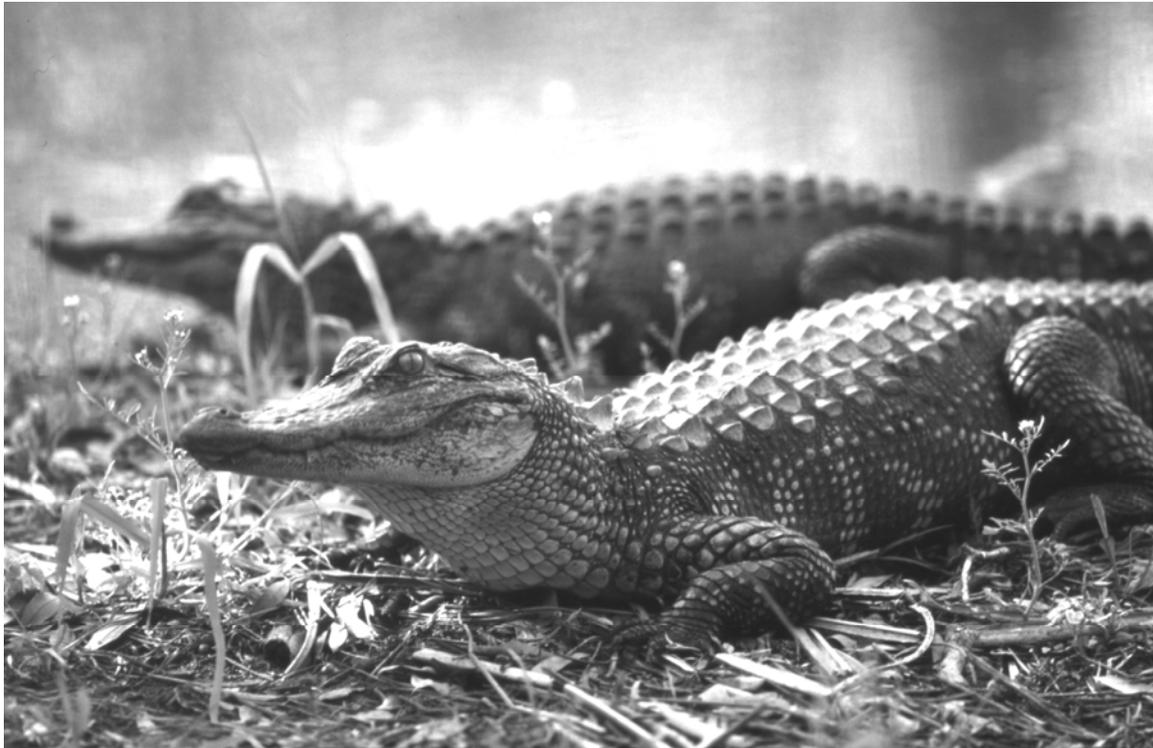


# Public Alligator Hunting Season Report 2011



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F&AP Report 11-05

## **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 2011 Public Alligator Hunting Season marked the fourth 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 apply, 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 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](http://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) remained 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 per hunt unit is 300 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 to the selected hunter and are non-transferrable. The harvest tag is a unique 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 feet in total length from either public or private waters in their selected hunt unit; 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.

New for the 2011 season was the inclusion of two Wildlife Management Area (WMA) properties, Bear Island and Santee Coastal Reserve, into the alligator hunting program. These two WMAs were part of a special drawing held separate 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 desired WMA. With only two hunters selected per week per site, and 4 weeks available in the season, there were 16 total slots available for both WMAs combined. If chosen, the applicant was issued a permit and tag that was only valid for the WMA during the week selected. In addition, the successful applicant could elect to use the WMA tag in the same unit that the specific WMA was located at any time during the public alligator season. Bear Island is in the Southern Coastal Unit and Santee Coastal Reserve is located in the Middle Coastal Unit. The nonrefundable 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 alligator draw hunts are conducted separately, a person could potentially be selected for both the Public and WMA alligator hunting season.

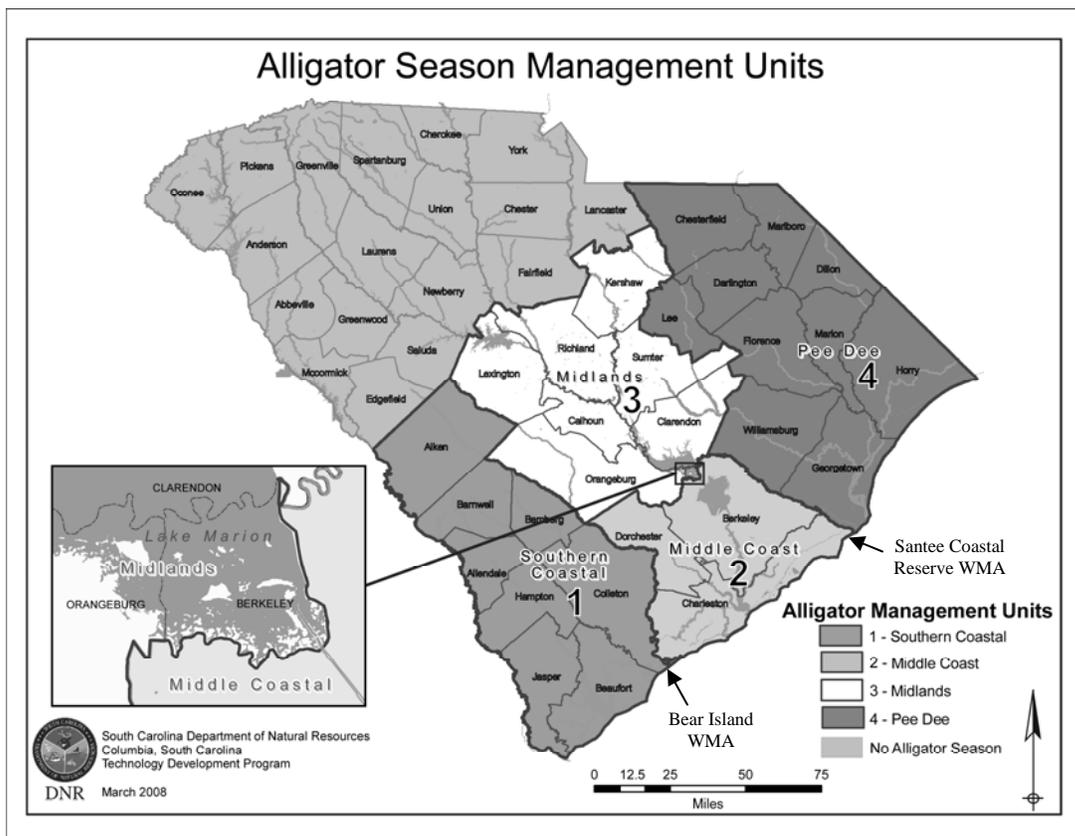


Figure 1. 2011 Alligator Management Units.

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 public hunting program 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. 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, and a 3-day hunting license. Nonresident assistants under 16 do not pay any fees. Other states have similar additional nonresident fees or prohibit nonresident participation altogether.

The online application process began on May 1<sup>st</sup> and ended on June 15<sup>th</sup>. A total of 6,396 hunters applied for the 2011 hunt, an incredible increase of 69% from the previous season. This number included applicants from 42 different states (including SC) and one from Canada. The number of SC resident applicants for the Public Hunting Season rose slightly to 91.7%. A total of 131 applications for the WMA Alligator Hunt were received, 86.3% from residents, the remainder from nine other states.

For the first year, no one without a preference point was selected for the Public Alligator Hunting season. As in 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 1,060 of the 1,205\* hunters selected (88.0 %) for the 2011 season completed the application process and were issued a harvest tag and permit. The tag purchase rate of 88.0% was slightly higher than the rate in 2010 (86.3%), and is the highest rate since the alligator hunting program began. Nevertheless, this purchasing rate still remains above the rate of 70-80% that staff had predicted when initially allocating the number of permits at the time the Public Alligator Program was developed, so no changes to the procedures are expected for 2012.

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 250 people attended the seminars, which were held in Moncks Corner, Greenville, and Irmo. Once again, alligator hunting vendors and guides were allowed to attend the seminars to showcase the tools and devices commonly used in alligator hunting. The 2011 Alligator Hunting Guide that is available on the DNR website (<http://www.dnr.sc.gov/wildlife/alligator/pdf/2011gatorguide.pdf>) was updated to reflect changes from the previous season and to clearly explain the nonresident fees and the new WMA

\*5 additional applicants were selected due to database correction measures.

Alligator Hunting Program. All permitted alligator hunters received a copy of the hunting guide after purchasing their permit and tag.

The 2011 season began at noon on September 10<sup>th</sup> and ended at noon on October 8<sup>th</sup>.

## SEASON RESULTS

All permitted alligator hunters were required to report their hunting activities by December 1<sup>st</sup>, regardless of whether or not they actually went alligator hunting in South Carolina. Reporting compliance for 2011 was 69.5% for all fully permitted hunters, down from 73.0% last year. Those hunters that did not report are not allowed to apply for the next hunting season.

The total number of alligators reported taken during the 2011 public alligator hunting season was 472, an decrease of one alligator from the 2010 season. This represents a success rate of 44.5% for all fully permitted hunters (n=1060), and 39.2% for all selected applicants (n=1,205). The Middle Coastal unit had the most alligators taken at 135 (28.6% of total harvest), followed by the Southern Coastal with 129, Pee Dee with 120 and the Midlands unit at 88 (Table 1).

Table 1. The number of alligators taken and percent of total alligators harvested for the 2011 season by Hunt Unit.

Hunt Unit	Number of Alligators Taken	Percent of Total Harvest*
Middle Coastal	135	28.6%
Midlands	87	18.4%
Pee Dee	120	25.4%
Southern Coastal	130	27.5%
Total	472	100.0%

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

Fully permitted hunters who actually reported going hunting (n=709) had a success rate of 66.6%. The number of hunters that hunted, but were unsuccessful was 237. Another 2.6 percent of hunters (n=28) 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 62.0% of all the selected hunters for the unit going on at least one alligator hunting trip. Participation rates for the other units were as follows: Southern Coastal at 61.0%, Pee Dee unit at 59.7%, and the

Midlands at 53.7% (Figure 2). Of *all hunters* that went on at least one hunting trip, the most efficient hunters were in the Southern Coastal unit, same as last season. Hunters in this unit went on 373 trips with 129 alligators taken, averaging one alligator killed per 2.9 (SD=1.6) hunting trips. The Pee Dee unit had 365 outings, and the success rate was 1 alligator per 3.0 (SD=2.0) trips. Middle Coastal hunters went on 429 alligator hunting trips, took 135 alligators, averaging an alligator per 3.2 times (SD=2.0) afield. Lastly, hunting trips for Midlands hunters numbered 366, or 1 alligator per 4.2 trips (SD=2.5). Statewide, one alligator was killed for every 3.2 alligator hunting trips taken (SD=2.1).

Considering only *successful hunters*, the most efficient hunters were again from the Southern Coastal unit at one alligator for every 2.2 hunting trips (SD=1.6). Pee Dee hunters took one alligator for every 2.3 outings (SD=1.7), followed by hunters in the Middle Coastal unit at 2.5 days per alligator taken (SD=1.8). Lastly, successful Midlands hunters averaged one alligator for every 2.7 days afield (SD=2.3). Collectively, successful hunters averaged one alligator for every 2.4 days spent hunting (SD=2.1).

The average size of all alligators reported taken during the 2011 public season was 9'0" (SD=2.0). The average size alligator taken in the Midlands was 9.6 feet, followed by the Middle Coastal (9.4 feet), Pee Dee (8.7 feet), and the Southern Coastal at 8.6 feet (Figure 3). A total of 5 alligators were reported at 13 feet or greater (1.1% of total). This was a 44.4% decrease from both of the previous two years (Figure 4). According to harvest reports, the largest alligator taken this season was 13'6". The smallest alligator reported was 4'10".

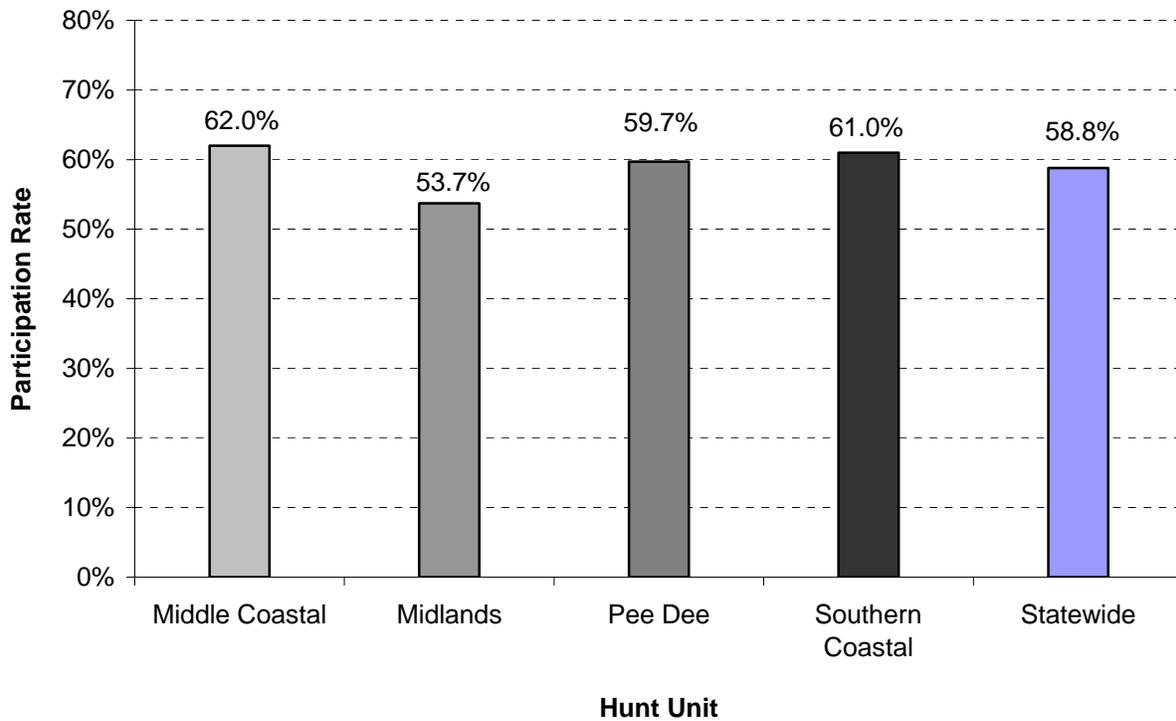


Figure 2. Reported participation rate (at least one trip afield) for all hunters selected to participate in the 2011 alligator season by Hunt Unit.

Twenty-four (5.1%) alligators taken were reported to be less than 6' in length. The number of smaller alligators (six feet and smaller) increased from 48 in 2009, 72 in 2010, and to 80 this season. As was the case the past two years, the majority (63.8%) of the larger alligators, those *10 feet and larger*, came from the Midlands and Middle Coastal units (Table 2; also see Appendices). Of the very large alligators, the Midlands and the Middle Coastal units had 27 of the 36 (75.0%) alligators taken that were in the 12 or 13 foot-class. To further contrast the size class differences, only 7 alligators in the 12 foot size class were taken from the Pee Dee unit and 2 in the Southern Coastal unit. No 13 foot alligators were taken from either the Pee Dee or Southern Coastal units.

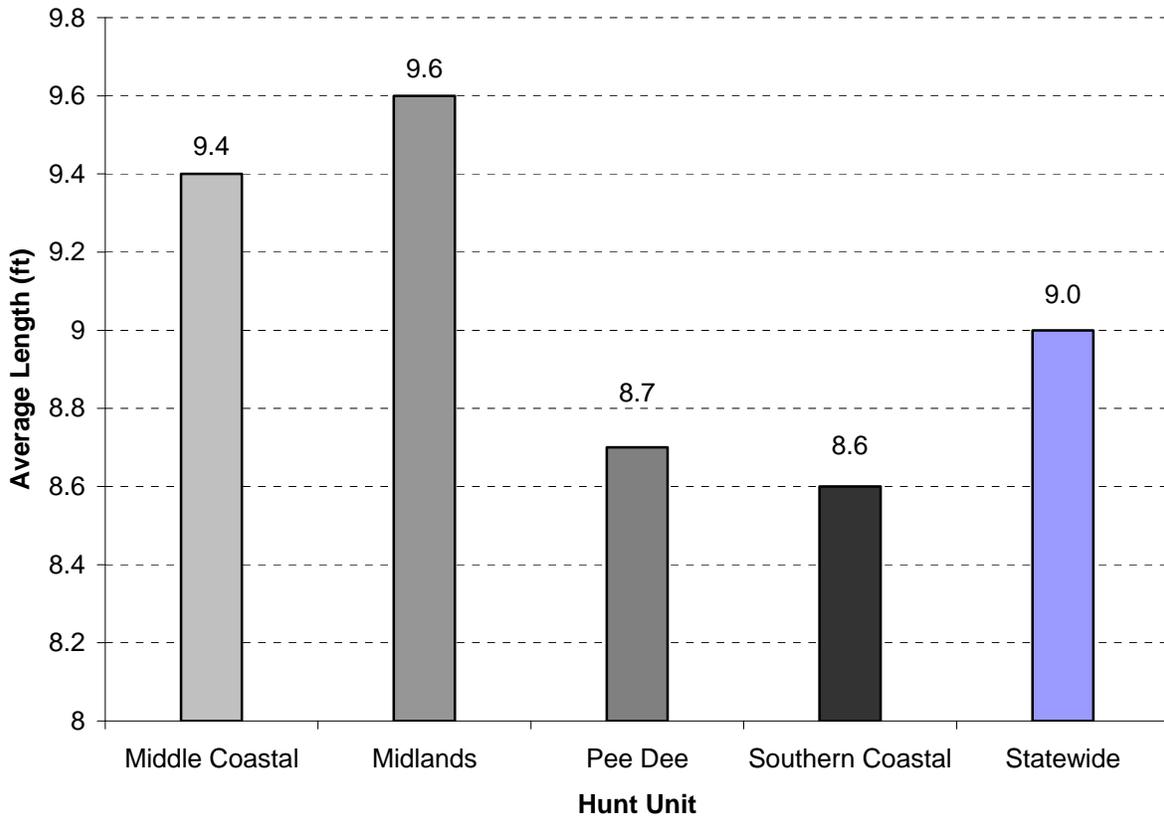


Figure 3. Average size of alligators taken during the 2011 Public Hunting Season by Hunt Unit.

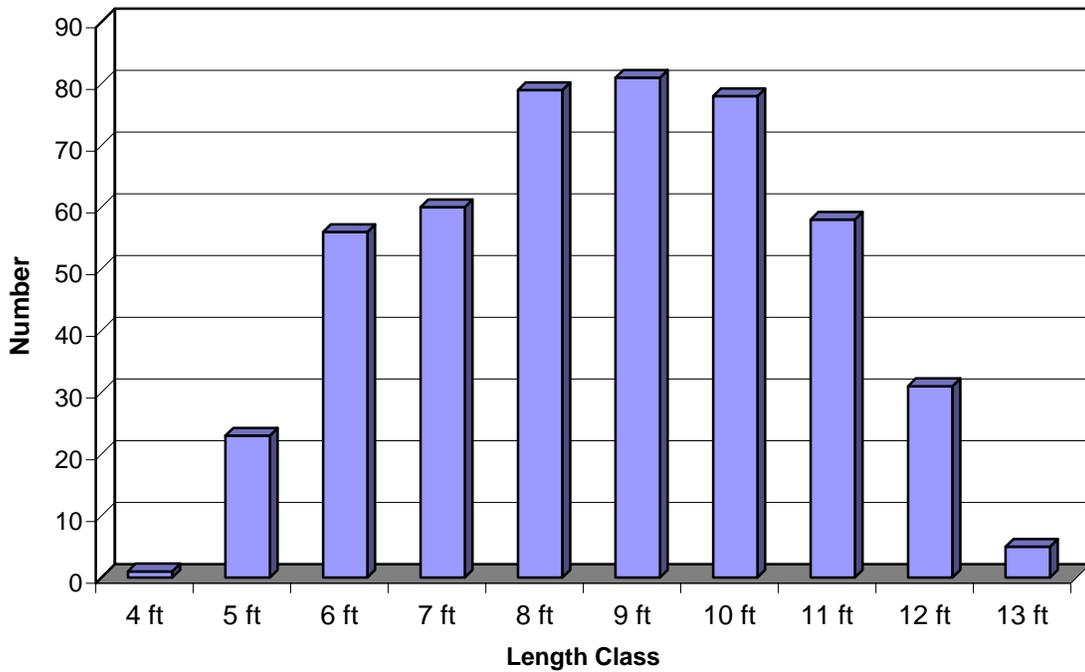


Figure 4. Number of alligators taken by size class during the 2011 Public Hunting Season.

Table 2. Number of alligators taken by size class and Hunt Unit during the 2011 Public Hunting Season.

Hunt Unit	Alligator Size Class <sup>a</sup>									
	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
Middle Coastal	0	5	12	17	17	22	31	18	11	2
Midlands	0	7	11	2	8	15	10	20	11	3
Pee Dee	0	3	18	21	28	21	13	9	7	0
Southern Coastal	1	8	15	20	26	23	24	11	2	0
Totals	1	23	56	60	79	81	78	58	31	5
Change from 2010	-3	+2	+9	-5	-10	+1	+9	+7	-7	-4

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

Alligator harvest was reported from 21 coastal plain counties, one more than last season. Reported take by county revealed that three counties: Berkeley, Georgetown, and Colleton, comprised over 66% of the public alligator harvest (Table 3; Appendix V). Those same counties accounted for approximately 60% of the harvest for the 2010 season and 70% of the harvest in the 2009 season. The largest alligators, on average, came from three Midlands Unit counties: Orangeburg (n=17), and Clarendon (n=28), and Calhoun (n=19). While Richland County had the largest average alligator size, followed by Dorchester and Florence those figures are represented by only 1, 2, and 3 alligators, respectively, that were taken this season (Figure 5).

Reported meat yield from all harvested alligators was 15,370 lbs, an 8.5% increase from 2010.

The most commonly reported alligator capture technique was a hook and line, with over half (62%) of all successful hunters using this as a capture device. Seventeen percent of hunters used a crossbow, followed by a bow (13%), harpoon (6%) and the remainder of the hunters described using other devices (Figure 6). A total of 15.2% of the successful hunters utilized a guide's services, down slightly (-1.6%) from last season.

Alligator hide utilization (sold, kept, or given away) was reported at 70.6%. Of this amount, only one skin was denoted as sold.

## **SEASON RESULTS – WILDLIFE MANAGEMENT AREAS**

Of the 16 available permits for the WMA Alligator Hunts, 11 alligators were taken. Six alligators were taken from Bear Island WMA and 5 from Santee Coastal Reserve (Table 4). The average size for alligators on both of the WMA properties exceeded the public hunting average. Bear Island alligators averaged 10.6' and Santee Coastal averaged 10.5'. Both the largest and smallest alligators taken during the WMA Alligator hunt were from Bear Island and measured 12.2' and 9.4', respectively.

Bear Island hunters took 6 alligators in 7 trips for a success rate of 85.7% or 1 alligator for every 1.2 trips. Santee Coastal's success rate was 5 alligators in 11 trips for a rate of 45% or one per 2.2 hunting trips. Three of the 11 successful WMA hunters hired a guide (27.3%).

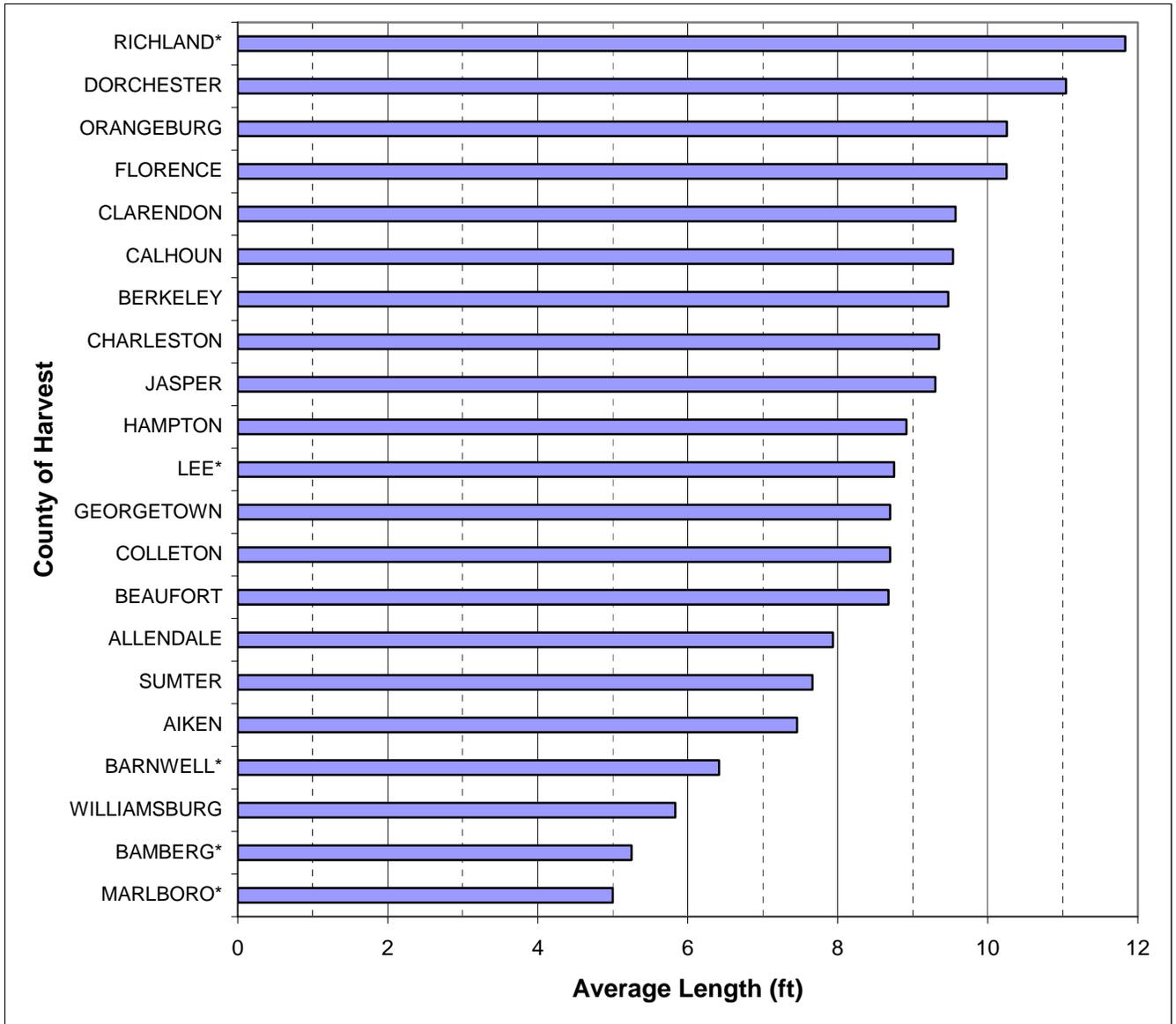
Table 3. 2011 Alligator harvest and percent of total alligator harvest by hunt unit and county.

Hunt Unit	County	Number of Alligators Taken	Percent of Total Harvest*
MIDDLE COASTAL		135	28.6%
	Berkeley <sup>a</sup>	105	22.2%
	Charleston	28	5.9%
	Dorchester	2	0.4%
MIDLANDS		87	18.4%
	Clarendon	28	5.9%
	Calhoun	19	4.0%
	Orangeburg	17	3.6%
	Berkeley <sup>b</sup>	13	2.8%
	Sumter	9	1.9%
	Richland	1	0.2%
SOUTHERN COASTAL		130	27.5%
	Colleton	82	17.4%
	Beaufort	23	4.9%
	Jasper	11	2.3%
	Aiken	5	1.1%
	Allendale	5	1.1%
	Hampton	2	0.4%
	Bamberg	1	0.2%
	Barnwell	1	0.2%
PEE DEE		120	25.4%
	Georgetown	113	23.9%
	Florence	3	0.6%
	Williamsburg	2	0.4%
	Lee	1	0.2%
	Marlboro	1	0.2%
TOTAL		472	100%

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

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

\*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 2011 Public Harvest Season by county.

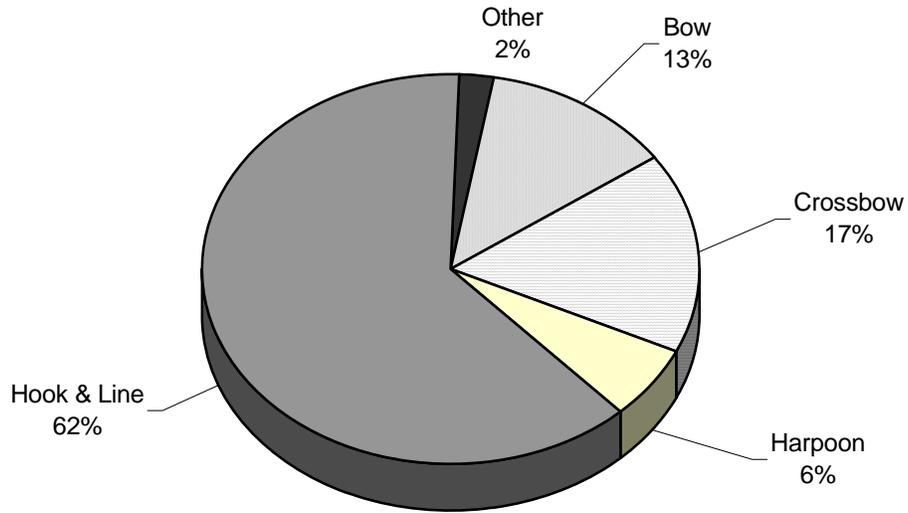


Figure 6. Reported initial capture device utilized during the 2011 Alligator Season.

Table 4. 2011 WMA Alligator harvest by week and management area.

Wildlife Management Area	Week	Number of Alligators Taken
Bear Island WMA		6
	First	1
	Second	2
	Third	2
	Fourth	1
Santee Coastal WMA		5
	First	1
	Second	1
	Third	2
	Fourth	1

## DISCUSSION AND RECOMMENDATIONS

The number of applicants for this season's alligator hunt grew at an incredible rate of 69%. One can only surmise that the recent popularity of the alligator hunting television show *Swamp People* helped to fuel the rise in interest. The two previous seasons' applications rate hovered right at 3,800 applicants. However, this season that number jumped to 6,375. It is unknown if future interest remains at a high level, or whether it will settle back to around 3,500 – 4,000 applicants.

The number of problems with the online application system dropped again from the previous year. For 2011, only 5 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 error number is down from 12 in 2010. Most database problems continue to involve 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. In a couple of instances there were applicants with preference points that should have been selected, but were not. Further investigations revealed that in a couple of cases, the applicant had two or more different Customer IDs in DNR's database, treating the person as two or more separate individuals instead of one. The total number of database applicants requiring corrective measures amounted to 0.08% of all applications received.

For the 2012 season, no significant change in the tag allotment or application process is likely. It is again expected that a secondary drawing will not take place in 2012 and the available permits will remain at 1,200.

Alligators are often viewed as a potential menace or at best a nuisance; however, there is some hope that with increased interest in the public alligator hunting season comes a certain respect for the resource as a huntable species. Though as expected, the number of exceptionally large alligators decreased from the previous season. The number of 13-foot alligators reported declined from 9 to 5. This number is predicted to remain low for subsequent seasons, and the harvest of these extremely large alligators may start to disappear from the Public Hunting Program altogether. Because of slow growth rates, large alligators are not an infinite resource, and South Carolina continues harvesting 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 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

2011 Harvest Graphs

by

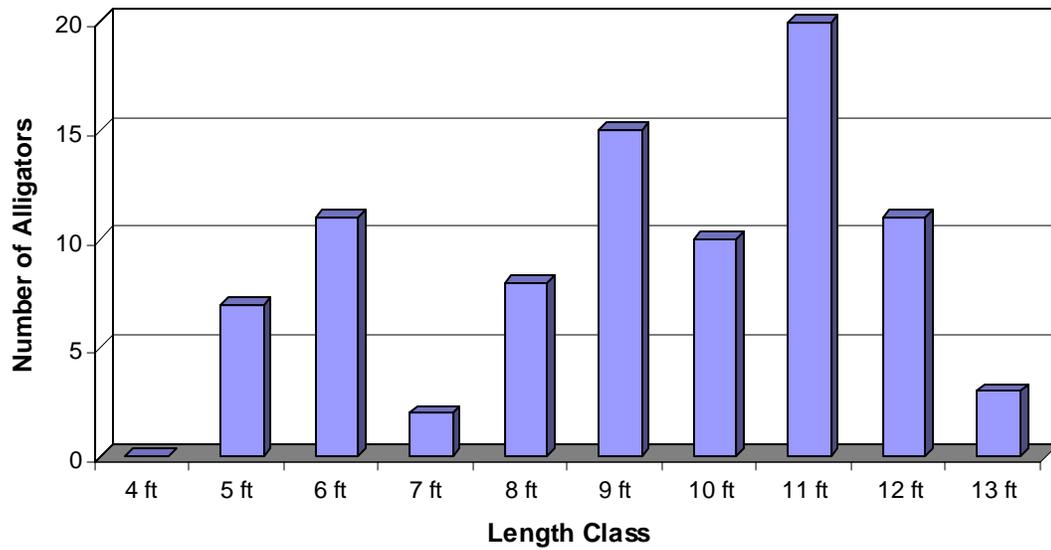
Public Alligator Harvest Hunt Unit

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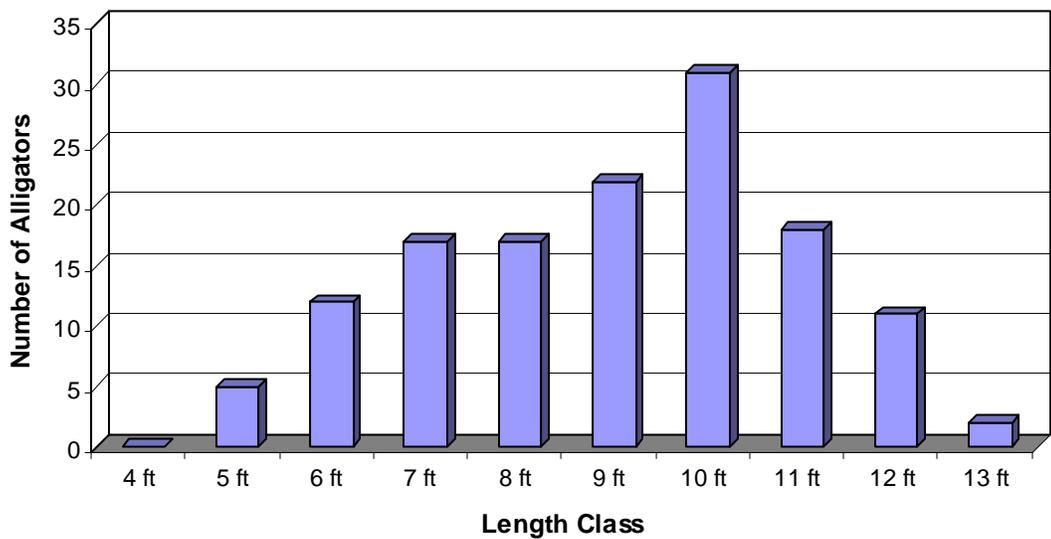
County of Harvest

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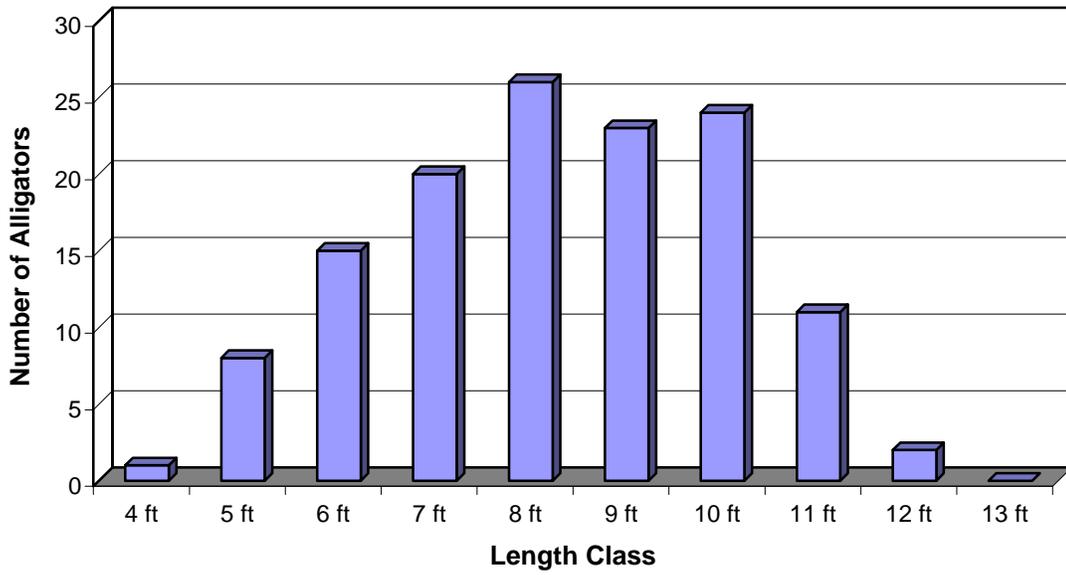
Cumulative Harvest Totals by Year



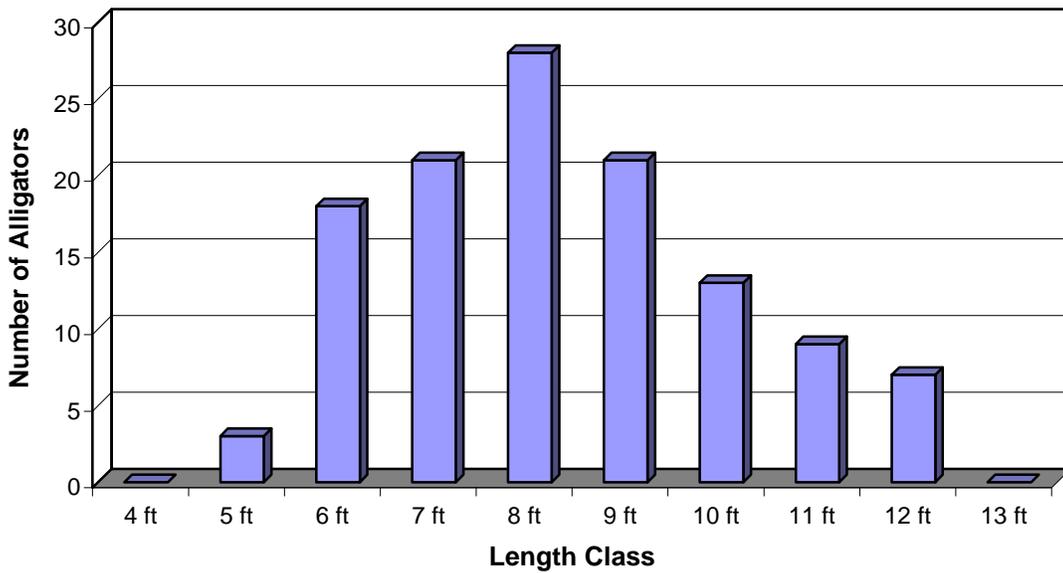
Appendix I. Number of alligators taken during the 2011 Public Hunting Season by size class for the Midlands Hunt Unit.



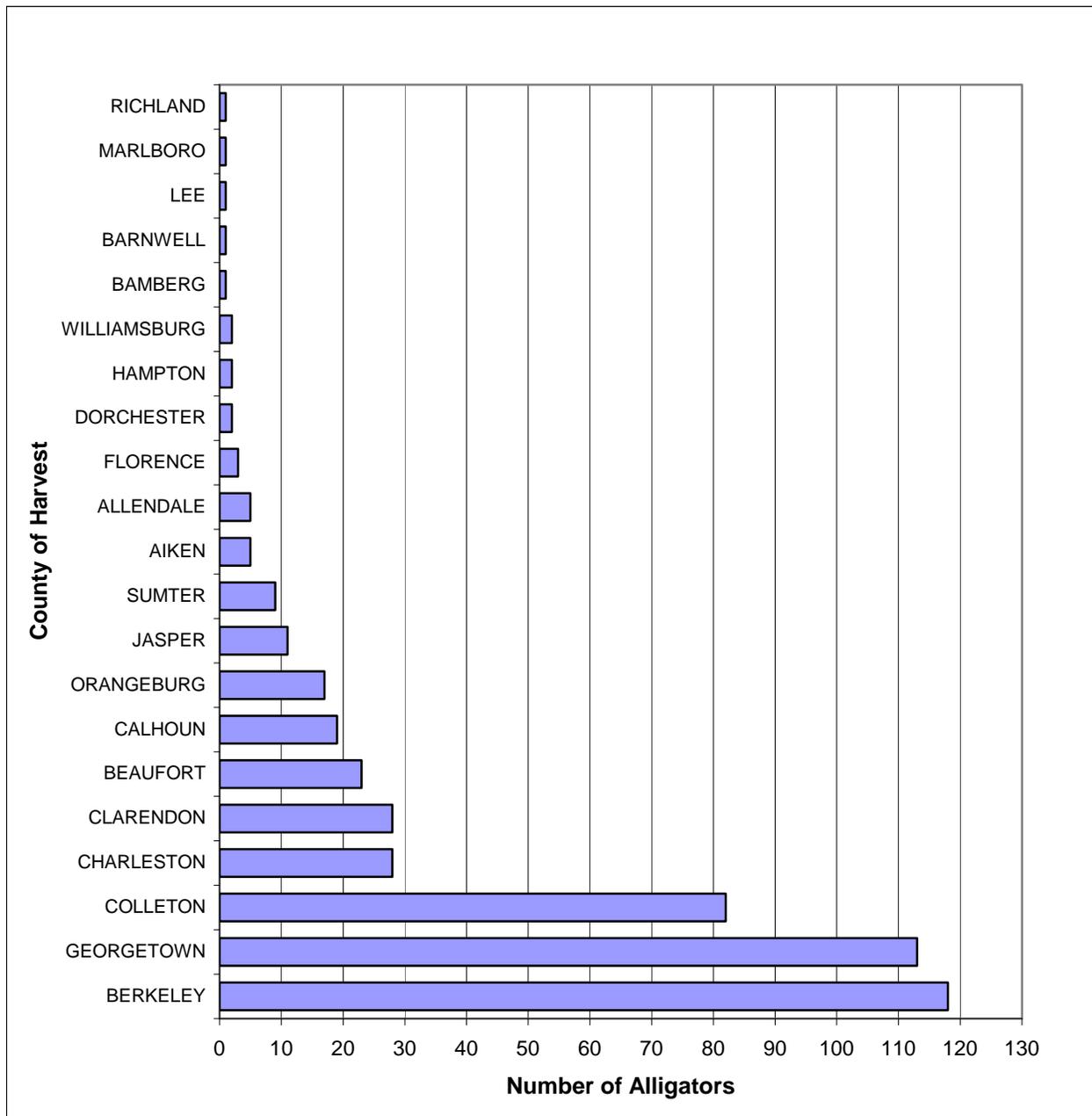
Appendix II. Number of alligators taken during the 2011 Public Hunting Season by size class for the Middle Coastal Hunt Unit.



Appendix III. Number of alligators taken during the 2011 Public Hunting Season by size class for the Southern Coastal Hunt Unit.



Appendix IV. Number of alligators taken during the 2011 Public Hunting Season by size class for the Pee Dee Hunt Unit.



Appendix V. Number of alligators taken during the 2011 Public Hunting Season by county of reported harvest.

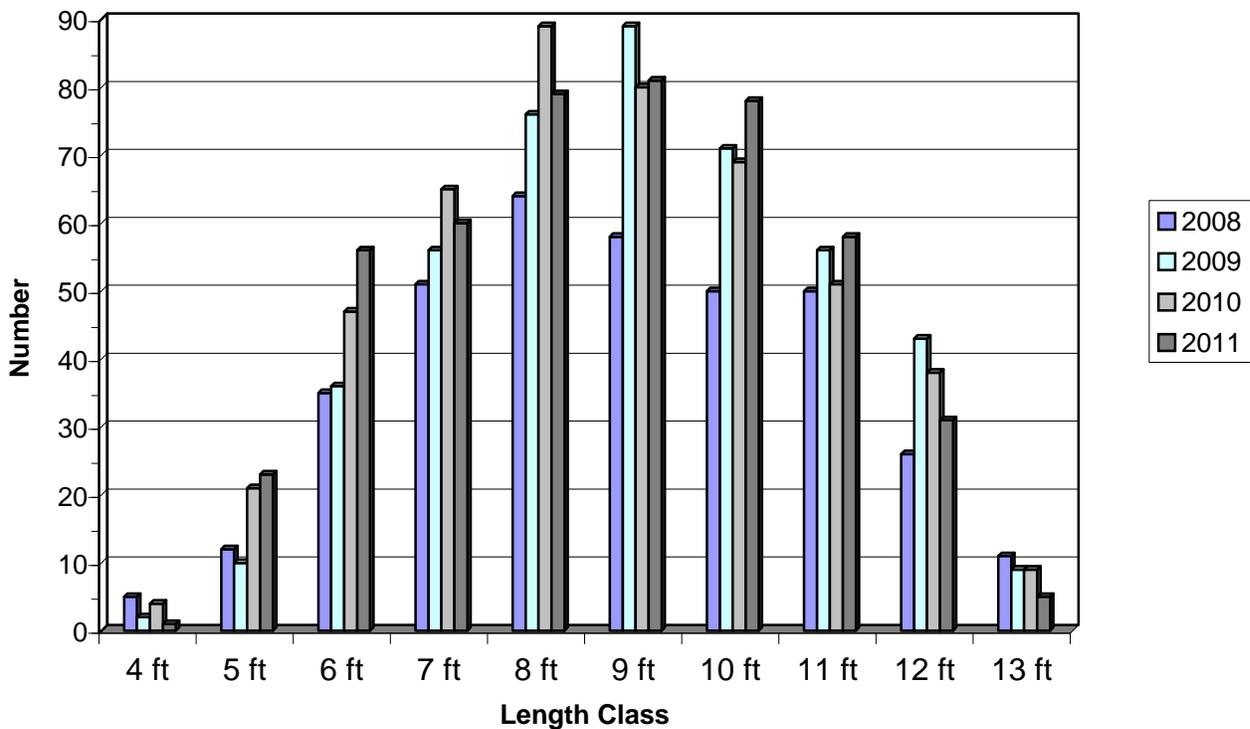
Appendix VI. Number of alligators taken during all years of the Public Hunting Season, by Hunt Unit.

Hunt Unit	Year				Total
	2008	2009	2010	2011 <sup>*</sup>	
Middle Coastal	121	147	117	140 <sup>a</sup>	525
Midlands	87	93	104	87	371
Pee Dee	60	104	111	120	395
Southern Coastal	94	108	141	136 <sup>b</sup>	479
<b>Annual Total</b>	<b>362</b>	<b>452</b>	<b>473</b>	<b>483<sup>*</sup></b>	<b>1,770</b>

<sup>\*</sup> includes alligators taken the WMA Alligator Hunting Program beginning in 2011.

<sup>a</sup> includes 6 alligators taken at Bear Island WMA

<sup>b</sup> includes 5 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. Does not include WMA hunts.