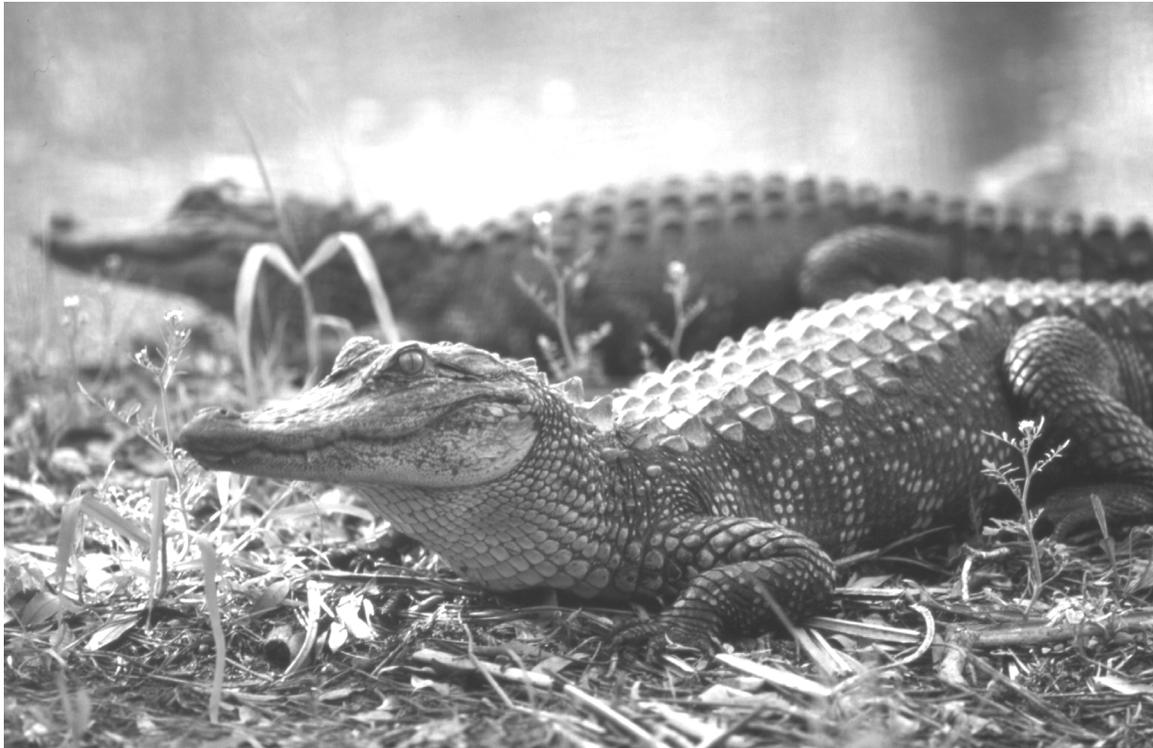


# Public Alligator Hunting Season Report 2009



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F&AP Report 10-01

## 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 1960’s 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 decidedly 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 2009 Public Alligator Hunting Season marked the second general alligator hunting season after a closure of nearly 40 years. Alligators have been legally hunted in South Carolina since 1995 under the Private Lands Alligator Harvest Program. The Private Lands Program was established for large landowners having significant amounts of alligator habitat, 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 SC hunting license, or be under the age of 16. To participate in the public alligator season one must apply, be selected, then pay a fee for a permit and harvest tag. The fee for the permit and tag is \$100. 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 resource.

## HUNTER SELECTION

This public alligator hunt was a limited-drawing hunt in which participants were selected in a randomized computer drawing. All potential hunters were required to submit an application online to the Department of Natural Resources (DNR) website ([www.dnr.sc.gov](http://www.dnr.sc.gov)) and pay a non-refundable application fee of \$10.

Of the 1,000 permits available for the 2008 season, 789 permits were purchased; therefore, staff recommended that 1,000 permits and tags be allocated for the 2009 hunt. The four hunt units (Figure 1) remained unchanged. With the exception of a small portion of Berkeley County located within Lake Marion, county lines bound all hunt units. Two hundred and fifty permits were issued for each unit. Hunters could select the option to be considered for any or all of the units, but a permit only allowed them to hunt in one unit per season. After paying the \$100 tag fee, those selected for the hunt, were issued a permit and one harvest tag. 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 allowed a hunter to take one alligator greater than 4 foot in total length from either public or private waters; however, no alligator hunting was allowed on public lands such as Wildlife Management Areas (except in navigable waters normally open to the general public for hunting), State Parks, or Federal properties like National

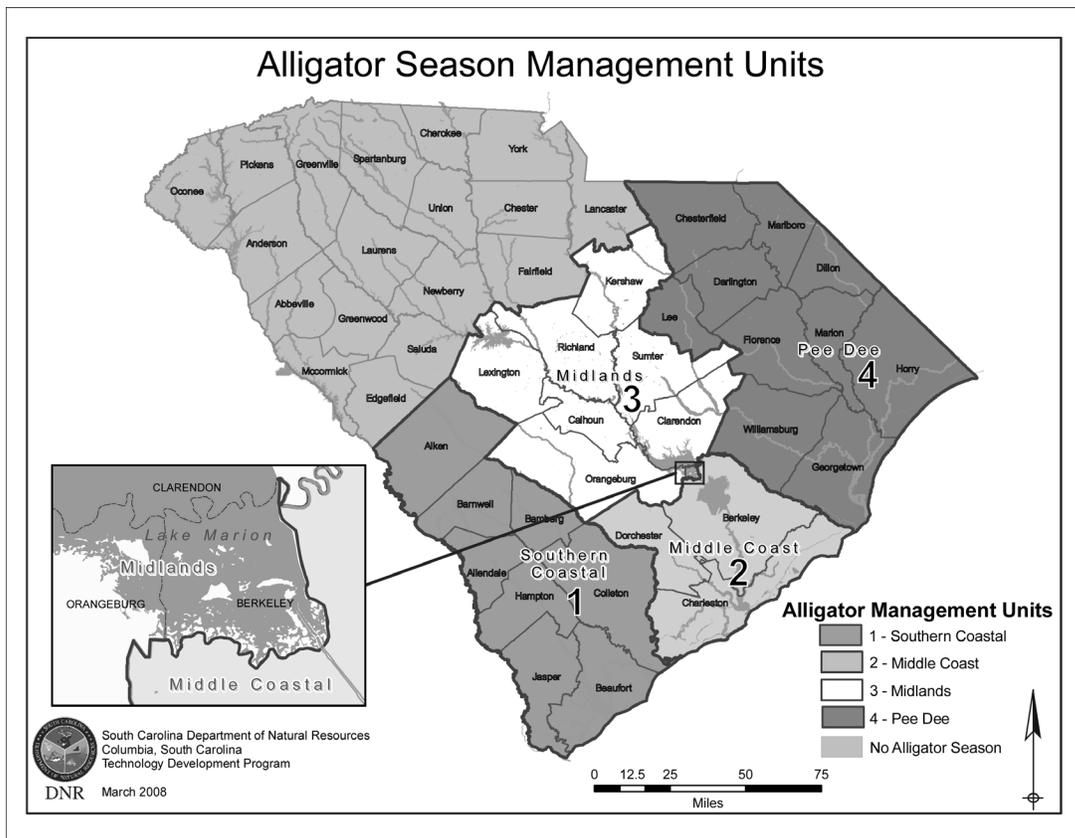


Figure 1. 2009 Alligator Management Units.

Wildlife Refuges and their jurisdictional waters. This year's season began at noon on September 12 and ended at noon on October 10. The noon opening and closing was a change from the midnight open and close in 2008.

The online application process began on May 1<sup>st</sup> and ended on June 15<sup>th</sup>. A total of 3,718 hunters applied for the 2009 hunt, an increase of 152.1% from the previous season. This number included applicants from 35 different states (including SC) as opposed to 19 states represented in 2008. Resident applicants comprised 87% of the total applications received this season.

As expected and due to the increase in applications, the success rate for all applicants was down sharply from 67.8% to 27.4%. Those hunters who were not drawn were issued a preference point for future alligator hunt drawings. All hunters from 2008 with a preference point should have been selected for the 2009 hunting season provided they applied. Beginning with the 2010 season, not all hunters with a preference point will be selected as there is a potential pool of approximately 2,700 applicants with a preference point entering the 2010 hunt draw. As with previous years, any applicant with a preference point that does not apply in a subsequent year will lose any accumulated preference points. Also, applicants lose any accumulated preference points once selected for a permit whether the permit is purchased or not.

A total of 848 of the 1,023\* hunters selected (82.9%) for the 2009 season completed the application process and were issued a harvest tag and permit. The tag purchase rate was slightly higher than the rate in 2008 (78.9%). The hunter participation rate was actually above the rate of 70-80% staff had predicted when initially allocating the 1,000 permits as the public alligator program was developed.

Five alligator hunting seminars were held prior to the season to assist hunters and potential hunters in understanding the laws, regulations and the techniques used for this season. Also, vendors were allowed to attend to showcase the tools and devices commonly used in alligator hunting. The alligator hunting guide ([www.dnr.sc.gov/wildlife/alligator/gatorhuntguide.pdf](http://www.dnr.sc.gov/wildlife/alligator/gatorhuntguide.pdf)) was updated to reflect changes from the previous season. All permitted alligator hunters received a hardcopy of the hunting guide when they purchased their permit and tag.

\*23 additional applicants were selected due to database correction measures.

## SEASON RESULTS

All permitted alligator hunters were required to report their hunting activities by December 1, regardless of whether or not they actually went alligator hunting in South Carolina. Reporting compliance for 2009 was 80.0% for all permitted hunters (676 reports). Of the hunters permitted for each hunt unit, reporting compliance was 84.7% for the Middle Coastal, 79.5% for the Southern Coastal, 77.3% for the Midlands, , and 76.9% for the Pee Dee hunting region. Those hunters that did not report will not be allowed to apply for the next hunting season.

The total number of alligators reported taken during the 2009 public alligator hunting season was 452. This was an increase of 24.9% from the 2008 season. This represented a success rate of 53.3% for all fully permitted hunters (n=848) and 44.2% for all selected applicants (n=1,023). The Middle Coastal unit had the most alligators taken at 147 (32.5% of total harvest), followed by the Southern Coastal with 108, Pee Dee with 104 and the Midlands unit at 93 (Table 1).

Fully permitted hunters who actually reported going hunting (n=651) had a success rate of 69.4%. The number of hunters that hunted, but were unsuccessful was 199 (30.5%). Another 3.2 percent of hunters (n=27) that paid their \$100 tag fee reportedly did not go alligator hunting this season.

The reported participation rate was highest in the Middle Coastal unit at 76.7% of the selected hunters for the unit going on at least 1 alligator hunting trip. Participation rates for the other units were as follows: Midlands at 65.4%, Southern Coastal at 57.0%, and lowest in the Pee Dee unit at 55.3% (Figure 2). Of the successful hunters, the most efficient hunters were in the Southern Coastal unit. Hunters in this unit only went on 218 trips with 108 alligators taken, averaging 1 alligator killed per 2.0 (SD=1.3) hunting trips. Middle Coastal hunters went on 302 alligator hunting trips, took 121 alligators, averaging 1 alligator per 2.5 times (SD=2.0) afield. The Pee Dee unit had 265 outings and the success rate was 1 alligator per 2.5 (SD=1.4) trips. Lastly, hunting trips for Midlands hunters numbered 241, or 1 alligator per 2.6 trips (SD=2.4). Over all of the hunt units, 1 alligator was killed for every 2.4 alligator hunting trips taken (SD=2.1).

Table 1. The number of alligators taken and percent of total alligators harvested for the 2009 season by Hunt Unit.

| Hunt Unit        | Number of Alligators Taken | Percent of Total Harvest |
|------------------|----------------------------|--------------------------|
| Midlands         | 93                         | 20.6%                    |
| Middle Coastal   | 147                        | 32.5%                    |
| Southern Coastal | 108                        | 23.9%                    |
| Pee Dee          | 104                        | 23.0%                    |
| Total            | 452                        |                          |

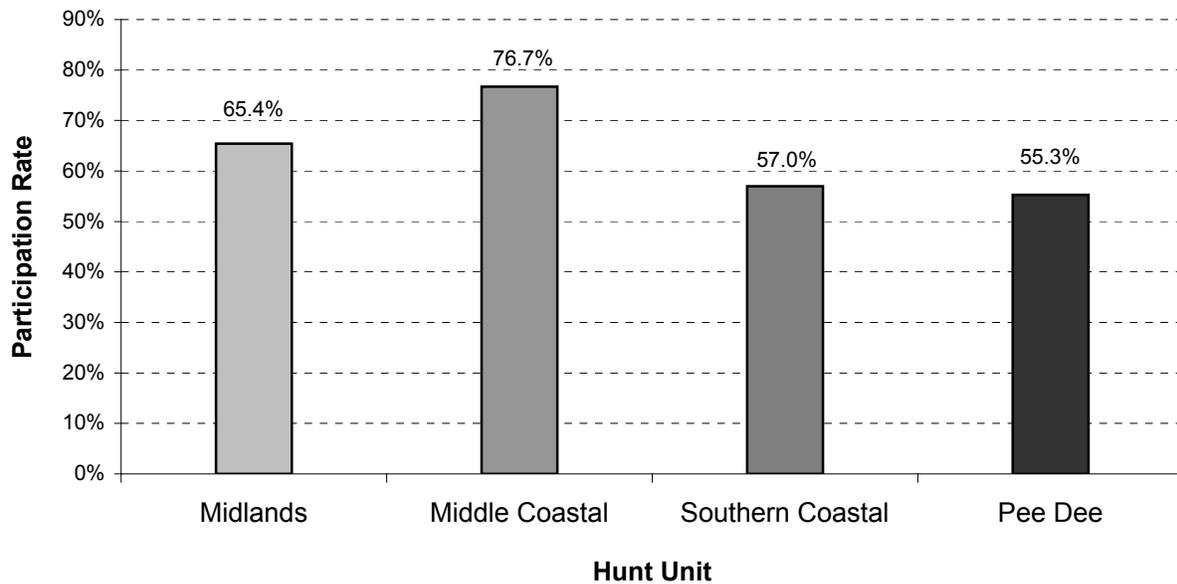


Figure 2. Participation rate (at least one trip afield) for all hunters selected to participate in the 2009 alligator season by Hunt Unit.

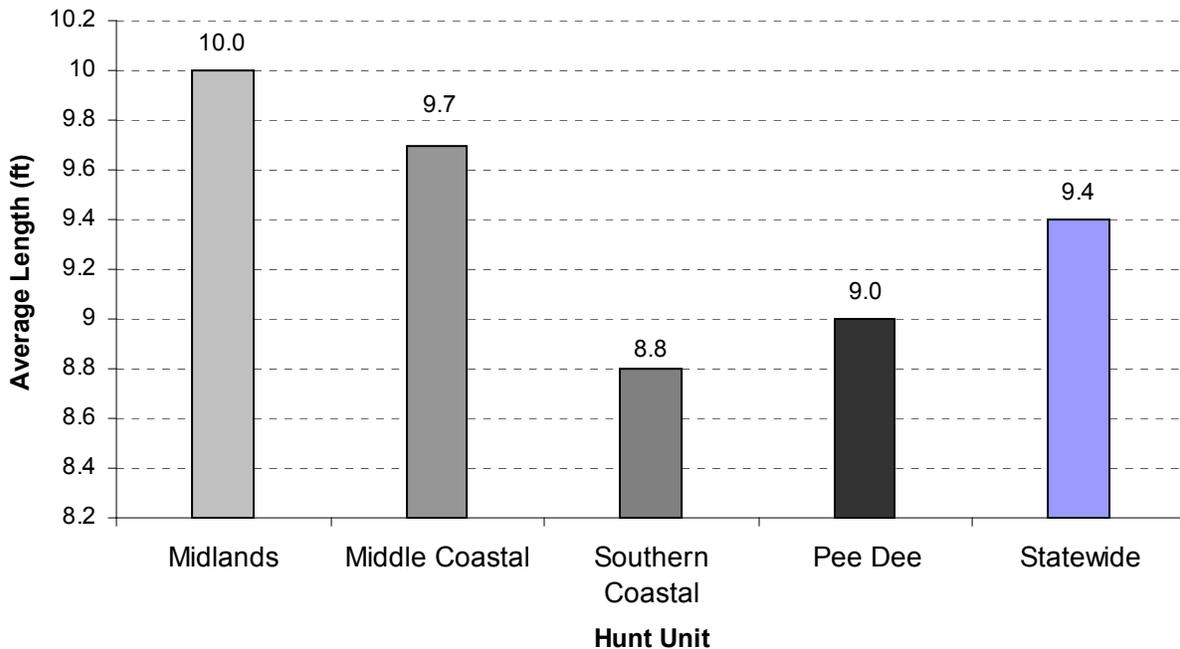


Figure 3. Average size of alligators taken during the 2009 Public Hunting Season by Hunt Unit.

The average size of all alligators reported taken during the 2009 public season was 9'5" (SD=1.96). The average size alligator taken in the Midlands was 10 feet, followed by the Middle Coastal (9.7 feet), Southern Coastal (9.0 feet), and Pee Dee at 8.8 feet (Figure 3). A total of 9 alligators were reported at 13 feet or greater (2.0% of total). This was only two less than in 2008. The largest animal taken according to the harvest reports was 13'8", one inch greater than the previous season. The smallest alligator being 4'1".

With respect to individual size classes, the majority of alligators taken were in the 9-foot size class (19.7%). In addition, 39.6% of the total alligators taken were 10' or greater in length (Figure 4). Only 12 (2.7%) alligators taken were reported to be less than 6' in length. The majority (65.4%) of the larger alligators, those over 10 feet, came from the Midlands and Middle Coastal units (Table 2, also see Appendices). The Midlands and the Middle Coastal units had 48 of the 52 (92.3%) alligators taken that were in the 12 or 13 foot-class. To further contrast the size class differences, only 2 alligators in the 12-foot size class were taken from the Pee Dee unit and 2 in the Southern Coastal unit.

Alligator harvest was reported from twenty coastal plain counties, up from thirteen for the previous season. Only one harvest report did not list the county of harvest. Reported take by county revealed that three counties, Berkeley, Georgetown, and Colleton, comprised nearly 70% of the public alligator harvest (Table 3, Appendix V). Those same counties accounted for approximately 60% of the harvest in 2008 as well. The largest alligators, on average, came from three Midlands Unit counties: Clarendon, Calhoun, and Orangeburg County (Figure 5).

Reported meat yield from all harvested alligators was 17,749 lbs.

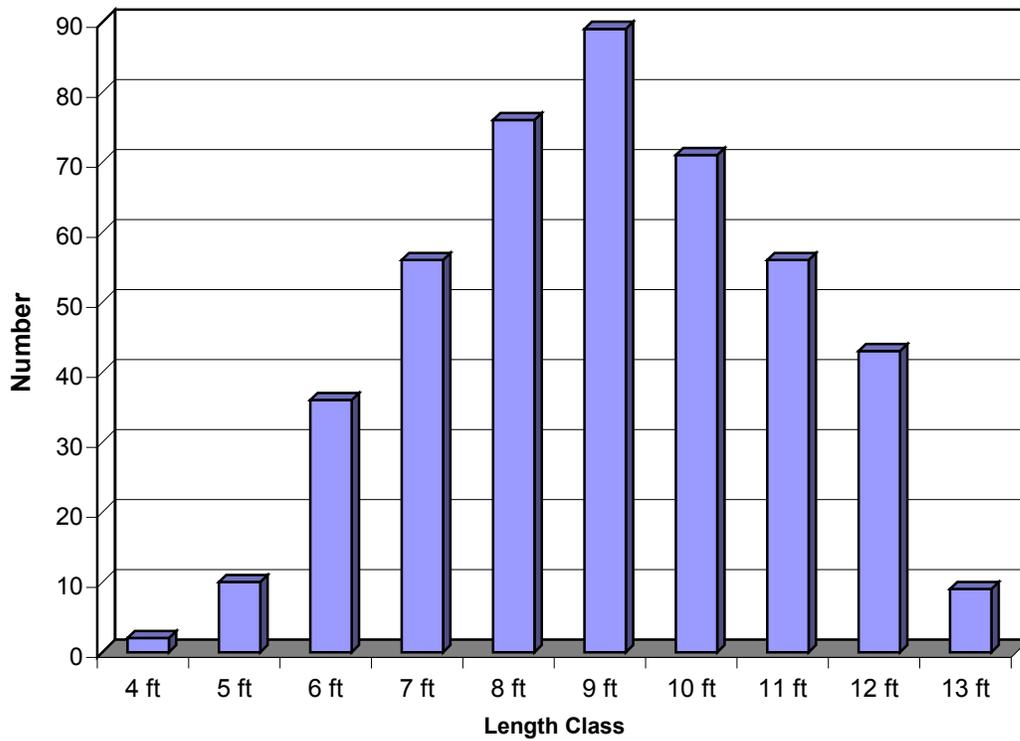


Figure 4. Number of alligators taken by size class during the 2009 Public Hunting Season.

Table 2. Number of alligators taken by size class and Hunt Unit during the 2009 Public Hunting Season.

| Hunt Unit           | Alligator Size Class <sup>a</sup> |    |    |    |    |    |     |     |     |     |
|---------------------|-----------------------------------|----|----|----|----|----|-----|-----|-----|-----|
|                     | 4'                                | 5' | 6' | 7' | 8' | 9' | 10' | 11' | 12' | 13' |
| Midlands            | 1                                 | 3  | 7  | 4  | 12 | 15 | 9   | 14  | 19  | 8   |
| Middle Coastal      | 0                                 | 1  | 10 | 19 | 24 | 24 | 19  | 27  | 20  | 1   |
| Southern Coastal    | 1                                 | 3  | 9  | 15 | 19 | 22 | 29  | 7   | 2   | 0   |
| Pee Dee             | 0                                 | 3  | 10 | 18 | 21 | 28 | 14  | 8   | 2   | 0   |
| Totals <sup>b</sup> | 2                                 | 10 | 36 | 56 | 76 | 89 | 71  | 56  | 43  | 9   |

<sup>a</sup> Shaded area denotes “larger” alligator size classes

<sup>b</sup> Does not include 4 alligators of an unknown size

Table 3. 2009 Alligator harvest and percent of total alligator harvest by hunt unit and county.

| Hunt Unit        | County                | Number of Alligators Taken <sup>a</sup> | Percent of Total Harvest |
|------------------|-----------------------|---|--------------------------|
| MIDLANDS         |                       | 93                                      | 20.6%                    |
|                  | Clarendon             | 35                                      | 7.7%                     |
|                  | Orangeburg            | 21                                      | 4.6%                     |
|                  | Calhoun               | 20                                      | 4.4%                     |
|                  | Berkeley <sup>b</sup> | 13                                      | 2.9%                     |
|                  | Sumter                | 2                                       | 0.4%                     |
|                  | Lexington             | 1                                       | 0.2%                     |
|                  | Richland              | 1                                       | 0.2%                     |
| MIDDLE COASTAL   |                       | 147                                     | 32.5%                    |
|                  | Berkeley <sup>c</sup> | 124                                     | 27.4%                    |
|                  | Charleston            | 19                                      | 4.2%                     |
|                  | Dorchester            | 3                                       | 0.7%                     |
|                  | -----                 | 1                                       | 0.2%                     |
| SOUTHERN COASTAL |                       | 108                                     | 23.9%                    |
|                  | Colleton              | 82                                      | 18.1%                    |
|                  | Beaufort              | 12                                      | 2.7%                     |
|                  | Allendale             | 1                                       | 0.2%                     |
|                  | Jasper                | 8                                       | 1.8%                     |
|                  | Aiken                 | 2                                       | 0.4%                     |
|                  | Hampton               | 2                                       | 0.4%                     |
|                  | Barnwell              | 1                                       | 0.2%                     |
| PEE DEE          |                       | 104                                     | 23.0%                    |
|                  | Georgetown            | 95                                      | 21.0%                    |
|                  | Horry                 | 7                                       | 1.5%                     |
|                  | Florence              | 1                                       | 0.2%                     |
|                  | Marlboro              | 1                                       | 0.2%                     |

<sup>a</sup> Only those reports that specified a county are listed. One report did not list a county.

<sup>b</sup> Includes the portion of Berkeley County in the lower end of Lake Marion.

<sup>c</sup> Does not include the portion of Berkeley County in the lower end of Lake Marion.

The most commonly reported capture technique was a hook and line, with 43.0% of successful hunters using this as their primary capture device. Nearly 26 percent of hunters used a bow, followed by a crossbow (15.1%), harpoon (14.7%) and the remainder of the hunters described using other devices (Figure 6). Nearly 18 percent of hunters utilized more than one device to harvest an alligator. Most used a combination of a hook and line followed by other devices, presumably as a backup device when the alligator was brought near the boat. A total of 8.9% of successful hunters utilized a guide's services, up from 6.4% from last season.

Alligator hide utilization (either sold or kept) was reported at 73.8%. Of this amount, only 1.4% of the skins were denoted as sold, likely a result of the poor market for alligator hides.

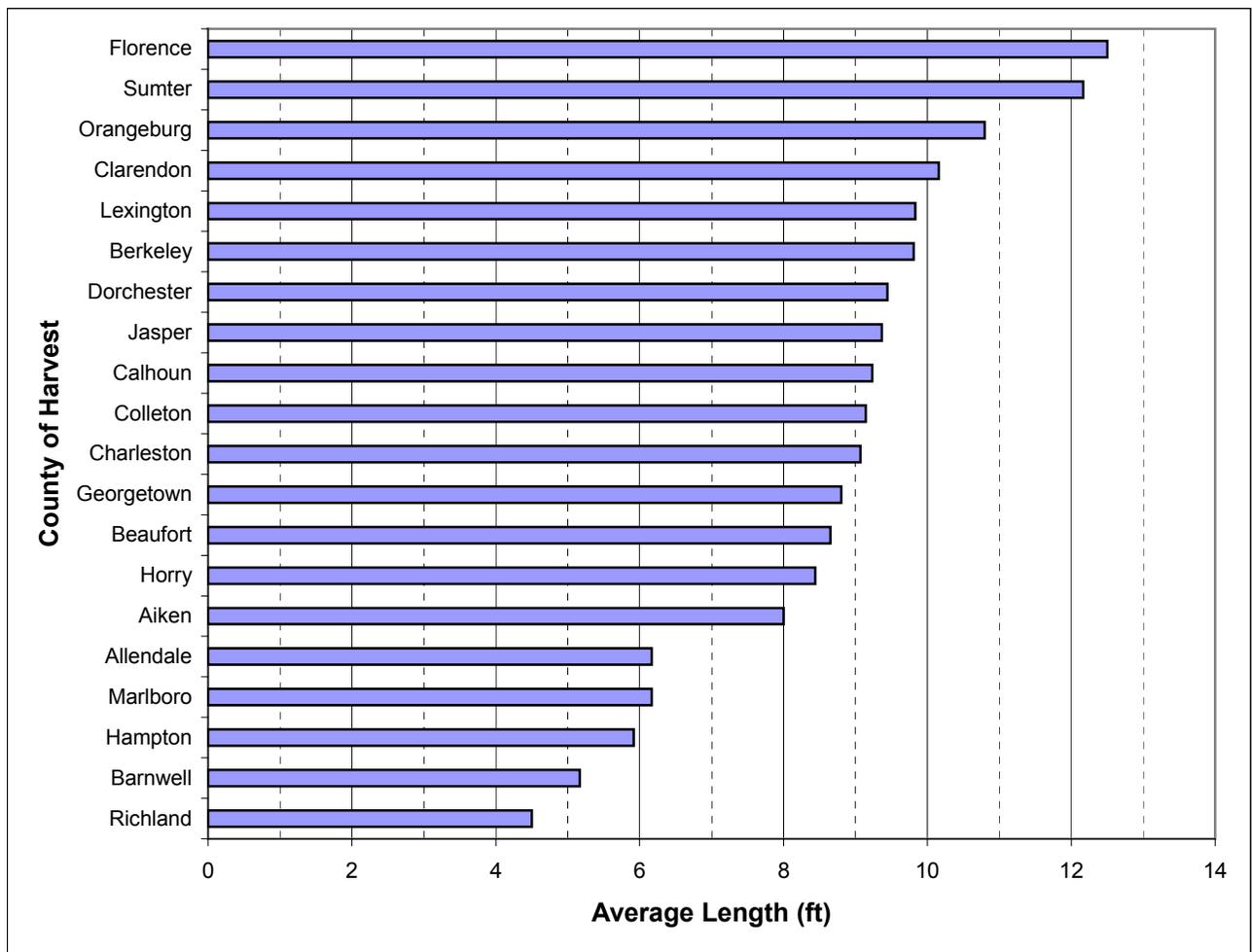


Figure 5. Average length of alligators reported taken during the 2009 Public Harvest Season by county.

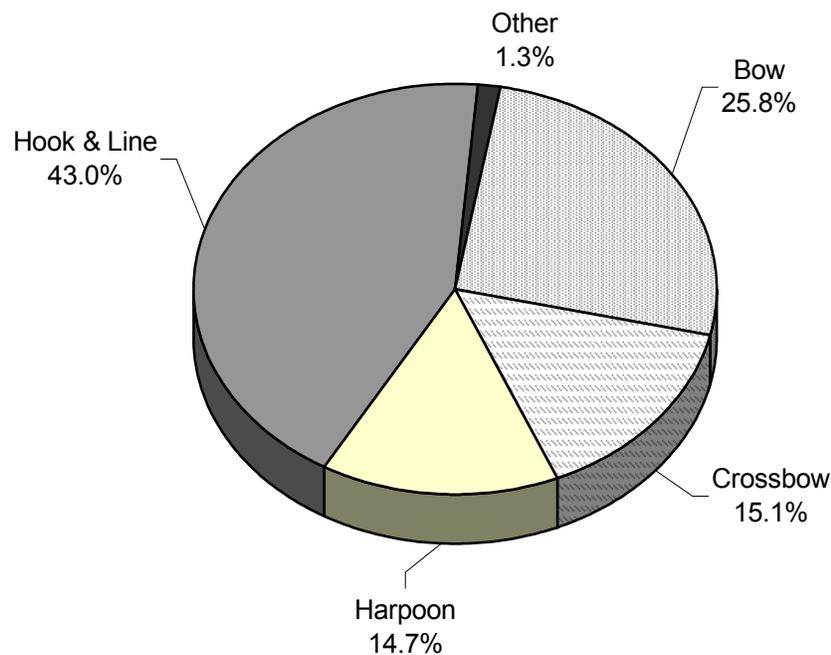


Figure 6. Reported primary techniques utilized during the 2009 Alligator Season.

## DISCUSSION AND RECOMMENDATIONS

There was a significant increase in the number of applications this season. With a nearly three-fold increase in the number of applications, even small administrative problems become large. As expected, there continues to be some problems with the online application system. Many of these issues are simply growing pains associated with transitioning to an online-only application system. For 2009, twenty-three additional applicants were added to the 1,000 permits allocated for the hunt in order to correct database problems from both this year, as well as last year's applicant pool. Other database problems involved the third-party credit card processing vendor. In these cases, applicants were charged their application fee, but never actually entered into the alligator hunt drawing database. Since the applicant correctly followed the application procedures and paid their fee, they assumed they were entered into the drawing. As a correction, those applicants were allotted a permit for this season just as though they were successfully chosen. The total number of database applicants requiring corrective measures amounted to 0.6% of all applications received.

For the 2010 season, no significant change in the tag allotment or application process is expected.

There continue to be requests for a secondary draw, or other type of system to be able to redirect permits that are not purchased by selected hunters. Based on the success rate of 53.3% of actual

permitted hunters and 69.4% for hunters that went hunting, an estimated 93 additional alligators would have been taken had all tags been issued this season. This would have resulted in a harvest of approximately 545 alligators or approximately twice the 200-300 alligator staff objective. The harvest level for all 1,023\* selected hunters was 44.2%, well above initial staff predictions. Because we are still in the formative years of the state's public alligator hunting program and alligators are a slow growing and low reproductive species, it is still advisable to maintain a more conservative harvest level. Since harvest objectives are being attained or even exceeded and because of limited staff and other resources, no secondary allotment of unclaimed permits is recommended.

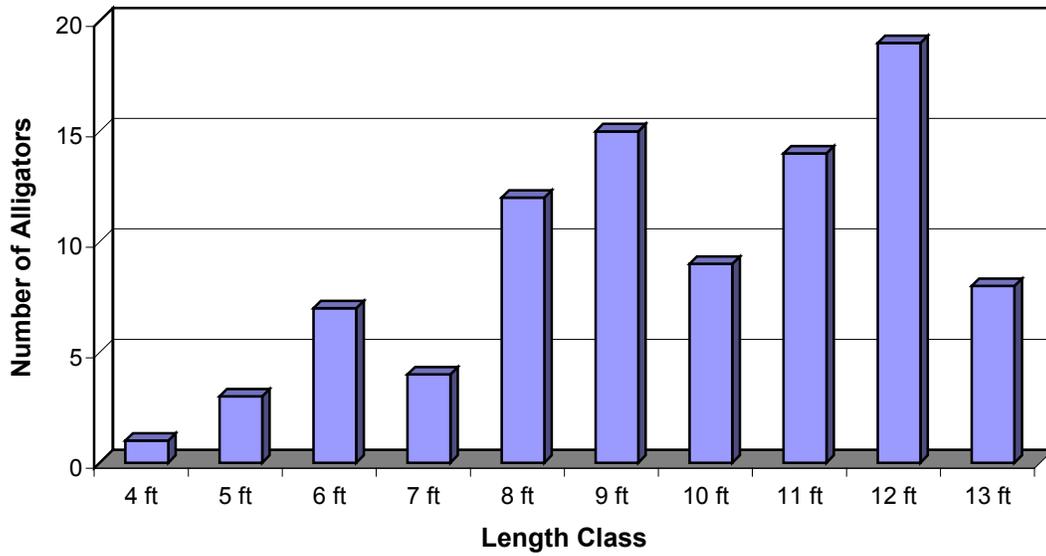
There is also a growing interest to increase the costs that non-residents pay for the opportunity to harvest an alligator in South Carolina. There is proposed legislation that would require any nonresident 16 years or older to pay an additional alligator hunting fee of \$200. This would prevent a resident from obtaining the permit and allowing a group of nonresidents to participate for only the cost of their nonresident hunting license.

Surprisingly the harvest of exceptionally large alligators continues. Large alligators are not an infinite resource. Currently, South Carolina is harvesting some of the largest alligators throughout its range. It's also quite possible that the chance to harvest a very large alligator may be driving the number of applications the Department receives; therefore, there does need to be attention to harvest as it relates to the number of very large alligators taken. There may be a drop in application numbers if we reach the point where 12-foot plus alligators are no longer available for harvest.

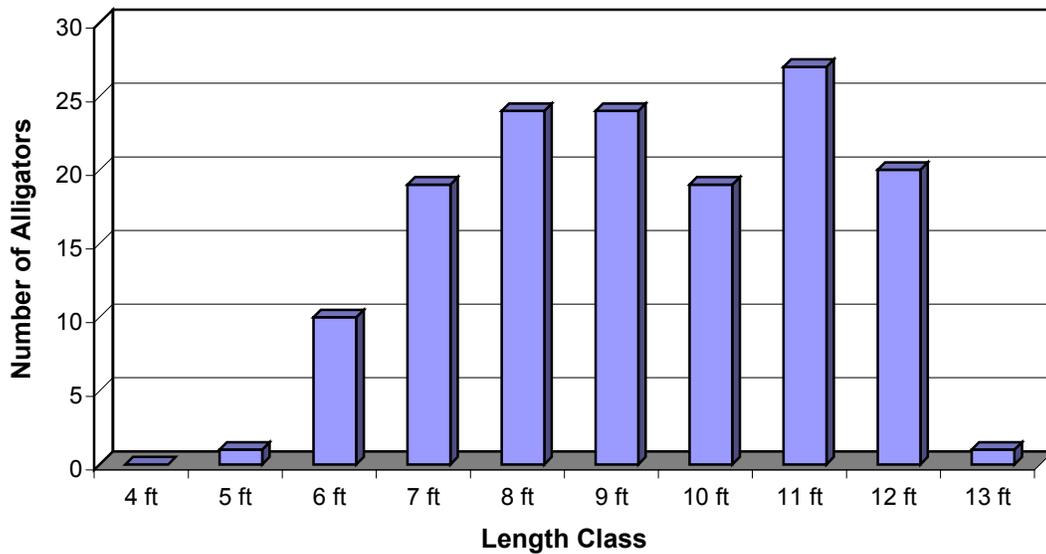
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## Appendix

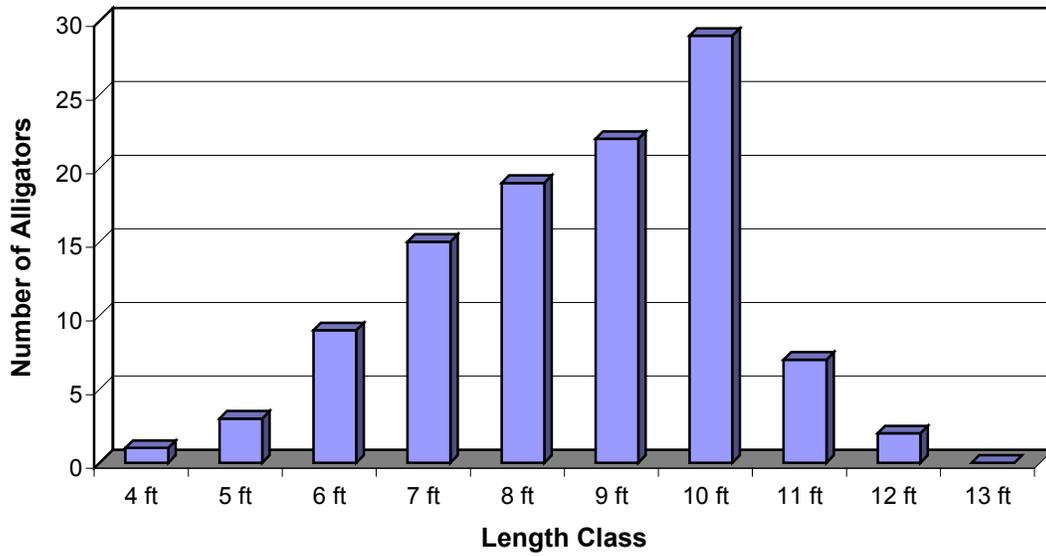
2009 Harvest Graphs  
by  
Public Alligator Harvest Hunt Unit  
and  
Harvest by County



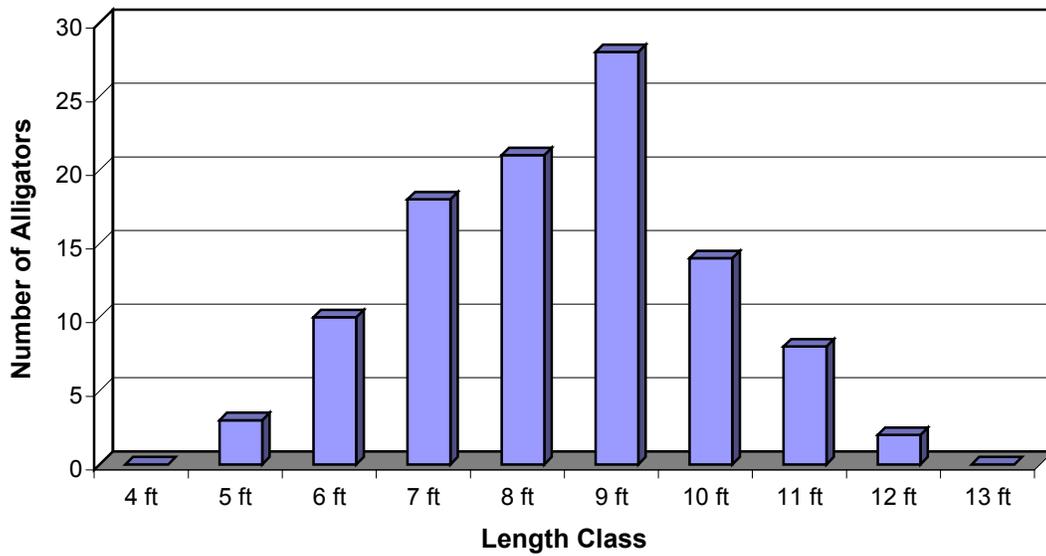
Appendix I. Number of alligators taken during the 2009 Public Hunting Season by size class for the Midlands Hunt Unit.



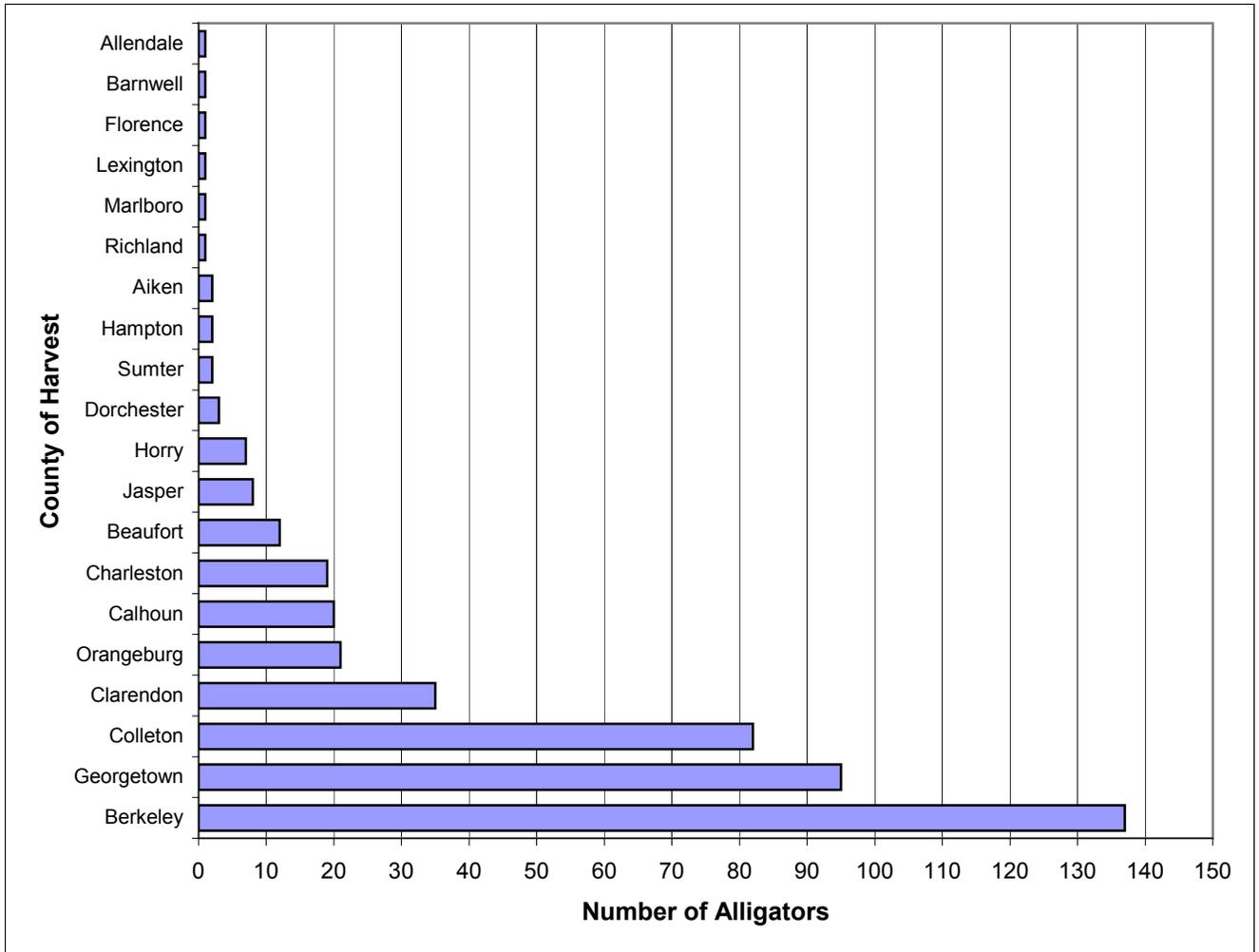
Appendix II. Number of alligators taken during the 2009 Public Hunting Season by size class for the Middle Coastal Hunt Unit.



Appendix III. Number of alligators taken during the 2009 Public Hunting Season by size class for the Southern Coastal Hunt Unit.



Appendix IV. Number of alligators taken during the 2008 Public Hunting Season by size class for the Pee Dee Hunt Unit.



Appendix V. Number of alligators taken during the 2009 Public Hunting Season by county of reported harvest.