



Michigan Department of Natural Resources
Wildlife Division Report No. 3558
February 2013

Printed by Authority of: P.A. 451 of 1994
Total Number of Copies Printed:25
Cost per Copy:\$1.82
Total Cost:\$45.50
Michigan Department of Natural Resources

2011 BEAR HARVEST REPORT FOR THE RED OAK BEAR MANAGEMENT UNIT

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ABSTRACT

A study area consisting of portions of Alcona, Alpena, Montmorency, and Oscoda counties (study area) represented 5% of the area of the Red Oak Bear Management Unit (BMU), yet about 22% of the black bears registered from the Red Oak BMU since 2000 were taken in the study area. Hunters with a bear hunting license valid in the Red Oak BMU were contacted after the 2011 hunting season to determine hunter participation, hunting methods, bear harvest, and hunter satisfaction among hunters in the Red Oak BMU. This information could be used to assess whether the study area should be managed independently from the remainder of the Red Oak BMU. In 2011, an estimated 983 hunters spent 5,017 days afield and harvested about 281 bears in the Red Oak BMU. About 29% of hunters harvested a bear. Hunter success and the effort required to harvest a bear was significantly different inside and outside the study area. Success was higher in the study area (34% versus 26%) and effort per harvested bear was lower in the study area (13.7 days versus 19.5 days) than outside the study area. Bear hunters in the study area more often hunted on private land only (87% versus 39%), and they more often harvested a bear on private land than hunters outside the study area (89% versus 42%). A slightly higher proportion of the bear hunters in the study area relied on bait to attract bears than hunters outside the study area (96% versus 88%). A greater proportion of hunters inside the study area rated their opportunities to see a bear as very good or good than among hunters outside the study area (36% versus 29%). Hunters in the study area experienced less interference from hunters (all types of hunting) than among hunters outside the study area (19% versus 32%). Furthermore, fewer hunters in the study area experienced



A contribution of Federal Aid in Wildlife Restoration, Michigan Project W-147-R

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interference with another bear hunter than among hunters outside the study area (9% versus 23%).

INTRODUCTION

Beginning in 1990, the Michigan Department of Natural Resources (DNR) created black bear (*Ursus americanus*) management units (Figure 1), including the Red Oak Bear Management Unit (BMU), and limited the number of bear hunting licenses issued for each unit. The DNR annually sets license quotas for each management unit and allocates licenses among eligible applicants.

During 2000-2011, nearly 22% of the black bears registered from the Red Oak BMU were taken in the study area consisting of portions of Alcona, Alpena, Montmorency, and Oscoda counties (Figure 2). In 2011, this study area represented 5% of the area of the Red Oak BMU. Thus, the study area has been contributing disproportionately to the harvest within the Red Oak BMU based on land area. Furthermore, the proportion of bears taken from the study area has been generally increasing since 1990 (Figure 3).

In 2011, bear could be hunted in the Red Oak BMU during September 16-24 and October 7-13. Bear could be harvested with a firearm, crossbow, or archery equipment, except for the special archery-only hunt during October 7-13. Hunters 10-years-old or older could use a crossbow to hunt bear. Hunters using a crossbow were required to obtain a free crossbow stamp, except hunters with a disability already hunting under a DNR-issued crossbow permit did not need the stamp.

Hunting licenses were valid on all land ownership types and allowed a hunter to take one bear of either sex, excluding cubs and female bears with cubs. Hunters could use bait throughout all hunting periods, but dogs could be used only during September 17-24 (i.e., prior to the archery-only season). Furthermore, the first day of hunting in the Red Oak BMU was restricted to hunting with bait only (i.e., September 16), and the last two days were restricted to hunters using dogs (i.e., September 23-24). All successful bear hunters were required to present their harvested bear at a registration station. (A tally of the registration data is not presented in this report.)

The DNR and Natural Resources Commission have the authority and responsibility to protect and manage the wildlife resources of the state of Michigan. Harvest and opinion surveys are some of the management tools used by the DNR to accomplish its statutory responsibility. Our objectives were to estimate hunter participation and success in the Red Oak BMU and inside and outside the study area within the BMU. This information could be used to assess whether the study area should be managed separately from the remainder of the Red Oak BMU.

METHODS

Following the 2011 bear hunting season, a questionnaire (Appendix A) was mailed to 948 people that had purchased a bear hunting license valid for the Red Oak BMU (resident, senior, nonresident bear licenses, and comprehensive lifetime license). The people selected for the sample were bear hunting license buyers that had not previously reported their hunting

activity online for the annual statewide bear harvest survey (Frawley 2012). Hunters reported whether they hunted, number of days spent afield, whether they harvested a bear, date of harvest, and their hunting methods. Hunters also reported whether other hunters (including bear hunters) caused interference during their hunt. Successful hunters were asked to report harvest date, sex of the bear taken, and harvest method. All hunters were asked to rate their hunting experiences.

Estimates were calculated using a simple random sampling design (Cochran 1977). The mean number of days required to harvest a bear was calculated using the number of bears registered by hunters at mandatory check stations as an auxiliary variate (ratio estimator).

A 95% confidence limit (CL) was calculated for each estimate. In theory, the CL can be added and subtracted from the estimate to calculate the 95% confidence interval. The confidence interval is a measure of the precision associated with the estimate and implies that the true value would be within this interval 95 times out of 100. Unfortunately, there are several other possible sources of error in surveys that are probably more serious than theoretical calculations of sampling error. They include failure of participants to provide answers (nonresponse bias), question wording, and question order. It is very difficult to measure these biases; thus, estimates were not adjusted for these possible biases.

Statistical tests are used routinely to determine the likelihood that the differences among estimates are larger than expected by chance alone. The overlap of 95% confidence intervals was used to determine whether estimates differed. Non-overlapping 95% confidence intervals was equivalent to stating that the difference between the means was larger than would be expected 995 out of 1,000 times, if the study had been repeated (Payton et al. 2003).

Questionnaires were mailed initially during late November 2011, and up to two follow-up questionnaires were mailed to nonrespondents. Although 948 people were sent the questionnaire, 15 surveys were undeliverable, resulting in an adjusted sample size of 933. Questionnaires were returned by 745 people, yielding an 80% adjusted response rate.

RESULTS

In 2011, 1,045 bear hunting licenses were purchased for the Red Oak BMU. Nearly $94 \pm 1\%$ of the license buyers hunted bear (Table 1). These hunters spent an estimated 5,017 days afield ($\bar{x} = 5.1$ days/hunter) and harvested 281 bears. The average number of days required to harvest a bear in the Red Oak BMU was 17.9 days in 2011.

About $23 \pm 2\%$ of the bear hunters in the Red Oak BMU hunted within the study area (224 hunters, Table 1), and they harvested 27% (77 bears) of the bear taken in the unit. These hunters spent 1,053 days afield ($\bar{x} = 4.7$ days/hunter). The average number of days required to harvest a bear in the study area was 13.7 days. An estimated $80 \pm 2\%$ of the bear hunters in the Red Oak BMU hunted outside the study area (786 hunters). These hunters spent 3,964 days afield ($\bar{x} = 5.0$ days/hunter) and harvested 203 bears. The average number of days required to harvest a bear outside the study area was 19.5 days, which was significantly greater than the effort required in the study area.

About 49% of the bear hunters in the Red Oak BMU hunted on private lands only, 35% hunted on public lands only, and 13% hunted on both private and public lands (Table 2). Among bear hunters hunting within the study area, 87% hunted on private lands only, 11% hunted on public lands only, and 2% hunted on both private and public lands. In contrast, 39% of hunters pursuing bears outside the study area hunted on private lands only, 41% hunted on public lands only, and 15% hunted on both private and public lands. The proportion of hunters using private lands was significantly greater among the hunters in the study area than for hunters outside the study area.

Bear hunters in the Red Oak BMU spent 2,551 days afield on private land, 1,843 days hunting on public land only, and 600 days hunting on both private and public lands (Table 3). Bear hunters active in the study area spent 898 days afield on private land, 125 days hunting on public land only, and 31 days hunting on both private and public lands. In contrast, hunters pursuing bears outside the study area hunted 1,654 days on private lands, 1,718 days on public lands, and 569 days hunting on both private and public lands.

Of the estimated 281 bear harvested in the Red Oak BMU in 2011, 55% of these bears (154) were taken on private land (Table 4). About 45% of the bears (126) were taken on public land. About 89% of the bears taken within the study area and 42% of the bears taken outside the study area were taken on private lands, which was significantly different.

Nearly 29% of hunters harvested a bear in the Red Oak BMU (Table 1); however, hunter success was significantly greater inside compared to outside the study area (34% versus 26%). About 32% of the bears taken in the Red Oak BMU were harvested during the first two days of the hunting season (Figures 4 and 5). Only about 10% of the harvested bear were taken in the last portion of the season (October 8-14). About 61% of the bears taken in the Red Oak BMU were males (170) and 39% were females (109; Table 5). Reported sex of harvested bears did not vary significantly inside and outside the study area.

Most hunters in the Red Oak BMU (86%) used only firearms while hunting bear (Table 6). About the same proportion of the bear hunters in the study area used firearms to hunt bears as among hunters outside the study area (89% versus 85%). Most hunters in the Red Oak BMU (81%) used a firearm to harvest their bear (Table 7). Most hunters in the Red Oak BMU (89%) relied primarily on baiting as a means of locating and attracting bears (Table 8). A higher proportion of the bear hunters in the study area relied on bait to attract bears than hunters outside the study area (96% versus 88%).

About 83% of the harvested bears in the Red Oak BMU were taken with the aid of bait only to attract bears (Table 9). A higher proportion of bear harvested in the study area were taken with the assistance of bait only than the bear harvested outside the study area (100% versus 77%). Hunting success for hunters using bait only in the Red Oak BMU was 27%, while hunting success for hunters using dogs was 42% (Table 10). Success among hunters using bait only was significantly greater among hunters inside the study area than among hunters outside the study area (38% versus 24%).

About 31% of hunters in the Red Oak BMU rated the number of bear seen as very good or good and 45% rated the number of bear seen as poor or very poor (Table 11). A greater

proportion of hunters inside the study area rated the number of bear seen as very good or good than among hunters outside the study area (36% versus 29%). About 26% of hunters in the Red Oak BMU rated their opportunities for taking a bear as very good or good and 46% rated their opportunities as poor or very poor (Table 11).

About 48% of hunters in the Red Oak BMU rated their hunting experiences as very good or good and 30% rated their hunting experiences as poor or very poor (Table 11). A greater proportion of hunters inside the study area rated their hunting experience as good or very good than among hunters outside the study area (55% versus 47%).

Hunter satisfaction is affected by many factors such as hunting success and whether hunting activities were completed without interference. Nearly 28% of the hunters in the Red Oak BMU were interfered with by other hunters (Table 12). Most of this interference was caused by another bear hunter, with 20% of hunters reporting that other bear hunters interfered with their hunt. Hunters in the study area experienced less interference from hunters (all types of hunting) than hunters outside the study area (19% versus 32%). Furthermore, fewer hunters in the study area experienced interference with another bear hunter than hunters outside the study area (9% versus 23%).

DISCUSSION

The differences between many estimates for the study area and the remainder of the Red Oak BMU likely reflect differences in land ownership patterns. About 95% of the study area was privately owned, while 65% of the area outside the study area was private lands. Thus, a greater proportion of hunters used private lands and took bears on private lands in the study area because these hunters were more dependent on private lands for hunting opportunities. In addition, interference among hunters was less frequent in the study area because private landowners likely limited hunter numbers on their properties.

During 2008-2011, hunter success and the effort required to harvest a bear has often been significantly different inside and outside the study area (Figures 6 and 7). Success was significantly greater in the study area during 2009 and 2011, and effort per harvested bear was significantly lower in the study area during these same years. Furthermore, the overall satisfaction among bear hunters was significantly greater among hunters in the study area than among hunters outside the study area during 2009 and 2011 (Figure 8).

ACKNOWLEDGEMENTS

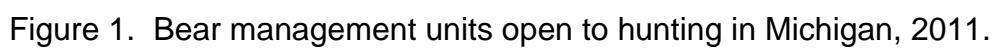
I thank all the bear hunters that provided information. Sheree Kershaw and Theresa Riebow completed data entry. The figure of bear management units and the area open to hunting was prepared by Marshall Strong. Adam Bump, Sarah Cummins, Russ Mason, Cheryl Nelson, and Doug Reeves reviewed a previous version of this report.

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Payton, M. E., M. H. Greenstone, and N. Schenker. 2003. Overlapping confidence intervals or standard error intervals: what do they mean in terms of statistical significance? Journal of Insect Science 3:34.



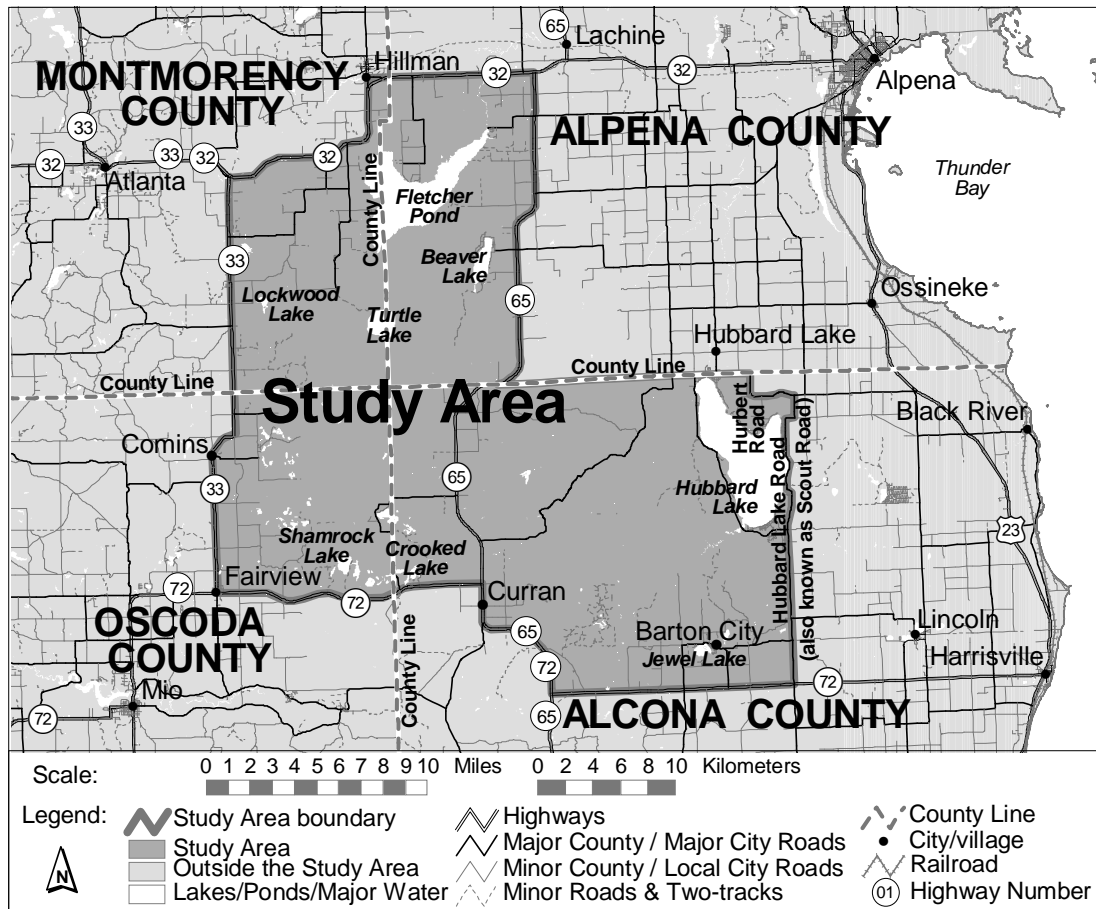


Figure 2. Study area (shaded) within the Red Oak BMU in Michigan.

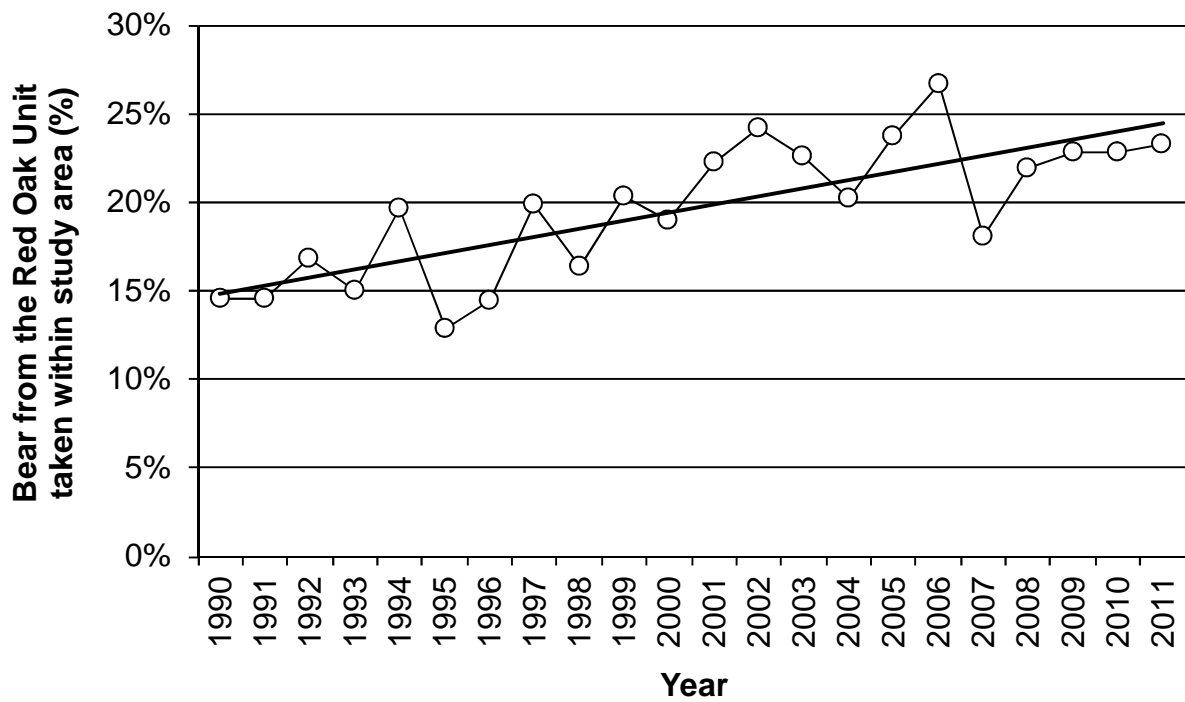


Figure 3. Proportion of bear taken in the Red Oak Bear Management Unit originating from the study area.

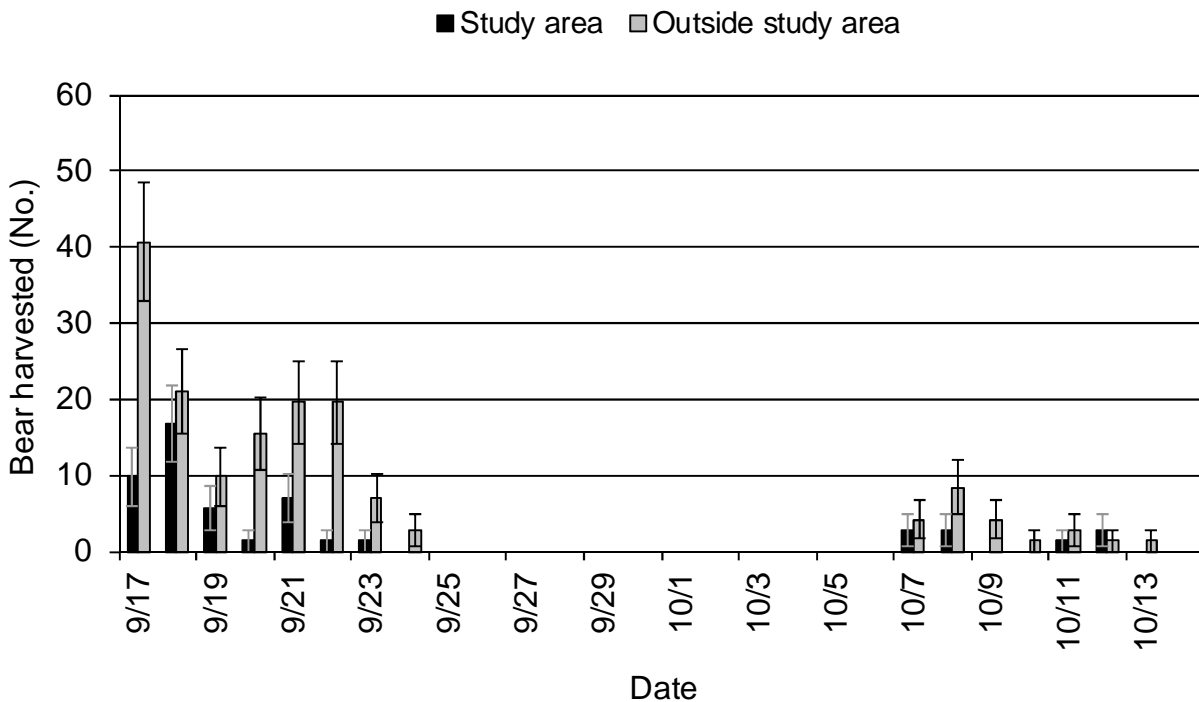


Figure 4. Estimated number of bear harvested in the Red Oak BMU by date during the 2011 bear hunting season (September 17-25 and October 8-14). Estimates presented separately for harvest within and outside the study area.

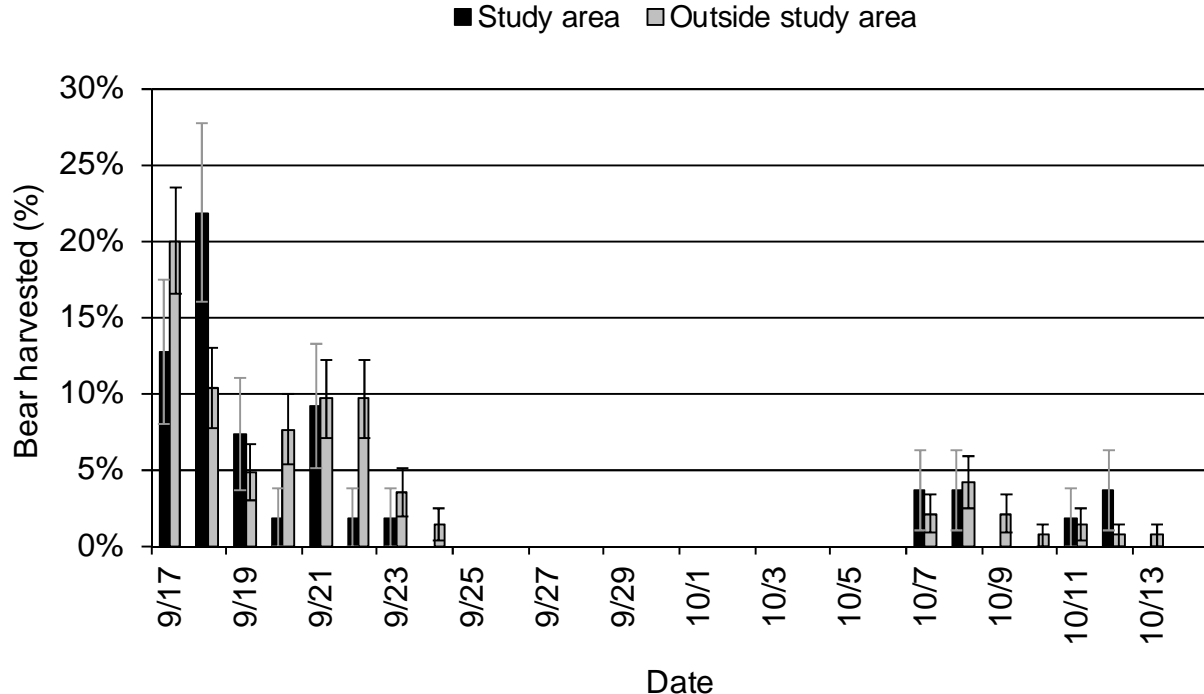


Figure 5. Estimated proportion of bear harvested in the Red Oak BMU by date during the 2011 bear hunting season (September 17-25 and October 8-14). Estimates presented separately for harvest within and outside the study area.

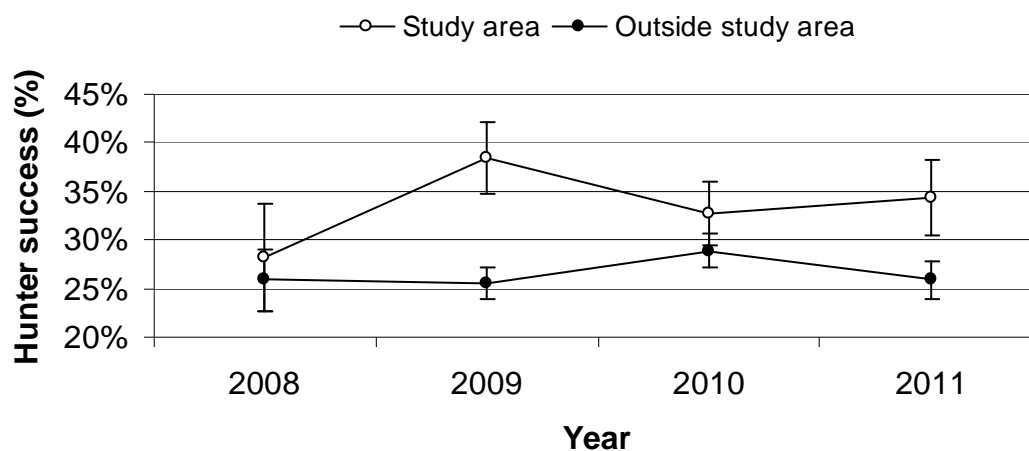


Figure 6. Proportion of bear hunters that harvested a bear during 2008-2011, summarized separately within and outside the study area.

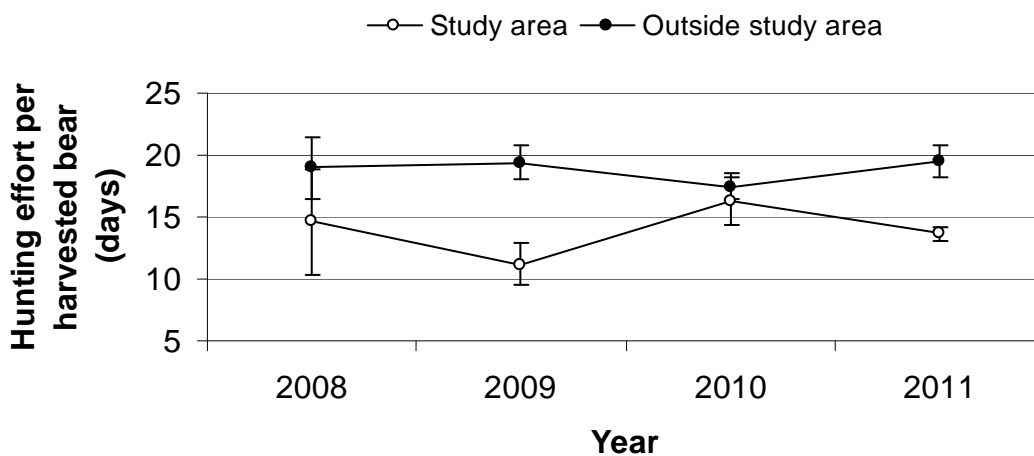


Figure 7. Mean number of days of hunting effort per harvested bear during 2008-2011, summarized separately within and outside the study area.

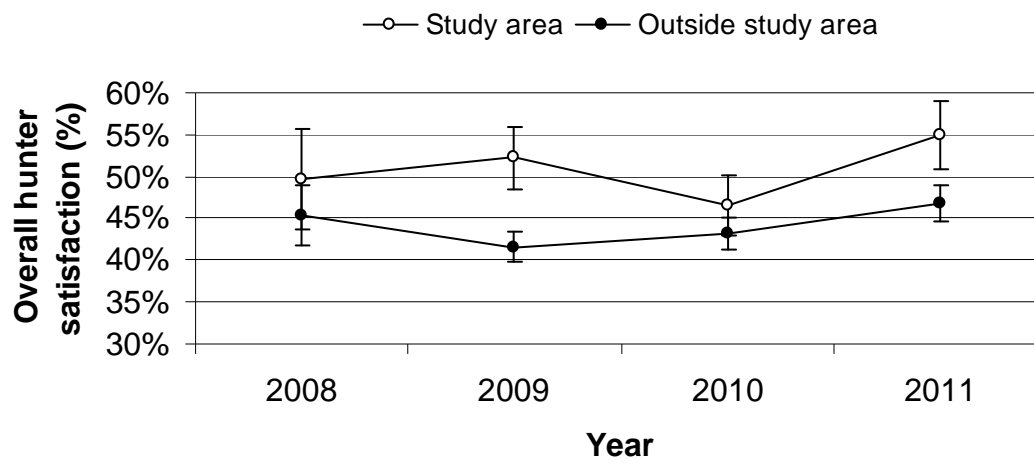


Figure 8. Proportion of bear hunters reporting their overall satisfaction with their bear hunt was either very good or good during 2008-2011, summarized separately within and outside the study area.

Table 1. Estimated number of hunters, harvest, hunter success, hunting effort, mean days hunted, and mean effort per harvested bear during the 2011 Michigan bear hunting season in the Red Oak BMU.

Area	Hunters		Harvest		Hunter success		Hunting effort		Days hunted per hunter (\bar{x})		Days hunted per harvested bear (\bar{x})	
	No.	95% CL ^a	No.	95% CL ^a	%	95% CL ^a	Days	95% CL ^a	Days	95% CL ^a	Days	95% CL ^a
Inside study area	224	17	77	11	34%	4%	1,053	101	4.7	0.3	13.7	0.6
Outside study area	786	17	203	16	26%	2%	3,964	156	5.0	0.2	19.5	1.3
Red Oak BMU ^b	983	9	281	18	29%	2%	5,017	155	5.1	0.1	17.9	1.4

^a95% confidence limits.

^bArea inside and outside study area combined. Number of hunters does not add up to total in Red Oak BMU because hunters could hunt both inside and outside study area. Number of bear harvested and hunting effort may not add up to total for Red Oak BMU because of rounding error.

Table 2. Estimated number and proportion of hunters hunting on private and public lands during the 2011 bear hunting season.

Management unit	Land type															
	Private land only				Public land only				Both private and public lands				Unknown land			
	Total	95% CL ^a	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL
Inside study area	195	16	87	3	24	6	11	3	4	3	2	1	1	1	1	1
Outside study area	309	18	39	2	323	19	41	2	118	13	15	2	36	7	5	1
Red Oak BMU ^b	483	20	49	2	339	19	35	2	123	13	13	1	38	8	4	1

^a95% confidence limits.

^bArea inside and outside study area combined. Number of hunters does not add up to total in Red Oak BMU because hunters could hunt both inside and outside study area.

Table 3. Estimated number of days of hunting effort on private and public lands during the 2011 Michigan bear hunting season.

Management unit	Land type							
	Private lands		Public lands		Both private and public lands		Unknown	
	Total	95% CL	Total	95% CL	Total	95% CL	Total	95% CL
Inside study area	898	92	125	39	31	24	0	0
Outside study area	1,654	121	1,718	126	569	82	22	14
Red Oak BMU ^a	2,551	141	1,843	130	600	86	22	14

^aArea inside and outside study area combined. Column totals may not equal management unit totals because of rounding errors.

Table 4. Estimated bear harvest in Red Oak BMU on private and public lands during the 2011 bear hunting season, summarized by area.

Ownership	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Private	89	4	69	10	42	4	86	11	55	4	154	14
Public	11	4	8	4	58	4	118	13	45	4	126	13

Table 5. Sex of bears harvested in the Red Oak BMU during the 2011 bear hunting season, summarized by area.

Ownership	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Male	55	7	42	8	63	4	128	13	61	4	170	15
Female	44	7	34	7	37	4	76	10	39	4	109	12

Table 6. Equipment used to hunt bear in the Red Oak BMU during the 2011 bear hunting season, summarized by area.

Equipment	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Firearm	89	3	199	16	85	2	666	19	86	1	843	16
Bow ^a	26	4	58	9	31	2	247	17	30	2	293	18
Crossbow	3	1	7	3	8	1	65	10	7	1	67	10

^aIncluded recurve, compound, and long bows.

Table 7. Equipment used to harvest bear in the Red Oak BMU during the 2011 bear hunting season, summarized by area.

Equipment used to harvest bear	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Firearm	84	5	65	10	79	4	161	15	81	3	226	17
Bow ^a	16	5	13	4	19	3	38	8	18	3	50	9
Crossbow	0	0	0	0	2	1	4	3	2	1	4	3

^aIncluded recurve, compound, and long bows.

Table 8. Hunting methods used to locate and attract bears in the Red Oak BMU during the 2011 bear hunting season, summarized by area.

Primary hunt method	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Bait only	96	2	216	16	88	1	687	19	89	1	878	15
Dogs only	1	1	1	1	6	1	43	8	5	1	45	8
Dogs & bait	2	1	4	3	4	1	35	7	4	1	38	8
Other	1	1	3	2	1	0	4	3	1	0	7	3
Unknown	0	0	0	0	2	1	15	5	2	0	15	5

Table 9. Hunting methods used to harvest bears in the Red Oak BMU during the 2011 bear hunting season, summarized by area.

Hunt method when bear harvested	Area											
	Study area				Outside study area				Red Oak BMU			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Bait only	100	0	77	11	77	4	156	14	83	3	233	17
Dogs only	0	0	0	0	15	3	31	7	11	2	31	7
Dogs & bait	0	0	0	0	7	2	14	5	5	2	14	5
Other	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	1	1	3	2	1	1	3	2

Table 10. Bear hunter success in the Red Oak BMU, summarized by primary hunting method used and area hunted.

Hunt method	Area					
	Study area		Outside study area		Red Oak BMU	
	%	95% CL	%	95% CL	%	95% CL
Bait only	38	4	24	2	27	2
Dogs only	0	0	52	9	50	9
Dogs & bait	0	0	36	10	33	10
Other	0	0	0	0	0	0
Dogs ^a	0	0	45	7	42	7

^aCombined hunters using dogs only and hunters using dogs and bait.

Table 11. Proportion and number of bear hunters satisfied with the number of bear seen, opportunities to take a bear, and their overall bear hunting experience in the Red Oak BMU during the 2011 bear hunting season, summarized by area.

Hunters rating	Area											
	Study area				Outside study area				Red Oak BMU ^a			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Bear seen - very good or good hunt rating	36	4	81	11	29	2	230	17	31	2	302	18
Bear seen - poor or very poor hunt rating	35	4	79	11	48	2	375	19	45	2	443	20
Opportunities to take bear - very good or good hunt rating	31	4	70	10	25	2	199	16	26	2	258	17
Opportunities to take bear - poor or very poor hunt rating	38	4	84	11	48	2	376	19	46	2	447	20
Overall hunt - very good or good hunt rating	55	4	123	13	47	2	368	19	48	2	476	20
Overall hunt - poor or very poor hunt rating	14	3	53	9	32	2	250	17	30	2	295	18

^aEstimates for the entire Red Oak BMU may not equal sum of estimates for inside and outside study area because some hunters hunted both inside and outside study area.

Table 12. Proportion and number of bear hunters interfered by other hunters in the Red Oak BMU during the 2011 bear hunting season, summarized by area.

Hunters response	Area											
	Study area				Outside study area				Red Oak BMU ^a			
	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL	%	95% CL	Total	95% CL
Interfered by another hunter	19	3	43	8	32	2	248	17	28	2	279	18
Interfered by another bear hunter	9	2	20	5	23	2	181	15	20	2	195	16

^aEstimates for the entire Red Oak BMU may not equal sum of estimates for inside and outside study area because some hunters hunted both inside and outside study area.

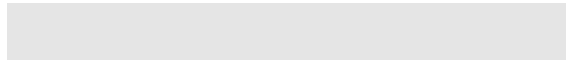
Appendix A

2011 Michigan Bear Harvest Questionnaire for the Red Oak BMU



MICHIGAN BEAR HARVEST REPORT (RED OAK UNIT)

This information is requested under authority of Part 435, 1994 PA 451, M.C.L. 324.43539.



It is important that you answer these questions even if you did not hunt or harvest a bear. You were selected to receive this survey because you purchased a 2011 bear hunting license valid for the Red Oak Management Unit in the northern Lower Peninsula.

1. Did you hunt bear in the Red Oak Management Unit during the 2011 season?

¹ ☐ Yes ² ☐ No; (If you select "No", you are finished. Please return the survey.)

2. Did you hunt bear using a firearm, crossbow, or bow during the 2011 bear season?
(please check all that apply)

¹ ☐ Firearm ² ☐ Crossbow ³ ☐ Bow (recurve, compound, or long bow)

3. What hunting method did you use most often when hunting bear during the 2011 bear season? (please select only one item)

¹ ☐ Hunted over bait only ² ☐ Used dogs only (bait not used)
³ ☐ Used dogs started over bait ⁴ ☐ Used other methods not involving dogs or bait

4. If you used bait to attract bears, what was the total number of gallons you used during the legal baiting and hunting periods? (Please write in the gallons used.)

Gallons

5. Did you kill a bear and put your kill tag on it? (If no, please skip to question 7.)

¹ ☐ Yes ² ☐ No

6. If your harvest tag was put on a bear, please fill in the information below

a. What date was the bear harvested?

(please check [X] the box for the date of harvest)

September 2011						
S	M	T	W	T	F	S
					16	17
18	19	20	21	22	23	24

October 2011						
S	M	T	W	T	F	S
					7	8
9	10	11	12	13		

b. What was the sex of the bear?

¹ ☐ Male

² ☐ Female

³ ☐ Not sure

c. In what county was it harvested? (Please write in the county name.)

d. On what type of land was the bear harvested?

¹ ☐ Private

² ☐ Public

e. What weapon was used to harvest bear?

¹ ☐ Firearm

² ☐ Crossbow

³ ☐ Bow (recurve, compound, or long bow)

f. What was the method of harvest?

¹ ☐ Taken over bait

² ☐ Used dogs only (bait not used)

³ ☐ Used dogs started over bait

⁴ ☐ Used other methods not involving dogs or bait

7. Did other hunters interfere with your bear hunting?

¹ ☐ Yes

² ☐ No (Skip to question 9.)

8. If you answered "yes" to the previous question, was the interference caused by other bear hunters?

¹ ☐ Yes

² ☐ No

9. How would you rate the following for your 2011 bear hunting season:

(Select one choice per item.)

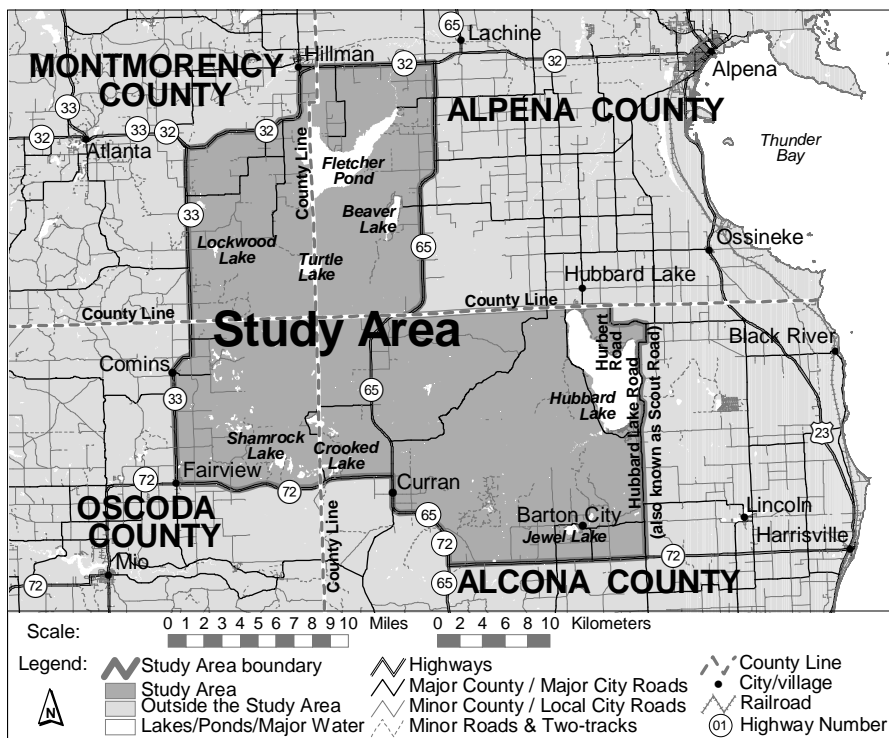
a. Number of bear you saw.

	Very Good	Good	Neutral	Poor	Very Poor	Not Applicable
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	
1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>	

b. Number of opportunities you had to take a bear.

c. Your overall bear hunting experience.

For the next three questions, we want to find out how often you may have hunted bear inside the study area that we have drawn on the figure. This study area includes parts of Alcona, Alpena, Montmorency, and Oscoda counties.



10. Did you hunt bear inside the study area outlined on the map during the 2011 season?

¹ ☐ Yes ² ☐ No; skip to question 13.

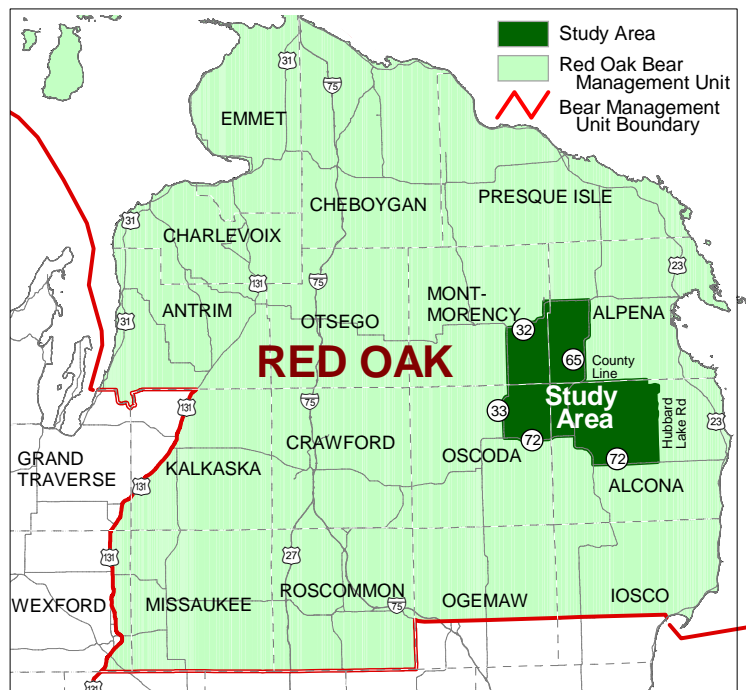
11. If you hunted inside this study area, please report the number of days for each county that you hunted bear in the following table.

COUNTY HUNTED (List each county that you hunted for bear inside the study area)	NUMBER OF DAYS HUNTED	TYPE OF LAND
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both

12. Did you harvest a bear inside the study area outlined on the figure?

¹ ☐ Yes ² ☐ No

For the final two questions, we want to find out how often you may have hunted bear outside the study area that we have drawn on the figure. This study area includes parts of Alcona, Alpena, Montmorency, and Oscoda counties.



13. Did you hunt bear outside the study area shown on the figure during the 2011 season?

- ¹ ☐ Yes ² ☐ No; skip the final question if you did not hunt outside study area.

14. If you hunted outside of the study area outlined on the figure, please report the number of days for each county that you hunted bear in the following table.

COUNTY HUNTED (List each county that you hunted for bear <i>outside</i> the study area)	NUMBER OF DAYS HUNTED	TYPE OF LAND
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both
		¹ <input type="checkbox"/> Private ² <input type="checkbox"/> Public ³ <input type="checkbox"/> Both

Please return questionnaire in the enclosed postage-paid envelope.

Thank you for your help!

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