

Polk County Controlled Bow-Hunt 2020-2021 Deer Report



Executive Summary
Post Season Reports
Aerial Survey Results
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Compiled by the
Polk County Deer Task Force

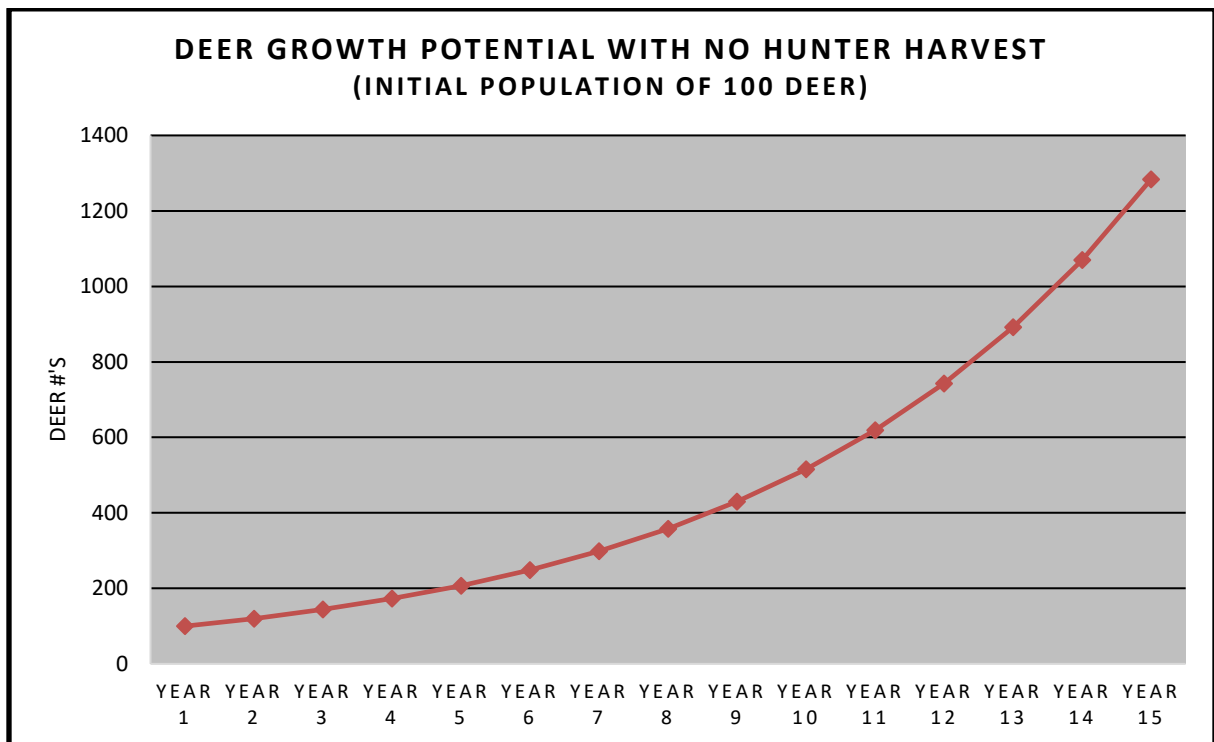
The Polk County Deer Task Force believes that the White-tailed deer is a valuable part of our natural heritage. We support the perpetuation of the deer population in Polk County at ecologically acceptable levels.

-1997 Position Statement of the Polk County Deer Task Force



Executive Summary

Based on harvest records and agency observations, it is recommended that the Polk County Controlled Bow-Hunt should be continued for the 2021-2022 season throughout the Polk County Deer Management Zone. Agencies are encouraged to continue or expand hunting opportunities in their areas of control. Deer population numbers may have been reduced to target goals in some areas but still remain higher in neighborhood habitats where hunting may not be a control option. Agencies may need to remember that an uncontrolled deer population can double every three to four years. Continued hunting pressure within the Deer Management Zone has produced remarkable results in managing deer populations across the area.



The graph above depicts potential population growth of a deer herd where no hunting is allowed. The growth takes into account average population structure based on probable gender and age distribution. Considerations are also given to related fecundity rates. Distribution of these animals over time and as densities increase can vary. A relatively confined population will probably contribute to an increase in deer numbers over an increasingly larger geographical area over time.

Post Season Reports

Hunting Season

This year the IDNR allowed participating entities to use September 9, 2020 through January 24, 2021, for the Polk County Deer Management Zone bow-hunting season. Agencies could choose to use these dates for their season, or tailor their hunt to suit individual needs (as long as the dates were within the allowable season above). Pending approval from the Natural Resource Commission, the proposed hunt dates for the 2021 - 2022 season will be September 18, 2021 through January 30, 2022.

Deer Harvest

Agencies reported that 281 antlerless deer were harvested during the 2020-2021 bow-hunt, which is a slight increase from 278 in the 2019-2020 season.

A total of 321 antlerless deer harvested in the Polk County Deer Management Zone (including antlerless deer harvested in Camp Dodge with shotgun/muzzle).

27 incentive bucks were harvested during the 2020-2021 bow-hunt

A total of *371 deer were harvested during the 2020-2021 season.

* Count includes Camp Dodge (shotgun and muzzle any sex-tags)

Proficiency Testing

Archery Field and Sports administered proficiency testing to hunt participants. 146 proficiency tests were taken and only 2 failed. 128 passed with a compound bow, 4 with a re-curve bow, and 12 with a crossbow.

Hunter Participation

169 total hunters purchased zone 48 tags

101 hunters tagged at least 1 deer

Total deer tagged	Number of hunters
1	30
2	16
3	17
4	12
5	18
6	2
7	5
10	1

The 38 hunters tagging 4 or more accounted for 63% of the harvest (195 of 308).

68 hunters did not tag a deer

Safety Record

No injuries were reported from hunters, neighbors or park visitors

Licenses Sold

The Polk County Deer Management Zone is divided into two zones.

1000 licenses were available for zone 48 which includes all of the cities, Polk County Conservation areas and U.S. Army Corps of Engineers areas.

75 licenses were available in zone 61 which is comprised of mostly rural areas not included in zone 48. Hunters purchased 522 antlerless licenses in zone 48 and 15 antlerless licenses in zone 61 for use in the Polk County Deer Management Zone.

Polk County Deer Surveys: 2021

By Andy Kellner
Iowa DNR

Helicopter surveys were flown on January 19th and 20th using a Hughes OH-6 helicopter operated by Bachman Aero. Observers were Robert Stober, Casey Trine, and Andy Kellner. Snow amounts persisted from winter weather January 14-16th resulting in approximately 7 inches of snow. Snow conditions for the survey were fair with >6" of snow at the beginning but snow conditions degraded through the survey. Cloudy skies the first day of surveys made for good viewing with limited shadow interference. However, strong winds out of the west and north made for difficult flying. Temperatures for the first day remained in the low to mid-30s. Windy conditions continued for the second day of flying with winds out of the southwest from 20 to 30 mph. Fair skies the second day made viewing more difficult with shadows. Temperatures at the start of the second day were around 17 degrees and soared into the low 40s in the afternoon. By the end of the flight on the 20th, south facing slopes were losing snow. Many deer beds were present which made for more difficult observations. Overall, conditions were fair.



The number of deer sighted for each area is reported in Table 1. The number of deer recorded should be viewed as a minimum count. Each area listed was divided up into discrete units and circled or flown systematically. Where necessary the helicopter was brought around to count areas more thoroughly. Deer activity largely varied with the passing of the helicopter with some deer remaining still and others vacating the area. Degrading snow, strong winds, and bright skies likely hampered observations.

Overall, the numbers are significantly lower than observations in 2019. The number of deer counted was up or the same in only in five of the urban areas surveyed. Quail Park and the area immediately adjacent to the airport were not flown this year. The Water Works Park count includes the area east of Fleur. Seven areas saw decreases while one was mostly unchanged.

While it is difficult to be certain, there is a likelihood that part of the decrease in observed deer numbers is due to the Epizootic Hemorrhagic Disease (EHD) outbreak summer of 2019. Some areas saw significant mortality events along the Des Moines and Raccoon River within the metropolitan area at that time. This may have been enough to shift deer populations around and show an overall decrease in observed deer numbers.

Continued hunting will help maintain decreased deer densities across the metro. Areas without hunting will see increases in deer numbers going forward. Populations can rebound from EHD related mortality events within a few years. Current numbers are falling within many of the management goals for deer densities and hunting will be an effective tool for maintaining those densities. Overall, the deer densities are considerably lower than would be expected if the controlled hunts had not been initiated in 1998.

This year also marked the second attempt at conducting a bowhunter observation survey in this deer management zone. Surveys were handed out to participating hunters and they recorded all observations of deer and other wildlife species which mirrors the statewide bowhunter survey conducted by the Iowa DNR. While a stronger set of data is being built with the second year's information, this survey will need to be continued to get enough information to assess trends in deer populations for the Polk/Dallas management zone at a valuable level. The Iowa DNR hopes to start comparing the bowhunter survey numbers to aerial deer survey numbers to gain better insights into the urban deer population trends.

There were 39 bowhunter surveys submitted in 2020 which is approximately a 23% return rate on the surveys. While this is a statistically significant number, the decrease in participation this year is discouraging and the Task Force hopes to increase that return rate to produce stronger data for the long term. This can be done through increased information getting to the hunters, improvements to survey methodology (e.g. survey app available on mobile devices), hunt administrators requiring the survey to be completed, and/or incentives for completing the surveys.

From the surveys that were turned in, a total of 696 hunting trips were recorded, totaling 1808 hours. The average time on per hunting trip was 2.6 hours. A total of 1950 deer were observed on these trips with approximately 60% of them being antlerless deer.

While more data needs to be collected to get statistically significant comparisons, as of right now the numbers are showing that the proportion of antlerless deer observed by bowhunters in the urban hunt is approximately 10% lower than other areas of central Iowa. This is extremely variable based on location and when the observations are made and cannot be made with a high degree of confidence due to the amount of information, but it offers some insight into the efficacy of the urban hunt at targeting the doe population. Data collected from the Statewide Bowhunter Survey is calculated at a much larger scale than data gathered so far from the urban bow-hunt. As more surveys are turned in this data can be calculated with more confidence.

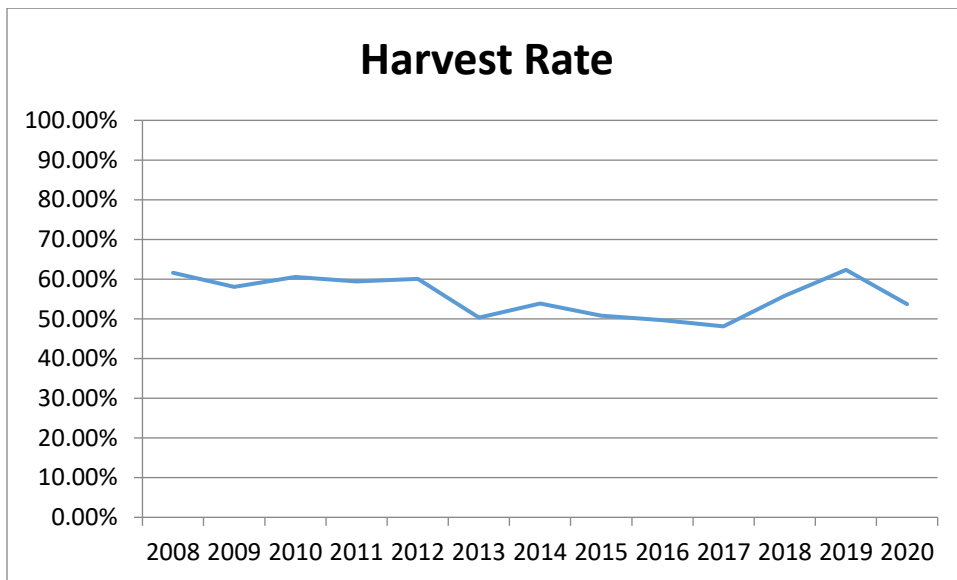
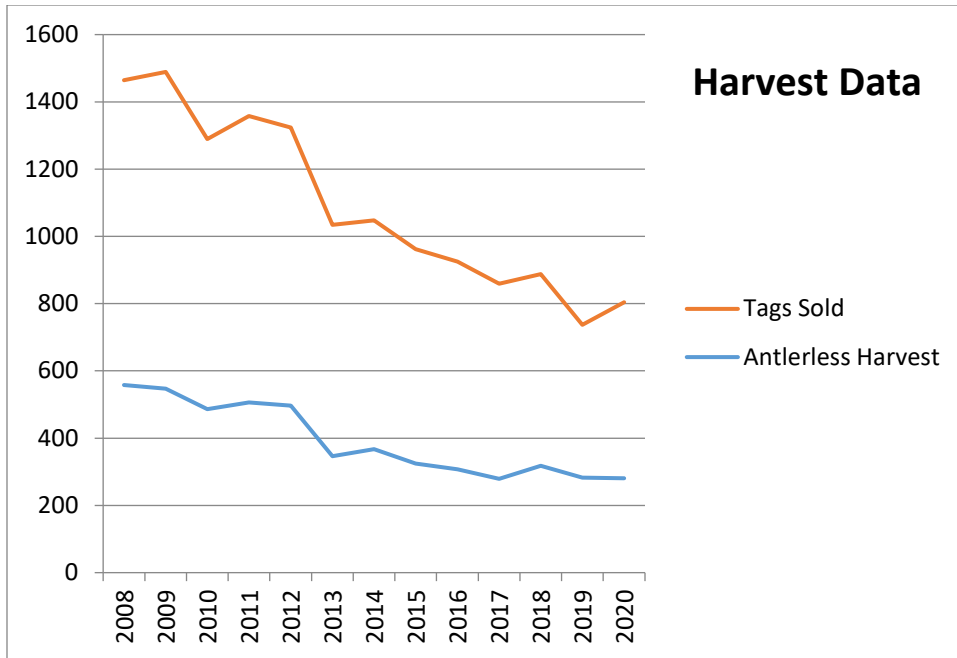


Table 1. Results from the helicopter deer surveys in Polk county, 1996 to present.

Area	Deer Sighted																							
Urban Areas	(Square																							
Surveyed	Miles)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2018	2019	2021	
Water Works Park Area	3.91	100	159	206	204	136	88	105	102	134	130	37	58	63	51	46	35	21	35	46	91	101	33	
D.M., South of Grand	1.37			56	45	39	50	49	36	63	56	18	53	66	49	55	28	28	29	18	41	60	8	
DSM airport west-63rd*	1.78												150	164	188	103	76	76	74	49				
Browns & Walnut Woods	4.20	43	132	149	106	128	86	91	155	226	167	137	301	216	232	151	189	182	238	165	153	159	57	
Easter Lake & DSM River East	6.74	26	43	58	135	145	110	163	132	146	239	84	418	233	209	254	195	142	174	112	127	93	94	
Yellow Banks & DSM River	1.75	24	52	62	77	67	122	81	98	77	78	29	110	92	77	61	33	19	51	44	40	30	10	
Four Mile Creek:																								
I80 -Des Moines River	5.29	7	41	51	99	79	39	83	87	100	107	118	174	165	179	164	87	113	114	91	50	47	27	
Pleasant Hill west*	0.93												48	71	59	86	63	53	43	70	71	63	128	16
Pleasant Hill east	2.27												25	31	150	162	128	90	71	138	123	126	94	
North of I-80	4.45	58	128	128	158	117	103	86	80	104	127	16	124	202	136	177	125	71	98	167	176	118	113	
Margo Frankel Woods	0.78	15	14	35	4	23	12	6	0	28	15	8	15	15	17	25	18	21	14	12	2	7	10	
Rock Creek	2.91	26	74	38	51	49	79	24	39	44	27	52	66	92	58	47	41	46	34	33	38	23	23	
Des Moines River:																								
Saylorville Dam-Riverview Park	4.66	83	115	83	150	124	122	162	209	296	184	153	278	238	143	155	150	123	193	148	200	170	110	
North of I-80*	2.81													175	122	124	111	82	118	97	138	106	68	
South of I-80*	1.85													63	21	31	39	41	75	51	62	64	42	
Jordan Creek/South Woods	0.26									63	56	38	10	25	35	30	33	15	17	14	18	18	14	
Quail Park- W. DSM	0.90																		101	92			35	
Walnut Creek:																								
Raccoon River to I-80	0.79	0	1	7	5	23	14	14	25	42	19	30	50	19	40	40	27	22	13	11	33	11	11	
Clive Area; west of I-35*	0.30													23	15	10	5	8	6	4	3	9	4	
Living History Farms	0.41				20	20	10	42	16	34	26	30	25	43	23	17	24	18	22	29	14	51	16	
West of I-80	1.38	59	229	285	261	270	225	146	203	336	177	227	340	172	147	186	170	127	154	111	152	103	68	
Beaver Creek (Johnston)	0.59													100	74	80	61	27	74	68	68	68	20	
Polk City Barrier Dam Refuge	3.11	41	92	117	133	125	89	113	135	230	135	89	198	150	166	268	142	118	99	81	114	87	117	
Total	53.44	482	1,080	1,275	1,448	1,345	1,149	1,165	1,317	1,923	1,543	1,091	2,401	2,205	1,986	1,987	1,524	1,240	1,678	1,418	1,446	1,190	829	
Rural Areas																								
Saylorville Reservoir																								
Camp Dodge	2.23	55	71	93	105	108	69	73	68	195	165	148	234	148	109	93	107	49	91	101	64	82	43	
Dam to MLB (west side)	1.92		61	62	24	38	34	61	50	109	46	67	98	114	86	136	84	115	94	36	20	36	43	
Dam to MLB (east side) <i>a</i>	2.55		41	72	94	83	85	86	50	137	94	55	66	127	91	90	105	110	67	67	97	83	34	
MLB to Hwy 17 (east side)	4.18		35	33	53	77	80	-	-		142	123	124	208	134	178	179	201	225	184	126	57	25	
Jester Park, MLB to Bridge to Hwy 17	4.82	88	158	161	95	95	132	127	108	189	82	110	133	221	165	187	201	238	132	133	118	56	43	
Total (excluding Barrier Dam Refuge)	16	143	366	421	371	401	400	347	276	630	529	503	655	818	585	684	676	713	609	521	425	314	188	
Chichaqua & Skunk River		96	85		197	109	-	-	187	133	106	181	210	-	154	-	103	-	-	168				
*New survey area, 2007.																								
<i>a</i> - does not include Barrier Dam Refuge area																								

Table 1. Results from the helicopter deer surveys in Polk county, 1996 to present.

Urban Areas Surveyed	Deer per Square Mile																					Change		
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2018	2019	2021	(2019 to 2021)	
Water Works Park Area	26	41	53	52	35	23	27	26	34	33	9	15	16	13	12	9	5	9	12	23	26	8	-69%	
D.M. South of Grand	0	0	41	33	28	36	36	26	46	41	13	39	48	36	40	20	20	21	13	30	44	6	-86%	
DSM airport west-63rd*												84	92	106	58	43	43	42	28	0	0	0		
Browns & Walnut Woods	10	31	35	25	30	20	22	37	54	40	33	72	51	55	36	45	43	57	39	36	38	14	-63%	
Easter Lake & DSM River East	4	6	9	20	22	16	24	20	22	35	12	62	35	31	38	29	21	26	17	19	14	14	0%	
Yellow Banks & DSM River	14	30	35	44	38	70	46	56	44	45	17	63	53	44	35	19	11	29	25	23	17	6	-65%	
Four Mile Creek:																								
I80 -Des Moines River	1	8	10	19	15	7	16	16	19	20	22	33	31	34	31	16	21	22	17	9	9	5	-44%	
Pleasant Hill west*												48	71	63	92	68	57	46	75	76	68	138	17	-88%
Pleasant Hill east												26	31	66	71	56	40	31	61	54	56		41	
North of I-80	13	29	29	36	26	23	19	18	23	29	4	28	45	31	40	28	16	22	38	40	27	25	-7%	
Margo Frankel Woods	19	18	45	5	29	15	8	0	36	19	10	19	19	22	32	23	27	18	15	3	9	13	44%	
Rock Creek	9	25	13	18	17	27	8	13	15	9	18	23	32	20	16	14	16	12	11	13	8	8	0%	
Des Moines River:																								
Saylorville Dam-Riverview Park	18	25	18	32	27	26	35	45	64	39	33	60	51	31	33	32	26	41	32	43	36	24	-33%	
North of I-80*													62	43	44	40	29	42	35	49	38	24	-37%	
South of I-80*													34	11	17	21	22	41	28	34	35	23	-34%	
Jordan Creek/South Woods	0								242	215	146	38	96	135	115	127	58	65	54	69	69	54	-22%	
Quail Park- W. DSM																		112	102	0	39	0	-100%	
Walnut Creek:																								
Raccoon River to I-80	0	1	9	6	29	18	18	32	53	24	38	63	24	51	51	34	28	16	14	42	14	14	0%	
Clive Area; west of I-35*													77	50	33	17	27	20	13	10	30	13	-57%	
Living History Farms				49	49	24	102	39	83	63	73	61	105	56	41	59	44	54	71	34	124	39	-69%	
West of I-80	43	166	207	189	196	163	106	147	243	128	164	246	125	107	135	123	92	112	80	110	75	49	-35%	
Beaver Creek (Johnston)													169	125	136	103	46	125	115	115	115	34	-70%	
Polk City Barrier Dam Refuge	13	30	38	43	40	29	36	43	74	43	29	64	48	53	86	46	38	32	26	37	28	38	36%	
Total	9	20	24	27	25	22	22	25	36	29	20	45	41	37	37	29	23	31	27	27	22	16	-27%	
Rural Areas																								
Saylorville Reservoir																								
Camp Dodge	25	32	42	47	48	31	33	30	87	74	66	105	66	49	42	48	22	41	45	29	37	19	-49%	
Dam to MLB (west side)	-	32	32	13	20	18	32	26	57	24	35	51	59	45	71	44	60	49	19	10	19	22	16%	
Dam to MLB (east side) <i>a</i>	-	16	28	37	33	33	34	20	54	37	22	26	50	36	35	41	43	26	26	38	33	13	-61%	
MLB to Hwy 17 (east side)	-	8	8	13	18	19	-	-	-	34	29	30	50	32	43	43	48	54	44	30	14	6	-57%	
Jester Park, MLB to Bridge to Hwy 17	18	33	33	20	20	27	26	22	39	17	23	28	46	34	39	42	49	27	28	24	12	9	-25%	
Total (excluding Barrier Dam Refuge)	-	23	27	24	26	25	22	18	40	34	32	42	52	37	44	43	45	39	33	27	20	12	-40%	
Chichaqua & Skunk River																								
*New survey area, 2007.																								
<i>a</i> - does not include Barrier Dam Refuge area																								

Bow-Hunt Administrators

- City of Des Moines: Mike Gaul 515-248-6329
-Administers public and private property bow-hunting
- City of Johnston: Jim Sanders 515-727-7760
-Administers public and private property bow-hunting
- Polk County Conservation: Charlie Finch 515-250-1031
- US Army Corps of Engineers (Saylorville Lake): Coty Thompson 515-276-4656 x6514
- City of Urbandale: Holly Pickett 515-278-3910
-Administers public and private property bow-hunting
- Walnut Woods State Park (IDNR): Josh Shipman 515-285-4502
- City of West Des Moines: Dave Sadler 515-222-3456
-Administers public and private property bow-hunting
- City of Clive: Jeff Theilen 515-238-0648 / Joel Pasco 515-210-7581
-Administers public property bow-hunting
- City of Pleasant Hill: Andrew Minnick 515-868-8177
-Administers public and private property bow-hunting

Advisory Organizations

The following organizations serve in an advisory capacity to the Polk County Deer Task Force (in addition to the organizations listed above).

- Iowa Dept. of Natural Resources: Andy Kellner 515-975-8318
- City of Ankeny, City of Des Moines Animal Control, City of Grimes, Dallas County Conservation Board, Des Moines Water Works
- Archery Field and Sports, Des Moines Audubon, Des Moines Founders' Garden Club, Des Moines Izaak Walton League, IDNR Law Enforcement, Iowa Bow Hunters Assoc. (IBA), National Field Archery Association, Polk County Conservation Board, Polk County Board of Supervisors, Sierra Club and Westwood Neighborhood Association.

2020 - 2021 Deer Harvest

POLK-DALLAS URBAN ZONE 48

A. **Polk County Conservation (PCC) Public Areas:** Charlie Finch 515-250-1031

	Incentive Buck	Shed Buck	Button Buck	Doe
Jester Park	3	0	3	16
Sycamore Trail (includes Area C in Johnston)	1	0	0	16
Easter Lake	0	0	0	4
Brown's Woods	1	1	1	11
Thomas Mitchell Park	1	0	0	0
Mally's Weh-Weh-Neh-Kee Park	0	0	0	0
Four Mile Greenbelt	0	0	0	0
Yellow Banks Park	0	0	0	0
Gay Lea Wilson East Trail	0	0	0	1
Polk County Conservation (PCC) Harvest Total	6	1	4	48

B. **City of Clive:** Jeff Theilen 515-238-0648 / Joel Pasco 515-210-7581

City of Clive Public Areas	Incentive Buck	Shed Buck	Button Buck	Doe
West of I-80	1	0	0	4
Greenbelt Park: East of NW 114th	0	0	0	4
Sub-total	1	0	0	8
City of Clive Private Property				
None at present date	0	0	0	0
Sub-total	0	0	0	0
City of Clive Harvest Total	1	0	0	8

C. City of Des Moines: Michael Gaul 515-248-6329				
City of Des Moines Public Areas	Incentive Buck	Shed Buck	Button Buck	Doe
Cases Lake: Hartford Ave	2	2	0	8
Crocker Woods: Prospect Rd. & Hickman Rd.	0	0	0	1
Ewing Park	0	0	0	1
Laurel Hill Woods	0	0	0	0
MacRae Park	0	0	2	3
Pioneer Park	1	0	0	4
Ashworth Park	1	0	1	4
Sub-total	4	2	3	21
City of Des Moines Private Property				
SW / Airport Area (South of Waterworks Park, West of Fleur to limits)	0	0	0	0
SE / Easter Lake and Ewing Parks Area (SE 14th east, South of DM River to Limit)	0	1	1	16
South of Grand Area (West of Terrace Hill to 63rd, South of University to Waterworks)	5	1	2	26
MacRae Park Area	0	0	0	0
Prospect / Beaverdale Park Area	1	1	2	22
East Area (East and Northeast area of city)	2	0	1	7
Sub-total	8	3	6	71
City of Des Moines	Harvest Total	12	5	9
		92		

D. Des Moines Water Works: Jessica Barnett				
	Incentive Buck	Shed Buck	Button Buck	Doe
2201 George Flagg Parkway, 50321	0	0	0	0
Des Moines Water Works	Harvest Total	0	0	0

E. City of Johnston: Jim Sanders 515-727-7760				
City of Johnston Public Areas	Incentive Buck	Shed Buck	Button Buck	Doe
Area A: Army Corps of Engineers (See USACE Totals)				
Area C: Sycamore Trail (See PCC totals)				
Area E: City of Johnston - 156 Acres	2	0	4	11
Sub-total	2	0	4	11
City of Johnston Private Property				
Private Property	1	0	0	4
Sub-total	1	0	0	4
City of Johnston	Harvest Total	3	0	4
		15		

F. City of Pleasant Hill: Andrew Minnick 515-868-8177				
	Incentive Buck	Shed Buck	Button Buck	Doe
Polk County Property (See Polk County Totals)				
City Property	1	0	3	15
Private Property	0	0	0	5
City of Pleasant Hill	Harvest Total	1	0	3
			20	

G. City of Urbandale: Holly Pickett 515-278-3910				
	Incentive Buck	Shed Buck	Button Buck	Doe
City of Urbandale Public Areas				
City Parks	0	0	1	11
Sub-total	0	0	1	11
City of Urbandale Private Property				
Living History Farms (LHF) (West of I-35)	1	0	1	11
Other Private Property	2	0	0	10
Sub-total	3	0	1	21
City of Urbandale	Harvest Total	3	0	2
			32	

H. City of West Des Moines: David Sadler 515-222-3456				
	Incentive Buck	Shed Buck	Button Buck	Doe
City of West Des Moines Public Areas				
South Woods	1	0	1	8
Racoon River Park	0	0	1	4
Sub-total	1	0	2	12
City of West Des Moines Private Property				
Private Property	0	0	0	3
Sub-total	0	0	0	3
City of West Des Moines	Harvest Total	1	0	2
			15	

I. USACE: (Corps of Engineers): Coty Thompson 515-276-4656 x6514				
	Incentive Buck	Shed Buck	Button Buck	Doe
Saylorville (No Buck Incentive Issued for this area)	0	0	6	13
Polk City Refuge (No Buck Incentive Issued for this area)	0	0	0	0
USACE	Harvest Total	0	0	6
			13	

J. Walnut Woods State Park: Josh Shipman 515-285-4502				
	Incentive Buck	Shed Buck	Button Buck	Doe
Walnut Woods State Park (No Buck Incentive Issued for this area)	0	0	0	0
Walnut Woods State Park	Harvest Total	0	0	0

K. Polk City: Matt Aswegan 515-984-6565				
	Incentive Buck	Shed Buck	Button Buck	Doe
Polk City Parks Polk City Private (No Buck Incentive Issued for this area)	0	0	0	1
	0	1	0	0
Polk City	Harvest Total	0	1	0

Total Doe Harvested Zone 48	244
Total Incentive Bucks Harvested Zone 48	27
Total Shed Antlered Bucks Harvested Zone 48	7
Total Button Bucks Harvested Zone 48	30
Antlerless tags available zone 46	1000
Incentive Buck Tags available Zone 48	46

Sold 522
Sold 46

L. IDNR ELECTRONIC LICENSING (ELSI) Zone 48				
	Buck	Shed Buck	Button Buck	Doe
	27	8	29	247
ELSI	Harvest Total	27	8	29

ELSI harvest totals for zone 48 are displayed to show reporting discrepancies by hunters to both administrating agencies and IDNR.

POLK-DALLAS RURAL ZONE 61

M. Camp Dodge: Shannan Garretson 515-252-4648				
	Buck**	Shed Buck	Button Buck	Doe
Archery / Shotgun / Muzzle loader **Buck (Normal seasons and any-sex tags allowed)	23	0	6	34
Camp Dodge	Harvest Total	23	0	6

IDNR ELECTRONIC LICENSING (ELSI) Zone 61				
	Buck	Shed Buck	Button Buck	Doe
	0	0	1	3
ELSI Harvest Total	0	0	1	3

Total Antlerless Deer Harvested Zone 61

37

Total Bucks Harvested Zone 61

23

Antlerless tags available zone 61

75

Sold

15

Antlerless Deer Harvested

Total 325

* Count including Camp Dodge (shotgun/muzzle) and ELSI zone 61

Incentive Bucks

Total 27

Bucks: Camp Dodge and ELSI zone 61**

Total 23

**Normal seasons (shotgun/bow) and any-sex tags allowed

Total Deer Harvested

375