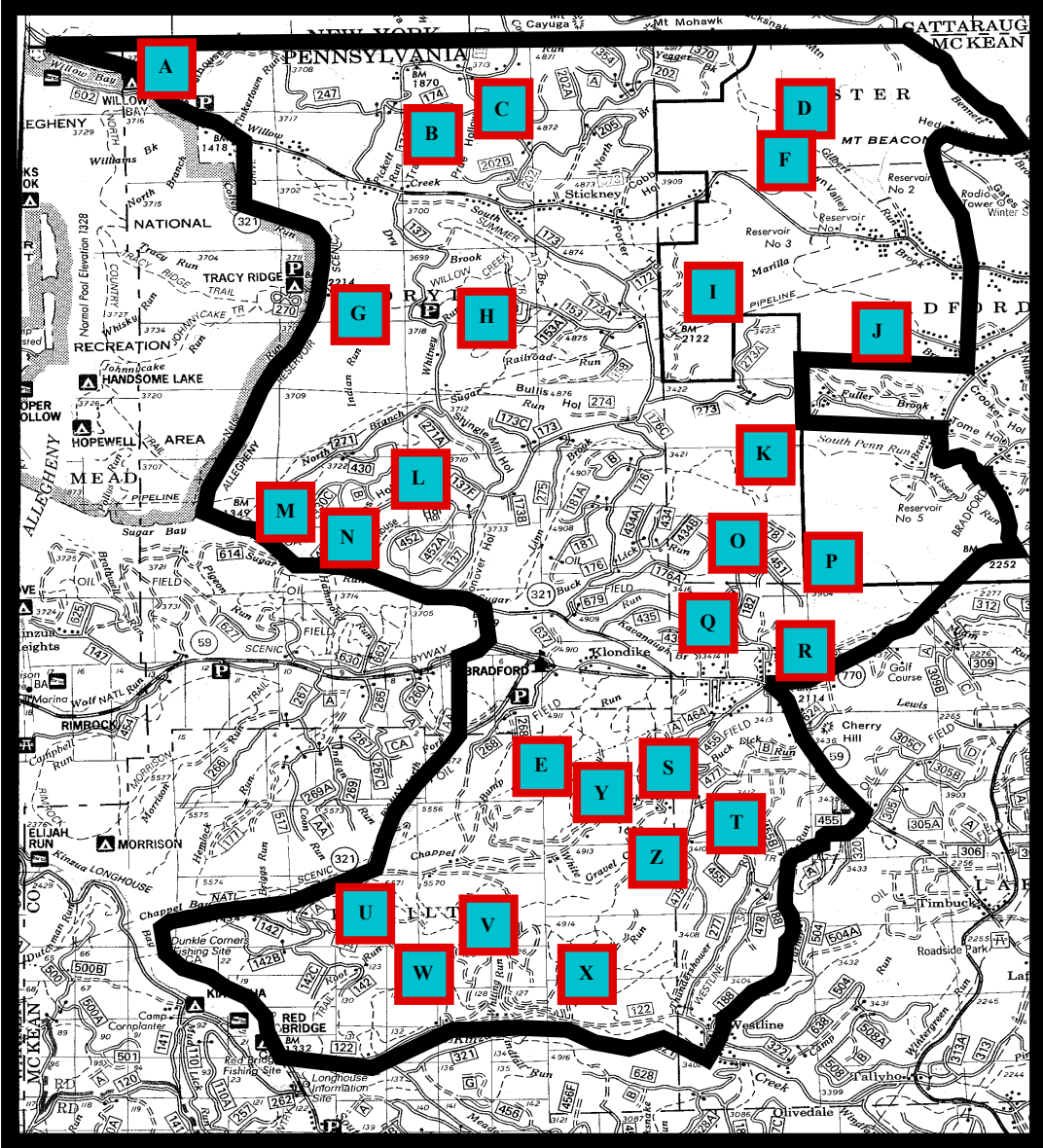


Figure 3. Location of 26 sites where deer density and impact estimates are collected.

All 26 transects completed in 2024

HABITAT and FOREST CONDITIONS

Table 3. Vegetation Treatments on the KQDC for years 2013 to 2022 years (in acres)

Table 3. Vegetation Treatments on the KQDC over the past 10 years (acres)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Regeneration Harvest	161	381	528	640	279	175	307	222	918	430
Partial Harvest	675	807	1061	295	1214	1020	1239	1612	922	1156
Herbicide	123	101	49	705	0	449	821	868	924	866
Fence Removal	100	0	0	219	0	0	52	0	9	18
Fence Construction	0	0	0	0	0	0	57	143	144	208
Total acres treated	1059	1289	1638	1859	1,493	1644	2476	2507	2917	2678

All landowners on the KQDC continue to do forest treatments which are geared towards a sustainable harvest and a sustainable forest ecosystem.

Table 3 shows those treatments. It is the cumulative number of acres treated over the last 10 years. A total of 19,898 acres have been treated. Of which 14,102 acres had partial harvests or regeneration harvests.

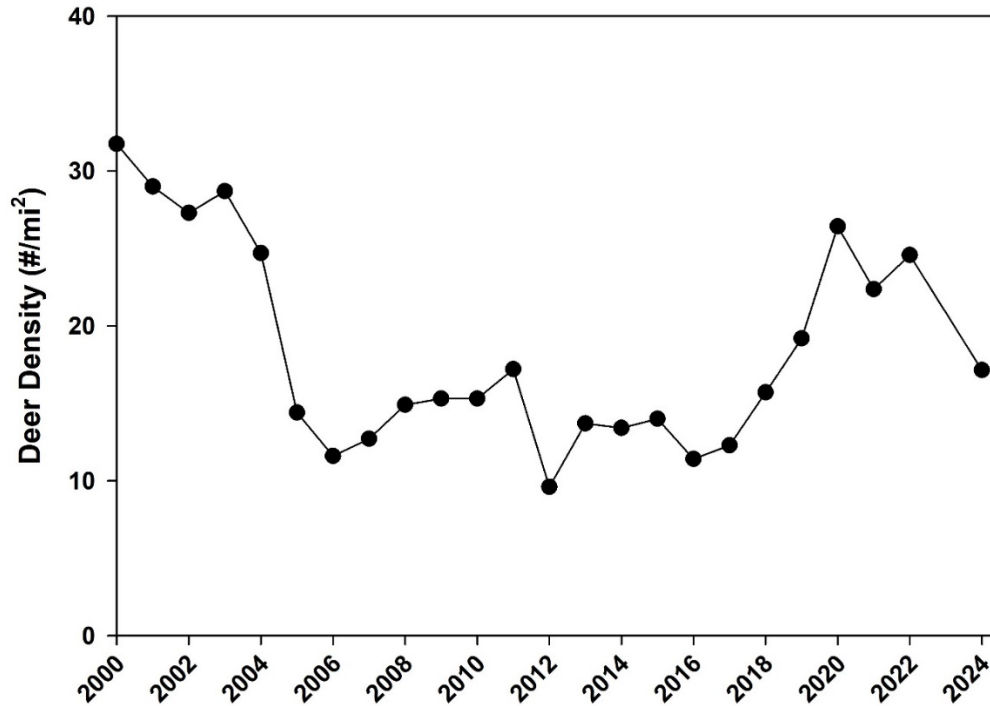
As one can see from the chart of Total Acres treated, forest management continues and is increasing to improve forest conditions for forest diversity and wildlife habitat, two of the original and ongoing goals of the KQDC. The harvests provide income for the landowners and allow increased sunlight to reach the forest floor which can increase the abundance of plants growing there. This provides more trees seedlings, shrubs, forbs and other herbaceous growth that are beneficial for deer. Over the past four years it has once again become necessary to fence more acres each year to ensure that the regeneration is diverse along with being abundant. The 2023 figures were not available for this year's update. However, timber management continues on all properties making up the KQDC. This active removal of timber along with techniques to improve quality, quantity and diversity of the forest regeneration also improves the forest ability to support deer and other wildlife.

**Table 4. Habitat variables on the KQDC by year.
2002 to 2022**

Year	Percent plots without regeneration	Percent of plots with regeneration & no browsing impact	Percent of plots with a closed canopy
2002	59	15	N/A
2003	63	8	N/A
2004	60	15	N/A
2005	53	34	N/A
2006	52	38	N/A
2007	55	28	N/A
2008	53	26	78
2009	55	25	75
2010	55	24	79
2011	50	22	84
2012	41	35	79
2013	49	25	87
2014	43	29	86
2015	58	27	84
2016	53	33	87
2017	50	35	87
2018	50	35	86
2019	44	41	77
2020	52	16	81
2021	44	23	76
2022	46	24	81
2024	40	41	85

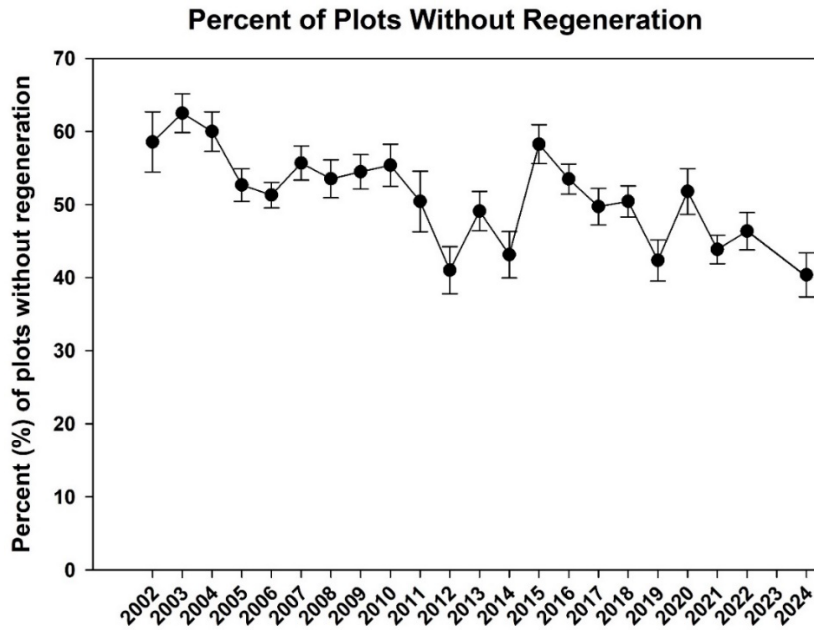
Impacts on vegetation were collected on all 26 transect to compile the habitat variables.

GRAPH # 1 Deer Density graph 2002 to 2024
Deer Density over time

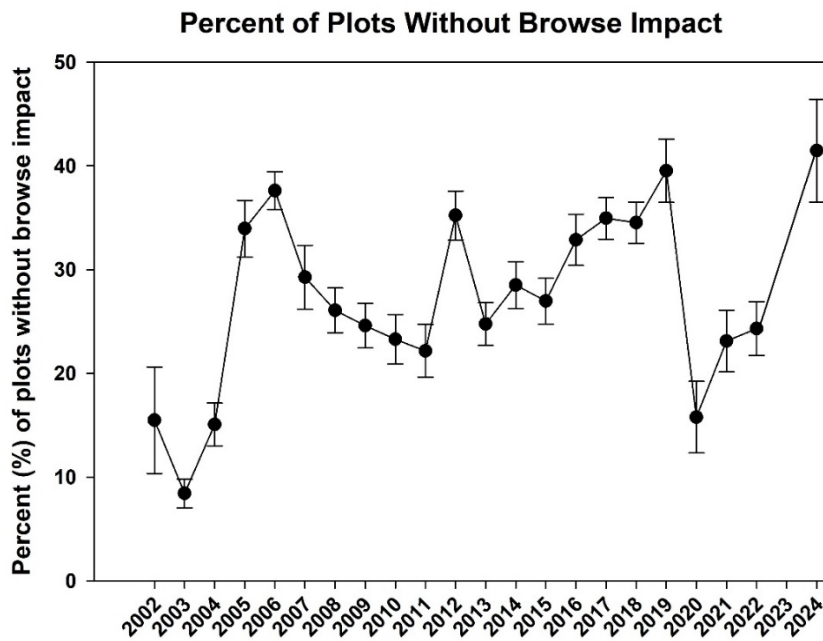


Since 2016 the deer density has trended upward or remained above the 2016 levels. In 2023 no transects to determine deer density were completed. In April and May of 2024 all 26 transects were completed. The transects data showed that deer density has dropped since the 2022 survey. There are a combination of factors that may have produced these results. Some are; (1) In 2019 the season opened up on Saturday which more hunters normally have that day off work and can go hunting. (2) From 2000 to 2023 Sunday was added as a day for deer hunting. (3) From 2021 to 2023 concurrent seasons have been in place. (4) During 2020 due to Covid possibly increased the number of hunters purchasing licenses and being afield. (5) During 2020 to 2023 the numbers of regular antlerless licenses in 2f and the number of DMAP permits for KQDC have been issued at higher levels than the preceding 8 years. (6) Vehicle counts also show a slight increase in numbers over those same years. All those factors result in more opportunities for hunters, especially antlerless hunters to have days to hunt and more time in the woods. Another concern some of the surveyors and biologists involved with the KQDC surveys is that the very warm and rainy weather over the past six months may have lowered the number of deer pellets found for the survey. (deCalesta; Chap. 17.4.1.2. Deer Management for Forest Landowners and Managers)

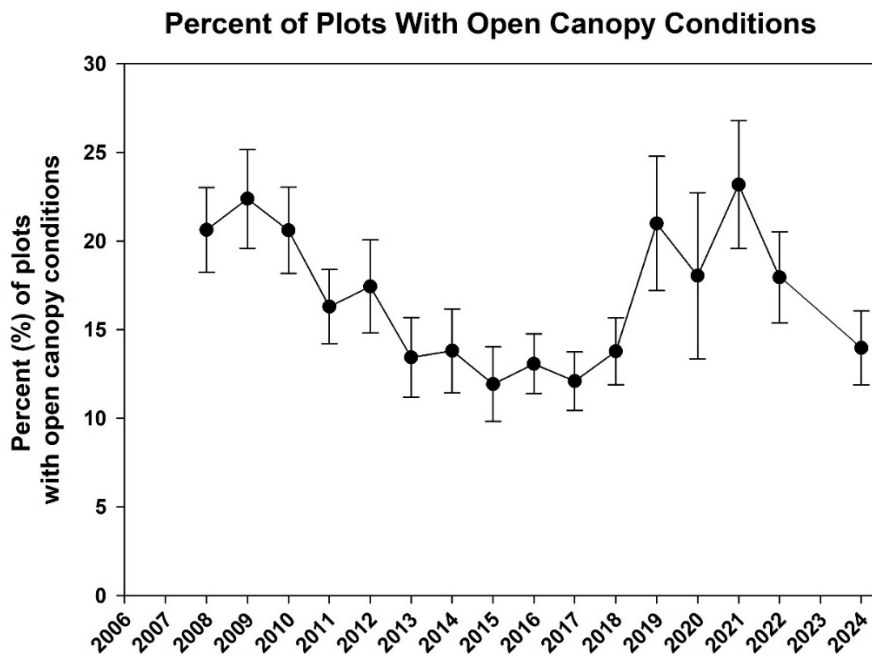
GRAPH 2 Percent of Plots without regeneration 2002 2024



GRAPH 3 Percent of plots without browse impacts 2002 2024



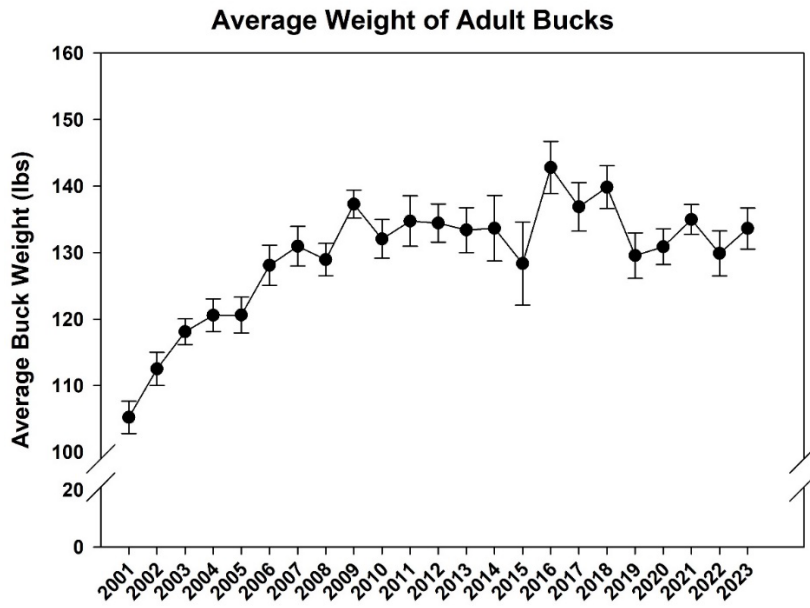
Graph # 4 Percent of plots with open canopy 2002 to 2024



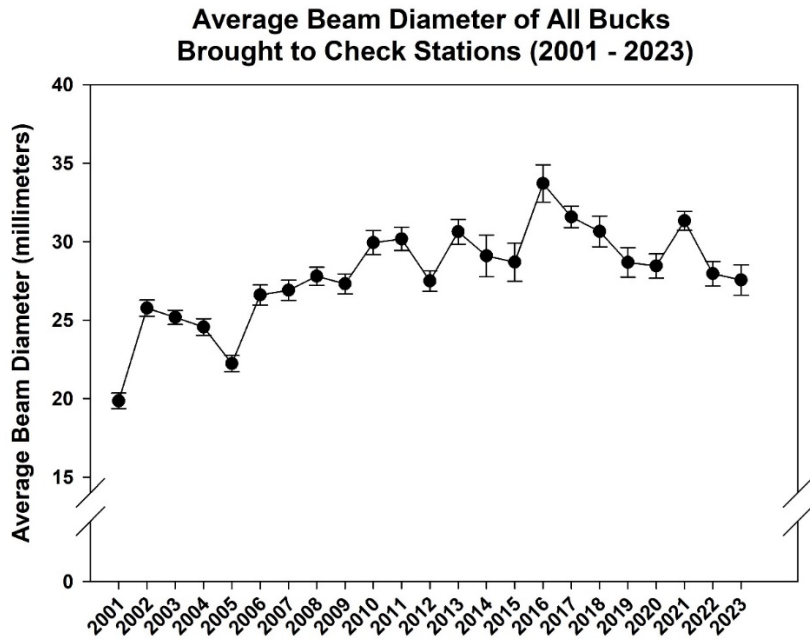
In the last Annual KQDC report (December 2002) it was mentioned that all the data at that time pointed to a need to once again reduce deer numbers so that impacts on forest regeneration and wildlife habitat would be reduced. That was from the transect data last gathered in the 2022 survey. Since there were no transects done in 2023, we are seeing a bigger change in the results of the 2024 survey. There have been two hunting seasons and two growing seasons since the survey instead of just one. This makes sense and it shows up clearly in the tables 1 and 2 and graphs 1, 2, and 3. It also shows that in the tables and graphs relating to deer weights, antler beams and spread that the statistics are improving a bit. Either not declining as much, or actually increasing some (antler spread), or stabilizing.

On the following pages GRAPHS #5 thru #8 show the changes in average weights of adult bucks, average spread of adult buck antlers, average beam diameters, and average weights of adult does for the past 23 years.

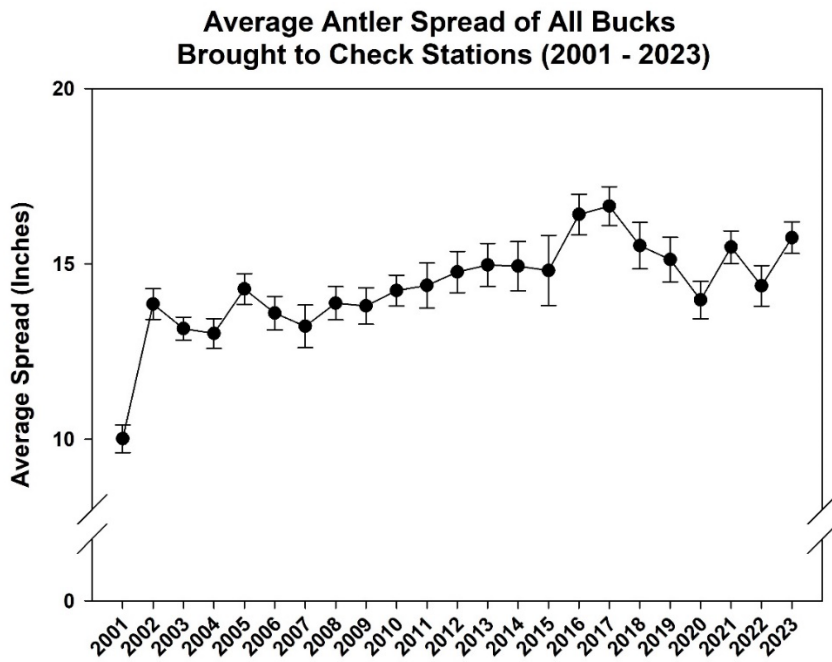
GRAPH 5. Average Weight of Adult Bucks Brought to the check stations 2001-2023



GRAPH 6. Average beam diameter of all bucks brought to the check stations 2001-2023



GRAPH 7. Average antler spread of all bucks brought to the check stations 2001-2023



GRAPH 8. Average weight of all does weight at the check stations 2001-2023

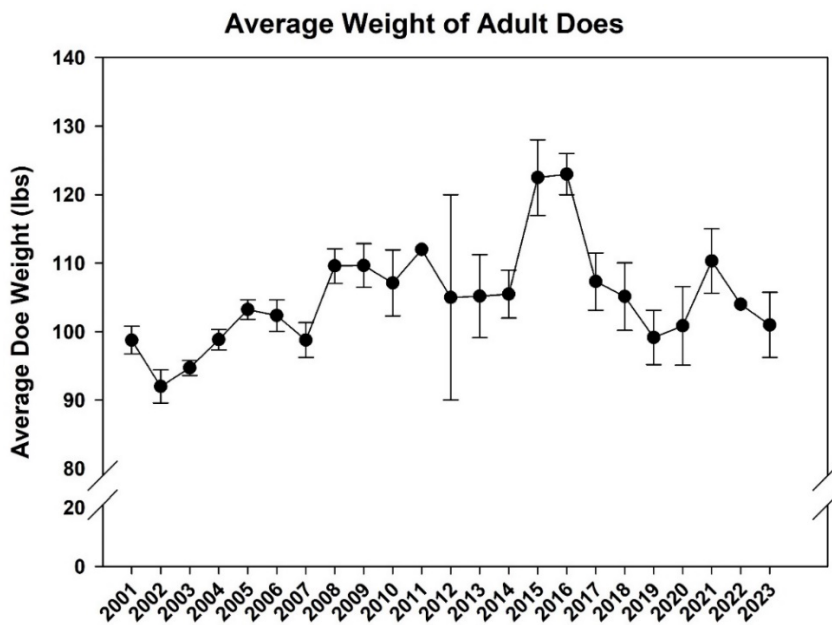


TABLE #5 – Year 2023 Deer Check Stations

Deer (#1-40 at Rt. 59) Deer (#41-73 at Rt. 346)

Deer #	Gender	Points Right	Points Left	Spread inches	Weight (guttied)	Age	Beam Diameter Right (mm)	Beam Diameter Left (mm)
1	M	5	6	15.5	120	3.5	29	30
2	M	4	4	15	137	3.5	35	31
3	M	3	2		108	1yr 7mo	15	14
4	F				63	7mo		
5	M	4	5	14.25	142	3.5	24	24
6	M	4	4	18.24	112	3.5	29	21
7	M	4	4	13.5	110	3.5	31	27
8	M	5	5	15.5	160	3.5	34	36
9	M	4	4	15	170	3.5	33	33
10	M	1	2	8.75	94	1yr 7mo	15	17
11	M	5	5	14	112	2.5	21	22
12	M	4	4	15.5	94	3.5	32	31
13	F				100	2.5		
14	F				84	3.5		
15	F				141	4.5		
16	M	4	4	12.75	120	2.5	24	23
17	F				120	2.5		
18	M				71	less than 5mo		
19	F				72	1yr 4-5mo		
20	M	3	5	17	155	3.5	33	33
21	F				91	3.5		
22	F				111	3.5		
23	M	5	5	15.75	128	2.5	34	34
24	F				116	2.5		
25	M	4	4	18.75	136	3.5	38	36
26	F				58	7mo		
27	F				63	7mo		
28	M	4	4	15.25	145	2.5	29	24
29	M				66	7mo		
30	M	5	5	22		3.5	38	40
31	F				101	4.5		

Deer #	Gender	Points Right	Points Left	Spread inches	Weight (guttied)	Age	Beam Diameter Right (mm)	Beam Diameter Left (mm)
32	M	4	4	21	146	2.5	29	29
33	F				63	6mo		
34	F				113	3.5		
35	F				66	1yr 5mo		
36	M	4	4	12.25	150	3.5	35	33
37	M	4	4	18.25	159	4.5	34	40
38	F				95	2.5		
39	M	6	6	17.5	142	2.5	29	29
40	F				109	1yr 5mo		
41	M	3	4	12.75	120	3.5	23	23
42	F				80	2.5		
43	M	3	3	20	144	3.5	30	30
44	F				108	2.5		
45	F				105	6.5		
46	M	4	4	18	130	3.5	34	30
47	M	3	3	8.5	100	2.85	16	13
48	M	3	4	12.5	115	2.5	19	28
49	M	4	4	16.25	145	3.5	27	28
50	F				65	*fawn		
51	M	5	5	17	145	2.5	23	22
52	M				75	*fawn		
53	M	3	4	13.75	135	3.5	22	23
54	M	5	6	16.75		3.5	32	28
55	M	4	4	17.25	130	3.5	31	28
56	M	4	4	17.75	145	2.5	25	24
57	F				110	3.5		
58	M	4	4	15.25		2.5	24	24
59	F				60	*fawn		
60	M	3	4	14.5	125	2.5	21	21
61	M	4	4	16.25	145	3.5	30	28
62	M	3	3	12.5	145	3.5	25	25
63	M	6	5	20	155	4.5	34	34

64	M	4	3	16.75		3.5	26	25
65	M	3	4	16.5	148	2.5	23	22
66	F				85	*yearling		
67	F				55	*yearling		
68	M	4	4	12.5	120	3.5	20	17
69	F				130	5.5		
70	F				45	*fawn		
71	M	4	3	18	155	5.5	39	40
72	M	3	3	17.5	136	2.5	24	26
73	F				129	2.5		

During the four days the check stations were operated in 2023 a total of 73 deer were brought in.

Notably, that is the highest number of deer checks since the 2009 season. Also, this past hunting year had the highest number of antlerless deer brought to the check station.

One factor that may increase the number of deer brought in to the check stations is the vehicle counts. During 2022 no one was available to do the vehicle counts. By not doing them there were also no leaflets that advertised the check stations days and hours left at the vehicles. Also, in 2022, PADOT was not able to supply the large road side signs as in past years. During the 2023 hunting season the vehicle counts were completed and a leaflet left at each vehicle with the dates and time on it to notify the hunters that the check stations were in operation. In addition to the leaflets road side signs were maintained by KQDC at the check stations since PADOT is no longer available. News releases are sent to local newspapers, radio stations and otherer forms of media outreach. It may be that the individual leaflets are one of the best ways to inform hunters of the check station days and hours and locations.

The Willows site is made available through the generosity of the Willows Restaurant owners Janet LaRoche and her husband Jim. The Marshburg site is made available by the trucking business owner John Perkins of Marshburg.

Overall, we would like to have more deer brought into the check stations. To accomplish that is difficult as it would take a lot more people days of work on more days to run the check stations. Focusing on the four days when the most hunters seem to be out rifle deer hunting is the best we can do with the present number of people available to operate at the check stations. The weights and other data collected are good documentation of the correlation between deer populations and the habitat conditions. Along with gathering the data operating the check stations gives deer managers and hunters a chance to meet face to face and share information. That is important along with the data collection.

**Table 6. Number of antlered and antlerless (male & female) brought to the check stations
Years (2001 through 2023).**

Year	Antlered Deer	Antlerless Deer	Total	Female Antlerless	Male Antlerless	Unsexed
2001	104	48	152	39	9	
2002	71	62	133	48	11	3
2003	87	168	255	145	23	
2004	57	86	143	76	10	
2005	47	44	91	36	8	
2006	54	35	89	30	5	
2007	32	26	58	24	2	
2008	57	28	85	21	7	
2009	44	31	75	26	4	1
2010	40	13	53	10	3	
2011	22	5	27	5	0	
2012	37	4	41	3	1	
2013	31	10	41	8	2	
2014	15	4	19	3	1	
2015	19	7	26	4	3	
2016	21	4	25	3	1	
2017	26	10	36	10	0	
2018	24	15	39	10	5	
2019	21	11	32	8	3	
2020	38	19	57	16	3	
2021	51	20	71	19	1	
2022	31	8	39	6	2	
2023	42	31	73	28	3	
totals	971	689	1660	578	107	4

Note, from 2001 to 2009 there were three check stations, The Warehouse, RT 59, The Willows, RT 346, and Bobs Trading Post, RT 321) From 2010 to 2015 there were two check stations, (The Warehouse (Harrisons) and the Willows, (in 2011 there was also a roving check station) (in 2012 Marshburg one was at USFS Bradford Ranger Station)

Since 2016, there has been one check station located at ANF's Timberdoodle Flats Trail Head Parking Lot on RT 59. In 2021 the RT 59 Marshburg Check Station was moved from the ANF Timberdoodle Parking Lot and held in John Perkins parking lot ¼ miles east of Timberdoodle. In 2022 and 2023 we had two check stations. RT 59 Perkins trucking garage parking lot and RT 346 Willows restaurant parking lot.

TABLE #7 Average weight of adult buck, average antler spread of all bucks, and average weight of adult doe brought to the check stations

2001 through 2023

Year	Average Weight of Adult Bucks	Average Antler Spread	Average Weight of Adult Does
2001	105	10	96
2002	110	13.9	92
2003	118	13.2	92
2004	120	13	96
2005	121	14.3	100
2006	128	13.6	101
2007	131	13.2	99
2008	129	13.9	107
2009	137	13.8	107
2010	132	14.2	106
2011	131	14.4	98
2012	134	14.8	105
2013	133	15	102
2014	134	14.9	108
2015	109	14.8	121
2016	143	16.4	123
2017	137	16.7	106
2018	140	15.5	104
2019	130	15.1	97
2020	131	14	95
2021	137	15.9	110
2022	129	14.3	104
2023	135	15.8	108

DMAP, KQDC and the Pennsylvania Game Commission

The information collected by the Pennsylvania Game Commission is all reviewed in February and March and DMAP Cooperators are then sent the information to assess how effective the DMAP program is at helping to control the deer population.

Table #9 DMAP harvest reports for KQDC Units (#135, #1981, and #1996)

License Year	DMAP Unit Number	DMAP Permits Approved	DMAP Permits Sold	DMAP Permits Unsold	Percent Permits Sold	DMAP Reports Received	DMAP Reports Not Received	Percent Reports Received	Reported they did Harvest a deer	Reported Did Not Harvest a deer	Percent Hunters successful
2018	135	416	416	0	100%	314	102	75.4%	64	250	15.3%
2019	135	416	416	0	100%	322	94	77.4%	53	269	12.7%
2020	135	417	417	0	100%	327	90	78.4%	65	262	15.5%
2021	135	440	440	0	100%	245	195	55.6%	57	188	12.9%
2022	135	440	440	0	100%	297	143	67.5%	41	256	9.3%
2023	135	440	362	78	82.3%	193	169	53.3%	33	160	9.1%
2018	1981	200	200	0	100%	151	49	71.5%	43	108	21.5%
2019	1981	200	200	0	100%	159	41	79.5%	42	117	21%
2020	1981	300	300	0	100%	235	65	78.3%	46	189	15.3%
2021	1981	641	594	47	92.7%	286	308	48.1%	42	244	6.5%
2022	1981	641	641	0	100%	419	222	65.3%	51	368	7.9%
2023	1981	641	494	147	77.1%	192	302	38.8%	41	151	8.2%
2018	1996	500	500	0	100%	288	212	57.6%	70	218	14%
2019	1996	500	500	0	100%	329	171	65.8%	76	253	15.2%
2020	1996	800	800	0	100%	532	268	66.5%	95	437	11.85%
2021	1996	800	800	0	100%	330	470	41.2%	60	270	7.5%
2022	1996	800	798	2	99.8%	410	388	51.3%	48	362	6%
2023	1996	800	554	246	69.2%	208	346	37.5%	34	174	6.1%

Over the past six years DMAP hunters have a reported harvesting a total of 875 deer on the whole 74,350 acres. That an average of 145 deer per year taken with DMAP permits. DMAP 1996 (Bradford Watershed) leads with 383 deer taken or 63 deer per year. DMAP 135 (Kinzua Forest LLC. and ANF north of Westline) shows 313 taken or 52 per year. DMAP 1981 (Mostly ANF lands north of RT 59) shows 179 taken or 44 per year

Some of the main factors that affect the number of antlerless deer reported taken by DMAP in each unit are;

- the number of DMAP permitted hunters on the unit,
- the number of acres (square miles) those hunters are spread out across.
- The road access throughout those individual areas is also an important factor in antlerless deer harvests. The more access that hunters have to better they do with harvesting and bringing out antlerless deer.
- Number of days to use the DMAP permit

DMAP holders are also required to report whether or not they killed a deer for every DMAP tag issued. The reporting rate for DMAP tags varies year to year and unit to unit from a high of 79.5% to a low of 37.5%.

Square miles per DMAP UNIT and 6-year average of deer taken per square mile with DMAP permits

UNIT 135 = 20,000 acres = 31.2 square miles 6-year avg. = 52 deer = 1.6 deer per square mile

UNIT 1996 = 14,800 acres = 23.13 square miles 6-year avg. = 63 deer = 2.72 deer per square mile

UNIT 1981 = 38,540 acres = 60.21 square miles 6-year avg. = 44 deer = 0.730 deer per square mile

Total KQDC = 73,340 acres = 114.5 square miles 6-year avg. = 145 = 1.26 deer per square mile

*** NOTE: In last year's annual report the square miles per DMAP unit (2022) data had typos in it so I corrected it and placed it here to compare to last year's report on page 28. (Last year Unit 1996 and Unit 1981 had data partly reversed due to typos. Below is last year's information corrected.**

Square miles per DMAP UNIT and 5-year average of deer taken per square mile with DMAP permits

UNIT 135 = 20,000 acres = 31.2 square miles 5-year avg. = 56 deer = 1.794 deer per square mile

UNIT 1996 = 14,800 acres = 23.13 square miles 5-year avg. = 69.8 deer = 3.01 deer per square mile

UNIT 1981 = 38,540 acres = 60.21 square miles 5-year avg. = 44.8 deer = 0.744 deer per square mile

Total KQDC = 73,340 acres = 114.5 square miles 5-year avg. = 170.6 = 1.48 deer per square mile

As the data shows, there is a good bit of difference with the reported DMAP harvest per square mile on the KQDC. Two factors stand out. #1) The number of DMAP permits allowed per square mile #2) The ability of hunters to access the property. The more hunters an area can have hunting per square mile seems to improve the number of deer taken per square mile.

It appears to show that the harder it is to access an area result in lower antlerless deer harvests. Talking to many hunters over the past 45 years of my involvement with hunters and deer management, both on and off the KQDC also supports this concept.

Hunters have long shown that they will walk further and drag a deer further when buck hunting. When it comes to antlerless deer, many hunters expend less effort, especially when it comes to walking far from a road. Many times, it is not necessary to do so to harvest an antlerless deer, as hunters almost always see more antlerless deer than antlered deer during their efforts. On the rare occasion when a hunter was walking to a remote area, chances are, they would harvest an antlerless deer before they got that far back in. The result is some areas, especially remote areas, was a very low antlerless deer harvest. I can truthfully say that back in the 1970's and up to the 1990's there were numerous areas in McKean, Elk, Cameron and Potter counties where I never saw anyone antlerless deer hunting. Like most things related to deer management, there were many factors that produced such a result. Lower numbers of antlerless deer licenses in the past. Less days to hunt antlerless deer back then. Few or no special programs or areas to assist hunters with antlerless harvest or with improved access to remote areas. All these things and more add up to a culture of underharvesting antlerless deer.

Today's hunters and manager now have a lot more opportunities to harvest antlerless deer than they did 25 to 50 or more years ago in Pennsylvania. Land managers, foresters and deer managers need to continue to reach out to hunters and others to make this happen.

On the KQDC the DMAP reports collected shows that the DMAP Unit 1996 which is the Bradford Watershed and Collins Pine Lands combined have the most effective harvest per square mile on the landscape. That DMAP UNIT also allows the highest number of DMAPS permits per square mile on its holdings. Bradford Watershed is managed by Generations Forestry Inc. under the supervision of Ken Kane. Ken works closely with the City of Bradford on many recreation efforts with the lands and waters on the Bradford Watershed. His local outreach with the many hunters of Bradford and his support and work with the KQDC also play a role in the results. The Bradford water shed back in the from the 1950's up until about 1985 was closed to all hunting to protect the water shed. Today foresters, biologists, scientists and hunters know that was a mistake. Presently deer hunting and numerous forms of outdoor recreation are allowed on the property. The watershed acreage is near the city of Bradford which is McKean's Counties highest population center. That makes it a short trip to hunt the watershed for many. Many hunters and others also live adjacent to the water shed and can walk out their door and hunt it. A well-maintained road system for timber practices, oil and natural gas production, and water reservoir management also serves as good access to the same area for deer hunters.

The other two KQDC DMAP units (135 and 1981) also provide a lot of large areas for the public to hunt and recreate on. They are well managed by their public and private land managers also, but are more remote and not as easy to access. Hunters and other outdoor enthusiasts are fortunate to have these large forest landowners that allow so much recreation use on their lands. The results in deer harvests and forest regeneration show up in the data collected from the different landowners. Unit 1996 shows a DMAP harvest of deer psm can be two or three times more deer psm compared to what UNIT 135 or UNIT 1981 shows.

DMAP permits per square mile per unit are as follows.

UNIT 1996 = 800 DMAPS on 23.13 square miles = 34.58 DMAPS psm. (1 per 18.5 acres)

UNIT 135 = 440 DMAPS on 31.2 square miles = 14.1 DMAPS psm. (1 per 45.39 acres)

UNIT 1981 = 641 DMAPS on 60.21 square miles = 10.64 DMAPS psm. (1 per 60.15 acres)

CAR/VEHICLE COUNTS, HUNTER NUMBERS

Prior ten year counts below:

(2012 = 237) (2013 = 247) (2014 = 199) (2015 = 206) (2016 = 214)

(2017 = 210) (2018 = 204) (2019 = 232) (2020 = 234) (2021=265)

(2022= no counts completed) (2023 = 287)

The 2023 vehicle count numbers were the highest number of vehicles parked since 2012. It seems to indicate that the Saturday Opener, the Sunday hunting, and the concurrent season have increased the number of hunters who are hunting on the KQDC.

Numerous factors may have contributed to this over the past ten years. Such as, Saturday opener, restoring concurrent season, increased antlerless permits and DMAP permits, increased advertising with the new KQDC Brochure being distributed. Covid pandemic effects on hunting and recreation. Etc.

While doing the car counts each person records all the vehicles parked along certain routes annually. They stop at each vehicle and place the annual Check Station Flyer on the windshield. They also placed the updated KQDC Brochure on the vehicles. Normally two people ride together to do the car counts. Due to COVID-19 restrictions routes were completed by one person alone. ANF employees completed the normal two days' worth of vehicle counts for 2021. In 2022 unfortunately no personnel were available to conduct the car counts. In 2023 all routes were completed by ANF Forest Service personnel.

One added note. The car counts may also affect the number of deer brought to the check stations as when the people count the vehicles, they leave a flyer on the first day's count on all the vehicles they count which has the information on it about the check stations days and hours of operations. One indication of this is that in 2022 when car counts were not done, and no flyers were put on vehicles. The number of deer brought in were only 39 total even with two check stations in operation. In 2021 with flyers left of vehicles 71 deer were brought into the check station at Marshburg and that was the only check station that year. In 2023 flyers were again left with vehicles and 73 deer total were brought in (40 at Marshburg, 33 at Willows.)

2023 Weather, Hunters, Hunting and Tradition.

Weather is a major factor during the opening days and Saturday of the regular rifle season. If the ground is snow covered and the weather mild and pleasant, hunters can remain comfortable and also see deer better due to snow cover, tracks, etc.

Inclement weather, especially rain and or fog, or heavy snows during hunting hours the opening week of rifle season can reduce the annual total deer harvest.

In 2023 the first day was sunny with but little to no snow was on the ground on most of the KQDC. The second day (Sunday) was warm and by evening some rain was falling. Over the whole two-week rifle season, no appreciable snow cover was on the ground to assist hunters with visibility or tracking. The rest of December January through March saw a very warm and mild winter. Weather was not a factor for most deer to survive. The quality of the habitat, the foods and browse available was what determined how well the deer survive the past winter.

Conversations with many hunters during the 2023 season shows that many hunters still practice the tradition of not hunting or harvesting antlerless deer until after they get a buck. Many hunters who are knowledgeable about the need to harvest antlerless deer for the benefit of the deer and forests often still hold to that tradition. Some hunters still profess their belief that there are not enough deer, so they will not shoot a doe because they want the deer numbers to increase. Continued information and education programs on why antlerless deer need harvested remains vital to producing quality deer and quality habitat.

Trail Camera Information 2023

In 2023 ten trail cameras were set out and maintained by KQDC Coordinator. They were in place as of August 1st and remained in place until December 31st 2023. Camera Cards were collected and data recorded once each month. All cameras functioned well for the whole 1530 camera days. No cameras were stolen. No cameras were disturbed by people or animals. Bucks, does and fawns were recorded at all ten camera locations.

During that time period deer set off the cameras 1300 times. (Last year deer tripped the cameras 1228 times out of 1378 trail camera days due to some camera cards being stolen) The second most common animal on the trail cameras were wild turkeys that totaled 61 turkeys recorded. Third place for tripping the cameras were bear at 25 times. Coyotes were on the trail cameras a total of 10 time. See Table # 8 for data by month by species.

Table 8. All Wildlife Photographed on Trail Cameras 2023

Year	AUG	SEPT	OCT	NOV	DEC	TOTAL
Antlerless Deer	140	229	132	126	94	721
Fawns	42	10	2			54
Bucks: 1 or 2 points to a side	8	12	21	39	15	95
Bucks: 3 or more points to a side	20	34	94	65	7	220
Unknown deer	52	33	48	58	19	210
Turkey	24	31	3	3		61
Grouse						
Black bear	12	5	8			25
Bobcat					1	1
Fisher						
Coyote	4	1	3	1	2	10
Red Fox			4			4
Squirrel	1				1	2
Raccoon			2	2	2	6

From what I have learned, to use trail cameras for doing populations surveys and populations models one would have to have dozens to a couple hundred trail cameras spread out over the 74,350 acres of the KQDC. By maintaining at least ten cameras throughout the KQDC provides some yearly and beautiful pictures of deer and other wildlife. It also gives a sampling of what condition they are in by recording their body and antler appearances. It also provides visible proof that there are deer there, and that there are some older mature deer producing quality antlers which is one of the goals on the KQDC. The trail camera pictures continue to be popular on KQDC Facebook.

OUTREACH EFFORT AT DEER CHECK STATIONS

Deer Check Stations were at two locations in 2022 and 2023. Hunters that brought deer to the check station were given a fluorescent orange KQDC hat and entered in a raffle for a cash prize; antlerless deer (\$500) and antlered deer (\$250). Information on Chronic Wasting, KQDC maps, and KQDC Brochures, deer density maps, and contact information on a variety of subjects is handed out to hunters. Most hunters who brought in a deer had one or two other hunters with them. A few hunters stopped by without deer just to ask questions, get information, or see some deer being brought in. It is estimated at least 120 hunters visited the check station in 2022 and had lots of questions answered and received information. NOTE: in 2022 repairs were made to both check station buildings as the floor stringers needed reinforced to handle the loading and unloading of the buildings when moving them.

OUTREACH EFFORT - ANNUAL DEER SEASON KICK OFF 2023

In 2023 we were able to hold our 7th Deer Season Kickoff. The main speaker was Kip Adams of the National Deer Association. He gave a PowerPoint program on comparing deer harvest in Pennsylvania with the Northeastern USA states and other whitetail hunting states. He also discussed plenty of information on how other states manage whitetail deer compared to Pennsylvania. Second speaker was KQDC coordinator John Dzemyan who did a PowerPoint on KQDC updates and presented a time lapse video of deer browsing on one of the transect sites. Linda Ordiway did the interactive map presentation. Attendance was only 37 people. However, about 30 of them filled out a critique of the program and all the remarks from those in attendance were good or excellent.

VIDEO EFFORTS REPLACE KICKOFF in 2024

KQDC at its January meeting decided to change its public outreach a bit in 2024 and not do an October Deer Season Kickoff. Instead, efforts would go into producing some videos on how KQDC gathers its data and other information about deer and forest habitat on the KQDC. In March and April of 2024, a video was completed by Alex Bond of Kane on how transect surveys are done. Another video is in the works about the cooperating landowners of KQDC.

OUTREACH EFFORT- KQDC BROCHURE

The 2019 printing of the KQDC trifold Brochure is still available is down to its last box of brochures in 2024. It gets distributed through the ANF Visitors Bureau. It also available on line in three places. Facebook, KQDC website, ANF Visitors Bureau. The ANF Visitors Bureau takes the brochures throughout Pennsylvania and to adjacent states and actively promotes hunting for this area.

Brochures are also on display and available in numerous public locations such as local State Parks like the Kinzua Bridge, The McKean County Courthouse, the ANF Visitors Office in Bradford and other public offices. Thousands of people access the ANF site daily and can find links to the KQDC on the site. The ANF Visitors Bureau is willing to assist with creating a new brochure as of 2024 or in the future.

OUTREACH EFFORT - KQDC NEWS RELEASES

Over the past eight years and probably more Mary Hosmer has taken on the role of sending out news releases. She has developed a standard news release form which works well with local newspaper, radio stations and other media outlets. She has a standard list of over 80 some places that get the KQDC News Releases. Other KQDC leadership staff assist with the editing and content, and Mary gets it out there.

OUTREACH EFFORT Testimony at the Pennsylvania Game Commission Meeting.

KQDC Coordinators continues to give written and verbal testimony at the January Commission meeting annually. KQDC leadership team work together on input for the letter and testimony.

OUTREACH EFFORT

College Students Involvement, University of Pittsburgh and Penn State Dubois

Contacts in 2023 continued with both colleges to encourage students and staff to get involved with KQDC. Over the past three years little involvement has occurred with students or teachers. Renewed efforts to increase this involvement are needed.

AHUG Allegheny Hardwood Utilization Group

AHUG Based in Kane, Pennsylvania they serve a 14 – county region bringing together the timber processing industries and other related industries and agencies, public and private, to further sustainable forests through wise management of the area’s natural resources. As of 2023 Linda Ordiway Ph.D. Forest Wildlife Biologist of the ANF office in Warren Pennsylvania coordinates the budget Amy Shields, Executive Director of AHUG, and Becky Carson, Administrative Assistant at AHUG’s office in Kane Pennsylvania.

Leadership Team and Budget

On 01-23-2024 the annual winter meeting of the KQDC Leadership Team was held at Collins Pines office in Kane. Some attended in person, others attended via phone lines. Those in attendance were 1) Matt Gayley (Collins Pine), 2) Ken Kane (Generations Forestry) 3) Becky Carson (AHUG) 4) Amy Shields (AHUG), 5) Mary Hosmer (KQDC), 6)John Dzemyan (KQDC), on-line attendance were; 7) Dan Ludwig (Forecon/Kinzua Forest) 8)Alex Royo (USFS Lab), 9)Greg Sanford (USFS), 10) Wendy Anderson (USFS), 11) Linda Ordiway (USFS), 12) Ashley Simmons (USFS), 13) Julie Smithbauer (USFS), 14) Lisa Barlow, (USFS), 15) Emily Rowan (KQDC)

It was recommended that we try something other than the annual deer season kick off, and the consensus was to produce some videos and increase information dissemination via social medias. One video on how KQDC does the deer populations and vegetation transects surveys has been completed. It was professionally done by Kane local videographer Alex Bond. A second video on the landowners who provide the 74,350 acres that KQDC program is operated on is in the works.

The KQDC Budget originally ran on ten year and five-year agreements. However, after twenty some years of existence the funding system has changed and presently some of the funding is on a year-to-year basis with the ANF and the USFS Lab at Irvine Pa. The same goes for the cooperating landowners who contribute according to their acreage on an annual basis. Over the past five years cost have been kept low in completing the KQDC functions and reports so at present the budget is solvent.

AHUG (Allegheny Hardwoods Utilization Group) provides bookkeeping and financial services to the KQDC handles the banking of funds and payment of bills for the KQDC.

The KQDC data is stored in a shared storage system through assistance with Alejandro A. Royo, Ph.D. Forest Service Research Ecologist, and Todd Ristau, Ph.D. Research Ecologist/Directors Representative at the United States Forest service Research Station (The Lab). Their office is located at P.O. Box 267, Irvine Pa. 16329.

Also, through the efforts Alex (Alejandro A. Royo) funding for various projects on the KQDC and surrounding forests such as plant inventories has been obtained through the Pennsylvania Game Commission.

OUTREACH EFFORT- KQDC FACEBOOK SITE AND KQDC WEBSITE

KQDC still gets a small following on its Facebook page during the fall hunting seasons. From September to December hunters and others check out the site for information and to see some pictures of deer and other wildlife on the KQDC area. Facebook site manager is John Dzemyan. www.facebook.com > KQDC

The KQDC website is easily reached online at kqdc.com. It still needs some attention from its administrators, but its total cost per year is less than \$200 so the decision to maintain it was approved. It has the potential to post information in way that Facebook does not offer.

Shared links of KQDC with other Facebook sites such as the Hunting 2F Facebook site, the ANF Visitors Bureau, Mt. Jewett Sportsman's Club, and some Ruffed Grouse sites are being developed. This has helped to spread information about the KQDC.

As coordinator for the KQDC I extend a heartfelt thank you to all those who continue to assist with the KQDC.

They are: Bradford Watershed Land/Generations Forestry and those who manage it, Kinzua Forest LLC. /Conservation Forestry Land/FORECON and those who manage it, Kane Hardwoods/Collins Pine Land and those who manage it, Ram Forest Products land and those who manage it, and Allegheny National Forest Land and those who manage it. AHUG and numerous other people mentioned throughout this report.

The challenges of managing forests and deer continues. The goal to maintain quality deer, quality forests and quality deer hunting remains.

Sincerely, Thank You.

John Dzemyan

KQDC Coordinator.