

Public Alligator Hunting Season Report 2008



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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 back 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 problem 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 crocodilians worldwide. It is estimated that a minimum of 100,000 alligators occur in the state of South Carolina.

The 2008 Public Alligator Hunting Season marked the first general alligator hunting season in South Carolina in over 40 years. While alligators have been legally hunted in South Carolina since 1995 under the Private Lands Alligator Harvest Program which was established for large landowners having significant amounts of alligator habitat, with specific size-class quotas issued to those property owners. This year’s hunt utilizing a random computer drawing was open to all applicants, including nonresidents, and was conducted on public and private lands from the Midlands to the coast.

Because alligators can grow to significant sizes and the techniques hunters are allowed to use, 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 the 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) and pay a non-refundable application fee of \$10. The non-refundable fee was another first as all other DNR draw hunts have application fees. Because the alligator hunt was a new drawing hunt, it was determined that the process should at least support the cost of administering the drawing, so a fee of \$10 was determined to be appropriate. Other DNR draw hunts cost the agency significant amounts of money for data entry, application printing and mailing, notification printing and mailing, and refund check processing.

Staff predetermined that 1,000 permits and tags would be allocated for the 2008 hunt. Four hunt units (Figure 1) were established along riparian subdivisions within the coastal plain of South Carolina. 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. Those selected for the hunt, after paying the \$100

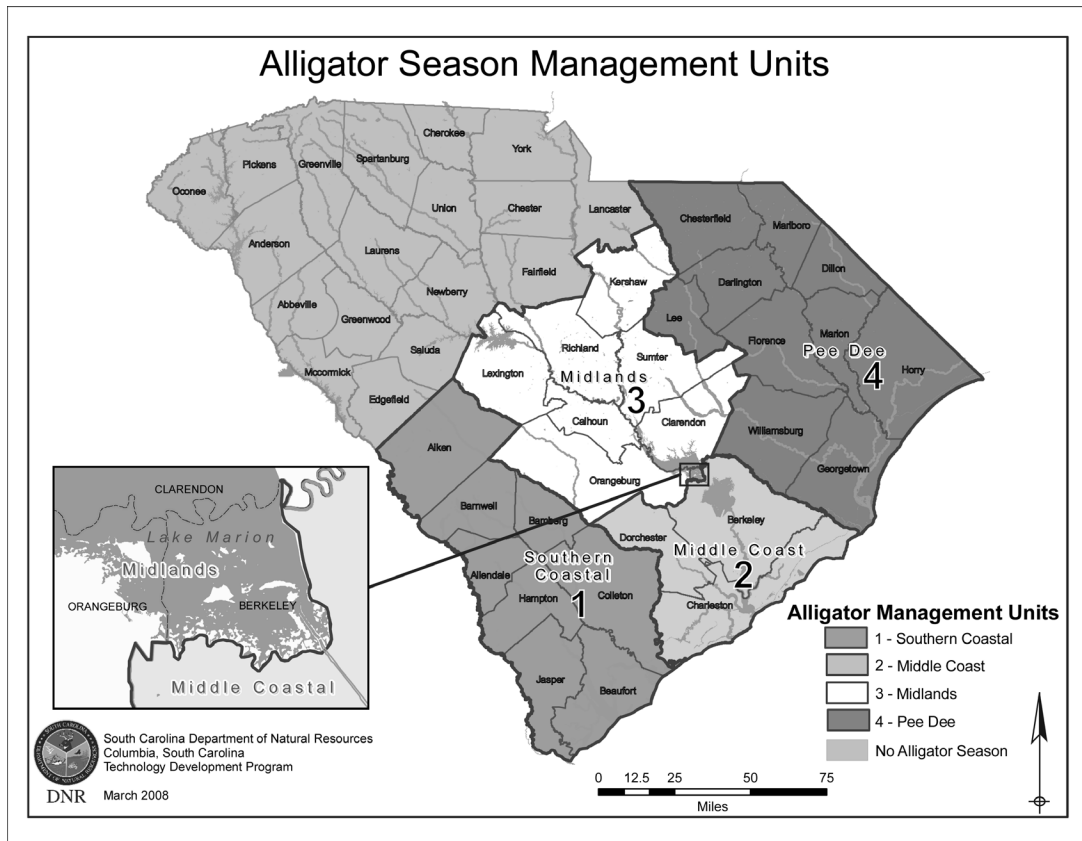


Figure 1. 2008 Alligator Management Units.

tag fee, were issued a permit and one harvest tag. The harvest tag was 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 Wildlife Refuges and their jurisdictional waters. This year's season began on September 13 and ended on October 11.

The online application process began on May 29th and ended on July 15th. A total of 1,475 hunters applied for the 2008 hunt. This number included applicants from 19 different states (including SC). However, nearly 91 percent of the applicants were from South Carolina, and the chances of being selected for the hunt, for all applicants, was 67.8%. Those hunters who were not drawn were issued a preference point for future alligator hunt drawings. Beginning with the 2009 season, all hunters with a preference point will be selected before another applicant without any preference points applying for the same hunt unit. Applicants with a preference point who do not apply in a subsequent year will lose all accumulated preference points. All selected applicants also lose any accumulated preference points when selected.

A total of 789 of the 1,000 hunters selected (78.9%) for the 2008 season completed the application process and were issued a harvest tag and permit. This was within the projected participation rate of 70-80% staff had predicted when initially allocating the 1,000 permits.

Three 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. A hunting guide (www.dnr.sc.gov/wildlife/alligator/gatorhuntguide.pdf) was developed with the assistance of Georgia DNR as another educational tool for prospective hunters. All permitted alligator hunters received a hardcopy of the hunting guide when they purchased their permit and tag.

SEASON RESULTS

All 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 2008 was 90.2% for all permitted hunters (712 reports). Of the 250 hunters selected for each hunt unit, reporting compliance was 96.4% for the Southern Coastal, 92.8% for the Midlands, 91.2% for the Middle Coastal, and 88.8% for the Pee Dee hunting region.

The total number of alligators reported taken during the 2008 public alligator hunting season was 362. This represented a success rate of 45.9% for all fully permitted hunters (n=789) and 36.2% for all selected applicants (n=1,000). The Middle Coastal unit had the most alligators taken at 121 (33.4% of total harvest), followed by the Southern Coastal with 94 (26.0%), Midlands at 87 (24.0%), and the Pee Dee unit with 60 (16.6%) (Table 1).

The reported participation rate was highest in the Midlands unit at 71.6% of the selected 250 hunters for the unit going on at least 1 alligator hunting trip. Participation rates for the other units were as follows: 68.4% for the Middle Coastal, Southern Coastal at 63.2%, and lowest in the Pee Dee unit at 51.2% (Figure 2). Of the successful hunters, the most efficient hunters were in the Pee Dee unit. There, hunters only went on 133 trips with 80 alligators taken, or 1 alligator killed per 1.7 (SD=1.64) hunting trips. The Southern Coastal unit had 216 outings afield and the success rate was 1 alligator per 2.3 (SD=1.6) trips. The Middle Coastal hunters went on 302 alligator hunting trips, and 121 alligators were taken or 1 alligator per 2.5 times (SD=2.77) afield. Lastly, hunting trips for the Midlands hunters numbered 233, or 1 alligator per 2.7 trips (SD=2.11). Over all of the hunt units, 1 alligator was killed for every 2.4 alligator hunting trips taken (SD=2.17).

The average size of all alligators reported taken during the 2008 public season was 9'2" (SD=2.07). The average size alligator taken in the Midlands was 10 feet, followed by the Middle Coastal and Pee Dee at 9.2 feet, and the Southern Coastal at 8.4 feet (Figure 3). A total of 11 alligators were reported at 13 feet or greater (3.0% of total). The largest animal taken according to the harvest reports was 13'7", with the smallest being 4'3".

Table 1. 2008 Alligator hunter success rates and percent of total alligator harvest, by hunt unit.

Hunt Unit	Number of Alligators Taken	Percent of Total Harvest
Midlands	87	24.0%
Middle Coastal	121	33.4%
Southern Coastal	94	26.0%
Pee Dee	60	16.6%
Total	362	

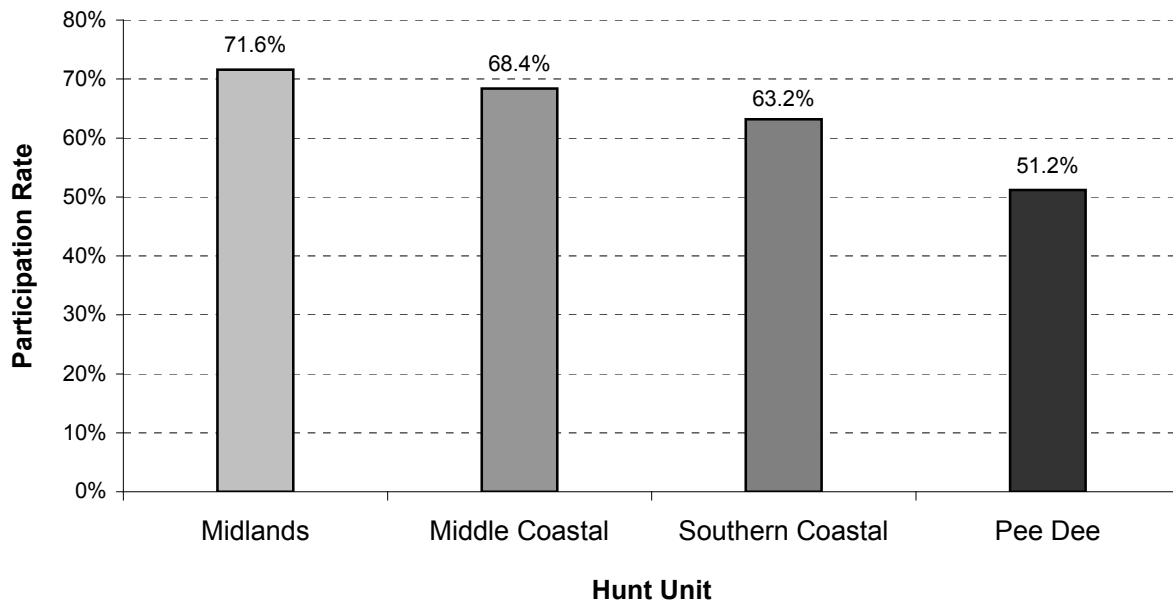


Figure 2. Participation rate (at least one trip afield) for all hunters selected (250 per unit) to participate in the 2008 alligator season, by hunt unit.

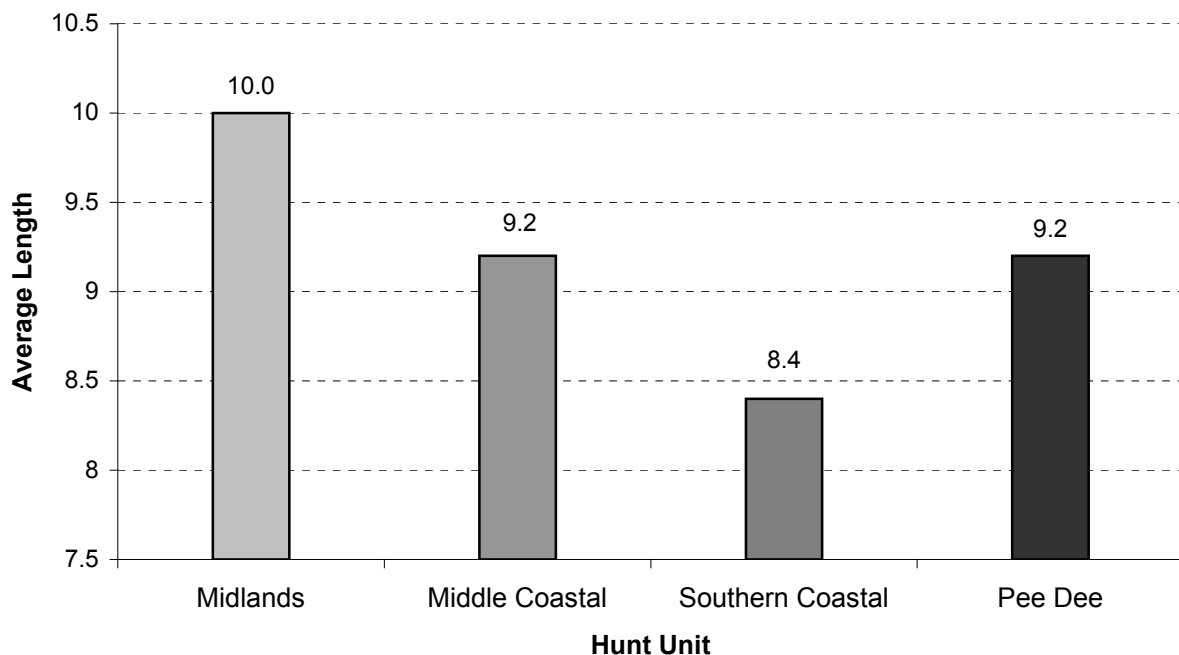


Figure 3. Average size of alligators taken during the 2008 Public Hunting Season, by Hunt Unit.

Looking at individual size classes, the majority of alligators taken were in the 8-foot size class (17.7%). However, a large portion (37.8%) of all alligators were 10' or greater in length (Figure 4). Only 17 (4.7%) alligators taken were reported to be less than 6' in length. The majority of the larger alligators (67.9%), those over 10 feet came, from the Midlands and Middle Coastal units (Table 2, also see Appendices). The Midlands unit had an astonishing 26 of the 37 (70.3%) alligators taken that were in the 12 or 13 foot-class. To further contrast the size class differences, only 4 alligators in the 12-foot size class were taken from the Pee Dee unit and none larger than 11-foot class in the Southern Coastal unit.

Alligator harvest was reported for thirteen coastal plain counties. Fifteen harvest reports either did not list the county or erroneously listed an area. Reported take by county revealed that three counties, Berkeley, Georgetown, and Colleton, comprised nearly 60% of the public alligator harvest (Table 3, Appendix V). 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 13,922 lbs.

Fully permitted hunters who actually reported going hunting (n=636) had a success rate of 56.9%. The number of hunters that hunted, but were unsuccessful was 274 (43.1%). Another 19.4 percent of hunters (n=153) that paid their \$100 tag fee reportedly did not go alligator hunting this season.

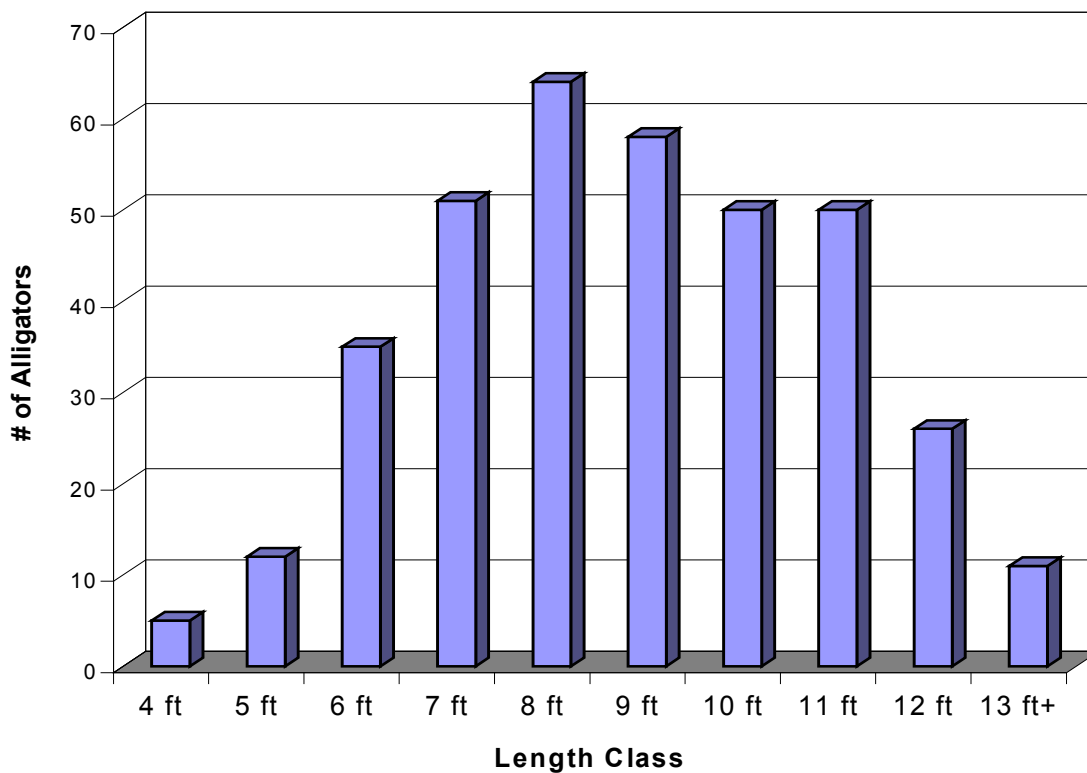


Figure 4. Number of alligators taken during the 2008 Public Hunting Season, by size class.

Table 2. Number of alligators taken during the 2008 Public Hunting Season, by size class and Hunt Unit.

Hunt Unit	Alligator Size Class*									
	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
Midlands	2	3	6	8	10	13	6	13	17	9
Middle Coastal	0	1	14	18	21	19	20	21	5	2
Southern Coastal	2	7	12	17	18	18	13	7	0	0
Pee Dee	1	1	3	8	15	8	11	9	4	0
Totals	5	12	35	51	64	58	50	50	26	11

*Shaded area denotes "larger" alligator size classes

Table 3. 2008 Alligator harvest rates and percent of total alligator harvest, by hunt unit and county.

Hunt Unit	County	Number of Alligators Taken ^a	Percent of Total Harvest
MIDLANDS		87	24.0%
	Clarendon	26	7.2%
	Calhoun	22	6.1%
	Orangeburg	16	4.4%
	Berkeley ^b	11	3.0%
	Sumter	9	2.5%
MIDDLE COASTAL		121	33.4%
	Berkeley ^c	85	23.5%
	Charleston	31	8.6%
SOUTHERN COASTAL		94	26.0%
	Colleton	54	14.9%
	Beaufort	16	4.4%
	Allendale	8	2.2%
	Jasper	8	2.2%
	Hampton	2	0.6%
PEE DEE		60	16.6%
	Georgetown	58	16.0%
	Horry	1	0.3%

^a Only those reports that specified a county are listed. Fifteen reports did not list a county.

^b Includes the portion of Berkeley County in the lower end of Lake Marion.

^c Does not include the portion of Berkeley County in the lower end of Lake Marion.

The most commonly reported capture technique was a bow, with 32% of successful hunters using this as their primary capture device. Twenty-six percent of hunters described using a combination of techniques, followed by a harpoon (18.5%), hook & line (12.2%), and a crossbow (11.3%) (Figure 6). A total of 6.4% of successful hunters utilized a guide's services.

Alligator hide utilization (either sold or kept) was reported at 81.0%. Of this amount, 14.3% of the skins were denoted as sold, or in some cases exchanged to defray processing costs.

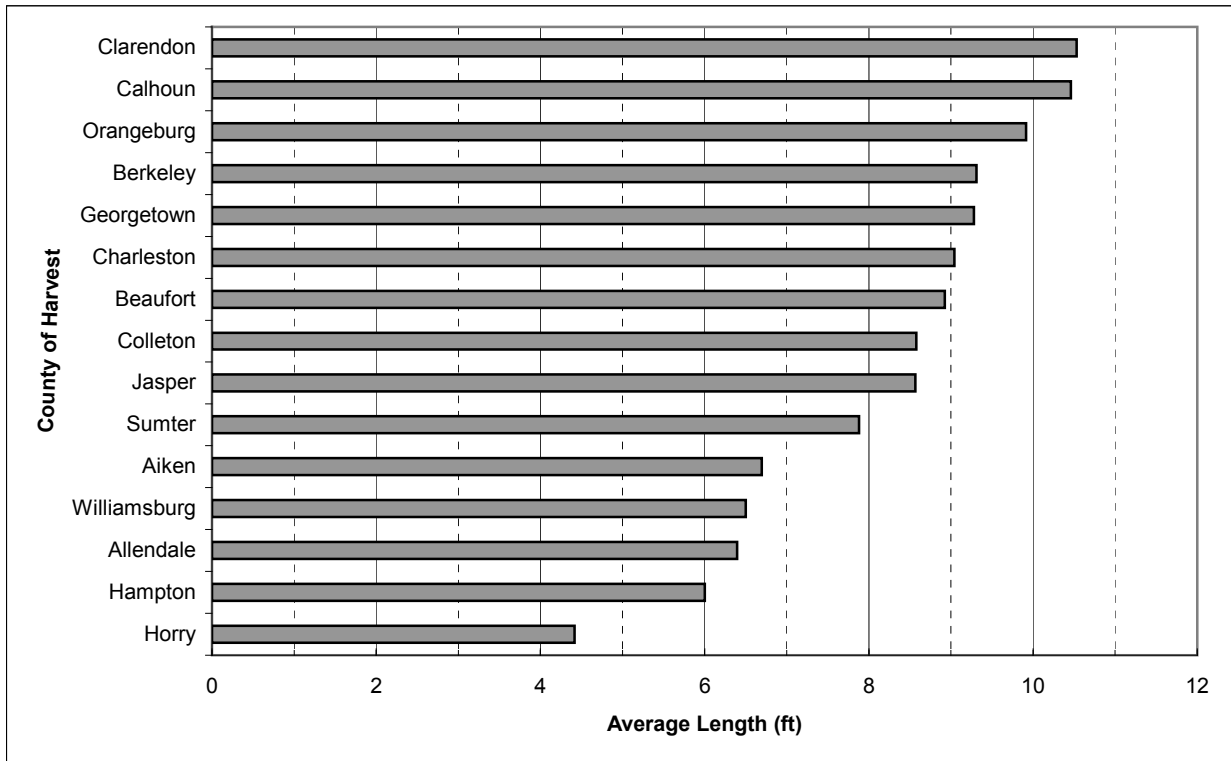


Figure 5. Average length of alligators reported taken during the 2018 Public Harvest Season, by county.

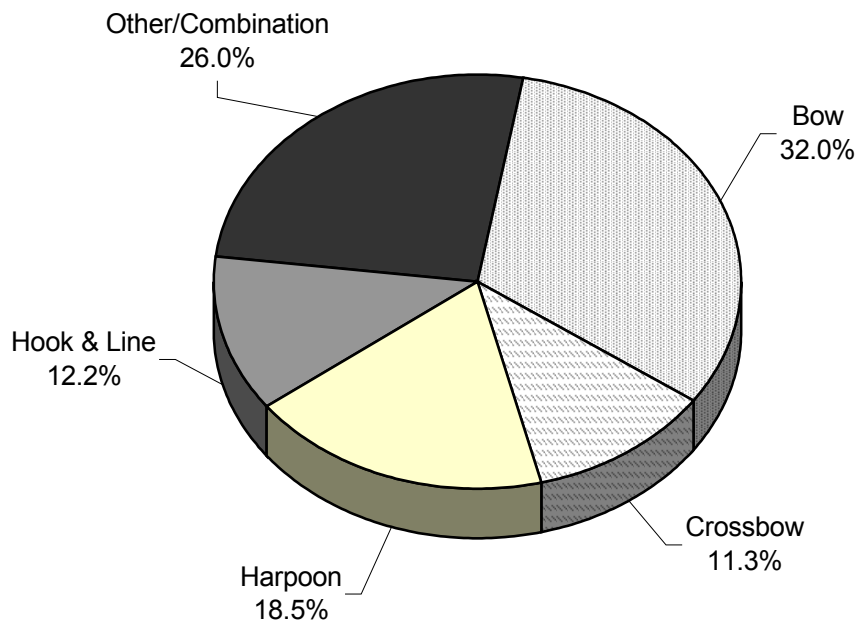


Figure 6. Reported techniques utilized during the 2018 Alligator Season.

DISCUSSION AND RECOMMENDATIONS

While there were issues with the online application process this season, overall the system seemed to work without too many problems. The most common problem seemed to stem from the creation of an online identity and difficulty with accessing the system. Unfortunately, the alligator hunt system also must be reconciled with an antiquated computer database system and some minor problems with the relating of the new computer system and the old database interfered with the online process. Supposedly, these issues are being addressed and next season's application procedure should be more seamless. Also, as constituents establish online SCDNR credentials, the process will become easier.

For the 2009 season, no significant change in the tag allotment or application process is predicted. However, the application period should occur earlier in the year to allow staff more time for notification and packaging of the permits and tags. It is recommended that the deadline for applications be no later than June 15th, with notifications being mailed beginning July 1st. This will allow staff two weeks to clean up any problems in the database, implement the drawing, and print and mail notifications to all the applicants.

It is also recommended that there be a minimum of 4 hunting seminars next season, 1 in each of the management units, with the possibility of another located somewhere in the upstate. The one unit where a seminar was not held in 2008 was the Midlands region. Seminars in the lower portion of the state should take place before August 15th, the opening day of deer season. Because all alligators are required to be brought boatside before dispatch, the hunting seminars provide an important mechanism to educate the state's hunters on proper and safe techniques to legally harvest an alligator. Evidently more education is needed on the humane and safe dispatch of alligators after the subject became a topic during the 2008 season. In two well-publicized cases of hunters taking a very large alligator, an extraordinary number of rounds were described as being fired from a handgun in an effort to dispatch the animal. While it may make for exciting news, if the alligators are captured as required by law and a shot aimed at the proper location, there should be no reason for the number of shots that were reported in these two cases. It is surmised that more than one firearm may have been used in these two occasions. These types of accounts do little to garner support for the public alligator harvest. Therefore, in an effort to reduce shots being fired from multiple guns, it is recommended that only one firearm be drawn and used at a time.

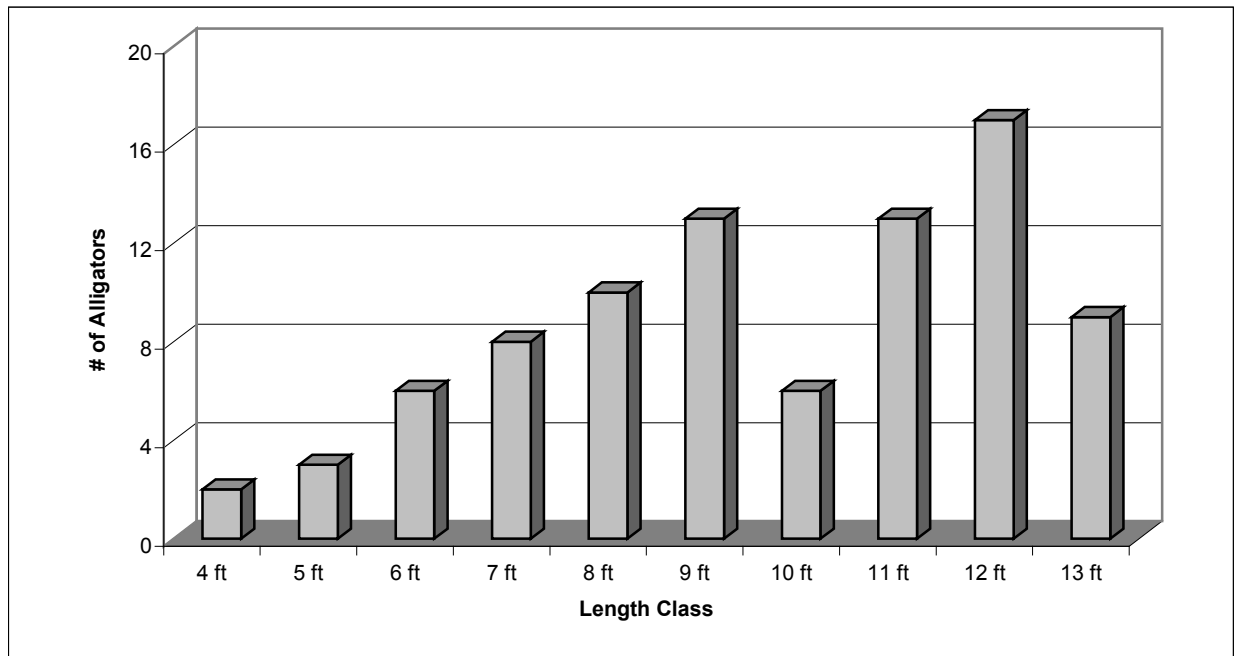
There was some concern voiced over the number of permits that were allocated but not purchased during the 2008 season (n=211). However, based on the success rate of 45.8% of actual permitted hunters, an estimated 97 additional alligators would have been taken had all tags been issued to all 1,000 selected hunters. This would have given a harvest of approximately 459 alligators. Staff initially expected, based on Georgia's success rates, to harvest 200-300 alligators (20-30% of 1,000 tags). The harvest level for all 1,000 selected hunters was 36.2%, somewhat above initial staff predictions. However, because this is the beginning of the state's public alligator hunting program and alligators are a slow growing species, the prudent course of action is to maintain a more conservative harvest level. Until such time as the number of hunters who complete the application process (currently at 78.9%) drops below the DNR staff's predicted permit fulfillment rate of 70% (at least 700 permits), no secondary drawing should be implemented for unfilled tags. While this can be seen as potential lost revenue for the

Department, considerable staff time would be required to redraw and again notify the additional hunters. Current staffing levels make a secondary drawing undesirable. Furthermore, economic pressures, especially gas prices, could be a major factor in the reluctance for individuals to purchase their alligator tag. Others may have waited to see if an opportunity arose to go hunting, and as shown by this season, drawn hunters were purchasing tags even during the last week of the hunting season.

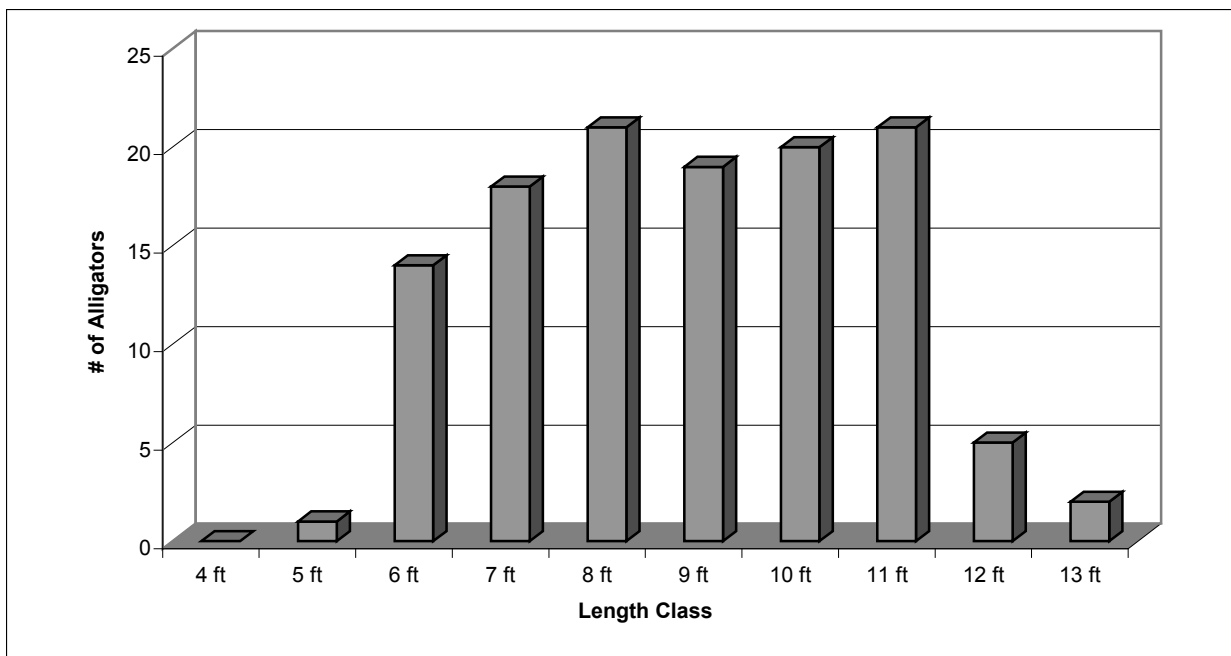
It is likely that next year's harvest rates will decline. While hunters with experience participating will likely increase, many of the naïve alligators may have been removed from the population. Also, the state will not likely be able to maintain the harvest of exceptionally large alligators in the 12-13 foot range (n=37) on public waters. The average size of all alligators taken, currently at 9'2", is also likely to decrease over time. Time will indicate any biological impacts that may be associated with removal of the largest animals.

Appendix

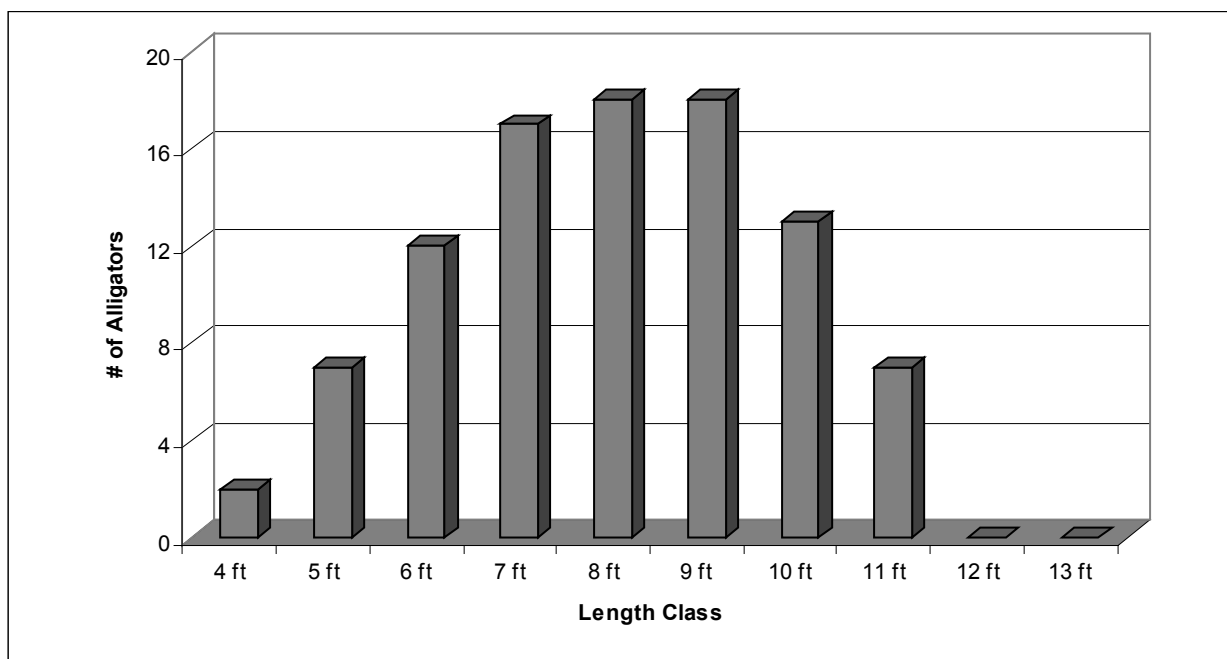
2008 Harvest Graphs
by
Public Alligator Harvest Hunt Unit
and
Harvest by County



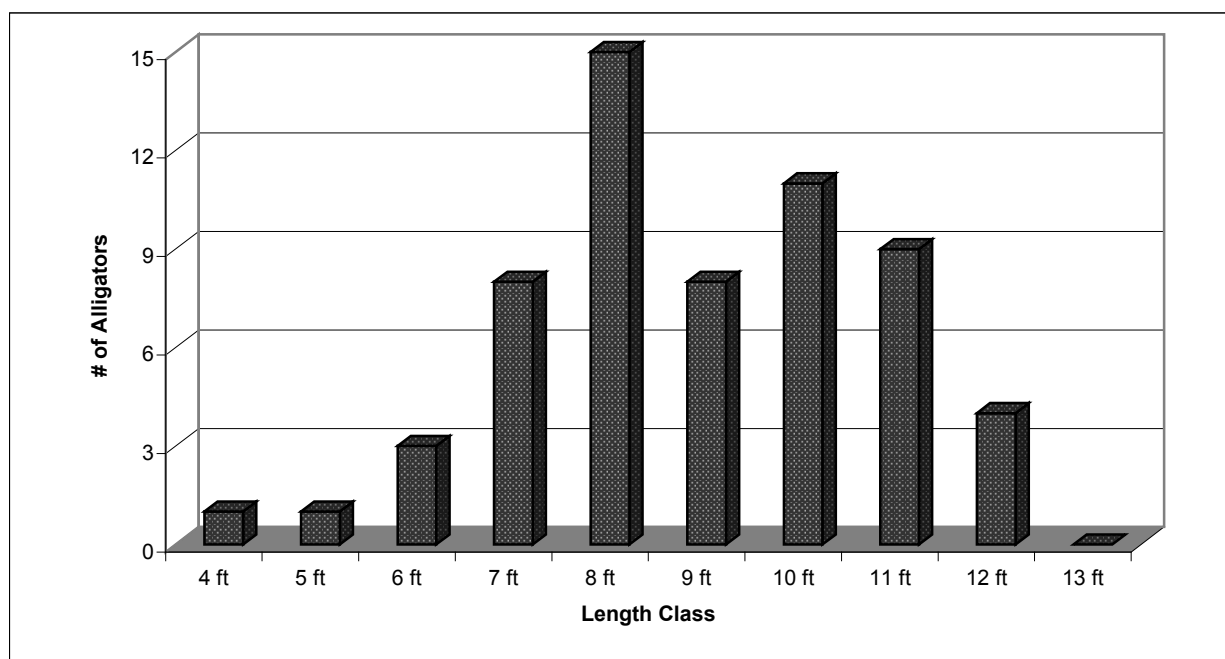
Appendix I. Number of alligators taken during the 2008 Public Hunting Season, by size class for the Midlands Hunt Unit.



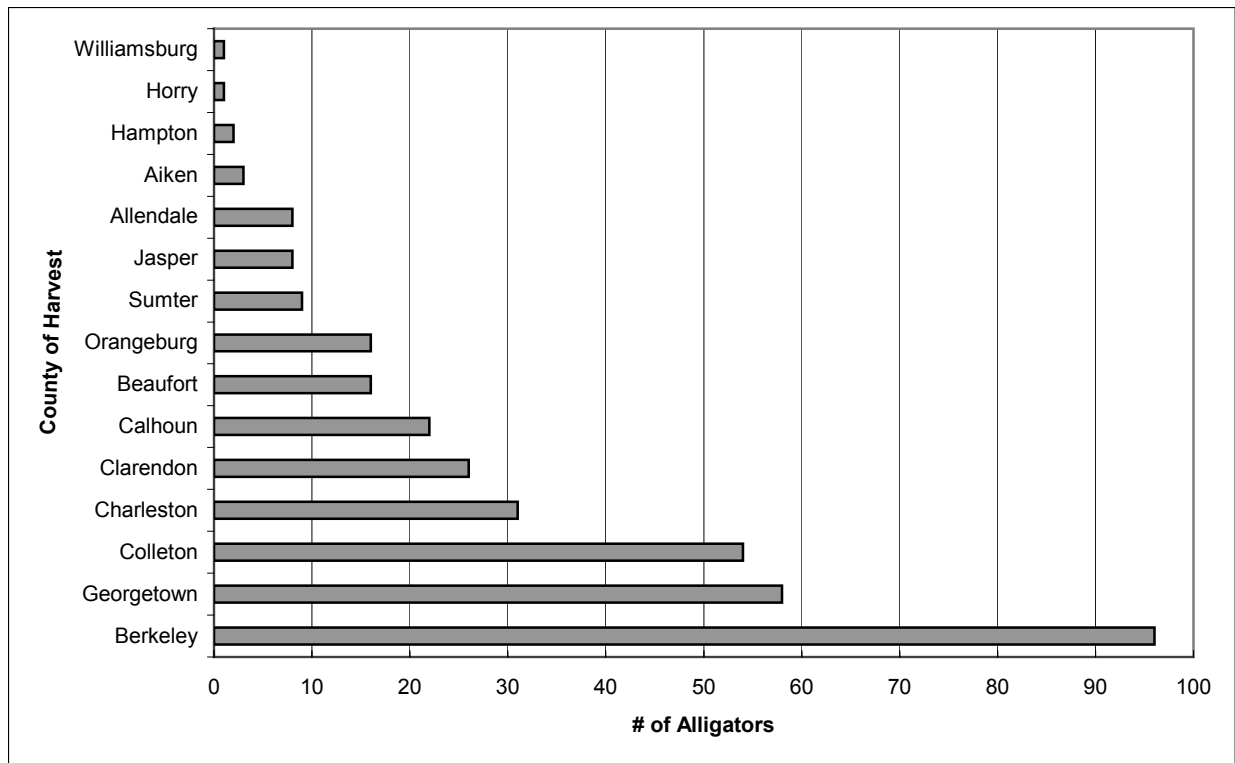
Appendix II. Number of alligators taken during the 2008 Public Hunting Season, by size class for the Middle Coastal Hunt Unit.



Appendix III. Number of alligators taken during the 2008 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 2008 Public Hunting Season, by county of reported harvest.