

Alligator Hunting Season Report 2012



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DNR

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 2012 Public Alligator Hunting Season marked the fifth 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. The fee for the permit and tag is \$100. In addition, any nonresident hunter or nonresident assistant 16 years of age or older must pay a \$200 nonresident alligator hunting fee. 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

The public alligator hunt is a limited-drawing hunt in which participants are selected in a randomized computer drawing. All potential hunters are 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.

Of the 1,000 permits available for the 2009 season, 848 permits were purchased (85%). Therefore the Department’s Administration recommended that 1,200 permits and tags be allocated for subsequent hunts in an effort to distribute approximately 1,000 permits and tags. The four hunt units (Figure 1) remain unchanged. With the exception of a small portion of Berkeley County located within Lake Marion, county lines bound all hunt units. The allocation of permits is 300 per hunt unit based on the 1,200 tags available. Hunters could select the option to be considered for any or all of the units for the computer drawing, but if successful, are only selected to hunt in one unit. After paying the \$100 tag fee, those selected for the hunt were issued a permit and one harvest tag. All alligator harvest tags and permits are issued specifically to the selected hunter and are non-transferrable. 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 in their selected hunt unit; however, no alligator hunting is allowed on certain public lands such as Wildlife Management Areas (except in navigable waters normally open to the general public for hunting), State Parks or Federal properties such as National Wildlife Refuges and their jurisdictional waters.

Two Wildlife Management Area (WMA) properties were opened for alligator hunting beginning in 2011, Bear Island and Santee Coastal Reserve. These two WMAs were part of a special draw hunt held separately from the regular Public Hunting Season. Applicants for the WMA Alligator Hunts were required to select an area and a week to hunt on the WMA. Only two hunters per WMA were selected per week, with 4 weeks available, for a total of 16 slots available. If chosen, the applicant was issued a permit and tag that was valid for the WMA and week selected, or at their choosing, could elect to use the tag in the same unit that the specific WMA was located for the remainder of the public alligator season. Bear Island is in the Southern Coastal Unit and Santee Coastal Reserve is located in the Middle Coastal Unit. The cost to apply for the WMA Alligator Hunt is \$15, and the cost for the permit and tag is \$500 for residents and \$800 for nonresidents. A WMA Permit is required of all WMA Alligator Hunters and assistants. Because the two draw hunts are separate, a person could potentially be drawn for both the Public and WMA hunting season. New for 2012 was the option to purchase an additional tag for a smaller alligator during the WMA hunt. This additional tag was only valid for an alligator from 4-7' in length, and only for the chosen WMA during the week selected. Anyone in the hunting party could utilize the tag if the selected hunter was present.

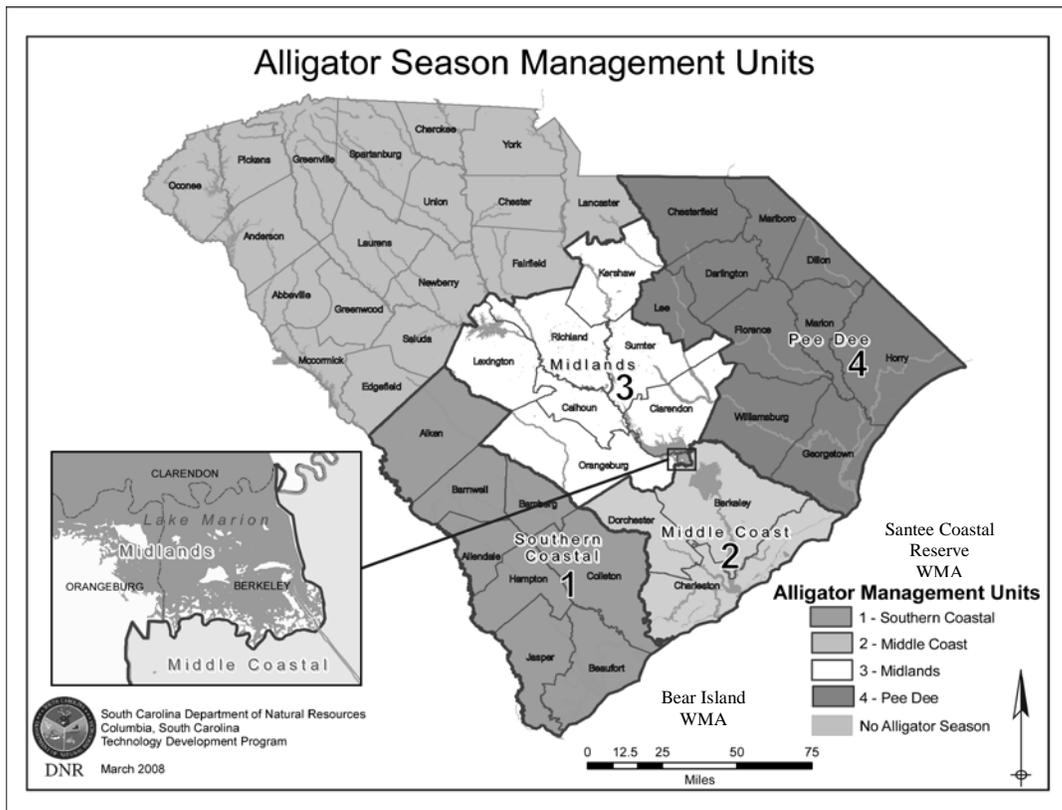


Figure 1. 2012 Alligator Management Units.

Legislation passed during the 2010 legislative session requires that all nonresident alligator hunters pay a *nonresident alligator hunting fee*. This fee is *in addition* to any application, licensing, and permit fees normally required to hunt alligators, regardless of the alligator hunting program. The cost is \$200 and is required of all nonresident hunters, as well as all nonresident assistants that are 16 years of age or older. Thus, the *minimum* cost for a nonresident alligator hunter that receives a permit and tag in the hunt selection is \$350. The fee breakdown would be: \$10 for the application, \$100 for the permit/tag, \$200 for the nonresident alligator hunting fee, and \$40 for a 3-day nonresident hunting license. Nonresident assistants 16 years of age or older would pay a minimum of \$240. This would include the \$200 nonresident fee and a 3-day hunting license (\$40). The *minimum* cost for a nonresident alligator hunter that receives a permit and tag in the WMA hunt selection is \$1,131. The fee breakdown would be: \$15 for the application, \$800 for the permit/tag, \$200 for the nonresident alligator hunting fee, \$76 for the WMA permit, and \$40 for a 3-day nonresident hunting license. Nonresident assistants 16 years of age or older would pay a minimum of \$316. This would include the \$200 nonresident fee, WMA permit (\$76), and a 3-day hunting license (\$40). Nonresident assistants under 16 do not pay any fees. Other states have similar additional nonresident fees or prohibit nonresident participation altogether.

Because the Alligator Draw Hunt computer program was completely rewritten, the online application process was delayed for over two weeks. Scheduled to begin on May 1st and end on June 15th, the delay pushed the opening of the application period to May 17th, so the new closing date of the application process was moved to the end of June. A total of 6,562 hunters applied for the 2012 hunt, an increase of 2.6% from the previous season. This percentage included applicants from 42 different states (including SC). The number of resident applicants decreased slightly to 90.7% of the total applications received for the Public Hunting Season. A total of 321 (-0.3%) applications for the WMA Alligator Hunt were received, 89.1% from residents, the remainder from eleven other states.

As was the case last year, no one without a preference point was selected for the Public Alligator Hunting season. All applicants with more than two preference points (n=221) were selected. Only 40% (N=983) of the applicants with one preference point were selected. As with previous years, any applicant with a preference point that does not reapply 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 982 of the 1,204* hunters selected (81.6 %) for the 2012 season completed the application process and were issued a harvest tag and permit. The tag purchase rate of 81.6% was slightly less than the rate in 2011 (88.0%). Nevertheless, this purchasing rate still remains above the predicted fulfillment rate of 70-80%, so no changes to the tag allotment are expected.

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. Overall, approximately 175 people attended the seminars, down from 250 attendees in 2011. The seminars were held in Moncks Corner, Greenville, and Irmo. It is unclear as to how long the alligator hunting seminars will be held as the number of attendees continues to decrease along with an apparent growing number of knowledgeable resident alligator hunters and guides.

*4 additional applicants were selected due to database correction measures.

As usual, alligator hunting vendors and guides were allowed to attend the seminars to showcase the tools and devices commonly used in alligator hunting. The 2012 Alligator Hunting Guide, (<http://www.dnr.sc.gov/wildlife/alligator/pdf/2012gatorguide.pdf>), was updated to reflect changes from the previous season.

The 2012 season began at noon on September 13th and ended at noon on October 10th.

SEASON RESULTS

All permitted alligator hunters were required to report their hunting activities by December 1st, regardless of whether or not they actually went alligator hunting in South Carolina. Reporting compliance for 2012 was 72.7% for all fully permitted hunters. Those hunters who did not report are not eligible to apply for the next hunting season.

The total number of alligators reported taken during the 2012 public alligator hunting season was 465*, a decrease of seven alligators from the 2011 season. This represents a success rate of 43.4% for all fully permitted hunters (n=1064), and 38.4% for all selected applicants (n=1,204). The Southern Coastal unit had the most alligators taken at 134 (28.9% of total harvest), followed by the Middle Coastal with 123, Pee Dee with 115 and the Midlands unit at 90 (Table 1).

* NOTE: this figure includes 3 alligators taken with WMA alligator tags in the hunt unit where the WMA was located. For statistical purposes, the 462 alligators taken under the Public Hunting Season were used for the calculations of success rates.

Table 1. The number of alligators taken and percent of total alligators harvested for the 2012 season by Hunt Unit.

Hunt Unit	Number of Alligators Taken	Percent of Total Harvest*
Middle Coastal ^a	125	26.9%
Midlands	90	19.4%
Pee Dee	115	24.7%
Southern Coastal ^b	135	29.0%
Total	465	100.0%

^a Includes two alligators taken with Santee Coastal WMA tags.

^b Includes one alligator taken with a Bear Island WMA tag.

*Percentages may not be equal due to rounding of decimal numbers.

Fully permitted hunters (n=1064) who actually reported going hunting (n=743) had a success rate of 62.2%. The number of hunters that hunted but were unsuccessful was 281. Another 2.7 percent of hunters (n=29) that paid their \$100 tag fee reportedly did not go alligator hunting this season.

The *reported* participation rate was highest in the Southern Coastal unit with 66.0% of *all selected hunters* (n=300) for the unit going on at least one alligator hunting trip. Participation rates for the other units were as follows: Middle Coastal at 65.2% (n=302), Pee Dee unit at 59.5% (n=301), and the Midlands at 56.8% (n=301; Figure 2). Of *all hunters* that went on at least one hunting trip, the most efficient hunters were in the Pee Dee unit. Hunters in this unit only went hunting 382 times, and the success rate was 1 alligator per 3.3 (SD=1.8) trips. Next was the Southern Coastal with 454 outings with 134 alligators taken, averaging one alligator killed per 3.8 (SD=2.2) hunting trips. Middle Coastal hunters went on 507 alligator hunting trips, took 123 alligators, averaging an alligator per 4.2 times (SD=2.1) afield. Lastly, hunting trips for Midlands hunters numbered 480, or 1 alligator per 5.3 trips (SD=2.8). Statewide, hunters went on a reported 1,823 hunting trips, taking one alligator for every 3.9 alligator hunting trips taken (SD=2.3).

Considering only *successful hunters*, the most efficient hunters were from the Pee Dee unit at one alligator for every 2.1 hunting trips (SD=1.6). Southern Coastal hunters took one alligator for every 2.4 outings (SD=2.3) followed by hunters in the Midlands unit at 3.0 days per alligator taken (SD=2.3). Lastly, successful Middle Coastal hunters averaged one alligator for every 3.3 days afield (SD=2.2). Collectively, successful hunters averaged one alligator for every 2.6 days spent hunting (SD=2.1).

The average size of all alligators reported taken during the 2012 public season was 8.9' (SD=1.9). The average size of alligators taken in both the Middle Coastal and Pee Dee units was 9.0 feet (SD=2.1, and 1.7 respectively), the Southern Coastal at 8.8 feet (SD=1.7), and lastly the Midlands averaged 8.7 feet (SD=2.2) (Figure 3). A total of 6 alligators were reported at 13 feet or greater (1.1% of total), one more than last year (Figure 4). According to harvest reports, the largest alligator taken this season was 13'9½". The smallest alligator reported was 4'2".

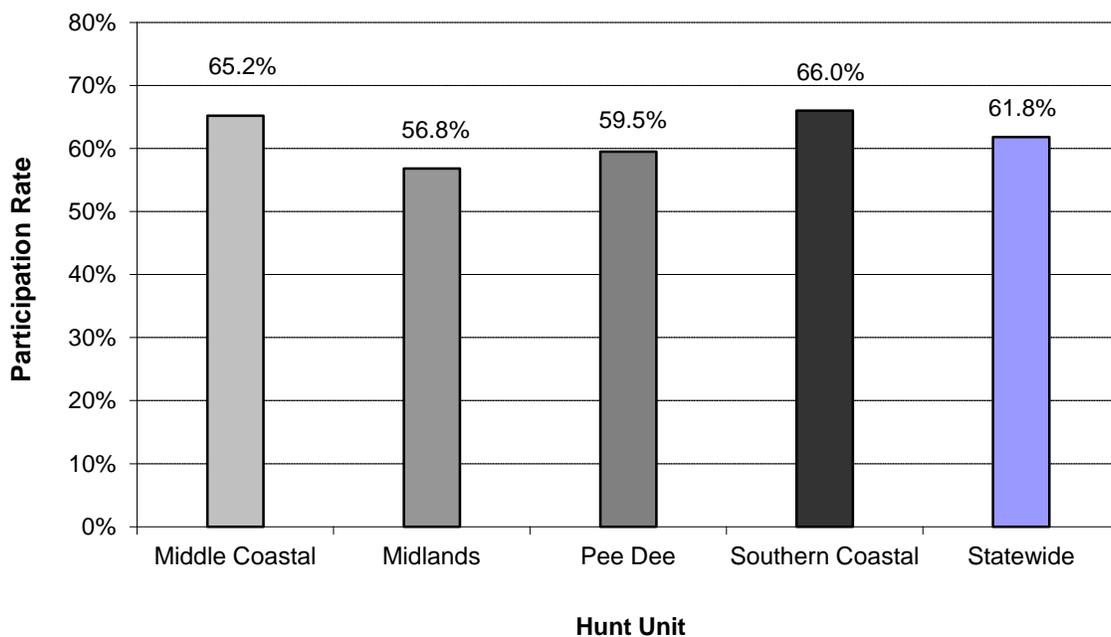


Figure 2. Reported participation rate (at least one trip afield) for all hunters selected to participate in the 2012 alligator season by Hunt Unit.

Twenty-four (5.2%) alligators taken were reported to be less than 6' in length. The number of smaller alligators (six-feet and smaller) decreased slightly from last year from eighty in 2011 to seventy-three this season. The greatest number (32.9%) of larger alligators, those *10 feet and larger*, came from the Middle Coastal unit. Of the *very large* alligators, the Midlands (n=10) had a slightly larger number of the total alligators taken that were in the 12 or 13 foot-class, followed closely by both the Middle Coastal (n=9) and the Pee Dee (n=8) units, then the Southern Coastal unit with 6 animals. No thirteen foot alligators were taken from either the Pee Dee or Southern Coastal units. With the exception of one additional alligator in the 13-foot class (n=6), there was an overall decrease in the number of alligators taken in all other size classes greater than 8-foot. (Table 2; also see Appendices).

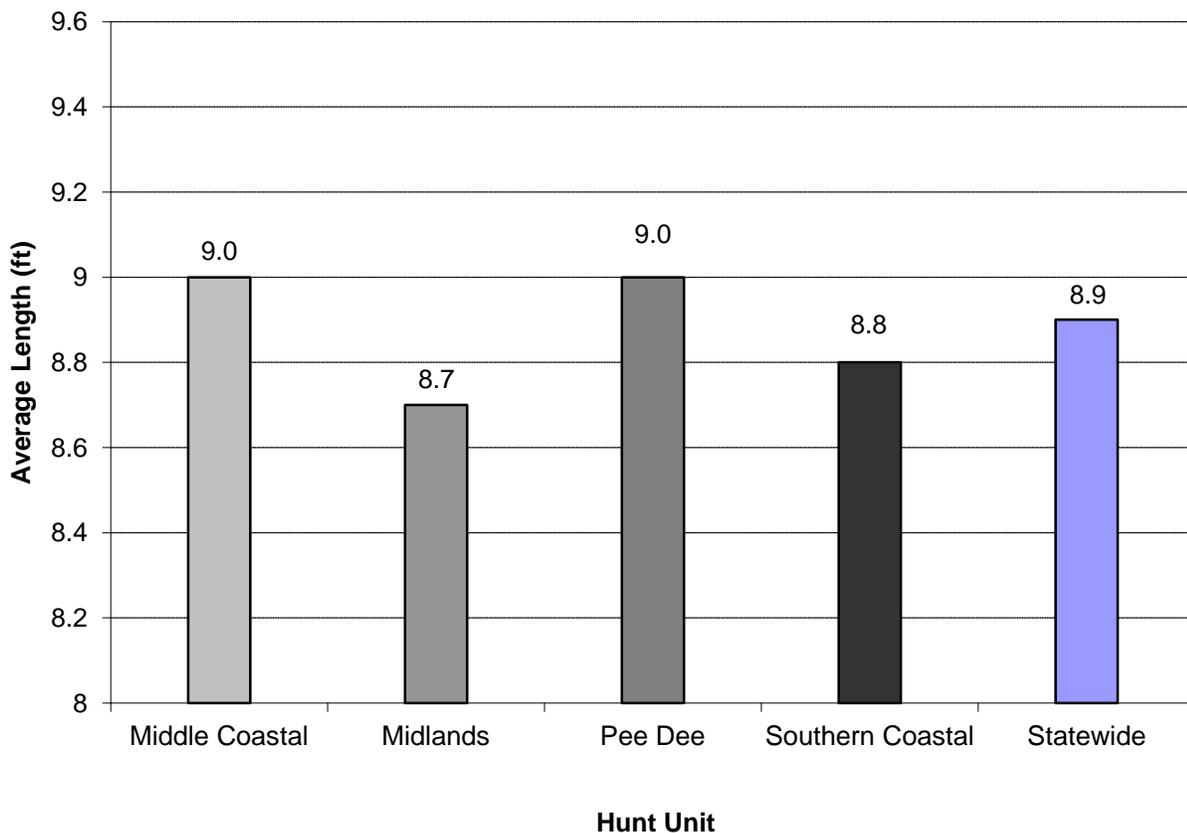


Figure 3. Average size of alligators taken during the 2012 Public Hunting Season by Hunt Unit.

Alligator harvest was reported from eighteen coastal plain counties, three less than last season. Reported take by county revealed that three counties: Berkeley, Georgetown, and Colleton, comprised nearly 66% of the public alligator harvest (Table 3; Appendix V). Those same counties have accounted for approximately 60% to 70% of the total harvest since the 2009 season. The largest alligators (10'+) came from three counties that were in different hunt units: Berkeley (n=42), Georgetown (n=35), and Colleton (n=25; Figure 5).

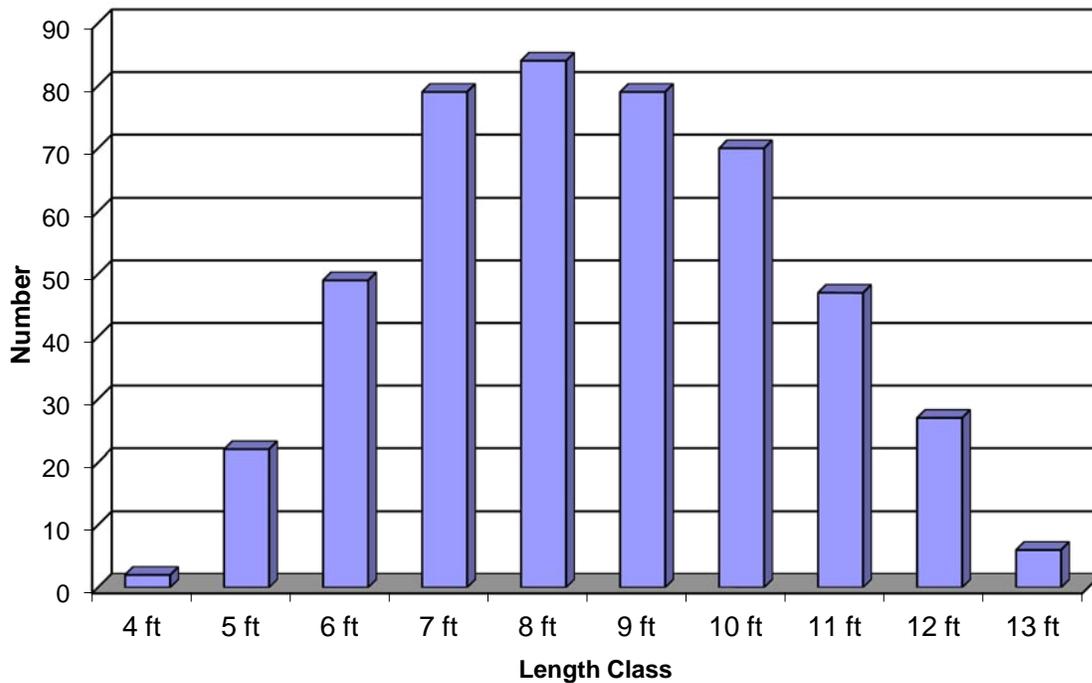


Figure 4. Number of alligators taken by size class during the 2012 Public Hunting Season.

Table 2. Number of alligators taken by size class and Hunt Unit during the 2012 Public Hunting Season.

Hunt Unit	Alligator Size Class ^a									
	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
Middle Coastal ^b	0	7	17	18	22	11	23	18	5	4
Midlands	1	8	12	13	14	13	10	9	8	2
Pee Dee	1	3	8	16	27	26	18	9	8	0
Southern Coastal ^c	0	4	12	33	20	29	19	11	6	0
Totals	2	22	49	79	84	79	70	47	27	6
Change from 2011	+1	-1	-7	+19	+5	-2	-8	-11	-4	+1

^a Shaded area denotes “larger” alligator size classes.

^b Includes two alligators taken with a Santee Coastal WMA Tag.

^c Includes one alligator taken with a Santee Coastal WMA Tag.

Reported meat yield from all harvested alligators was 13,230 lbs, a 6.4% increase from 2011.

The most commonly reported alligator capture technique was a hook and line, with over half (61%) of all successful hunters using this as a primary capture device. Nearly seventeen percent of hunters used a crossbow, followed by a bow (13%), harpoon (8%) and the remainder of the hunters describing using other devices (Figure 6). A total of 13.6% of the successful hunters utilized a guide's services, down slightly (-1.6%) from the previous season.

Alligator hide utilization (sold, kept, or given away) was reported at 74.2%. Of this amount, no skins were denoted as sold, likely a result of the somewhat poor market for alligator hides.

SEASON RESULTS – WILDLIFE MANAGEMENT AREAS

Starting this season, WMA alligator permittees were given the option to purchase a "smaller" alligator tag in addition to the normal WMA alligator tag. This tag allowed the take of an additional alligator seven feet or smaller in length. Thus, with sixteen WMA permits available, up to thirty-two tags were offered to selected WMA hunters. Thirteen of the additional "smaller" alligator tags were purchased this season. Of the sixteen available permits, a total of twenty-eight tags were purchased (15 WMA, plus 13 additional tags) for the WMA Alligator Hunts and eighteen alligators were taken. Nine alligators were taken from both Bear Island WMA and from Santee Coastal Reserve (Table 4). The average size for alligators on both of the WMA properties using the normal WMA tag exceeded the public hunting average. Bear Island alligators averaged 11.1' and Santee Coastal averaged 10.3'. The largest alligator taken from Bear Island was 11' 5", and the largest alligator taken from Santee Coastal was 10' 9". For the additional smaller tag, Bear Island alligators averaged 5.9' while the additional smaller tag Santee Coastal alligators averaged 6.7'.

Both Bear Island and Santee Coastal hunters took nine alligators in six trips for a success rate of more than one alligator for every trip (1 per 0.7 trips). Success rates were high because of the additional tag that was purchased by most WMA hunters. Three of the thirteen successful hunters hired a guide (23.1%). While the normal WMA tag allows the hunter to take an alligator from the WMA during the week assigned, this tag can also be used in the same Public Alligator Hunt Unit where the WMA is located. Three hunters took advantage of this option, killing three alligators, two in the Middle Coastal Unit, and one in the Southern Coastal Unit. One of the three included a 13'2" alligator taken from Lake Moultrie.

Table 3. 2012 Alligator harvest and percent of total alligator harvest by hunt unit and county.

Hunt Unit	County	Number of Alligators Taken	Percent of Total Harvest*
MIDDLE COASTAL		125	26.9%
	Berkeley ^a	89	19.1%
	Charleston ^b	36	7.7%
MIDLANDS		91	19.6%
	Clarendon	32	6.9%
	Orangeburg	29	6.2%
	Calhoun	12	2.6%
	Berkeley ^c	12	2.6%
	Sumter	3	0.6%
	Kershaw	1	0.2%
	Richland	1	0.2%
SOUTHERN COASTAL		134	28.8%
	Colleton ^d	93	20.0%
	Beaufort	27	5.8%
	Jasper	6	1.3%
	Aiken	2	0.4%
	Allendale	2	0.4%
	Hampton	3	0.6%
	Barnwell	2	0.4%
PEE DEE		115	24.7%
	Georgetown	112	24.1%
	Williamsburg	2	0.4%
	Horry	1	0.2%
TOTAL		465	100%

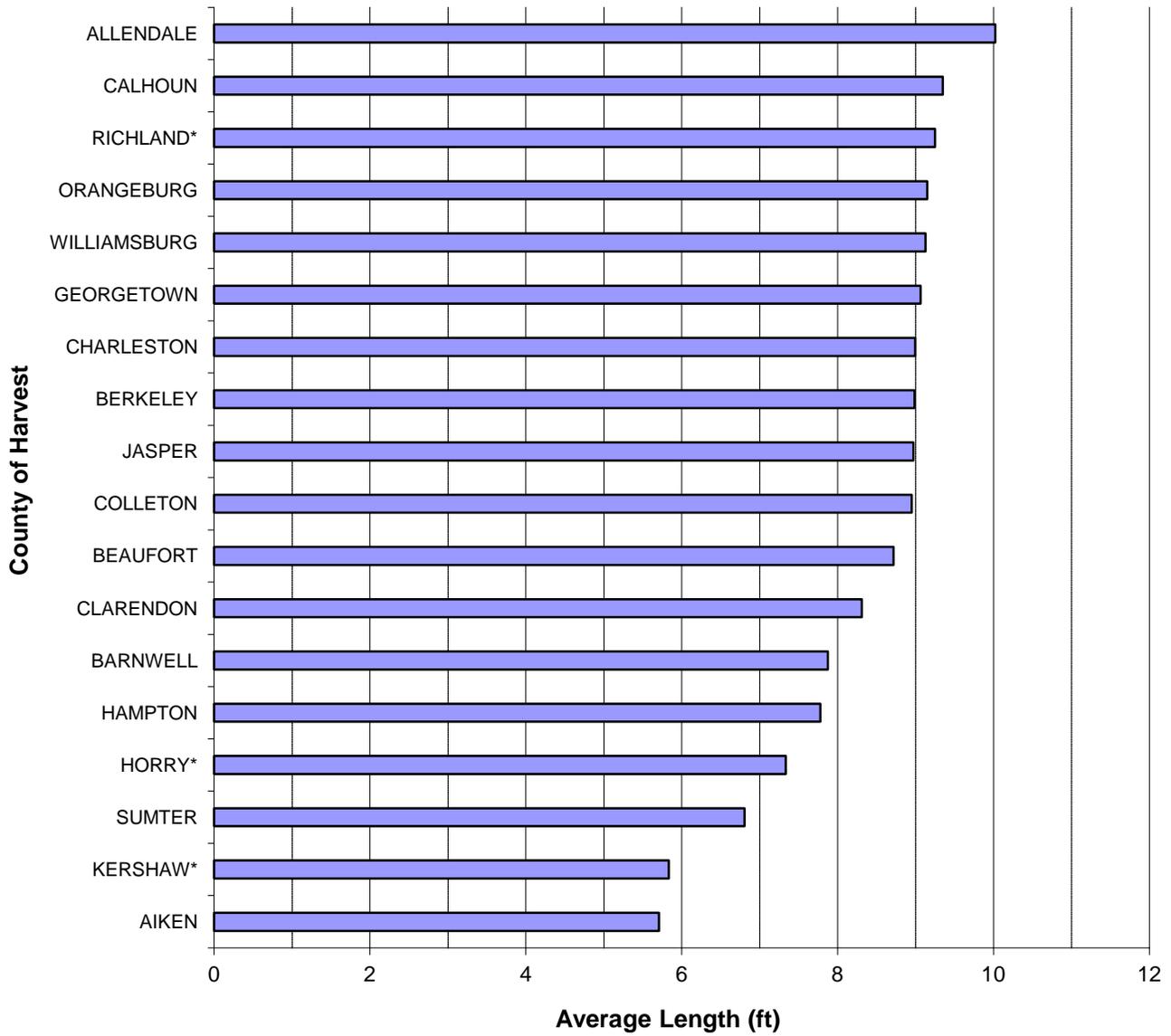
^a Includes the portion of Berkeley County in the lower end of Lake Marion. Includes one alligator taken with a Santee Coastal WMA Tag.

^b Includes one alligator taken with a Santee Coastal WMA Tag.

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

^d Includes one alligator taken with a Bear Island WMA Tag

*Percentages may not be equal due to rounding of decimal numbers.



*Represented by only one alligator.

Figure 5. Average length of alligators reported taken during the 2012 Public Harvest Season by county.

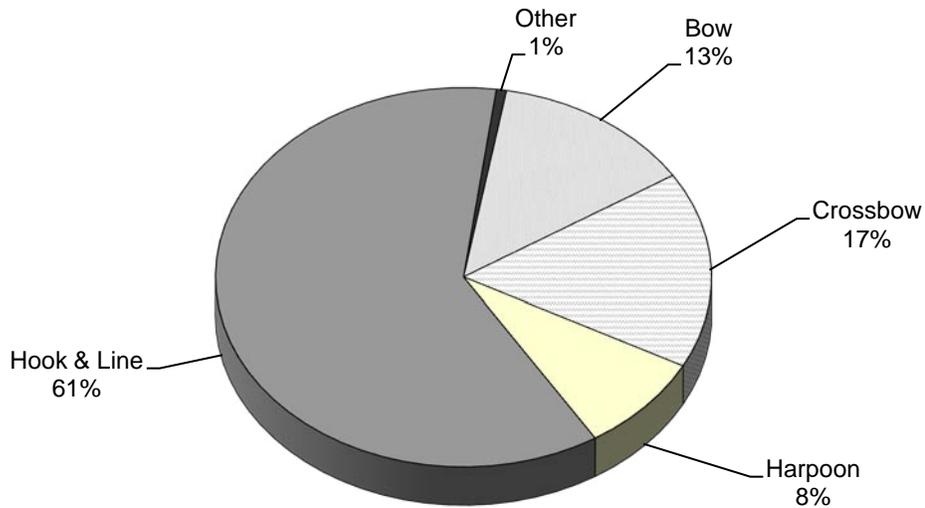


Figure 6. Reported initial capture device utilized during the 2012 Alligator Season.

Table 4. 2012 WMA Alligator harvest by week and management area.

Wildlife Management Area	Week	Number of Alligators Taken
Bear Island WMA ^a		9
	First	1
	Second	3
	Third	3
	Fourth	2
Santee Coastal WMA ^b		9
	First	2
	Second	0
	Third	4
	Fourth	3

^a One alligator not listed in this table was taken in the Southern Coastal Unit with a Bear Island WMA tag.

^b Two alligators not listed in this table were taken in the Middle Coastal Unit with a Santee Coastal WMA tag.

DISCUSSION AND RECOMMENDATIONS

The number of applicants for this season's alligator hunt increased 2.6% from the previous high set last season. The continued popularity of the alligator hunting television show *Swamp People* has likely kept the interest level high. It is unknown if future application rate will remain at such an elevated level or possibly settle back to about 3,500 – 4,000 applicants that participated before the television show first aired.

The number of problems with the online application system dropped again from the previous year. For 2012, only four additional applicants were added to the 1,200 permits allocated for the hunt in order to correct database problems from both this year, as well as previous seasons. This is down from five in 2011. What is most surprising is that the original computer program was completely rewritten. Certainly, there were some growing pains including a two-week delay in implementing the application program. Other nagging problems with customer logins persisted for a few weeks, but were eventually fixed. However, many of the database problems continue to involve the third-party credit card processing vendor. Further investigations revealed that in a few cases, applicants had two different Customer IDs in the DNR's database, treating the person as two separate individuals from year to year instead of one. This issue is problematic for any preference-based hunt draw system as the customer often switches between customer IDs, thus "erasing" accumulated preference points since the system computes a lapse in their continued annual application and accumulation of preference points. So long as DNR is notified in a timely manner, we can investigate and "fix" the problem of duplicate IDs and implement corrective actions when warranted. The total number of database applicants requiring corrective measures resulting in the issuance of a permit for 2012 amounted to 0.06% of all applications received (n=4).

For the 2013 season, no significant change in the tag allotment or application process is expected. It is expected that no secondary drawing will take place in 2012, and the available permits will remain at 1,200.

As predicted, the number of large alligators taken has decreased from the previous season. While the number of 13-foot alligators reported taken during the 2012 season actually increased by one, the number of alligators nine feet and larger decreased for all other larger size classes. This number is expected to remain low for subsequent seasons, and the harvest of these larger alligators may start to disappear from the public hunting program altogether. The ever-cautious prediction of decreasing numbers of large alligators may be coming somewhat more apparent. Large alligators are not an infinite resource, as it can potentially take 20 or more years for an alligator in South Carolina to exceed 10 feet in length. Currently, South Carolina harvests some of the largest alligators throughout the animal's range. It is also quite possible that the chance to harvest a very large alligator may be driving the number of applications the Department receives; therefore, careful attention needs to be given to the harvest as it relates to the number of very large alligators taken. There realistically could come a time where interest in the alligator season drops off considerably if we reach the point where very large alligators are no longer available for harvest.

Appendix

2012 Harvest Graphs

by

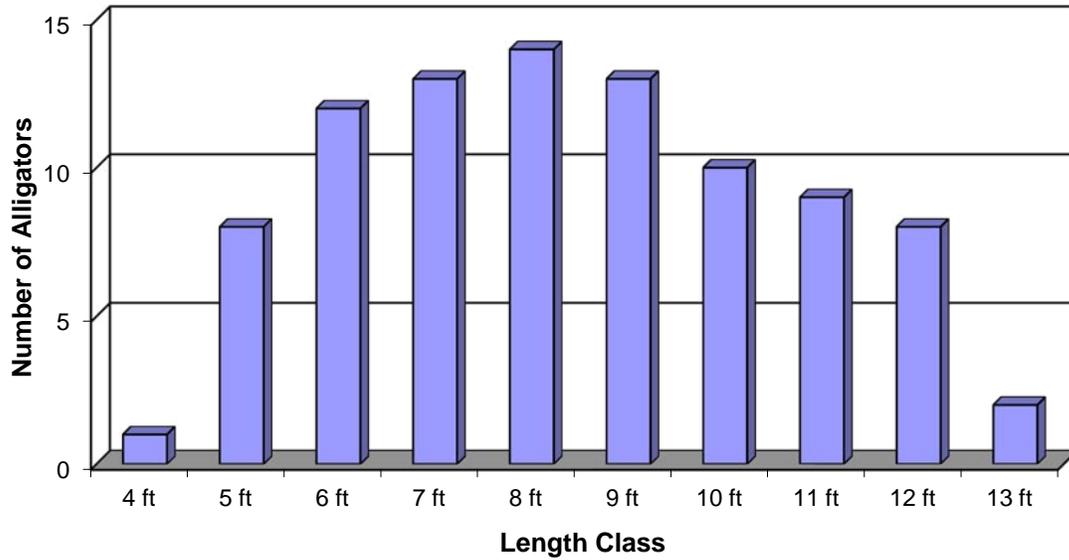
Public Alligator Harvest Hunt Unit

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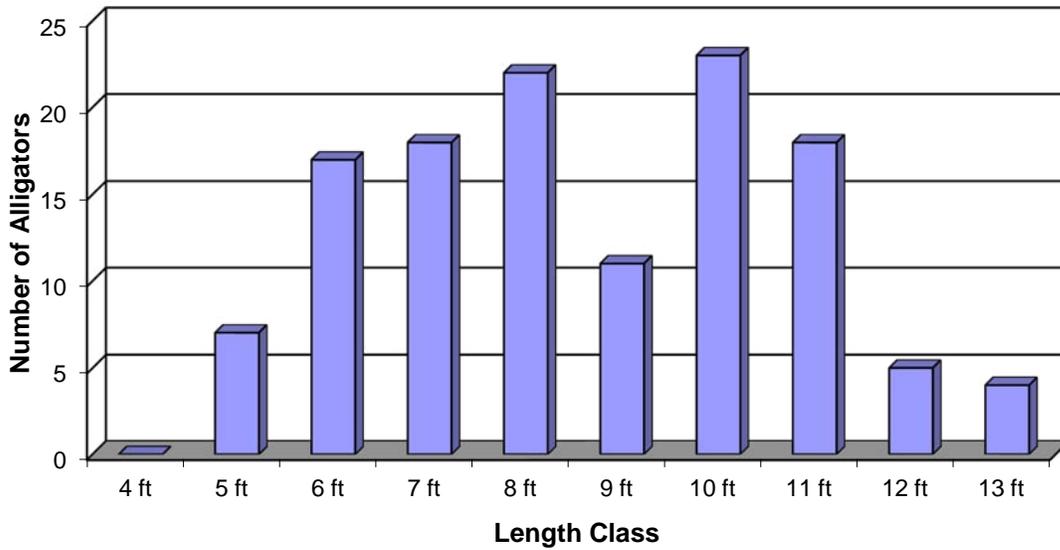
County of Harvest

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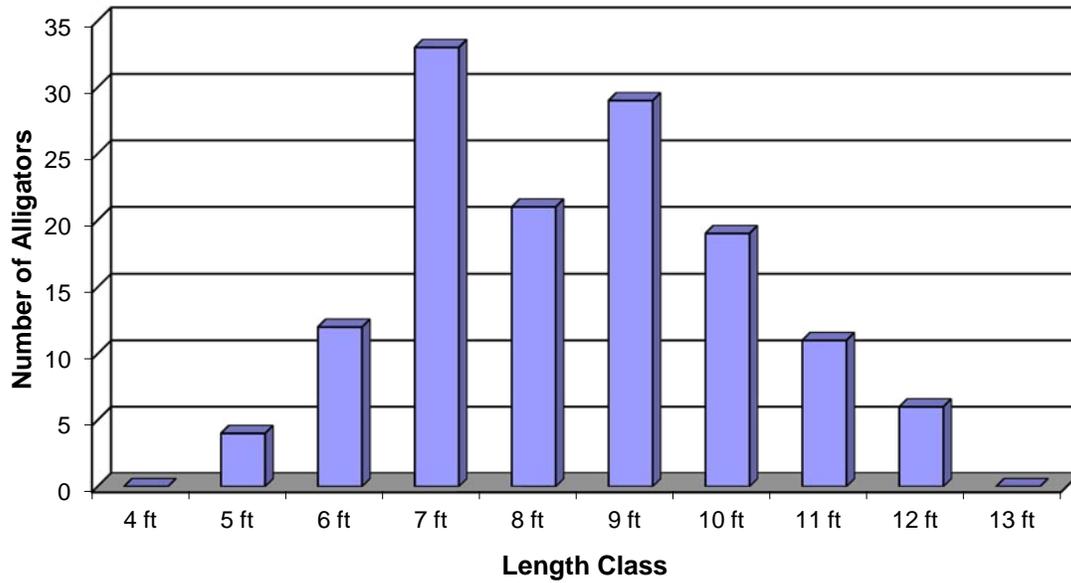
Cumulative Harvest Totals by Year



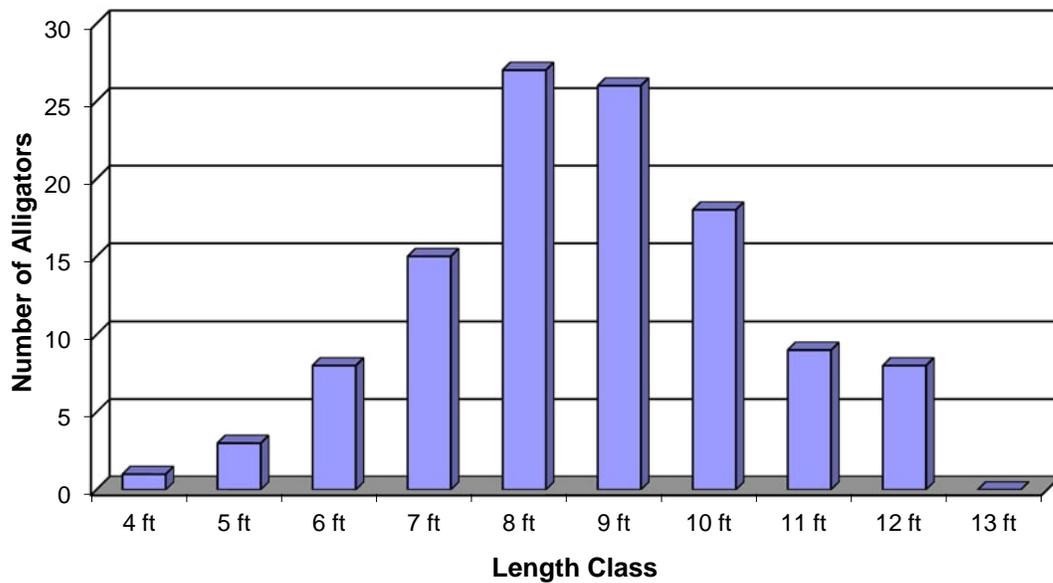
Appendix I. Number of alligators taken during the 2012 Public Hunting Season by size class for the Midlands Hunt Unit.



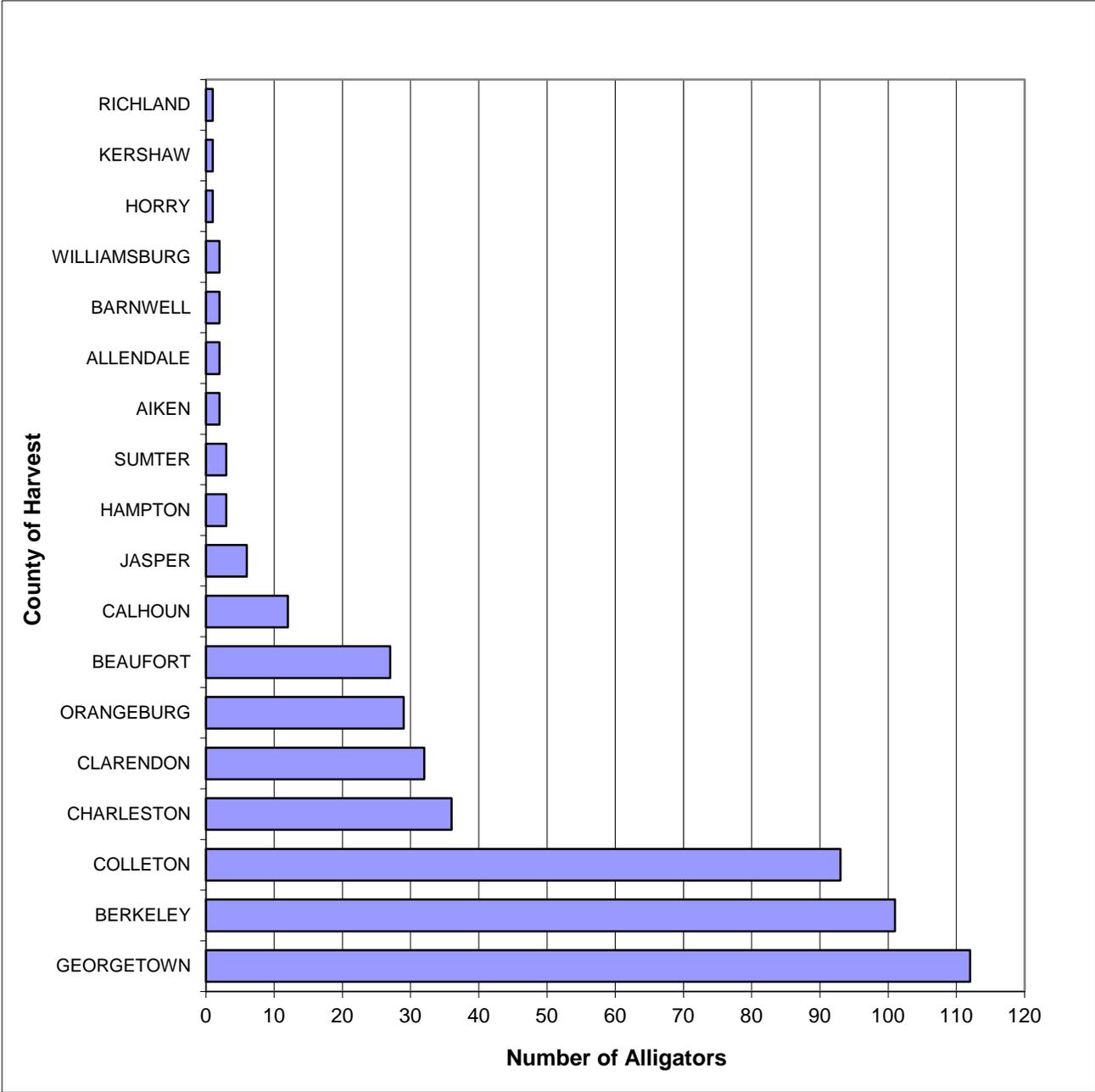
Appendix II. Number of alligators taken during the 2012 Public Hunting Season by size class for the Middle Coastal Hunt Unit.



Appendix III. Number of alligators taken during the 2012 Public Hunting Season by size class for the Southern Coastal Hunt Unit.



Appendix IV. Number of alligators taken during the 2012 Public Hunting Season by size class for the Pee Dee Hunt Unit.



Appendix V. Number of alligators taken during the 2012 Public Hunting Season by county of reported harvest.

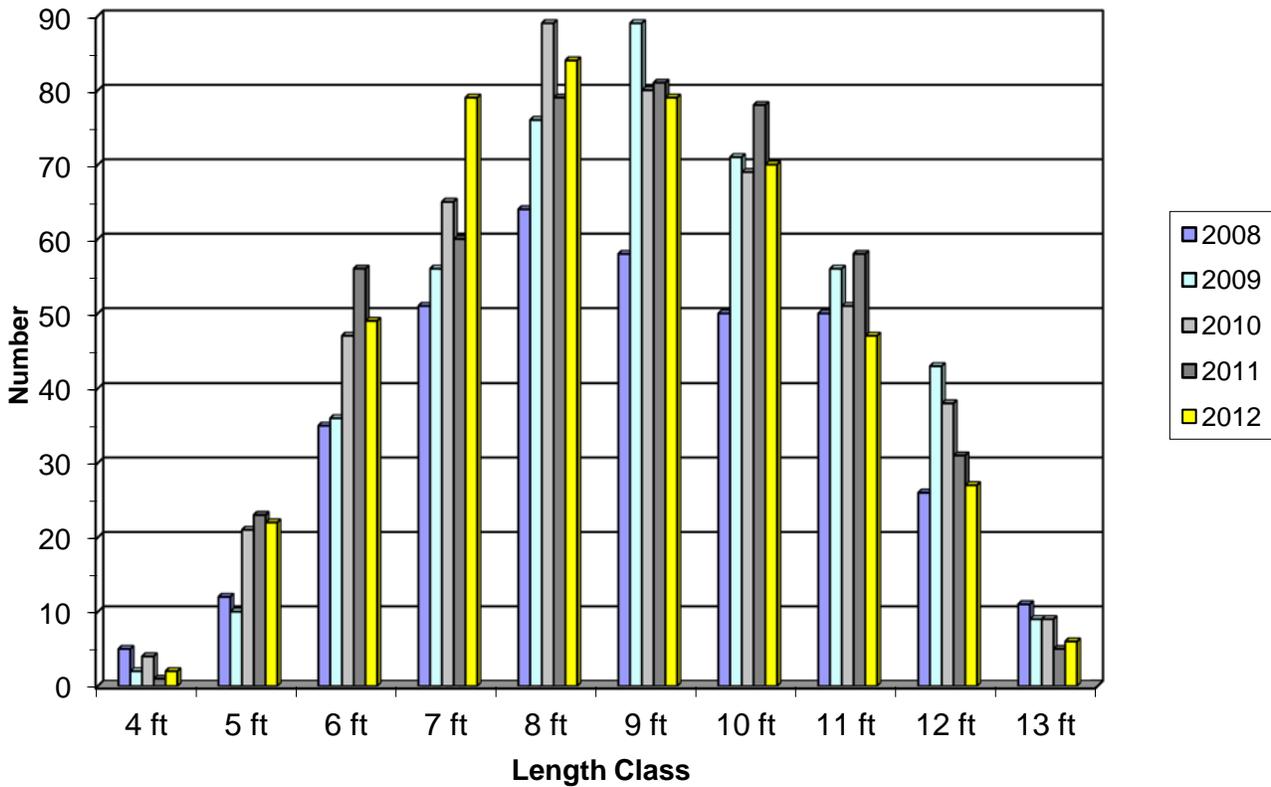
Appendix VI. Number of alligators taken during all years of the Public & WMA Hunting Season, by Hunt Unit.

Hunt Unit	Year					Total
	2008	2009	2010	2011	2012	
Middle Coastal	121	147	117	140 ^a	134 ^a	659
Midlands	87	93	104	87	90	461
Pee Dee	60	104	111	120	115	510
Southern Coastal	94	108	141	136 ^b	144 ^b	623
Annual Total	362	452	473	483[*]	483[*]	2,253

* includes alligators taken the WMA Alligator Hunting Program beginning in 2011.

^a includes alligators taken at Bear Island WMA

^b includes alligators taken at Santee Coastal Reserve WMA



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