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## Alligator hunting season report 2022

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# Alligator Hunting Season Report 2022



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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 2022 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://gooutdoorssouthcarolina.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. 1,100 permits were offered in 2022. 250 tags were allocated per hunt unit, and an additional 50 permits were offered to the Middle Coastal and Midlands units as a result of increased negative interactions with alligators in the area. Of the additional 100 tags, only 31 were accepted by hunters. 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 as usual on May 1st and ended on June 15th. A total of 9,152 hunters applied for the 2022 hunt. This is an increase of 771 applicants from last year. The applicants were from 42 different states (including SC) along with two applicants from Washington D.C. The number of resident applicants increased to 91.2% of the total applications received for the Public Hunting Season. Similar to past years, NC and GA residents made up the majority of non-residents at 3.7% and 0.71% of the total number of applicants, respectively. No other states' applicants were more than 1% of the total.

With the exception of a single hunter with zero preference points, no hunters with fewer than three preference points were selected for the Public Alligator Hunting season. The majority had three preference points (67.7%). The remaining selected hunters had four (29.1%) and five or greater (3%) preference points. Two applicants had 13 preference points. A small portion of applicants that are selected chose the non-draw option and retained their preference points into the following year. Applicants lose any accumulated preference points once selected for a permit, whether the permit is purchased or not.

A total of 927 of the 1,031 hunters selected in the 2022 season completed the application process and were issued a harvest tag and permit. The tag purchase rate (90%) was higher than last year's rate of 83%. 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 2022 season began at noon on September 10th and ended at noon on October 8th.

**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.

<b>Fee</b>	<b>Resident</b>	<b>Non-resident</b>
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.

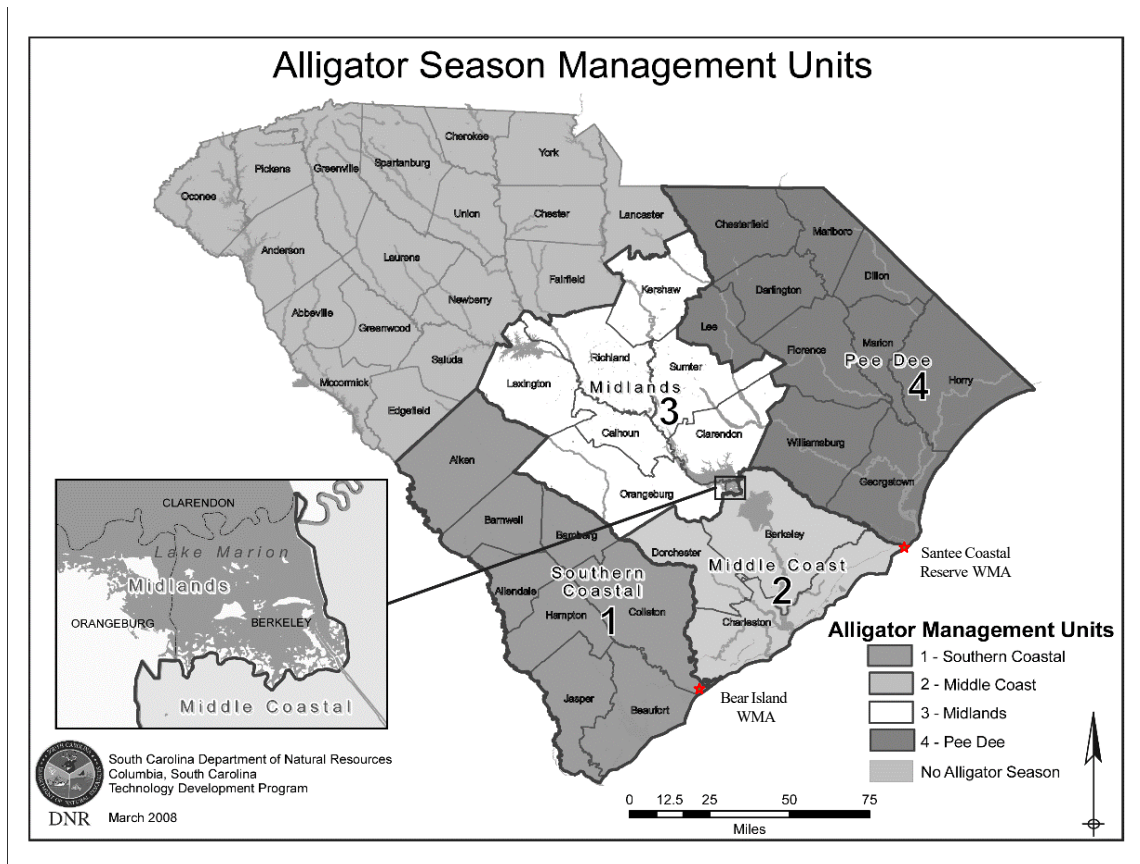


Figure 1. 2022 Alligator Management Units

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 2022 public alligator hunting season was 322, an increase of 12 alligators from the 2021 season. One alligator harvest occurred outside of its assigned hunting unit and has been excluded from all harvest data going forward. The Middle Coastal had the most alligators taken at 103, followed by Pee Dee with 80, Midlands with 71, and Southern Coastal with 67 (Table 2).

### Hunter Information

All permitted alligator hunters were required to report their hunting activities by November 1<sup>st</sup>, regardless of whether they went alligator hunting in South Carolina. Reporting compliance for 2022 was \_\_\_% for all fully permitted hunters<sup>1</sup>, **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=927), \_\_\_ reported going hunting and 321 reported a successful harvest (Table 2). The *reported* participation rate was highest in the \_\_\_ unit, with \_\_\_% of all selected hunters *for the unit* (n=\_\_\_) going on at least one alligator hunting trip. Participation rates for the other units are shown in Figure 2.<sup>1</sup>

Table 2. Hunter participation and harvest success from each Hunt Unit.<sup>1</sup>

Hunt Unit	Allotted Permits	Fully permitted hunters	Reported going hunting	Successful harvest	Hunted did <b>not</b> harvest
Southern Coastal	250	211		67	
Middle Coastal	264	246		103	
Midlands	268	243		71	
Pee Dee	249	227		80	
<b>Totals</b>	<b>1031</b>	<b>927</b>		<b>321</b>	

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<sup>1</sup> Reported participation data will be added at a later date.

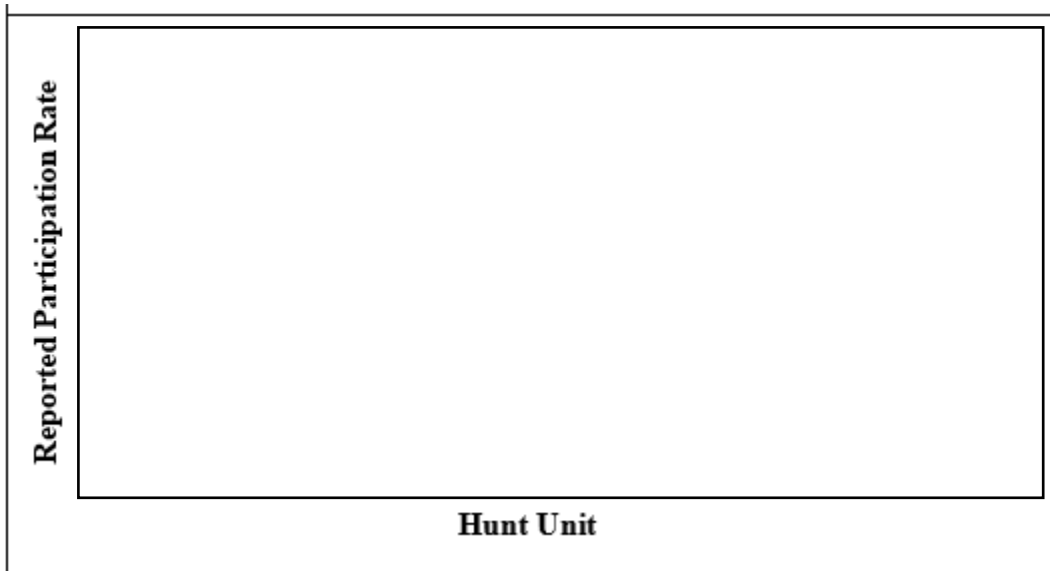


Figure 2. Reported participation rate (at least one trip afield) for all hunters selected to participate in the 2022 alligator season by Hunt Unit.<sup>2</sup>

Alligator harvest was reported from seventeen coastal plain counties. Reported take revealed that just three counties - Berkeley, Georgetown, and Colleton - comprised of over 50% of the public alligator harvest (63.2%) (Figure 3). Those same counties have accounted for approximately 60% to 70% of the total harvest since the 2009 season. The largest alligators (10'+) came from 12 counties: Allendale, (n=1), Beaufort (n=4), Berkeley (n=37), Calhoun (n=3), Charleston (n=2), Clarendon (n=10), Colleton (n=6), Georgetown (n=11), Hampton (n=1), Jasper (n=2), Orangeburg (n=5), and Sumter (n=1) (Figure 4).

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<sup>2</sup> Reported participation data will be added at a later date.



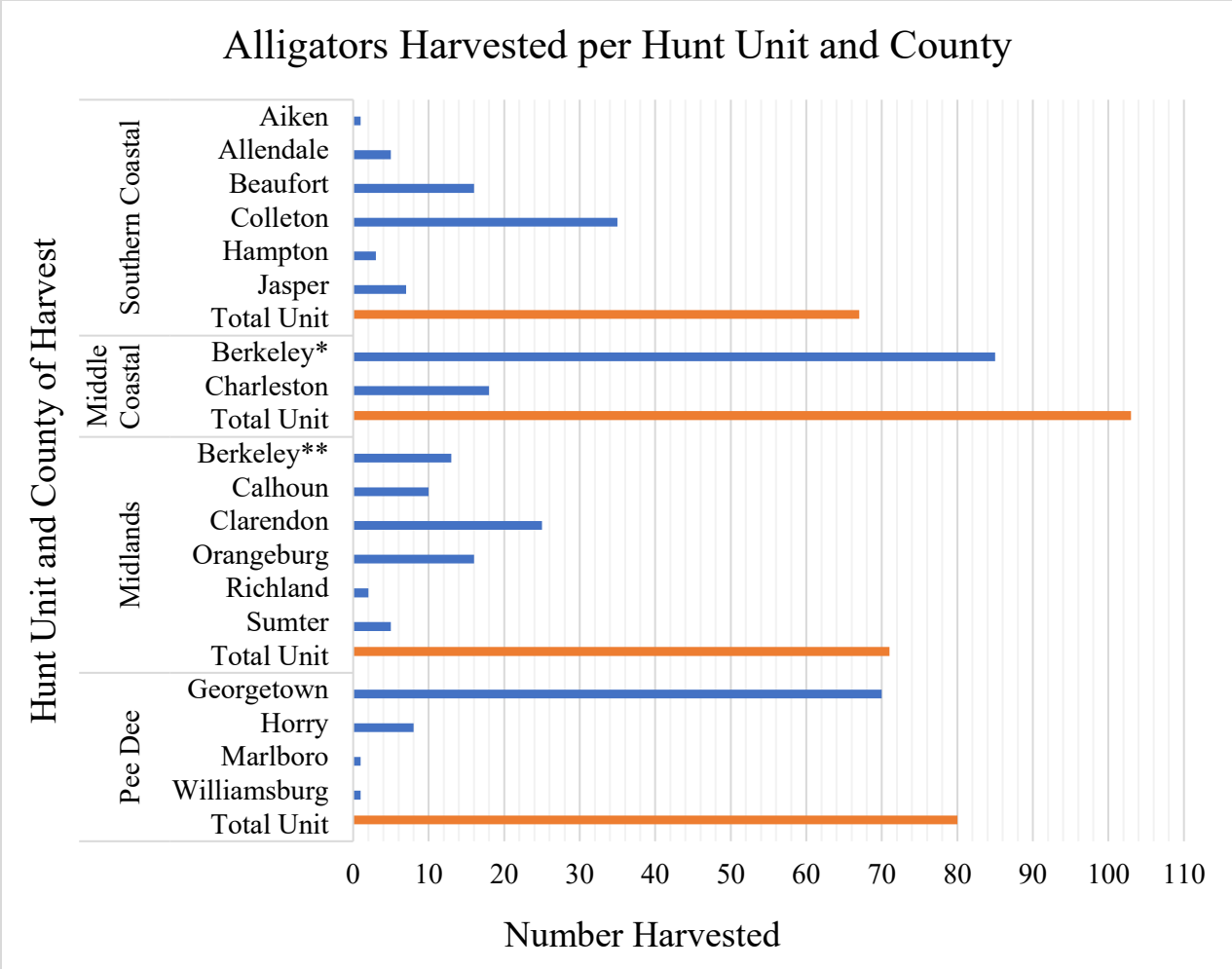


Figure 3. Alligator harvest per hunt unit and county.

\*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

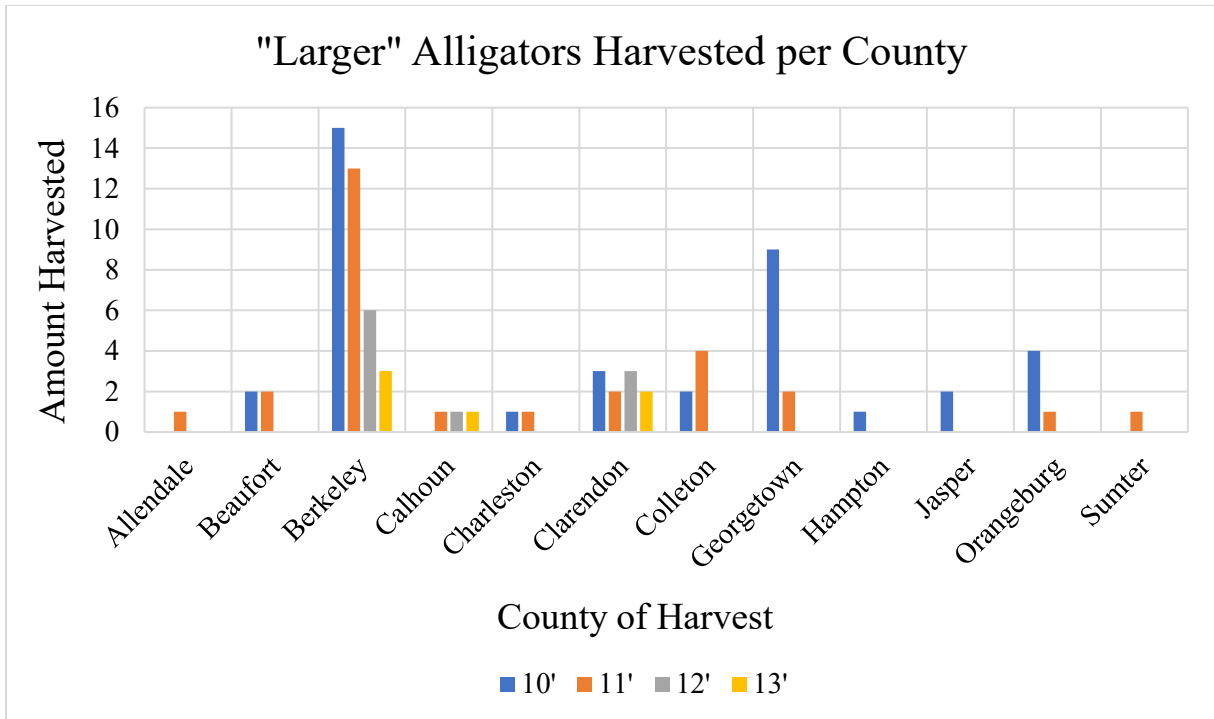


Figure 4. Number of “larger” alligators (10 feet and greater) taken during the 2022 Public Hunting Season by size class and county.

### Harvested Alligator Information

The average size of all alligators taken during the 2022 public season was 8.6 feet, a decrease from 2021. The average size of alligators taken in Middle Coastal unit was 9.2 feet, followed by the Midlands at 9.1 feet, Southern Coastal at 8.1 feet and lastly, the Pee Dee unit at 8 feet (Figure 5; Appendix 1). Six alligators harvested were reported to be 13 feet or greater, two more than last year (Figure 6). According to harvest reports, the largest alligator taken this season was 13’05” from the Midlands unit. The smallest alligator reported was 4’05” and was taken from the Southern Coastal unit.

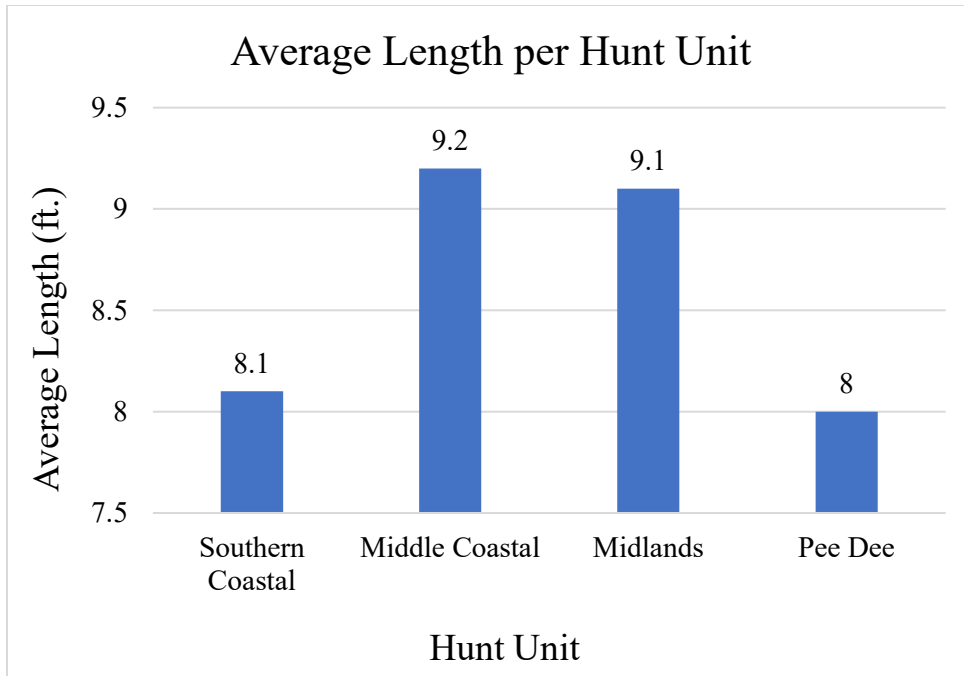


Figure 5. Average size of alligators taken during the 2022 Public Hunting Season by Hunt Unit.

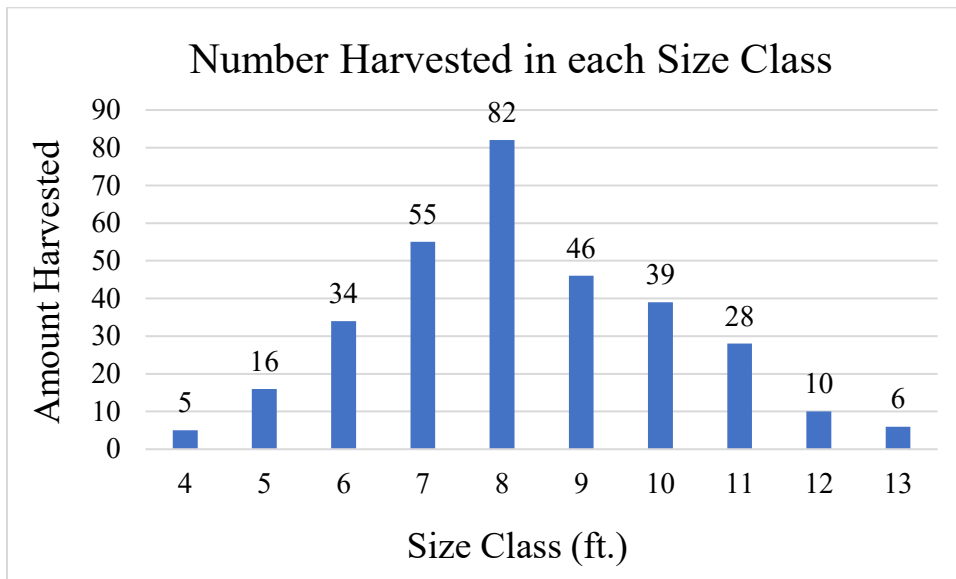


Figure 6. Number of alligators taken by size class during the 2022 Public Hunting Season

24 alligators harvested this season were reported to be *six feet and smaller*, an increase from last year's 16. The greatest number of alligators *10 feet and larger* came from the Middle Coastal unit with 32, followed by the Midlands with 26, the Southern Coastal unit with 14, and Pee Dee with 11. Six alligators 13 feet and larger were harvested, four from the Midlands unit and two from the Middle Coastal unit. See Figure 7 for a breakdown of sizes harvested in each hunt unit. Overall, those taken in the 8 foot size class increased significantly from the 2021 to 2022 hunts while those 9 feet and greater had slight decline in harvest (Figure 8; Appendix).

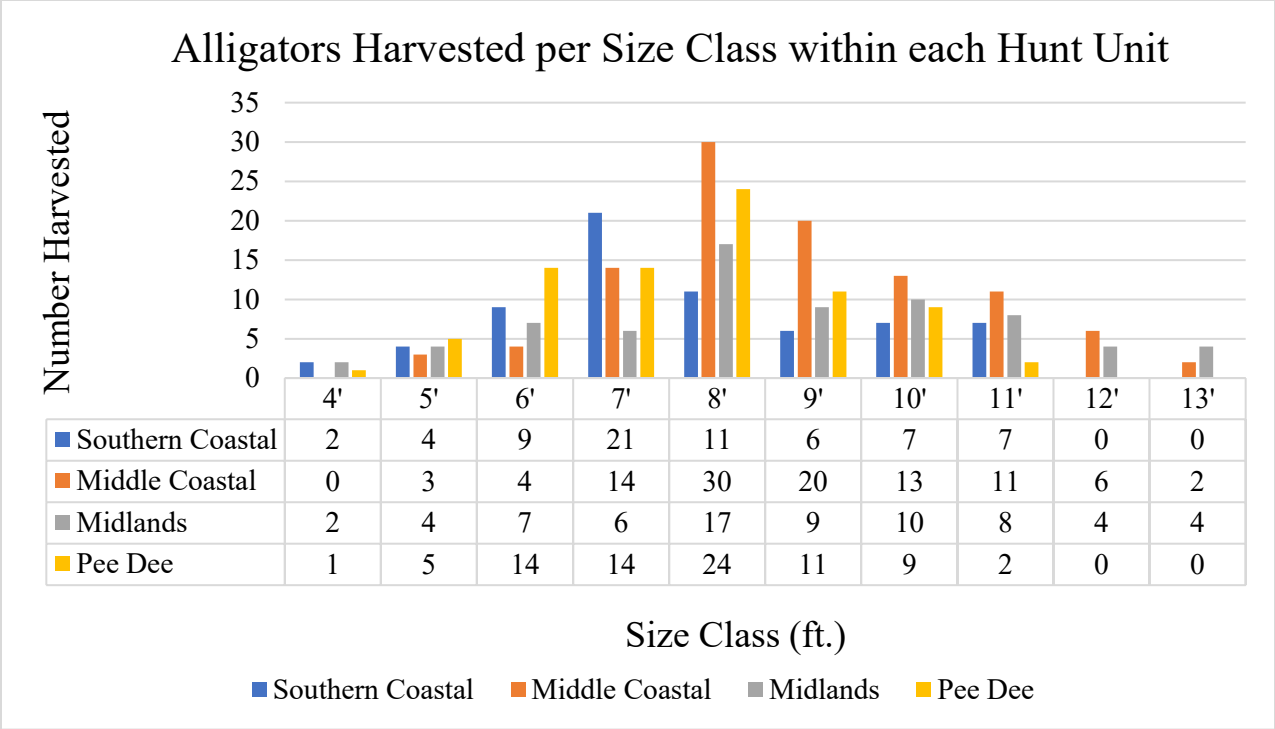


Figure 7. Number of alligators taken during the 2022 Public Hunting Season by size class and Hunt Unit.

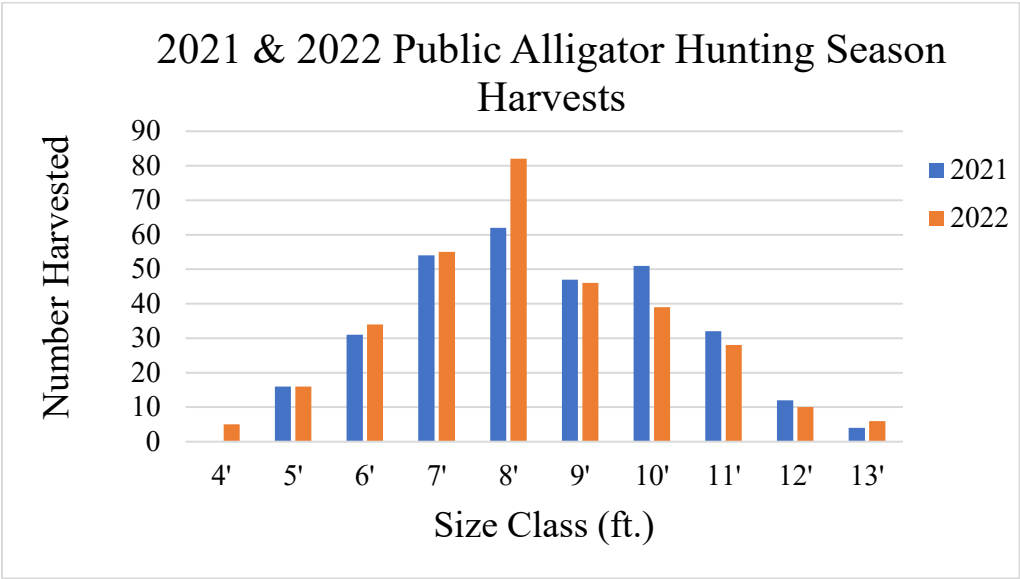


Figure 8. Number of alligators harvested in each size class in 2021 and 2022.

Reported meat yield from all harvested alligators was 9,290 lbs. The most reported alligator capture technique was a hook and line, with over three-quarters (76.6%) of all successful hunters using this as a primary capture device. The second most reported type was the crossbow at 16.5%. The harpoon and gig were utilized in fewer than 7% of successful harvests. A total of 15.9% of the successful hunters utilized a guide’s services.

## 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.

Overall hunt participation was down slightly (1.9%) from last year (Figure 2)<sup>3</sup>, with only the Midlands unit reporting a minor increase in participation. The success rate among all selected hunters (n=1,031) remained the same as last year. However, it is still below the long-term average of 37% (Figure 9).

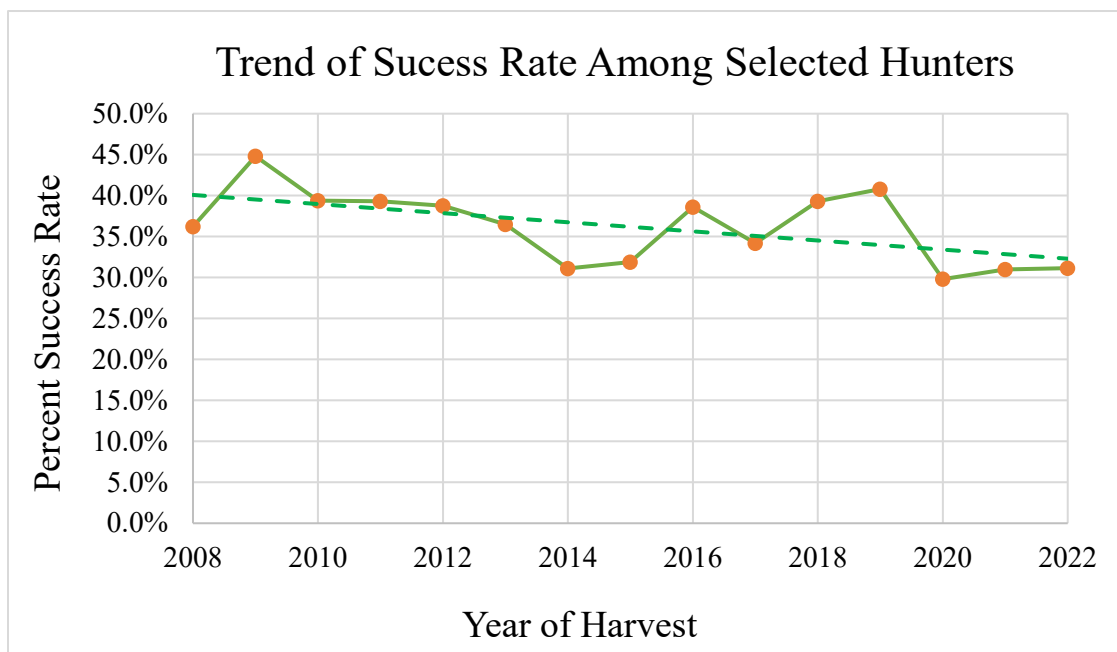


Figure 9. Percent success rate for all selected hunters, by year.

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 10). 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.

<sup>3</sup> Reported participation data will be added at a later date.

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. Future management decisions will consider sustainable harvest of all size classes to avoid over harvest.

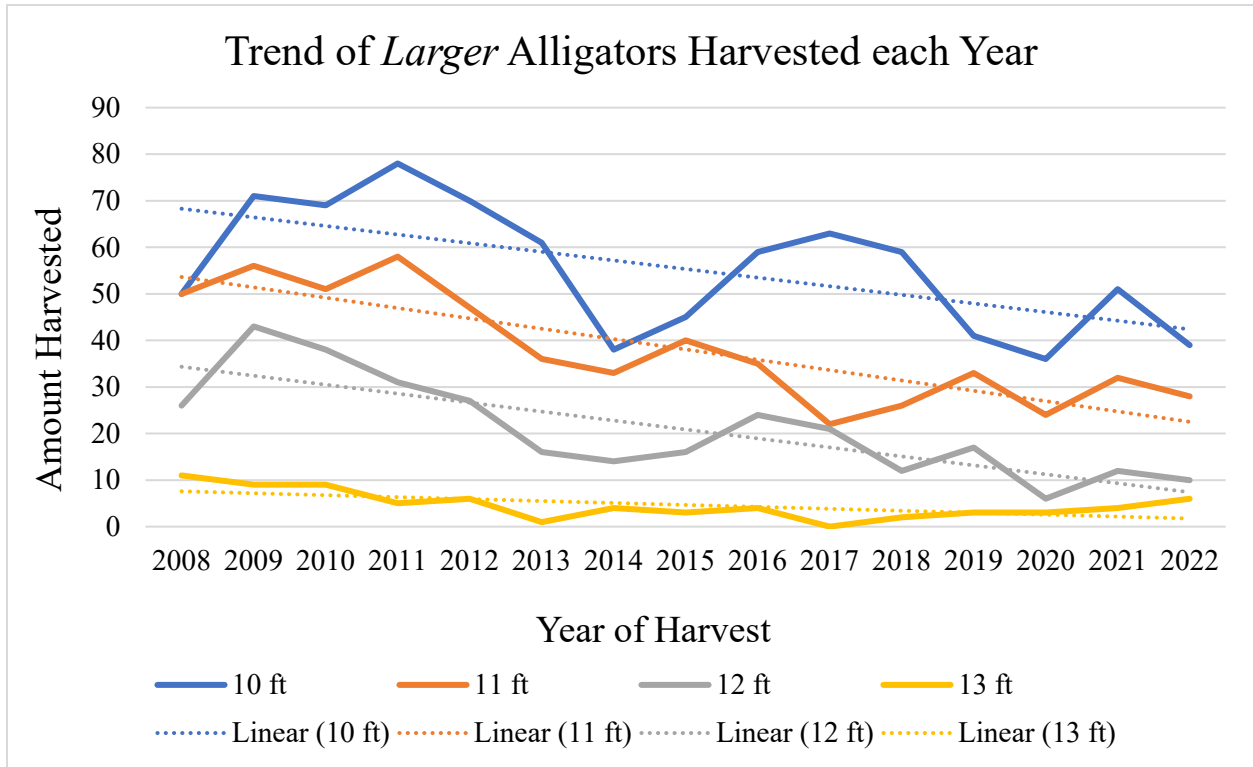
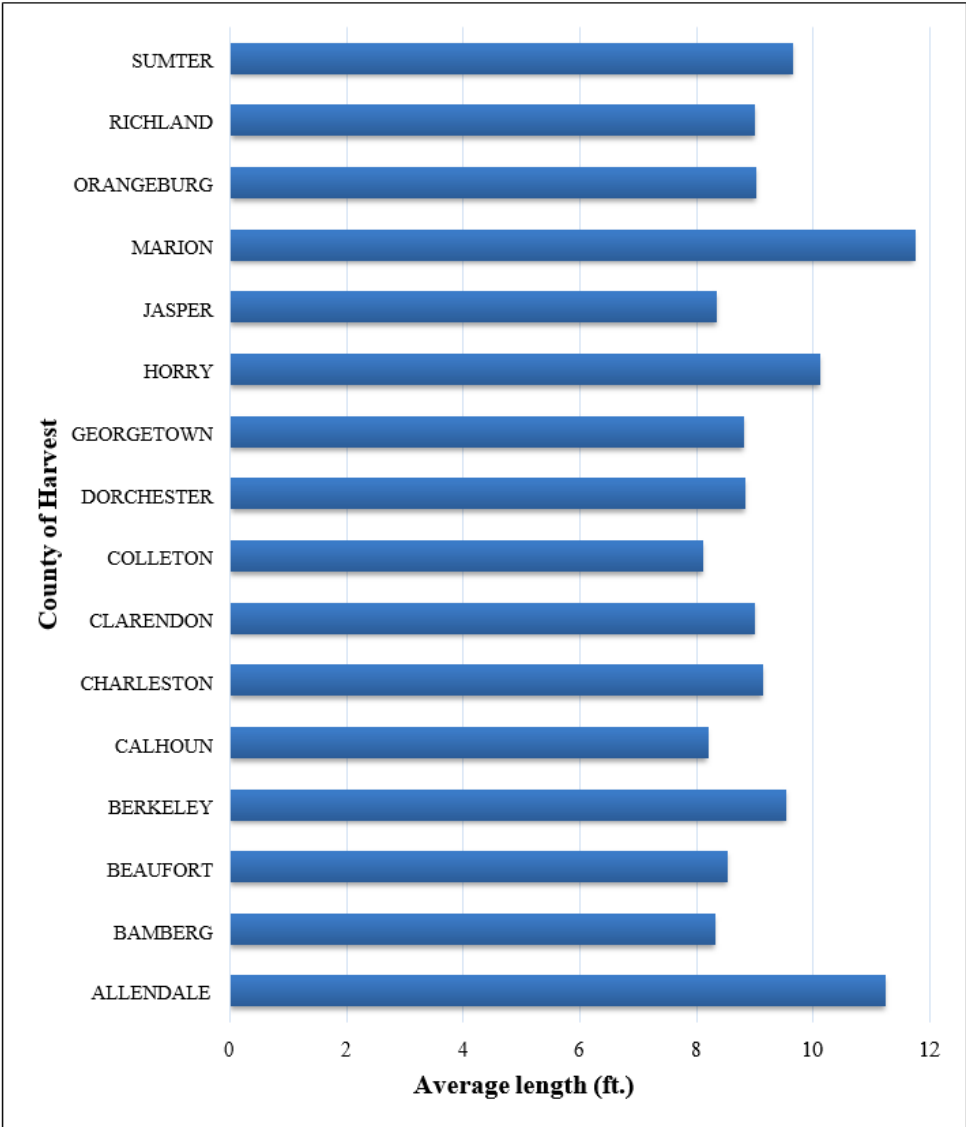


Figure 10. Total number of the largest alligators (10-13 ft.) harvested each year since 2008. Trend lines (linear) represent trajectory of harvest numbers over time.

# APPENDIX



Appendix I. Average length of alligators harvested during the 2022 Public Harvest Season by county.

	<b>Hunt Unit</b>				
<b>Year</b>	<b>Southern Coastal<sup>a</sup></b>	<b>Middle Coastal<sup>b</sup></b>	<b>Midlands</b>	<b>Pee Dee</b>	<b>Annual Total</b>
<b>2008</b>	94	121	87	60	362
<b>2009</b>	108	147	93	104	452
<b>2010</b>	141	117	104	111	473
<b>2011</b>	136	140	87	120	483
<b>2012</b>	144	134	90	115	483
<b>2013</b>	121	128	82	121	452
<b>2014</b>	81	88	57	85	311
<b>2015</b>	102	88	74	69	333
<b>2016</b>	118	108	79	91	396
<b>2017</b>	91	94	71	86	342
<b>2018</b>	100	105	72	60	337
<b>2019</b>	79	78	89	90	336
<b>2020</b>	75	72	52	54	253
<b>2021</b>	79	76	80	74	309
<b>2022</b>	67	103	71	81	322
<b>Totals</b>	1536	1599	1188	1321	<b>5644</b>

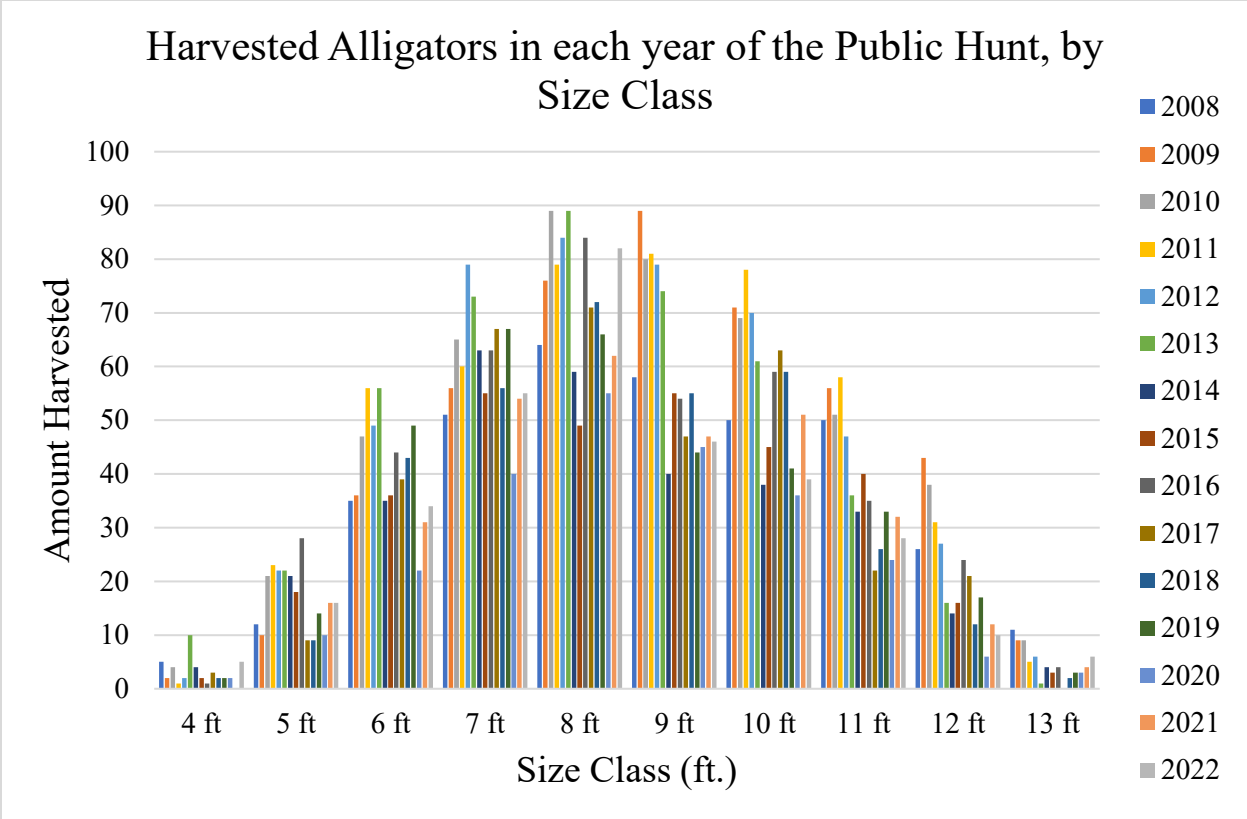
\*Includes alligators taken during the WMA Alligator Hunting Program beginning in 2011 and ending in 2017.

<sup>a</sup>Includes alligators taken at Santee Coastal Reserve WMA

<sup>b</sup>Includes alligators taken at Bear Island WMA

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





Appendix III. Number of alligators harvested during all years of the Public Alligator Hunting Seasons, by size class.