

Alligator Hunting Season Report 2013



Submitted by:
Jay Butfiloski
Furbearer & Alligator
Program Coordinator

South Carolina Department of Natural Resources
Wildlife & Freshwater Fisheries Division

Alligator Project

PO Box 167

Columbia, SC 29202

www.dnr.sc.gov



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 2013 Public Alligator Hunting Season marked the sixth 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. Beginning in 2012, there 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.

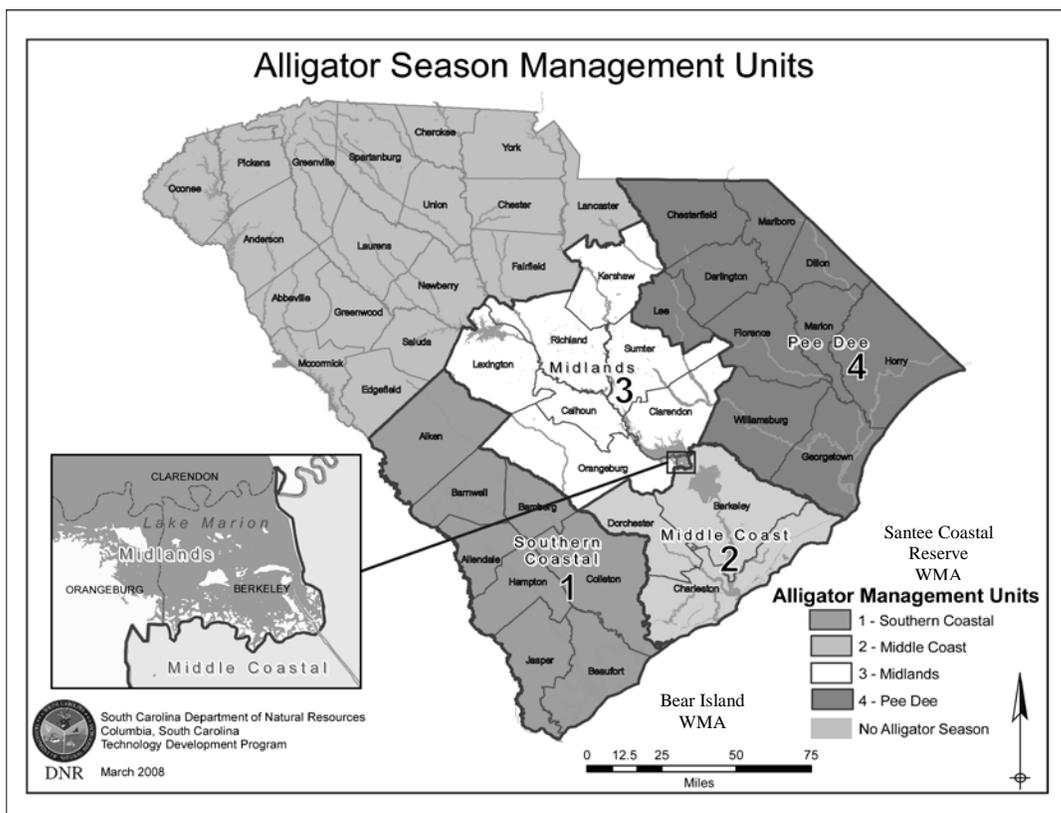


Figure 1. 2013 Alligator Management Units.

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.

The lottery selection process began as usual on May 1st and ended on June 15th. A total of 5,626 hunters applied for the 2013 hunt, a decrease of 14.3% from the previous season. This percentage included applicants from 44 different states (including SC) along with applicants from Canada and the Virgin Islands. The number of resident applicants decreased slightly to 89.2% of the total applications received for the Public Hunting Season. Of non-residents NC and GA residents were 4.1% and 1.2% of the total number of applicants. No other states' applicants were more than 1% of the total.

A total of 222 applications for the WMA Alligator Hunt were received from eleven different states. The number of applicants decreased 30.8% from the previous season. SC residents comprised the overwhelming majority (82%) of the WMA applicant pool, followed by 5.4% from NC, 4.5% from GA, and 2.3% from VA.

As was the case last season, no one without a preference point was selected for the Public Alligator Hunting season. Of all the successful applicants, only 20.1% (n=242) had one preference point. The remaining selected hunters had two (79.4%) or three (0.2%) preference points. Applicants lose any accumulated preference points once selected for a permit, whether the permit is purchased or not.

A total of 1004 of the 1,204* hunters selected (83.4 %) for the 2013 season completed the application process and were issued a harvest tag and permit. The tag purchase rate was slightly above last year's rate of 81.6%. Nevertheless, this purchasing rate still remains above the predicted fulfillment rate of 75-80% relative to the targeted tag distribution. Currently, the targeted allotment is 1,000 tags, an amount which is subject to change in future years based on harvest and/or survey data.

Due to declining attendance and five complete alligator hunting seasons completed, there were no alligator hunting seminars hosted this season. It is believed that since sufficient public knowledge of alligator hunting exists that the seminars were no longer necessary to inform the public on how to hunt alligators in South Carolina. However, the alligator hunting information PowerPoint presentation that is generally presented at the seminars was posted to the alligator hunting portion of the DNR web site.

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

The 2013 Alligator Hunting Guide, (<http://www.dnr.sc.gov/wildlife/alligator/pdf/2013gatorguide.pdf>), was updated to reflect changes from the previous season.

The 2013 season began at noon on September 14th and ended at noon on October 12th.

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 2013 was 77.7% 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 2013 public alligator hunting season was 440, a decrease of 25 alligators (-5.4%) from the 2012 season. This total includes two alligators taken by WMA hunters, but these hunters are not factored into the remainder of the public season results. This represents a success rate of 43.6% for all fully permitted hunters (n=1004), and 36.4% for all selected applicants (n=1,204). The Middle Coastal unit had the most alligators taken at 125 (28.5% of total harvest), followed by the Pee Dee with 121, Southern Coastal with 110 and the Midlands unit at 82 (Table 1).

Table 1. The number of alligators taken and percent of total alligators harvested for the 2013 season by Hunt Unit.

Hunt Unit	Number of Alligators Taken	Percent of Total Harvest*
Middle Coastal ^a	127	28.5%
Midlands	82	18.7%
Pee Dee	121	27.6%
Southern Coastal	110	25.1%
Total	440^a	100.0%

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

^a includes two alligators taken by WMA hunters

Fully permitted hunters (n=1004) who actually reported going hunting (n=747) had a success rate of 58.6%. The number of hunters that hunted but were unsuccessful was 309. Another 3.5 percent of hunters (n=35) 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 with 64.8% of *all selected hunters* (n=301) for the unit going on at least one alligator hunting trip. Participation rates for the other units

were as follows: Pee Dee unit at 64.2% (n=302), Southern Coastal at 60.4% (n=301), and the Midlands at 58.7% (n=300; Figure 2).

Of *all hunters*, the most efficient hunters were from the Southern Coastal unit at one alligator for every 2.4 hunting trips (SD=1.7). Pee Dee hunters took one alligator for every 2.6 outings (SD=2.2) followed by hunters in the Middle Coastal unit at 2.9 days per alligator taken (SD=2.2). Lastly, Midlands hunters averaged one alligator for every 3.1 days afield (SD=2.7). Collectively, all hunters averaged one alligator for every 2.8 days spent hunting (SD=2.2).

Considering *only the successful hunters*, the most efficient hunters were from the Southern Coastal unit. These hunters went afield 256 times for an average of 2.3 trips per alligator killed (SD=1.7). Successful Pee Dee hunters went, on average, 2.6 days for each alligator taken (SD=2.3) and Midlands hunters took one alligator for every 2.7 days afield (SD=2.3). Lastly, Middle Coastal hunters averaged 2.8 days hunting for each alligator taken (SD=2.1). On average, all successful hunters spent 2.6 days hunting for every alligator taken (SD=2.1).

The average size of all alligators reported taken during the 2013 public season was 8.6' (SD=1.9). The average size of alligators taken in both the Middle Coastal and Midlands units was 8.9 feet (SD=1.7, and 2.3 respectively), the Pee Dee at 8.3 feet (SD=1.7), and lastly the Southern Coastal averaged 8.2 feet (SD=1.8) (Figure 3). Only one alligator was reported to be 13 feet or greater (0.2% of total), five less than last year (Figure 4). According to harvest reports, the largest alligator taken this season was 13'0". The smallest alligator reported was 4'4".

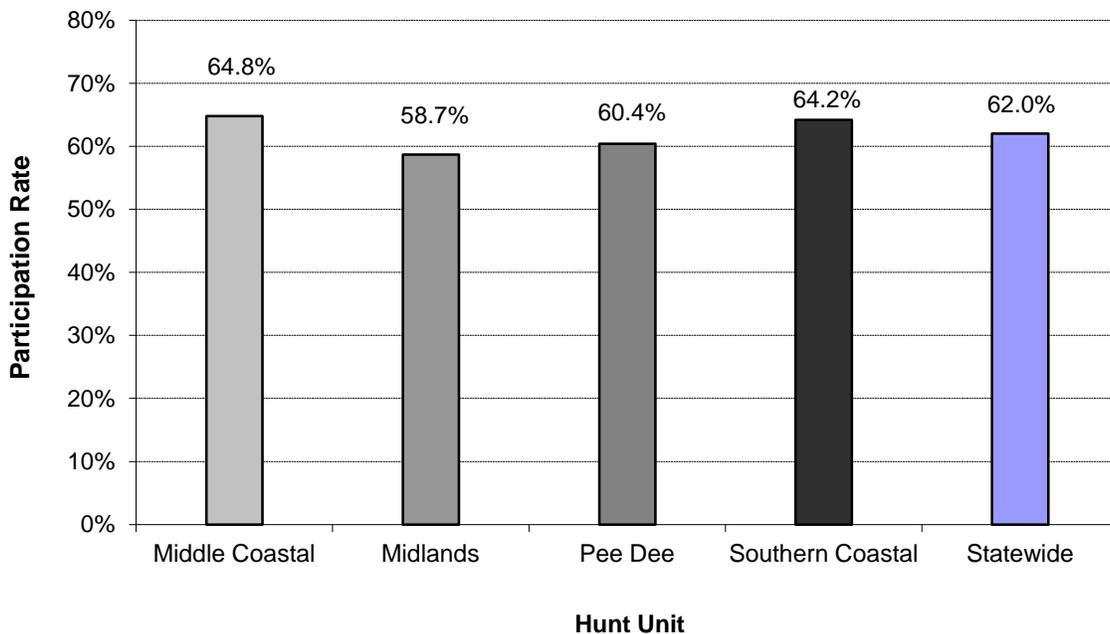


Figure 2. Reported participation rate (at least one trip afield) for all hunters selected to participate in the 2013 alligator season by Hunt Unit.

Thirty-two (7.3%) alligators taken were reported to be less than 6' in length. The number of smaller alligators (six-feet and smaller) increased from last year from seventy-three in 2012 to eighty-nine this season. The greatest number (31.3%) 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=4) and the Southern Coastal (n=2) units, then the Pee Dee unit with 1 animals. The only thirteen-foot class alligator was taken in the Midlands unit. Overall there was an 17.5% decrease in the number of alligators taken in all size classes greater than 8-foot. (Table 2; also see Appendices).

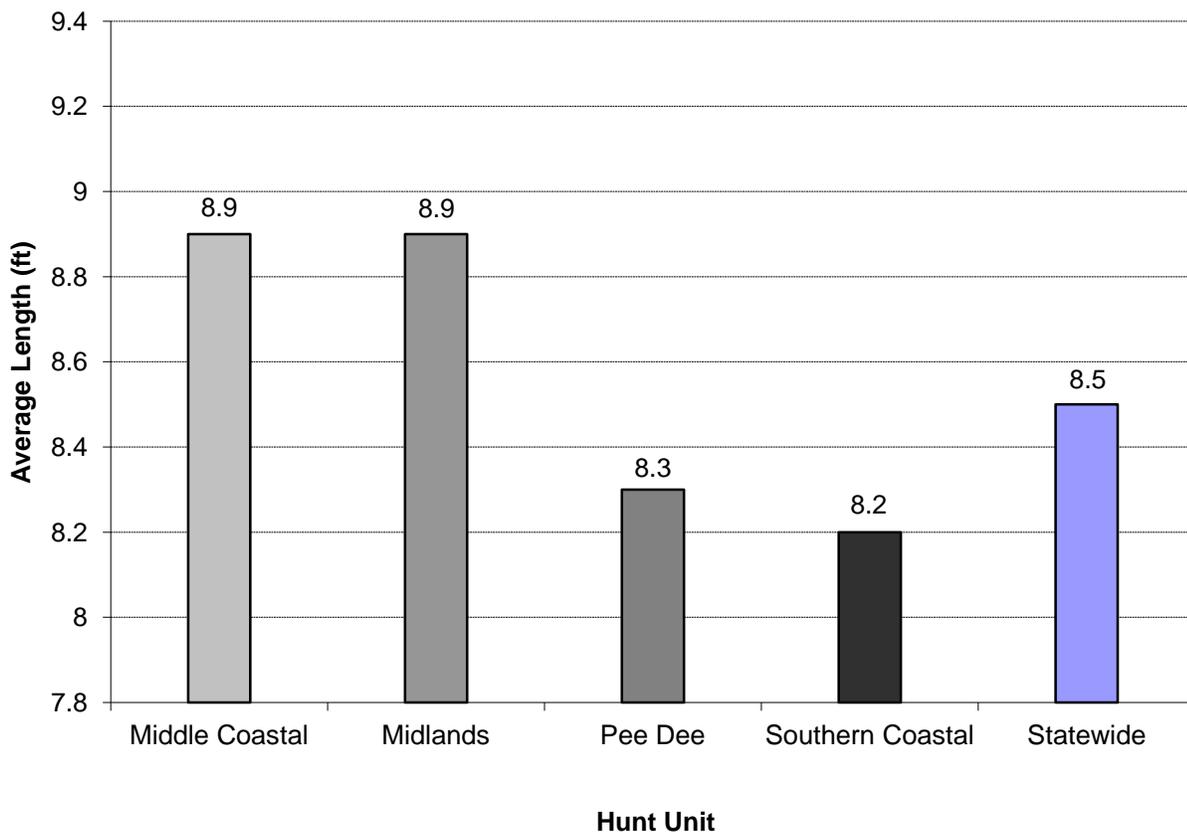


Figure 3. Average size of alligators taken during the 2013 Public Hunting Season by Hunt Unit.

Alligator harvest was reported from twenty coastal plain counties, two more than last season. Reported take by county revealed that three counties: Georgetown, Berkeley, and Colleton, comprised 64% 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'+) also came from these three counties that were in different hunt units: Berkeley (n=39), Georgetown (n=22), and Colleton (n=17). On average, the largest alligators came from Calhoun County, followed by Sumter, Berkeley, and Clarendon. (Figure 5).

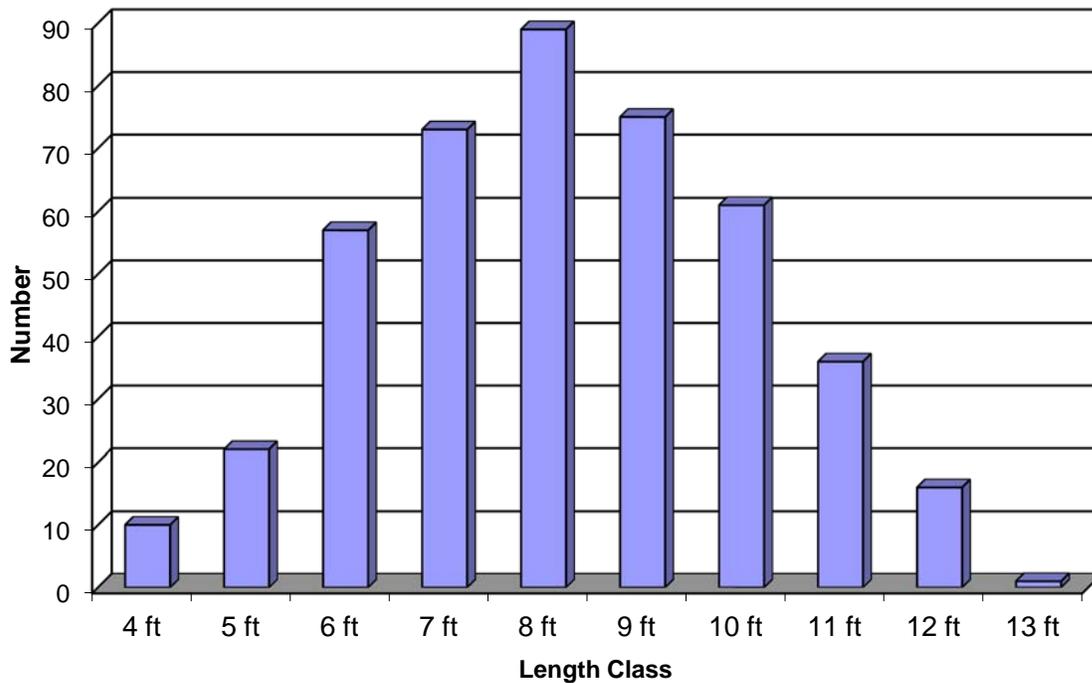


Figure 4. Number of alligators taken by size class during the 2013 Public Hunting Season.

Table 2. Number of alligators taken by size class and Hunt Unit during the 2013 Public Hunting Season.

Hunt Unit	Alligator Size Class ^a									
	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
Middle Coastal ^b	1	4	12	18	31	25	16	16	4	0
Midlands	3	4	10	13	11	9	14	8	9	1
Pee Dee	4	3	20	21	29	21	16	6	1	0
Southern Coastal	2	11	15	21	18	20	15	6	2	0
Totals	10	22	57	73	89	75	61	36	16	1
Change from 2012	+8	0	+8	-6	+5	-4	-9	-11	-11	-5

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

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

Reported meat yield from all harvested alligators was 11,591 lbs, a 12.4% decrease from 2012.

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%.

SEASON RESULTS – WILDLIFE MANAGEMENT AREAS

Starting with the 2013 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 a total of thirty-two tags were offered to selected WMA hunters if the additional tag was purchased. Nine of the additional "smaller" alligator tags were purchased this season. Twelve alligators were taken from Bear Island WMA and only two from Santee Coastal Reserve (Table 4). The average size for alligators on Bear Island WMA using the normal WMA tag exceeded the public hunting average. Bear Island alligators averaged 10.5'. Santee Coastal WMA only averaged 6.9', but this was only represented by two alligators. The largest alligator taken from Bear Island was 11' 3", the largest on Santee Coastal Reserve was 7'0".

Both Bear Island and Santee Coastal hunters took fourteen alligators in nine trips for a success rate of more than one alligator for every trip (1.6 per trip). Success rates were high because of the additional tag that was purchased by most WMA hunters. 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. Two Santee Coastal WMA hunters took advantage of this option, killing a total of two alligators, both in the Middle Coastal Unit. Thus, WMA alligator hunters took a total of sixteen alligators during the season.

Table 3. 2013 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		127	28.9%
	Berkeley ^{ab}	92	20.9%
	Charleston ^b	32	7.3%
	Dorchester	3	0.7%
MIDLANDS ^c		82	18.6%
	Clarendon	29	6.6%
	Orangeburg	21	4.8%
	Berkeley ^d	14	3.2%
	Calhoun	9	2.0%
	Sumter	7	1.6%
SOUTHERN COASTAL ^e		110	25.0%
	Colleton	67	15.2%
	Beaufort	24	5.5%
	Allendale	6	1.4%
	Aiken	3	0.7%
	Hampton	3	0.7%
	Jasper	3	0.7%
	Bamberg	2	0.5%
	Barnwell	1	0.2%
PEE DEE		121	27.5%
	Georgetown	114	25.9%
	Horry	3	0.7%
	Williamsburg	2	0.5%
	Dillon	1	0.2%
	Marion	1	0.2%
TOTAL		440	100%

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

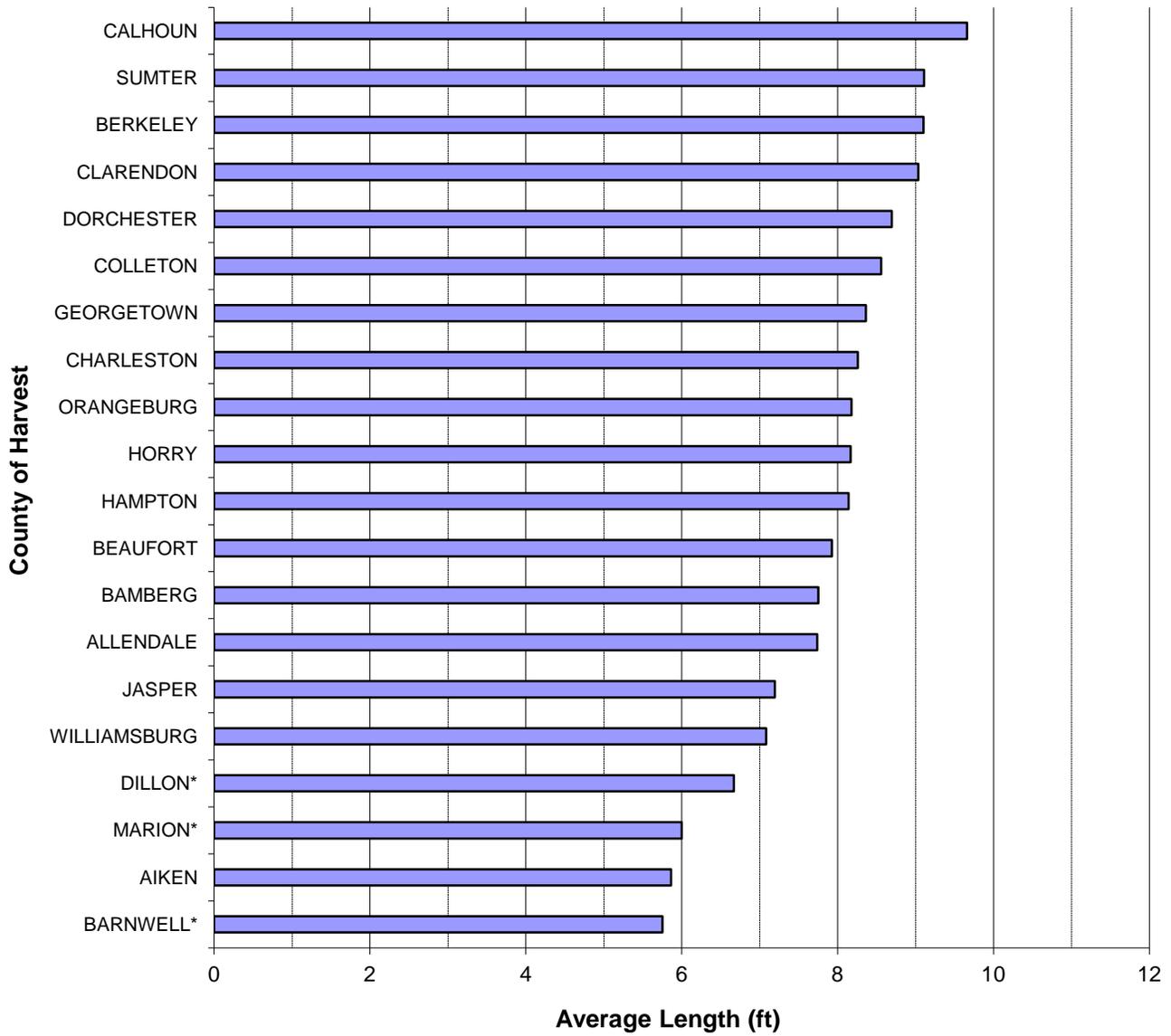
^b Includes one alligator taken by WMA hunter

^c Includes two alligators where the harvest county is unknown.

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

^e Includes one alligator where the harvest county is unknown

*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 2013 Public Harvest Season by county.

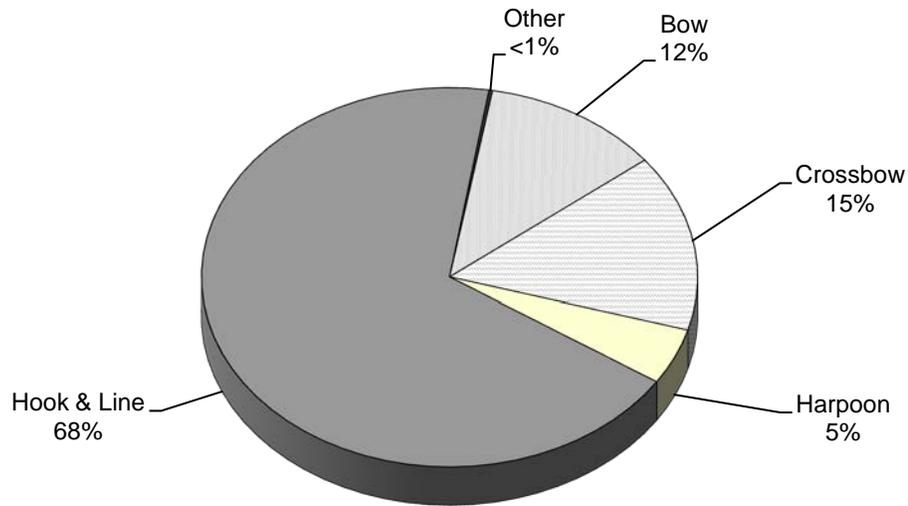


Figure 6. Reported initial capture device utilized during the 2013 Alligator Season.

Table 4. 2013 WMA Alligator harvest by week and management area.

Wildlife Management Area	Week	Number of Alligators Taken
Bear Island WMA		12
	First	4
	Second	4
	Third	2
	Fourth	2
Santee Coastal WMA ^a		2
	First	0
	Second	2
	Third	0
	Fourth	0

^aTwo 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 decreased 14.3% from the previous season. As the popularity of alligator-related shows such as *Swamp People* begin to wane, it's possible that the interest in alligator hunting may follow. It still remains whether or not future application rates will remain at this level or settle back to about 3,500 – 4,000 applicants that participated before the television show first aired.

The application process was tweaked once again this year, now residing with a third-party vendor. The sign-on process was revamped and made easier for customers to locate their information. A username and password is no longer required, which has apparently simplified the process of getting onto the application system. There are still some tweaks that will need to be made to simplify the application process in general and to reduce the chance that an applicant uses the wrong customer ID.

However, the number of applicants needing corrective action remained low at four added to the 1,200 applicants chosen this season, the same as last year. As is almost always the case, these corrective actions were the result of duplicate customers in the database. As the system only distinguishes applicants based on their customer ID, a small portion of customers exist in the database more than once. 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 2013 amounted to 0.07% of all applications received (n=4).

The number of larger alligators taken dropped across the board this season. All size classes larger than eight feet saw decreases this season. In fact, there was a 24% decrease in the number of alligators taken in the ten foot and larger size classes. As expected, the harvest of larger alligators is not a resource easily replaced. This season, only one alligator in the thirteen-foot class was taken and it measured exactly thirteen feet. Whether this was an exactly thirteen-foot long animal - or an almost thirteen-foot animal that was "rounded up" - is unknown. Nevertheless, it is becoming apparent that the number of very large alligators appear to be decreasing and may start to disappear from the public hunting program altogether. 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. At one time, South Carolina was taking some of the largest alligators throughout the animal's range. Now whether or not the chance for a very large alligator drives the number of applications the Department receives remains to be seen. However, 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.

For the 2013 season, data suggests that the Department investigate tag allocation and decide whether or not a reduction in the number of tags issued is warranted for future seasons.

Appendix

2013 Harvest Graphs

by

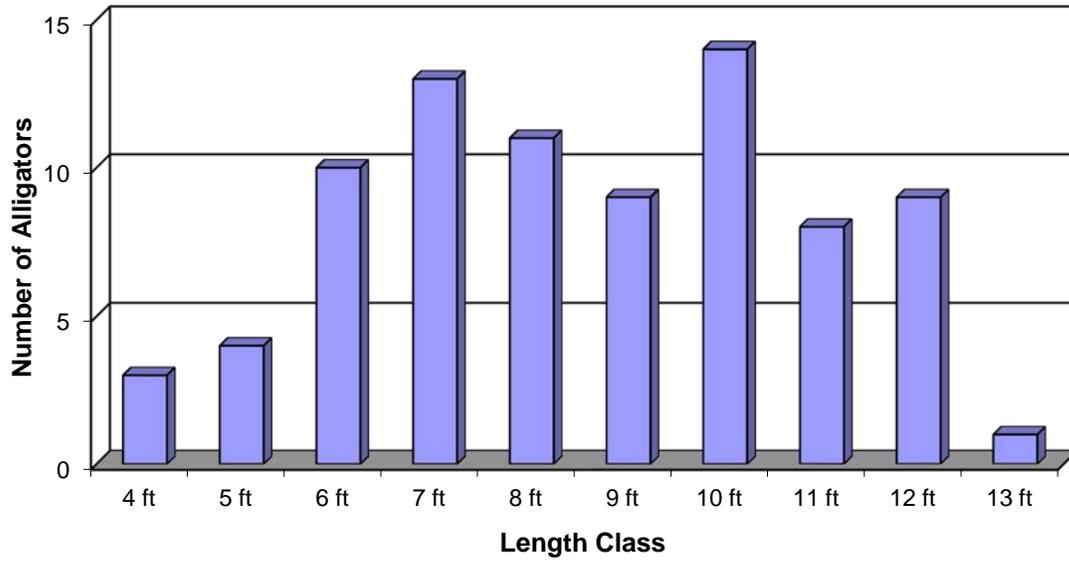
Public Alligator Harvest Hunt Unit

&

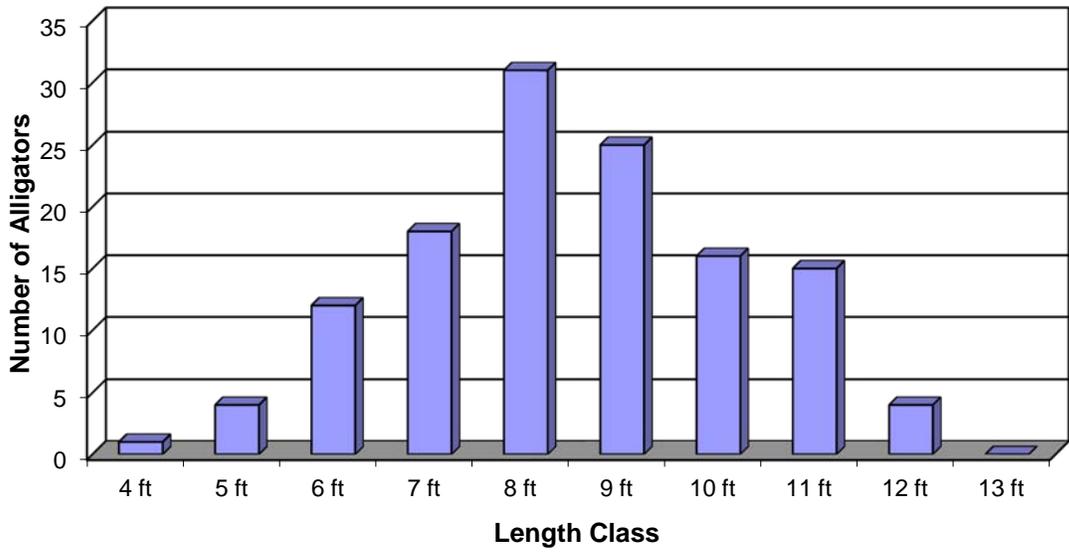
County of Harvest

&

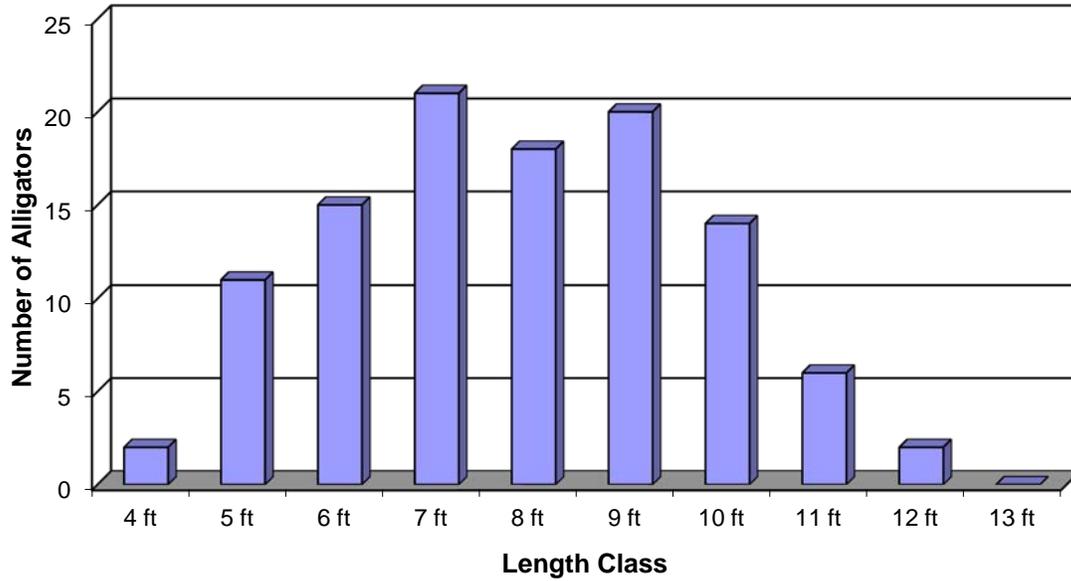
Cumulative Harvest Totals by Year



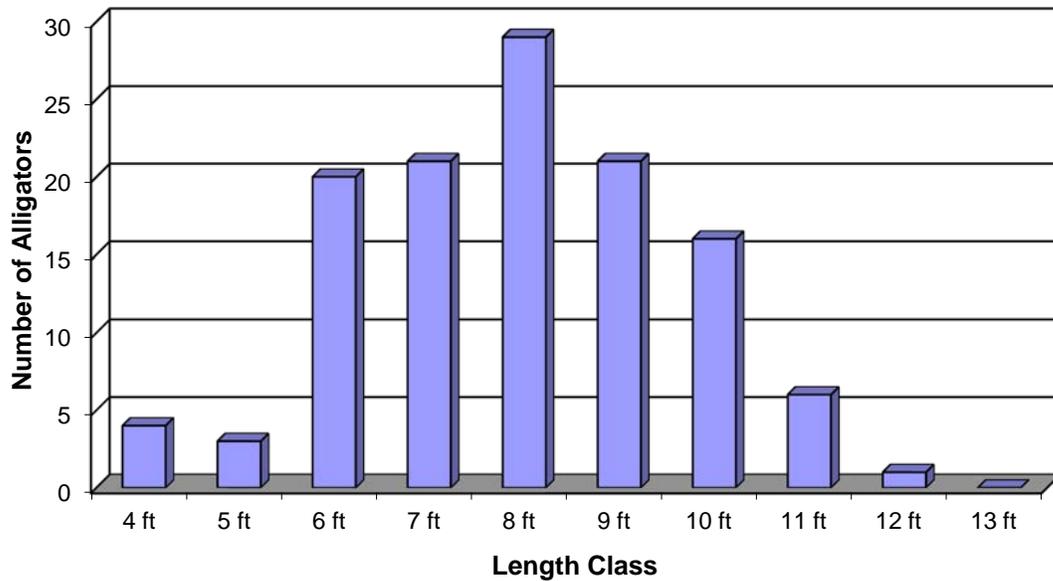
Appendix I. Number of alligators taken during the 2013 Public Hunting Season by size class for the Midlands Hunt Unit.



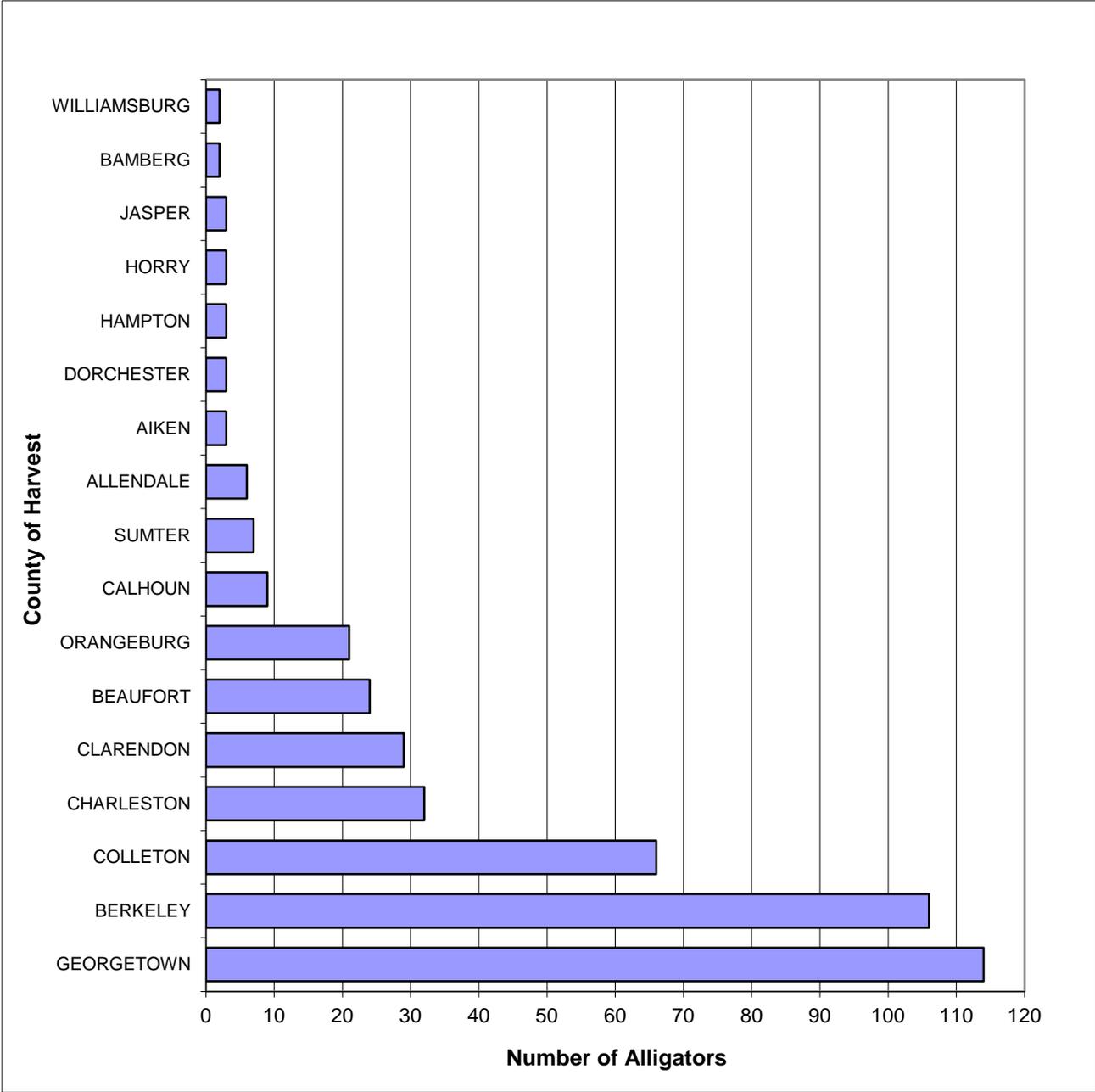
Appendix II. Number of alligators taken during the 2013 Public Hunting Season by size class for the Middle Coastal Hunt Unit.



Appendix III. Number of alligators taken during the 2013 Public Hunting Season by size class for the Southern Coastal Hunt Unit.



Appendix IV. Number of alligators taken during the 2013 Public Hunting Season by size class for the Pee Dee Hunt Unit.



Appendix V. Number of alligators taken during the 2013 Public Hunting Season by county of reported harvest.

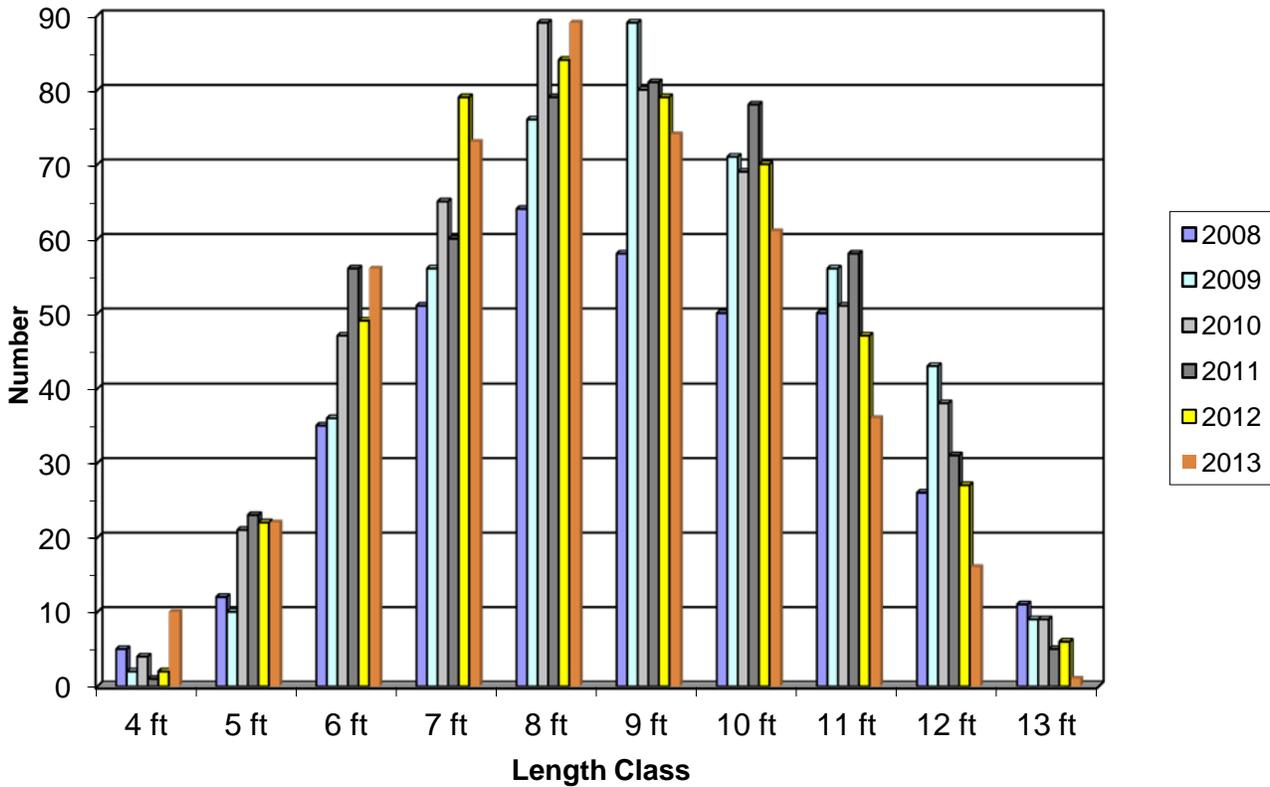
Appendix VI. Number of alligators taken during all years of the Public & WMA Hunting Season, by Hunt Unit.

Hunt Unit	Year						Total
	2008	2009	2010	2011	2012	2013	
Middle Coastal ^a	121	147	117	140	134	128	787
Midlands	87	93	104	87	90	82	543
Pee Dee	60	104	111	120	115	121	631
Southern Coastal ^b	94	108	141	136	144	121	744
Annual Total*	362	452	473	483	483	452	2,705

* 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.