

Alligator Hunting Season Report 2023



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INTRODUCTION

The successful return of the American alligator (*Alligator mississippiensis*), since its near demise and subsequent listing as “endangered” by the Endangered Species Act in the 1960s, has prompted most Southeastern states to implement hunting seasons to allow the public use of this unique natural resource. The hunts are also seen as an attempt to maintain the number of nuisance alligator complaints at a manageable level. The alligator is currently listed as “threatened,” not because of population numbers, which are secure, but because of its “similarity of appearance” to other rare and protected crocodylians worldwide. It is estimated that a minimum of 100,000 alligators occur in the state of South Carolina.

The 2023 Public Alligator Hunting Season marked the fifteenth general alligator hunting season after a closure of nearly 40 years. However, alligators have been legally hunted in South Carolina since 1995 under the Private Lands Alligator Harvest Program. The Private Lands Program was established as a means for large landowners having significant amounts of alligator habitat to manage their alligator numbers on a sustained-yield basis and included quotas for specific size-class alligators. This year’s public hunt, utilizing a random computer drawing, was open to all applicants, including nonresidents, and was conducted on public and private lands (not enrolled in the Private Lands Program) from the Midlands to the coast.

Because alligators can grow to considerable size, alligator hunters can have others assist them with the taking of an alligator during the season. Everyone who participates must have a South Carolina hunting license or be under the age of 16. To participate in the public alligator season, one must first apply online, be selected, then pay a fee for a permit and harvest tag. By law, all fees collected for the alligator hunting program are used to support administration of the alligator program in South Carolina, and for research, monitoring, and management of this important and unique natural resource.

HUNTER SELECTION

Selection Process

The public alligator hunt is a limited, lottery-style hunt in which participants are selected in a randomized computer drawing. All potential hunters are required to apply online through the Go Outdoors South Carolina app or website (<https://gooutdoorsouthcarolina.com/>). A person must be 16 years of age or older to apply for any alligator lottery hunt. There is no age requirement to assist a permitted alligator hunter, although other fees may apply.

Alligator harvest tags and permits are issued specifically to the selected hunter and are non-transferable. 1,000 permits were offered in 2023. 250 tags were allocated per hunt unit. The harvest tag is a numbered, permanently locking nylon tag that must be attached to the alligator’s tail immediately after harvest. The permit and tag allow a hunter to take one alligator greater than 4 feet in total length from either public or private waters in their selected hunt unit.

The lottery selection process began on June 1st and ended on July 15th. A total of 10,546 hunters applied for the alligator hunt, 1,610 of which chose the non-draw option to be excluded from the lottery and gain an additional preference point. The remaining 8,936 applicants entered in the lottery selection were from 44 states (including SC), along with two from Washington D.C., one from Puerto Rico, and one from New Zealand. 91.4% of the applicants were in-state residents. Similar to past years, North Carolina had the second highest application rate, but only made up 3.6% of the total. No other state’s applicants made up more than 1% of the total.

No hunters with fewer than three preference points were selected for the Public Alligator Hunting season. A majority had three (52.3%) or four (43.5%) preference points. The remaining selected hunters had five or more preference points. One applicant had 14 preference points. Applicants lose any accumulated preference points once selected for a permit, whether the permit is purchased or not.

A total of 863 of the 1,000 hunters selected in the 2023 season completed the application process and were issued a harvest tag and permit. The tag purchase rate (86.3%) was lower than last year’s rate of 90%. This purchasing rate remains at or above the predicted fulfillment rate of 75-80% relative to the targeted tag distribution. Currently, the targeted allotment is 1,000 tags, a number which is subject to change in future years based on harvest and/or alligator survey data.

The 2023 season began at noon on September 9th and ended at noon on October 14th.

Fees

All applicants are required to pay a \$10 non-refundable *application fee*. Those selected must also pay a \$100 *permit fee* to receive a permit and tag.

Legislation passed in 2010 requires that all nonresident alligator hunters and nonresident assistants 16 years and older pay a *nonresident alligator hunting fee* of \$200. This fee is **in addition** to any application, licensing, and permit fees normally required to hunt alligators (Table 1). Nonresident assistants under 16 do not pay any fees. Other states have similar additional nonresident fees or prohibit nonresident participation altogether.

Table 1. Fee breakdown for resident and non-resident hunters.

Fee	Resident	Non-resident
Application (non-refundable)	\$10	\$10
Permit/tag	\$100	\$100
Hunting fee	\$0	\$200
Hunting license	\$12	\$40 (3-day)

Huntable Lands

The four alligator hunt units (Figure 1) remain unchanged. Except for a small portion of Berkeley County located within Lake Marion, county lines bound all hunt units. Hunters could select the option to be considered for any or all units for the computer drawing, but if successful are only selected to hunt in one unit.

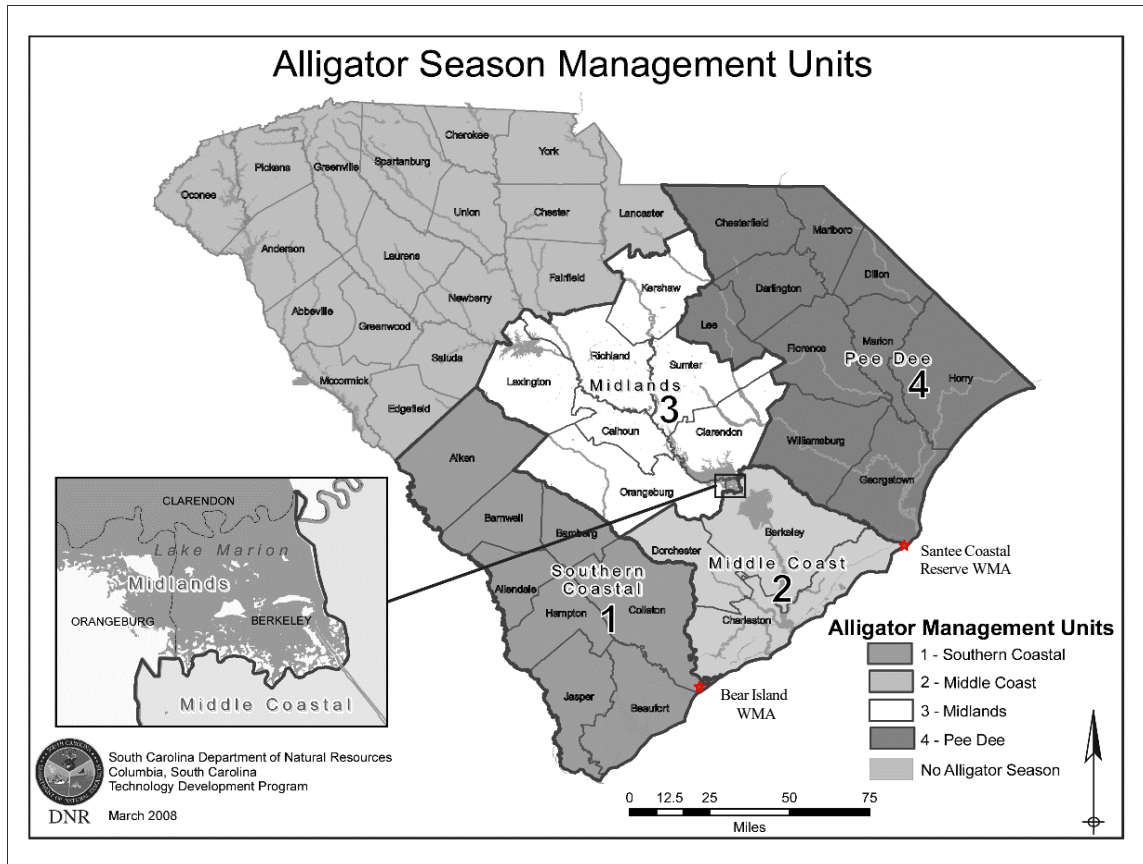


Figure 1. Alligator Management Units

No alligator hunting is allowed on certain public lands such as Wildlife Management Areas (except in navigable waters normally open to the public for hunting), State Parks, or Federal properties such as National Wildlife Refuges and their jurisdictional waters.

Two Wildlife Management Area (WMA) properties, Bear Island and Santee Coastal Reserve, were opened for alligator hunting beginning in 2011 and closed to alligator hunting after the 2018 season. These two WMAs were part of a special draw hunt held separately from the regular Public Alligator Hunting Season, but due to extremely long wait times for hunt selection and often disappointing hunt results these hunts were discontinued.

SEASON RESULTS

The total number of alligators reported taken during the 2023 public alligator hunting season was 380, an increase of 58 alligators from the 2022 season. The Middle Coastal unit had the most alligators taken at 114, followed by Southern Coastal with 103, Pee Dee with 89, and Midlands with 74 (Table 2). Five alligator harvests occurred outside of its assigned hunting unit.

Hunter Information

All permitted alligator hunters were required to report their hunting activities by November 1st, regardless of whether they went alligator hunting in South Carolina. Reporting compliance for 2023 was 70.5% for all fully permitted hunters, **therefor the results in this report only reflect the data submitted. Those hunters who did not report are not eligible to apply for the next hunting season.**

Of the fully permitted hunters (n=863), 608 reported going hunting and 380 reported a successful harvest (Table 2). The *reported* participation rate was highest in the Middle Coastal unit, with 63.6% of all selected hunters *for the unit* (n=250) going on at least one alligator hunting trip.

Table 2. Hunter participation and harvest success from each Hunt Unit.

Hunt Unit	Allotted Permits	Fully permitted hunters	Reported going hunting	Successful harvest	Hunted did not harvest
1 - Southern Coastal	250	212	141	103	38
2 - Middle Coastal	250	220	159	114	45
3 - Midlands	250	223	146	74	72
4 - Pee Dee	250	208	139	89	50
Totals	1000	863	585	380	205

Alligator harvest was reported from 17 coastal plain counties. Reported take revealed that just three counties - Berkeley, Georgetown, and Colleton - comprised of over 50% of the public alligator harvest (67.6%) (Figure 2). Those same counties have accounted for approximately 60% to 70% of the total harvest since the 2009 season. A total of 112 alligators *10 feet and larger* were harvested in 13 counties: Allendale, (n=2), Beaufort (n=2), Berkeley (n=41), Calhoun (n=8), Charleston (n=7), Clarendon (n=11), Colleton (n=8), Georgetown (n=17), Horry (n=2), Kershaw (n=1), Orangeburg (n=7), Richland (n=2), Sumter (n=3), and one harvested in an unreported county (Figure 3).

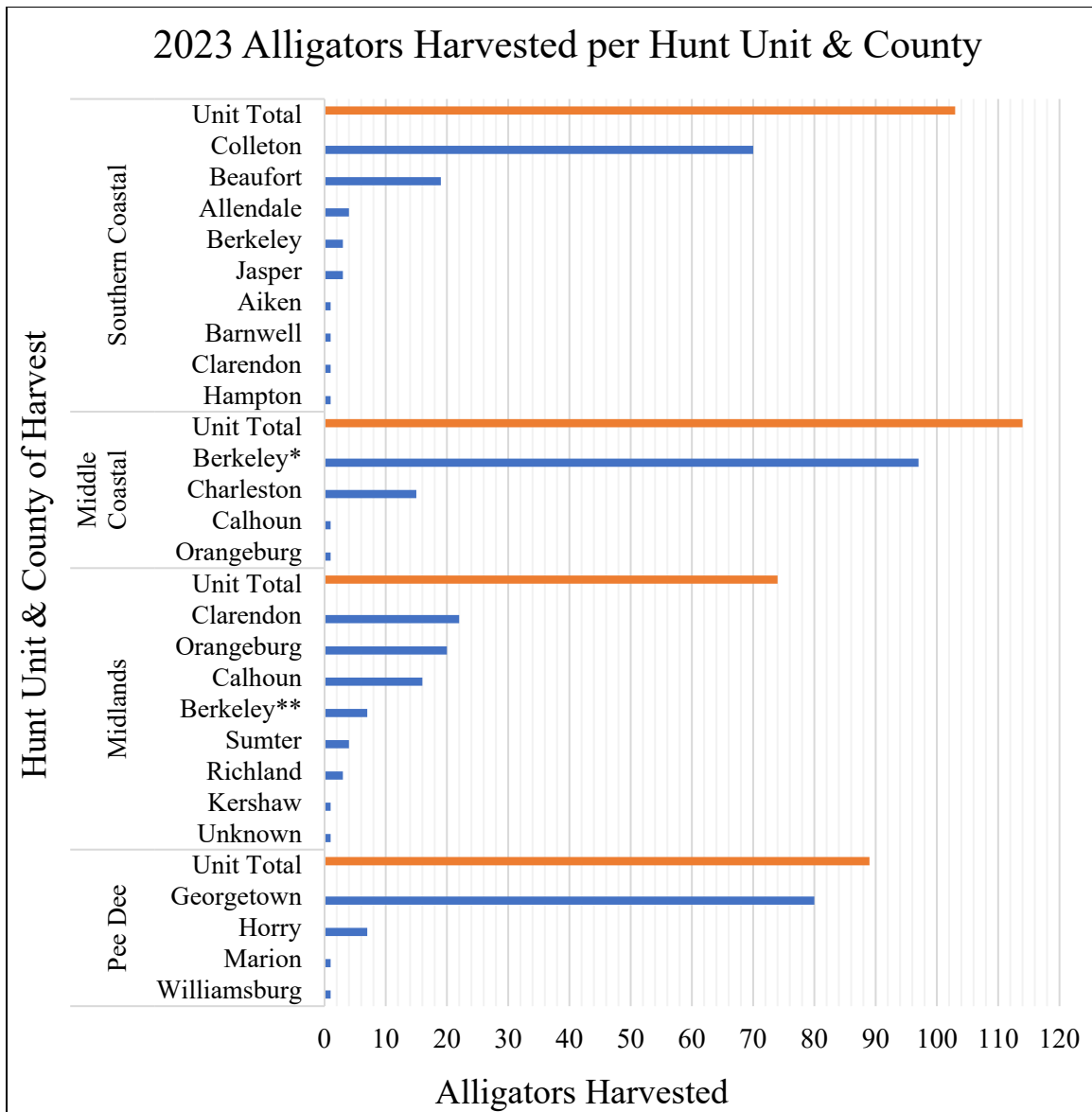


Figure 2. Total alligators harvested in 2023 per hunt unit and county. One report from the Midlands unit did not list the county of harvest & is listed as 'Unknown'.

*Does not include the portion of Berkeley County in the lower end of Lake Marion

**Includes only the portion of Berkeley County in the lower end of Lake Marion

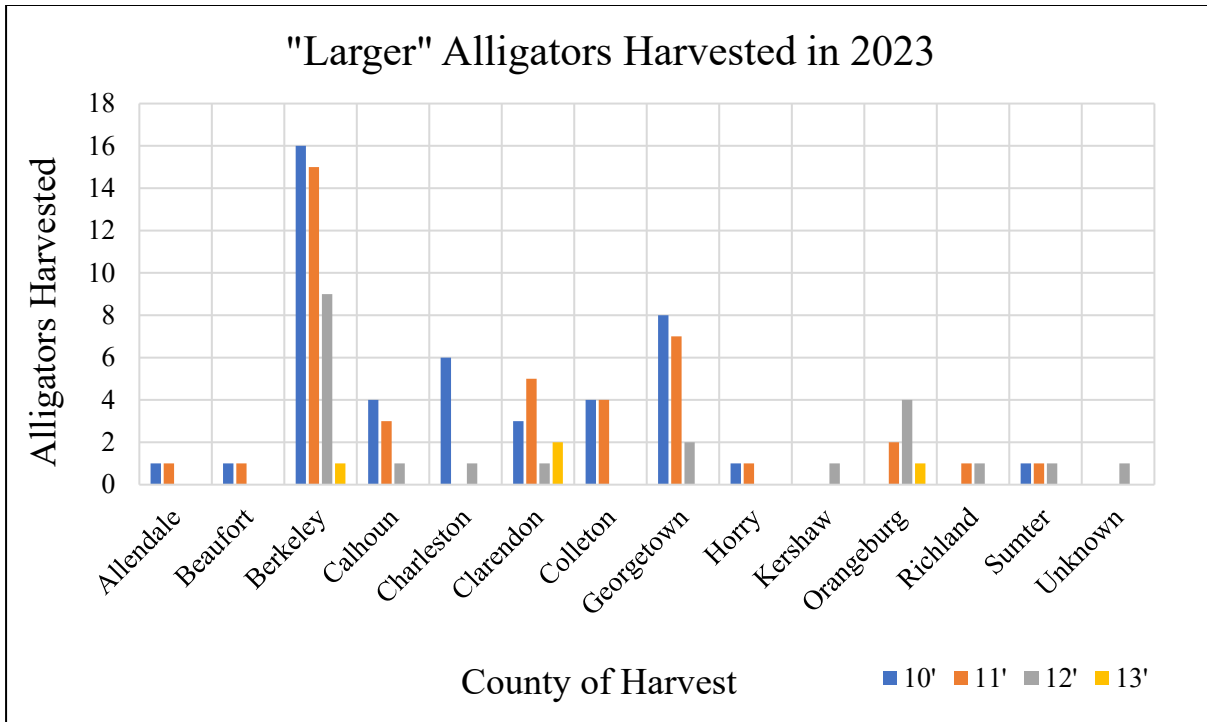


Figure 3. Total “larger” alligators (10 feet and greater) harvested during the 2023 Public Hunting Season by size class and county. One report did not list county of harvest & is listed as ‘Unknown’.

Harvested Alligator Information

The average size of all alligators taken during the 2023 public season was 8.9 feet, an increase from 2022. The average size of alligators taken in the Midlands unit was 9.6 ft., followed by the Middle Coastal unit at 9.5 feet, Southern Coastal at 8.6 feet, and lastly, the Pee Dee unit at 8 feet (Figure 4; Appendix 1). According to harvest reports, the largest alligator taken this season was 13’06” from the Middle Coastal unit. The smallest alligator reported was 4’04” and was taken from the Southern Coastal unit.

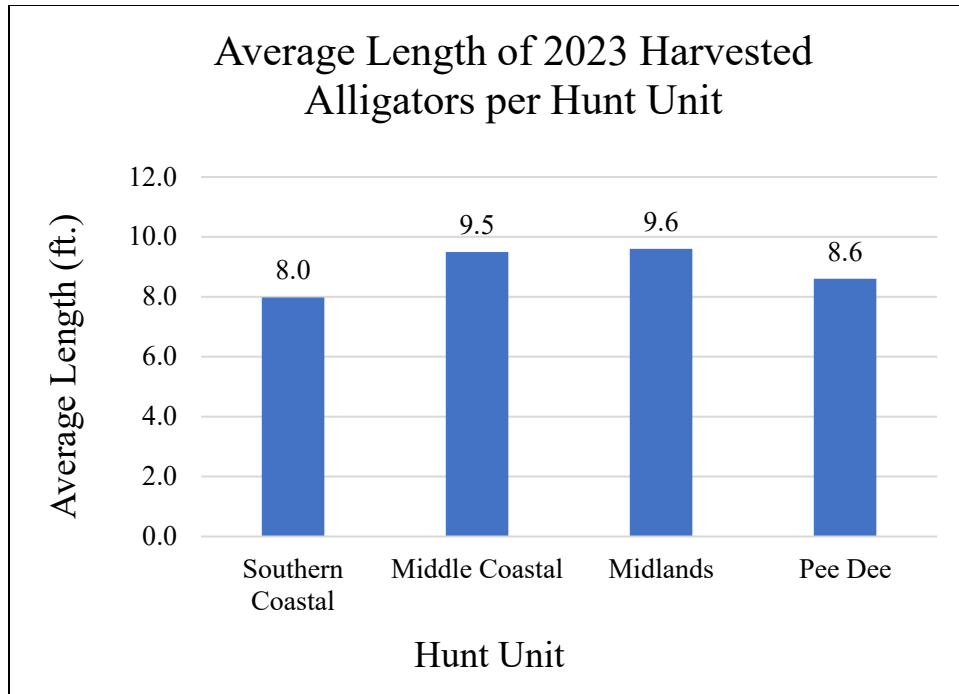


Figure 4. Average length (feet) of alligators harvested during the 2023 Public Hunting Season by Hunt Unit.

21 alligators harvested this season were reported to be *six feet and smaller*, a decrease from last year's 24. The greatest number of alligators *10 feet and larger* came from the Middle Coastal unit with 46, followed by the Midlands with 35, Pee Dee with 19, and Southern Coastal with 12. Four alligators harvested were reported to be *13 feet or greater*, two less than last year. Overall, there was an increase in harvests of alligators 8 feet and greater from the 2022 to 2023 public hunt (Figure 5). Three were harvested in the Midlands unit and one from Middle Coastal. See Figure 6 for a breakdown of sizes harvested in each hunt unit.

Reported meat yield from all harvested alligators was 9,731 lbs. The most reported alligator capture technique was a hook and line (72.6%), followed by the crossbow, harpoon, and snare. Only 48 of the successful hunters reported utilizing a guide's services.

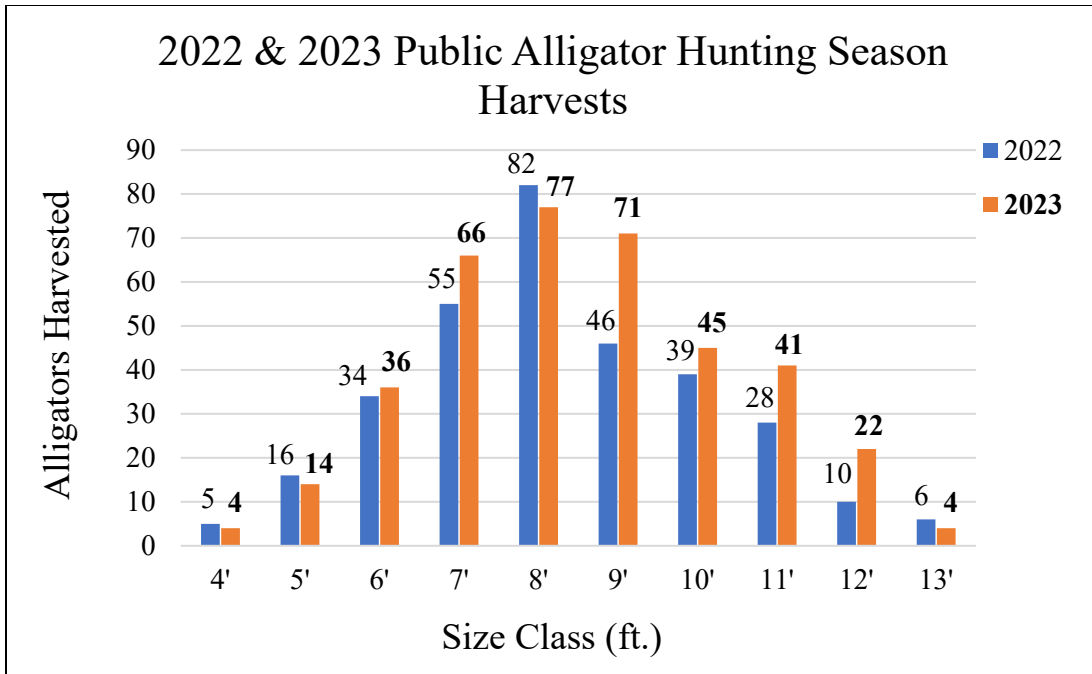


Figure 5. Comparison of the total alligators harvested in each size class in 2022 and 2023.

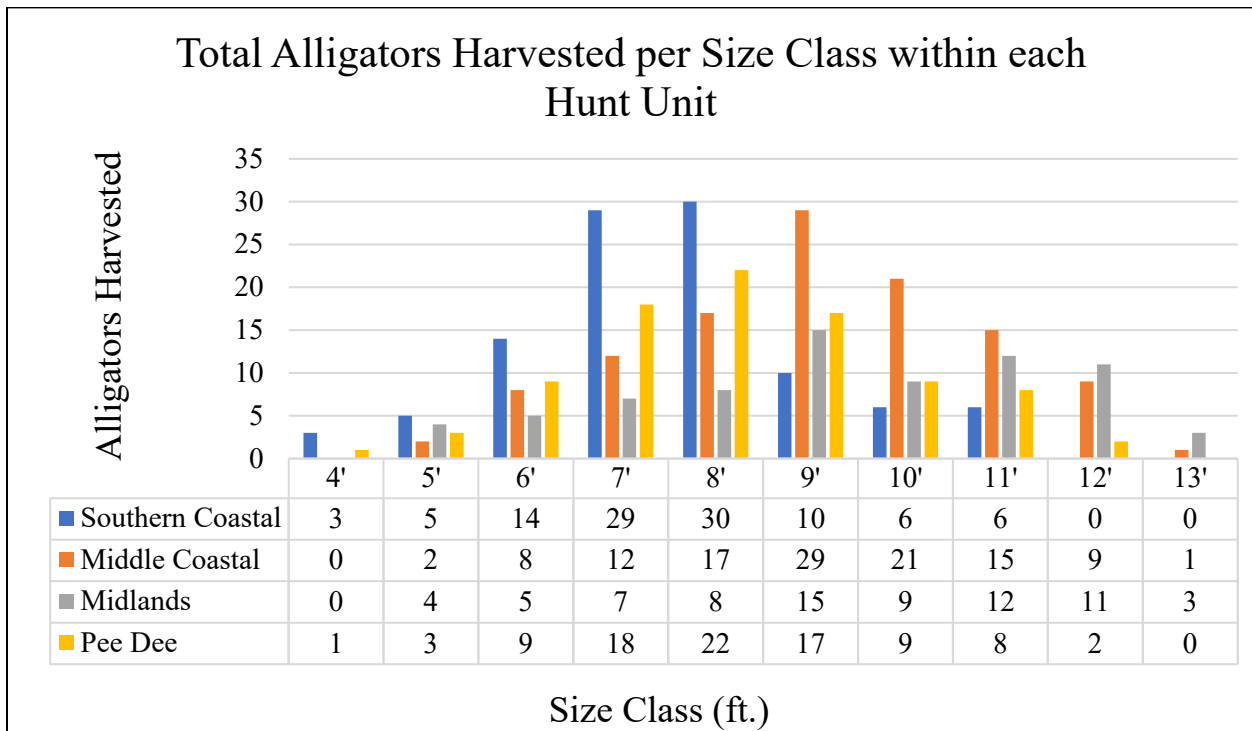


Figure 6. Total alligators harvested during the 2023 Public Hunting Season by size class and Hunt Unit.

DISCUSSION AND RECOMMENDATIONS

The number of applicants for this season’s alligator hunt continued to increase from last year and make up a new all-time high. Many hunters apply annually, and as the human population growth in South Carolina continues to climb, the number of applicants climbs too. A continued increase every year suggests there is still strong interest in South Carolina’s public alligator hunting program.

The success rate among all selected hunters increased from last year to 38%, just above the long-term average of 36% (Figure 7).

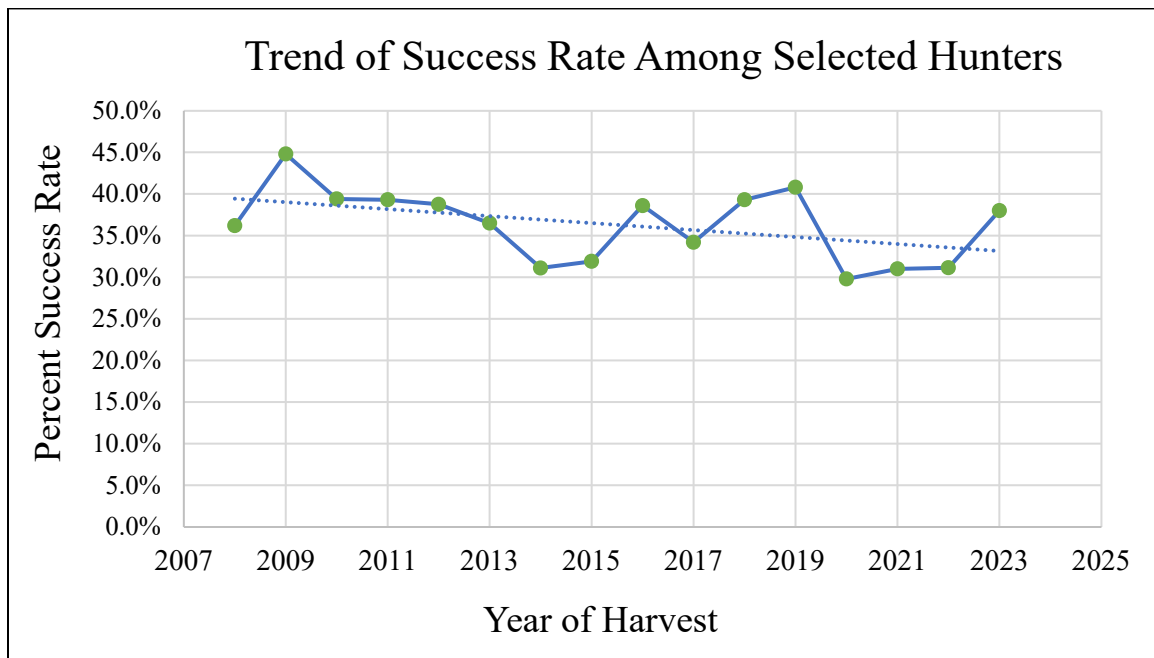


Figure 7. Percent success rate for all selected hunters, by year.

One concern regarding the public alligator hunt is the over harvest of “larger” alligators. Although total harvest per hunt unit and total harvest of “larger” alligators did increase from last year, trends from the past 14 years still suggest an overall decrease in alligators harvested in these larger size classes (Figure 8). While this does not necessarily represent a true decline in the number of large alligators available, it does suggest that fewer large alligators are being harvested and reported.

Possible explanations for this apparent trend include but are not limited to:

1. An overall reduction in participation and/or reporting of harvest
2. An overall reduction in total alligators harvested
3. Behavioral changes in alligators resulting from negative anthropogenic interactions
4. Reduced accessibility to larger alligators
5. It represents a true decline in the larger size classes.

Harvest numbers will continue to be closely monitored as there is still uncertainty as to how many of these animals can be taken annually on a sustainable basis. See the Appendix for alligator

harvest totals based on hunt unit and size class from the opening of the Public Alligator Hunting Season in 2008. Future management decisions will consider sustainable harvest of all size classes to avoid over harvest.

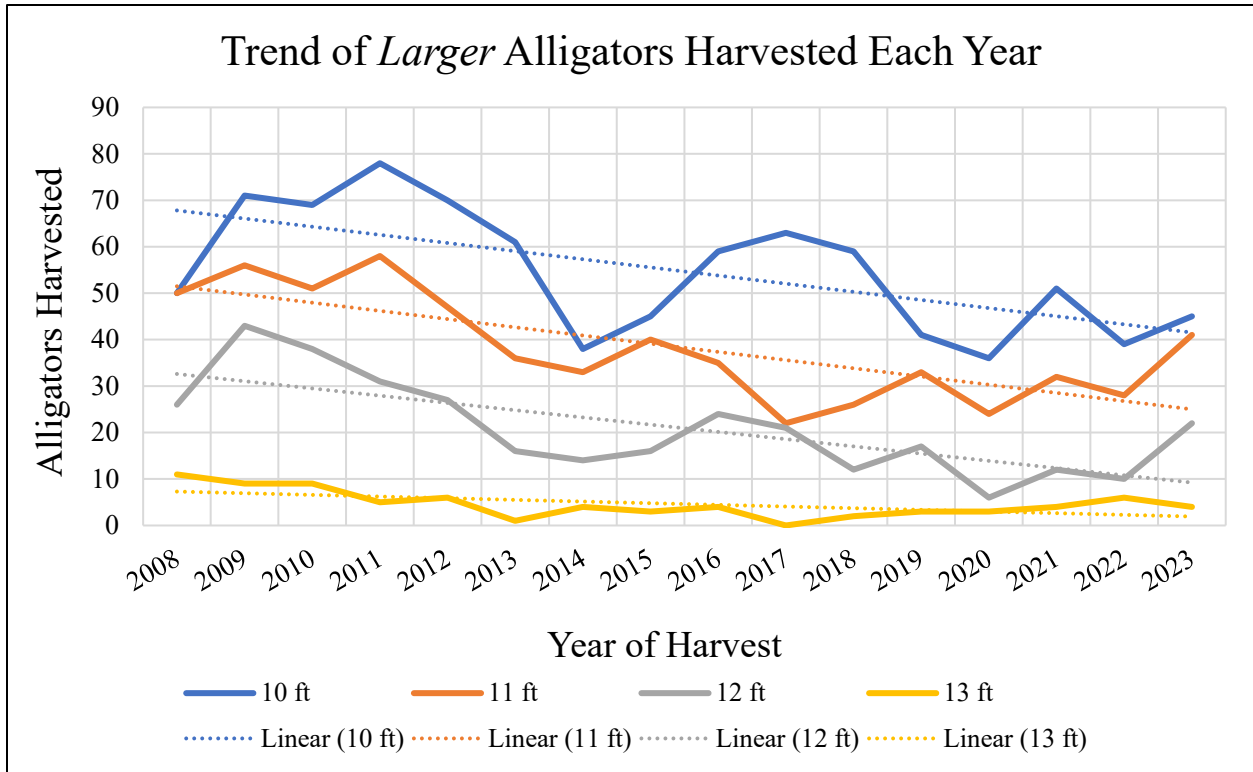
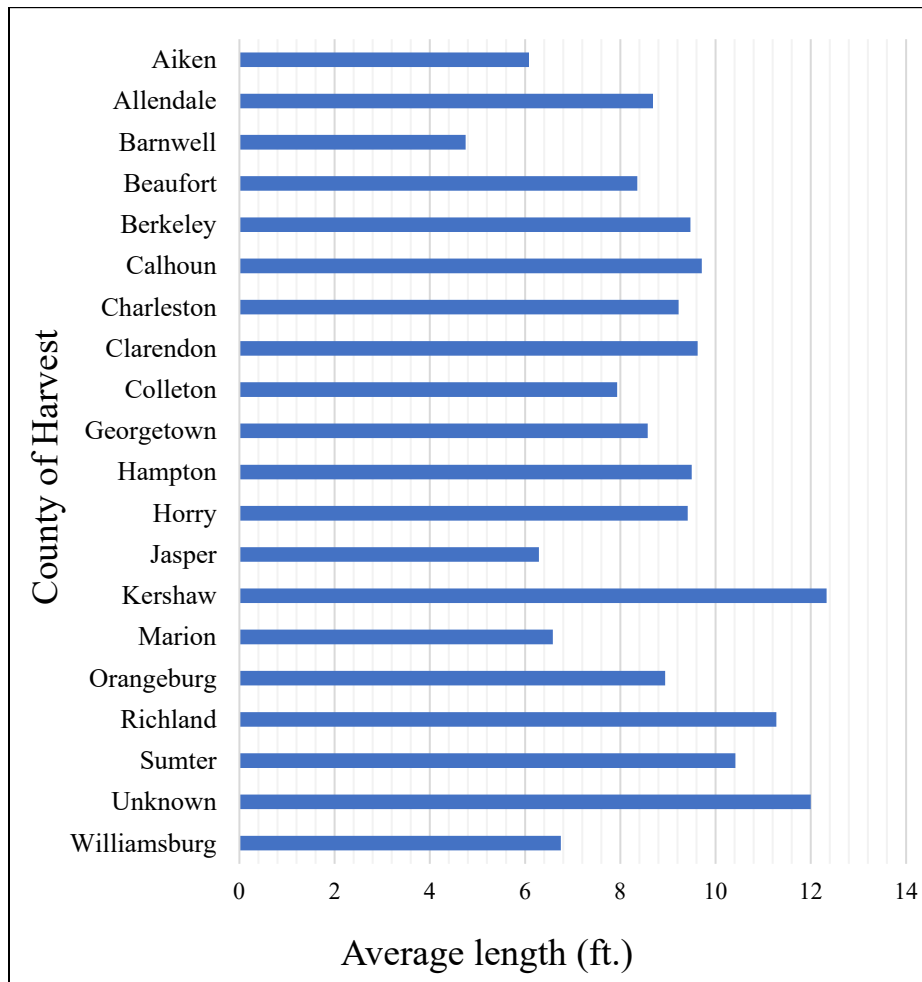


Figure 8. Yearly totals of the largest alligators (10-13 ft.) harvested each year since 2008. Trend lines (linear) represent trajectory of harvest numbers over time.

APPENDIX



Appendix I. Average length of alligators harvested during the 2023 Public Harvest Season by county. One report did not list county of harvest & is listed as 'Unknown'.

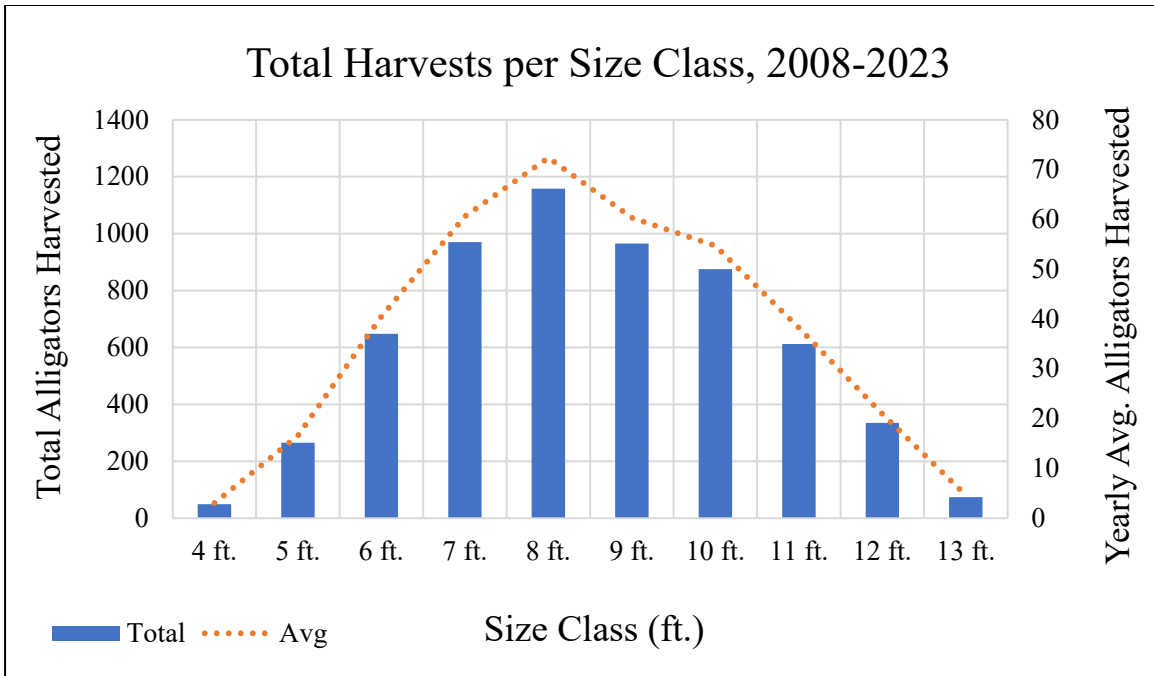
Year	Hunt Unit				Annual Total
	Southern Coastal ^a	Middle Coastal ^b	Midlands	Pee Dee	
2008	94	121	87	60	362
2009	108	147	93	104	452
2010	141	117	104	111	473
2011	136	140	87	120	483
2012	144	134	90	115	483
2013	121	128	82	121	452
2014	81	88	57	85	311
2015	102	88	74	69	333
2016	118	108	79	91	396
2017	91	94	71	86	342
2018	100	105	72	60	337
2019	79	78	89	90	336
2020	75	72	52	54	253
2021	79	76	80	74	309
2022	67	103	71	81	322
2023	103	114	74	89	380
Totals	1639	1713	1262	1410	6024

*Includes alligators taken during the WMA Alligator Hunting Program beginning in 2011 and ending in 2018.

^aIncludes alligators taken at Santee Coastal Reserve WMA

^bIncludes alligators taken at Bear Island WMA

Appendix II. Total alligators harvested during all years of the Public & WMA Hunting Season, by Hunt Unit.



Appendix III. Alligators harvested, by size class, during all years of the Public Alligator Hunting Season. The bars represent total alligator harvests from 2008-2023 (left Y-axis). The dotted line represents the average amount of alligators harvested per size class from the 2008-2023 seasons (right Y-axis).