North Carolina Black Bear Annual Report
Updated with 2023 Data

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Funding for the Black Bear Program was partially provided through a Pittman-Robertson Wildlife Restoration Grant. The Federal Aid in Wildlife Restoration Act, popularly known as the Pittman-Robertson Act, was approved by Congress on September 2, 1937, and began functioning July 1, 1938. The purpose of this Act was to provide funding for the selection, restoration, rehabilitation and improvement of wildlife habitat, wildlife management research, and the distribution of information produced by the projects. The Act was amended October 23, 1970, to include funding for hunter training programs and the development, operation and maintenance of public target ranges.

Funds are derived from an 11 percent Federal excise tax on sporting arms, ammunition, and archery equipment, and a 10 percent tax on handguns. These funds are collected from the manufacturers by the Department of the Treasury and are apportioned each year to the States and Territorial areas (except Puerto Rico) by the Department of the Interior on the basis of formulas set forth in the Act. Funds for hunter education and target ranges are derived from one-half of the tax on handguns and archery equipment.

Each state's apportionment is determined by a formula which considers the total area of the state and the number of licensed hunters in the state. The program is a cost-reimbursement program, where the state covers the full amount of an approved project then applies for reimbursement through Federal Aid for up to 75 percent of the project expenses. The state must provide at least 25 percent of the project costs from a non-federal source.

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For more information on black bears in North Carolina, please visit our website
at: www.ncwildlife.org/bear

There you will find information on:
- NCWRC's 2012-2022 Black Bear Management Plan
- BearWise and how to prevent and resolve conflicts with bears.
- How to participate in the Black Bear Cooperator Program.
- Harvest Reports and Summaries

Black Bear Management Units
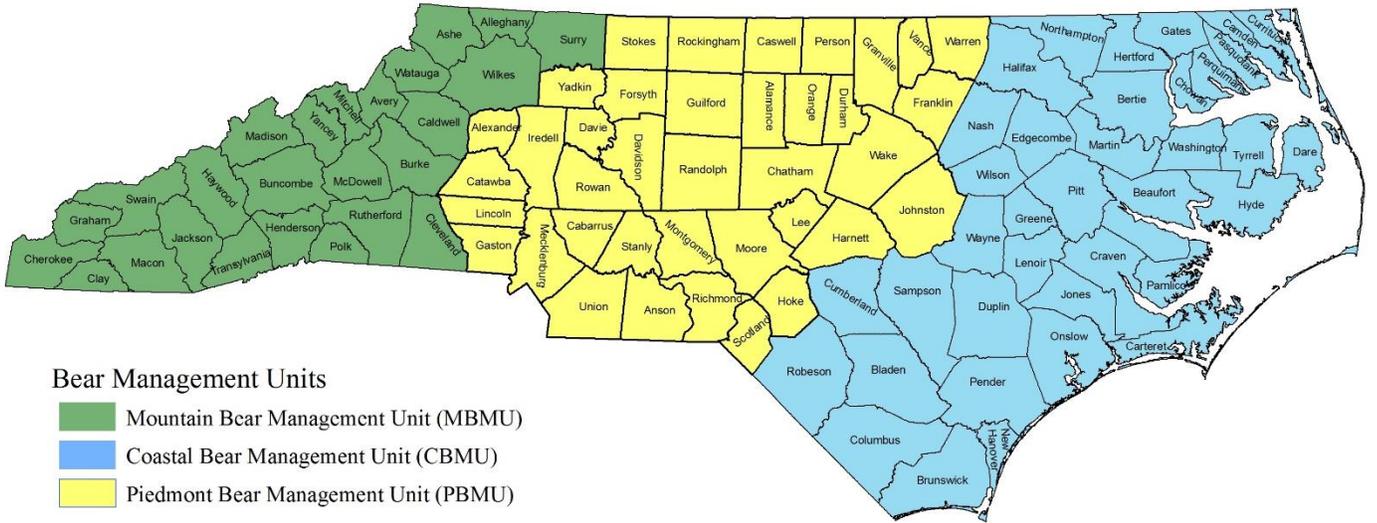
Bear Management Units

- Mountain Bear Management Unit (MBMU)
- Coastal Bear Management Unit (CBMU)
- Piedmont Bear Management Unit (PBMU)

Coastal Bear Management Unit (CBMU) Zones

CBMU Zones

- 1
- 2
- 3
- 4
- 5
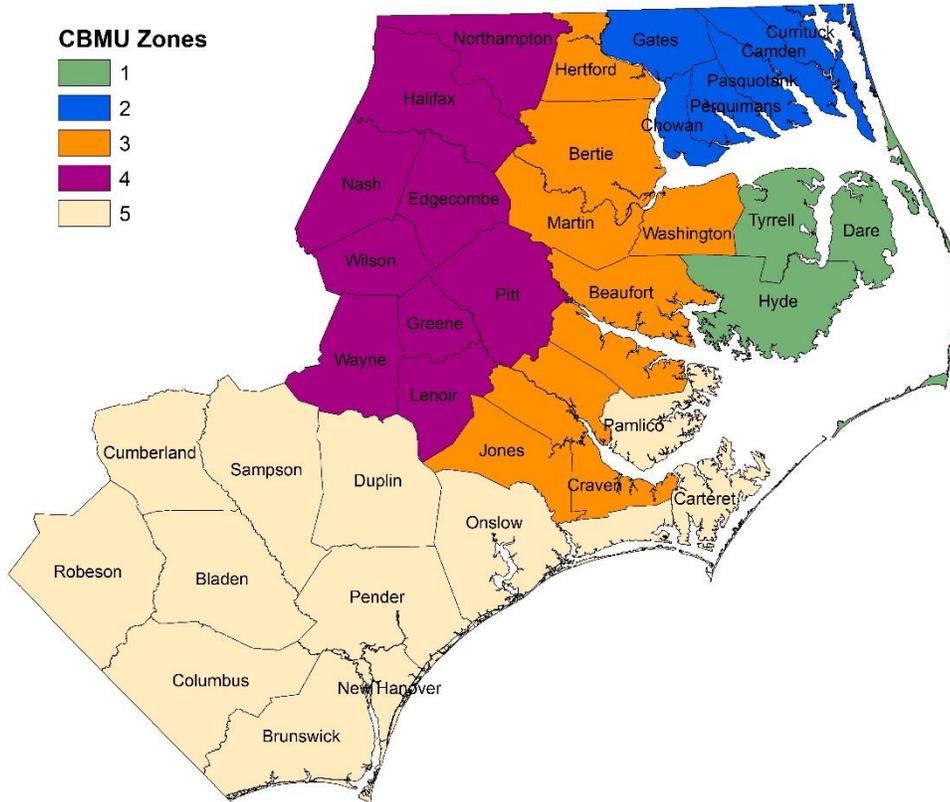
Statewide and Bear Management Unit Harvest

The 2023 bear hunting seasons and regulations can be found in Appendix A. The statewide reported harvest for 2023 was a harvest of 4,281 bears (Figure 1), a 6% increase from the 2022 record harvest (N=4,055; Table 1). The 2023 season was the 2nd year in a row in which harvest exceeded 4,000 bears and was the highest reported harvest ever recorded (Table 1). Compared to 2022, male harvest increased 2% and female harvest increased 11% during the 2023 season and comprised 42% of the reported harvest (Table 1).

Record-breaking harvests were recorded in all three Bear Management Units (BMUs). The Coastal BMU experienced a 6% increase (2,696 bears), the Mountain BMU experienced a 2% increase (1,497 bears) and Piedmont BMU experienced a 60% increase (88 bears; Figure 1).
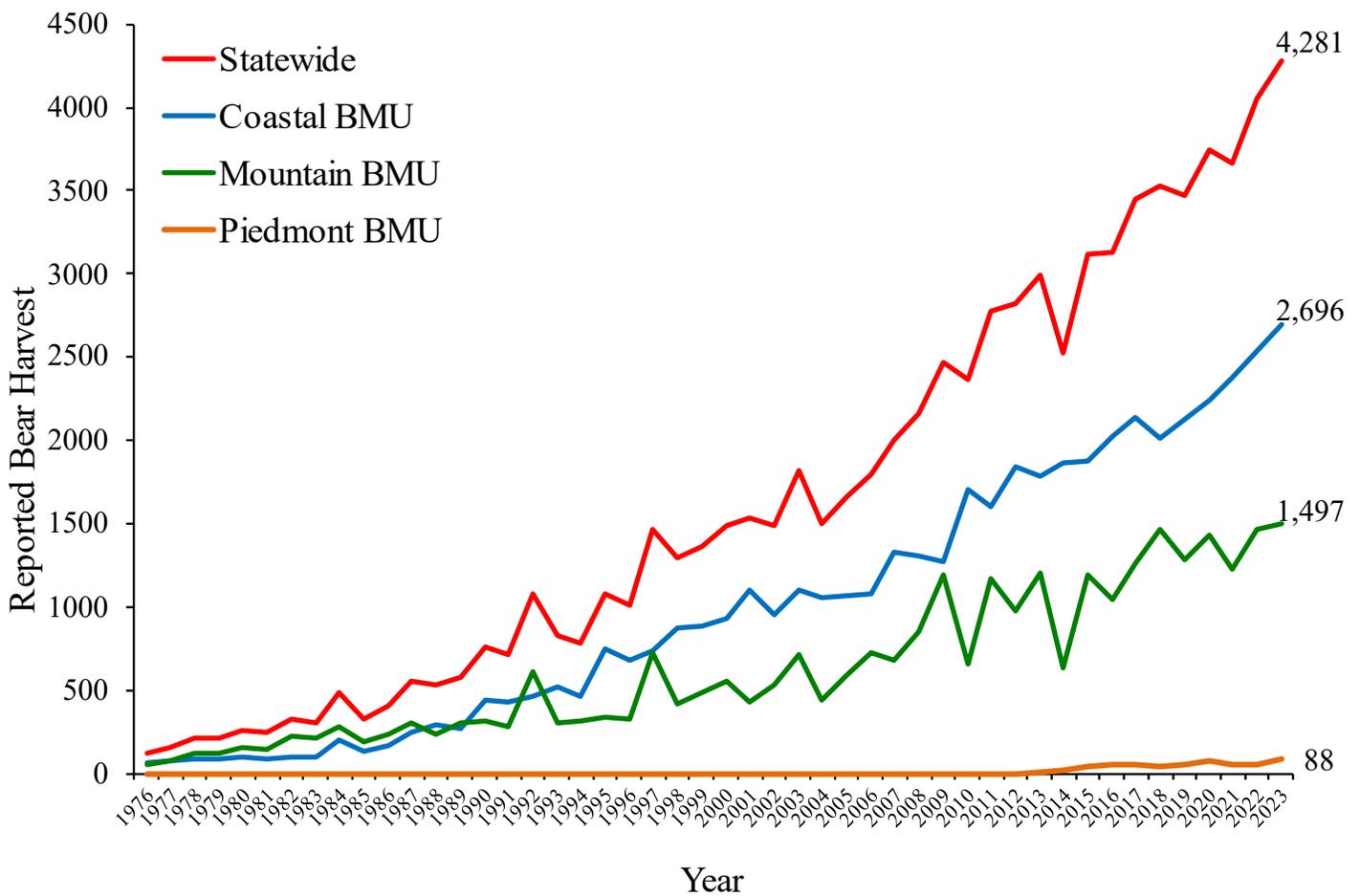

Figure 1. Statewide and regional harvest from 1976 through 2023.

Table 1. Statewide reported harvest of male and female bears from 1976 through 2023.

	Male		Female		All Bears	
Year	Harvest	Percent Change	Harvest	Percent Change	Total Harvest	Percent Change
1976	71	--	48	--	121	--
1977	84	18%	68	42%	154	27%
1978	144	71%	68	0.0%	214	39%
1979	124	-14%	93	37%	219	3%
1980	24	-81%	27	-71%	254	16%
1981	127	429%	79	193%	250	-2%
1982	178	40%	118	49%	319	27%
1983	189	6%	96	-19%	305	-4%
1984	323	71%	157	64%	481	58%
1985	198	-39%	124	-21%	322	-33%
1986	263	33%	144	16%	409	27%
1987	386	47%	167	16%	554	35%
1988	334	-14%	233	40%	567	3%
1989	310	-7%	237	2%	547	-4%
1990	455	47%	304	28%	760	39%
1991	416	-9%	294	-3%	716	-6%
1992	639	54%	420	43%	1060	48%
1993	505	-21%	316	-25%	821	-23%
1994	470	-7%	315	-0.3%	785	-4%
1995	657	40%	427	36%	1,084	38%
1996	593	-10%	417	-2%	1,010	-7%
1997	825	39%	638	53%	1,464	45%
1998	723	-12%	577	-10%	1,300	-11%
1999	820	13%	546	-5%	1,366	5%
2000	891	9%	599	10%	1,490	9%
2001	937	5%	596	-0.5%	1,533	3%
2002	939	0.2%	546	-8%	1,485	-3%
2003	1080	15%	732	34%	1,812	22%
2004	947	-12%	550	-25%	1,497	-17%
2005	1,024	8%	637	16%	1,661	11%
2006	1,142	12%	658	3%	1,800	8%
2007	1,198	5%	807	23%	2,005	11%
2008	1,323	10%	839	4%	2,162	8%
2009	1,537	16%	931	11%	2,468	14%
2010	1,481	-4%	882	-5%	2,363	-4%
2011	1,742	18%	1,033	17%	2,779	18%
2012	1,670	-4%	1,157	12%	2,827	2%

| Year | Male | | Female | | All Bears | |
	Harvest	Percent Change	Harvest	Percent Change	Total Harvest	Percent Change
2013	1,788	7%	1,203	4%	**2,991**	**6%**
2014	1,490	-17%	1,030	-14%	**2,521**	**-16%**
2015	1,930	31%	1,185	15%	**3,118**	**24%**
2016	1,839	-5%	1,285	8%	**3,125**	**0.2%**
2017	2,159	17%	1,295	1%	**3,454**	**11%**
2018	2,069	-4%	1,461	13%	**3,530**	**2%**
2019	2,096	1%	1,380	-6%	**3,476**	**-2%**
2020	2,183	4%	1,565	13%	**3,748**	**8%**
2021	2,192	0.4%	1,469	-6%	**3,661**	**-2%**
2022	2,420	10%	1,635	11%	**4,055**	**11%**
2023	2,466	2%	1,815	11%	**4,281**	**6%**

Up until the late 1980's, the majority of bears harvested in North Carolina were in the Mountain BMU versus the Coastal BMU, partly due to the closure of several coastal counties to bear hunting (Figure 2; Table 2). As coastal bear populations increased and bear hunting seasons expanded in the Coastal BMU counties, bear harvest levels increased and started to exceed bear harvest levels in the Mountain BMU. Since 1993, most bears harvested in North Carolina are from the Coastal BMU (Figure 2; Table 3). During the 2023 season, 63% of bears harvested in North Carolina were from the Coastal BMU, while 35% and 2% of bears were harvested in the Mountain BMU and Piedmont BMU, respectively (Table 2).
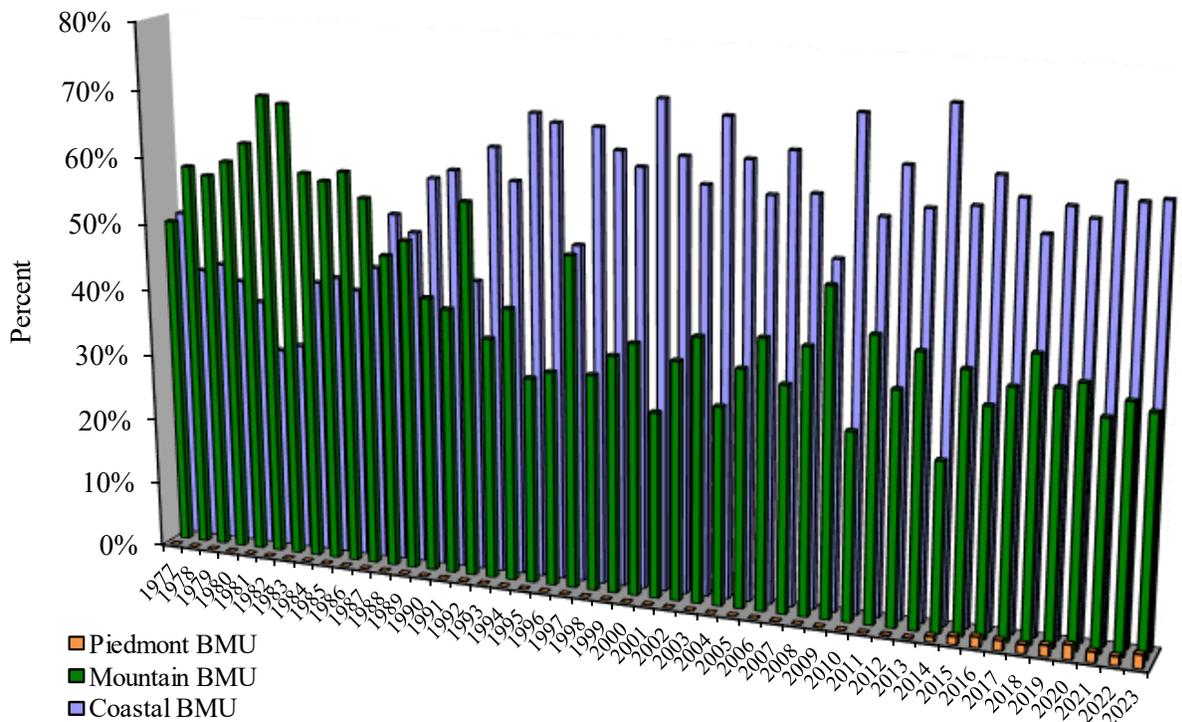

Figure 2. Percent of total reported bear harvest that occurs in the Piedmont BMU, Mountain BMU and Coastal BMU of North Carolina from 1977 through 2023.

Table 2. Percent (%) of total reported bear harvest that occurs in the Coastal BMU, Mountain BMU, and Piedmont BMU of North Carolina from 1987 through 2023.

Season	% of Total Harvest in Coastal BMU Region	% of Total Harvest in Mountain BMU Region	% of Total Harvest in Piedmont BMU Region
1987	44%	56%	NS
1988	53%	47%	NS
1989	50%	50%	NS
1990	58%	42%	NS
1991	60%	40%	NS
1992	44%	56%	NS
1993	64%	36%	NS
1994	59%	41%	NS
1995	69%	31%	NS
1996	68%	32%	NS
1997	50%	50%	NS
1998	68%	32%	NS
1999	64%	36%	NS
2000	62%	38%	NS
2001	72%	28%	NS
2002	64%	36%	NS
2003	60%	40%	NS
2004	70%	30%	NS
2005	65%	35%	0%
2006	60%	40%	0%
2007	66%	34%	0%
2008	60%	40%	0%
2009	51%	49%	0%
2010	72%	28%	0%
2011	58%	42%	0%
2012	65%	35%	0%
2013	60%	40%	0%
2014	74%	25%	1%
2015	60%	39%	1%
2016	65%	33%	2%
2017	62%	36%	2%
2018	57%	42%	1%
2019	61%	37%	2%
2020	60%	38%	2%
2021	65%	33%	2%
2022	62%	36%	1%
2023	63%	35%	2%

The composition of the statewide harvest that occurs in the Mountain BMU fluctuates annually, largely due to mast abundance and weather (Table 3). Usually, higher mast production makes bears less vulnerable to harvest, as they are not moving as much to find food and are less attracted to unprocessed bait placed by hunters. However, despite the higher mast production that occurred during Fall 2023 (see page 46) bear harvest increased 2% and was a record harvest (Table 3). This may reflect the increase in active bear hunters (see page 29), as well as more baiting that is occurring on private lands.

The sex ratio of the Coastal BMU harvest is increasingly biased towards females, with the sex ratio of the female harvest at or above 41% since the 2014 season, the year when unprocessed bait was allowed for all hunters (Table 4). In 2023, the female sex ratio of the Coastal BMU was 47%, the highest percentage recorded since 1998 (Table 4). In the Mountain BMU, the availability of hard mast as well as cold weather can influence the vulnerability of females. During 2023, females comprised 35% of the reported harvest in the Mountain BMU, the lowest composition since 2017 (Table 4). During 2023, mast production was better than in 2022, in particular red oaks. When mast abundance improves, females tend to be less vulnerable to harvest. In the Piedmont BMU, females comprised 41% of the reported harvest, an increase from previous seasons and likely reflective of the bear population becoming more established in certain Piedmont counties (Table 4).

Until 2005, there were no counties in the Piedmont BMU with a bear hunting season. Starting in 2014, all 100 counties in North Carolina have a regulated bear hunting season. Harvest in the Piedmont BMU is still concentrated on the fringes of the Coastal BMU, Mountain BMU, and Virginia (Figure 3). During the 2023 season, the highest number of bears harvested per square mile occurred in the eastern portion of the Coastal BMU (Camden, Hyde, Jones, and Tyrrell counties; Figure 3). In some counties, the bears harvested per square mile is not necessarily reflective of the bear population, but rather limits on hunter access. For example, although Dare County has one of the densest bear populations in the United States, hunter access is very limited due to the amount of federal lands (i.e., Alligator River National Wildlife Refuge; Dare County Bombing Range) where bear hunting is restricted or prohibited.

Table 3. Harvest of registered black bears in the Coastal BMU and Mountain BMU and percent change in registered harvest from 1980-2023.

	Coastal BMU						Mountain BMU					
	Male		Female		Total[1]		Male		Female		Total[1]	
Year	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change
1980	3	-94%	5	-88%	**104**	**11%**	21	-70%	22	-58%	**152**	**22%**
1981	42	1300%	26	420%	**92**	**-12%**	85	305%	53	141%	**152**	**0%**
1982	45	7%	46	77%	**97**	**5%**	133	56%	72	36%	**221**	**45%**
1983	55	22%	29	-37%	**96**	**-1%**	134	1%	67	-7%	**209**	**-5%**
1984	134	144%	65	124%	**199**	**107%**	189	41%	92	37%	**281**	**34%**
1985	80	-40%	57	-12%	**137**	**-31%**	118	-38%	67	-27%	**186**	**-34%**
1986	116	45%	51	-11%	**167**	**22%**	147	25%	93	39%	**242**	**30%**
1987	166	43%	80	57%	**246**	**47%**	220	50%	87	-6%	**307**	**27%**
1988	173	4%	126	58%	**299**	**22%**	161	-27%	107	23%	**268**	**-13%**
1989	147	-15%	128	2%	**275**	**-8%**	163	1%	109	2%	**272**	**1%**
1990	257	75%	187	46%	**444**	**61%**	198	21%	117	7%	**315**	**16%**
1991	242	-6%	187	0%	**429**	**-3%**	174	-12%	107	-9%	**287**	**-9%**
1992	281	16%	183	-2%	**464**	**8%**	358	106%	237	121%	**595**	**107%**
1993	304	8%	219	20%	**523**	**13%**	201	-44%	97	-59%	**298**	**-50%**
1994	286	-6%	177	-19%	**463**	**-11%**	184	-8%	138	42%	**322**	**8%**
1995	426	49%	319	80%	**745**	**61%**	231	26%	108	-22%	**339**	**5%**
1996	384	-10%	301	-6%	**685**	**-8%**	209	-10%	116	7%	**325**	**-4%**
1997	417	9%	320	6%	**737**	**8%**	408	95%	318	174%	**726**	**123%**
1998	457	10%	422	32%	**879**	**19%**	266	-35%	155	-51%	**421**	**-42%**

	Coastal BMU						Mountain BMU					
	Male		Female		Total[1]		Male		Female		Total[1]	
Year	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change
1999	509	11%	372	-12%	**881**	**0%**	311	17%	174	12%	**485**	**15%**
2000	532	5%	397	7%	**929**	**5%**	359	15%	202	16%	**561**	**16%**
2001	667	25%	440	11%	**1,107**	**19%**	270	-25%	156	-23%	**426**	**-24%**
2002	594	-11%	361	-18%	**955**	**-14%**	345	28%	185	19%	**530**	**24%**
2003	656	10%	442	22%	**1,098**	**15%**	425	23%	292	58%	**717**	**35%**
2004	643	-2%	410	-7%	**1,053**	**-4%**	304	-28%	140	-52%	**444**	**-38%**
2005	655	2%	418	2%	**1,073**	**2%**	371	22%	219	56%	**590**	**33%**
2006	639	-2%	436	4%	**1,075**	**0%**	503	36%	222	1%	**725**	**23%**
2007	789	23%	538	23%	**1,327**	**23%**	409	-19%	269	21%	**678**	**-6%**
2008	757	-4%	548	2%	**1,305**	**-2%**	566	38%	291	8%	**857**	**26%**
2009	792	5%	478	-13%	**1,270**	**-3%**	745	32%	452	55%	**1,197**	**40%**
2010	1,060	34%	641	34%	**1,701**	**34%**	421	-43%	241	-47%	**662**	**-45%**
2011	987	-7%	620	-3%	**1,608**	**-5%**	755	79%	415	72%	**1,170**	**77%**
2012	1,082	10%	762	23%	**1,844**	**15%**	585	-23%	395	-5%	**980**	**-16%**
2013	1,089	1%	692	-9%	**1,781**	**-3%**	696	19%	510	29%	**1,206**	**23%**
2014	1,103	1%	764	10%	**1867**	**5%**	372	-47%	262	-49%	**634**	**-47%**
2015	1,115	1%	762	0%	**1880**	**1%**	784	111%	415	58%	**1199**	**89%**
2016	1,141	2%	882	16%	**2,024**	**8%**	666	-15%	385	-7%	**1051**	**-12%**
2017	1,252	10%	885	0.3%	**2,137**	**6%**	872	31%	392	2%	**1,264**	**20%**
2018	1,151	-8%	866	-2%	**2,017**	**-6%**	883	1%	583	49%	**1,466**	**16%**

| | Coastal BMU | | | | | | Mountain BMU | | | | | |
| | Male | | Female | | Total[1] | | Male | | Female | | Total[1] | |
Year	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change	Harvest	% change
2019	1,222	6%	906	4.4%	**2,128**	**6%**	832	-6%	458	-22%	**1,290**	**-12%**
2020	1,264	3%	974	8%	**2,238**	**5%**	861	3%	568	24%	**1,429**	**11%**
2021	1,377	9%	997	2%	**2,374**	**6%**	774	-10%	455	-20%	**1,229**	**-14%**
2022	1,453	6%	1079	8%	**2,533**	**7%**	929	20%	539	18%	**1,468**	**19%**
2023	1,440	-1%	1256	16%	**2,696**	**6%**	974	5%	523	-3%	**1,497**	**2%**

[1] Total includes harvest of bears in which sex is unknown.
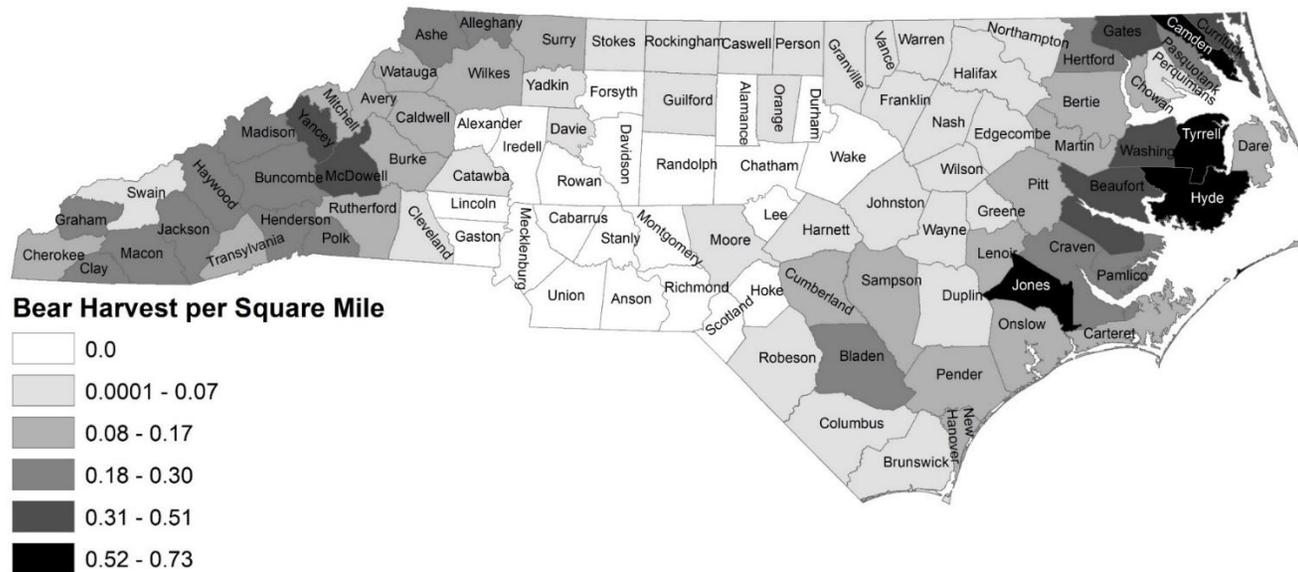
Figure 3. The 2023 reported bear harvest per square mile by county.

Table 4. Percentage of males and females that comprised the reported harvest in the three BMUs of North Carolina from 1976 through 2023.

Year	Coastal BMU		Mountain BMU		Piedmont BMU	
	% Female	% Male	% Female	% Male	% Female	% Male
1976	43%	57%	38%	62%	n/s	n/s
1977	47%	53%	42%	58%	n/s	n/s
1978	27%	73%	36%	64%	n/s	n/s
1979	44%	56%	42%	58%	n/s	n/s
1980	63%	38%	51%	49%	n/s	n/s
1981	38%	62%	38%	62%	n/s	n/s
1982	51%	49%	35%	65%	n/s	n/s
1983	35%	65%	33%	67%	n/s	n/s
1984	33%	67%	33%	67%	n/s	n/s
1985	42%	58%	36%	64%	n/s	n/s
1986	31%	69%	39%	61%	n/s	n/s
1987	33%	67%	28%	72%	n/s	n/s
1988	42%	58%	40%	60%	n/s	n/s
1989	47%	53%	40%	60%	n/s	n/s
1990	42%	58%	37%	63%	n/s	n/s
1991	44%	56%	38%	62%	n/s	n/s
1992	39%	61%	40%	60%	n/s	n/s
1993	42%	58%	33%	67%	n/s	n/s
1994	38%	62%	43%	57%	n/s	n/s
1995	43%	57%	32%	68%	n/s	n/s
1996	44%	56%	36%	64%	n/s	n/s
1997	43%	57%	44%	56%	n/s	n/s
1998	48%	52%	37%	63%	n/s	n/s
1999	42%	58%	36%	64%	n/s	n/s
2000	43%	57%	36%	64%	n/s	n/s
2001	40%	60%	37%	63%	n/s	n/s
2002	38%	62%	35%	65%	n/s	n/s
2003	40%	60%	41%	59%	n/s	n/s
2004	39%	61%	32%	68%	n/s	n/s
2005	39%	61%	37%	63%	0%	0%
2006	41%	59%	31%	69%	0%	100%

	Coastal BMU		Mountain BMU		Piedmont BMU	
Year	% Female	% Male	% Female	% Male	% Female	% Male
2007	41%	59%	40%	60%	100%	0%
2008	42%	58%	34%	66%	0%	100%
2009	38%	62%	38%	62%	100%	0%
2010	38%	62%	36%	64%	0%	0%
2011	39%	61%	35%	65%	0%	100%
2012	41%	59%	40%	60%	0%	100%
2013	39%	61%	42%	58%	25%	75%
2014	41%	59%	41%	59%	20%	80%
2015	41%	59%	35%	65%	21%	79%
2016	44%	56%	37%	63%	36%	64%
2017	41%	59%	31%	69%	37%	63%
2018	43%	57%	40%	60%	26%	74%
2019	43%	57%	36%	64%	28%	72%
2020	44%	56%	40%	60%	28%	72%
2021	42%	58%	37%	63%	31%	69%
2022	43%	57%	37%	63%	31%	69%
2023	47%	53%	35%	65%	41%	59%

Method of Harvest

Two types of hunting methods are utilized in North Carolina, still/stand and hound hunting. The use of hounds to "strike" and "tree" bears has been a technique that goes back centuries. North Carolinians developed a strain of hound to hunt bears, known as the Plott Hound, which has been designated by the Legislature as the official state dog of North Carolina. Hunters who use hounds to aid in the harvest of bears are often referred to as houndsmen or hound hunters. Still hunting or stand hunting is also an important hunting method. This is a technique whereby hunters place stands on either trails, field edges, or in areas frequented by bears to feed. Hunters who use this technique are often referred to as still hunters.

Prior to 2008, the WRC was able to track method of harvest only through information provided voluntarily by hunters when they submitted a premolar tooth for aging (Table 5). In 2008, the big game registration system started requesting method of harvest from hunters registering their harvested bear on-line or via phone. In 2009, the NCWRC requested information on method of take through all three registration systems. However, we refined the question on the big game cooperator sheets in 2010 to improve data collection; the question on method of take was changed to a "yes/no" question.

Use of hounds remains the primary method for successfully harvesting bears in North Carolina (59% in 2023; Table 5). Until 2021, when mandatory tooth submission became effective, the method of harvest collected through the bear cooperator program (i.e., the premolar tooth) was biased towards hound hunters when compared to the reported harvest (Table 5). While there is still a very slight bias towards houndsmen,

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due to their greater submission rates to the bear cooperator program, the method of harvest reported from the big game registration system is more similar to the information submitted by the hunter with the premolar tooth (Table 5).

BMU Method of Harvest: The majority of bears harvested in the Coastal BMU and Mountain BMU are by houndsmen (57% and 65%, respectively), while most bears taken in the Piedmont BMU are by still hunters (90%; Table 6). Still hunting of bears is more common in the Coastal BMU and the Piedmont BMU, than in the Mountain BMU. However, in the Mountain BMU, the percentage of bears taken by still hunters has increased and since 2017, 30% or more of bears taken in the Mountain BMU are by still hunters (Table 6).

Table 5. Method of harvest from voluntary tooth submission and from big game registration system, 1996-2023.

Season	Tooth Submission Data			Registered Harvest		
	Dog	Still	Unknown	Dog	Still	Unknown
1996	79%	20%	1%	N/A	N/A	N/A
1997	78%	20%	2%	N/A	N/A	N/A
1998	75%	24%	1%	N/A	N/A	N/A
1999	77%	21%	2%	N/A	N/A	N/A
2000	77%	23%	0.3%	N/A	N/A	N/A
2001	81%	17%	1%	N/A	N/A	N/A
2002	81%	17%	2%	N/A	N/A	N/A
2003	81%	17%	2%	N/A	N/A	N/A
2004	82%	16%	3%	N/A	N/A	N/A
2005	82%	16%	2%	N/A	N/A	N/A
2006	85%	13%	2%	N/A	N/A	N/A
2007	84%	14%	2%	N/A	N/A	N/A
2008[1]	87%	12%	0.6%	37%	25%	38%
2009[2]	84%	16%	0.5%	63%	36%	0.1%
2010	84%	15%	0.5%	69%	30%	0.1%
2011	88%	12%	0.0%	71%	29%	0.0%
2012	83%	16%	0.8%	68%	31%	0.1%
2013	82%	18%	0.1%	69%	31%	0.0%
2014	74%	24%	2.6%	68%	32%	0.0%
2015	72%	27%	0.6%	66%	34%	0.0%
2016	73%	27%	0.2%	65%	35%	0%
2017	70%	30%	0.2%	63%	37%	0%
2018	66%	32%	1.3%	60%	40%	0%
2019	71%	29%	0.2%	63%	37%	0%
2020	68%	32%	0.3%	59%	41%	0%
2021[3]	63%	37%	0%	60%	40%	0%
2022	59%	41%	0%	59%	41%	0%
2023	60%	40%	0%	59%	41%	0%

[1]In 2008, the big game registration system started collecting information on method of hunting on-line and via telephone.
[2]In 2009, the big game registration system added method of harvest to the big game cooperator sheets.
[3]In 2021, tooth submission became mandatory for successful hunters.

Table 6. Method of harvest by bear management unit, based on 2009[1] through 2023 registered harvest.

Year	Coastal BMU			Mountain BMU			Piedmont BMU	
	Still	**Dog**	**Unknown**	**Still**	**Dog**	**Unknown**	**Still**	**Dog**
2009[1]	39%	59%	1.7%	33%	66%	0.3%	100%	0%
2010[2]	36%	64%	0.1%	15%	84%	0.3%	0%	0%
2011	31%	69%	0.1%	27%	73%	0.0%	100%	0%
2012	36%	64%	0.2%	24%	76%	0.0%	67%	33%
2013	33%	67%	0%	29%	71%	0.0%	50%	50%
2014	37%	63%	0.1%	14%	86%	0%	75%	25%
2015	37%	63%	0%	26%	74%	0%	90%	10%
2016	38%	62%	0%	27%	73%	0%	70%	30%
2017	40%	60%	0%	30%	70%	0%	87%	13%
2018	41%	59%	0%	38%	62%	0%	74%	26%
2019	40%	60%	0%	30%	70%	0%	78%	22%
2020	44%	56%	0%	33%	67%	0%	84%	16%
2021	43%	57%	0%	31%	69%	0%	79%	21%
2022	44%	56%	0%	34%	66%	0%	80%	20%
2023	43%	57%	0%	35%	65%	0%	90%	10%

[1]In 2009, the big game registration system started collecting information on method of hunting on all three registration methods (i.e. on-line, telephone, big game cooperator sheets).

[2] In 2010, method of harvest on the big game cooperator sheets was refined to improve data collection.

BMU Method of Harvest and Sex Ratio

Statewide, still hunters show less selectivity for male bears than houndsmen; in 2023, still hunter reported harvest is comprised of 46% female, whereas houndsmen reported harvest is 40% female (Table 7). Bear populations typically continue to increase when the composition of the female harvest is 42%, will stabilize if female composition is 42-44%, and may decline if female composition is over 44%. During 2023, still hunters and houndsmen in the Mountain BMU were most selective for male bears (68% and 63%, respectively) and still hunters in the Coastal BMU were the least selective for male bears (47%; Table 7). In the Piedmont BMU, houndsmens were slightly more selective for male bears than still hunters (59% vs. 56%, respectively; Tabe 7).

Table 7. Sex ratio by method of harvest based on the 2012 through 2023 registered harvest.

	Method	Coastal BMU		Mountain BMU		Piedmont BMU		Statewide	
		Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
2012	**Dog**	63%	37%	59%	41%	100%	0%	61%	39%
	Still	51%	49%	63%	37%	100%	0%	54%	46%
2013	**Dog**	65%	35%	60%	40%	100%	0%	63%	37%
	Still	53%	47%	52%	48%	50%	50%	53%	47%
2014	**Dog**	62%	38%	57%	43%	60%	40%	61%	39%
	Still	53%	47%	68%	32%	87%	13%	56%	44%
2015	**Dog**	65%	34%	66%	35%	100%	0%	66%	34%
	Still	49%	51%	63%	37%	77%	23%	54%	46%
2016	**Dog**	61%	39%	62%	38%	73%	27%	61%	39%
	Still	49%	51%	67%	33%	60%	40%	54%	46%
2017	**Dog**	63%	37%	69%	31%	43%	57%	66%	34%
	Still	52%	48%	68%	32%	67%	33%	57%	43%
2018	**Dog**	62%	38%	61%	39%	83%	17%	62%	38%
	Still	50%	50%	59%	41%	71%	29%	54%	46%
2019	**Dog**	61%	39%	65%	35%	77%	23%	63%	37%
	Still	51%	49%	64%	36%	71%	29%	60%	40%
2020	**Dog**	63%	37%	61%	39%	46%	54%	62%	38%
	Still	49%	51%	58%	42%	76%	24%	53%	47%
2021	**Dog**	62%	38%	62%	38%	75%	25%	62%	38%
	Still	53%	47%	65%	35%	70%	30%	57%	43%
2022	**Dog**	62%	38%	66%	34%	64%	36%	64%	36%
	Still	52%	48%	58%	42%	70%	30%	54%	46%
2023	**Dog**	58%	42%	63%	37%	56%	44%	60%	40%
	Still	47%	53%	68%	32%	59%	41%	54%	46%

Weights of Sampled Harvested Bears

Mortality information from harvested bears, including the collection of premolar teeth and reproductive tracts, began in 1969. NCWRC staff continue to work closely with bear hunters to collect biological data from harvested bears. Age and sex information gathered from biological samples are used for analyzing the age structure of the harvested population and for population reconstruction modeling.

During the 2023 hunting season, three bears were sampled that weighed over 700 lbs. (Table 8). The plurality of bears harvested since 1976 are in the 100-199 lbs. weight class (38%), followed by the 200-299 lbs. weight class (30%; Table 9; Figure 4). During the 2023 season, bears in the 100-199 lbs. and 200-299 lbs. weight category comprised the majority of the sampled harvest (Table 8).

Since 1976, 39 harvested male bears that were sampled weighed over 700 lbs. (Table 9). Hyde County has produced the 2nd and 3rd largest bears in North Carolina, and 4 of the top ten bears have been harvested in

Hyde County (Table 10). To be a top ten bear by weight in North Carolina, a bear must weigh at least 737 lbs. (Table 10). Of the top ten male bears, 9 of the 14 bears were taken by hound hunters.

Table 8. Number of harvested bears sampled by weight category during the 2023 hunting season.

	2023 Bear Hunting Season				
Weight Category	Statewide Total	Statewide Percent	Mountain BMU	Coastal BMU	Piedmont BMU
<100 lbs.	44	2%	8	35	1
100-199 lbs.	814	39%	311	490	13
200-299 lbs.	692	33%	213	467	12
300-399 lbs.	253	12%	64	184	5
400-499 lbs.	150	7%	16	132	2
500-599 lbs.	118	6%	5	113	0
600-699 lbs.	35	2%	0	35	0
700-799 lbs.	3	0%	0	3	0

Table 9. Number of harvested bears sampled by weight category from 1976 through 2023, North Carolina.

Weight Category	Statewide	Statewide Percent	Mountain BMU	Coastal BMU	Piedmont BMU
<100 lbs.	812	3%	336	474	2
100-199 lbs.	11,273	38%	5,414	5,789	69
200-299 lbs.	8,825	30%	3,041	5,706	77
300-399 lbs.	3,654	12%	1,023	2,606	25
400-499 lbs.	2,707	9%	405	2,295	7
500-599 lbs.	1,781	6%	86	1,690	4
600-699 lbs.	480	2%	14	465	1
700-799 lbs.	38	0.1%	0	38	0
> 800 lbs.	1	0%	0	1	0
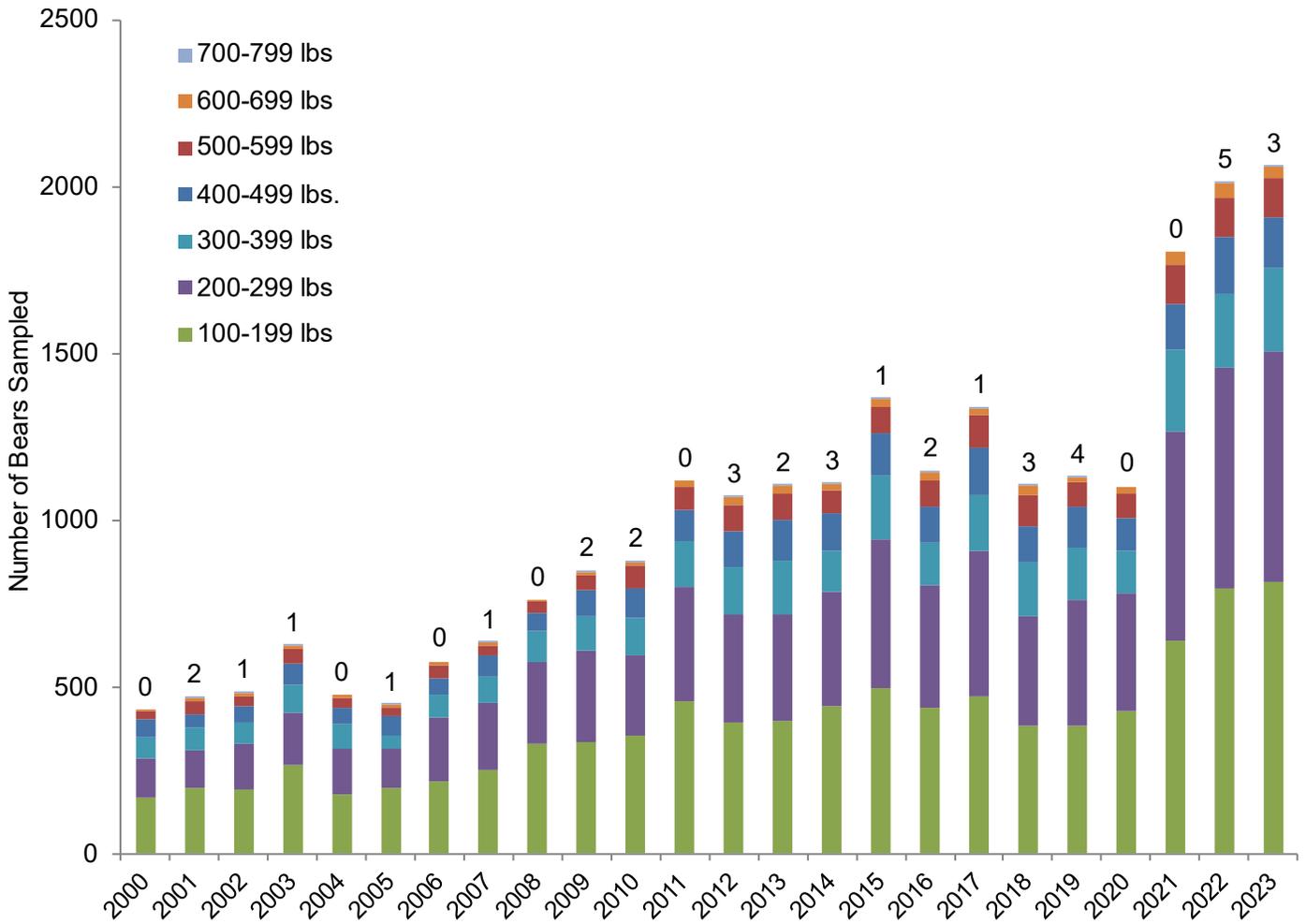
Figure 4. Number of bears sampled by weight category from 2000 through 2023. Note: Number on top of each bar indicates number of bears sampled from 700-799 lbs.
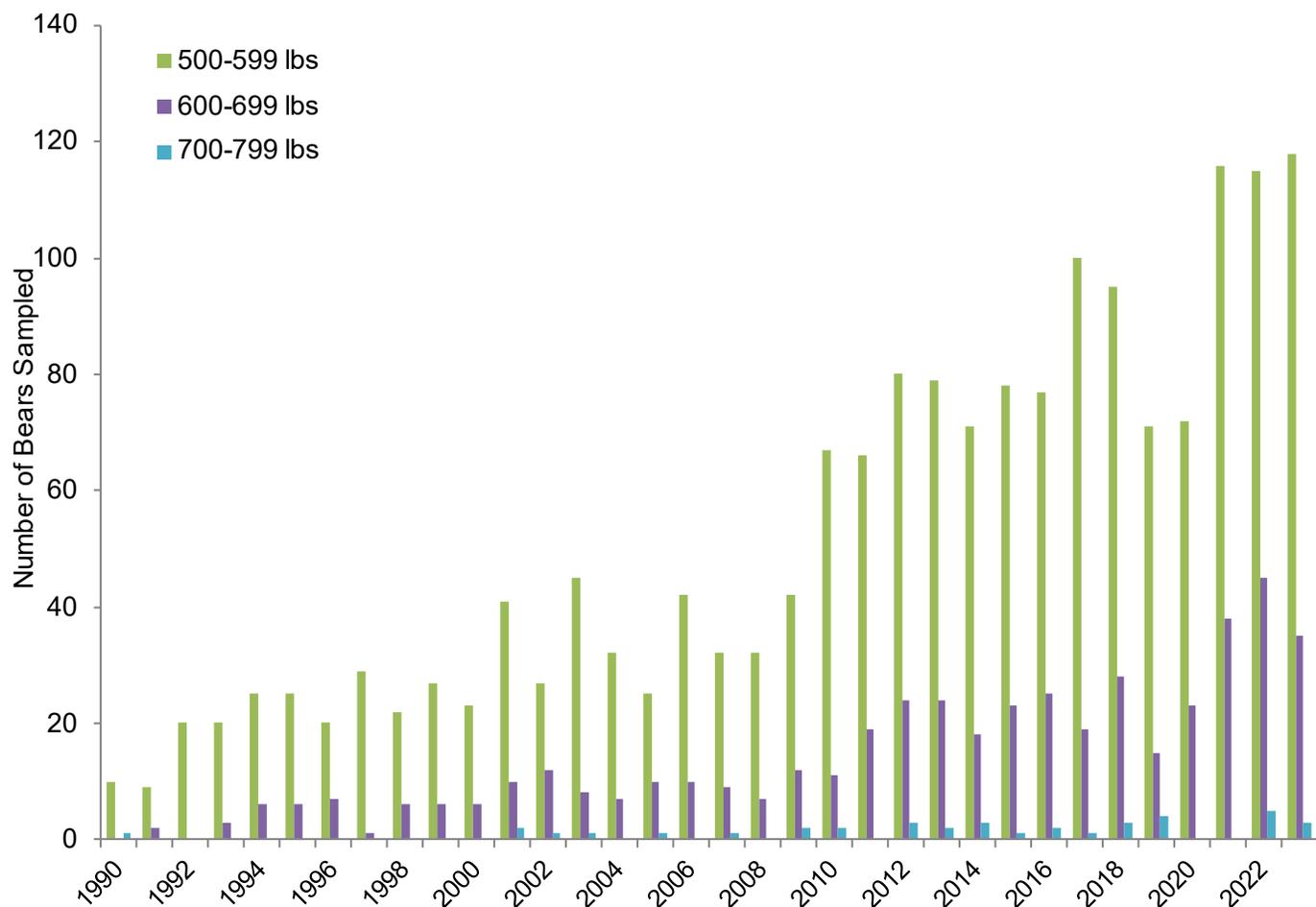
Figure 5. The number of harvested black bears sampled by the Commission that weighed over 500 lbs. from 1990 through 2023.

Table 10. Top ten male bear weights recorded by NCWRC from 1976 through 2023.

Rank	Year	County	BMU	Type of Hunt	Sex	Weight	Age
1	1998	CRAVEN	Coastal	DG	Male	880	10.75
2	2014	HYDE	Coastal	DG	Male	784	9.75
3	2014	HYDE	Coastal	ST	Male	782	9.75
4	2012	WASHINGTON	Coastal	DG	Male	780	6.75
4	2013	CRAVEN	Coastal	DG	Male	780	8.75
4	2023	BEAUFORT	Coastal	ST	Male	780	6.75
5	2009	HYDE	Coastal	ST	Male	760	6.75
5	2019	BEAUFORT	Coastal	DG	Male	760	7.75
6	2016	HYDE	Coastal	DG	Male	757	8.75
7	2007	DARE	Coastal	ST	Male	752	7.75
8	2001	GATES	Coastal	DG	Male	742	9.75
8	2023	NORTHAMPTON	Coastal	DG	Male	740	12.75
9	2001	BEAUFORT	Coastal	DG	Male	740	13.75
10	2022	JONES	Coastal	ST	Male	737	14.75

The record for female bear weight is 520 lbs., taken by a hound hunter in Martin County in 2015 (Table 11). To be a top ten female bear by weight, a harvested female bear must weigh at least 429 lbs. (Table 11). Eight of the top ten females were harvested by hound hunters and four were harvested by still hunters (Table 11). Only one of the top ten harvested female bears was in the Mountain BMU; the remaining 11 bears were harvested in the Coastal BMU. Four of the 12 female bears were taken in Hyde County.

Table 11. Top ten female bear weights recorded by NCWRC from 1976 through 2023.

Rank	Year	County	BMU	Type of Hunt	Weight	Sex	Age
1	2015	Martin	Coastal	DG	520	F	18.75
2	2017	Sampson	Coastal	DG	517	F	13.75
3	2021	Tyrrell	Coastal	DG	498	F	8.75
4	2017	Hyde	Coastal	ST	482	F	6.75
5	2020	Edgecombe	Coastal	DG	471	F	8.75
6	2010	Chowan	Coastal	DG	450	F	13.75
6	2010	Hyde	Coastal	DG	450	F	3.75
7	2007	Hyde	Coastal	ST	445	F	9.75
8	2018	Washington	Coastal	DG	440	F	13.75
9	2013	Caldwell	Mountains	DG	438	F	5.75
9	2019	Pitt	Coastal	ST	438	F	11.75
10	2016	Hyde	Coastal	ST	429	F	12.75

Weight by Bear Management Unit: Male bears sampled in the Coastal BMU during the 2023 hunting season weighed more on average, than their counterparts in the Mountain BMU and Piedmont BMU (*All hunters*; Figure 6; Table 12). The mean weight of male bears in the Coastal BMU were 103 lbs. and 57 lbs. heavier than male bears in the Mountain BMU and Piedmont BMU, respectively (Table 12). Female bears in the Coastal BMU weighed 13 lbs. and 31 lbs. more than females sampled in the Mountain BMU and Piedmont BMU, respectively (Figure 7; Table 12).

This difference in weight between the BMUs is expected; bears in the Mountain BMU are dependent on availability of natural food sources (i.e., soft and hard mast) that fluctuate annually in abundance, which can limit how much weight they can gain. In addition, natural food sources in the Mountain BMU are only available during late spring through fall. The opposite occurs in the Coastal BMU; not only are food sources (e.g., soft mast, hard mast, agricultural crops) relatively stable from year to year, but these food sources are available during a longer period of time throughout the year, due to the longer growing season. Much of the Piedmont BMU has a recently expanded bear population, in which younger, thus smaller, male bears will more likely comprise the population and the harvest. In addition, a majority of the bear harvest in the Mountain BMU occurs on game lands, where unprocessed bait is prohibited, whereas a vast majority of the harvest in the Coastal BMU occurs on private lands and unprocessed bait is legal and commonly distributed.
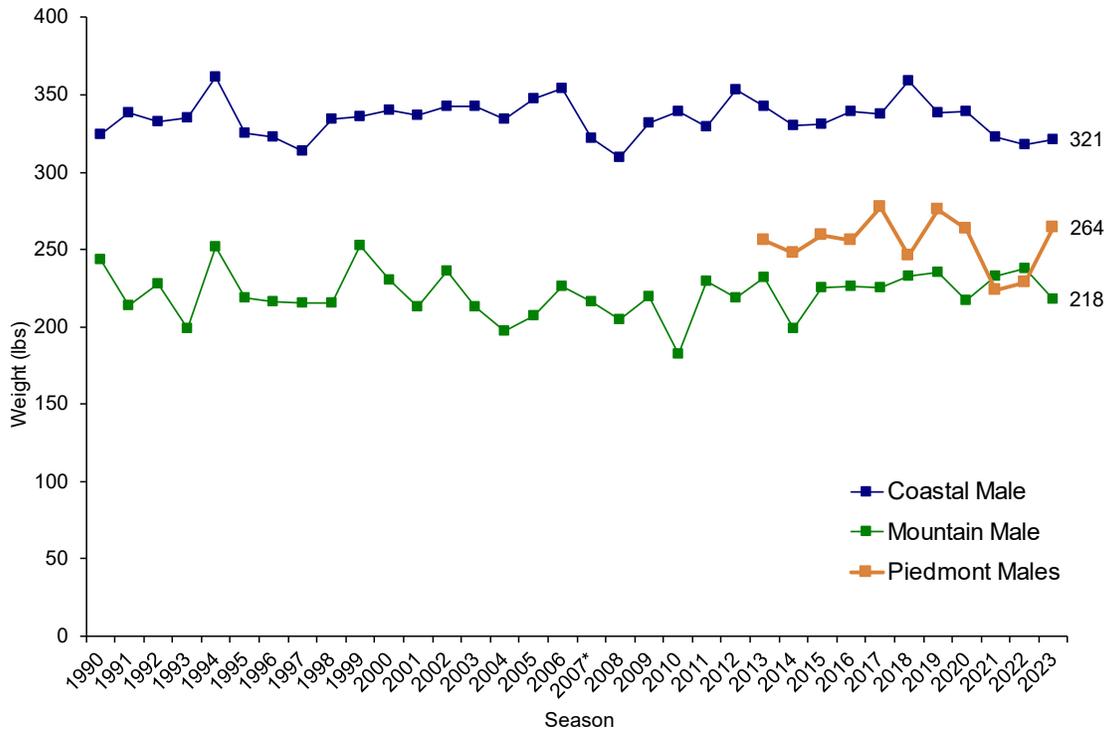
Figure 6. Average weight of sampled male bears in each bear management unit from 1990 through 2023.
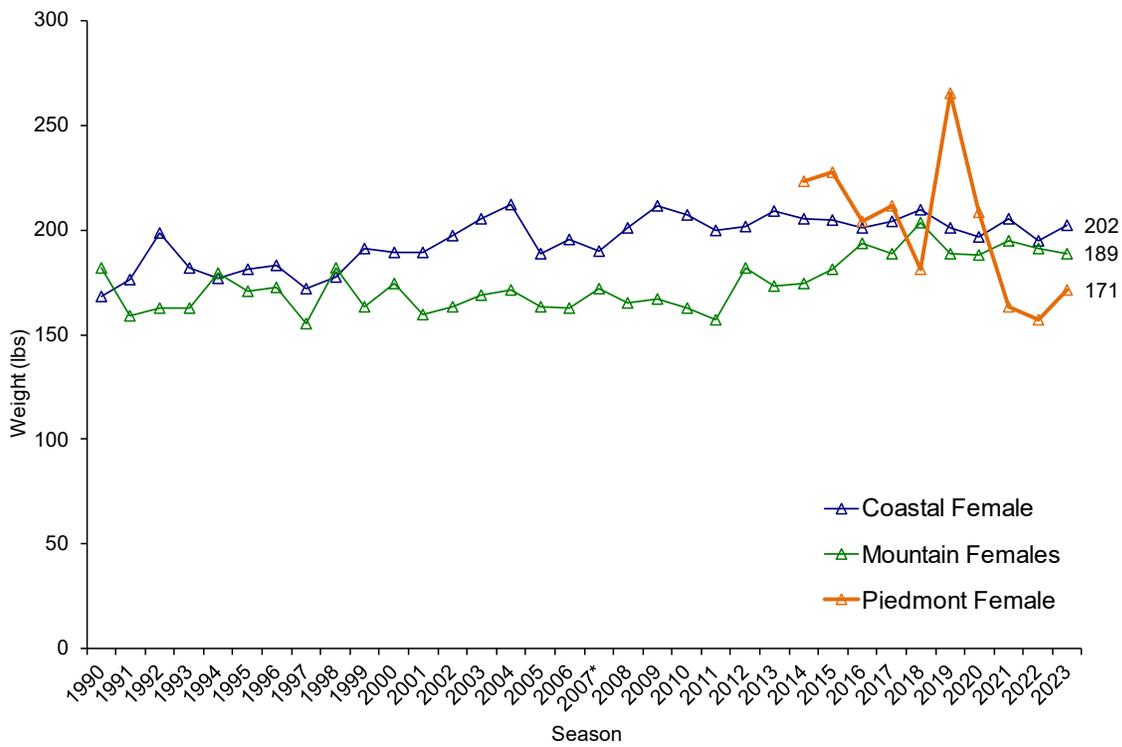

Figure 7. Average weight of sampled female bears in each bear management unit from 1990 through 2023.

Table 12. Mean age and weight for harvested bears sampled from North Carolina during the 2023 season and 3-year averages.

Season	Region	Hunting Method	Mean Age (yr.)		Mean Weight (lbs.)	
			Male	Female	Male	Female
2023	Coastal BMU	Still Hunters	3.7	4.7	297	182
		Houndsmen	4.3	5.5	333	219
		All Hunters	*4.1*	*5.1*	*321*	*202*
2023	Mountain BMU	Still Hunters	2.7	3.6	210	193
		Houndsmen	3.3	5.1	220	188
		All Hunters	*3.1*	*4.7*	*218*	*189*
2023	Piedmont BMU	Still Hunters	2.5	2.6	262	181
		Houndsmen	2.8	5.8	304	122
		All Hunters	*2.5*	*3.0*	*264*	*171*
2020-2022 (3-yr. average)	Coastal BMU	Still Hunters	3.9	4.3	298	179
		Houndsmen	4.4	5.1	337	213
		All Hunters	*4.2*	*4.7*	*324*	*199*
2020-2022 (3-yr. average)	Mountain BMU	Still Hunters	2.9	4.3	225	185
		Houndsmen	3.4	5.2	232	193
		All Hunters	*3.3*	*4.9*	*231*	*192*
2020-2022 (3-yr. average)	Piedmont BMU	Still Hunters	2.7	3.2	237	180
		Houndsmen	2.6	2.9	258	171
		All Hunters	*2.7*	*3.1*	*240*	*177*

Boone and Crockett Club® Scores

The Boone and Crockett Club has an official measurement and scoring system for big game and several NCWRC staff are Official Measurers. Besides weight (see page 15), many hunters view the Boone and Crockett Club's official scoring system as another measure of bear quality.

To measure and score a black bear, the length and width of the skull are recorded to the nearest sixteenth of an inch. Before measurement, all flesh, cartilage, and membrane must be removed from the skull and the skull must be air dried at habitable room temperature for at least 60 days. The minimum score for a black bear is 20 and will be listed in the 3-year Awards book and the first issue of *Fair Chase* magazine that is released after the score is accepted into the program. The All-Time minimum score is 21 and will be included in the Awards book and the All-time records book, *Records of North American Big Game.*

North Carolina has recorded 229 black bears that met the minimum scoring requirement of 20, with the majority of bears originating from the Coastal BMU (Table 13). When examined by county, 29% are black bears are from Hyde County, followed by Tyrrell (13%), Beaufort (10%), Craven (6%), and Carteret (5%). Black bears from 34 out of 100 counites of North Carolina met the minimum score for Boone and Crockett.

Table 13. Number of bears that meet the minimum score for Boone and Crockett from 1983 through 2022, North Carolina[1].

Score	Total Number of Bears	# from Mountain BMU	# from Coastal BMU	# from Piedmont BMU
20 to 20 15/16th	85	6	78	1
21 to 21 15/16th	132	3	129	0
22 to 22 15/16th	11	2	9	0
23 to 23 5/16th	1	0	0	1
Total	**229**	**11**	**207**	**2**

[1]This data is copyrighted and provided with permission from the Boone and Crockett Club's Records Department.

Second highest North Carolina scored black bear (22½).

The Coastal BMU is known for producing large bears by weight (see page 15), so it is not surprising that most black bears that meet the minimum Boone and Crockett award score also come from this same region (Table 13). However, the top score for a bear from North Carolina was a male bear harvested in Surry County in 2016 that scored 23 5/16th, followed by a male bear harvested in Haywood County in 2008 that scored 22½ (see picture on left). Habitat, food availability and nutrition, hunting pressure, and genetics all contribute to a bear's weight and skull score. However, one other reason so many Boone and Crockett bears come from the Coastal BMU is likely due to increased awareness and interest by hunters in this region to having a bear scored for Boone and Crockett. Currently, to be a top 5 bear in North Carolina, the bear must score 22 or higher (Table 14). The average age and weight of a top 5 bear by Boone and Crockett score is 10.0 years old and 612 lbs. (Table 14).

Table 14. Top five black bear scores in North Carolina.[1]

State Rank	All Time Rank	Final Score	County	Bear Management Unit	Weight	Age	Year
1	8	23 5/16	Surry	Piedmont	595	18.75	2016
2		22 1/2	Haywood	Mountain	640	7.75	2008
3	68	22 7/16	Beaufort	Coastal	560	12.75	2020
3	68	22 7/16	Beaufort	Coastal	615 (dressed)	11.75	2005
6	68	22 6/16	Lenoir	Coastal	590	13.75	2023
7	192	22 1/16	Beaufort	Coastal	649	6.75	2015
7	192	22 1/16	Bladen	Coastal	632	8.75	2008
7	192	22 1/16	Hyde	Coastal	635	8.75	2006
10	218	22	Carteret	Coastal	n/a	2.75	2010
10	218	22	Gates	Coastal	595	11.75	2006
10	218	22	Hertford	Coastal	n/a	6.75	1997

[1]This data is copyrighted and provided with permission from the Boone and Crockett Club's Records Department.

Ages of Sampled Harvested Bears

During the 2023 bear hunting seasons, the oldest bear ever recorded in North Carolina was harvested in the Coastal BMU in Bladen County (Table 15). The 27.75 year old bear was a 365 lbs. female taken by a hound hunter. The oldest bear harvested in the Mountain BMU during the 2023 season was a 23.75-year-old female taken by a hound hunter in Buncombe (Table 15). The oldest male harvested during the 2023 season was a 22.75-year-old bear taken in the Coastal BMU (Onslow County) by a hound hunter that weighed 205 lbs. (Table 15). From 1969 to 2013, 5% of the sampled harvest has been comprised of bears over 11 years old (Table 16).

Table 15. Top five bear ages, based on sampled harvest, recorded by NCWRC from 1969 through 2023.

Rank	Year	County	BMU	Type of Hunt	Sex	Age	Weight
1	2023	Bladen	Coastal	Dogs	F	27.75	365
2	2003	McDowell	Mountain	Still/Stand	F	26.75	200
3	2011	Beaufort	Coastal	Still/Stand	F	24.75	180
3	2023	Currituck	Coastal	Dogs	F	24.75	288
3	2020	Bertie	Coastal	Still/Stand	F	24.75	350
4	2005	McDowell	Mountain	Dogs	F	23.75	100
4	2013	Chowan	Coastal	Dogs	F	23.75	150
4	2005	Pamlico	Coastal	Still/Stand	F	23.75	275
4	2003	Haywood	Mountain	Dogs	F	23.75	Not Reported
4	1998	Madison	Mountain	Dogs	F	23.75	Not Reported
4	2009	Chowan	Coastal	Dogs	F	23.75	Not Reported
4	2023	Buncombe	Mountain	Dogs	F	23.75	Not Reported
4	2005	Bertie	Coastal	Still/Stand	M	23.75	460
4	2013	Hyde	Coastal	Still/Stand	M	23.75	545
5	2009	Macon	Mountain	Dogs	F	22.75	140
5	2015	Bladen	Coastal	Dogs	F	22.75	250
5	2000	Graham	Mountain	Dogs	F	22.75	Not Reported
5	2018	Haywood	Mountain	Still/Stand	F	22.75	Not Reported
5	2023	Onslow	Coastal	Dogs	M	22.75	205
5	2022	Beaufort	Coastal	Dogs	M	22.75	600
5	1969	Graham	Mountain	Dogs	M	22.75	Not Reported

Table 16. Number of harvested bears sampled that were older and younger than 11 years old, 1969 through 2023, North Carolina.

Age (yrs.)	Number of Bears	Mountain BMU	Coastal BMU	Piedmont BMU
11.75	635	172	461	2
12.75	513	114	398	1
13.75	334	78	255	1
14.75	247	71	176	0
15.75	171	36	135	0
16.75	105	29	76	0
17.75	68	21	47	0
18.75	45	9	36	0
19.75	29	8	21	0
20.75	27	5	22	0
21.75	9	1	8	0
22.75	7	4	3	0
23.75	9	4	5	0
24.75	3	0	3	0
25.75	0	0	0	0
26.75	2	1	0	0
27.75	1	0	1	0
Total >11 years old	2,204	553	1,647	4
Total <11 years old	41,571	17,114	24,135	322

During 2023, male bears in the Coastal BMU were 1.0 year older and 1.6 years older than male bears harvested from the Mountain BMU and Piedmont BMU, respectively (Table 12 on page 21; Figure 8). Male bears from the Coastal BMU are typically older than male bears in the other two BMUs. From 2018 through 2022, female bears in the Mountain BMU were older than in the Coastal BMU (Figure 9). However, during 2023, female bears in the Coastal BMU were 0.4 years older than female bears in the Mountain BMU. With the exception of one year, female bears in the Coastal and Mountain BMU are typically older than female bears in the Piedmont BMU (Table 12 on page 21; Figure 9).

During the 2023 season, a majority of harvested male and female bears sampled in the Coastal BMU were yearlings (Table 17; Figure 10), followed by the 3-5 years old age class. In the Mountain BMU, a majority of the female bears harvested were 3-5 years old, followed by yearlings, whereas a majority of males harvested were yearlings, followed by subadults (Table 17; Figure 10). During 2023 in the Piedmont BMU, a majority of the male and female harvest were of yearling bears, followed by subadults (Table 17; Figure 10).
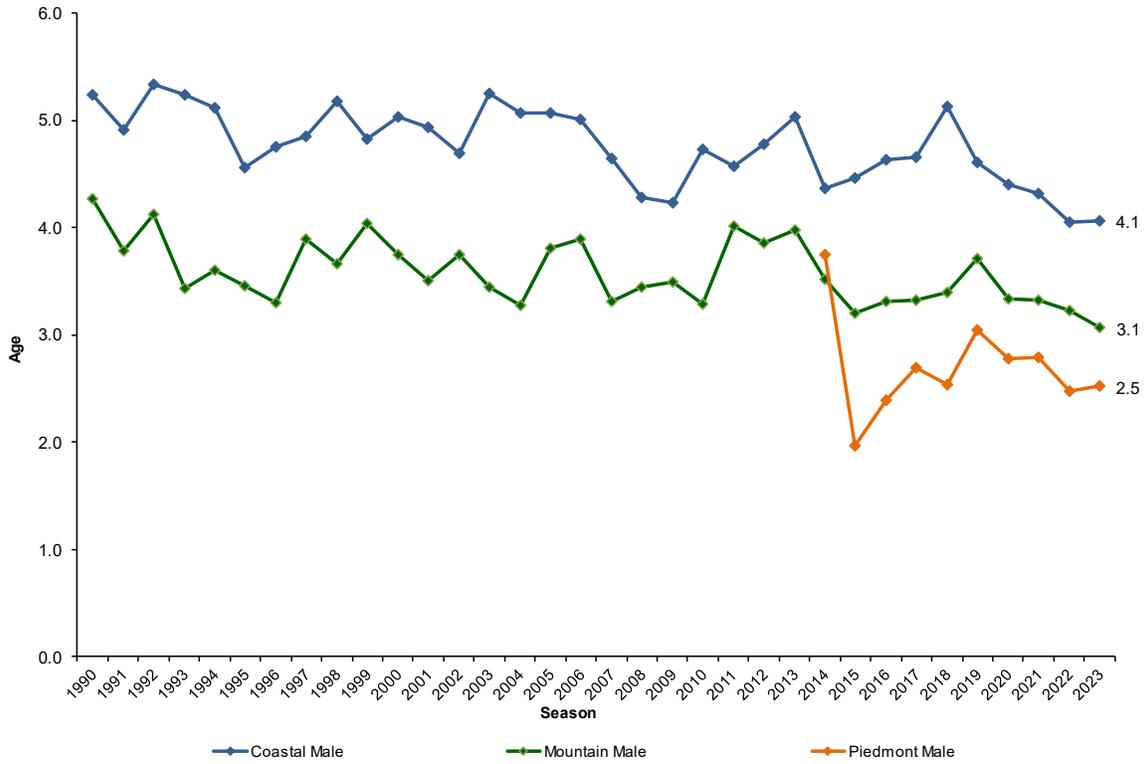
Figure 8. Average age of harvested male bears sampled by bear management unit from 1990 through 2023.
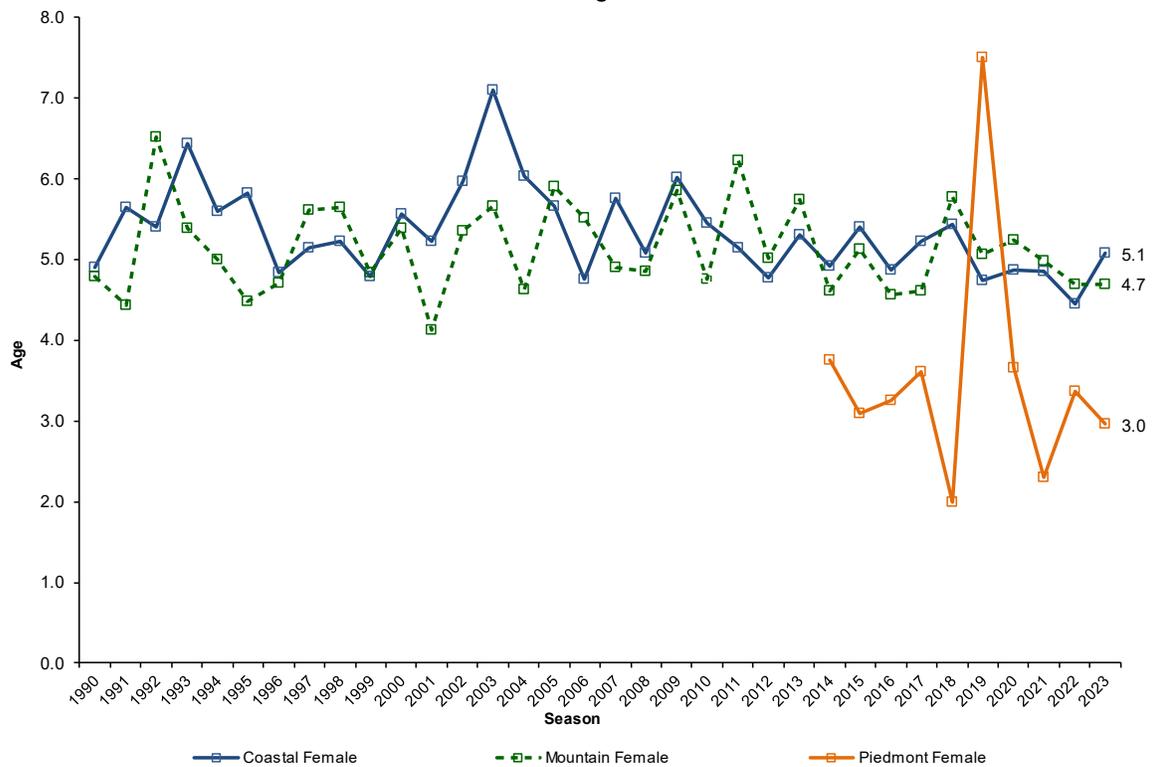
Figure 9. Average age of harvested female bears sampled by bear management unit from 1990 through 2023.

Table 17. Percent of bears sampled by age class and BMU during the 2023 season compared to the 3-year average (2020 through 2022 seasons).

BMU	Sex	Age	2023 Percent of the Harvest	3-year average (2020 to 2022)
Coastal	F	Cub	4%	4%
		Yearling	29%	29%
		Subadult	17%	16%
		3-5 yrs. old	19%	22%
		6-10 yrs. old	23%	21%
		11-15 yrs. old	7%	6%
		>15 yrs.old	2%	1%
Coastal	M	Cub	6%	6%
		Yearling	33%	32%
		Subadult	19%	19%
		3-5 yrs. old	22%	22%
		6-10 yrs. old	16%	15%
		11-15 yrs. old	3%	4%
		>15 yrs.old	1%	1%
Mountain	F	Cub	2%	1%
		Yearling	22%	24%
		Subadult	19%	19%
		3-5 yrs. old	31%	29%
		6-10 yrs. old	20%	21%
		11-15 yrs. old	5%	5%
		>15 yrs.old	1%	1%
Mountain	M	Cub	1%	2%
		Yearling	42%	39%
		Subadult	28%	29%
		3-5 yrs. old	21%	22%
		6-10 yrs. old	7%	7%
		11-15 yrs. old	0.7%	1%
		>15 yrs.old	0.1%	0%
Piedmont	F	Cub	14%	10%
		Yearling	50%	58%
		Subadult	14%	12%
		3-5 yrs. old	11%	12%
		6-10 yrs. old	4%	4%
		11-15 yrs. old	7%	6%
		>15 yrs.old	0.0%	0.0%
Piedmont	M	Cub	0.0%	5%
		Yearling	48%	46%
		Subadult	33%	29%
		3-5 yrs. old	20%	17%
		6-10 yrs. old	0.0%	3%
		11-15 yrs. old	0.0%	0.0%
		>15 yrs.old	0.0%	0.0%
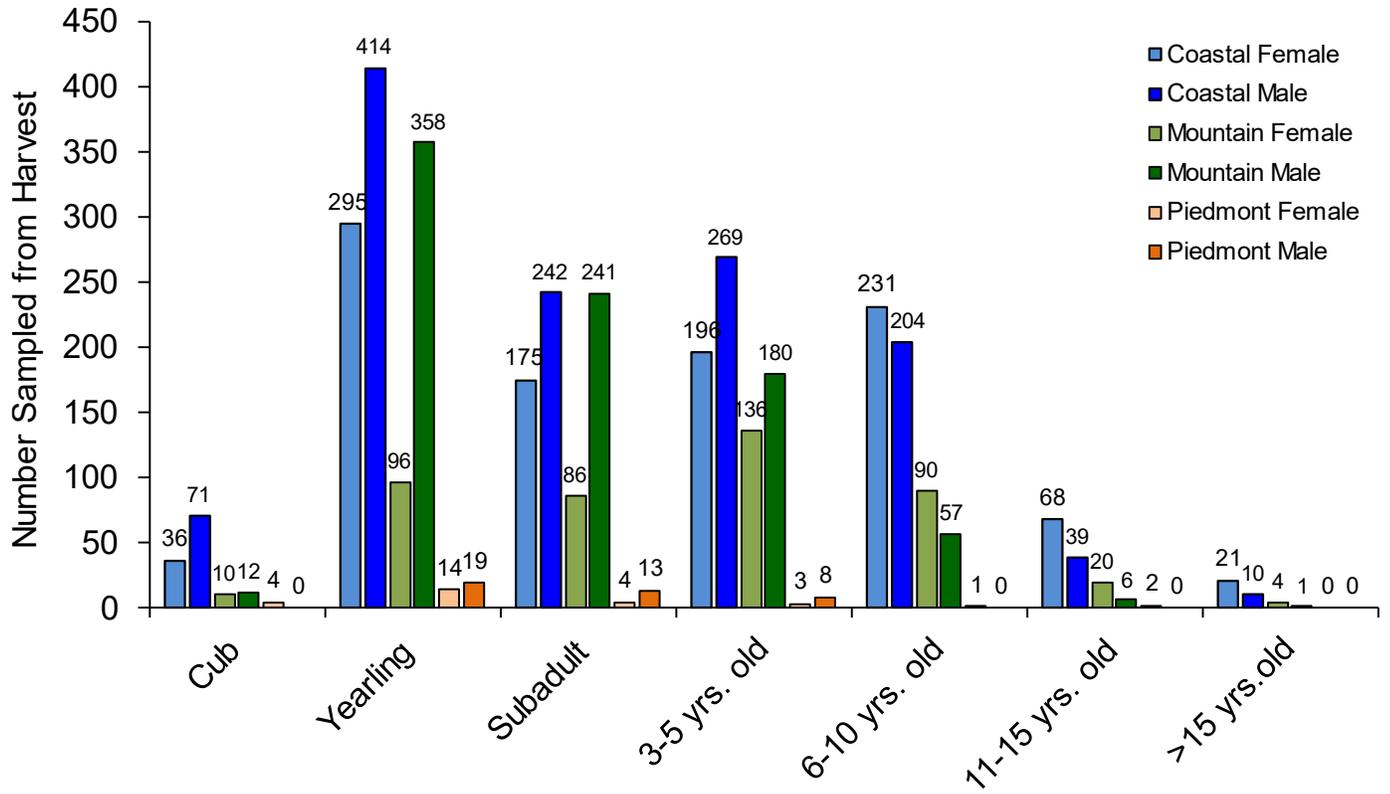
Figure 10. Number of bears sampled by age class and BMU during the 2023 season.

Bear e-stamp Holder Survey

On July 1, 2014, the bear e-stamp became a requirement for both residents and non-residents who hunted bears during the regulated bear hunting season in North Carolina. The bear e-stamp allows the NCWRC to identify potential bear hunters. In January 2015, the NCWRC initiated a survey of all holders of the bear e-stamp from the 2014 bear hunting season. This survey is conducted annually in order to monitor changes in the number of active bear hunters and bear hunter success rates. In addition, biological staff can gain information on specific harvest statistics (e.g., hunter effort and success by method). This data will aid in evaluating future regulatory proposals, as well as help biological staff demonstrate cause-effect relationships of several factors that influence harvest levels, such as regulatory and statutory changes, number of bear hunters, changes in hunting methods, and changes in bear population levels.

During the 2023 bear hunting season, 83,976 hunters had a valid bear e-stamp (Figure 11), of which 42% (n=43,327) received due to exemptions (e.g., lifetime license holder prior to July 1, 2014). The number of bear e-stamps issued peaked in 2020 and has declined since that year. We sent the survey to 83,951 bear e-stamp holders with valid addresses and received 27,673 responses (34% response rate; Table 18). Although the number of bear e-stamps issued has declined since 2020, the estimated number of active bear hunters has increased; during 2023, there were an estimated 13,443 active bear hunters. Success rate in harvesting a bear was estimated at 11% (Table 18). While houndsmen comprise a majority of the reported bear harvest (59%; Table 5 on page 13), still/stand hunting was the more common method for hunting (74%; Table 19).

Table 18. Results of bear e-stamp holder survey for the 2014-15 through 2023-24 survey years.

Survey Year	# Bear E-stamp holders	# non-exempt Bear E-stamp holders	# of Survey Respondents	Response Rate	# Identifying as Bear Hunters[1]	% Hunted Specifically for Bear	Estimated # Active Bear Hunters[2]	% Respondents Harvested Bear
2014-15	70,391	24,205 (34%)	31,292	44%	N/A	15%	10,758	7.1%
2015-16	79,743	28,185 (36%)	28,273	36%	N/A	14%	11,434	6.8%
2016-17	79,718	29,379 (37%)	31,292	39%	21,129	14%	10,855	5.6%
2017-18	83,151	31,608 (38%)	29,489	36%	22,513	15%	12,302	6.8%
2018-19	84,662	33,396 (39%)	30,155	37%	22,050	14%	12,088	6.1%
2019-20	85,012	33,024 (39%)	28,326	35%	22,059	14%	11,866	5.8%
2020-21	88,411	35,807 (41%)	28,162	31%	24,766	15%	13,342	7.6%
2021-22	88,302	38,373 (44%)	13,337	16%	33,522	15%	13,430	9.1%
2022-23	87,834	39,037 (44%)	Survey was not conducted for the 2022-23 bear hunting season.					
2023-24	83,976	40,649 (48%)	27,673	34%	33,173	16%	13,443	11.3%

[1]Based on survey question that asked bear e-stamp holder if they identify as a bear hunter.
[2]Estimated based on survey question that asked if bear e-stamp holder hunted specifically for bear during applicable season.
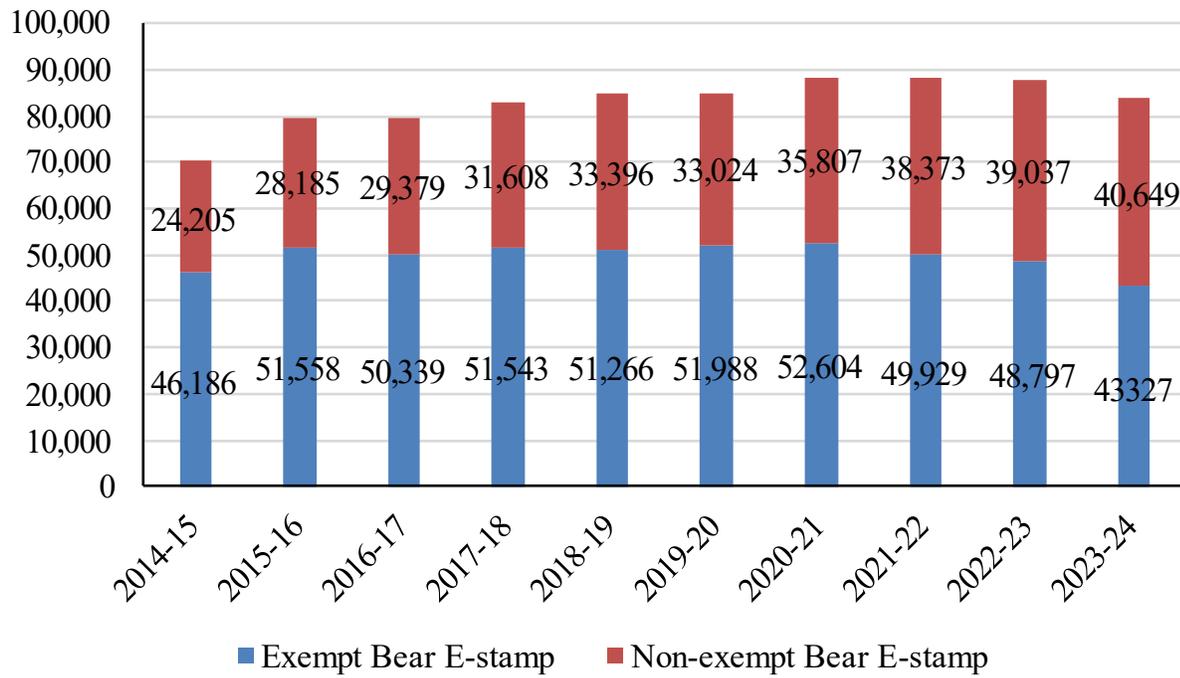
Figure 11. Number of Bear E-stamps issued from 2014-15 season through 2023-24 season.

Table 19. Method of hunting by bear management unit during the 2023 bear hunting season.

Region	Method	% of Method[1]
Statewide	Dog	26%
	Still / Stand	74%
Coastal BMU	Dog	31%
	Still / Stand	69%
Mountain BMU	Dog	31%
	Still / Stand	69%
Piedmont BMU	Dog	7%
	Still / Stand	93%

[1]Includes hunters who used both methods and/or hunted in greater than one bear management unit.

Population Growth Rates

Our bear population growth rates are based on population reconstruction which relies on biological data collected from harvested bears (see page 103). This method of population analysis reconstructs the age structure of the bear population three years prior to when the biological data is collected. For example, biological data collected during the 2023 harvest season reconstructs the size of the bear population in 2020.

Therefore, impacts of harvest on the bear population growth trends are not known until three years after any regulatory change has occurred. Because of this lag time, caution should be taken in setting specific harvest levels for bears until a more robust population model can be identified and developed. In addition, population reconstruction is sensitive to changes in harvest levels, so population trends may follow harvest trends. The Commission's Black Bear Management Plan identified this need under Objective 2, Strategy 4 and Objective 3, Strategies 4 and 5. To meet these objectives, the Commission will partner with NC State University and Mississippi State University to not only estimate the Coastal BMU bear population, but to incorporate the data from this study, as well as data from other surveys (i.e., Bear E-stamp survey), into our population reconstruction estimates.

Population reconstruction relies on the assumption that the sampled harvest reflects the actual harvest (e.g., % younger bears in the harvest equals % younger bears in sampled harvest). Prior to mandatory bear tooth submission, anecdotal evidence indicated the sampled harvest was biased towards older bears, because hunters are less interested in receiving age results from younger bears (e.g., yearlings, subadults). Implementing mandatory bear tooth submission can overcome this bias in sampling, providing more accurate growth rates and population estimates at the bear management unit level and Coastal BMU zone level. However, to overcome potential biases, tooth submission rates should be above 80%. Lastly, population reconstruction is mainly meant as a tool to monitor bear population trends (i.e., growth rates, λ) over time, rather than to come up with precise population estimates.

Population growth rates in the Coastal BMU and the Mountain BMU show a declining trend (Figures 12 and 13). The population objectives of the Mountain BMU and the Coastal BMU, based on the 2012-2022 Black Bear Management Plan, were to lower the rate of population growth in order to stabilize bear populations and keep them within cultural carrying capacity.

The Commission is meeting this objective in the Coastal BMU (Figure 12) due to the changes on bear season structures (e.g., lengthening seasons) and hunting methods (i.e., legalization of use of unprocessed bait) that have occurred since 2007 (Table 25 on page 57). As of 2020, the Coastal BMU growth trend is reaching 0-1% population growth, and that growth trend is resulting in the bear population starting to plateau. Population growth in the Mountain BMU is also declining, but more slowly than that of the Coastal BMU (Figure 13). As of 2020, population growth had declined to 3-4%. It is estimated that, as of 2020, the statewide bear population was 17,200 to 19,200 bears.
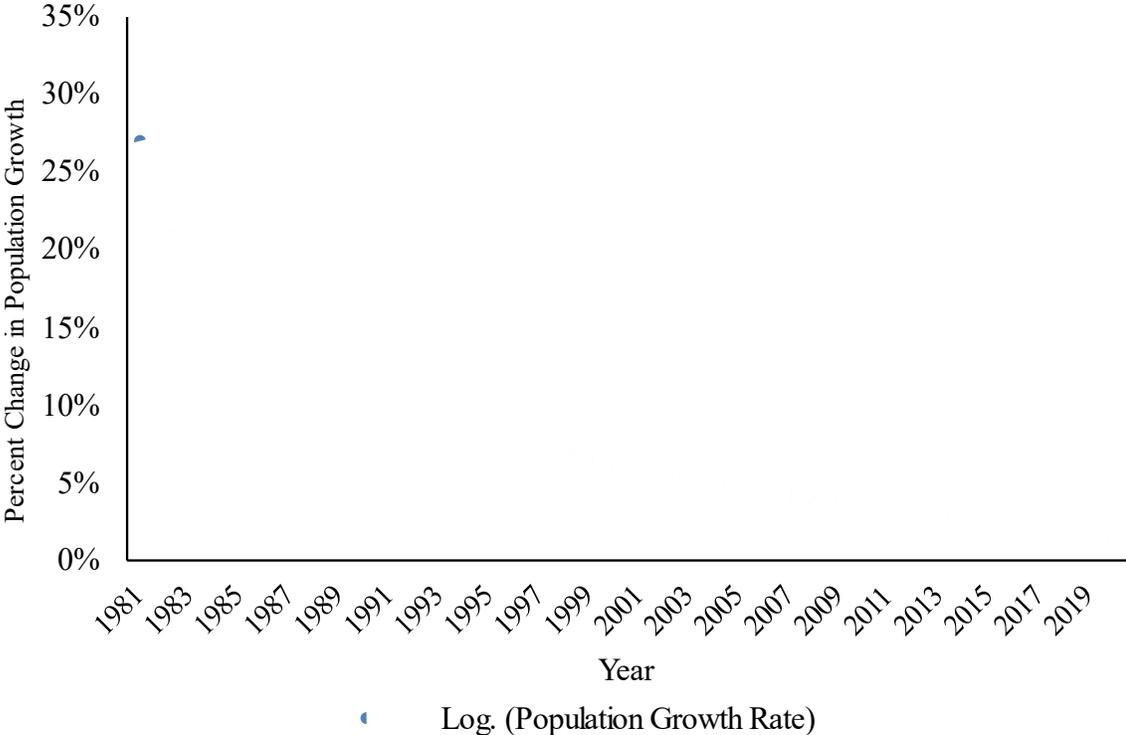
Figure 12. Population growth rates of the Coastal BMU bear population (1981-2020)
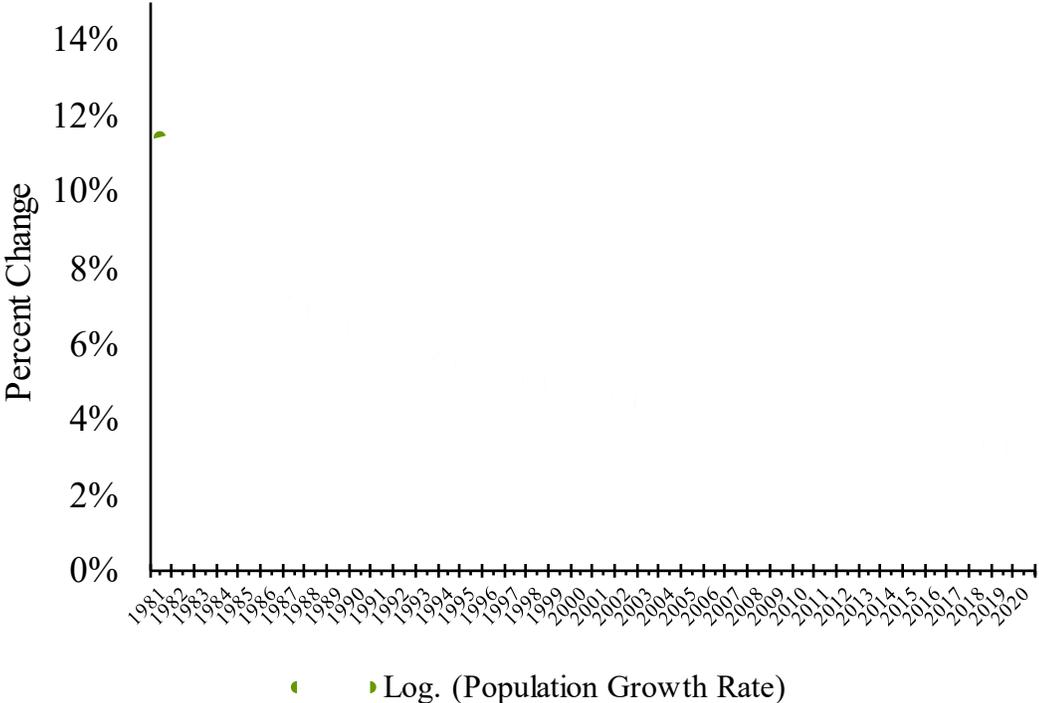
Figure 13. Population growth rates of the Mountain BMU bear population (1981-2020).

Non-Harvest Mortality

Human-induced mortality is the greatest source of black bear mortality in North Carolina (Figure 14). Regulated hunting (92%) remains the primary cause of mortality in black bears, with vehicle collisions (7%) being the second leading cause of mortality.
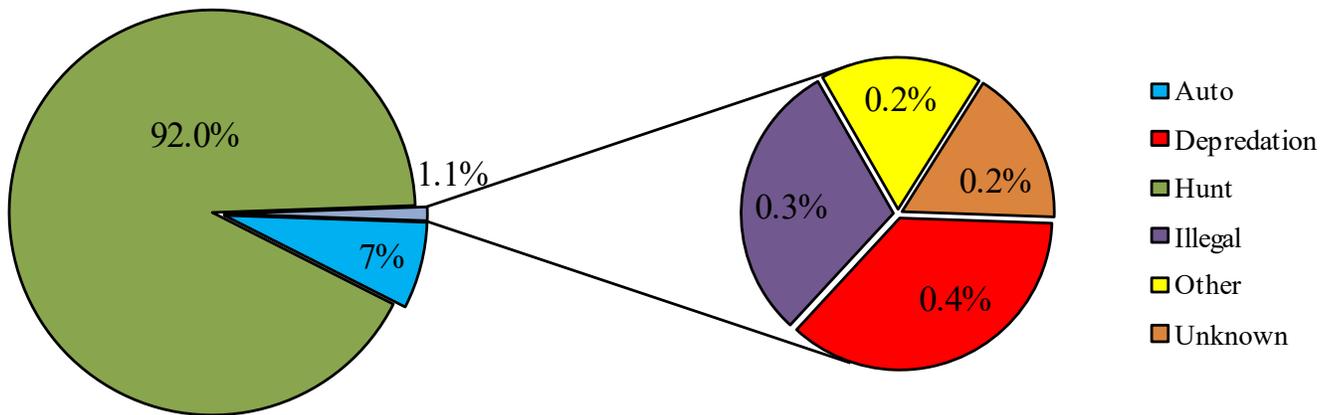

Figure 14. Causes of mortality among bears sampled by NCWRC from 1969 through 2023.

During 2023, there were 226 recorded non-harvest mortalities in North Carolina (Table 20); 81% of these non-harvest mortalities were from vehicle collisions (n=183), followed by depredation (n=28), unknown causes (n=10), other mortalities (n=3), and illegal mortalities (n=1). Depredation mortalities decreased 2% in 2023 (Figure 15), with an 82% decline in the Coastal BMU (n=3 depredations) and a 33% increase in the Mountain BMU (n=24 depredations; Figures 16). Illegal mortalities decreased 83% from the prior year (n=5; Figure 17).

Vehicle-caused mortalities decreased 22% from 2020 (n=183; Figure 18). Vehicle-caused mortalities decreased 12 and 32% in the Coastal and Mountain BMUs but increased 50% in the Piedmont BMU (Figure 19). Fifty percent of vehicle-caused mortalities occurred in the Mountain BMU during 2023, followed by 45% occurring in the Coastal BMU (Figure 19), likely reflecting the high number of collisions that occur in Buncombe County (Figure 20). In 2023, Buncombe (n=23), Currituck (n=17), and Haywood (n=14) counties reported the highest number of vehicle mortalities (Figure 20). For the past few years, Buncombe County (n=486) leads counties statewide for vehicle-caused mortalities, followed by Currituck County (n=385; Figure 20).

A majority of vehicle-caused mortalities occur in October, followed by November and June (Figures 22). The increase in the number of vehicle-bear collisions that occur in June is primarily due to increased movements by younger bears; when the female's offspring are just over a year old, they will separate from their mother sometime after den emergence (late April through mid-June) and disperse until they establish a home range. The increases in vehicle-bear collisions that occur in October and November is due to increased travel by both male and female bears in search of foods (Figures 22 and 23). During fall, black bears must consume mass amounts of food to prepare their body for winter, when they must rely on their body fat for nutrition, maintenance, production of cubs and lactation. The need to find foods in fall in order to have adequate body fat for the lactation and the production of cubs is likely the main reason the majority

of vehicle-caused mortality of females is in October, followed by November and December (Figure 23). About half of vehicle-caused mortality of females is of adults, while the other half is of subadults (Figure 24). Most cubs that are killed by a vehicle are due to the female also being struck and injured or killed by a vehicle. Most vehicle-caused mortality in male bears occurs in May and June, during breeding season (Figure 23). Male yearlings and subadults tend to travel further from their natal home range than females, thus they comprise the majority of male vehicle-caused mortalities (Figure 25).

Table 20. Non-harvest mortalities by district during 2023.

District	Vehicle	Depredation	Illegal	Other	Unknown	Total
1	57	3	1	0	0	61
2	12	0	0	0	0	12
3	8	0	0	0	0	8
4	7	0	0	0	0	7
5	6	0	0	0	1	7
6	0	0	0	0	0	0
7	9	2	0	0	1	12
8	20	4	0	1	0	25
9	64	19	0	3	8	94
Total	**183**	**28**	**1**	**4**	**10**	**226**
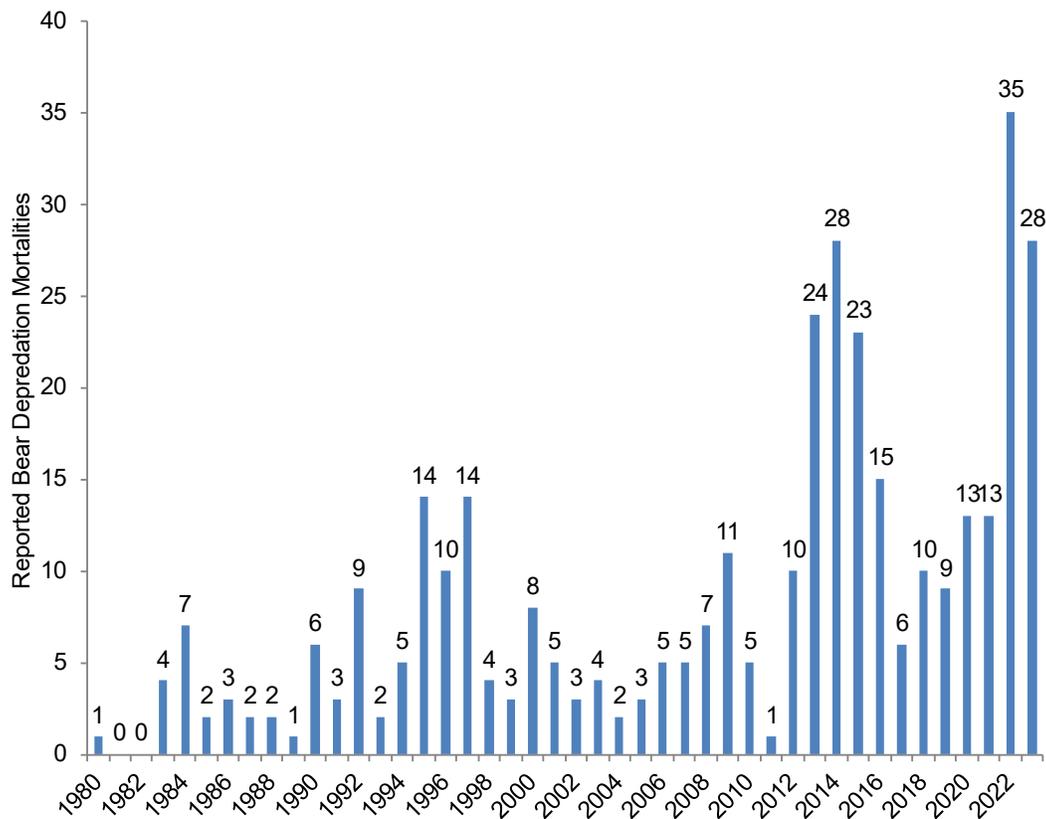
Figure 15. Number of reported bear mortalities caused by depredation from 1980 through 2023 in North Carolina.
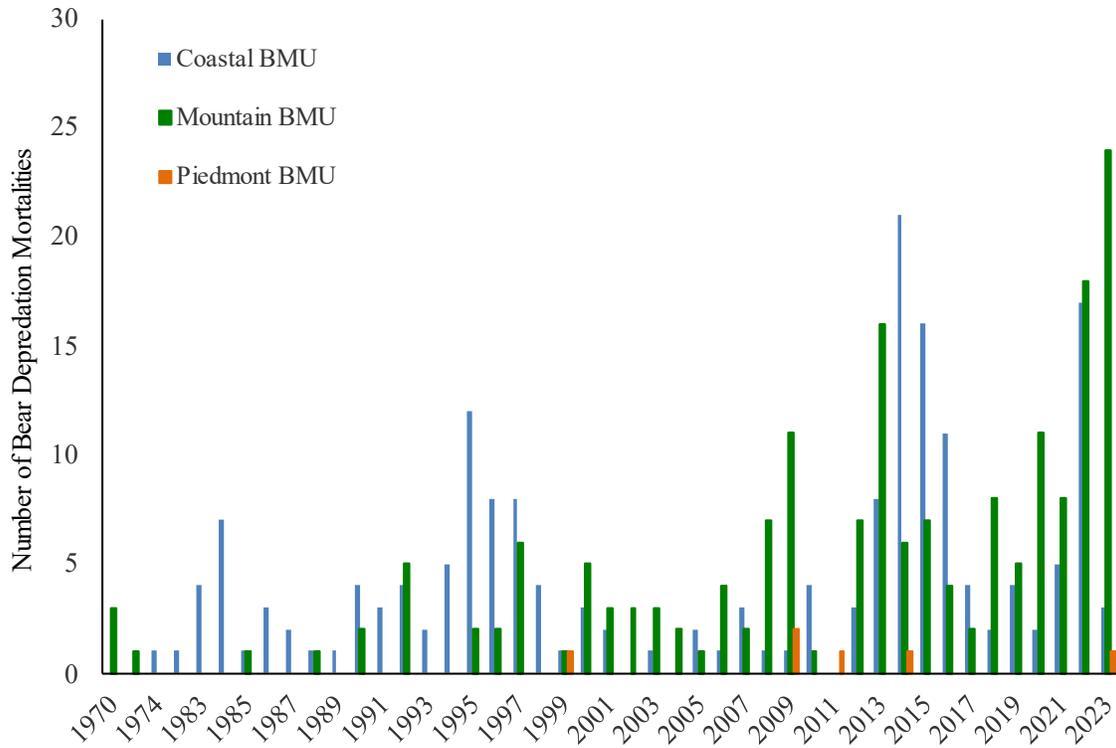
Figure 16. Number of reported bear mortalities caused by depredation from 1980 through 2023 in North Carolina by bear management unit.
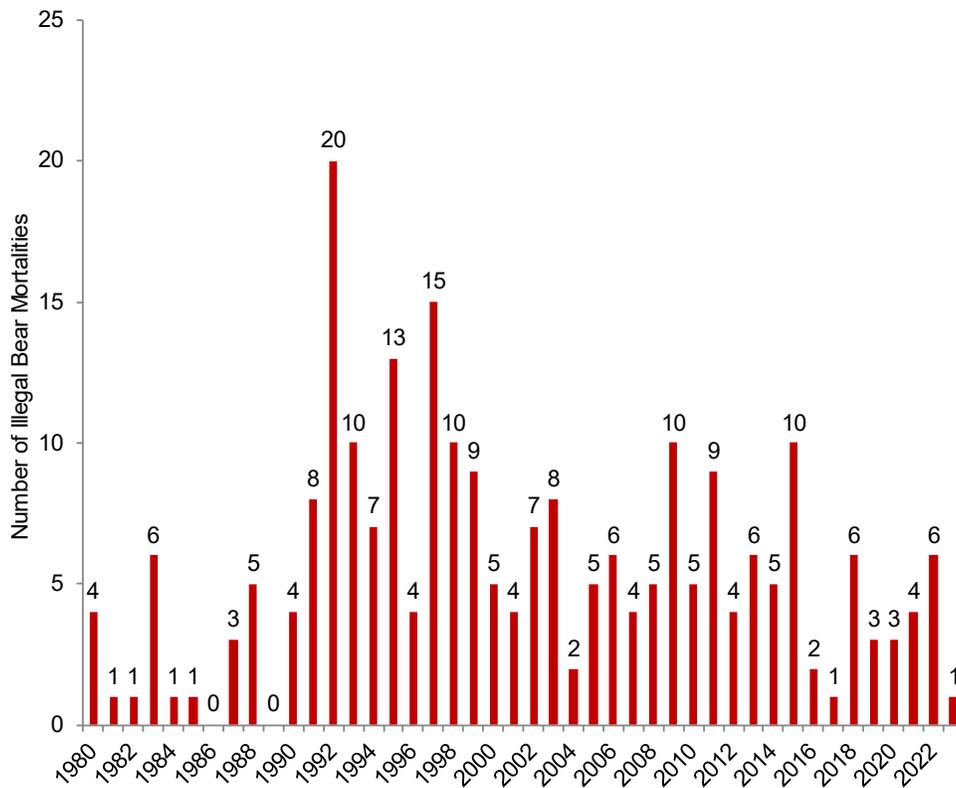
Figure 17. Number of illegal bear mortalities in North Carolina from 1980 through 2023.
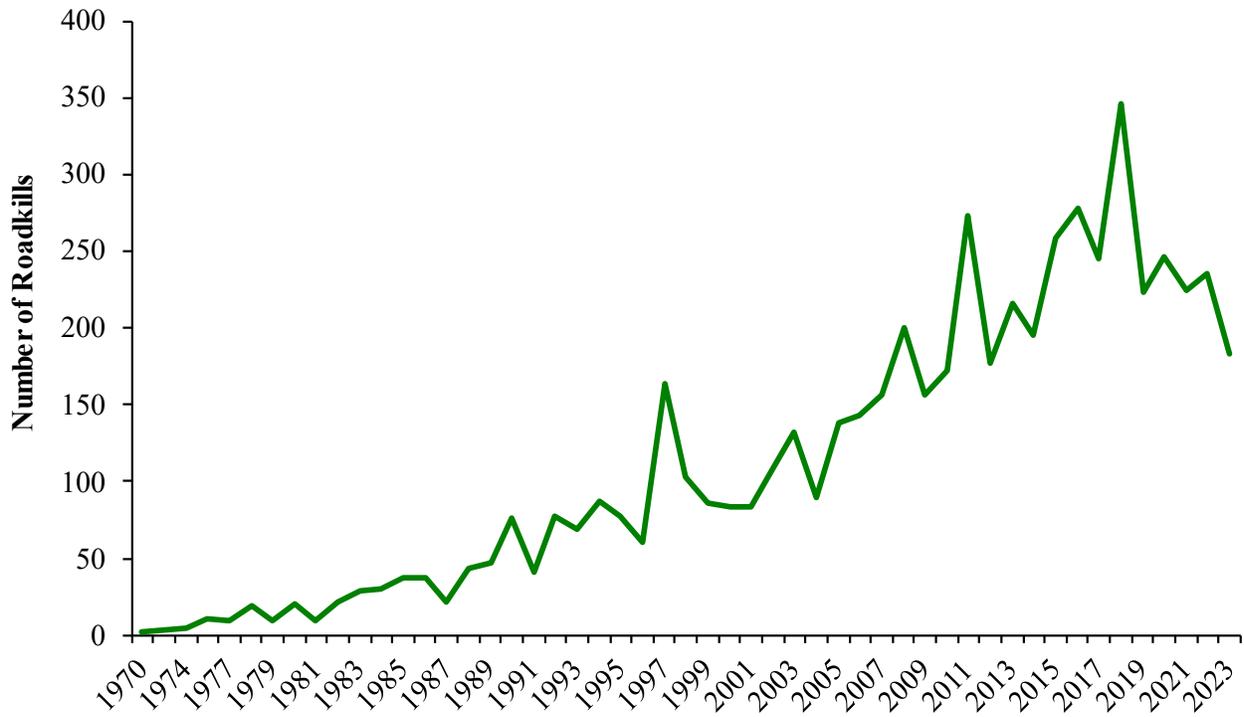
Figure 18. Total number of vehicle-caused black bear mortalities in North Carolina from 1970 through 2023.
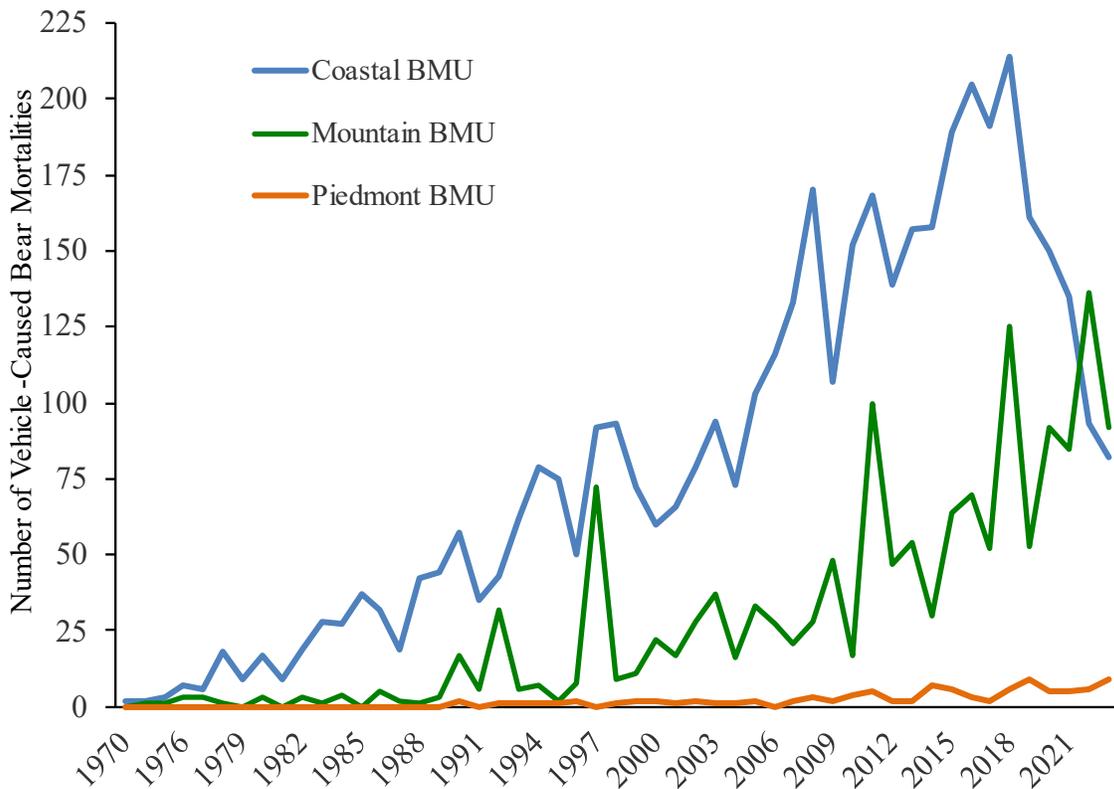

Figure 19. Total number of vehicle-caused black bear mortalities in North Carolina from 1970 through 2023 by bear management unit.

Reported Vehicle-Bear Mortalities

- 0
- 1-2
- 3-5
- 6-9
- 10-17
- 18-23
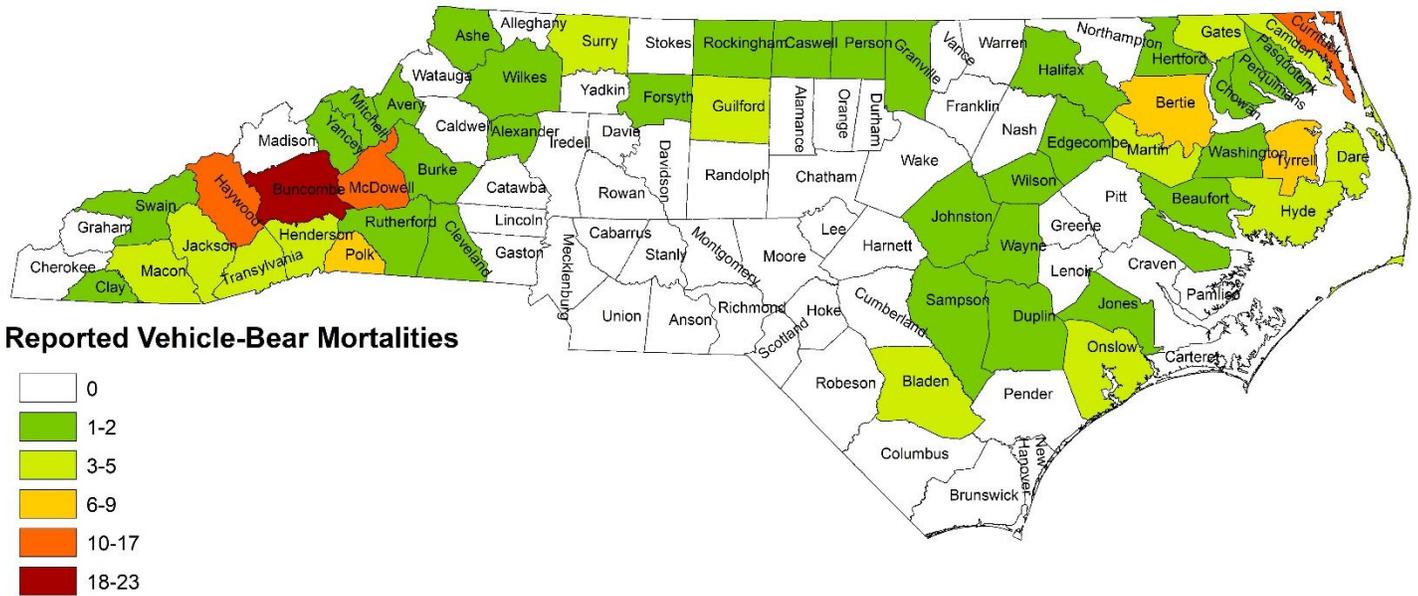
Figure 20. Number of vehicle-caused bear mortalities in North Carolina in 2023.

Reported Vehicle-Bear Mortalities
3 year average

- 0
- 1-2
- 3-5
- 6-9
- 10-17
- 18-23
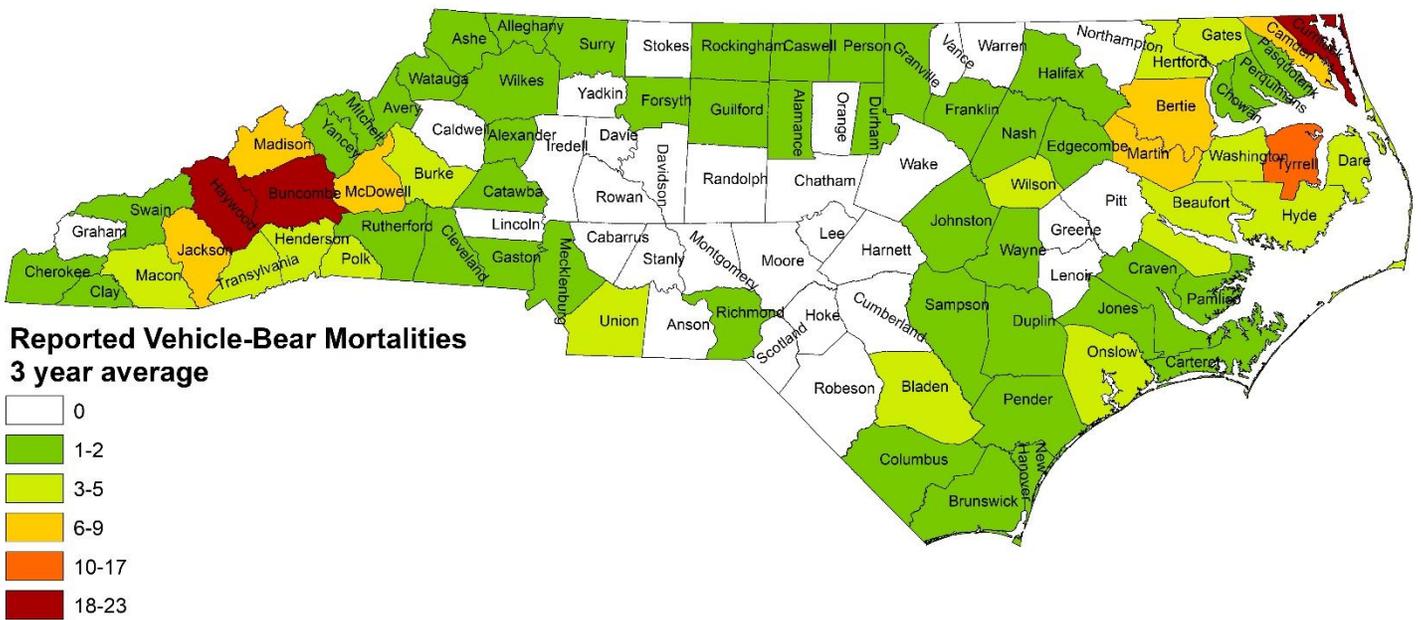
Figure 21. Number of vehicle-caused bear mortalities from 2021 through 2023.
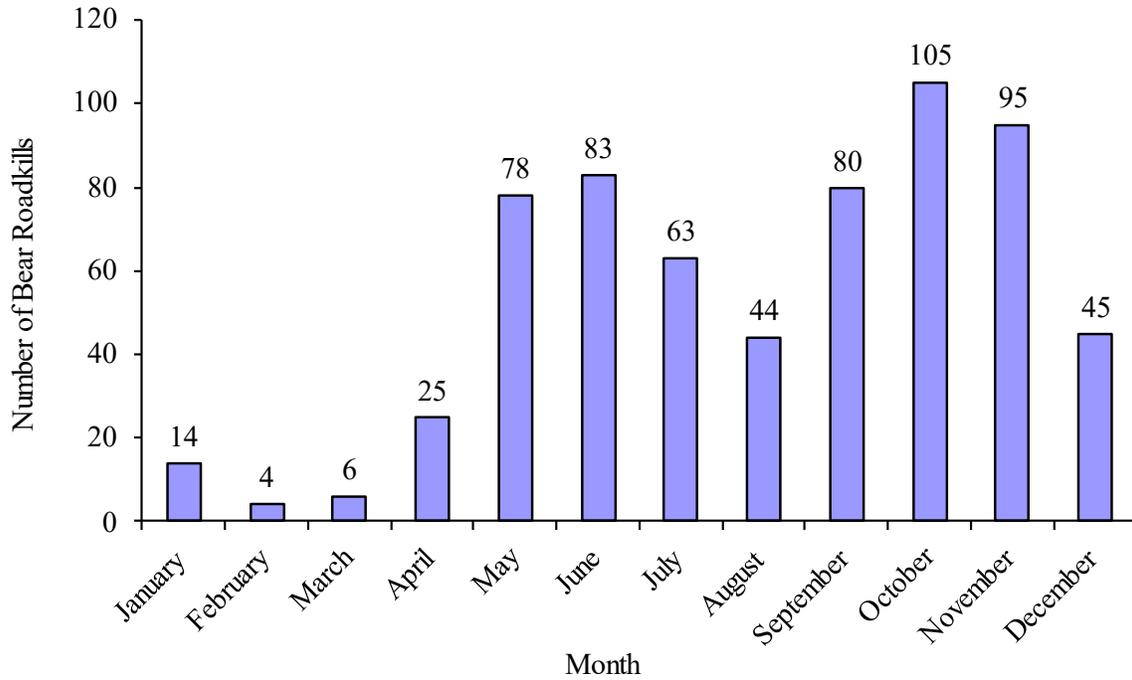
Figure 22. Number of vehicle-caused mortalities by month in North Carolina, 2021 through 2023.
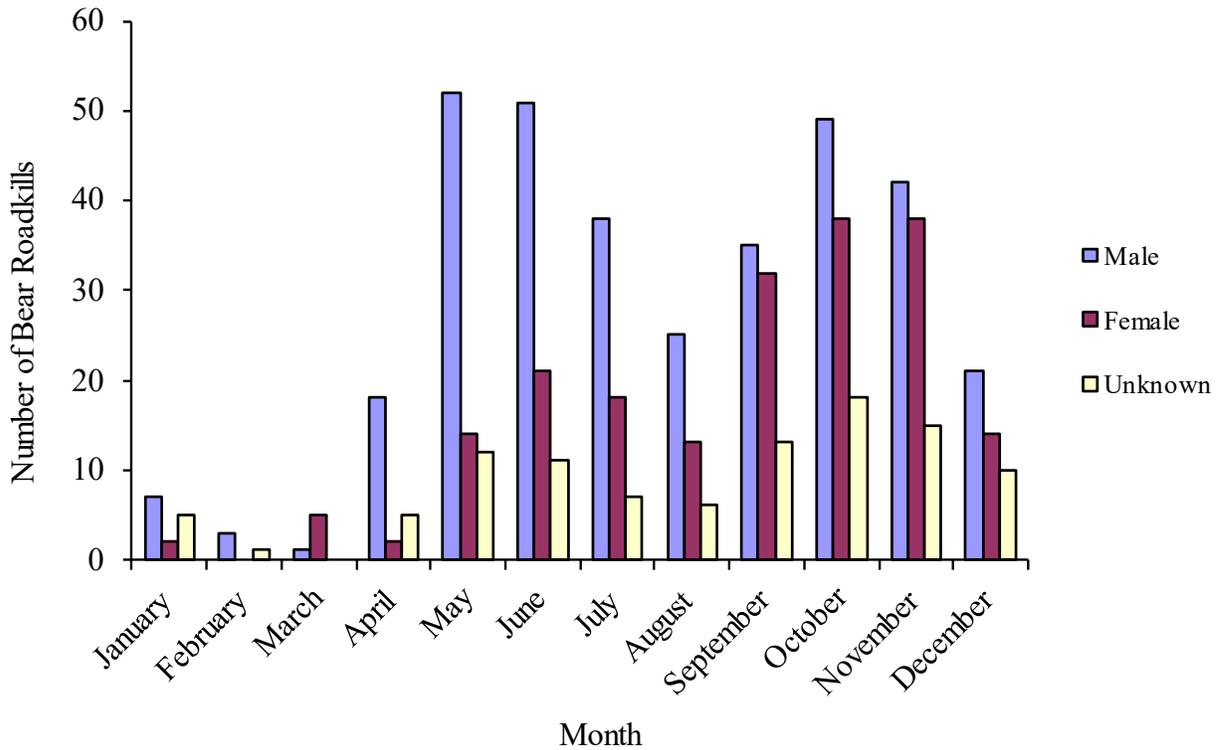
Figure 23. Number of vehicle-caused mortalities by month and by sex in North Carolina, 2021 through 2023.
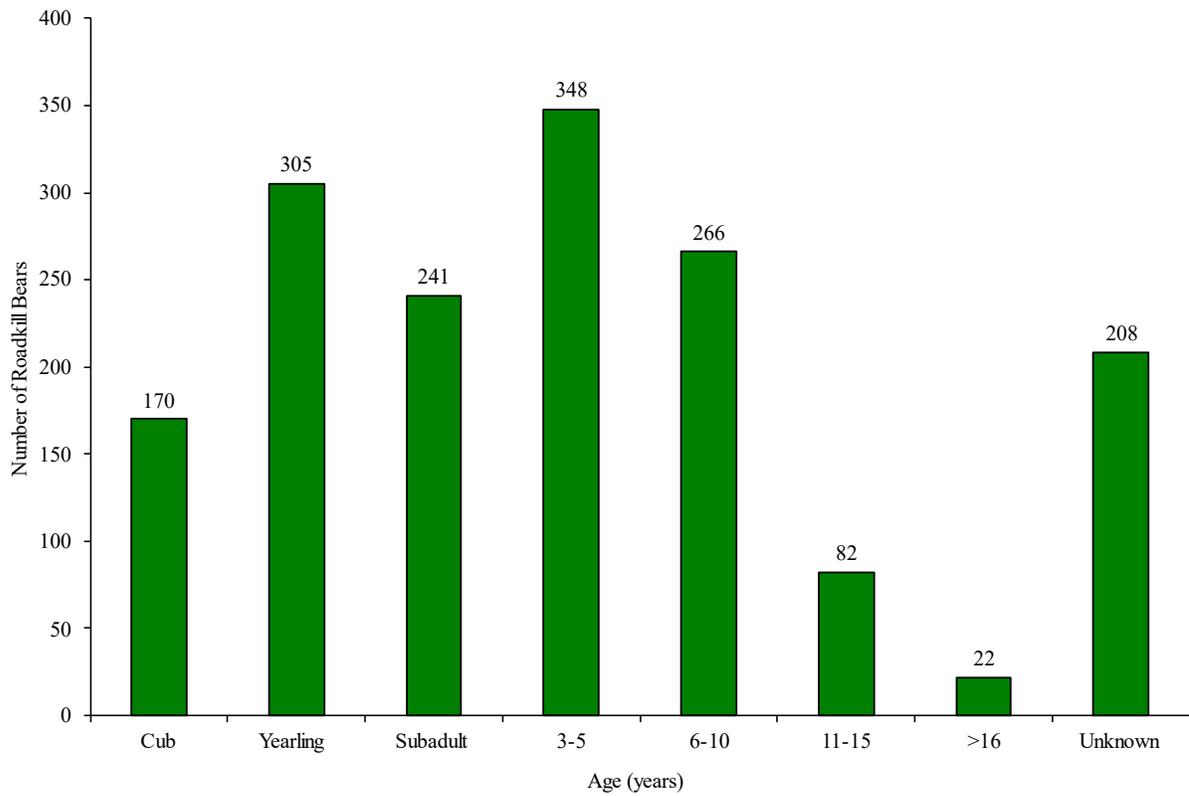
Figure 24. Number of vehicle-caused mortalities of female bears by age category in North Carolina, 1970-2023.
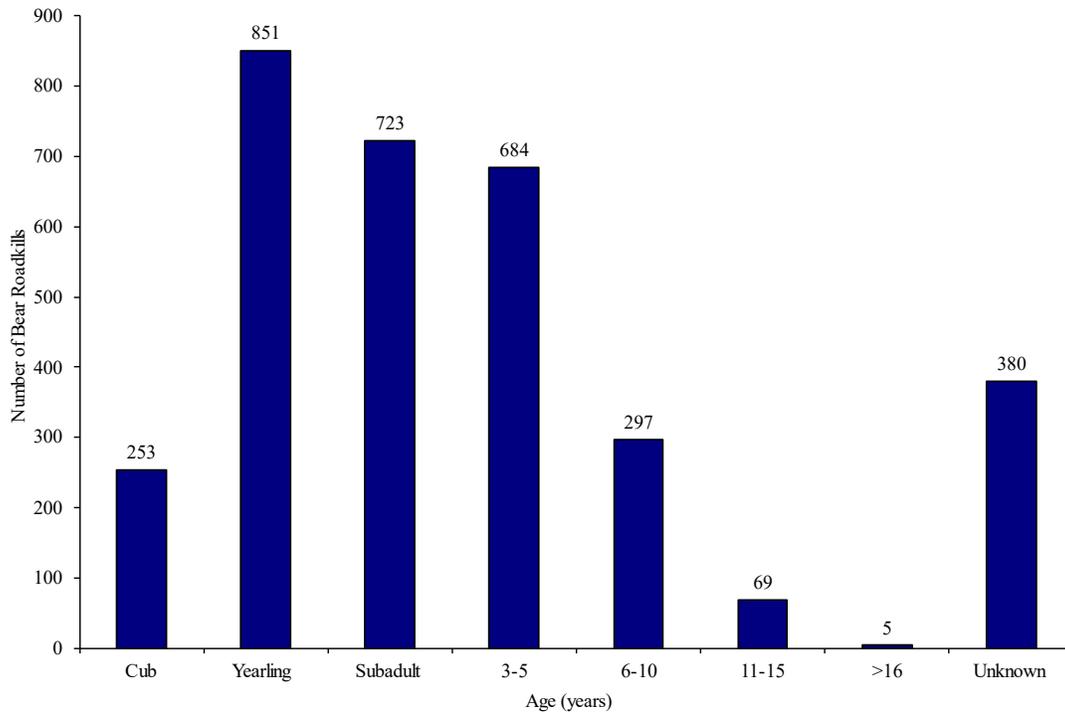
Figure 25. Number of vehicle-caused mortalities of male bears by age category in North Carolina, 1970-2023.

Human-Bear Interactions

Since 1992, WRC biological staff have recorded human-bear interaction reports (Figure 26). A human-bear interaction includes both bear observations and conflicts with bears. This information aided in tracking bear population trends for several decades and now helps the Commission predict when most interactions may occur (Figures 30 through 32; identify areas of high interactions Figure 29) and identify common sources of conflict so that we can properly address human-bear interactions and provide effective technical guidance, such as the BearWise® Basics (bearwise.org) to resolve conflicts.

In 2023, observations and complaints about black bears increased 13%, from 2,109 in 2022 to 2,391 in 2023 (Figure 26). As in past years, the Mountain BMU had the highest number of human-bear interactions (n=1,595; 66% of statewide phone calls; Figure 27), particularly District 9, which comprised 53% of all interactions (n=1,253; Table 21). The Mountain BMU and the Piedmont BMU experienced a 12% and 54% increase in human-bear interactions, respectively, while the Coastal BMU experienced a 5% decline (Figure 27).
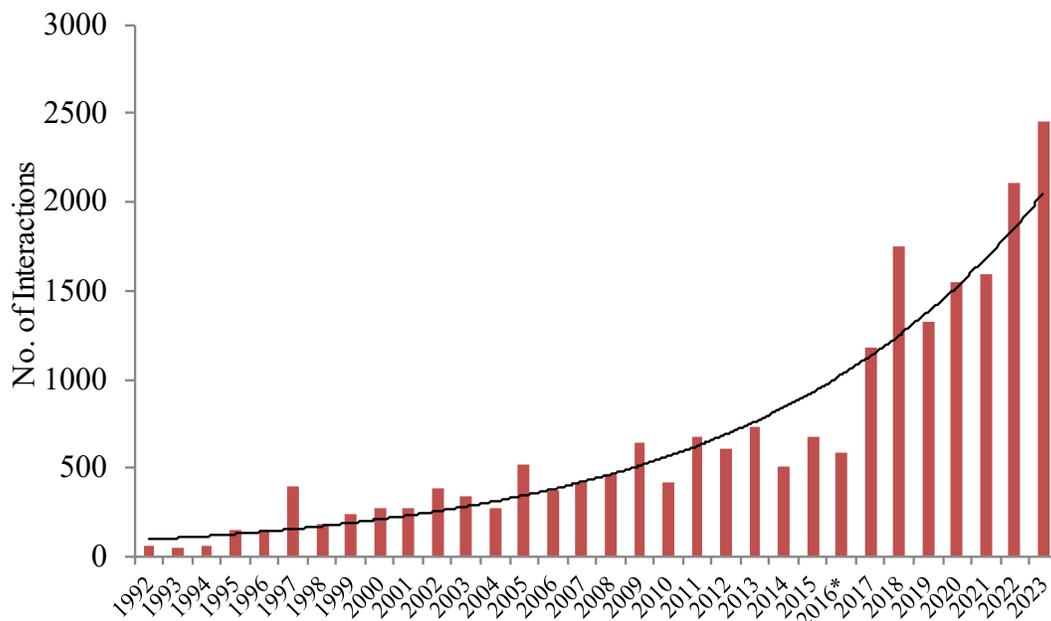

Figure 26. Number of human-bear interactions by year in North Carolina, 1993 through 2023.
*Statewide wildlife helpline created.

The high number of human-bear interactions in District 9 is largely driven by the high human population in Buncombe County, coupled with high bear densities in this area, due to limited hunter access, topography and habitat that aids in bear dispersal, and the high amount of artificial food resources in and around Asheville (e.g., bird feeders, garbage, purposeful feeding). Buncombe (n=821) and Henderson (n=81) counties reported the highest number of human-bear interactions, followed by Polk County (n=73; Figure 29).

Out of 100 counties, Buncombe County reported 35% of all human-bear interactions during 2023, which is why the Commission has focused efforts to promote living responsibly with bears via BearWise and BearWise Recognized Communities in this county. A BearWise-Recognized community is defined as a neighborhood, town, business, campground, park, college, or other type of land-based organization.

BearWise communities commit to co-existing responsibly with bears, securing all potential food sources, and knowing when and how to report bear activity. Over the past 4 years, the Commission has worked with community partners to create recognized BearWise Communities. The number of recognized BearWise communities continues to grow in North Carolina and we currently have 15 recognized BearWise communities, comprised of 7 neighborhoods/towns, 4 businesses, 3 outdoor camps, and 1 recreation area. Lean more about how to become a recognized BearWise community or business at the Wildlife Commission website and BearWise.org.
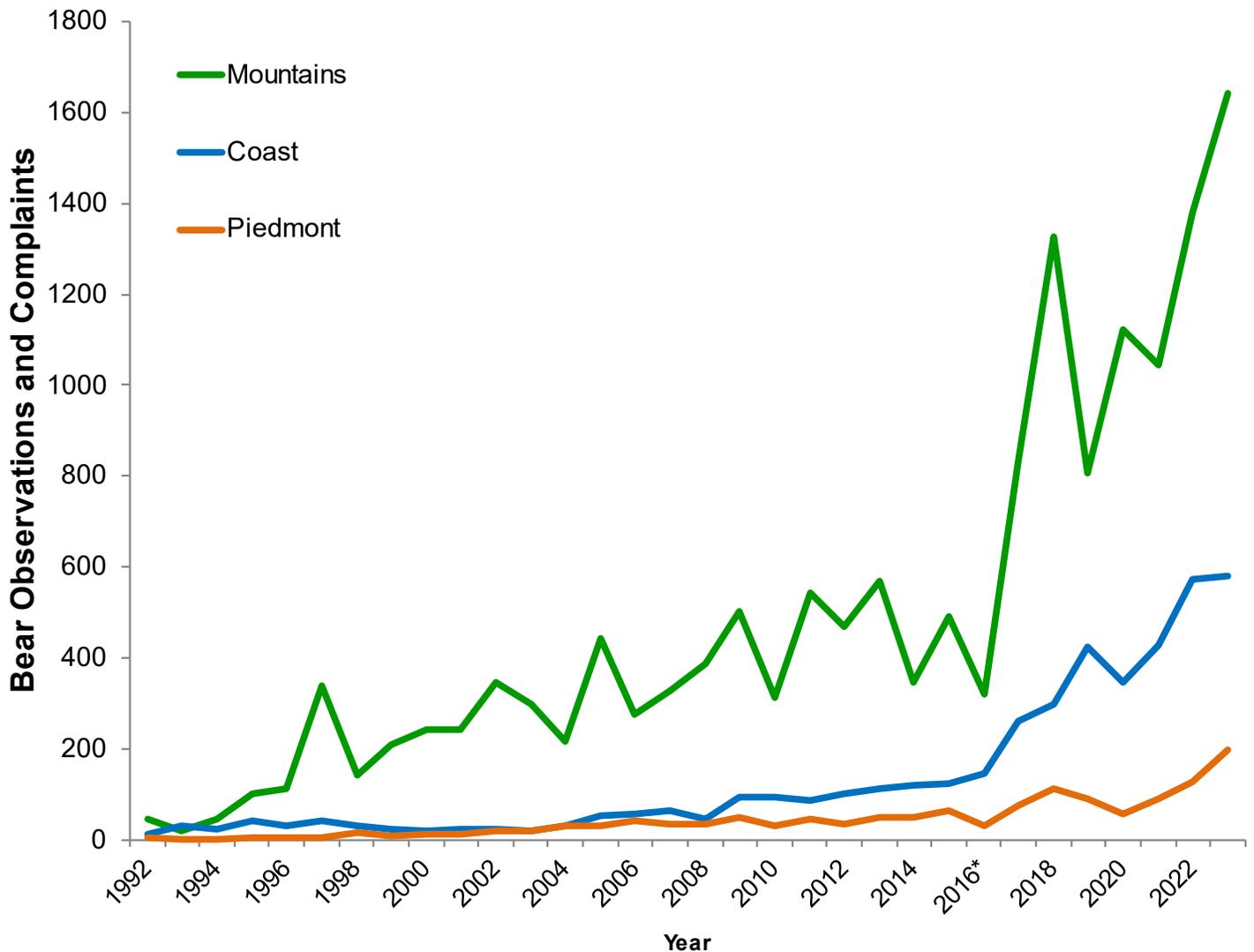

Figure 27. Number of human-bear interactions by bear management unit from 1992 through 2023.

Table 21. Number of Human-Bear Interactions Received by the North Carolina Wildlife Resources Commission, 2005-2023.

District	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*	2017	2018	2019	2020	2021	2022	2023
1	17	30	31	21	44	46	48	53	48	58	70	90	105	125	143	185	161	220	183
2	19	14	9	3	27	33	22	25	52	49	40	31	86	160	155	98	170	251	276
3	12	13	13	12	22	11	17	14	6	5	6	9	19	39	44	14	34	52	62
4	6	5	15	5	9	9	11	17	11	11	14	23	41	38	56	67	64	78	72
5	16	12	7	13	11	6	14	12	14	12	18	12	17	29	34	22	28	45	83
6	0	4	4	3	3	0	8	3	15	6	6	2	15	12	19	10	22	20	19
7	16	29	27	30	34	15	29	24	46	36	39	39	52	96	51	99	121	99	200
8	51	37	41	70	91	63	97	70	74	62	63	46	145	146	89	80	119	159	205
9	397	232	271	302	405	234	425	385	465	272	419	331	676	1140	694	1017	777	1220	1253
Totals	**534**	**376**	**418**	**459**	**646**	**417**	**671**	**603**	**731**	**511**	**675**	**583**	**1156**	**1785**	**1285**	**1592**	**1496**	**2144**	**2353**

*New call center created and all Commission staff now reporting phone calls about bears.
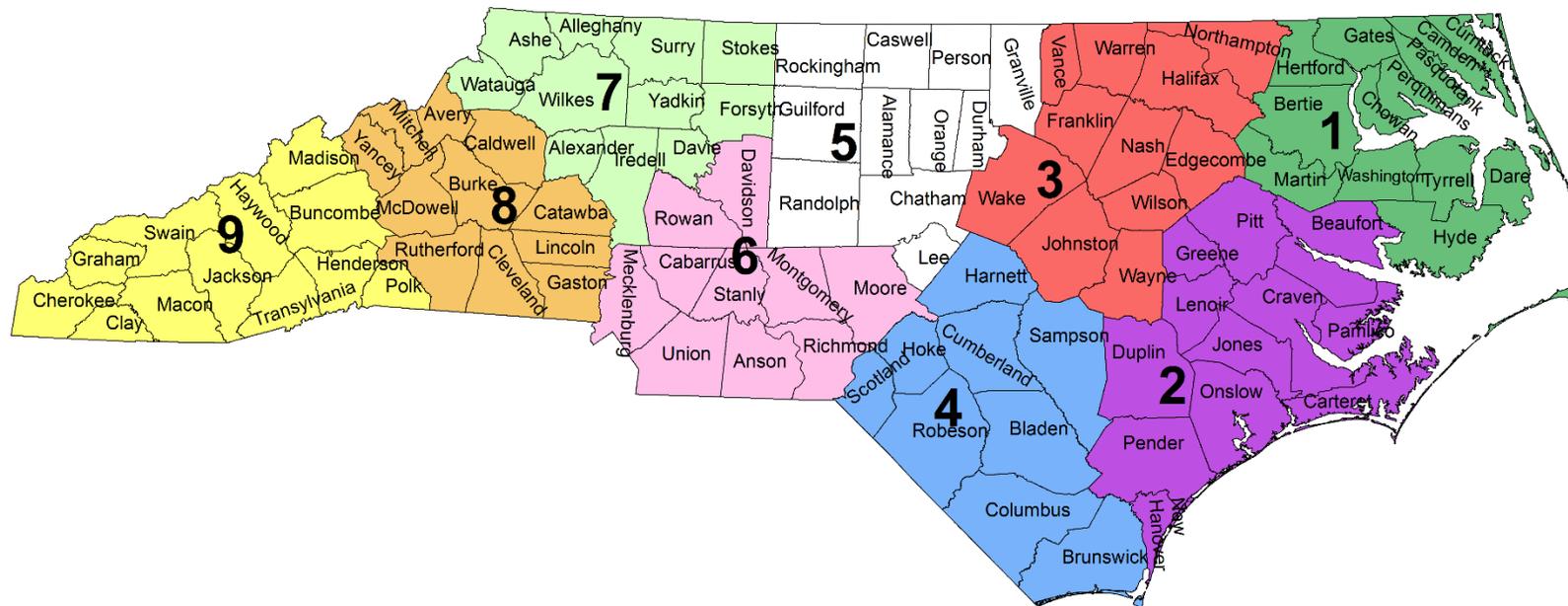
Figure 28. The nine wildlife districts of the North Carolina Wildlife Resources Commission.
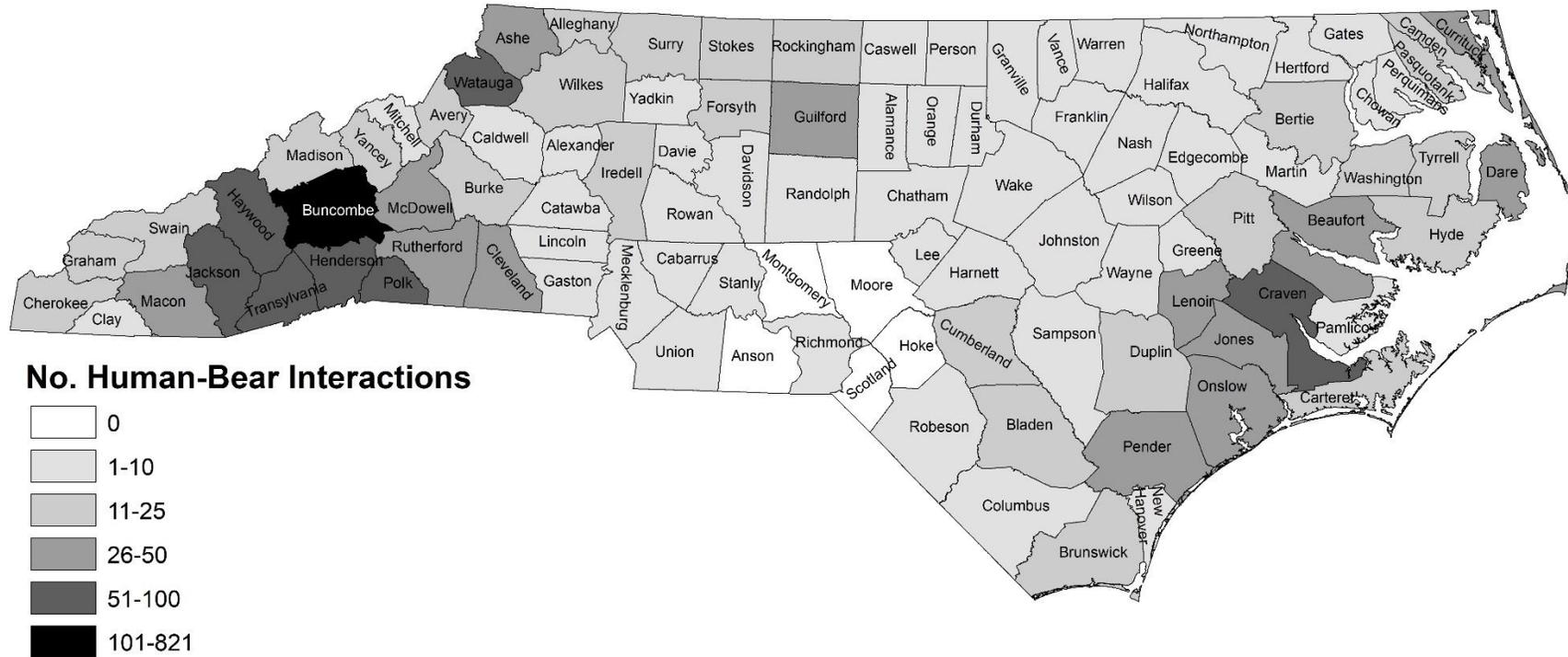
Figure 29. Number of human-bear interaction reports received by the North Carolina Wildlife Resources Commission in 2023.

A majority of observations and complaints about black bears occur in May through August (Figures 30 and 31), when bears are more active due to increased traveling to locate natural food resources, as well as a time of year when more people are spending time outdoors. May and June are also the time of year when yearling bears are dispersing away from their mothers and more likely to encounter human development and unnatural food sources, such as bird feeders and garbage. In late summer and early fall, acorns become available, typically resulting in a decline in human-bear interactions at this time of year. Similar to the 3-year average, monthly patterns of human-bear interactions in 2023 were highest from June through August and started to decline once hard mast was available in late August/early September through the fall (Figures 30 and 31).
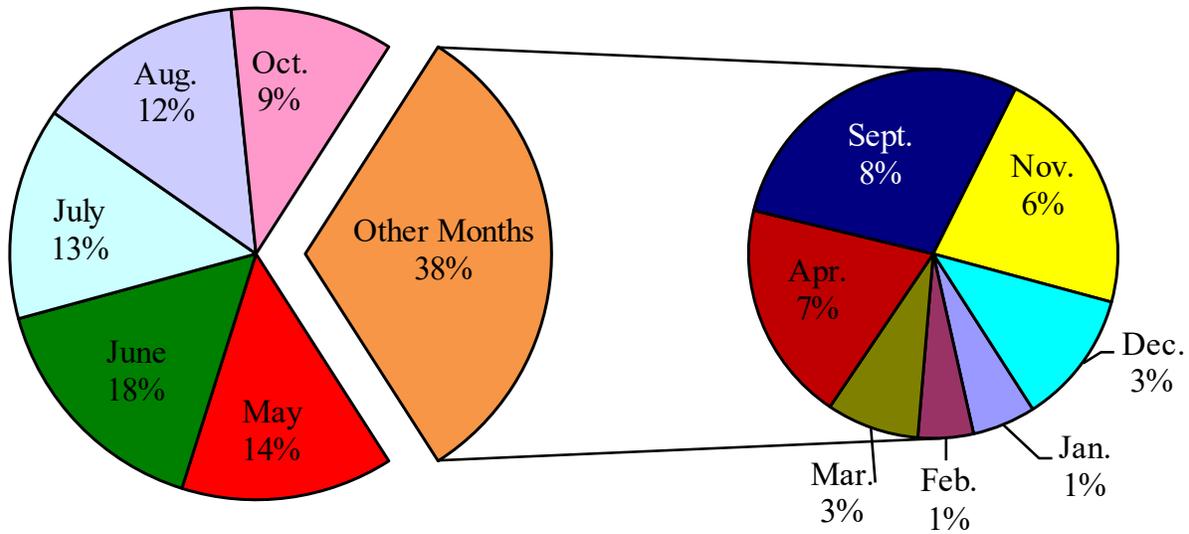

Figure 30. Percentage of statewide black bear observations and complaints by month for 2020-2022 (3-year average).
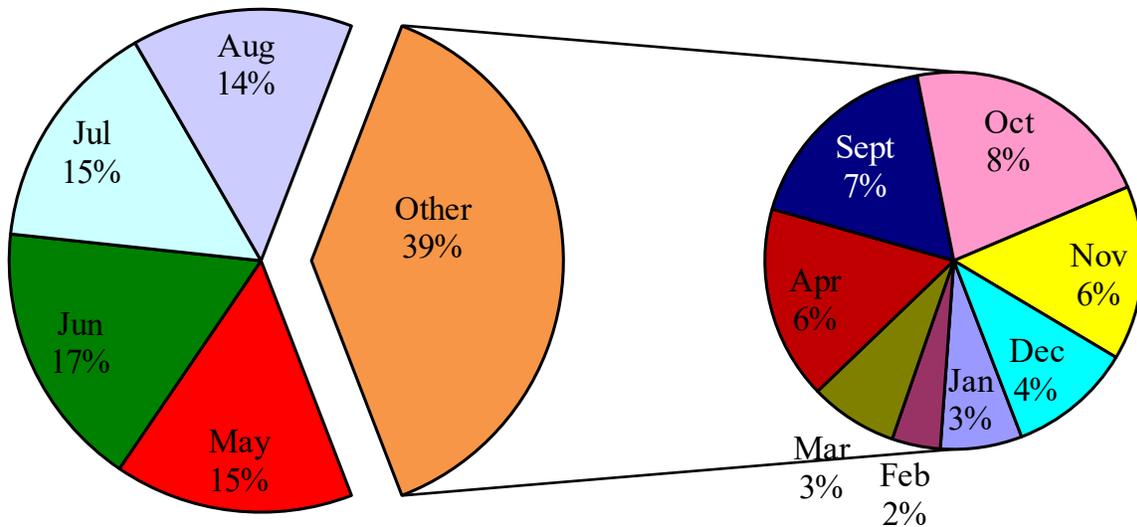

Figure 31. Percentage of statewide black bear observations and complaints by month for 2023.

Human-bear interactions were at their highest in the Mountain BMU, Piedmont BMU, and Coastal BMU during the summer months, though each BMU had peak interactions staggered by month; peak interactions occurred in June (n=98), followed by May (n=86) for the Coastal BMU, in May (n=50), followed by June (n=49) for the Piedmont BMU, and in August (n=273) followed by July (n=263) for the Mountain BMU (Figure 32). In the Coastal BMU during June and July, corn is typically reaching the milk stage of the growth stage, which makes it highly attractive to bears. In the Piedmont BMU, the peak months of human-bear interactions likely reflects dispersing subadult bears. For the Mountain BMU, interactions sharply declined by 64% due to hard mast becoming available on the landscape, and in particular, 2023 was a one of the best mast crops since 2017.
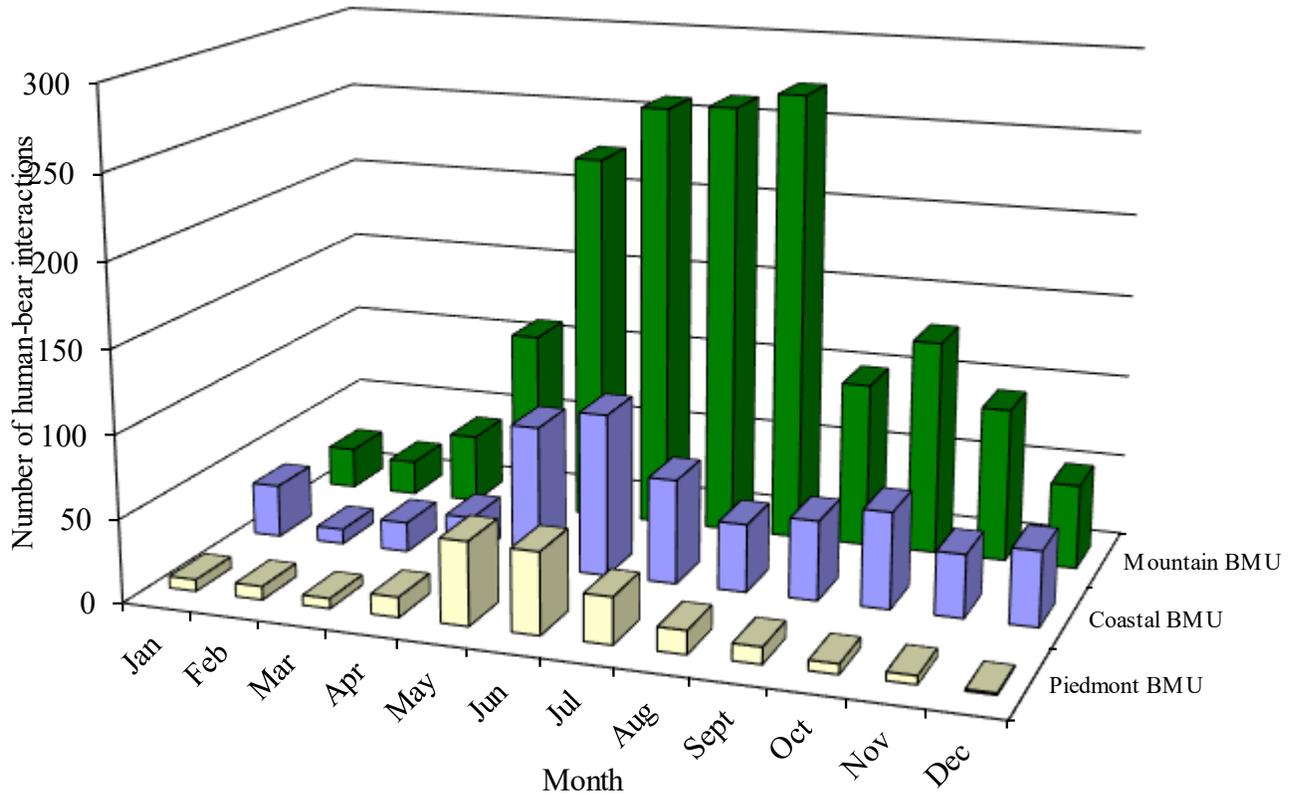

Figure 32. Number of human-bear interactions by month and bear management unit in 2023 in North Carolina.

Hard Mast Surveys

This report and previous annual mast reports (2003 to present) can be found at:
http://www.ncwildlife.org/bear and click on "Surveys and Reports" tab, then scroll down to "Hard and Soft Mast Reports".

Bait Station Surveys

Bait station surveys in the Mountain BMU were initiated in 1992 and provide a monitoring tool that is independent of harvest and human-bear interaction data, which both have biases. The surveys were conducted annually until 2005, then based on recommendations from the Southern Appalachian Black Bear Study Group, changed to every two years. Several other states in the southeast use this tool to monitor trends in the bear population. All surveys are conducted on public lands (i.e., game lands, National Forest), where the NCWRC has long-term access. In 1998, bait station surveys were conducted in the Coastal BMU to see if this technique could be used to monitor the Coastal BMU's bear population. Due to the abundance of natural foods and agricultural crops, which resulted in bears less likely to visit the bait station, as well as the lower amount of public lands to conduct the surveys, it was determined this technique was not an effective tool in the Coastal BMU.

The most recent bait station survey was conducted in July 2023 by Operations staff, Game and Furbearer staff, and Land and Water Access staff, and 791 stations were visited 381 times by black bears for a visitation rate of 48% (Figure 33). There have been two declines in visitation rates since 2009, with the most recent decline occurring between 2019 and 2021. This decline was likely due to a combination of a wet summer, which likely impacted visitation rates, and the changes to bait station lines. In 2021, we removed one line due to increased human disturbance (Lake James State Park) and added a new line at Johns River Game Land. The previous decline in visitation rates from 2009 through 2013 likely reflects a host of factors, including record rainfall that occurred during summer 2013 and changes made to the survey lines in 2011 and 2013. These changes included the removal of several bait stations and survey lines and the addition of four new survey lines.
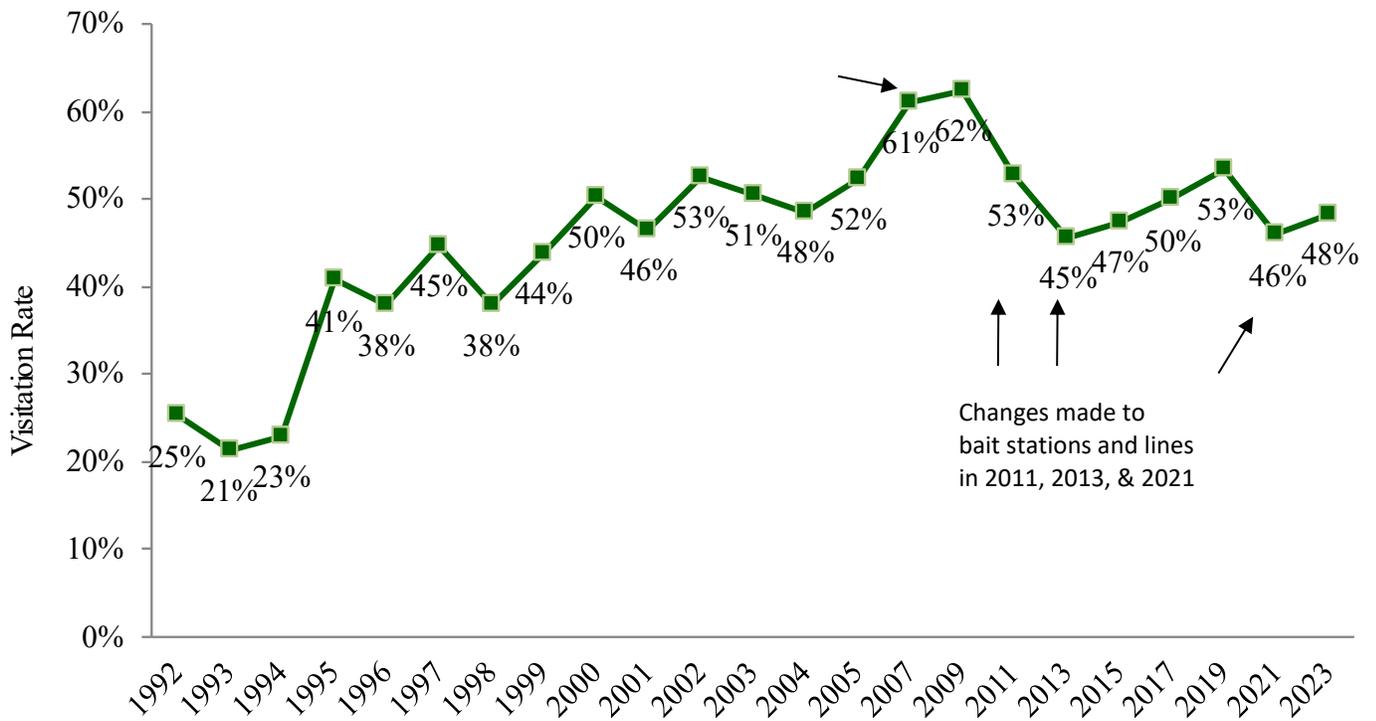

Figure 33. Mountain Black Bear Bait Survey Visitation Rate (%), 1992-2023.

Piedmont Bear Management Unit (Piedmont BMU): In 2005, four counties in the Piedmont BMU were opened to bear hunting. In 2014, all 38 counties were opened for bear hunting opportunities in the Piedmont BMU in order to meet the 2012-2022 Black Bear Management Plan objective for this region, which is to limit the establishment of the bear population. There are 3 bear hunting seasons in the Piedmont BMU, which are open concurrent to the deer gun season for that county (Figure 34).

While there is small, established bear populations in at least 9 counties of the Piedmont BMU that have a bear hunting season, harvest levels are low in comparison to the Coastal BMU and the Mountain BMU, reflecting the lower number of bears. In 2023, the Piedmont BMU had a record harvest of 88 bears (52 males; 36 females); this was a 60% increase from 2022 harvest (55 bears; Table 22 and 23). The previous record harvest in the Piedmont BMU occurred in 2020 (81 bears; 58 males; 23 females).

The majority of the harvest occurred in the northern Piedmont BMU counties that border Virginia, with Warren County having the highest bear harvest, followed by Stokes County (Table 22; Figures 35, 36 and 37). This is likely due to these northern counties being less developed than other areas of the Piedmont BMU, as well as Virginia serving as a source population for black bear. Of note is bears were harvested from Guildford (1.75 year old female) and Moore (unknown age female) counties for the first time in decades. Since the season opened in 2014, there has been a bear harvested in 30 of 38 counties (Table 22; Figure 37).

The percent of females that comprised the 2023 reported harvest was higher than the previous 3 seasons (2020-2022; Table 23); females comprised 41% of the harvest. Even though the Piedmont BMU seasons start in October, a majority of the reported harvest (63%) occurs in November, in particular around Thanksgiving, followed by December (23%; Figure 40).
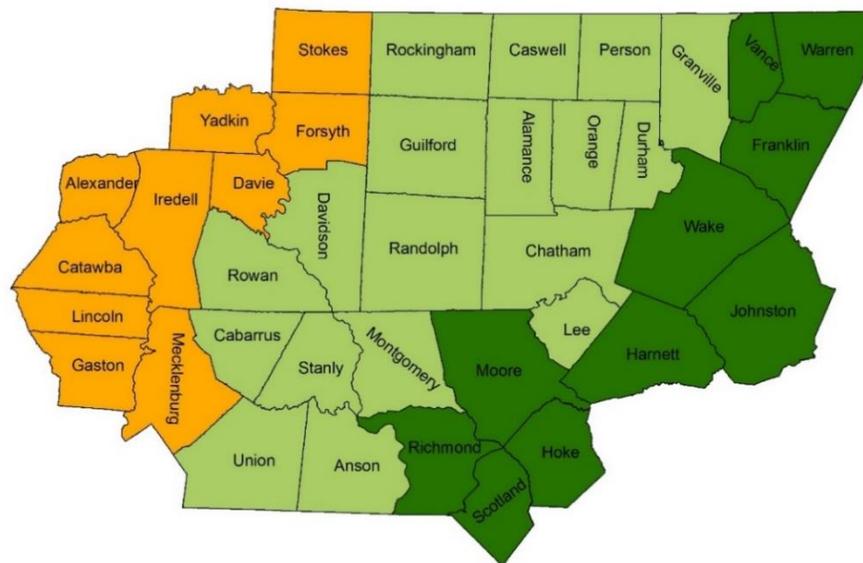
| Piedmont - Eastern	Piedmont - Central	Piedmont – Northwestern
Oct. 14, 2023-Jan. 1, 2024	Nov. 11, 2023-Jan. 1, 2024	Nov. 18, 2023-Jan. 1, 2024
10 counties	19 counties	9 counties

Figure 34. The 2023-24 Piedmont BMU bear hunting seasons, which are based on the deer gun seasons for these counties.

Table 22. Reported harvest results of black bears by county in the Piedmont BMU of North Carolina from 2008 through 2023 (n/s=no season).

County	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Alamance	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	1	0	0	1
Alexander	0	0	0	1	0	0	1	1	0	2	0	1	2	0	0	0	8
Anson	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	1	0	0	0	1
Cabarrus	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	0
Caswell	n/s	n/s	n/s	n/s	n/s	n/s	0	3	7	5	4	13	7	5	11	9	64
Catawba	1	1	0	0	0	0	1	1	0	1	0	0	1	0	1	1	10
Chatham	n/s	n/s	n/s	n/s	n/s	n/s	0	0	1	0	0	0	0	0	0	0	1
Davidson	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	1	0	0	0	1
Davie	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	1	0	0	1	2
Durham	n/s	n/s	n/s	n/s	n/s	n/s	0	1	0	0	0	0	0	0	0	0	1
Forsyth	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	0
Franklin	n/s	n/s	n/s	n/s	n/s	n/s	0	3	2	0	1	1	0	0	0	2	9
Gaston	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	1	0	0	0	0	1
Granville	n/s	n/s	n/s	n/s	n/s	n/s	1	4	3	4	6	7	12	9	10	9	65
Guilford	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	1	1
Harnett	n/s	n/s	n/s	n/s	0	0	0	1	0	0	1	0	0	0	0	2	4
Hoke	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	2	0	2
Iredell	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	2
Johnston	n/s	n/s	n/s	n/s	1	0	0	2	1	1	0	0	2	0	0	3	10
Lee	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	1	1	0	0	2
Lincoln	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	0
Mecklenburg	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	0
Montgomery	n/s	n/s	n/s	n/s	n/s	n/s	1	0	0	0	0	0	0	0	0	0	1
Moore	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	1	1

County	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Orange	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	1	1	**2**
Person	n/s	n/s	n/s	n/s	n/s	n/s	8	7	9	7	4	5	9	9	7	12	**77**
Randolph	n/s	n/s	n/s	n/s	n/s	n/s	0	0	1	0	0	0	0	0	0	0	**1**
Richmond	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	**0**
Rockingham	n/s	n/s	n/s	n/s	n/s	n/s	2	3	5	4	5	3	10	3	6	8	**49**
Rowan	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	**0**
Scotland	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	**0**
Stanly	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	1	0	0	**1**
Stokes	n/s	n/s	n/s	n/s	1	2	2	8	6	19	8	8	15	13	4	15	**101**
Union	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	0	0	0	0	0	0	**0**
Vance	n/s	n/s	n/s	n/s	0	0	1	1	3	2	1	3	2	3	5	1	**22**
Wake	n/s	n/s	n/s	n/s	n/s	n/s	0	0	0	0	1	0	0	0	0	0	**1**
Warren	n/s	n/s	n/s	n/s	1	2	2	4	12	7	15	15	17	12	8	20	**115**
Yadkin	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2	**4**
Total	**1**	**1**	**0**	**1**	**3**	**4**	**20**	**39**	**50**	**52**	**47**	**58**	**81**	**58**	**55**	**88**	**560**

Table 23. Total number of male and female bears harvested in the Piedmont BMU from 2005 through 2023.

| Year	Males	Females	Total	Percent Male	Percent Female
2004	NS	NS	NS	NS	NS
2005	0	0	0	0%	0%
2006	1	0	1	100%	0%
2007	0	1	1	0%	100%
2008	1	0	1	100%	0%
2009	0	1	1	0%	100%
2010	0	0	0	0%	0%
2011	1	0	1	100%	0%
2012	3	0	3	100%	0%
2013	3	1	4	75%	25%
2014	16	4	20	80%	20%
2015	31	8	39	80%	21%
2016	32	18	50	64%	36%
2017	33	19	52	64%	37%
2018	35	12	47	74%	26%
2019	42	16	58	72%	28%
2020	58	23	81	72%	28%
2021	40	18	58	69%	31%
2022	38	17	55	69%	31%
2023	52	36	88	59%	41%
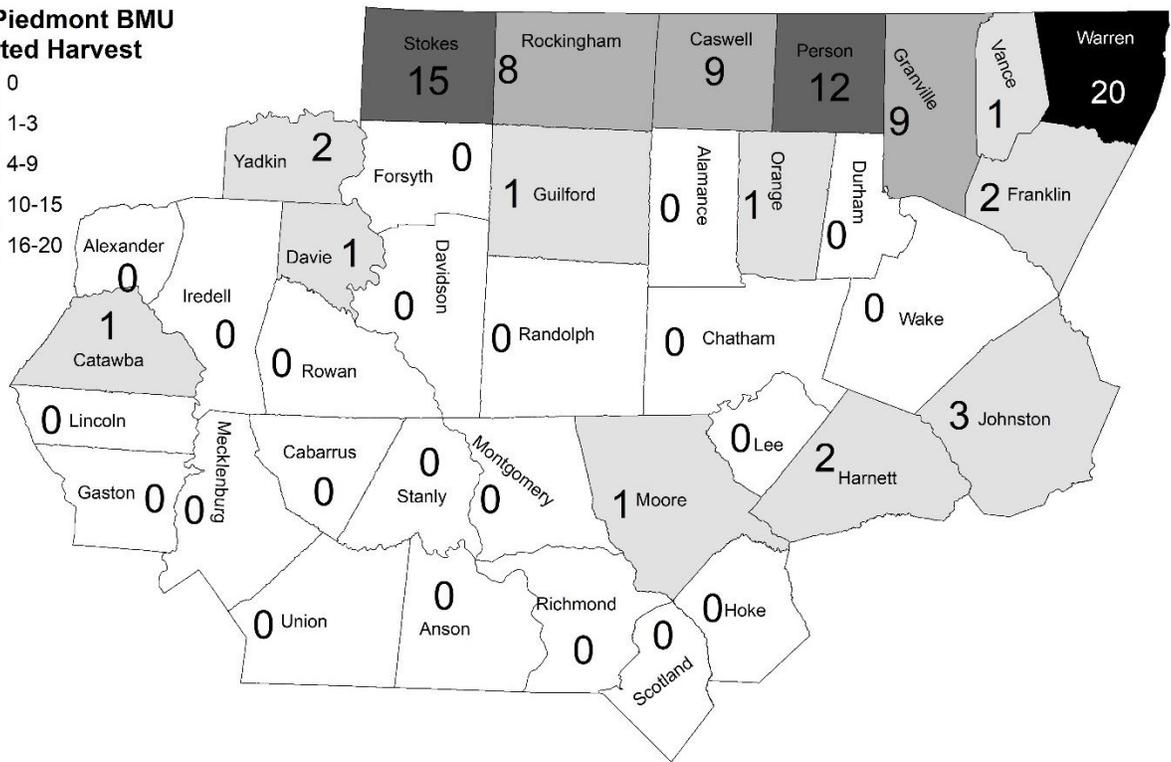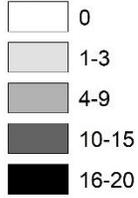
Figure 35. Reported harvest of black bears in the Piedmont BMU during the 2023 bear hunting season.
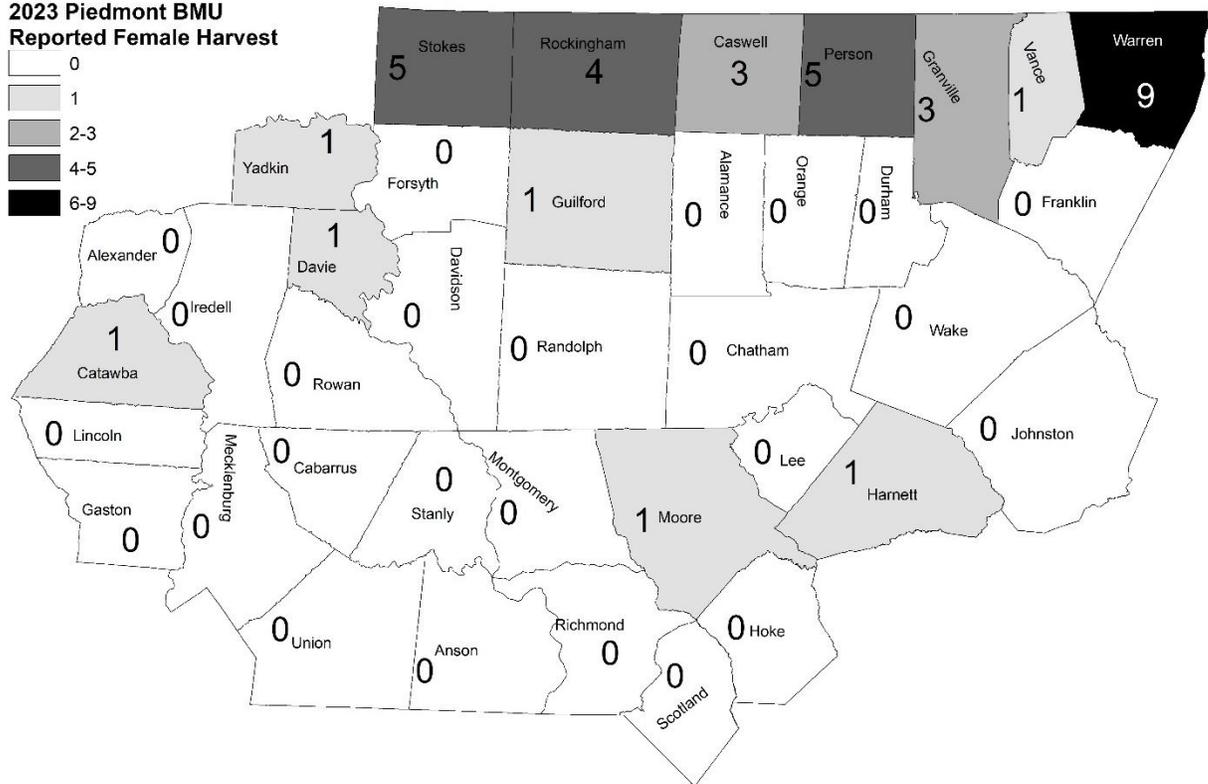

Figure 36. Reported harvest of female black bears in the Piedmont BMU during the 2023 black bear hunting season.
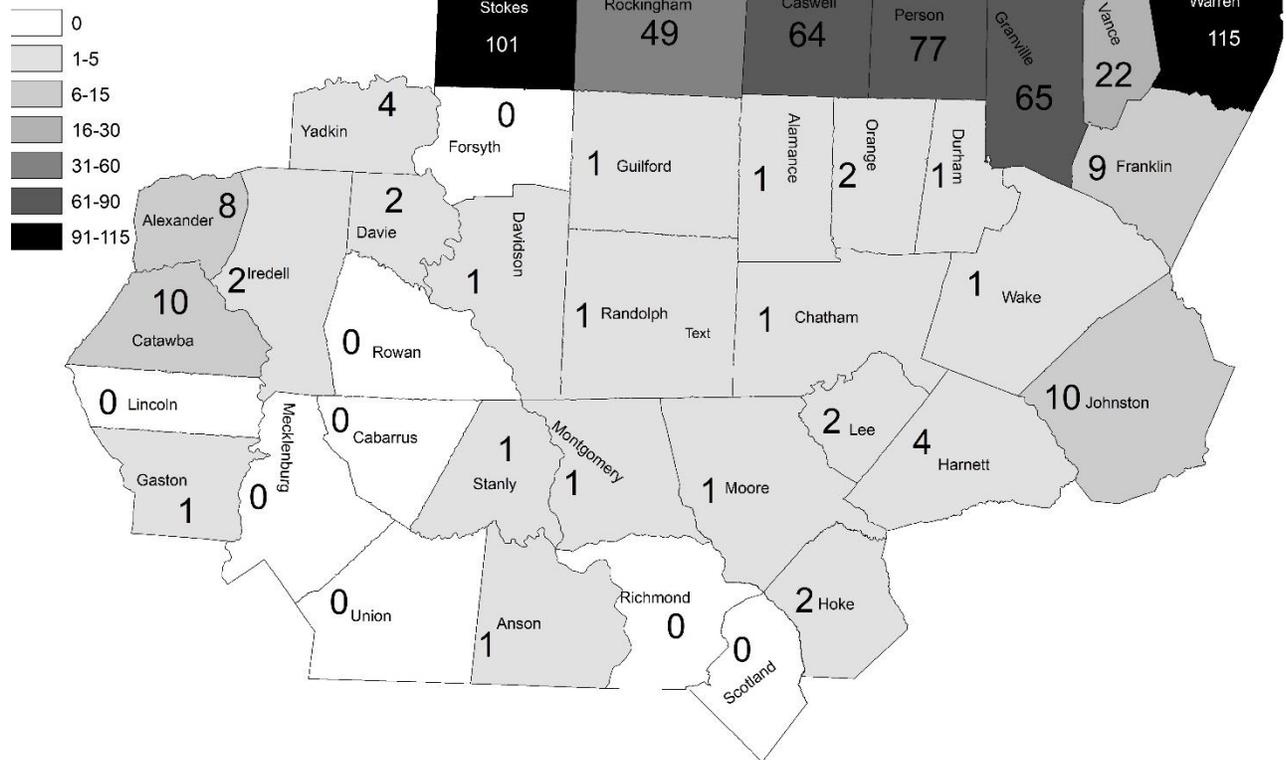
Figure 37. Reported harvest of black bears in the Piedmont BMU during the 2014 to 2023 black bear hunting seasons.
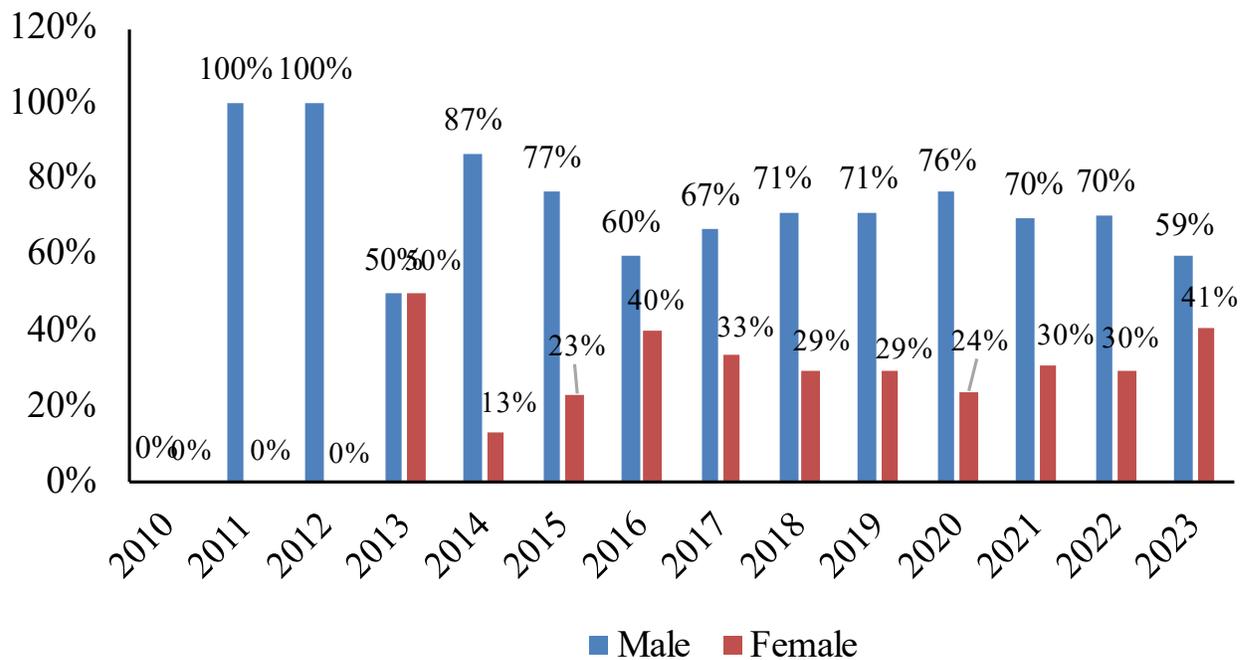

Figure 38. Sex ratio of the still hunter reported harvest in the Piedmont BMU, 2010-2023.
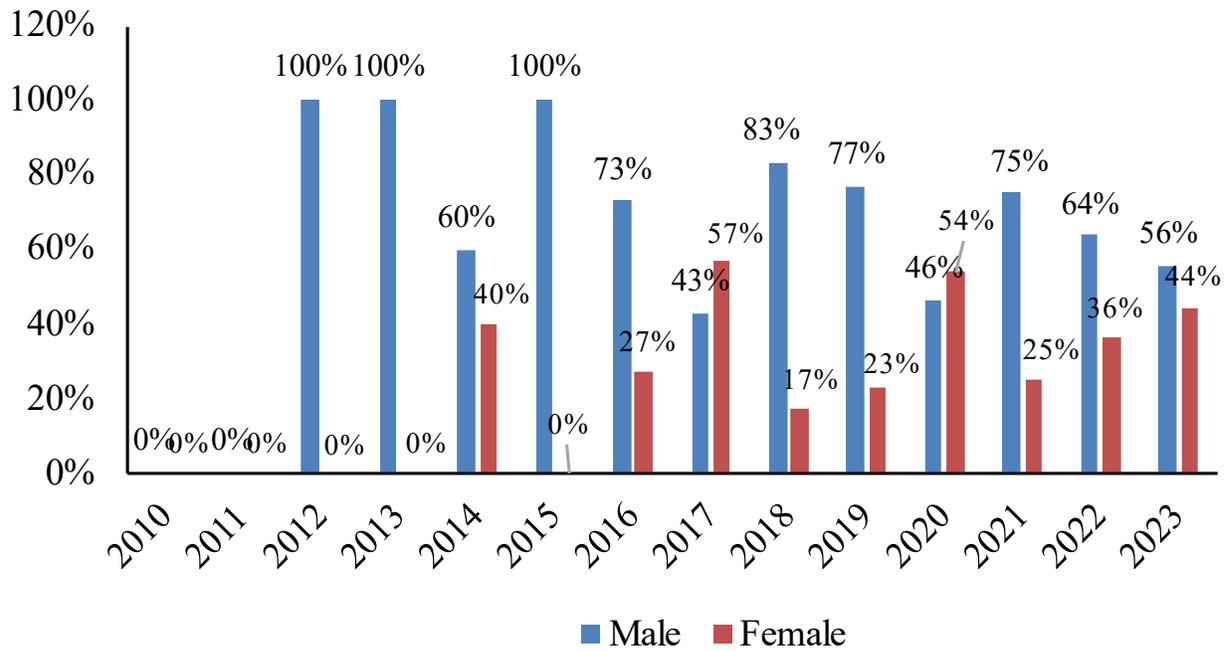
Figure 39. Sex ratio of the hound hunter reported harvest in the Piedmont BMU, 2010-2023.
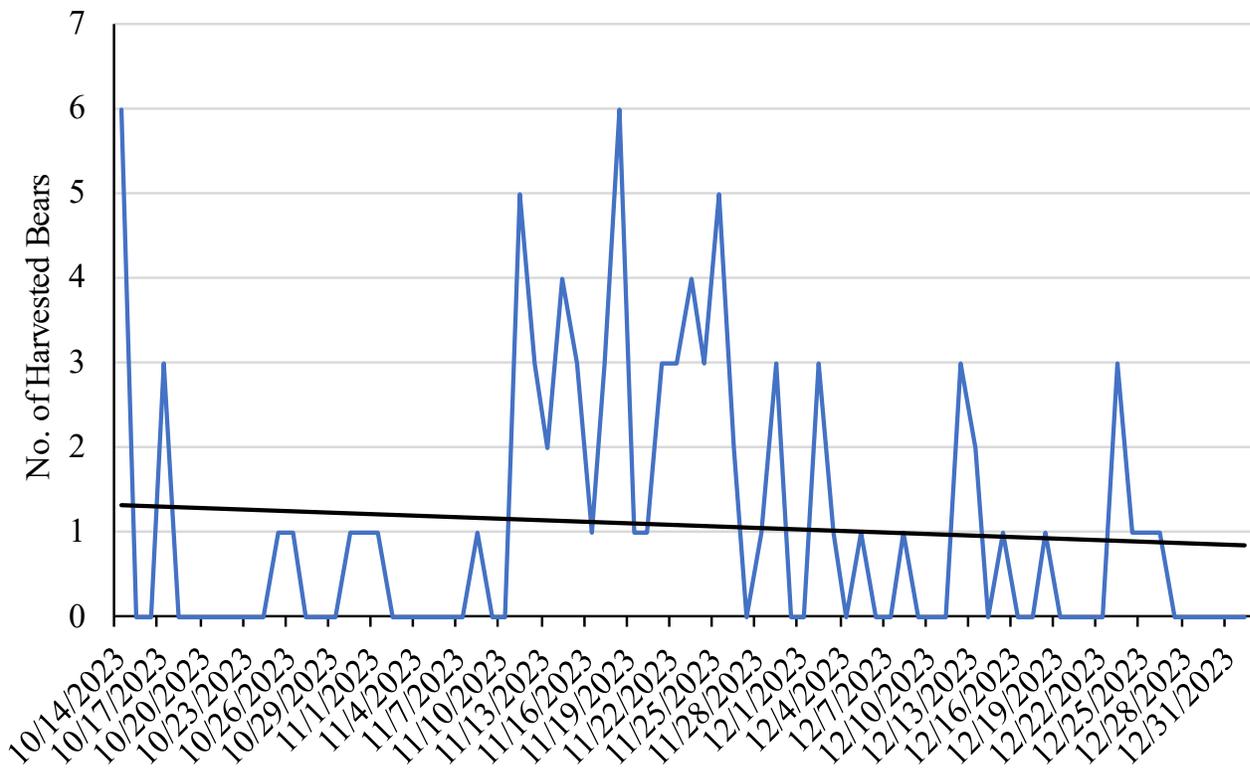

Figure 40. Reported harvest per day in the Piedmont BMU during the 2023 season.

Weight and Age by Method of Harvest: In the Piedmont BMU, houndsmen harvested heavier and older male bears, and lighter but older female bears than still hunters during 2023 (Table 24). Compared to the 3-year average, male and female bears sampled from still hunters during 2023 were younger, but heavier. Male and female bears sampled from houndsmen during 2023 were older than the 3-year average, but while male bears were heavier, female bears were lighter.

Limited interpretation should be given to these results, since we are unable to sample the weight of all harvested bears and much of the information on weight is provided by the hunter, rather than the bear being weighed by Commission staff. Despite the weight information being self-reported by hunters, most hunters now have access to accurate and low-cost digital scales. In addition, with mandatory tooth submission, the Commission is receiving more data on bear weights. For example, in 2020, the Commission received weight data on 32% of harvested bears, whereas in 2023 (3rd year of mandatory tooth submission), we received weight data from 38% of harvested bears in the Piedmont BMU.

Table 24. Mean age and weight for harvested bears sampled from North Carolina during the 2023 season and 3-year averages.

Season	Region	Hunting Method	Mean Age (yr.)		Mean Weight (lbs.)	
			Male	Female	Male	Female
2023	Piedmont BMU	Still Hunters	2.5	2.6	262	181
		Houndsmen	2.8	5.8	304	122
		All Hunters	*2.5*	*3.0*	*264*	*171*
2020-2022 (3-yr. average)	Piedmont BMU	Still Hunters	2.7	3.2	237	180
		Houndsmen	2.6	2.9	258	171
		All Hunters	*2.7*	*3.1*	*240*	*177*

Coastal Bear Management Unit (Coastal BMU): Historically, harvest in the Costal BMU could vary based on weather and hunter access (Figure 1 on page 3, Table 3 on page 8). A recent example occurred when many counties in the Coastal BMU, especially in the southern portion, experienced high water due to the record rainfall from Hurricane Florence in September 2018. Hurricane Florence not only caused tremendous property damage, which likely resulted in some hunters having limited time to hunt, but flooded portions of the landscape, which limited access to huntable lands. However, despite the annual influence of weather, harvest rates in the Coastal BMU have remained high in recent years, likely due to changes in season structures in 2016 and 2018, such as legalization of unprocessed bait all season, Sunday hunting on private lands, and the lengthening of many seasons (Table 25). Since the use of unprocessed bait was allowed in 2014, the Coastal BMU has experienced only one season (2018) in which bear harvest declined from the previous season. Otherwise, unlike the harvest fluctuations observed from 1980 through 2013, the harvest has increased each season since 2014. In addition to higher hunter success rates due to the aid of unprocessed foods, hunters have many more days of opportunity after season changes took effect in 2018 (Table 25). In 2017, there were 1,022 bear hunting days in the Coastal BMU and, after season changes that took effect in 2018, there were 1,318 hunting days in 2019. With a difference of almost 300 hunting days, hunters have more time to bear hunt if unsuccessful on their first outings, while bear hunting guides can accommodate more clients.

Table 25. Changes to Coastal BMU bear hunting season structure from 2007 through present.

Year	Change	Note
2007	Release of dogs allowed in the vicinity of unprocessed bait	
2011	Sunday hunting with archery equipment allowed.	
2014	Use of unprocessed bait allowed for 1st six days of season	
2014	Robeson County opened to bear hunting.	
2016	Brunswick and Columbus counties changed from 3-week December season to 9-week Nov. to Jan. 1 season.	
2016	Sunday hunting with firearms allowed on private land	
2016	Use of unprocessed bait allowed entirety of Coastal BMU seasons.	
2017	No changes.	35 Coastal BMU counties had a total of 1,022 bear hunting days.
2018	Coastal BMU seasons lengthened in all 37 Coastal BMU counties, including Thanksgiving holiday weekend in 3 counties.	
2018	Coastal BMU November seasons started 2 days earlier in 25 counties	Change from Monday opening day to Saturday opening day.
2018	Coastal BMU December season started 2 days earlier in 16 counties	Change from Monday opening day to Saturday day
2018	Robeson County changed from 3-week December season to 9-week Nov. to Jan. 1 season.	
2019 - present	No changes	37 Coastal BMU counties had a total of 1,318 bear hunting days.

In 2023, the reported harvest increased 6% (n=2,696 bears; Table 3 on page 8) from what occurred during the 2022 harvest (n=2,533 bears). The 2023 harvest season was the highest on record and the 7th year in a row that the harvest exceeded 2,000 bears. As in previous seasons dating back to 2016, the county with the highest reported harvest was Hyde County (n=288), followed by Beaufort (n=259), Tyrrell (n=234), Jones (n=234) and Bladen (n=176; Figures 41 and 42; Table 26). These five counties comprised 44% of the total harvest in the Coastal BMU, which is comprised of 37 counties.

Record harvests occurred in 15 of 37 counties of the Coastal BMU and include Beaufort, Tyrrell, Jones, and Bladen counties (Table 26). Compared to the prior season, 21 counties experienced increases in harvest, 5 counties had no change, and 11 counties had declines in harvest (Table 26).
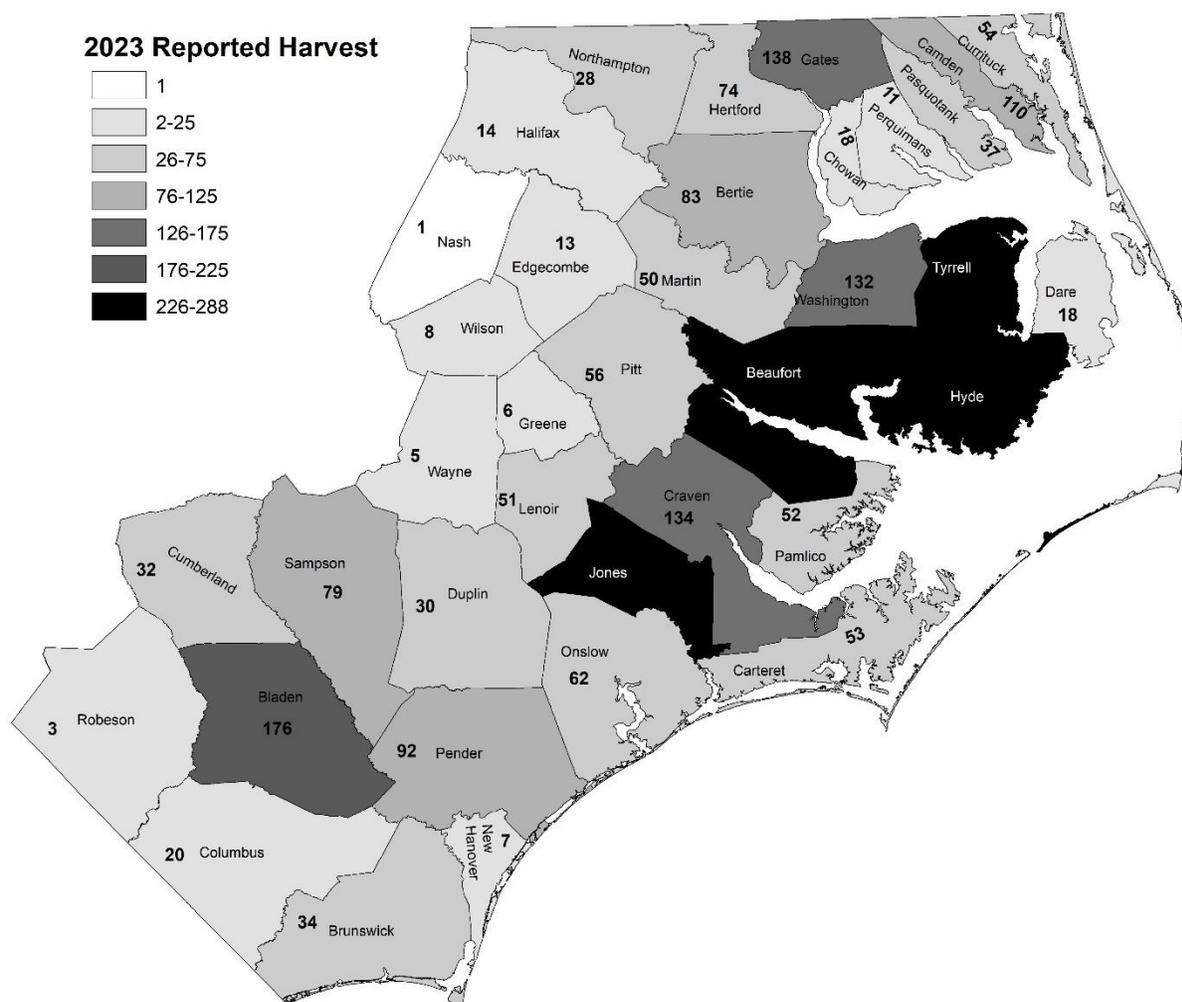

Figure 41. The 2023 reported harvest by county in the Coastal BMU.
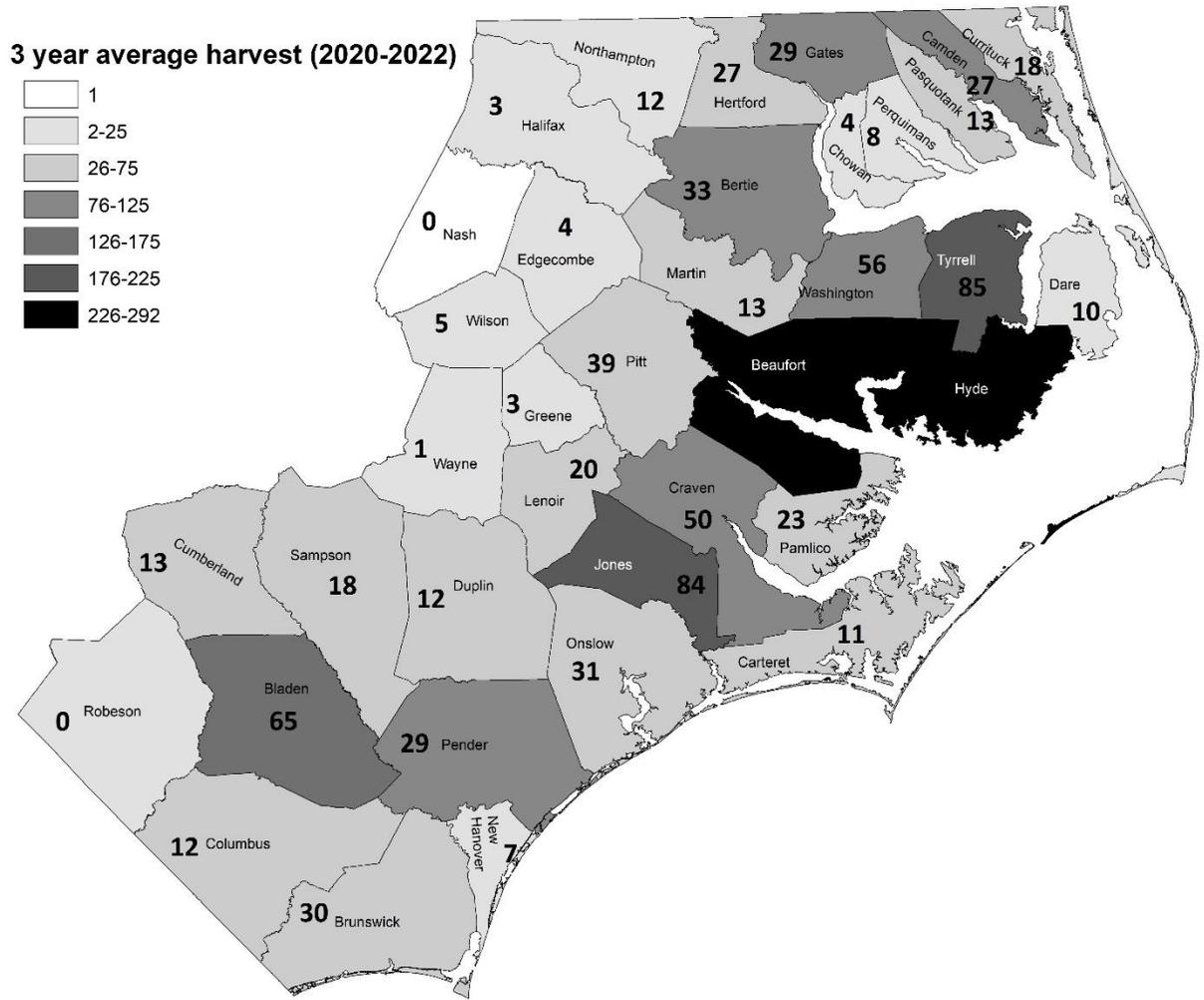
Figure 42. The 3-year average harvest by county in the Coastal BMU.

Table 26. Reported harvest of black bears by county in the Coastal BMU from 2010 to 2023.

County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	% of 2023 Harvest	% change 2022 to 2023
Beaufort	184	183	169	181	200	201	189	228	194	201	224	230	249	259	10%	4%
Bertie	61	90	112	99	68	81	79	100	75	90	90	65	82	83	3%	1%
Bladen	101	88	91	98	103	90	101	121	95	123	137	144	147	176	7%	20%
Brunswick	26	32	43	37	46	31	56	57	32	62	53	72	48	34	1%	-29%
Camden	71	64	78	63	43	63	79	77	63	66	70	71	96	110	4%	15%
Carteret	25	31	32	15	28	36	29	45	35	33	30	44	59	53	2%	-10%
Chowan	9	7	17	15	16	13	6	12	7	8	8	11	13	18	1%	38%
Columbus	25	21	32	25	14	9	25	23	15	27	22	27	29	20	1%	-31%
Craven	84	79	87	65	76	67	79	90	100	99	115	109	108	134	5%	24%
Cumberland	9	16	33	20	25	36	22	27	23	43	45	36	31	32	1%	3%
Currituck	34	39	27	26	35	40	31	30	23	22	25	41	52	54	2%	4%
Dare	4	5	3	3	10	2	11	18	9	10	25	14	21	18	1%	-14%
Duplin	18	16	17	11	14	15	9	19	18	22	29	26	30	30	1%	0%
Edgecombe	n/s	n/s	12	10	7	9	8	13	11	9	5	11	14	13	0%	-7%
Gates	75	52	75	70	82	77	75	85	85	87	81	102	93	138	5%	48%
Greene	0	1	4	5	4	2	2	8	3	6	5	8	8	6	0%	-25%
Halifax	3	6	4	7	4	0	2	9	4	6	7	8	18	14	1%	-22%
Hertford	53	71	48	59	50	48	58	39	45	56	59	54	77	74	3%	-4%
Hyde	215	180	210	216	253	233	260	269	262	241	258	298	289	288	11%	0%
Jones	154	129	108	159	134	116	134	158	159	176	181	197	204	234	9%	15%
Lenoir	13	22	32	29	18	26	30	39	40	46	44	41	62	51	2%	-18%
Martin	53	48	50	64	61	56	43	43	47	31	32	38	46	50	2%	9%
Nash	n/s	n/s	0	0	0	1	0	0	0	2	2	0	1	1	0%	0%
New Hanover	3	3	3	5	5	1	4	3	2	6	2	10	7	7	0%	0%
Northampton	14	8	15	15	25	16	19	31	17	25	17	21	25	28	1%	12%
Onslow	61	44	54	47	55	49	67	51	41	58	68	60	72	62	2%	-14%
Pamlico	42	22	37	41	45	53	56	47	40	33	54	54	60	52	2%	-13%
Pasquotank	10	8	11	8	25	14	12	24	39	32	27	34	31	37	1%	19%
Pender	73	66	45	48	56	53	51	76	60	62	79	72	87	92	3%	6%

County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	% of 2023 Harvest	% change 2022 to 2023
Perquimans	15	5	17	10	11	10	24	20	14	19	18	19	11	11	0%	0%
Pitt	36	40	51	77	61	38	60	57	49	57	49	67	54	56	2%	4%
Robeson	n/s	n/s	n/s	n/s	0	2	0	0	0	0	1	1	2	3	0%	50%
Sampson	14	17	25	19	28	20	37	31	26	41	54	55	76	79	3%	4%
Tyrrell	150	137	216	151	156	264	231	185	258	221	217	207	212	234	9%	10%
Washington	66	75	81	79	102	105	131	98	125	107	99	120	114	132	5%	16%
Wayne	n/s	n/s	0	0	1	0	0	1	1	0	1	2	1	5	0%	400%
Wilson	n/s	n/s	5	3	6	3	4	4	0	1	5	5	4	8	0%	100%
Totals	**1,701**	**1,605**	**1,844**	**1,780**	**1,867**	**1,880**	**2,024**	**2,138**	**2,017**	**2,128**	**2,238**	**2,374**	**2,533**	**2,696**		

In 2023, there was a 1% decrease in the reported male harvest (n=1,440) and a 16% increase in the reported female harvest (n=1,256; Table 3 on page 8; Figure 43). Female bears comprised 47% of the 2023 reported harvest, the highest ratio that has ever occurred in the Coastal BMU. The previous record occurred in 2016 and in 2020, when females comprised 44% of the black bears harvested in the Coastal BMU (Figure 44). The 2016 and 2020 female sex ratio of the reported harvest is the maximum before we expect population declines. Since 2014, when unprocessed bait was legalized for bear hunting, the percentage of female black bears that comprise the reported Coastal BMU harvest has stayed at or above 41% (average=43% from 2014 to 2023), compared to the previous 10-year period from 2004 to 2013 (average=40%; Table 4; Figure 44).
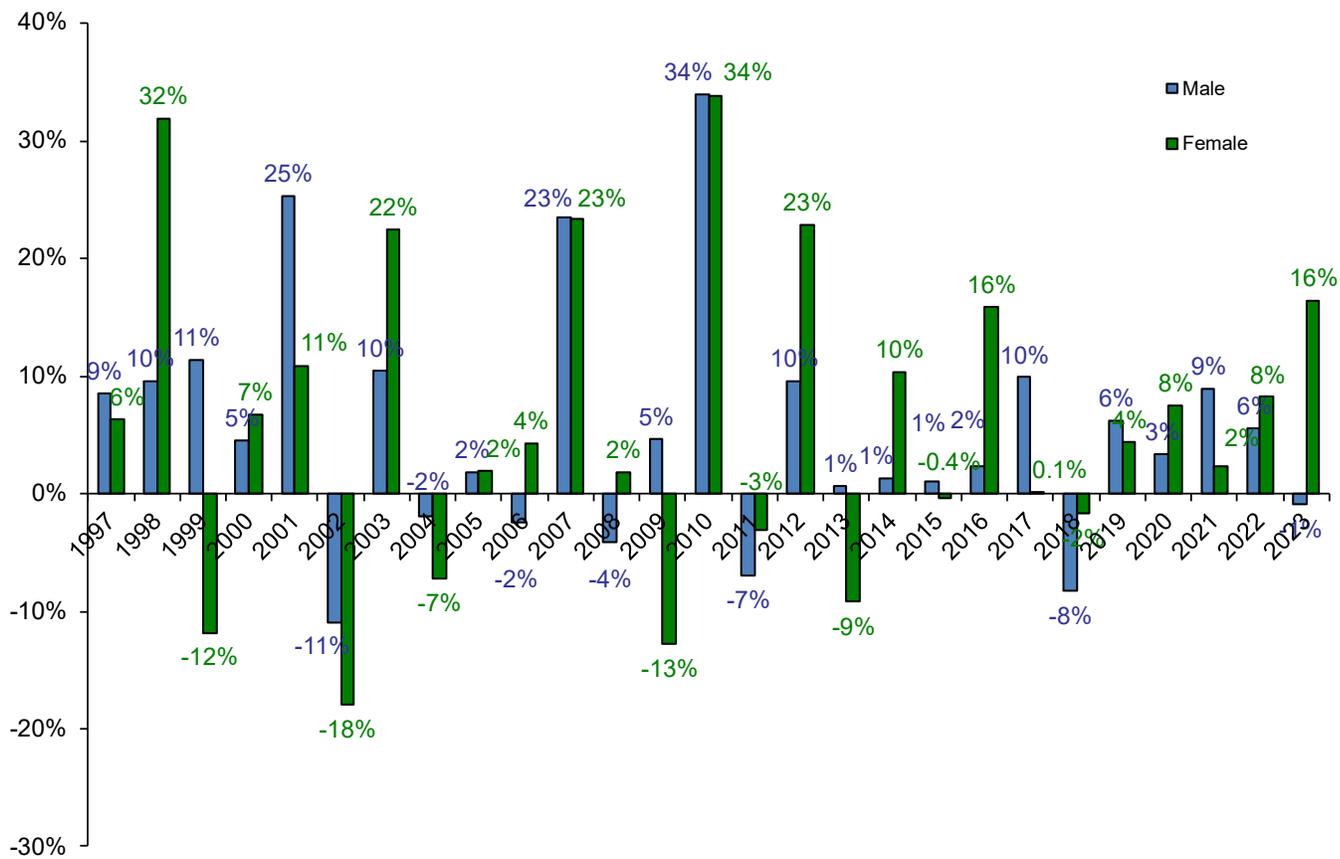

Figure 43. Annual percent change in male and female reported harvest in the Coastal BMU from 1997 through 2023.
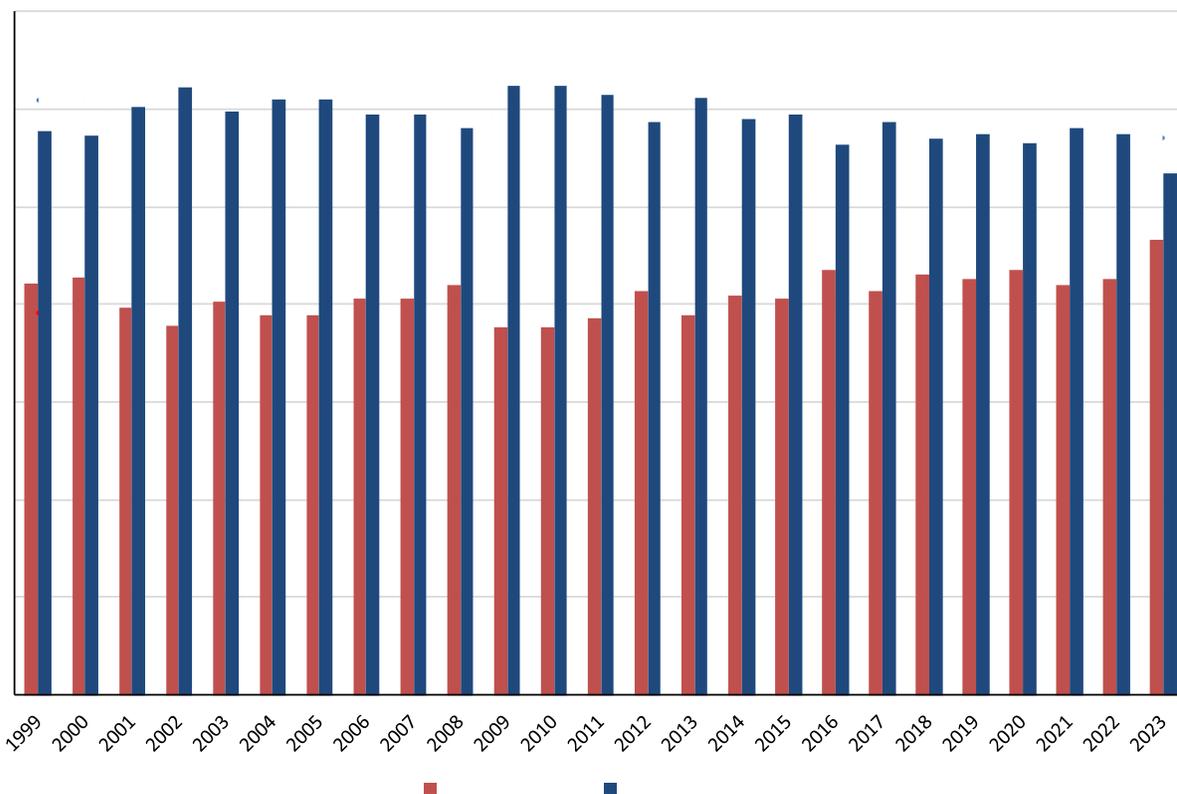
Figure 44. Percentage of male (red) and female (blue) bears in the reported Coastal BMU harvest.

The increase in the female sex ratio of the harvest, coupled with the record harvests of the past few years, likely explains the slowing growth of the bear population in the Coastal BMU; population growth has declined and is now at 0-1% (page 31-32; Figure 12), which is in accordance with the objective ("stabilize the Coastal BMU bear population") approved by the Commission in the 2012-2022 Black Bear Management Plan. Several changes have occurred in the season structures and methods allowed since 2007 that has resulted in the record harvests of the past few years (Table 25 on page 56). The Commission will continue to closely monitor the harvest to determine how it is influencing the Coastal BMU bear population.

Similar to previous years, Beaufort, Hyde, Jones, and Tyrrell counties had the highest reported harvest of female bears, while one county (Nash) on the western periphery of the Coastal BMU had no females harvested (Figure 45). The female composition of the harvest was over 44% in 22 counties and less than 44% of the harvest in the remaining 15 counties of the Coastal BMU (Figure 46).
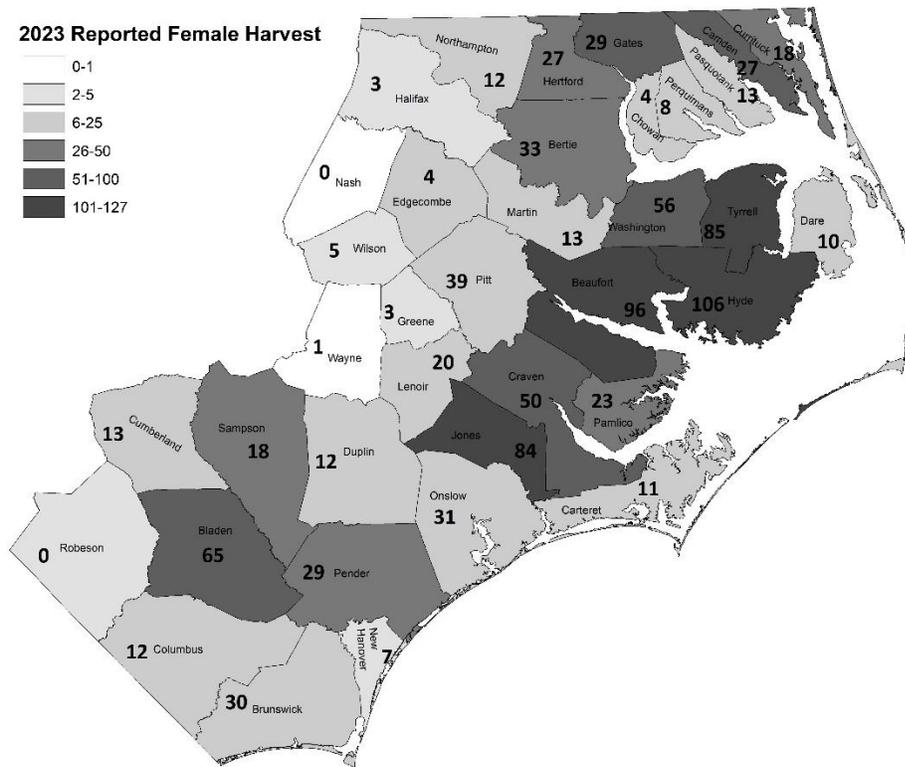
Figure 45. The 2023 reported female harvest by county in the Coastal BMU.
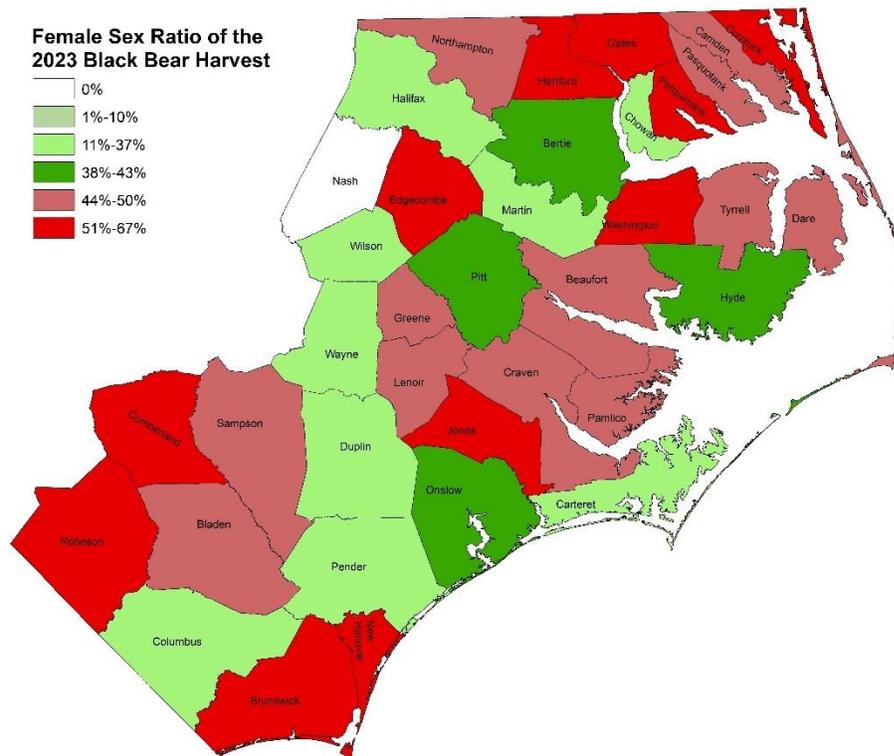
Figure 46. Percentage of the 2023 reported harvest comprised of female black bears in the Coastal BMU.

Historically, over half of the reported bear harvest occurred in the first seven days of the Coastal BMU bear seasons. Since 2018, when many bear seasons in the Coastal BMU were lengthened in November, a lower percent of the bear harvest occurs within the first seven days, compared to previous seasons. The longer season (Table 25 on page 56) likely changed hunter effort and selectivity during the first seven days. During the 2023 season, 36% of the reported Coastal BMU harvest occurred in the first seven days of the season (Figure 47). Most of the reported harvest (60%) and the reported female harvest (62%) still occurs in November (Figures 48 and 49).
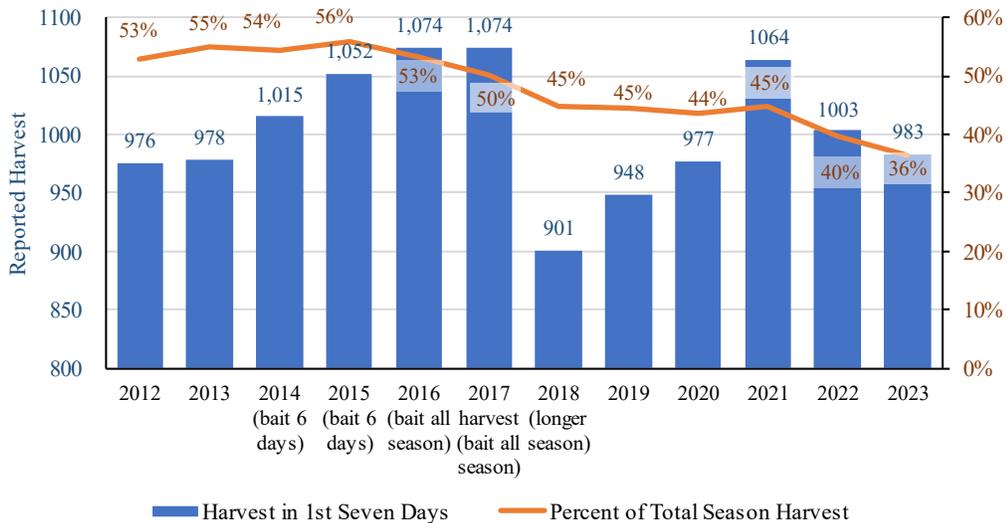

Figure 47. Reported harvest that occurs in first seven days of the Coastal BMU seasons and percent of harvest that occurs in first seven days compared to rest of Coastal BMU season.
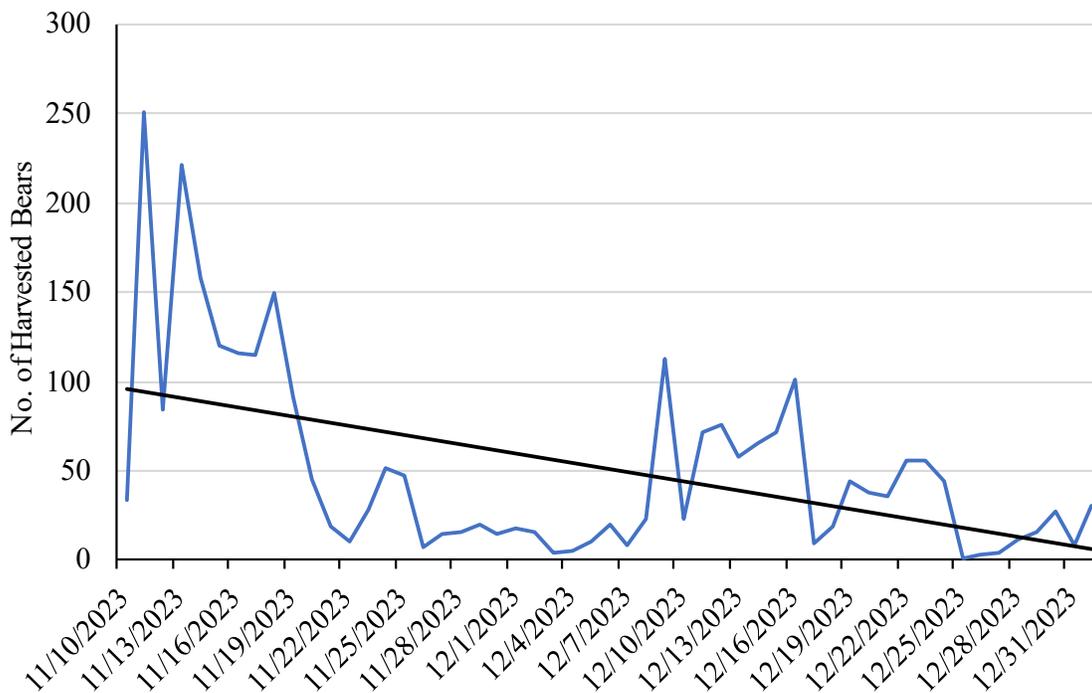

Figure 48. Number of reported bears harvested per date in the Coastal BMU during the 2023 season.
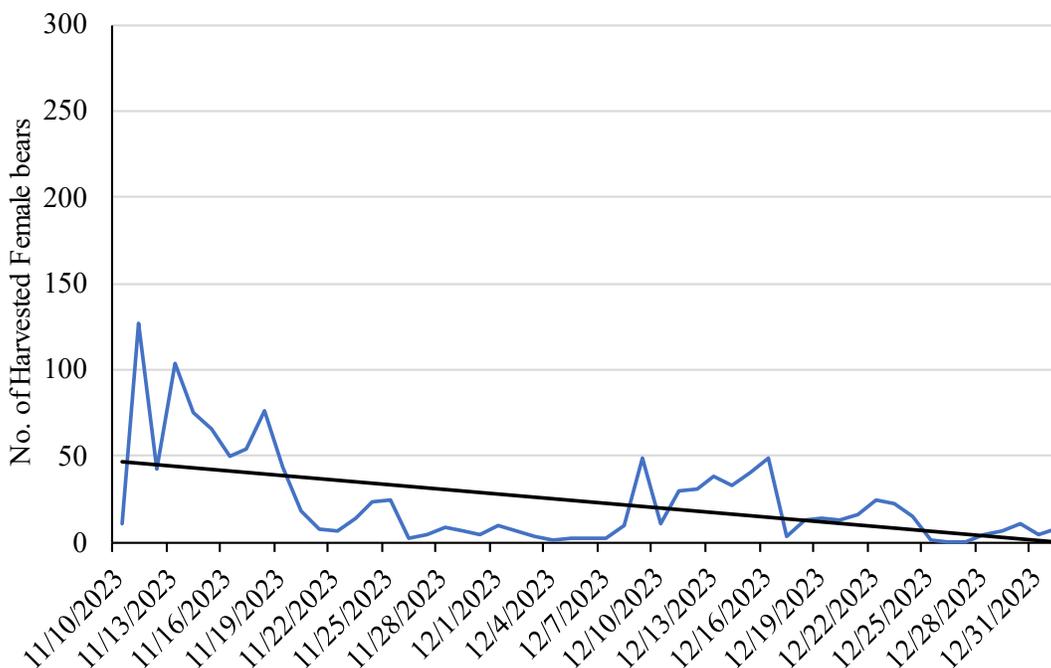
Figure 49. Number of reported female bears harvested per date in the Coastal BMU during the 2023 season (trend indicated by black line).

Method of Harvest: In the Coastal BMU, still hunters comprised 43% of the reported harvest in 2023, which is similar to the last three seasons (Table 6 on page 14; Figure 50). Compared to the previous season, still hunter harvest in the Coastal BMU increased 5%, while harvest by hound hunters increased 8% (Figure 51). Prior to 2014, harvest by still hunters fluctuated, sometimes widely, from season to season. Since 2014, while harvest by hound hunters has fluctuated (-8% to 8%; Figure 51), the change in the harvest from season to season by still hunters has remained positive, with the exception of 2018 (Figure 51). In 2014, use of unprocessed bait was allowed for still hunters. This change likely resulted in still hunters being more successful, despite annual changes in weather that can impact hunting success in the Coastal BMU.
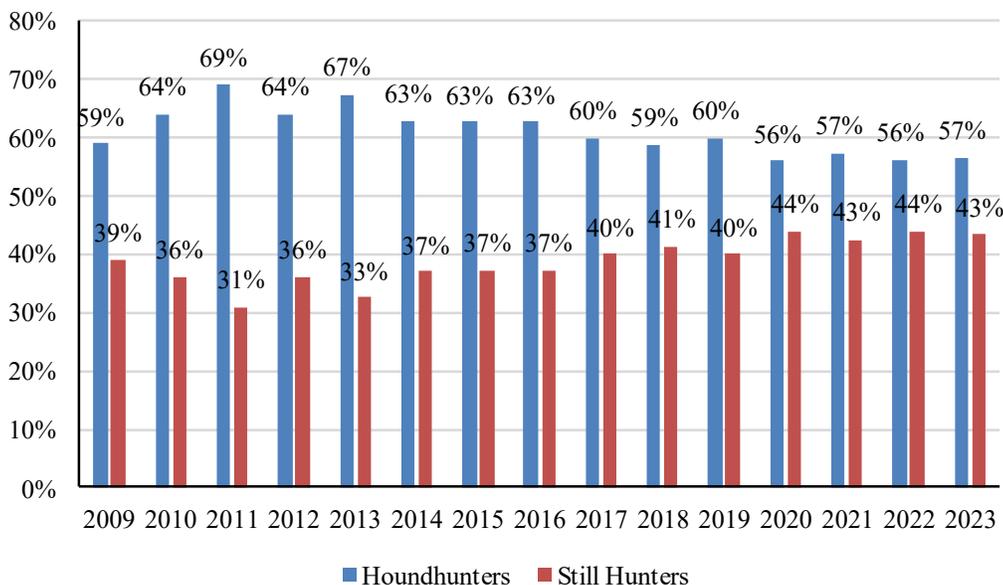
Figure 50. Percent of Coastal BMU bear harvest taken by still hunters and hound hunters.
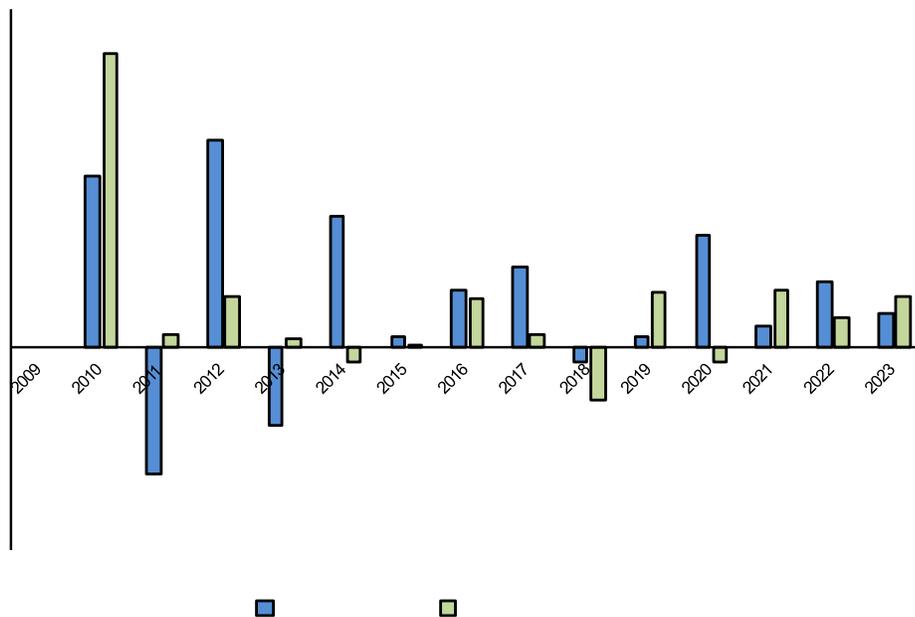
Figure 51. Percent change (%) in reported harvested in the Coastal BMU by method of harvest from 2010 through 2023.

Sex Ratio by Method of Harvest: During the 2023 season, still hunters in the Coastal BMU showed less selectivity for male bears (53% female; Figure 52), whereas houndsmen showed greater selectivity for male bears (42% female; Figure 53). Since 2010, still hunters have shown a declining selectivity for male bears in the Coastal BMU, with three seasons (2015, 2020, 2023) in which the majority of harvest by still hunters was female bears (Figure 52).
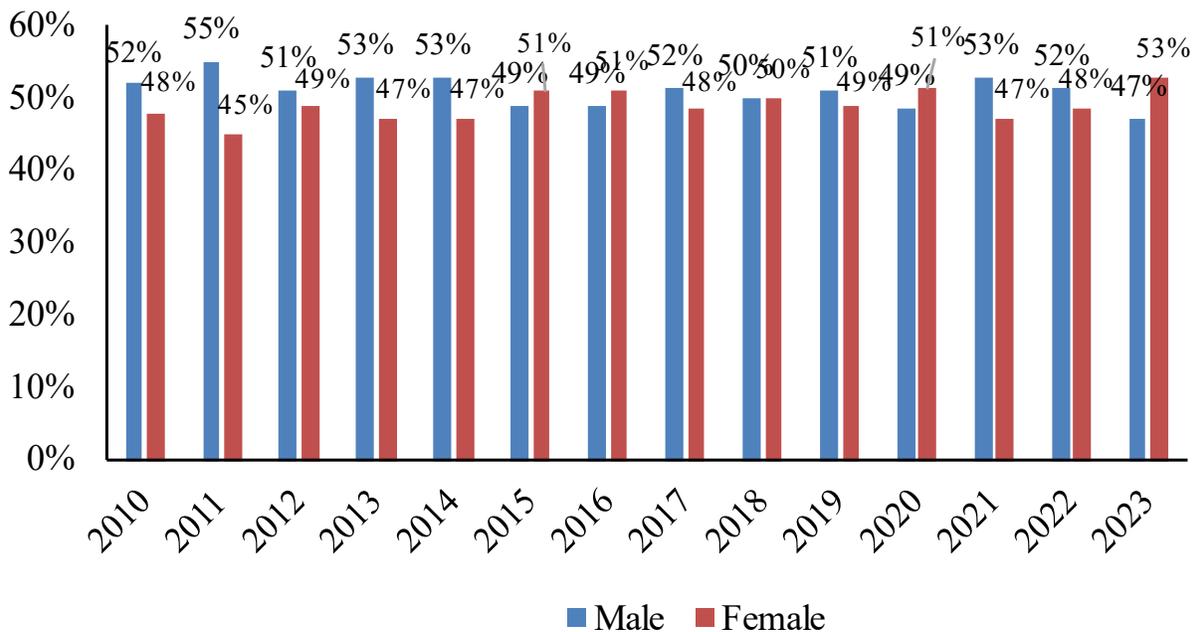
Figure 52. Sex ratio of the bear harvest by still hunters in the Coastal BMU from 2010 through 2023
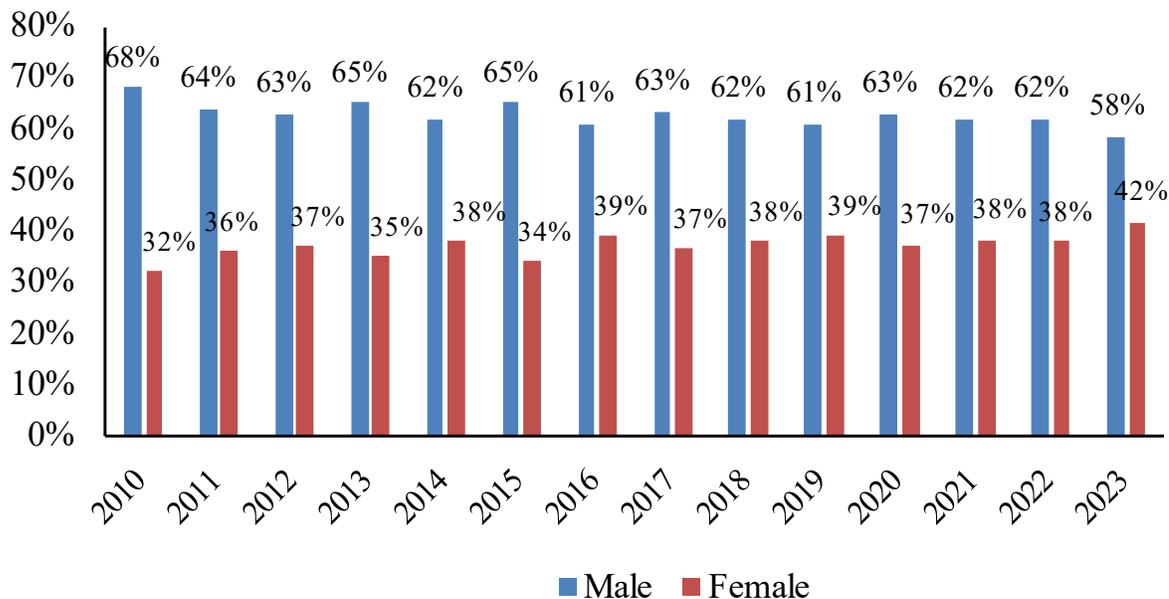
Figure 53. Sex ratio of the bear harvest by houndsmen in the Coastal BMU from 2010 through 2023.

Coastal BMU Weights: In 2023, the average ($\bar{x}$) weight of male and female bears in the Coastal BMU were 321 lbs. and 202 lbs. respectively. Male weights were slightly below the 3-year average of 327 lbs. and female weights were slight above the 3-year average of 199 lbs. From 2000 through 2023, average ($\bar{x}$) weights of harvested male bears sampled in the Coastal BMU has remained fairly stable (blue bars; Figure 54), likely reflecting year-round stable food resources (e.g., hard mast, agricultural crops). However, there has been a slight decline in weights of males sampled since the 2018 season. The highest average weights for harvested males occurred during the 2018 ($\bar{x}$=359 lbs.), 2006 ($\bar{x}$=354 lbs.) and 2012 ($\bar{x}$=352 lbs.) seasons. In 2018, the Commission approved changes to bear hunting seasons in the Coastal BMU that aligned seasons to zones (page 2), added Saturday openers for the November and December seasons in zones 1 through 4, changed the November season start date and end date in Zone 4, and extended the November season in Zone 1 from 6 days to 16 days, which also added 3 weekends (Table 25 on page 56). These season changes, especially in Zone 1 (Dare, Hyde and Tyrrell counties), may have allowed hunters more time to select for larger bears and, in this year with the longer seasons, these bears were more vulnerable to harvest.

There is a fairly stable trend in the percentage of male bears sampled that weigh over 500 lbs. (blue line; Figure 55). The percent of male bears sampled that weighed over 500 lbs. during the 2023 season was similar to the past two seasons; in 2023, 18% of male bears sampled weighed over 500 lbs. The highest percent of bears that weighed over 500 lbs. occurred during the 2018 season.

The average ($\bar{x}$) weight of harvested female bears sampled in the Coastal BMU has also remained fairly stable over the past 20 years, ranging from $\bar{x}$=189 lbs. to $\bar{x}$=212 lbs. (red bars; Figure 54). The heaviest average weight occurred during the 2004 and 2009 seasons ($\bar{x}$=212 lbs.). In 2023, the average weight of sampled female bears in the Coastal BMU was 202 lbs.
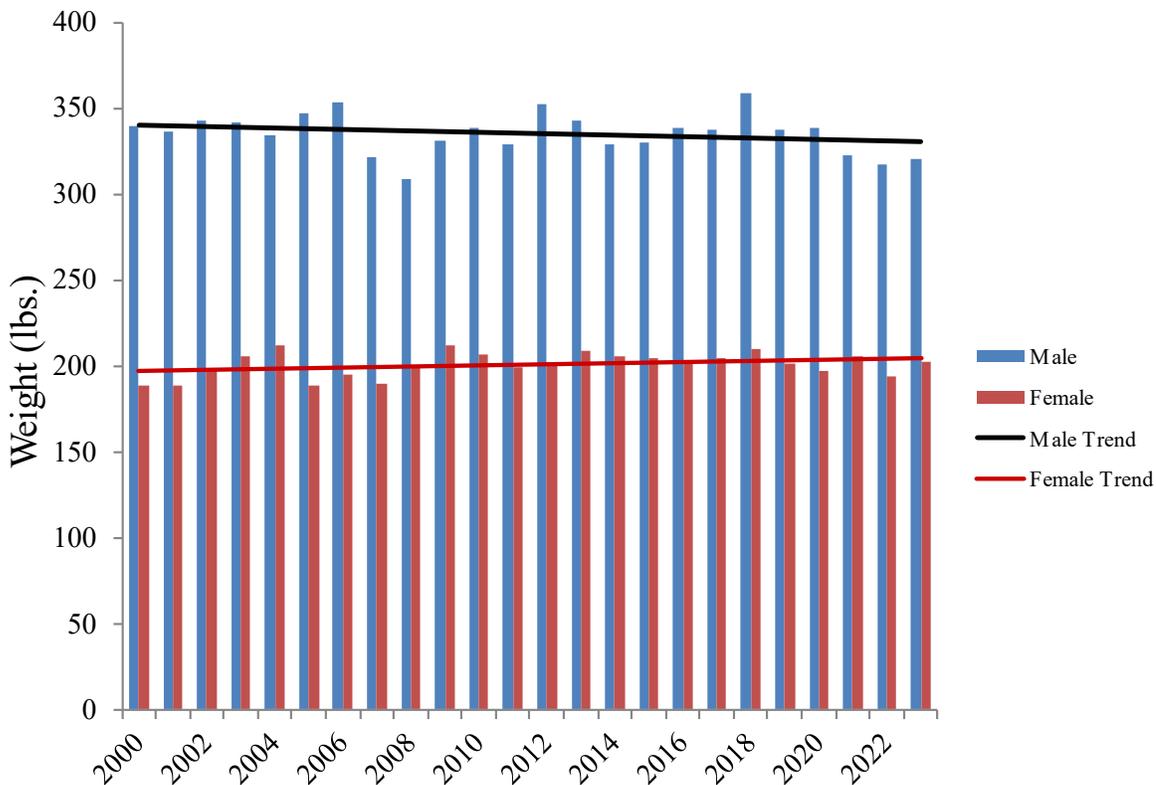
Figure 54. Average weight of harvested male and females bears sampled in the Coastal BMU, 2000-2023.
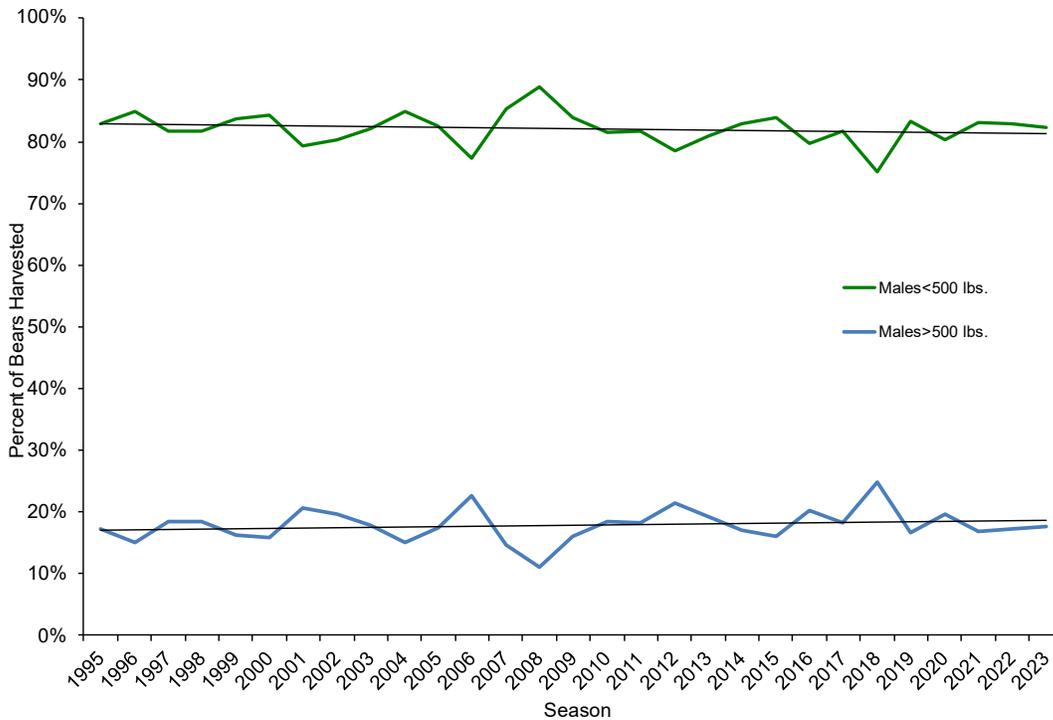
Figure 55. Percent of male bears sampled in the Coastal BMU that weighed over and under 500 lbs. from 1995 through 2023 in North Carolina.

Coastal BMU Ages: There is a declining trend in the average ($\bar{x}$) age of harvested males sampled in the Coastal BMU (blue bars; Figure 56). In 2023, the average age of sampled bears was 4.1 years old, which was slightly younger than the 3-year average ($\bar{x}$=4.3 years old) and significantly younger than the 2018 season ($\bar{x}$=5.1 years old) and the 2013 season ($\bar{x}$=5.0 years old). Since 2000, the oldest mean age of male bears occurred in the 2018 season, followed by the 2005 season, and the youngest mean age occurred in 2022 ($\bar{x}$= 4.0 years old; Figure 56)

From 2000 to 2020, the average ($\bar{x}$) age of harvested female bears sampled in the Coastal BMU has varied, ranging from 4.7 yrs. old to 7.1 yrs. old, but also shows a declining trend (red bars; Figure 56). The average age of female bears peaked in 2003 ($\bar{x}$=7.1 yrs. old). In 2023, the average age of females sampled was 5.1 years old, which was slightly older than the 3-year average ($\bar{x}$=4.7 years old). The 2019 season is the youngest female mean age ($\bar{x}$=4.7 years old) sampled since the 1983 season, while the 2003 season, followed by the 2004 season ($\bar{x}$=6.0 years old) had the oldest mean age (Figure 56).
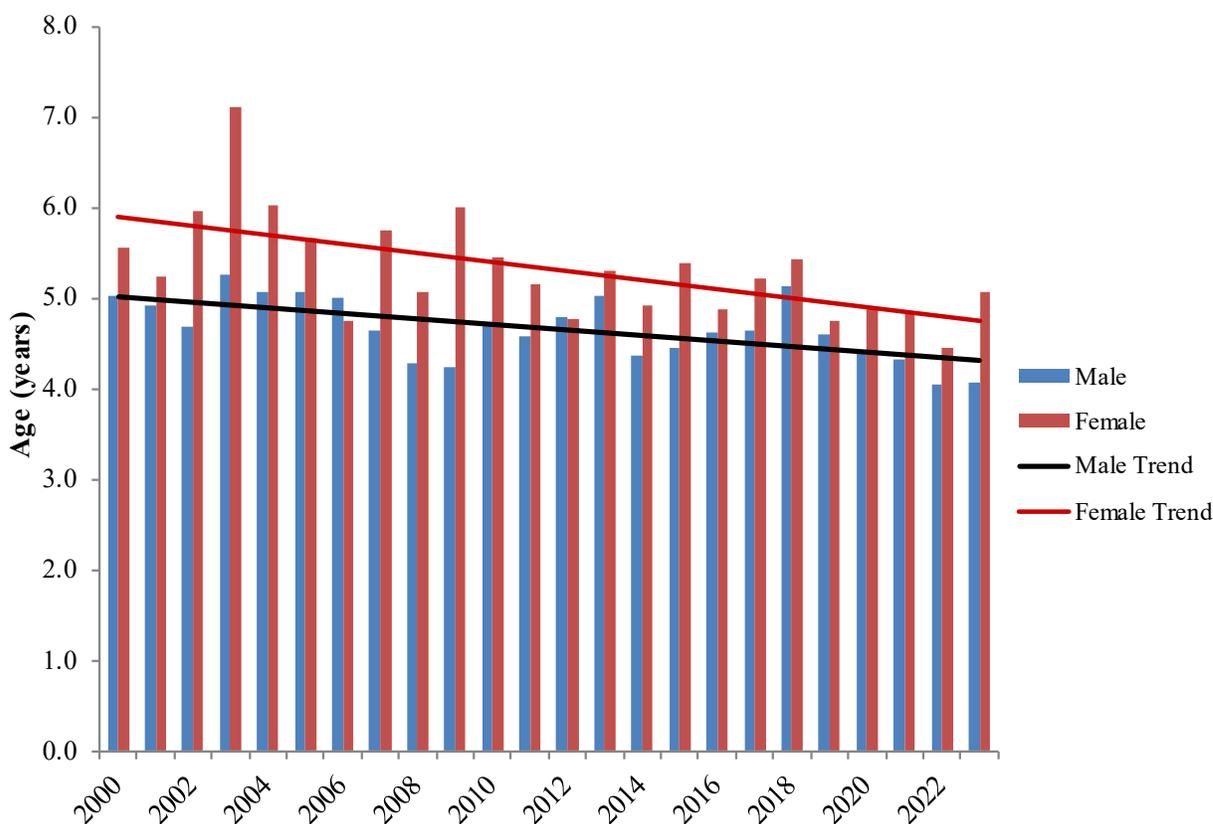
Figure 56. Average age of harvested male and female bears sampled in the Coastal BMU, 2000-2023.

*Weight and Age by Method of Harvest*: For the 2023 season, Coastal BMU male and female bears sampled from houndsmen were heavier (36 lbs. and 37 lbs. respectively) than those sampled from still hunters (Table 27). Overall, in 2023, weights of male bears were 3 lbs. lighter than the 3-year average, while female bears were 3 lbs. heavier (*All Hunters*; Table 27). For the 2023 season, houndsmen harvested older male and female bears than still hunters. When comparing ages of bears harvested during the 2023 season with the prior 3-year average, male bears were slightly younger while female bears were slightly older (Table 27).

Limited interpretation should be given to weight results, since we are unable to sample all harvested bears and, starting in 2020, much of the information on weight is provided by the hunter, rather than the bear being weighed by Commission staff. Despite the weight information being self-reported by hunters, most hunters now have access to accurate and low-cost digital scales. In addition, with mandatory tooth submission, the Commission is receiving more data on bear weights. For example, in 2020, the Commission received weight data on 32% of harvested bears from the Coastal BMU, whereas in 2023 we received weight data from 54% of harvested bears.

Table 27. Mean age and weight for harvested bears sampled in the Coastal BMU during the 2023 season and 3-year average.

			Mean Age (yr.)		Mean Weight (lbs.)	
Season	**BMU**	**Hunting Method**	**Male**	**Female**	**Male**	**Female**
2023	Coastal	Still Hunters	3.7	4.7	297	182
		Houndsmen	4.3	5.5	333	219
		All Hunters	*4.1*	*5.1*	*321*	*202*
2020-2022 (3-yr. average)	Coastal	Still Hunters	3.9	4.3	298	179
		Houndsmen	4.4	5.1	337	213
		All Hunters	*4.2*	*4.7*	*324*	*199*

Coastal BMU Zone Harvest

In August 2016, the Commission engaged with constituents through 7 public bear management forums across the State. These forums were to engage with citizens on bear management issues and to gain feedback on the development of distinct biological zones for the Coastal BMU. As a result, five zones were created in the Coastal BMU based on bear land cover, harvest per huntable acre, and percent of sanctuary in a county, as well as expert opinion provided by Commission biological staff and input from constituents. Seventy-six percent of attendees at the forums felt the zones were reasonable. There was less agreement about whether the Commission should create biological zones in the Mountain BMU
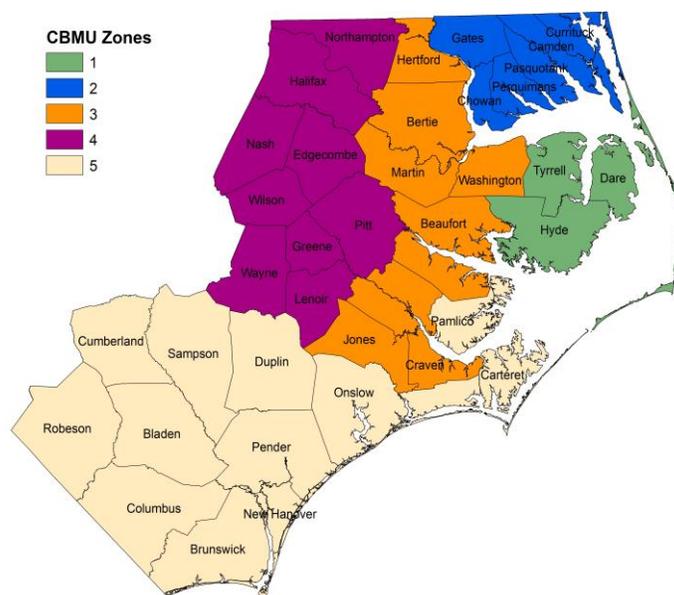
(50% support). Many hunters who did not support zones in the Mountain BMU indicated concern that by creating zones, different seasons would be developed, resulting in greater hunting pressure on the bear population if these seasons were not concurrent.

In 2018, the Commission approved changes to bear hunting seasons in the Coastal BMU that aligned the season to the zone, added Saturday openers for the November and December seasons in zones 1 through 4, changed the November season start date and end date in Zone 4, and extended the November season in Zone 1 from 6 days to 16 days, which also added 3 weekends (Table 25 on page 56).

In 2023, reported harvest was highest in Zone 3 (n=966 bears) followed by Zone 5 (n=640 bears), while lowest in Zone 4 (n=182 bears; Figure 57). Three of five zones experienced increases in harvest during 2023, with Zone 2 (24%) and Zone 3 (10%) having the highest increases (Figure 57). Zone 1 increased 3%. Zone 4 declined 3% and Zone 5 declined 1%.
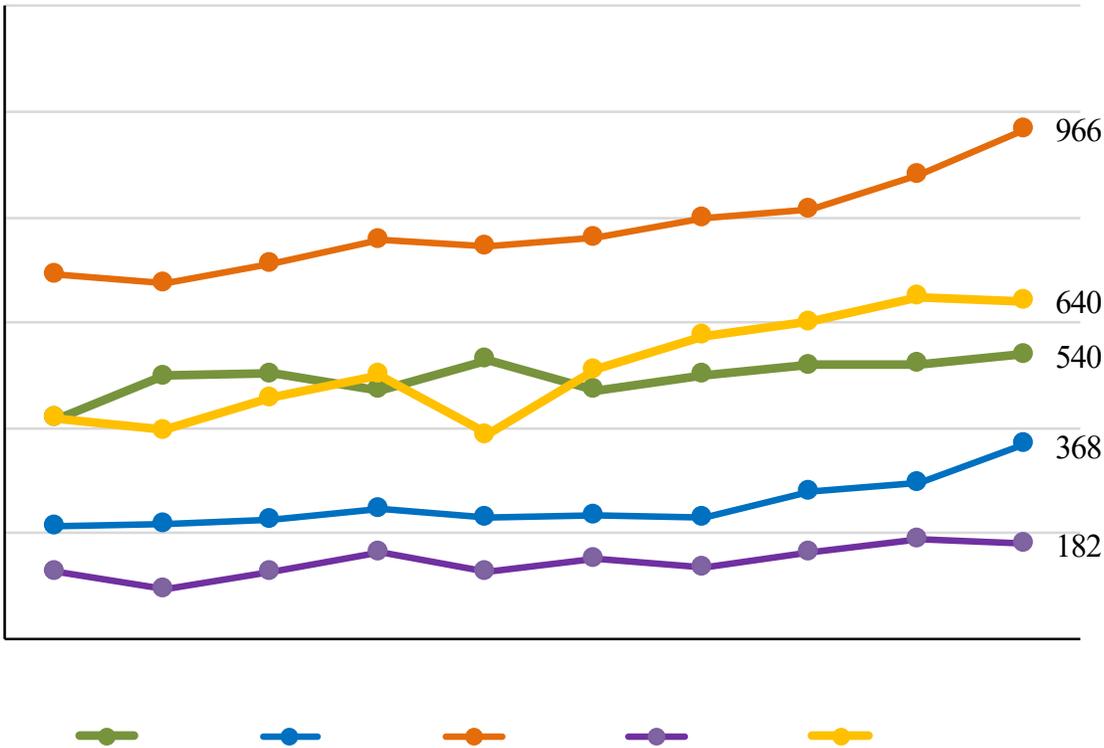
Figure 57. Reported harvest by Coastal BMU zone from 2009 through 2023.

Hunters were more selective for male bears in Zone 4 (40% female) and Zone 5 (43% female), and less selective in Zones 1, 2, and 3 (45% to 51% female; Table 28). On average, the oldest male and female bears harvested are from Zone 1, while the youngest bears harvested are from Zone 4 (Table 29). The heaviest male bears, on average, are harvested from Zone 1 and the lightest male bears are from Zone 2. The heaviest females, on average, are harvested from Zone 4 and Zone 1, while the lightest are from Zone 2 (Table 29).

Table 28. Female sex ratio by Coastal BMU zone 2018 to 2023

Female Sex Ratio of Reported Harvest

Coastal Zone	2018	2019	2020	2021	2022	2023
1	40%	40%	40%	38%	39%	45%
2	47%	40%	42%	36%	44%	51%
3	46%	44%	48%	45%	45%	49%
4	40%	44%	38%	54%	48%	40%
5	40%	44%	43%	42%	40%	43%

Table 29. Mean age and weight for harvested bears sampled in the Coastal BMU during the 2023 season and 3-year average.

Season	BMU	Coastal Zone	Mean Age (yr.)		Mean Weight (lbs.)	
			Male	Female	Male	Female
2023	Coastal	Zone 1	5.5	5.5	377	203
		Zone 2	3.3	5.5	268	202
		Zone 3	3.4	5.0	294	203
		Zone 4	4.2	4.7	364	217
		Zone 5	4.4	4.5	323	196
2020-2022 (3-yr. average)	Coastal	Zone 1	5.8	5.4	374	204
		Zone 2	3.5	5.2	280	190
		Zone 3	3.8	4.4	313	200
		Zone 4	3.3	3.8	313	205
		Zone 5	4.1	4.5	313	196

Mountain Bear Management Unit (Mountain BMU): The 2023 reported harvest (n=1,497 bears) in the Mountain BMU increased 2% compared to the 2022 season (n=1,468 bears) and was the highest harvest on record (Table 3 on page 8 and Table 30). The Mountain BMU harvest has exceeded 1,000 bears consistently for the last 9 seasons. During the 2009 season, the reported bear harvest exceeded 1,000 bears for the first time since records were kept.

As with the Coastal BMU, the Mountain BMU bear harvest is also tied to bear population size, number of hunters, and changes in bear hunting season structure and hunting methods. However, the Mountain BMU bear harvest is also typically tied to weather and the availability of hard and soft mast; harvest levels typically rise in years of poor natural food availability and drop in years of good natural food availability. When there is a lack of hard mast, bears are more attracted to unnatural food sources, such as bait piles, and look for food over larger unfamiliar areas, making them more accessible to hunters. For example, during falls 2009, 2011 and 2013, the hard mast abundance was poor, which contributed to the record bear harvests that occurred in the Mountain BMU in those years (Table 30). More recently, in 2016 the harvest declined 12% which corresponded with a fair hard mast crop and an improvement in hard mast production when compared to 2015. However, the harvest in 2017 differed from the traditional pattern observed in the Mountain BMU; despite an improvement in hard mast production from 2016, in 2017, there was a 20% harvest increase and a record harvest. While the fall hard mast index was higher in 2017 than in 2016, the 2017 hard mast production was uneven and extremely variable based on location, with some areas experiencing poor production while other areas experienced good to excellent production. For example, several areas experienced very poor production of white oaks. In addition, we suspect that hard mast productivity in 2016 was higher than what the index reflected. In 2018, hard mast abundance was poor, resulting in an increase in the reported harvest (+16%), as well as a record harvest. The hard mast abundance was improved in 2019 and 2021, which explains the 12% and 14% decline, respectively, in the reported harvest in the Mountain BMU. During 2020, hard mast abundance declined from the previous year, and the harvest increased in response. Even though there was a record bear harvest in the Mountain BMU during 2023, despite an increase in mast abundance compared to the prior season, female harvest declined 3%, reflecting the influence that hard mast abundance has on harvest levels (Table 3 on page 8).

The county with the highest reported harvest was Haywood County (n=143), followed by McDowell and Madison counties (140 and 108, respectively, Figure 58; Table 30). Record harvests occurred in 9 of 25 counties of the Mountain BMU, with Ashe and Alleghany counties experiencing the highest increase in harvest (Table 30). Fourteen counties experienced increases in harvest, while 2 counties had no change, and 9 counties experienced declines in harvest compared to 2022 (Table 30).
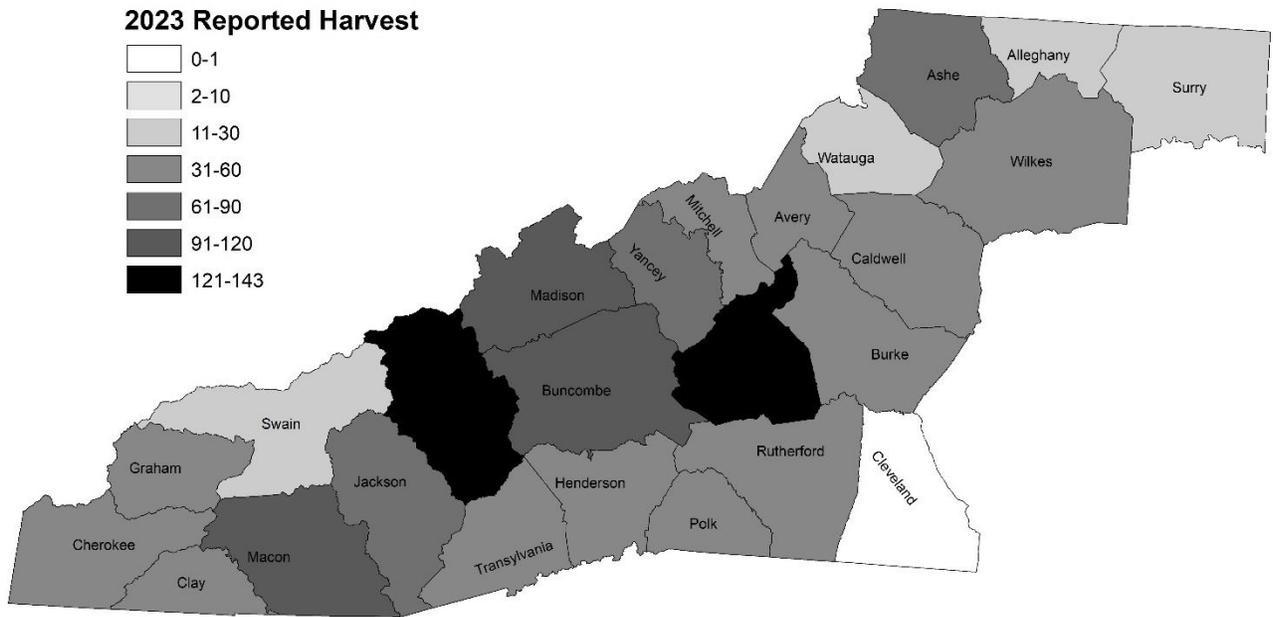
Figure 58. Reported harvest by county in the Mountain BMU during the 2023 bear hunting season.
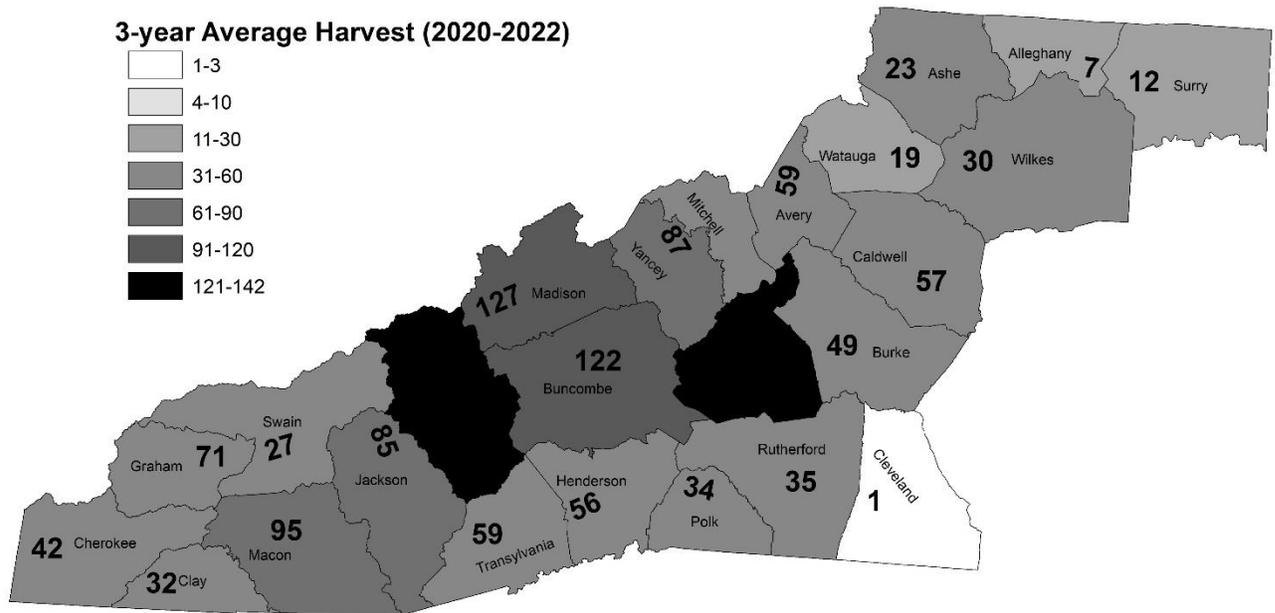
Figure 59. Three-year average harvest (2020 through 2022) in the Mountain BMU

Table 30. Reported harvest results of black bears by county in the Mountain Bear Management Unit (Mountain BMU) of North Carolina from 2010 through 2023.

County	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	% change from 2022 to 2023
Alleghany	2	8	6	6	2	8	11	11	14	13	23	8	7	29	314%
Ashe	5	31	24	25	8	29	30	50	37	27	38	31	23	67	191%
Avery	17	46	25	45	25	48	43	50	52	47	57	41	59	38	-36%
Buncombe	18	49	47	74	30	61	68	69	103	77	121	86	122	105	-14%
Burke	28	37	38	55	19	33	36	47	44	70	41	58	49	55	12%
Caldwell	15	36	23	31	15	51	40	48	45	49	46	43	57	60	5%
Cherokee	51	85	71	58	32	65	44	64	60	52	47	35	42	36	-14%
Clay	49	25	40	37	25	29	27	32	40	43	38	34	32	38	19%
Cleveland	0	0	3	3	1	0	0	0	0	2	0	5	1	1	0%
Graham	74	134	96	68	77	116	58	103	95	76	81	52	71	53	-25%
Haywood	41	127	75	102	54	117	92	99	142	104	139	123	161	143	-11%
Henderson	10	37	25	38	7	28	26	33	61	65	46	59	56	57	2%
Jackson	28	37	59	71	26	63	54	64	80	50	78	51	85	86	1%
Macon	65	77	67	110	50	87	41	76	72	92	77	66	95	91	-4%
Madison	46	73	73	91	55	120	107	79	135	102	97	122	127	108	-15%
McDowell	87	105	110	98	67	81	119	117	128	109	144	107	135	140	4%
Mitchell	19	40	29	42	22	37	36	45	52	32	37	35	43	31	-28%
Polk	2	5	3	13	5	9	3	7	15	13	18	25	34	42	24%
Rutherford	8	6	10	25	7	14	13	16	24	29	23	19	35	37	6%
Surry	2	15	11	15	6	8	21	18	6	17	23	18	12	30	150%
Swain	15	43	24	23	14	24	23	33	52	13	42	35	27	30	11%
Transylvania	26	43	42	52	18	33	25	42	45	55	53	45	59	53	-10%
Watauga	3	9	10	20	8	26	10	17	18	18	20	14	19	23	21%
Wilkes	9	24	13	16	10	29	27	35	62	28	46	40	30	57	90%
Yancey	42	78	56	89	51	83	97	109	84	107	94	78	87	87	0%
Totals	**662**	**1,170**	**980**	**1,207**	**634**	**1,199**	**1,051**	**1,264**	**1,466**	**1,290**	**1,429**	**1,230**	**1,468**	**1,497**	

During the 2023 harvest season, the number of males harvested in the Mountain BMU increased by 5% and the number of females harvested decreased by 3% (Table 3 on page 8). In the Mountain BMU, the percentage of females that have comprised the total harvest over the last 3 years has not varied (35% - 37%; Figure 60). The 3-year average has been 36%; during the 2023 season females comprised 35% of the reported harvest. Typically, when hard mast abundance is fair to good, we see a decrease in the female sex ratio of the harvest, as they are less vulnerable to hunters, which is what occurred in 2023. The overall trend in the Mountain BMU shows continued selectivity against females, as well as female bears being less vulnerable to harvest due to mast abundance and timing of denning. However, 4 out of 25 counties exceeded a 44% female sex ratio in 2023 (Figure 62); for sustainable bear harvests, in which the objective is to have stabilized bear population growth, the female sex ratio of the harvest should not exceed 44%. Unlike the Coastal BMU, where population growth is now at 0-1%, the Mountain BMU is still at 3-4% population growth (Figure 13 on page 32). The additional harvest pressure on females in some of these counties may help to achieve the bear population objective for the Mountain BMU, which is to stabilize the population by reducing population growth to zero.
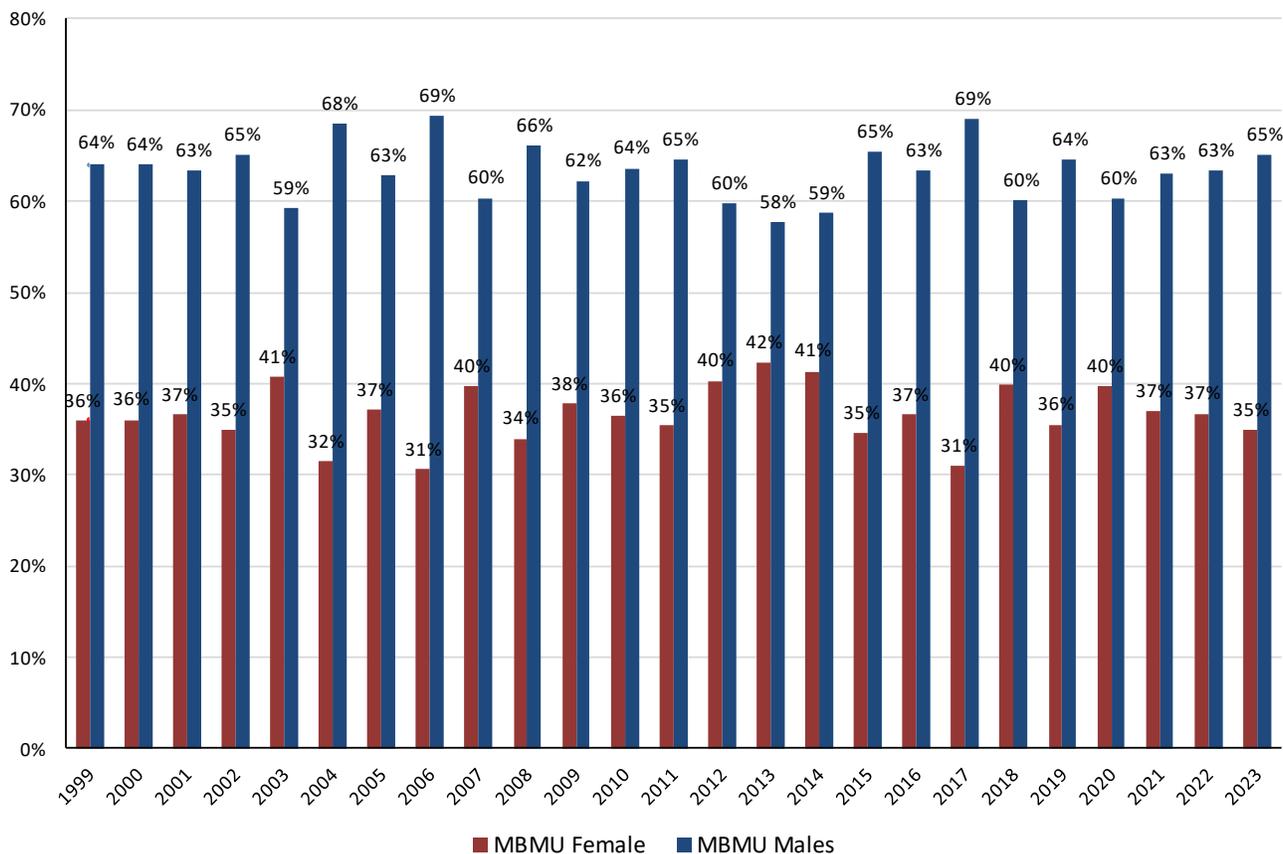
Figure 60. Percentage of male (blue) and female (red) bears in the reported Mountain BMU harvest.

2023 Reported Female Harvest
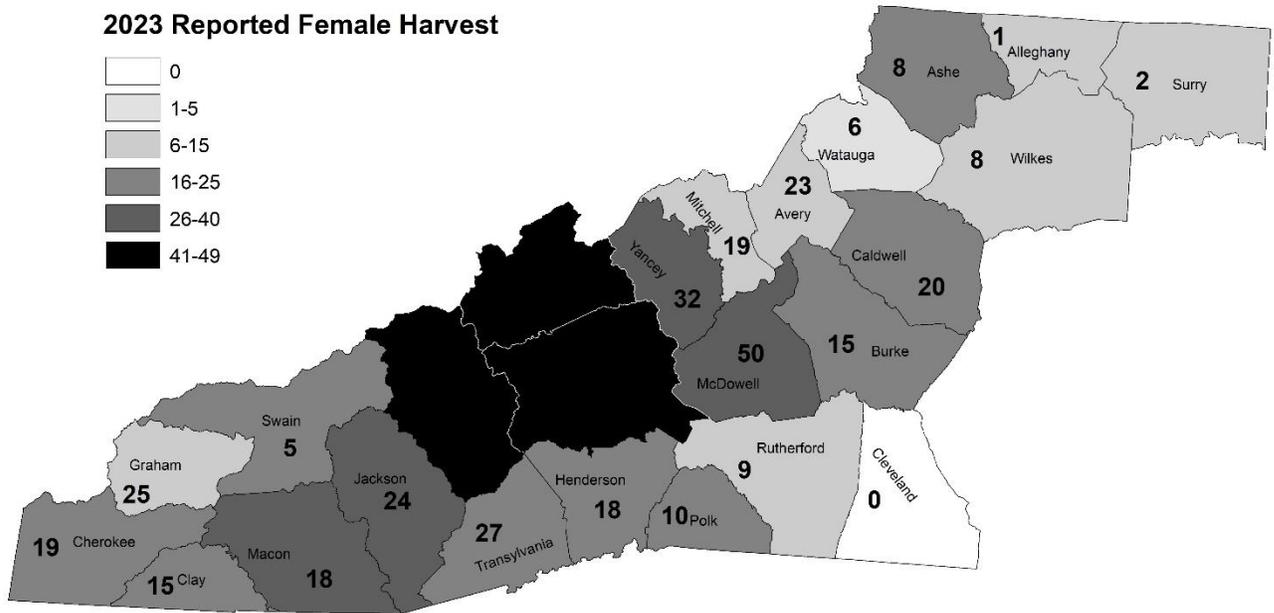
Figure 61. The 2023 reported female harvest by county in the Mountain BMU.

Female Sex Ratio of the 2023 Black Bear Harvest
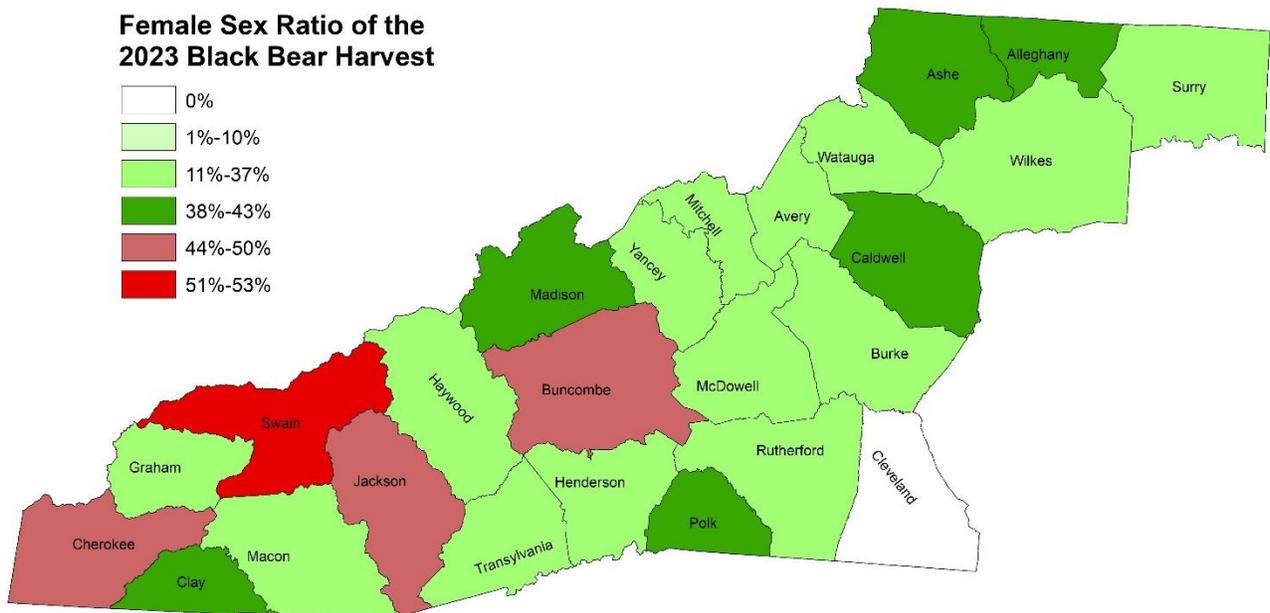
Figure 62. Percentage of the reported harvest comprised of female black bears in the Mountain BMU during the 2023 bear hunting season.

As expected, and observed in previous seasons, reported harvest of all bears declined throughout the season, with increases occurring on the last day of the first half of the season and on the last day of the season (Figures 63 and 64). Forty-nine percent of the Mountain BMU harvest occurred in October, while 27% and 24% occurred in November and December, respectively. The percent of females in the harvest showed a declining trend throughout the season, with 50% of females harvested in October (Figure 64).
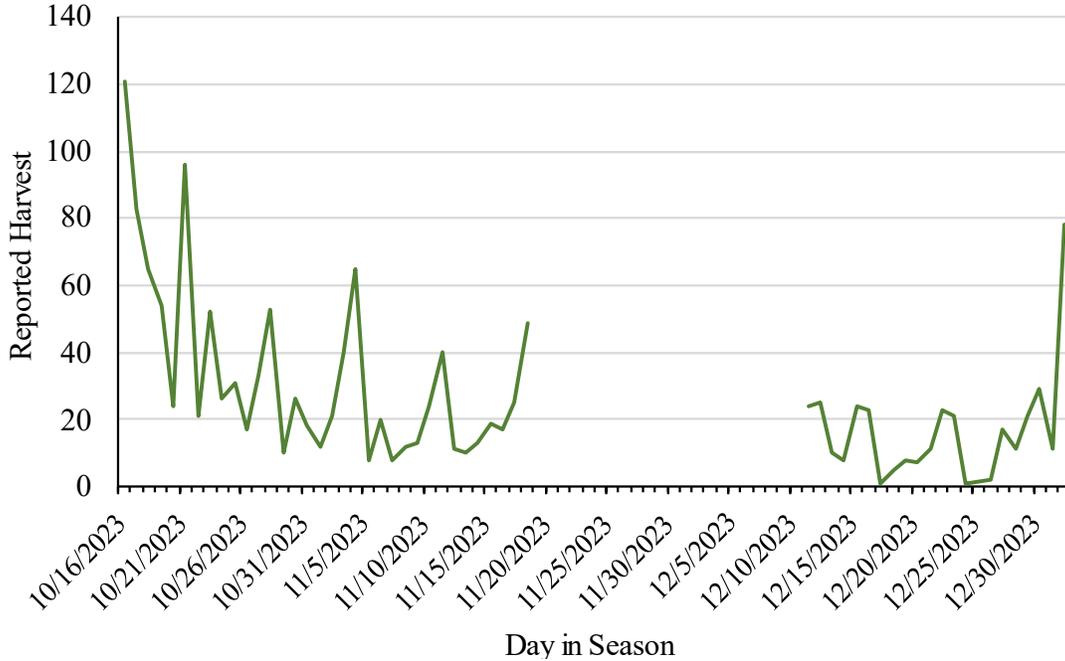
Figure 63. Reported bear harvest by day during the 2023 season in the Mountain BMU.
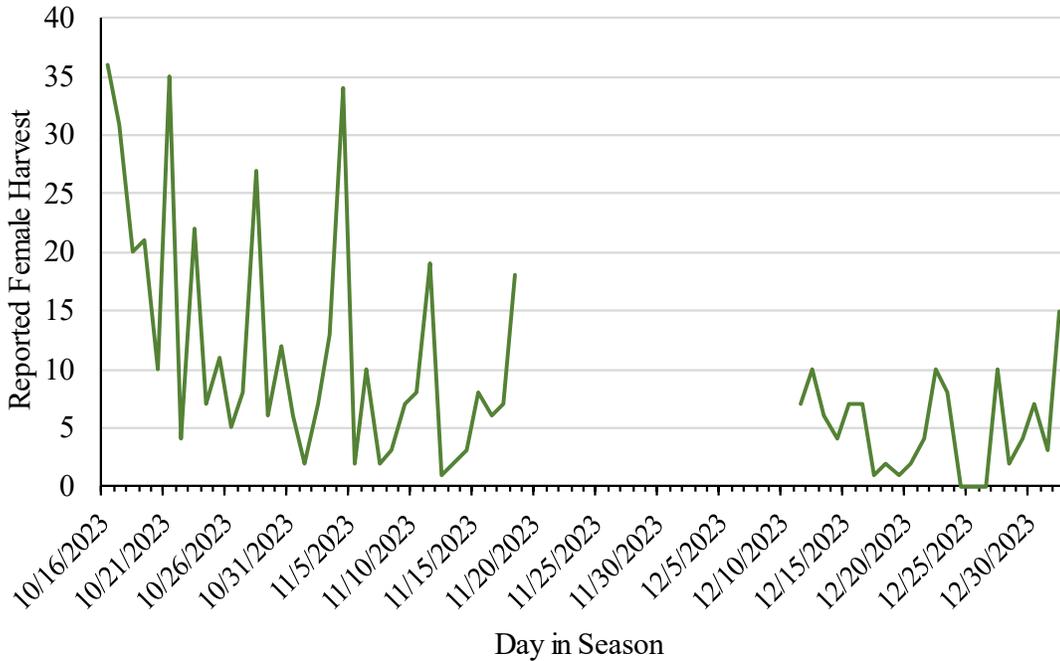
Figure 64. Reported harvest of female bears during the 2023 season in the Mountain BMU.

During 2023, houndsmen comprised 65% of the bear harvest (Figure 65). The percentage of the harvest comprised of hound hunters and still hunters in the Mountain BMU increased by 1% and 4%, respectively, from the previous season (Figure 66). Typically, when hard mast is abundant, reported harvest decreases, especially by still hunters, as when there is a fair to good hard mast, bears are less attracted to unnatural food sources, such as unprocessed bait, and are less likely to travel as far to search for food, making them less vulnerable to hunters. But harvest, in particular, by still hunters increased despite fair mast abundance during 2023. This may be due to the use of unprocessed bait on private lands and/or an increase in the number of active bear hunters (Table 18 on page 29).
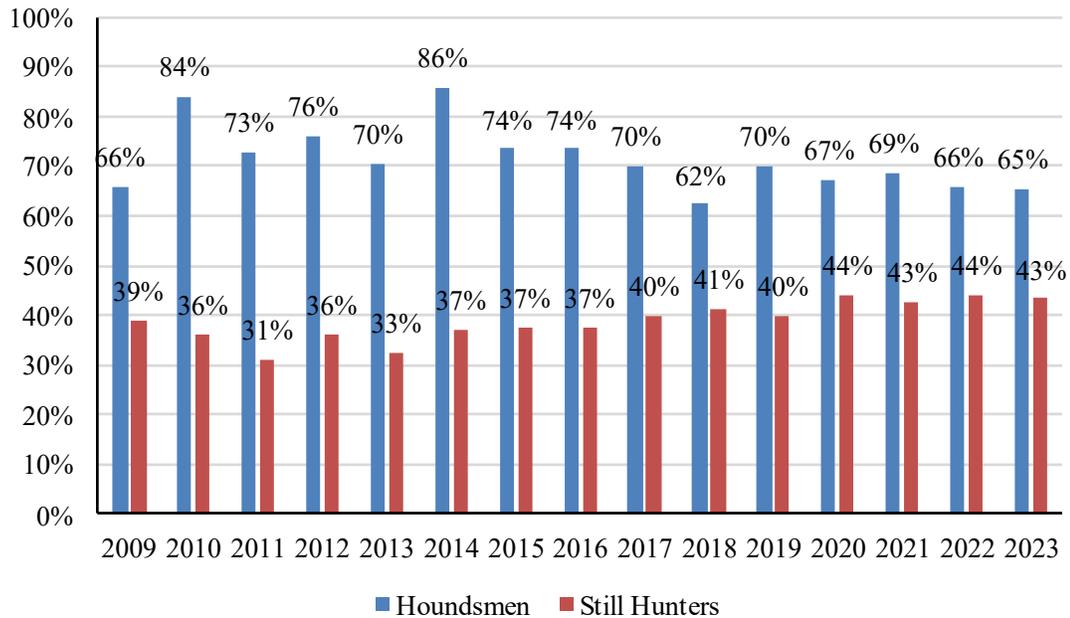
Figure 65. Percent of harvest in Mountain BMU by houndsmen and still hunters.
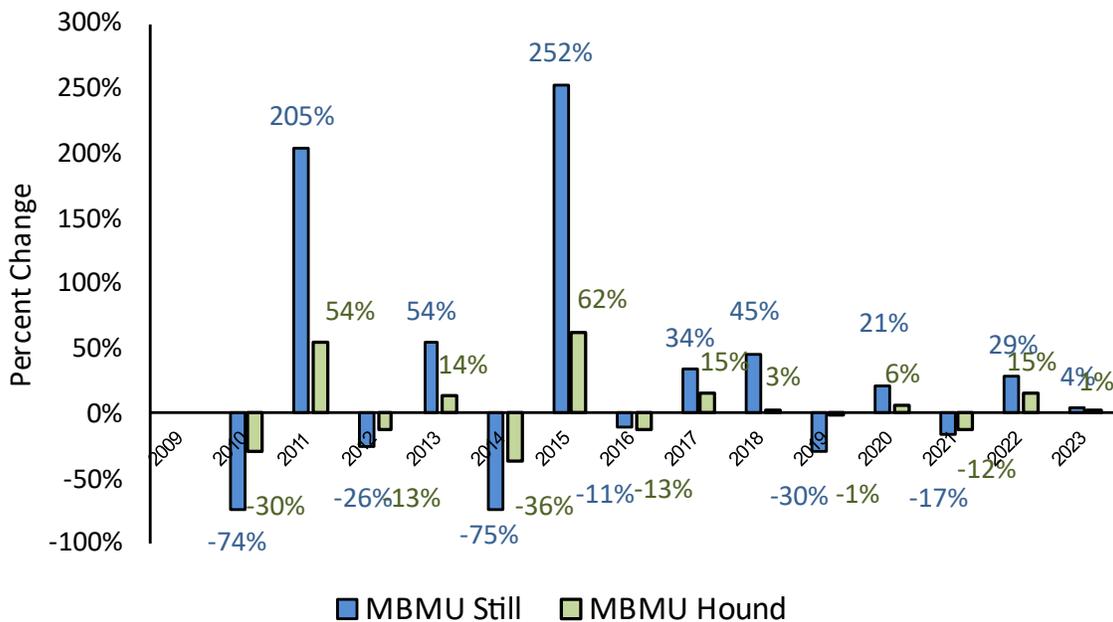
Figure 66. Annual percent change in reported harvest by method of harvest in the Mountain BMU from 2010 through 2023.

Sex Ratio by Method of Harvest: In the Mountain BMU when mast is fair to poor, as it was in 2018 and 2020, bear hunters, in particular still hunters, are likely to harvest a greater ratio of females than in years with fair to good mast crop. This is due to the poor acorn crop causing bears to travel more extensively, making them more vulnerable to harvest and more likely to be attracted to artificial food sources, such as unprocessed bait. In 2023, mast abundance was fair and higher than in 2022, and still hunters harvested a lower ratio of females than in 2022, while hound hunters harvested a higher ratio (Figures 67 and 68).
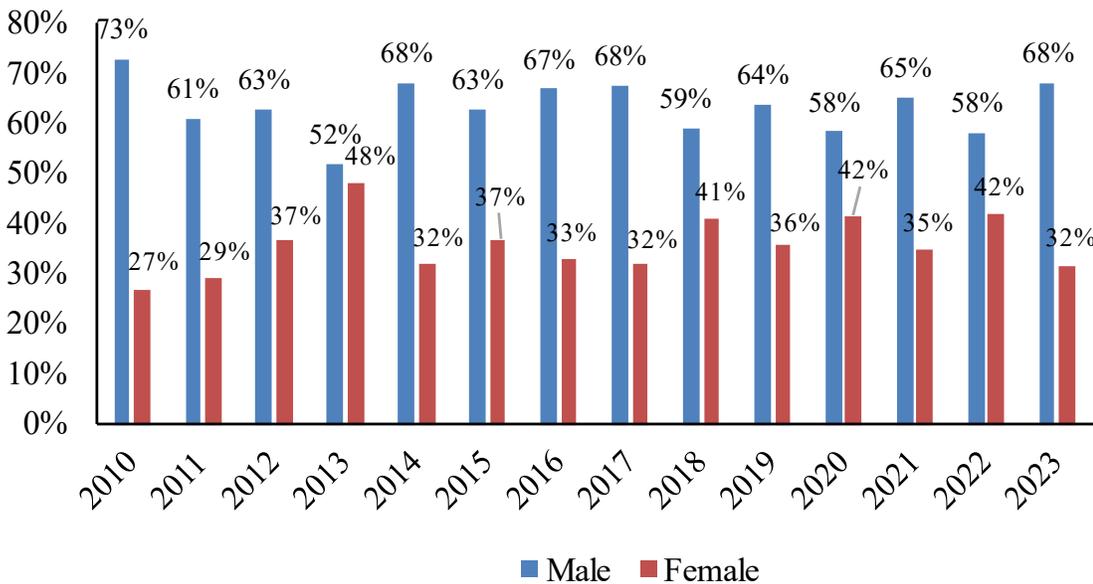
Figure 67. Sex ratio of the bear harvest by still hunters in the Mountain BMU from 2010 through 2023
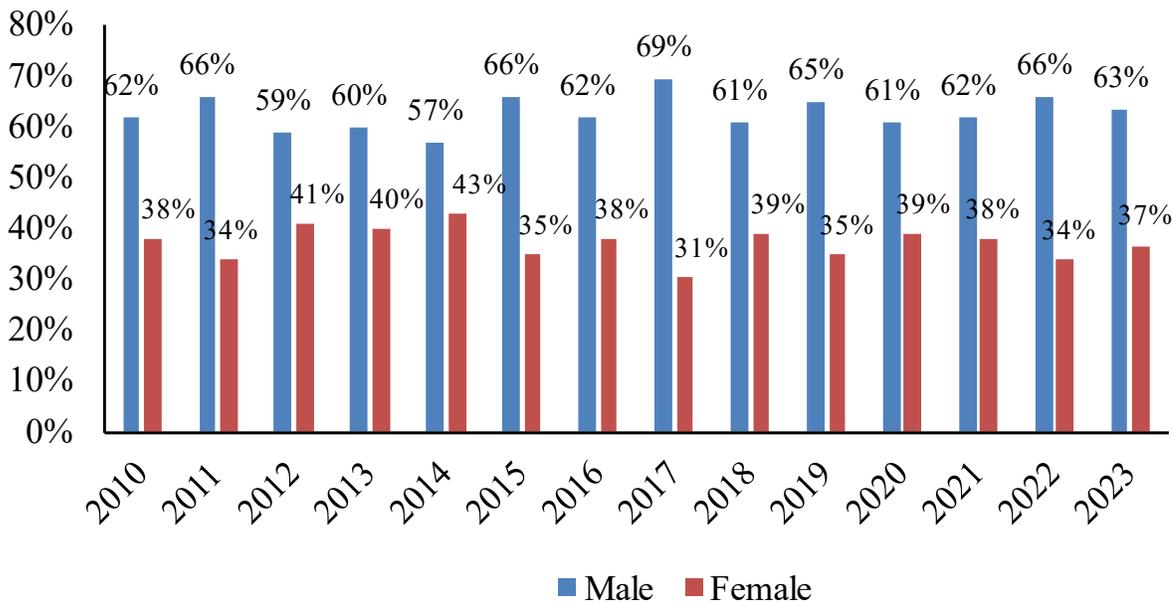
Figure 68. Sex ratio of the bear harvest by houndsmen in the Mountain BMU from 2010 through 2023.

Mountain BMU Weights: The average ($\bar{x}$) weight of harvested male bears sampled in the Mountain BMU has varied over the years. For example, from 1990 through 2014, weight varied by as much as 71 lbs., with 2010 experiencing the lowest weight ($\bar{x}$=182 lbs.) and 1999 experiencing the heaviest weight ($\bar{x}$=253 lbs.). For the past 10 seasons (2014-2023), the average weight of male bears sampled has been stable to slightly increasing and that average weight is 225 lbs. (range 217-238 lbs.; blue bars, Figure 69). In 2023, the average weight of male bears sampled was 218 lbs., which was 20 lbs. lighter than in 2022, but only 7 lbs. below the 10-year average. Overall, average male weights are stable to slightly increasing (Figure 69), however there is a stable to slightly declining trend in the percent of male bears >300 lbs. that comprise the harvest (blue line; Figure 70). However, limited interpretation should be made, as certain factors, such as the annual variation in hard mast abundance and the use of unprocessed bait to aid in hunting bears, has influenced the sampled male bear weights over the past few years. In addition, reporting bear weight is not mandatory, and hunters may be less inclined to report weights of smaller bears versus larger bears. However, with mandatory tooth submission, we are getting more information on self-reported bear weights. For example, in 2020, we received actual gross weight information from 27% of male bears harvested in the Mountain BMU. For the 2023 season, we received weight information from 43% of harvested male bears. This increase in self-reporting improves the analysis of male bear weights in the Mountain BMU.

The average ($\bar{x}$) weight of harvested female bears sampled in the Mountain BMU shows an increasing trend (red bars; Figure 69). From 1990 through 2014, weights varied by 27 lbs. during this time period, with 1997 experiencing the lowest weight ($\bar{x}$=155lbs.) and 1990 and 2012 experiencing the heaviest weight ($\bar{x}$=182 lbs.). For the past 10 seasons (2014-2023), the average weight of female bears sampled has been showing in increasing trend and that average weight is 189 lbs. (range 174-204 lbs.; red bars, Figure 69). During the 2023 season, the average weight of female bears sampled was 189 lbs., which was 2 lbs. lighter than in 2022 and same as the 10-year average. Female weights reflect many factors, including hunter selectivity and the fact that female bears are limited in size, due to variation in natural food supplies and the energetic demands of raising cubs. Since 2014, both still hunters and houndsmen could use the aid of unprocessed bait during the first half of the Mountain BMU season. The availability of unprocessed bait, in addition to the increase in anthropogenic foods (e.g., bird feeders, unsecured garbage) may also be influencing female weights in the Mountain BMU. In addition, mast abundance has not been as variable the past 5 years, as it has been historically (see page 46). As stated in the paragraph above, limited interpretation should be made on female weights due to various factors. However, similar to male bear weights, we have seen an increase in self-reporting of female bear weights from the Mountain BMU due to mandatory tooth submission. For example, in 2020, we received actual gross weight information from 25% of female bears harvested in the Mountain BMU. For the 2023 season, we received weight information from 37% of harvested female bears. This increase in self-reporting improves the analysis of female bear weights in the Mountain BMU.
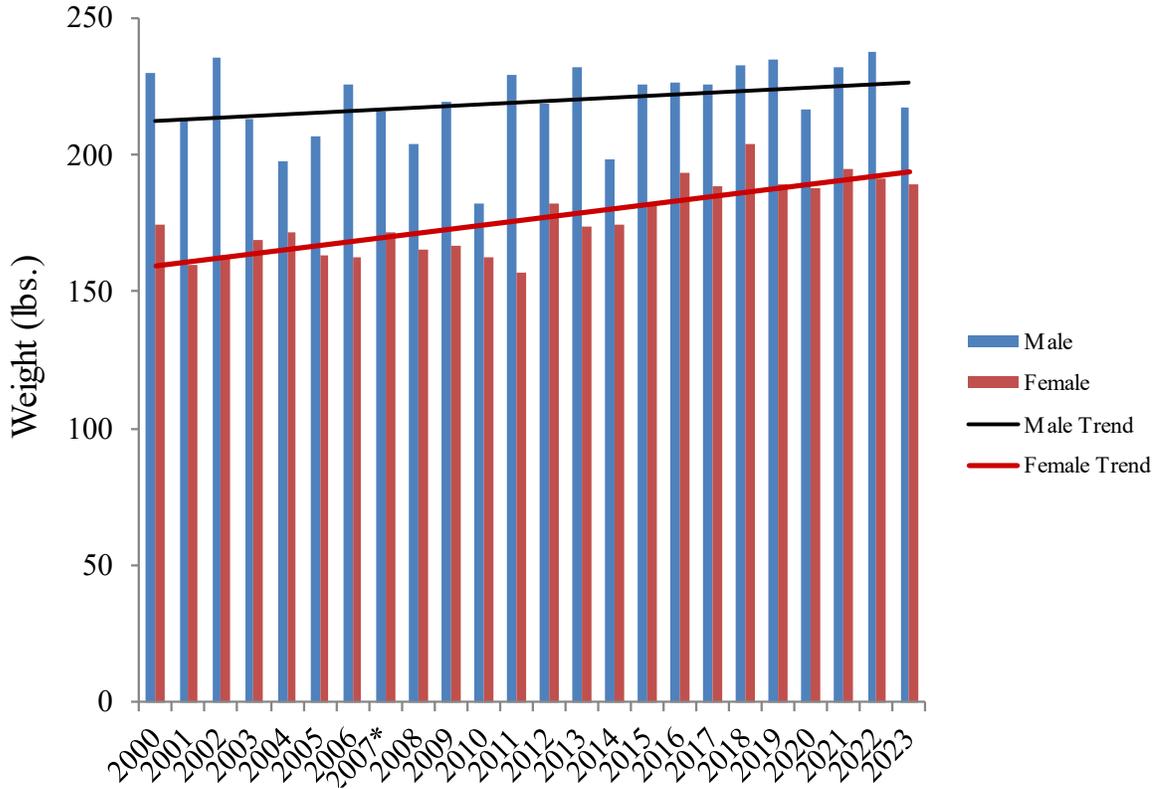
Figure 69. Average weight of harvested male and female bears sampled in the Mountain BMU, 2000-2023.
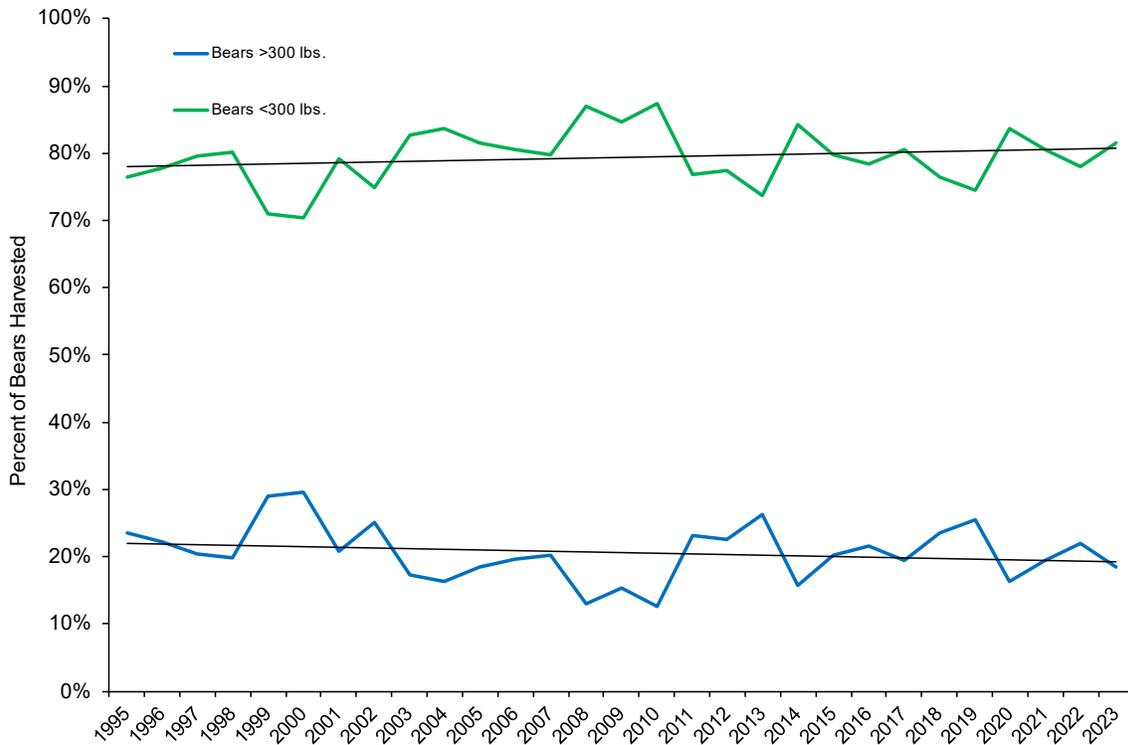
Figure 70. Percent of male bears sampled in the Mountain BMU that weighed over and under 300 lbs. from 1995 through 2023 in North Carolina.

Weight by Method of Harvest: Weights of male and female bears harvested by houndsmen from the Mountain BMU were 10 lbs. heavier and 5 lbs. lighter, respectively, than bears harvested by still hunters in the Mountain BMU (Table 31).

Compared to the 3-year average, male bears sampled from still hunters during 2023 in the Mountain BMU were 15 lbs. lighter, while female bears were 8 lbs. heavier (Table 31). During 2023, houndsmen in the Mountain BMU also harvested lighter males (-12 lbs.) and harvested lighter females (-5 lbs.) than the average (Table 31).

Table 31. Mean age and weight for harvested bears sampled from the Mountain BMU during the 2023 season and 3-year averages.

Season	BMU	Hunting Method	Mean Age (yr.)		Mean Weight (lbs.)	
			Male	Female	Male	Female
2023	Mountain BMU	Still Hunters	2.7	3.6	210	193
		Houndsmen	3.3	5.1	220	188
		All Hunters	*3.1*	*4.7*	*218*	*189*
2020-2022 (3-yr. average)	Mountain BMU	Still Hunters	2.9	4.3	225	185
		Houndsmen	3.4	5.2	232	193
		All Hunters	*3.3*	*4.9*	*231*	*192*

Mountain BMU Ages: The average ($\bar{x}$) age of harvested male bears sampled in the Mountain BMU has varied over the years, likely due to annual changes in hard mast abundance, which heavily influences harvest pressure (blue bars; Figure 71). For example, from 1990 through 2014, the average age of male bears harvested during a season varied from 3.3 years old to 4.3 years old during the 1990 season. For the past 10 seasons (2014-2023), the average age of male bears sampled has been slightly decreasing and the average age is 3.3 years old (range 3.1-3.7 years old; blue bars, Figure 71). In 2023, the average age of male bears sampled was 3.1 years old which is younger than the 10-year average. The average age of male bears harvested during the 2023 season was the youngest since 1988, when the average age was 3.0 years old. However, when comparing the average age of bears harvested during the 2021, 2022, and 2023 seasons to previous seasons, it should be recognized that bear ages are likely more accurate, as tooth submission has been required since the 2021 season. Prior to mandatory tooth submission, voluntary tooth submission was declining and during the 2020 season, we received teeth from only 45% of the harvested bears. Since mandatory tooth submission (2021 through 2023), we have received teeth from 86% of harvested bears (see page 103). Prior to mandatory tooth submission, age data was likely biased towards older bears, as hunters were more likely to submit a tooth from a larger bear than a smaller bear.

The average ($\bar{x}$) age of harvested female bears sampled in the Mountain BMU has also varied over the years (red bars; Figure 71). From 1990 through 2014, the average age of female bears harvested during a season varied from 4.1 years old during the 2021 season to 6.2 years old during the 2011 season. For the past 10 seasons (2014-2023), the average age of female bears sampled has been decreasing and the average age is 4.9 years old (range 4.6-5.8 years old; red bars, Figure 71). In 2023, the average age of female bears sampled was 4.7 years old which is slightly younger than the 10-year average.
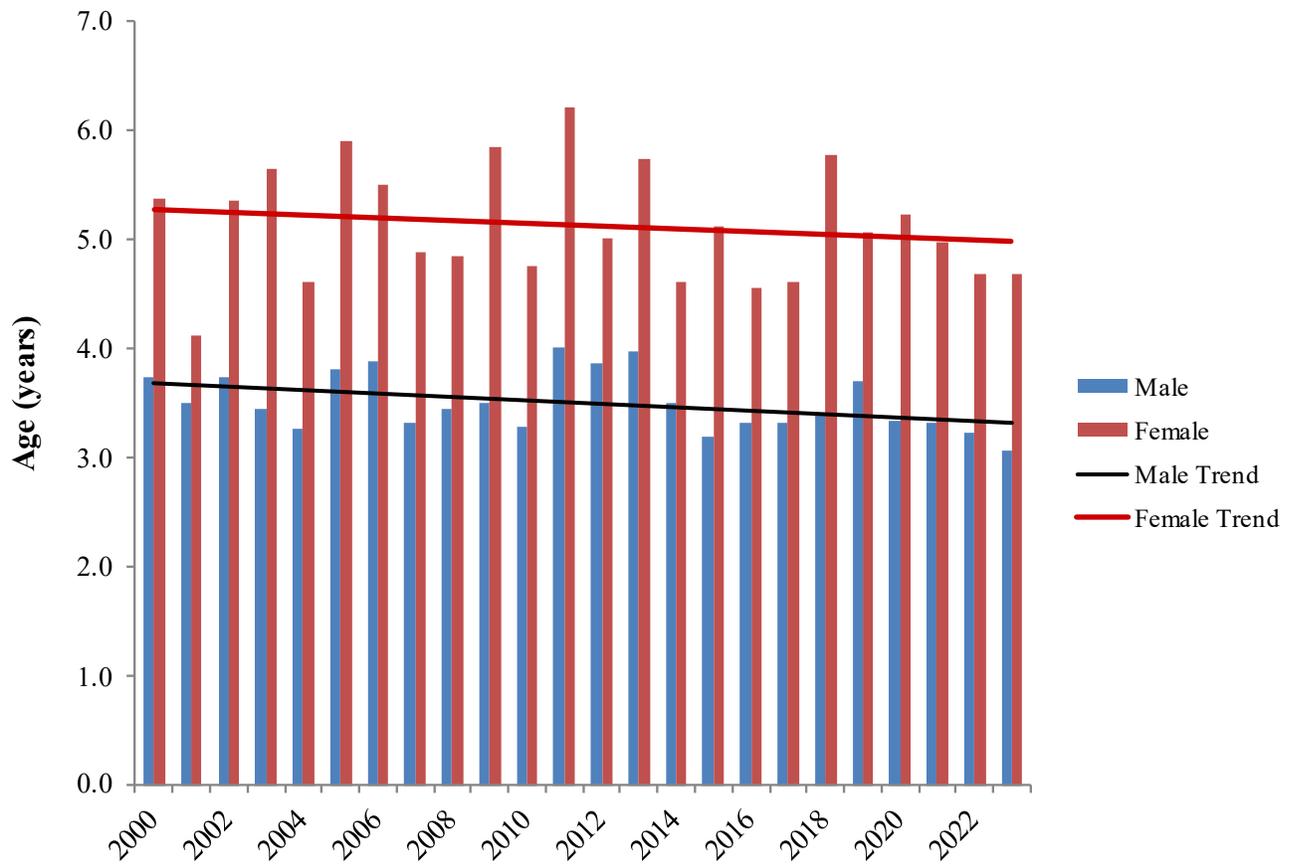
Figure 71. Average age of harvested male and female bears sampled in the Mountain BMU, 2000-2023.

Harvest by District
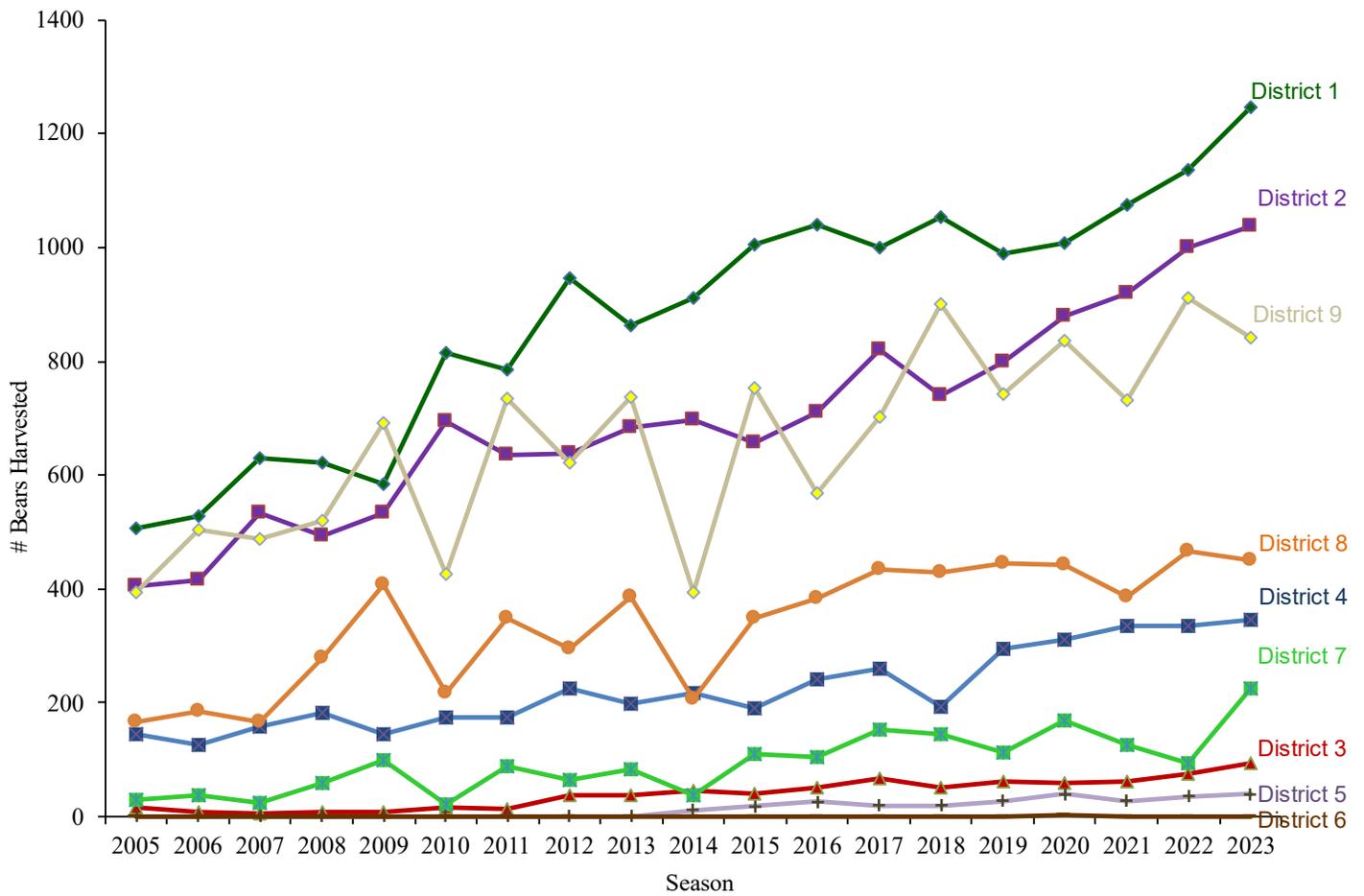
Figure 72. The reported harvest of black bears by district from 2005 through 2023.
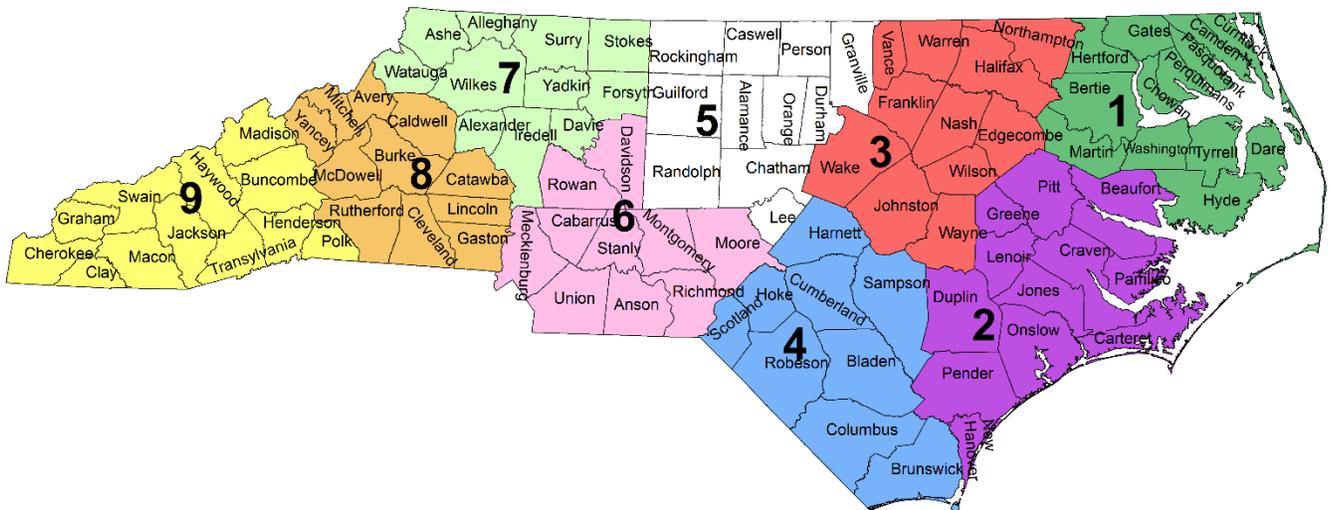
Figure 73. The nine wildlife districts of the North Carolina Wildlife Resources Commission.

Table 32. The reported harvest of black bears by district from 1977 through 2023.

Season	District								
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1977	0	58	0	16	0	0	0	23	56
1978	0	57	0	28	0	0	1	45	78
1979	0	57	0	36	0	0	2	29	93
1980	0	74	0	30	0	0	2	49	101
1981	0	62	0	30	0	0	1	32	118
1982	0	73	0	26	0	0	0	56	168
1983	0	71	0	26	0	0	0	54	157
1984	0	120	0	81	0	0	2	45	234
1985	0	103	0	35	0	0	0	34	153
1986	48	86	0	33	0	0	1	76	163
1987	94	93	0	58	0	0	1	68	238
1988	98	136	0	62	0	0	0	53	187
1989	83	146	0	46	0	0	2	59	239
1990	194	192	0	58	0	0	4	81	231
1991	187	185	0	57	0	0	1	75	210
1992	222	186	0	56	0	0	2	130	478
1993	239	206	0	78	0	0	4	65	232
1994	194	192	0	77	0	0	5	102	215
1995	389	281	0	75	0	0	6	74	254
1996	392	204	0	89	0	0	3	91	231
1997	359	296	0	82	0	0	12	197	517
1998	467	336	15	61	0	0	9	119	293
1999	447	312	16	106	0	0	10	107	368
2000	461	355	9	104	0	0	20	139	402
2001	469	520	15	103	0	0	14	110	302
2002	429	410	16	100	0	0	30	170	330
2003	557	423	1	117	0	0	22	227	468
2004	480	401	13	159	0	0	15	99	330
2005	507	406	15	145	0	0	30	165	395
2006	527	416	7	125	0	0	37	185	503
2007	631	533	6	157	0	0	24	167	487
2008	622	493	9	181	0	0	58	279	520
2009	584	533	9	144	0	0	99	408	691
2010	816	693	17	175	0	0	21	216	425
2011	784	636	14	174	0	0	88	348	735
2012	945	639	38	224	0	0	65	294	622
2013	864	683	37	199	0	0	84	387	737
2014	912	696	46	216	12	1	38	207	393
2015	1,006	657	39	189	18	0	109	348	752
2016	1,040	710	51	241	26	0	105	384	568
2017	1,000	821	68	259	20	0	152	433	701
2018	1,052	741	51	192	19	0	146	429	900
2019	990	799	62	296	28	0	113	446	742
2020	1,009	880	58	312	39	2	168	443	837
2021	1,074	918	62	335	28	1	125	386	732
2022	1,137	1,000	76	335	35	0	95	467	911
2023	1,247	1,036	95	346	40	1	224	450	842
Percent of 2023 Harvest by District	**29%**	**24%**	**2%**	**8%**	**1%**	**0%**	**5%**	**11%**	**20%**

District and County Method of Harvest: While use of dogs has been the primary method of successful bear harvest in most wildlife districts, still hunters took 100%, 98%, and 55% of harvested bears in District 6, District 5, and District 3, respectively (Table 33). Of the remaining wildlife districts, Districts 8 and 9 had the highest percentage of bears taken by houndsmen (86% and 91%; Table 33).

Table 33. Method of harvest by district, based on the 2023 registered harvest.

District	Dogs	Still	% Dogs	% Still
1	642	605	51%	49%
2	637	399	61%	39%
3	43	52	45%	55%
4	210	136	61%	39%
5	1	39	3%	98%
6	0	1	0%	100%
7	27	197	64%	36%
8	349	101	86%	14%
9	605	237	91%	9%
Statewide	**2514**	**1767**	**59%**	**41%**

Sex ratio by method, district and county: In all 8 wildlife districts where bear harvest by houndsmen occurred, houndsmen harvested a higher ratio of male bears than female bears (56% to 74% male; Table 34). Still hunters in 5 of 9 wildlife districts harvested a higher ratio of male bears to females bears during the 2023 season (52% to 71% male; Table 34). Still hunters in 3 districts harvested a higher ratio of females (52% - 100%) or an equal ratio (50%), as occurred in District 1 (Table 34).

Houndsmen harvested the highest ratio of males in District 3 (74% male; Table 34), followed by Districts 7 and 8 (67% male), while still hunters harvested the highest ratio of males in District 8 (71% male), followed by District 7 and 9 (70% and 65%, respectively; Table 34). All of these districts are partially or fully in the Mountain BMU. The Mountain BMU experienced a good acorn crop during fall 2023, which often results in female bears being less vulnerable to harvest (see page 46 for information on annual mast report). In previous seasons, some districts in the Piedmont BMU had the highest ratio of male bears harvested, as not only does this BMU have a less established bear population compared to the Coastal BMU and Mountain BMU but is a BMU in which bears are still expanding their range. Bear range expansion is initially led by dispersing males, so the Piedmont BMU likely has many more males than females, as reflected in the harvest by both houndsmen and still hunters. During 2023, males comprised 59% of the Piedmont BMU harvest, which contains portions of District 3, 4, 5, and 6 (Table 4 on page 11). However, males comprised 65% of the Mountain BMU harvest during 2023, which resulted in Districts 7, 8, and 9 having the highest composition of male harvest, rather than the Piedmont BMU.

Table 34. Sex ratio by method of harvest by district based on 2023 registered harvest.

District	Dogs		Still		Dogs		Still		All Methods	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
1	357	285	302	303	56%	44%	50%	50%	56%	44%
2	380	257	181	218	60%	40%	45%	55%	60%	40%
3	32	11	27	25	74%	26%	52%	48%	74%	26%
4	123	87	55	81	59%	41%	40%	60%	59%	41%
5	0	1	24	15	0%	100%	62%	38%	0%	100%
6	0	0	0	1	0%	0%	0%	100%	0%	100%
7	18	9	137	60	67%	33%	70%	30%	67%	33%
8	234	115	72	29	67%	33%	71%	29%	67%	33%
9	370	235	154	83	61%	39%	65%	35%	61%	39%

No bear harvest was reported in 22 of 100 counties during the 2023 season and all of these counties are located in the Piedmont BMU (Table 35). During 2023, still hunters harvested 100% of the bears in 17 counties; 12 of these counties are in the Piedmont BMU and 1 county (Pamlico County) prohibits pursuing bears with hounds by local law (Table 35). Still hunters harvested >50% of reported bears during 2023 in 36 counties; 16 counties were in the Piedmont BMU, 9 counties were in the Coastal BMU, and 8 counties were in the Mountain BMU. Three counties (Brunswick, Chowan, and Halifax) had equal ratios (50:50) of reported bear harvest by still hunters and houndsmen (Table 35). During 2023, houndsmen harvested 100% of reported bears in two counties, Cherokee and Graham, which are both located in the Mountain BMU. Houndsmen harvested >50% of reported bears in 39 counties; 25 of these counties are in the Coastal BMU and 14 counties are in the Mountain BMU (Table 35).

In the Mountain BMU, Graham (100%), Cherokee (100%), and Macon (97%) counties had the highest percent of bears taken by houndsmen. In the Coastal BMU, Martin County (90%), followed by Bertie (75%) and Pitt (73%) counties had the highest percent of bears taken by houndsmen (Table 35). In the Mountain BMU, Alleghany (100%), Cleveland (100%), and Polk (95%) counties had the highest percentage of bears taken by still hunters. In the Coastal BMU, Dare (100%), Nash (100%), and Robeson (100%) counties had the highest percentage of bears taken by still hunters (Table 35). There was one bear reportedly taken by dogs from Pamlico County, where dog hunting is prohibited, but this is likely an error in big game reporting.

Table 35. Method of harvest by county and sex, based on the 2023 registered bear harvest.

	Still			Dog			Percent Method		Percent Female
County	Male	Female	Total	Male	Female	Total	Still	Dog	All Methods
Alamance	0	0	0	0	0	0	N/A[1]	N/A	N/A
Alexander	0	0	0	0	0	0	N/A	N/A	N/A
Alleghany	18	11	29	0	0	0	100%	0%	38%
Anson	0	0	0	0	0	0	N/A	N/A	N/A
Ashe	32	20	52	10	5	15	78%	22%	37%
Avery	3	2	5	21	12	33	13%	87%	37%
Beaufort	30	50	80	102	77	179	31%	69%	49%
Bertie	14	7	21	37	25	62	25%	75%	39%
Bladen	24	34	58	68	50	118	33%	67%	48%
Brunswick	6	11	17	9	8	17	50%	50%	56%
Buncombe	37	27	64	19	22	41	61%	39%	47%
Burke	15	2	17	20	18	38	31%	69%	36%
Cabarrus	0	0	0	0	0	0	N/A	N/A	N/A
Caldwell	4	1	5	32	23	55	8%	92%	40%
Camden	25	28	53	34	23	57	48%	52%	46%
Carteret	13	10	23	25	5	30	43%	57%	28%
Caswell	6	3	9	0	0	0	100%	0%	33%
Catawba	0	1	1	0	0	0	100%	0%	100%
Chatham	0	0	0	0	0	0	N/A	N/A	N/A
Cherokee	0	0	0	20	16	36	0%	100%	44%
Chowan	6	3	9	6	3	9	50%	50%	33%
Clay	2	0	2	20	16	36	5%	95%	42%
Cleveland	1	0	1	0	0	0	100%	0%	0%
Columbus	4	2	6	9	5	14	30%	70%	35%
Craven	16	30	46	52	36	88	34%	66%	49%
Cumberland	5	8	13	9	10	19	41%	59%	56%
Currituck	6	11	17	16	21	37	31%	69%	59%
Dare	9	9	18	0	0	0	100%	0%	50%
Davidson	0	0	0	0	0	0	N/A	N/A	N/A
Davie	0	1	1	0	0	0	100%	0%	100%
Duplin	7	2	9	14	7	21	30%	70%	30%
Durham	0	0	0	0	0	0	N/A	N/A	N/A
Edgecombe	2	3	5	4	4	8	38%	62%	54%
Forsyth	0	0	0	0	0	0	N/A	N/A	N/A
Franklin	1	0	1	1	0	1	50%	50%	0%
Gaston	0	0	0	0	0	0	N/A	N/A	N/A
Gates	25	42	67	41	30	71	49%	51%	52%

	Still			Dog			Percent Method		Percent Female
County	Male	Female	Total	Male	Female	Total	Still	Dog	All Methods
Graham	0	0	0	38	15	53	0%	100%	28%
Granville	6	2	8	0	1	1	89%	11%	33%
Greene	1	1	2	2	2	4	33%	67%	50%
Guilford	0	1	1	0	0	0	100%	0%	100%
Halifax	4	3	7	7	0	7	50%	50%	21%
Harnett	1	1	2	0	0	0	100%	0%	50%
Haywood	17	7	24	80	39	119	17%	83%	32%
Henderson	21	12	33	19	5	24	58%	42%	30%
Hertford	5	19	24	27	23	50	32%	68%	57%
Hoke	0	0	0	0	0	0	N/A	N/A	N/A
Hyde	105	78	183	65	40	105	64%	36%	41%
Iredell	0	0	0	0	0	0	N/A	N/A	N/A
Jackson	12	8	20	37	29	66	23%	77%	43%
Johnston	3	0	3	0	0	0	100%	0%	0%
Jones	32	50	82	77	75	152	35%	65%	53%
Lee	0	0	0	0	0	0	N/A	N/A	N/A
Lenoir	12	13	25	17	9	26	49%	51%	43%
Lincoln	0	0	0	0	0	0	N/A	N/A	N/A
Macon	2	1	3	59	29	88	3%	97%	33%
Madison	13	5	18	52	38	90	17%	83%	40%
Martin	4	1	5	28	17	45	10%	90%	36%
McDowell	13	7	20	88	32	120	14%	86%	28%
Mecklenburg	0	0	0	0	0	0	N/A	N/A	N/A
Mitchell	8	6	14	12	5	17	45%	55%	35%
Montgomery	0	0	0	0	0	0	N/A	N/A	N/A
Moore	0	1	1	0	0	0	100%	0%	100%
Nash	1	0	1	0	0	0	100%	0%	0%
New Hanover	2	4	6	1	0	1	86%	14%	57%
Northampton	4	8	12	11	5	16	43%	57%	46%
Onslow	8	11	19	30	13	43	31%	69%	39%
Orange	1	0	1	0	0	0	100%	0%	0%
Pamlico[2]	26	25	51	0	1	1	98%	2%	50%
Pasquotank	13	11	24	6	7	13	65%	35%	49%
Pender	24	17	41	35	16	51	45%	55%	36%
Perquimans	2	3	5	2	4	6	45%	55%	64%
Person	7	5	12	0	0	0	100%	0%	42%
Pitt	10	5	15	25	16	41	27%	73%	38%
Polk	24	16	40	1	1	2	95%	5%	40%

| | Still | | | Dog | | | Percent Method | | Percent Female |
County	Male	Female	Total	Male	Female	Total	Still	Dog	All Methods
Randolph	0	0	0	0	0	0	N/A	N/A	N/A
Richmond	0	0	0	0	0	0	N/A	N/A	N/A
Robeson	1	2	3	0	0	0	100%	0%	67%
Rockingham	4	4	8	0	0	0	100%	0%	50%
Rowan	0	0	0	0	0	0	N/A	N/A	N/A
Rutherford	21	3	24	10	3	13	65%	35%	16%
Sampson	14	23	37	28	14	42	47%	53%	47%
Scotland	0	0	0	0	0	0	N/A	N/A	N/A
Stanly	0	0	0	0	0	0	N/A	N/A	N/A
Stokes	8	4	12	2	1	3	80%	20%	33%
Surry	20	7	27	2	1	3	90%	10%	27%
Swain	2	1	3	12	15	27	10%	90%	53%
Transylvania	24	6	30	13	10	23	57%	43%	30%
Tyrrell	57	48	105	62	67	129	45%	55%	49%
Union	0	0	0	0	0	0	N/A	N/A	N/A
Vance	0	1	1	0	0	0	100%	0%	100%
Wake	0	0	0	0	0	0	N/A	N/A	N/A
Warren	9	7	16	2	2	4	80%	20%	45%
Washington	31	43	74	33	25	58	56%	44%	52%
Watauga	17	4	21	1	1	2	91%	9%	22%
Wayne	2	1	3	2	0	2	60%	40%	20%
Wilkes	41	12	53	3	1	4	93%	7%	23%
Wilson	1	2	3	5	0	5	38%	63%	25%
Yadkin	1	1	2	0	0	0	100%	0%	50%
Yancey	7	7	14	51	22	73	16%	84%	33%
Total	**952**	**815**	**1,767**	**1,514**	**1,000**	**2,514**	**41%**	**59%**	**42%**

[1] N/A: No harvest occurred in the county
[2] Pamlico: Session law 1983, c. 448 prohibits taking bears with dogs

Harvest on Game Lands

Until 2008, the majority of the Mountain BMU bear harvest occurred on game lands, but since that season, the majority of the Mountain BMU bear harvest typically occurs on private lands, with the exception of 2010, 2012, and 2014 (Table 36; Figure 74). However, compared to the other BMUs, game lands still comprise a significant source for harvested bears in the Mountain BMU (42% of harvest in 2023). In the Coastal BMU, harvest by land type has been more stable and in the 2023 season, 96% of the Coastal BMU bear harvest occurred on private lands. A vast majority of bears harvested in the Piedmont BMU were taken on private lands (99%; Table 36; Figure 74). One reason for the regional difference is that in the Mountain BMU there is a large amount of public lands (e.g. Pisgah National Forest, Nantahala National Forest), as well as private properties that are smaller than what is observed on the coast. In the Coastal BMU, private properties tend to have a large amount of acreage (e.g. Weyerhaeuser, agricultural operations) that is more conductive to bear hunting with hounds. The declining percent of bears harvested off game lands in the Mountain BMU is likely due to the increase in the still hunter harvest aided by bait since 2015. However, with human populations projected to increase in North Carolina and the increasing cost of leasing private lands, NCWRC game lands will become increasingly important in maintaining and providing bear hunting opportunities.

Table 36. Percentage of North Carolina's registered bear harvest occurring on game lands, 2003 through 2023.

Year	Coastal BMU Game land	Other	Mountain BMU Game land	Other	Piedmont BMU Game land	Other	Statewide Game land	Other
2003	5%	95%	56%	44%			25%	75%
2004	5%	95%	67%	33%			24%	76%
2005	6%	94%	55%	45%			23%	77%
2006	6%	94%	52%	48%			25%	75%
2007	8%	92%	61%	39%			26%	74%
2008	6%	94%	50%	50%			24%	76%
2009	6%	94%	43%	57%			24%	76%
2010	6%	94%	65%	35%			23%	77%
2011	6%	94%	48%	52%			24%	76%
2012	6%	94%	53%	47%	0%	100%	22%	78%
2013	3%	97%	42%	58%	0%	100%	19%	81%
2014	5%	95%	56%	44%	10%	90%	18%	82%
2015	5%	95%	44%	56%	0%	100%	20%	80%
2016	4%	96%	43%	57%	6%	94%	17%	83%
2017	5%	95%	46%	54%	0%	100%	20%	80%
2018	3%	97%	31%	69%	6%	94%	15%	85%
2019	4%	96%	43%	57%	7%	93%	19%	81%
2020	4%	96%	39%	61%	1%	99%	17%	83%
2021	5%	95%	39%	61%	3%	97%	16%	84%
2022	4%	96%	37%	63%	5%	95%	16%	84%
2023	4%	96%	42%	58%	1%	99%	17%	83%
3-yr Average	**4%**	**96%**	**39%**	**61%**	**3%**	**97%**	**16%**	**84%**
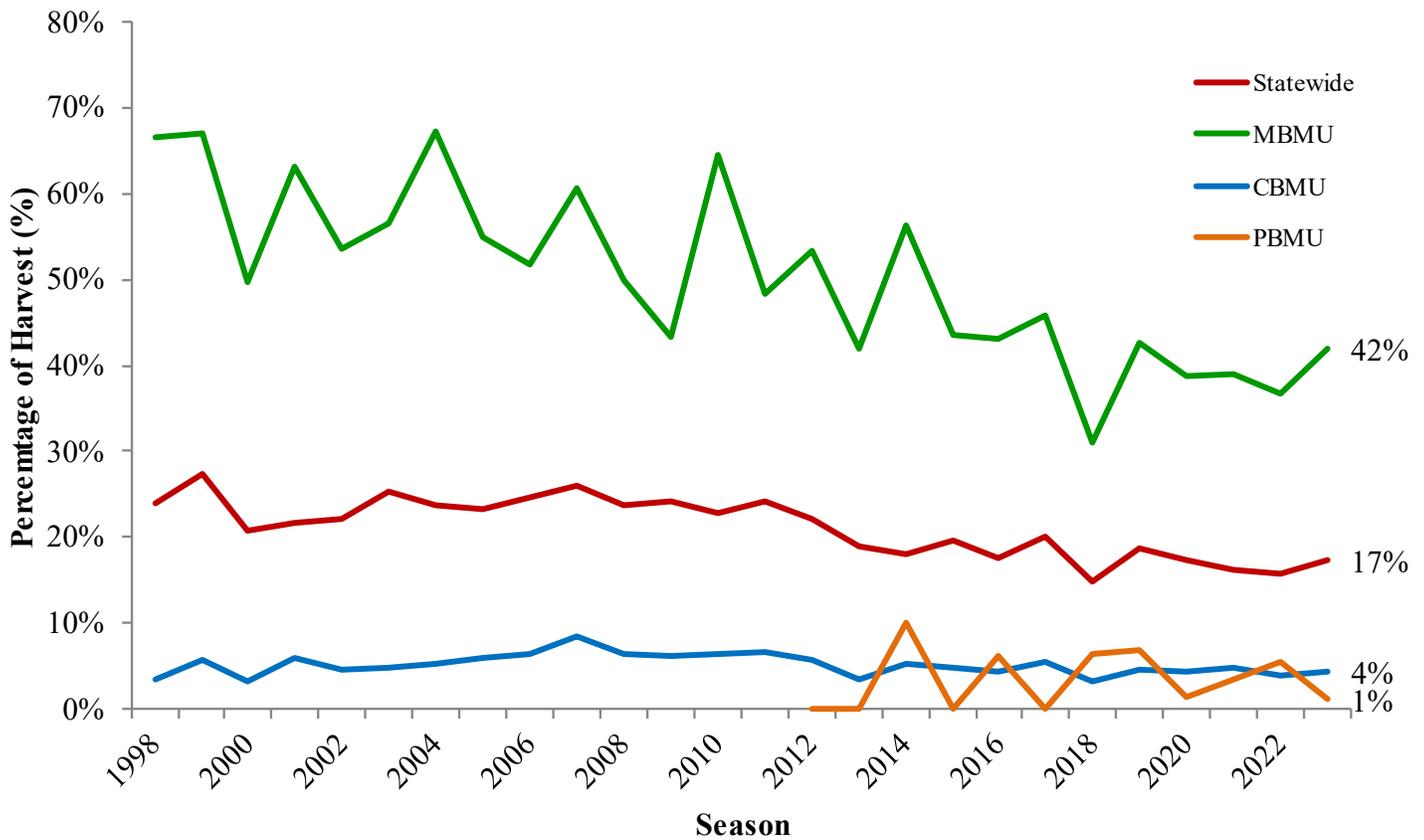
Figure 74. Percentage of registered bear harvest occurring on game lands, 1998 through 2023.

Based on the 3-year average, a majority (58%) of the game land harvest in the Coastal BMU occurs on four game lands: Croatan National Forest (21%), Buckridge (17%), Chowan Swamp (115), and Bladen Lakes State Forest (9%; Table 36). During the 2023 bear season, 26 bears were harvested on Croatan National Forest, followed by Chowan Swamp (n=20), Buckridge Game Land (n=14), and Bladen Lakes State Forest (n=13; Table 37).

In the Mountain BMU, 90% of the game land harvest occurs on Nantahala National Forest (43%) and Pisgah National Forest (47%; Table 37). These two national forests comprise just over one million acres total and are the largest public lands in the mountain region in which bear hunting is allowed. Nantahala National Forest (n=266), followed by Pisgah (n=278) had the highest bear harvest on game lands, followed by Cold Mountain (n=17). Sixteen bears were harvested on Daniel Boone Designated Bear Management Area (DBMA) and 16 bears were also harvested on Mt. Mitchell DBMA (Table 37). In the Piedmont BMU, one bear was harvested on Embro Game Land during the 2023 bear season (Table 37).

Table 37. Registered harvest on game lands in the Coastal, Mountain, and Piedmont BMUs of North Carolina, 2015 through 2023. Note: The total column reflects total harvest from 2008-2023.

Region	Game Land	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total[1]	3-year Average	% of Game Land Harvest within BMU[2]
Coastal	Alligator River	14	10	4	3	8	6	10	7	8	128	8	8%
BMU	Angola Bay	3	1	8	7	7	8	3	3	5	70	4	3%
	Bachelor Bay	0	0	0	0	0	0	0	0	0	1	0	0%
	Bertie County[1]	0	1	1	1	0	3	1	1	2	15	1	1%
	Bladen Lakes State Forest	16	6	10	4	7	9	8	7	13	136	9	9%
	Buckridge	18	11	19	4	14	21	19	21	14	240	18	17%
	Cape Fear River Wetlands	0	0	0	0	0	0	0	1	0	3	0	0%
	Carteret County[3]	1	1	0	1	1	3	0	0	0	15	0	0%
	Chowan Swamp	3	2	5	4	6	8	8	9	20	100	12	11%
	Columbus County	0	1	0	1	0	1	1	0	1	10	1	1%
	Croatan	11	23	26	8	25	12	23	20	26	319	23	21%
	Dare	2	8	15	1	1	5	6	2	0	64	3	2%
	Dover Bay	0	0	0	0	0	0	0	1	0	3	0	0%
	Goose Creek	0	0	4	1	0	5	0	0	0	17	0	0%
	Green Swamp	1	0	1	0	0	0	1	0	0	4	0	0%
	Gull Rock	3	5	2	3	4	4	4	7	8	55	6	6%
	Holly Shelter	6	4	1	2	4	0	2	0	3	44	2	2%
	Juniper Creek	1	1	2	5	1	0	6	2	2	41	3	3%
	Lantern Acres	6	6	7	10	12	3	10	6	8	97	8	7%
	Light Ground Pocosin	0	0	0	0	0	0	0	0	0	1	0	0%
	Neuse River	0	0	0	0	0	1	0	2	0	5	1	1%
	New Lake	1	2	0	3	0	1	0	0	0	7	0	0%
	North River	0	3	1	0	0	1	0	0	0	5	0	0%
	Northwest River Marsh	0	0	0	0	1	0	0	1	1	3	1	1%

Region	Game Land	2015		2016	2017	2018	2019	2020	2021	2022	2023	Total[1]	3-year Average	% of Game Land Harvest within BMU[2]
	Pungo River	1		0	0	0	1	0	1	1	0	5	1	1%
	Sampson	0		0	0	0	0	0	1	0	0	1	0	0%
	Stones Creek	0		0	0	0	0	0	0	0	0	1	0	0%
	Texas Plantation	0		0	0	0	0	1	0	0	0	1	0	0%
	Van Swamp	1		3	8	7	1	6	5	7	5	77	6	5%
	White Oak River	0		0	0	0	1	0	1	0	0	5	0	0%
Mountain BMU	Buffalo Cove	2		3	2	3	4	3	0	5	6	33	4	1%
	Cold Mountain	10		4	14	4	13	12	9	9	17	142	12	2%
	Daniel Boone Bear Sanctuary	7		4	8	6	11	5	5	9	16	90	10	2%
	Green River	3		1	0	4	2	1	4	4	6	32	5	1%
	Headwaters	0		0	0	1	1	2	1	2	3	10	2	0%
	Johns River	0	0	0	0	0	0	0	0	0	1	1	0	0%
	Mitchell River	0		0	0	0	0	0	0	0	0	2	0	0%
	Mt. Mitchell Bear Sanctuary	16		13	11	4	13	10	9	7	16	133	11	2%
	Nantahala	298		206	287	239	251	260	206	240	278	3,971	241	43%
	Needmore	2		1	7	6	4	3	1	2	3	62	2	0%
	Pisgah	179		216	241	184	236	240	250	266	266	3,354	261	47%
	Pond Mountain	2		1	2	0	6	3	1	5	0	21	2	0%
	Sandy Mush	2		1	1	0	0	3	0	2	1	17	1	0%
	South Mountains	1		1	2	2	6	4	1	1	6	37	3	0%
	Three Top Mountain	1		1	2	0	0	0	0	0	2	10	1	0%
	Toxaway	0		0	3	2	2	4	5	3	7	41	5	1%
	William H. Silver	0		0	0	1	1	3	1	1	0	7	1	0%
Piedmont BMU	Butner-Falls of Neuse	0		0	0	0	0	0	1	0	0	1	0	0%
	Embro	0	0	0	0	0	0	0	0	0	1	1	0	0%

Region	Game Land	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total[1]	3-year Average	% of Game Land Harvest within BMU[2]
Piedmont	Harris	0	0	0	1	0	0	0	0	0	1	0	0%
BMU	Hyco	0 0	0	0	0	0	0	0	1	0	1	0	0%
	Mayo	2	2	0	0	1	1	0	0	0	6	0	0%
	Lee	0	0	0	0	0	0	1	0	0	1	0	0%
	R.Wayne Bailey-Caswell	1	1	0	1	3	0	0	1	0	7	0	0%
	Sandy Creek	0	0	0	1	0	0	0	0	0	1	0	0%

[1] The total column reflects total harvest from 2008-2023

[2] Percent (%) of Game Land Harvest within BMU is based on 3-year averages

[3] Possibly an error in reporting from hunters equating game land to county of harvest.

Harvest by Weapon Type

Since 1981, the requirement to report the weapon used for taking bears has changed throughout the years (Table 38). As of 2010, when a hunter registers a bear, s/he must indicate if a gun, bow, muzzleloader or crossbow was used. A majority of bears are harvested by use of gun (94%), followed by bow (33%), muzzleloaders (2%), then crossbow (1%).

Table 38. Composition of registered bear harvest by weapon from 1984 through 2021.

Year	Statewide Harvest	Gun	Muzzleloader	Bow	Crossbow	Unknown
1986	407	100%	N/A	N/A	N/A	0%
1987	552	99%	N/A	N/A	N/A	1%
1988	536	100%	N/A	N/A	N/A	0%
1989	575	98%	N/A	N/A	N/A	2%
1990	760	99%	N/A	1%	N/A	0%
1991	715	95%	N/A	1%	N/A	4%
1992[1]	1,074	96%	0.1%	2%	N/A	3%
1993[2]	824	55%	0.0%	0%	N/A	45%
1994	785	60%	0.1%	1%	N/A	39%
1995	1,079	55%	0.0%	0%	N/A	45%
1996	1,010	57%	0.1%	0%	N/A	42%
1997	1,463	51%	0.0%	1%	N/A	48%
1998	1,300	52%	0.0%	0.1%	N/A	48%
1999	1,366	46%	0.3%	0.1%	N/A	53%
2000	1,490	41%	0.1%	0.3%	N/A	58%
2001	1,533	44%	0.1%	0.2%	N/A	56%
2002	1,485	43%	0.0%	1%	N/A	56%
2003	1,812	47%	0.1%	0.3%	N/A	52%
2004	1,497	43%	0.1%	0.3%	N/A	56%
2005	1,661	37%	0.2%	0.2%	N/A	62%
2006	1,800	41%	0.1%	0.1%	N/A	59%
2007	2,006	44%	0.1%	0.2%	N/A	56%
2008	2,162	58%	1%	3%	N/A	38%
2009[3]	2,468	93%	1%	5%	N/A	1%
2010	2,363	96%	1%	2%	0.30%	0.30%
2011	2,779	95%	1%	4%	0.54%	0.04%
2012	2,827	95%	1%	3%	0.81%	0%
2013	2,521	97%	1%	2%	0.40%	10%
2014	3,118	95%	1%	3%	0.61%	0.1%
2015	2,521	97%	1%	2%	0.40%	10%
2016	3,125	94%	2%	3%	0.74%	0.1%
2017	3,454	94%	2%	3%	1%	0%
2018	3,530	92%	2%	4%	2%	0%
2019	3,476	93%	1%	3%	1%	0%
2020	3,748	94%	2%	3%	1%	0%
2021	3,659	94%	2%	3%	1%	0%
2022	4,056	94%	1%	94%	2%	0%
2023	4,281	94%	2%	2%	2%	0%
3- yr. Average		**94%**	**2%**	**33%**	**2%**	**0%**

[1]From 1981-1992, weapon reported when hunters registered their bear.
[2] Weapon used based on sampled harvest.
[3] Type of weapon required when registering by all registration methods (i.e. big game harvest sheet, on-line and phone).

Non-Resident (NR) Bear Harvest

Until Oct. 1, 2011, determining the annual number of NR bear hunters was difficult. Prior to Oct. 1, 2011, non-residents (NRs) were required to obtain a NR bear/wild boar license prior to hunting bear. Because the NR bear license was combined with wild boar, not all NRs who purchased the NR bear/wild boar license were hunting bear. Another difficulty in determining the number of NR bear hunters was that NRs who purchased a NR lifetime sportsman license prior to May 24th, 1994, are exempt from purchasing a NR bear license. In 2011, these exempt lifetime NRs comprised 7% of the non-resident registered bear harvest. Lastly, during 2011, 26% of successful NR bear hunters who registered their harvested bear did not purchase the NR bear license. Some of these successful NRs may have been exempt from having to purchase the separate bear license, while other NRs were illegally hunting without the required NR bear license.

After Oct. 1, 2011, wild boars were reclassified as feral hogs and non-resident hog hunters were no longer required to purchase the separate license. This improved our efforts to estimate the number of NR bear hunters. However, due to NR lifetime license exemptions, other exemptions, and illegal activity, we continued to underestimate the number of NR bear hunters in North Carolina.

On July 1, 2014, the bear e-stamp was created and is required for all hunters before taking any bear within North Carolina. For NR hunters, they must have the bear e-stamp if they hunt bears, even if they are exempt from purchasing the NR bear license. The bear e-stamp will provide a more accurate estimate of NR hunters who hunt bears in North Carolina. In addition, the NC General Assembly increased the NR bear license from $125 to $225 in 2015. In 2021, the NR bear license increased to $239.

In 2023, there was a 18% increase in bear e-stamps issued (n=4,288) to NRs compared to the previous year; 51% of NRs were required to purchase the bear e-stamp ($11); 49% of NRs were exempt from purchasing the bear e-stamp due to their lifetime license (Table 39). There was a 48% increase in the number of NR bear hunting licenses (n=2,211; $239) issued compared to 2022. If a NR purchased a resident or non-resident lifetime license prior to May 24, 1994, they do not have to purchase the non-resident bear hunting license. There was a 17% increase in the number of NR bear licenses sold in 2023 compared to 2022.

During 2023, a majority of NR bear hunters were from Virginia (21%), Tennessee (16%), and South Carolina (13%), which matches trends seen in previous seasons. NR bear hunters came from all 50 states and 1 country (Canada). It is estimated that successful NR bear hunters comprised 18% of the registered bear harvest, the highest percentage since the Commission started tracking NR harvest (Table 39; Figure 75).

While statewide and resident harvest increased 6% and 5% respectively, NR harvest increased 10% (Table 39). For the fourth season in a row, a majority of NR bear hunters (55%) successfully harvested a bear by still/stand hunting in the Coastal BMU, whereas 40% of the reported harvest from residents were by still/stand hunters (Table 40). In the Mountain BMU, the majority of the reported NR harvest was with the assistance of hounds (69%; Table 40). The percent of NRs that successfully harvested a bear by still/stand hunting has increased in the Mountain BMU and Coastal BMU since 2016, likely due to the legalization of unprocessed bait, resulting in higher success rates, as well as the increase in guide services offered in the Coastal BMU. NR bear hunters showed less selectivity for male bears in all three BMUs during the 2023 season than residents (Table 40).

Table 39. Non-resident (NR) bear license sales, NR bear e-stamps, and harvest from 2001 through 2023.

Year	License/E-stamp Issuance			NR[2] Male Harvest	NR Female Harvest	Total NR Harvest	NR Composition of Statewide Harvest	NR Change in Harvest
	NR Bear Licenses Issued	Bear E-Stamps Issued to NR	NRs paid for Bear E-stamp[1]					
2001	698	NA	NA	45	37	82	5%	
2002	1,075	NA	NA	39	17	56	4%	-32%
2003	1,126	NA	NA	91	51	142	8%	154%
2004	1,123	NA	NA	73	36	109	7%	-23%
2005	695	NA	NA	93	49	142	9%	30%
2006	1,124	NA	NA	90	71	161	9%	13%
2007	1,201	NA	NA	115	79	194	10%	20%
2008	1,107	NA	NA	81	59	140	6%	-28%
2009	1,080	NA	NA	93	39	132	5%	-6%
2010	1,071	NA	NA	123	67	190	8%	44%
2011[3]	1,127	NA	NA	150	106	256	9%	35%
2012	1,194	NA	NA	179	126	305	11%	19%
2013	1,216	NA	NA	159	114	273	9%	-10%
2014	1,149	2,490	974	175	107	282	11%	3%
2015	991	2,702	1,041	239	134	373	12%	32%
2016	1,224	2,723	1,122	207	184	391	13%	5%
2017	1,430	3,033	1,339	310	169	479	14%	23%
2018	1,577	3,045	1,359	286	175	462	13%	-4%
2019	1,198	3,227	1,532	335	194	529	15%	15%
2020	1,230	3,329	1,570	337	201	538	14%	2%
2021	1,366	3.640	1,844	361	268	629	17%	17%
2022	1,493	3,625	1,950	415	298	713	18%	13%
2023[4]	2,211	4,288	2,823	416	368	784	18%	10%

[1] All NRs are required to have bear e-stamp, but NRs with lifetime licenses prior to July 1, 2014, are exempt from paying for bear e-stamp.

[2] Male and female reported harvest includes NRs who were exempt from purchasing a NR bear license.

[3] In October 2011, license changed to non-resident bear license, as wild boar was reclassified to feral hog.

[4] Logic incorporated into GoOutdoors licensing portal that now prompts NRs with a NR lifetime license after July 1, 1994, to purchase NR bear license.
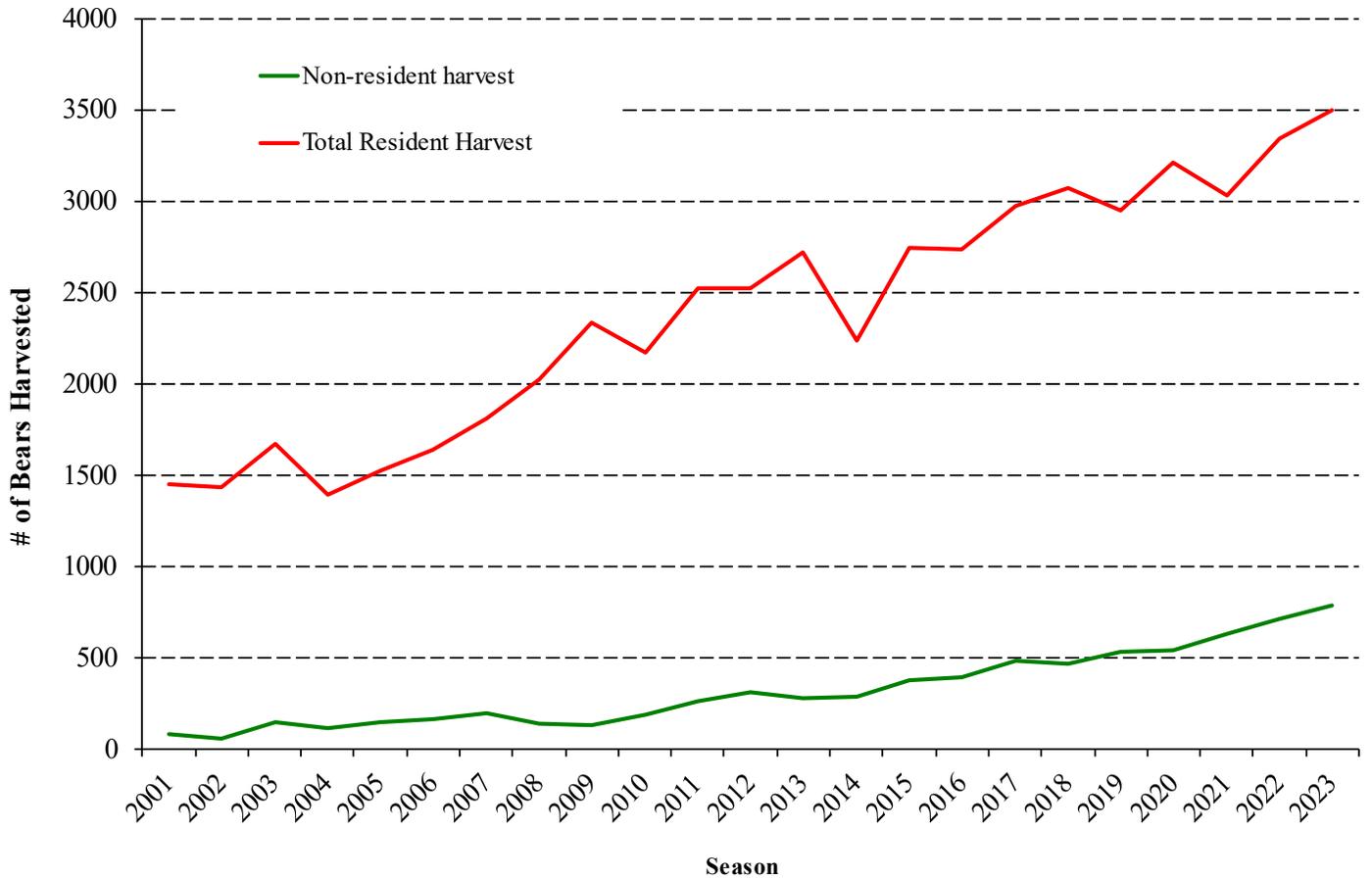
Figure 75. Number of bears harvested by non-residents and residents statewide from 2001 through 2023.

Table 40. Sex ratio and method of harvest of successful non-resident bear hunters who registered a bear, 2003 through 2023.

Year	Coastal BMU		Mountain BMU		Piedmont BMU		Coastal BMU		Mountain BMU		Piedmont BMU	
	Male	Female	Male	Female	Male	Female	Still	Dog	Still	Dog	Still	Dog
2003	65%	35%	61%	39%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2004	64%	36%	74%	26%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2005	61%	39%	78%	23%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2006	53%	47%	61%	39%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2007	60%	40%	57%	43%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2008	57%	43%	58%	42%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2009	67%	33%	77%	23%	N/A	N/A	47%	53%	5%	95%	N/A	N/A
2010	64%	36%	67%	33%	N/A	N/A	31%	69%	6%	94%	N/A	N/A
2011	56%	44%	63%	37%	N/A	N/A	22%	78%	14%	86%	N/A	N/A
2012	58%	42%	60%	40%	N/A	N/A	38%	62%	8%	92%	N/A	N/A
2013	58%	42%	59%	41%	N/A	N/A	36%	64%	16%	84%	N/A	N/A
2014	62%	38%	62%	38%	67%	33%	38%	62%	14%	86%	33%	67%
2015	62%	38%	70%	30%	67%	33%	43%	58%	10%	90%	67%	33%
2016	52%	48%	59%	41%	50%	50%	44%	56%	11%	89%	75%	25%
2017	64%	36%	68%	32%	100%	0%	47%	53%	20%	80%	100%	0%
2018	64%	36%	58%	42%	50%	50%	47%	53%	35%	65%	50%	50%
2019	65%	35%	58%	42%	67%	33%	47%	53%	30%	70%	33%	67%
2020	64%	36%	58%	42%	100%	0%	52%	48%	31%	69%	100%	0%
2021	57%	43%	59%	41%	0%	100%	53%	47%	29%	71%	100%	0%
2022	55%	45%	68%	32%	0%	0%	52%	48%	39%	61%	0%	0%
2023	52%	48%	58%	42%	50%	50%	55%	45%	31%	69%	100%	0%
2023 Resident Harvest	**54%**	**46%**	**66%**	**34%**	**59%**	**41%**	**40%**	**60%**	**35%**	**65%**	**90%**	**10%**

During the 2023 season, 24%, 9%, and 2% of the reported harvest in the Coastal BMU, Mountain BMU, and Piedmont BMU, respectively, were by non-residents (Table 41). While the percent of residents that comprise the reported Mountain BMU bear harvest has remained relatively stable since 2010 (89-93%), there is a decreasing trend in resident hunters that comprise the reported Coastal BMU bear harvest (from 89% to 76%; Table 41). In the Coastal BMU, Zone 1 (41%) had the highest percentage reported harvest comprised by non-residents, followed by Zone 2 (32%; Table 42).

Table 41. Percent of reported harvest in the Coastal BMU and Mountain BMU that is comprised of resident and non-resident hunters from 2010 through 2023.

	Coastal BMU		Mountain BMU		Piedmont BMU	
Year	Resident	Non-resident	Resident	Non-resident	Resident	Non-resident
2010	89%	11%	92%	8%	100%	0%
2011	89%	11%	93%	7%	1%	0%
2012	87%	13%	93%	7%	100%	0%
2013	89%	11%	93%	7%	100%	0%
2014	88%	12%	91%	9%	85%	15%
2015	88%	12%	92%	8%	92%	8%
2016	84%	16%	93%	7%	92%	8%
2017	83%	17%	91%	9%	96%	4%
2018	83%	17%	92%	8%	96%	4%
2019	81%	19%	90%	10%	95%	5%
2020	82%	18%	91%	9%	99%	1%
2021	79%	21%	89%	11%	98%	2%
2022	78%	22%	89%	11%	100%	0%
2023	76%	24%	91%	9%	98%	2%

Table 42. Non-resident reported harvest by Coastal BMU Zone for 2023 hunting season.

Coastal BMU Zone	NR Harvest	% of Harvest by NR in each Zone	Total Zone Harvest
Coastal BMU Zone 1	220	41%	540
Coastal BMU Zone 2	118	32%	368
Coastal BMU Zone 3	214	22%	966
Coastal BMU Zone 4	15	8%	182
Coastal BMU Zone 5	76	12%	640
Coastal BMU Total	643	24%	2,696

Bear Cooperator Program Participation

The Black Bear Cooperator Program lets hunters directly participate with the NCWRC in monitoring the bear population when they submit biological information from their harvested bear to the NCWRC. Age and sex information gathered from biological samples are used for analyzing the age structure of the harvested population and for population reconstruction modeling. Participating hunters receive an age report on their harvested bear, as well as a blaze orange black bear cooperator hat. For information on how to participate and instructions on removing the upper pre-molars from a bear, please visit: ncwildlife.org/bearcooperator

In order to meet the assumptions of population reconstruction (see page 31), remove biases due to the under-sampling of younger bears and female bears, accurately determine age structures of the bear populations, and calculate population growth rates at a smaller scale (i.e., Coastal BMU zones 1-5), we would need ~80 to 90% submission rate. This has not yet been accomplished through the voluntary Bear Cooperator Program. Despite intensive efforts expended by NCWRC staff prior to and during the bear hunting seasons, as previously described in prior bear annual reports, the number of bear teeth submitted by hunters statewide has declined since the 1990's (Figure 76; Table 43).

Effective for the 2021-22 bear season, and with support from bear hunters, S.L. 2021-60 was passed by the NC Geneal Assembly making it mandatory for a successful bear hunter to submit at least one premolar tooth from his/her harvested bear no later than Jan. 31 following the applicable prior bear hunting season. As in previous years, all bear e-stamp holders will receive a bear cooperator packet that contains a self-addressed, postage-paid envelope in which they can submit their bear tooth, as well as information on the mandatory requirement and detailed instructions on removing the tooth. Failure to submit a tooth shall be an infraction, punishable by a fine of thirty-five dollars ($35.00). A person responsible for an infraction shall not be assessed court costs, but the Executive Director of the North Carolina Wildlife Resources Commission is authorized to revoke or refuse to issue bear e-stamp privileges for any individual guilty of an infraction for violations of the mandatory tooth requirement for two consecutive years or upon failure to pay outstanding infraction fines when required to do so.

Submission rates by BMU: Tooth submission rates to the bear cooperator program increased from 45% during the 2020 season to 84% in the 2021 season, the first season of mandatory tooth submission. In 2023, the tooth submission rate was 86%, with 3,680 teeth received from hunters. Submission rates were as follows by BMU: 87% in the Coastal BMU, 87% in the Mountain BMU, and 78% in the Piedmont BMU (Figure 76; Table 43).

Submission rates by hunting methods: Since 2009, NCWRC biological staff has been able to collect information on method of hunt by hunters reporting their harvest, allowing us to compare reported harvest to the sampled harvest. Historically, bear houndsmen participation in the Bear Cooperator Program has been substantially higher than participation by still hunters (Table 44; Figure 77). In 2023, 87% of houndsmen who harvested a bear also submitted biological information versus 83% of still hunters. Submission rates for both houndsmen and still hunters have vastly improved once tooth submission became mandatory in 2021. Houndsmen participation is likely higher than still hunters due to their greater awareness of the Bear Cooperator Program. Since data collection began in 1969, NCWRC staff have worked closely with houndsmen in the collection biological samples, such as sex, weight, age and location of harvest. In addition, party leaders regularly collect biological samples from all bears harvested by their party and submit them to NCWRC staff at the end of the bear season. A portion of the still harvest is opportunistic to

deer hunting, especially in the Piedmont BMU; these hunters are not traditional bear hunters and less likely to be aware of the Bear Cooperator Program and other black bear monitoring efforts.
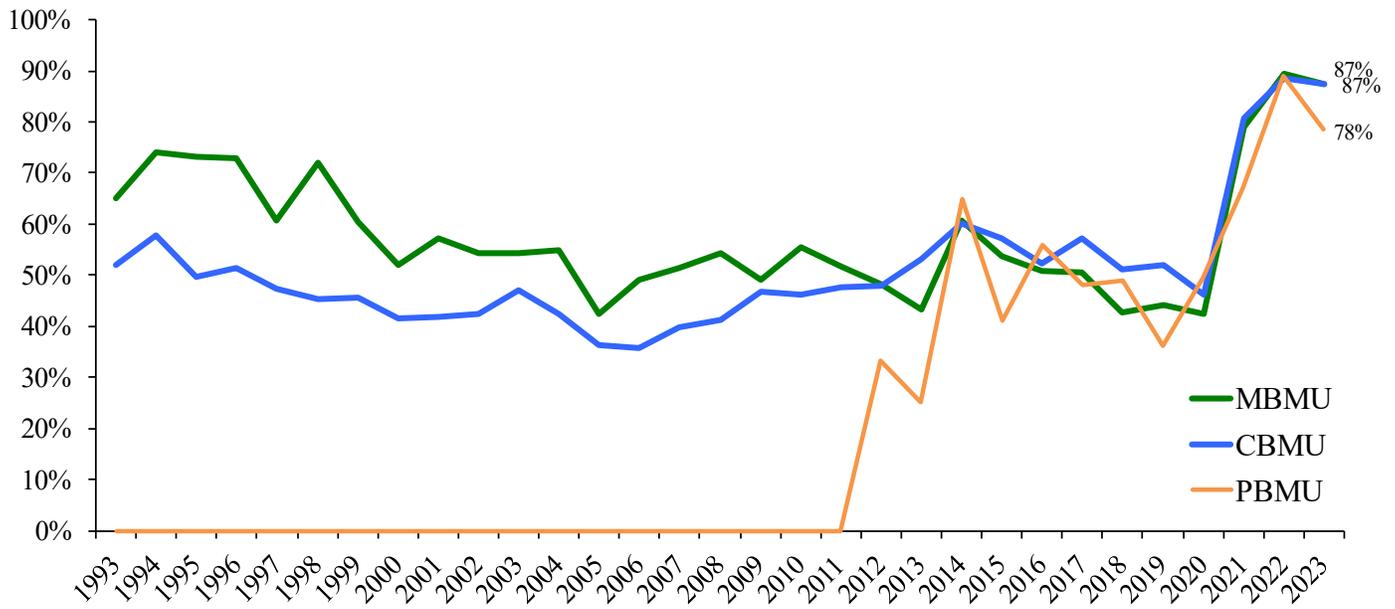

Figure 76. Percentage of registered bears that are sampled by NCWRC for aging from 1976 through 2023.
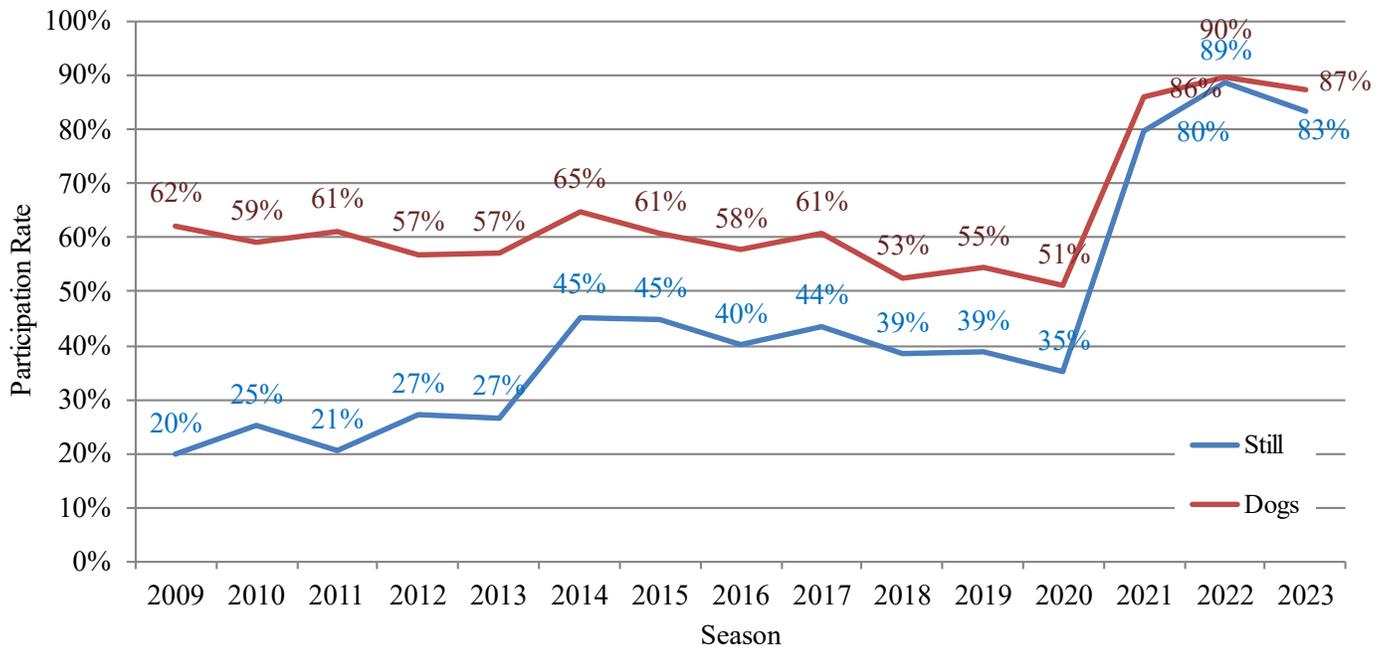

Figure 77. Participation in the bear cooperator program by hunting methods from 2009 through 2023 in North Carolina.

Table 43. Percent of registered black bears in each bear management region that are sampled by NCWRC from 1977 through 2023 (ns=no season).

Year	Coastal BMU	Mountain BMU	Piedmont BMU
1977	23%	75%	ns
1978	51%	90%	ns
1979	48%	69%	ns
1980	36%	69%	ns
1981	58%	74%	ns
1982	38%	58%	ns
1983	44%	88%	ns
1984	29%	77%	ns
1985	32%	80%	ns
1986	24%	74%	ns
1987	42%	77%	ns
1988	38%	61%	ns
1989	36%	55%	ns
1990	34%	57%	ns
1991	30%	61%	ns
1992	50%	54%	ns
1993	52%	65%	ns
1994	58%	74%	ns
1995	50%	73%	ns
1996	51%	73%	ns
1997	47%	61%	ns
1998	45%	72%	ns
1999	46%	60%	ns
2000	42%	52%	ns
2001	42%	57%	ns
2002	43%	54%	ns
2003	47%	54%	ns
2004	42%	55%	ns
2005	35%	42%	N/A[1]
2006	36%	49%	0%
2007	40%	51%	0%
2008	41%	54%	0%
2009	47%	49%	0%
2010	46%	55%	N/A
2011	48%	52%	0%
2012	48%	48%	33%
2013	53%	43%	25%
2014	60%	61%	65%
2015	57%	54%	41%
2016	52%	51%	56%
2017	57%	50%	48%
2018	51%	43%	49%
2019	52%	44%	36%
2020	46%	42%	49%
2021[2]	83%	79%	64%
2022	90%	89%	89%
2023	87%	87%	78%

[1] N/A: Submission rates not available because no bears were harvested in that region.

[2] 2021: First year in which tooth submission became mandatory for all successful bear hunters.

Table 44. Bear Cooperator Program participation rates (%) of still hunters and houndsmen in the three bear management units of North Carolina (2009-2021).

	Statewide		Coastal BMU		Mountain BMU		Piedmont BMU	
	Still	Dogs	Still	Dogs	Still	Dogs	Still	Dogs
2009 Participation Rates	20%	62%	23%	58%	15%	66%	0%	N/A[1]
2010 Participation Rates	25%	59%	26%	57%	18%	63%	N/A[2]	N/A
2011 Participation Rates	21%	61%	22%	59%	19%	64%	0%	N/A
2012 Participation Rates	27%	57%	29%	58%	20%	54%	50%	N/A
2013 Participation Rates	27%	57%	32%	60%	18%	53%	0%	50%
2014 Participation Rates	45%	65%	47%	66%	34%	62%	47%	100%
2015 Participation Rates	45%	61%	51%	61%	32%	61%	43%	25%
2016 Participation Rates	40%	58%	43%	58%	30%	58%	57%	53%
2017 Participation Rates	44%	61%	50%	62%	29%	59%	51%	29%
2018 Participation Rates	39%	53%	47%	53%	25%	53%	54%	33%
2019 Participation Rates	39%	55%	45%	57%	25%	52%	40%	23%
2020 Participation Rates	35%	51%	40%	51%	23%	51%	49%	54%
2021 Submission Rates[3]	80%	86%	83%	87%	71%	85%	74%	42%
2022 Participation Rates	89%	90%	90%	89%	86%	90%	91%	82%
2023 Participation Rates	83%	87%	84%	86%	82%	89%	81%	50%

[1] N/A: Submission rates not available because no bears were harvested by hound hunters in that management unit.
[2] N/A: Submission rates not available because no bears were harvested by hound hunters in that management unit.
[3] 2021 Submission rates: Tooth submission became mandatory for successful hunters in 2021.

Hunting Regulations AND INFORMATION

Big Game – Bear

Restrictions

It is unlawful to do any of the following:

- Take a cub (less than 75 pounds) or a female bear with cub(s).
- Hunt bear on a designated bear management area. (See pages 79-80 for information on designated bear management areas.)

Mandatory Bear Tooth Submission

- It is now mandatory to submit at least one premolar tooth from your harvested bear by January 31st following the applicable bear hunting season.
- After pulling both upper premolar teeth (see ad below and instructions at *ncwildlife.org/bear*), place one of the teeth in the bear tooth envelope you received in the mail from the Commission. Save the other tooth as a backup until you have been notified by the Commission that we received your tooth.
- **If you lost the bear tooth envelope**, call 919-707-0050 to have a new envelope sent to you.

Information on the use of dogs to hunt bears and the use of unprocessed foods is on pages 54-56, and 61.

The following additional restrictions apply to designated bear management areas:

- Dogs may not be used to pursue bear, except during permit hunts that allow hunting bear with dogs.
- It is unlawful to take feral swine on designated bear management areas except during the deer archery season, deer blackpowder season, deer gun season and any small game season using only weapons and manner of take prescribed for that hunting season.
- Dogs may not be used to take feral swine.
- Dogs shall not be trained or allowed to run unleashed between March 1 and the Monday on or nearest October 15 on designated bear management areas located in and west of the counties and parts of counties in Alamance County south of I-85, Orange County south of I-85, Chatham County, Lee County, Wake County south of N.C. 98; and in and west of Rockingham, Guilford, Randolph, and Montgomery Counties and that part of Anson County west of N.C. 742.

Scan QR code for demo on how to extract the premolar teeth.

BEAR HUNTING SEASONS

Daily limit 1; Season limit 1

SEASON DATES	APPLICABLE COUNTY OR COUNTIES
MOUNTAIN BEAR MANAGEMENT UNIT SEASONS	
Oct. 16 – Nov. 18, 2023 Dec. 11 – Jan. 1, 2024	In and west of Surry, Wilkes, Caldwell, Burke, Cleveland. *Note: Further game land restrictions may apply. See the "Game Lands" section for specific game land rules.*
PIEDMONT BEAR MANAGEMENT UNIT SEASONS	
Oct. 14 – Jan. 1, 2024	Franklin, Harnett, Hoke, Johnston, Moore, Richmond, Scotland, Vance, Wake, Warren
Nov. 11 – Jan. 1, 2024	Alamance, Anson, Cabarrus, Caswell, Chatham, Davidson, Durham, Granville, Guilford, Lee, Mecklenburg, Montgomery, Orange, Person, Randolph, Rockingham, Rowan, Stanly, Union
Nov. 18 – Jan. 1, 2024	Alexander, Catawba, Davie , Forsyth, Gaston, Iredell, Lincoln, Stokes, Yadkin
COASTAL BEAR MANAGEMENT UNIT SEASONS	
Nov. 11 – Nov. 26 and Dec. 9 – Dec. 24, 2023	**Zone 1:** Dare, Hyde, Tyrrell
Nov. 11 – Nov. 19 and Dec. 9 – Dec. 24, 2023	**Zone 2:** Camden*, Chowan*, Currituck, Gates, Pasquotank*, Perquimans
Nov. 11 – Nov. 19 and Dec. 9 – Dec. 24, 2023	**Zone 3:** Beaufort, Bertie, Craven, Hertford, Jones, Martin, Washington
Nov. 18 – Dec. 17, 2023	**Zone 4:** Edgecombe, Greene, Halifax, Lenoir, Nash, Northampton, Pitt, Wayne, Wilson
Nov. 13 – Jan. 1, 2024	**Zone 5:** Bladen, Brunswick, Carteret, Columbus, Cumberland, Duplin, New Hanover, Onslow, Pamlico (use of dogs for hunting bears prohibited in this county), Pender, Robeson, Sampson

* Per local law, bear season in these counties opens on Nov. 10.

2023–2024 Bear Seasons

- ■ – Oct. 16 – Nov. 18 and Dec. 11 – Jan. 1
- ■ – Nov. 18 – Jan. 1
- ■ – Nov. 11 – Jan. 1
- ■ – Oct. 14 – Jan. 1
- ■ – Nov. 13 – Jan. 1
- ■ – Nov. 18 – Dec. 17
- ■ – Nov. 11 – Nov. 19 and Dec. 9 – Dec. 24
- ■ – Nov. 11 – Nov. 19 and Dec. 9 – Dec. 24
- ■ – Nov. 10 – Nov. 19 and Dec. 9 – Dec. 24
- ■ – Nov. 11 – Nov. 26 and Dec. 9 – Dec. 24

Designated Bear Management Areas

1. Bachelor Bay
2. Columbus County
3. Croatan
4. Daniel Boone*
5. Dare*
6. Fires Creek
7. Flat Top
8. Green Swamp
9. Gull Rock
10. Harmon Den
11. Juniper Creek
12. Mount Mitchell*
13. North River
14. Panthertown - Bonas Defeat
15. Pisgah
16. Pungo River
17. Rich Mountain
18. Sherwood
19. Standing Indian
20. Suggs Mill Pond
21. Thurmond Chatham
22. Wayah

* Hunting by permit only

Hunting Bear with Dogs and Using Unprocessed Foods
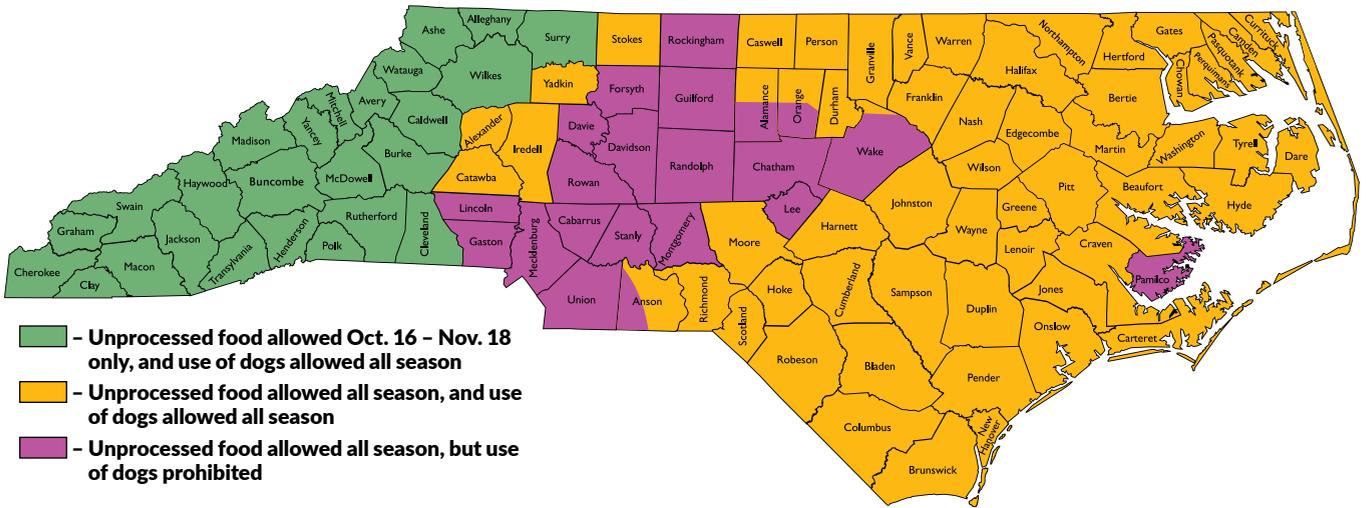
- ■ – Unprocessed food allowed Oct. 16 – Nov. 18 only, and use of dogs allowed all season
- ■ – Unprocessed food allowed all season, and use of dogs allowed all season
- ■ – Unprocessed food allowed all season, but use of dogs prohibited

DOGS. Hunting bears with dogs is prohibited in the following counties or parts of counties: Alamance south of I-85, Anson west of N.C. Hwy 742, Cabarrus, Chatham, Davie, Davidson, Forsyth, Gaston, Guilford, Lee, Lincoln, Mecklenburg, Montgomery, Orange south of I-85, Pamlico (per local law), Randolph, Rockingham, Rowan, Stanly, Union, and Wake south of N.C. Hwy 98. In all other counties, hunting bears with the use of dogs is legal during open bear seasons, but restrictions may apply on game lands. See "Game Land" section for further information.

UNPROCESSED FOODS. Legal during the Monday on or nearest October 15 to the Saturday before Thanksgiving* in and west of Surry, Wilkes, Caldwell, Burke and Cleveland counties. In all other counties, unprocessed foods may be used to aid in taking of bear during any open season for bear.

* *The prohibition against taking bears with the use and aid of bait does not apply to the release of dogs in the vicinity of any food source that is not a processed food product. However, dogs may not be released in the vicinity of any commercially available mineral supplement whether placed for the purpose of attracting deer or otherwise.*

It is unlawful:

- to take a bear while in the act of consuming unprocessed foods; or with use or aid of any animal, animal part or product, salt, salt lick, honey, sugar, sugar-based material, syrups, candy, pastry, gum, candy block, oils, spices, peanut butter, grease; or extract of such substances; or any substance modified by any of the above substances or extract of above substance; or any bear bait attractant, including scented sprays, aerosols, scent balls, and scent powders; or processed food products. Processed food products are any food substance or flavoring that has been modified by the addition of ingredients or by treatment to modify its chemical composition or form or to enhance its aroma or taste. This includes: food products enhanced by sugar, honey, syrups, oils, salts, spices, peanut butter, grease, meat, bones, or blood; candies, pastries, gum, and sugar blocks; and extracts of such products; and to place any sort of processed or unprocessed foods on game lands.