

Crocodile Specialist Group Steering Committee Meeting
Chetumal International Business and Convention Centre, Chetumal, Mexico
(4 July 2022)

North America

Alabama - Chris Nix (Alabama Division of Wildlife and Freshwater Fisheries):

The following information is provided regarding Alabama's CITES American alligator export program and alligator harvests:

1. Fifteen wild nuisance alligators were tagged by nuisance alligator hunters and an additional 151 wild alligators were harvested during the alligator hunting season. There were an additional 11 alligators collected and disposed of by conservation enforcement officers. A total of 177 alligators were taken from Alabama the 2020-21 season.
2. The alligator population appears to be increasing and expanding its range in Alabama as indicated by nuisance alligator reports and harvest success during the alligator hunting season. Alligators currently occupy habitats in areas of the state well beyond the historic range. This is due to suitable habitats created by artificial impoundments and gradual range expansion as a result of alligator protection.
3. Wild alligators are harvested within the framework of a nuisance alligator program and a regulated hunting season. Nuisance alligator complaints are received by agency personnel and investigated by conservation enforcement officers and/or agency biologist. When alligators are judged to pose a threat to the public, conservation officers contact an alligator nuisance control hunter permitted by the agency to capture and remove nuisance alligators. Nuisance alligators removed lethally by permitted nuisance alligator hunters are tagged by conservation officers with CITES alligator tags. Nuisance control hunters are able to market the harvested alligators. Nuisance alligator removals largely occur in two areas of the state: 1) the southwest portion of the state within the Mobile Delta and surrounding area; and 2) the southeast region along the Chattahoochee River, its impoundments, and tributaries. Occurrences in central Alabama are becoming more prevalent and in the northern portion of the state on rare occasions. Nuisance alligator complaints and harvests are monitored at the regional level by reporting requirements that include nuisance alligator complaint reports submitted by conservation officers and nuisance alligator reports submitted by alligator nuisance control hunters.
4. A hunting season was instituted in a defined portion of the Mobile Delta, further known as Southwest Zone, in 2006 and expanded to both the Southwest Zone and a defined area within the Chattahoochee River System Lake, further known as Lake Eufaula Zone, in 2007. In 2008, seasons were open for two 4-day segments in August in the Southwest Zone and one 4-day period in August in the Lake Eufaula Zone, by a random drawing. Minor changes made to the 2009 Lake Eufaula Zone alligator hunt included hunting on consecutive days from 21-31 August 2009 and included all lands in several counties. This change was made to allow the harvest of alligators from farm ponds, tributaries of the Chattahoochee River, and areas where nuisance alligator complaints had been received.

The 2010 hunting season in the Southwest Zone followed the model of the 2009 season with two 4-day segments in August. The 2010 season in the Lake Eufaula Zone was changed to consecutive days from 13-31 August, 2010 and included all lands within Barbour, Coffee, Covington, Dale, Geneva, Henry, Houston, and Russell counties. A total of 125 alligator permits were issued to hunters in the Southwest Zone and 80 permits were issued in the Lake Eufaula Zone, by random drawing. Hunters harvested 80 alligators in the Southwest Zone and 45 from the Lake Eufaula Zone.

The 2011 hunting season in the Southwest Zone and Lake Eufaula Zone areas were similar to those in 2010. A third area of the state, West Central Zone, on the Alabama River in Monroe, Clarke, Wilcox, and Dallas Counties (west-central Alabama) was opened to hunting in 2011. The West Central Zone hunting regulations were similar to those developed for the Southwest Zone. A total of 125, 120, and 50 permits were issued to hunters in the Southwest Zone, Lake Eufaula Zone, and West Central Zone, respectively. Hunters harvested a total of 78, 40, and 40 alligators in the Southwest Zone, Lake Eufaula Zone, and West Central Zone, respectively.

The 2012, 2013 and 2014 hunting seasons in the Southwest Zone, Lake Eufaula Zone and West Central Zone were similar to those in 2011. Hunts in 2014 resulted in a total of 150, 40, and 50 permits being issued to hunters in the Southwest Zone, Lake Eufaula Zone, and West Central Zone, respectively. Hunters harvested a total of 102, 17, and 28 alligators in the Southwest Zone, Lake Eufaula Zone, and West Central Zone, respectively.

In 2015, a change was made by dividing the Lake Eufaula Zone into two individual zones. The first, remaining as the lake Eufaula Zone, consist of the lake Eufaula itself and its navigable tributaries. The second, further known as Southeast Zone, is the remaining portions consisting of public and private waters in Barbour, Coffee, Covington, Dale, Geneva, Henry, Houston and Russell Counties. This change was made due to a decrease in population on Lake Eufaula and allowing regulated harvest in each zone. Additionally, there was an 8' minimum length requirement implemented for the Lake Eufaula Zone. Hunts in 2015 resulted in a total of 150, 20, 40 and 50 permits being issued to hunters in the Southwest Zone, Lake Eufaula Zone, Southeast Zone and West Central Zone, respectively. Hunters harvested a total of 91, 12, 15 and 25 alligators in the Southwest Zone, Lake Eufaula Zone, Southeast Zone, and West Central Zone, respectively.

The 2018 hunting season remained consistent to the changes made in 2015. Hunts in 2018 resulted in a total of 150, 20, 40 and 50 permits being issued to hunters in the Southwest Zone, Lake Eufaula Zone, Southeast Zone and West Central Zone, respectively. Hunters harvested a total of 96, 7, 10 and 31 alligators in the Southwest Zone, Lake Eufaula Zone, Southeast Zone, and West Central Zone, respectively.

The 2019 alligator hunting season remained consistent to the changes made in 2015 with the exception of the addition of the Coastal zone. The Coastal zone has historically been part of the Southwest zone and was created in order to encourage additional harvest in areas with high nuisance problems Hunts in 2019 resulted in a total of 100, 20, 40, 50 and 50 permits being issued to hunters in the Southwest Zone, Lake Eufaula Zone, Southeast Zone, Coastal Zone and West Central Zone, respectively. Hunters harvested a total of 67, 8, 19, 30 and 31 alligators in the

Southwest Zone, Lake Eufaula Zone, Southeast Zone, Coastal Zone and West Central Zone, respectively.

The 2020 hunting season remained consistent to the 2019 season. Hunts in 2020 resulted in a total of 100, 20, 40, 50 and 50 permits being issued to hunters in the Southwest Zone, Lake Eufaula Zone, Southeast Zone, Coastal and West Central Zone, respectively. Hunters harvested a total of 73, 10, 19, 25 and 35 alligators in the Southwest Zone, Lake Eufaula Zone, Southeast Zone, Coastal Zone and West Central Zone, respectively.

The 2021 alligator hunting season remained consistent to the 2020 season. Hunts in 2021 resulted in a total of 100, 20, 40, 50 and 50 permits being issued to hunters in the Southwest Zone, Lake Eufaula Zone, Southeast Zone, Coastal and West Central Zone, respectively. Hunters harvested a total of 65, 8, 18, 28 and 32 alligators in the Southwest Zone, Lake Eufaula Zone, Southeast Zone, Coastal Zone and West Central Zone, respectively.

Biologists within the Wildlife Section continue to collect necessary data to ensure the longevity of this species. Populations are monitored on an annual basis utilizing established survey routes within each management zone and biological data is collected from harvested animals at check stations during the hunt. Based on the current increasing populations and hunter success, it is planned to have additional hunt zones created within the current range in upcoming years.

5. Licensed alligator farmers are allowed to incubate eggs and raise hatchlings, but only from farm origin alligators. Alabama law does not allow any transfer between farm origin and wild alligators. Alligator farmers are not allowed to collect eggs from the wild or release farm origin alligators into the wild or to possess wild alligators. Alabama has three licensed alligator farms, one each in Limestone, Montgomery and Baldwin Counties.

Arkansas - Mark Barbee (Arkansas Game and Fish Commission):

Since 1984, alligator populations in Arkansas have increased and continue to be stable and in sufficient numbers to support a regulated sport hunt.

The Commission's Alligator Management Team currently administers three alligator related management programs (Alligator Farmer, Nuisance and Harvest) in Arkansas. The Alligator Farmer Program was established in 1991 and provides for the permitted commercial captive propagation and sale of alligators. Currently, there are no permitted alligator farmers in Arkansas. In 2001, the AGFC initiated the Nuisance Alligator Program to provide improved coordination, response, and documentation of nuisance alligator complaints in Arkansas. This program is staffed by a network of regional nuisance alligator coordinators who respond to nuisance alligator complaints from the public or enforcement agencies by removing alligators that pose a threat to the welfare of the public, pets, livestock, or property. The Alligator Harvest Program was implemented in 2007 to enable the harvest of alligators (greater than 4 feet in total length) within specific zones open to alligator hunting. Each permit authorizes the take of one alligator within a specific harvest zone on either public or private lands. Hunting opportunity is allowed in two Alligator Management Zones (AMZ 1 and AMZ 3). These two zones represent the highest and most sustainable populations. In 2020 AMZ 2 was opened up to limited private land hunting. The remaining AMZ's remain close to alligator harvesting.

2019 marked the thirteenth season for hunting in Arkansas. There was a total of 147 tags available with only 118 tags being issued to qualified recipients. Out of that 118 tags, 84 CITES tags were issued to hunters for harvested alligators. This represented a 16% increase over the previous year. The harvest sex ratio was 2.2:1 (M:F) with males making up 68% of the total harvest. AMZ 1 produced the second highest harvest rate with 34 alligators behind AMZ 3 with 50 alligators. The male mean TL was 8.7 ft. and the female TL was 7.5 ft. AMZ 1 continues to yield a slightly higher mean TL for both male and female alligators harvested. The 2015 harvest record of a 13' 10" male alligator still remains the largest alligator harvested in Arkansas to date.

2020 marked the fourteenth season for hunting in Arkansas. This was the first year AGFC adopted a "zone quota" for open Alligator Management Zones (AMZ). The state quota was 164 alligators across open zones. The state harvest was reached with a 6% overage that still fell within the states acceptable harvest parameters. The harvest sex ratio was 1.5:1 (M:F) with males making up 60% of the total harvest. AMZ 1 produced the second highest harvest rate with 72 alligators ahead of AMZ 2 with 4 alligators. AMZ 3 continues to be the highest harvest zone with 98 alligators. The male mean TL was 7.5 and the female TL was 6.3. AMZ 1 continues to yield a slightly higher mean TL for both male and female alligators harvested. The 2015 harvest record of a 13' 10" male alligator in AMZ 3 from public lands was surpassed by a new state harvest record of a 13' 11.5" male alligator in AMZ 3 from public lands.

A complete analysis of harvest data from the 2021 season has not been finalized at this point. Preliminarily a total of 159 CITES tags were issued to hunters for tagging harvested alligators. Hunting was still restricted to AMZ 1, AMZ 2 and AMZ 3 with all other zones remaining closed. Overall harvest rate was 100 percent for the 2021 season. The harvest sex ratio was 1.7:1 (M:F) with males making up 62.9% of the total harvest. The 13' 11.5" male alligator harvested in 2020 on public waters still remains the largest harvested alligator to date. The complete data analysis for 2021 will be made available and presented in the USFWS Annual Report.

Florida - Dwayne Carbonneau, Brooke Talley, and Allan Woodward (Florida Fish and Wildlife Conservation Commission):

American Alligator (*Alligator mississippiensis*) - The overall Florida alligator population has been relatively stable since 1988, when the statewide alligator harvest and ranching programs were implemented. Significant increases in the population over that period were in the 0.9-2.7-m TL size classes, as indicated from spotlight surveys conducted annually on a sample of areas throughout the state. Populations of juvenile (0.3-0.9 m TL) alligators and the largest (≥ 2.7 -m TL) alligators showed no significant change. Florida has three alligator harvest programs (nuisance, statewide public waters, and private lands), which accounted for an average harvest of 17,682 alligators per year during 2018-2021 (Table 1). In 2021, the Florida Fish and Wildlife Conservation Commission (FWC) received 18,570 complaints about alligators, which resulted in harvest of 8178 adult alligators (≥ 1.22 -m TL) and translocation of 2,171 juvenile alligators (≤ 1.22 -m TL). During 2018-2021, the FWC documented an average of 7.25 unprovoked alligator bites per year that resulted in moderate to severe injuries. Two incidents resulted in fatalities during that time, one in 2018 and another in 2019.

Table 1. Harvest of wild American alligators and alligator eggs in Florida during 2018-2021. *Note - 2021 figures are not yet final but are not expected to change substantially.					
Alligator Harvest	2018	2019	2020	2021*	Ave.
Statewide Hunt	8,404	8,332	8,216	7,944	8,234
Private Lands	1,630	1,298	1,194	1,865	1,497
Nuisance	8,143	7,669	7,814	8,178	7,951
Total Wild Harvest	18,177	17,339	17,224	17,987	17,682
Public Waters - Eggs	49,912	38,333	41,328	51,055	45,151
Private Lands - Eggs	104,301	100,589	41,117	69,653	78,915
Total - Eggs	154,213	138,922	82,445	120,708	124,072

The Florida alligator ranching program includes collections of wild eggs and hatchlings on both public waters and private lands. In 2021, 51,055 eggs were collected on public waters and 69,653 eggs were collected on private lands. In addition to eggs, a combined total of 4125 hatchlings were collected from both public and private sources in 2021. Farms produced approximately 8487 viable eggs from closed cycle production. In 2021, 45,479 eggs (all to the state of Georgia) and 20,727 hatchlings (7841 to Georgia, 12,886 to the state of Louisiana) were transferred to farms in other states for raising. Additionally, 1727 non-hatchling alligators were transferred to Louisiana farms. In 2020, Florida farms produced 37,209 skins (avg. 29 cm belly width) for sale in 2021, which sold for a reported \$6.25/cm (\$39/ft.) for 1st grade skins. The exporting of eggs and live alligators from Florida to other states reflects an ongoing shift of production from smaller farms to large corporate farms in those states over the past several years.

American crocodile (*Crocodylus acutus*) - The American crocodile is currently a Federally-designated Threatened species in Florida. The population has experienced tremendous growth since 1975, when the species was listed as Endangered under the Federal Endangered Species Act. Crocodile sightings have been documented as far north as Cocoa Beach in Brevard County on the east coast and Lake Tarpon in Pinellas County on the west coast. With the increasing crocodile population (estimated between 1160 and 2800 non-hatchlings), a commensurate increase in crocodile-human conflicts has been documented. FWC manages these conflicts on a case-by-case basis with human safety being the highest priority, while also recognizing the needs of a recovering species. In August 2020, the FWC and U.S. Fish and Wildlife Service (USFWS) finalized the “American crocodile-human interaction response plan,” which details how these cooperating agencies respond to complaints by the public about the American crocodile. A collaborative study by the FWC and the University of Florida has been investigating the effectiveness of translocating problem American crocodiles in south Florida using GPS/Satellite transmitters.

In 2021, the FWC received 208 calls about crocodiles; most of these complaints were resolved by educating the public through telephone calls and site visits. As a geospatial management-based communication tool, the FWC developed an interactive online dashboard to display the location of complaints and roadkills (Figure 1). Available data include limited details of the incident, and an incident number; the incident number can then be linked to a thorough report through a request to the FWC. This dashboard is only available to managing authorities (i.e. USFWS and FWC) and select researchers whose work helps inform crocodile management.

Complaints about problem crocodiles have increased along with the increasing crocodile population.

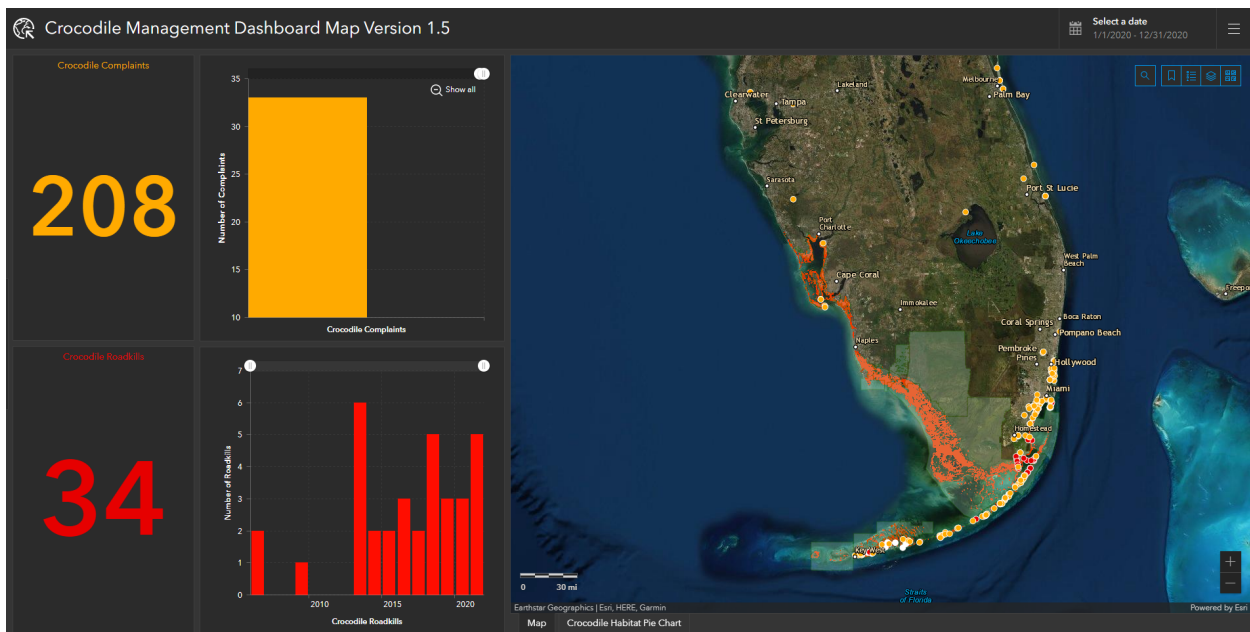


Figure 1. Screenshot of the Crocodile Management Dashboard.

South Florida Crocodylian Research - Venetia Briggs-Gonzalez and Sidney Godfrey (University of Florida): The University of Florida, U.S. Geological Survey, and U.S. Fish and Wildlife Service continue crocodylian research in Florida demonstrating linkages of both American crocodiles and American alligators as indicator species of Everglades restoration.

Over a 50-year period (1970-2020) they have recorded a total of 3013 American crocodile nests across South Florida with an increase in nesting success over the years and a shift in nesting sites that include Northeastern Florida Bay and more recently Flamingo/Cape Sable areas (both within Everglades National Park). There has also been an expansion of nesting into anthropogenic habitats such as along canals in Flamingo/Cape Sable areas, Turkey Point Power Plant and Crocodile Lake National Wildlife Refuge. Growth and survival, as well as relative density and body condition of American crocodiles show negative effects of high salinity due to diverted freshwater flow and water management. In areas that are the targets of Everglades restoration, there are the beginnings of positive responses in these performance measures of American crocodiles.

The team has monitored American alligators in the Everglades system for more than 40 years and continue to show marked declines in growth, survival, and body condition. Alligator abundance has declined, particularly in areas that are consistently drier earlier in the year such as in northern Water Conservation areas and northeastern Shark River Slough. Alligator responses are well below target conditions with Everglades restoration and underscores the importance of continued efforts to restore historic hydrological conditions.

The University of Florida has also been conducting a removal and monitoring program for Spectacled caiman (*Caiman crocodilus*) in South Florida since 2012 with a focus on Everglades restoration projects. During 2012 to 2021, a total of 277 caimans were removed, and there was a substantial decrease in caiman encounter rates within Everglades restoration project areas. There has been an increased number of caiman removals per year for the past several years, as well as increases to average caiman capture probability. Necropsies of captured caimans have provided useful information about the South Florida caiman reproductive timeline that has further maximized removals. Four pods of hatchlings and one adult female were removed as a result of this information, impeding recruitment into the affected populations. Maximum containment for caimans may be achieved within Everglades restoration projects if it can be determined that immigration from adjacent areas is not occurring.

Louisiana - Ruth M. Elsey and Jeb Linscombe (Louisiana Dept. of Wildlife and Fisheries):

Improvement from the worldwide economic recession in 2009 has led to better prices and more demand for wild and farm-raised alligator skins since early 2010, although prices remain low for wild skins in recent years. Near optimum habitat conditions over the last several years led to record high coastal nest estimates. Alligator egg harvests have been very high, and wild alligator harvests were gradually increasing, until hurricanes and the coronavirus pandemic led to uncertainty in market conditions and lower egg collections in 2020, with an increase in 2021. The table below shows the quantities of estimated coastal nests, ranched eggs, year-end farm inventory, farm hides shipped, farm alligators released to the wild, and alligators harvested in the annual autumn season.

In 2019, near perfect habitat conditions with optimal water levels led to a record total of 650,878 wild alligator eggs being collected in the ranching program, producing 579,008 hatchling alligators. In January 2020 there were 57 licensed farmers in Louisiana with on farm inventories totaling a record high of 998,152 alligators, reflecting excellent nesting and high egg ranching efforts for several years in a row. In both January 2021 and 2022 there were 55 licensed alligator farmers. During the 2019 tag year (January 2019 through December 2019) an estimated 438,577 farm-raised alligators were harvested, with hides averaging 26.96 cm belly width. The total estimated value of these alligator hides was \$US76.8 million; meat was valued at over \$US9.2 million. In 2019, an estimated 67,935 nests were counted on the coast-wide survey, the highest on record. Nest counts were also high in 2020 and 2021, but as of this writing in March 2022 water levels are somewhat low, and drought conditions may impact nesting effort in the summer of 2022.

Wild alligators have been harvested in Louisiana for nearly 50 years, as a sustained use management program was developed with the first wild season being held in 1972. The majority of licenses are commercial licenses, although some recreational “sport” hunting licenses are also issued. In 2019, some 23,828 wild alligators were harvested by 2861 trappers. Alligators harvested averaged 7.55 feet in length, with an estimated value of \$US5.18 million for hides and meat. LDWF staff checked the sex ratio of 8,490 wild harvested alligators, which were 72.8% male and 27.2% female. Low demand for wild hides led to a reduced harvest of wild alligators in recent years; final numbers harvested and shipped are currently being tallied; but gradually more alligators are being harvested.

Year	coastal nest count	ranched eggs	year-end farm inventory	farm hides shipped	farm releases to the wild	wild alligators harvested
2018	53,733	587,776	900,999	450,220	52,750	20,168
2019	67,935	650,878	998,152	438,577	38,543	23,828
2020	60,794	303,883	788,224	386,048	55,366	approx. 13,700
2021	64,345	461,387	701,581	~306,000	35,803	

Due to recent low prices for wild alligator hides, we occasionally had trouble maintaining interest and participation of “nuisance” alligator trappers to remove problem alligators that are a safety concern. Previously, the sale of the hide and meat was a mechanism of payment for the trapper’s time and effort to provide this service. The LDWF established a program where the agency has established a fund to pay \$75 for each nuisance alligator complaint handled by licensed nuisance alligator trappers to ensure this service is maintained for the state’s citizens. In 2021, the fees paid to nuisance trappers amounted to \$104,325 (1391 situations handled at \$75/situation). As of this April 2022, LDWF is increasing the nuisance hunter payment from \$75 to \$100 due to gas prices and inflation in general.

In 2011, the Department of Wildlife and Fisheries and the LSU School of Veterinary Medicine in conjunction with the Louisiana Alligator Farmers and Ranchers Association developed a document entitled “Best Management Practices for Louisiana Alligator Farming”. The document details recommended practices to ensure animal welfare of captive reared alligators in Louisiana, including egg collection, hatching, rearing, release to the wild and slaughter methods. This document was again updated in January 2016 and distributed to all farmers and has been useful to educate persons interested in alligator farming or exhibiting alligators. Another update is underway with changes in temperature regimes and slaughter methods, and we anticipate distribution in 2022 after final administrative approval.

In October 2017, the LDWF organized an alligator session at the 71st annual conference of the Southeastern Association of Fish and Wildlife Agencies (SEAFWA) held in Louisville, Kentucky to discuss issues relevant to all management programs. The session was well attended by representatives from most southeastern states. Topics discussed included movement of live alligators between states, nuisance alligator programs, issues with marketing and hide prices, and enforcement of various aspects of these programs. Subsequently, a formal “Alligator Working Group” was established within SEAFWA and the group corresponds regularly, and meets once or twice a year to discuss common problems and solutions. In October of 2020 and 2021 the meetings were held by “Zoom” due to travel restrictions related to the corona virus pandemic.

As of January 1, 2019, the LDWF now requires veterinary certificates of health be obtained prior to our issuing export or import permits for live alligator shipments to/from licensed farmers in other states. Compliance with this new requirement has been good.

Disease monitoring for emerging infectious diseases such as Chlamydia has been conducted and amplified in 2021-2022. All cohorts of imported alligators are tested, and a comprehensive report is currently being prepared.

Since our last report, the wild harvest in Louisiana was expanded from a 30-day autumn season to a 60-day season, to allow additional time for recreational “sport” hunting opportunities for alligator trappers to host guests. The extra 30 days were added to the end of the season, to extend trapping opportunities into October. The majority of the commercial harvest is completed within the first two weeks of the wild season, however.

For the years 2020 and 2021, the CITES hide shipping fee was temporarily decreased from \$4 per hide to \$3 per hide. This fee returned to \$4 per hide on 1 January 2022. The \$0.25 severance tax was discontinued in November 2021. In addition, the required percentage of alligators to be released to the wild was decreased from 10% of the quantity of eggs hatched to 5%, starting with the 2021-year egg collection permits.

Despite efforts by alligator industry personnel and lobbyists, recent legislation in California did not extend the “sunset clause” to allow importation of crocodylian hides into the state of California. As of 1 January 2020, it would no longer be legal to ship crocodylian hides/products into California; however, enactment of this new law has been delayed as the matter has entered the legal arena. Numerous court hearings on the matter have been attended with expert testimony by the CSG Chairman and other prominent industry personnel. Another ruling was to be made on 4 March 2022; a decision is expected soon.

The Louisiana Department of Wildlife and Fisheries has an active research program in addition to management and administration of our wild harvest, nuisance alligator control program, and commercial farming oversight. Our staff publishes numerous abstracts and full papers annually;

many in collaboration with university researchers and graduate students on a variety of topics related to alligators (physiology, ecology, food habits, nesting, etc.).

Mississippi - Ricky Flynt (Mississippi Dept. of Wildlife, Fisheries & Parks):

Mississippi offered its first public alligator sport-hunting season in 2005. From 2005 until 2011, opportunities expanded gradually to include 480 permits on portions of two major waterways, one coastal and one inland. In 2012, Mississippi expanded sport-hunting opportunities on public waters to over two-thirds of the state and in 2013 alligator hunting on public waters was opened statewide. The state is divided into 7 geographical zones with a 10-day season with a total of 960 available permits in a web-based application/drawing and permit sales process. An online alligator hunting training course is provided by the Mississippi Department of Wildlife, Fisheries & Parks. Permit holders may harvest 2 alligators over 4 feet long, only one of which may exceed 7 feet TL. The bag limit restrictions are intended to distribute harvest among adults and juvenile alligators. Alligators over 7' long comprised 50%, 47%, 48%, 43%, 43%, 46%, and 54% from 2014-2021, respectively. Total alligator harvests were 682, 982, 784, 741, 761, 922, 871 and 776 on public waterways from 2014-2021, respectively. Females comprised 30%, 35%, 31%, 31%, 30%, 30%, and 27% of the harvest from 2014-2021, respectively. The average length of all harvested alligators in 2021 was 7.78 feet (males 7.9', females 6.6'). Alligators that were 10 feet or longer comprised 23%, 27%, 28%, 26%, 25%, 22%, 25%, and 24% of harvest from 2014-2021, respectively.

Private lands alligator hunting opportunities are offered in 36 counties. In 2021, there were a record 135 landowner applications approved for permits that totaled 378 available harvest vouchers on 26,778 acres of alligator habitat. There were 84, 115, 95, 117, 106, 95, 117 and 117 alligators harvested on private lands from 2014-2021, respectively. Properties in open counties must contain a minimum of 20 acres of privately owned permanent surface water to qualify for an alligator harvest voucher. Additional vouchers are issued for each additional 100 acres of privately owned permanent surface water. Each voucher allows the harvest of 2 alligators over 4 feet long, only one of which may exceed 7 feet long.

There are two permitted alligator farms in Mississippi, and neither is commercially active. One alligator egg production facility was permitted in 2016, and began commercial production in 2017.

North Carolina – Alicia Davis (North Carolina Wildlife Resources Commission):

Marking and Data Collection Protocol: A new marking and data collection protocol (Protocol) was initiated in spring of 2017 for all alligators handled by NCWRC staff and all external handlers of alligators in the state, including Alligator Control Agents, Jurisdictional Alligator Handlers, and researchers*. This requires scanning for/the insertion of a PIT tag, collection of tissue samples (scutes), gender determination by cloacal examination, measuring total length (TL) and snout-vent length, and recording GPS coordinates of locations of capture and release. As of January 2022, a total of 800 individuals have been marked in North Carolina (see Table 1). A total of 240 marked alligators were nuisance animals that were captured for purposes of relocation. A total of 553 alligators have been captured and marked for data collection purposes only (in addition to 131 recaptures of these marked alligators). In rare situations where alligators are captured in locations far outside of alligator range, agency staff must assume that those individuals have been illegally kept in captivity. Due to concerns about potential disease introductions and/or habituation to being fed by humans, those individuals are not released into habitats that support wild alligator populations; rather, those individuals must be euthanized or transferred to captivity. For these reasons, seven have been transferred to captivity and three have been euthanized since 2017. Otherwise, alligators are typically only euthanized when severely injured, such as by a motor

vehicle strike. In accordance with the Protocol, data and tissue samples, including femurs, are also collected from dead alligators, including euthanized individuals and those found dead. Femurs will be used to attempt to age individuals. To date, data have been collected from a total of 53 dead alligators.

Table 1. Alligators Handled in North Carolina by year (2017-2021)

Reason for Handling	2017		2018		2019		2020		2021		Total Records	Total Marked
	New	Recap	New	Recap	New	Recap	New	Recap	New	Recap		
Capture for data collection purposes only	29	0	69	11	165	32	116	37	174	51	684	553
Relocation	41	3	49	5	52	8	49	9	49	6	271	240
Health/safety issue (not requiring relocation)	1	0	0	0	0	0	2	0	0	0	3	3
Negative Conditioning/Hazing (not relocated)	0	0	0	0	0	0	1	0	3	0	4	4
Capture for transfer to captivity	0	0	2	0	2	0	3	0	0	0	7	-
Euthanization	0	0	0	0	1	1	2	1	3	0	8	-
Mortality (prior to interaction)	5	0	9	0	3	0	18	5	12	1	53	-
Total	76	3	129	16	223	41	191	52	241	58	1,030	800

*Researchers include Dr. Stephen Dinkelacker, Framingham State University and Dr. Scott Belcher, NC State University

Marking of Relocated Alligators: In the interest of human and/or alligator safety and property protection, alligators may be captured by NCWRC staff or authorized agents and relocated from public or private properties in certain situations including threats to human safety, injuries or threats to pets or livestock, alligator injury or welfare, emergency situations (e.g. roadway blockage, presence in structure or dwelling), or other appropriate circumstances at the discretion of NCWRC staff. Marking of these animals will help agency staff learn more about the fate of these relocated alligators (e.g. mortality rates, the rates at which individuals attempt to return to the area of capture, etc.). Adherence to this Protocol will also allow NCWRC staff to more closely monitor relocation activities being conducted in North Carolina and assist in the agency’s continuous evaluation of relocation as a management tool. Since 2017, a total of 240 alligators have been relocated (see Table 2). Note that the individual captured for a fourth time for relocation purposes in 2020 had previously been captured three times by researchers and released on-site. In almost all other cases, previous capture events can be attributed to prior relocations.

Table 2. Numbers of relocated alligators by year and capture event (2017-2021).

Capture Event	2017	2018	2019	2020	2021	Total
1	41	49	52	49	49	240
2	3	4	7	7	5	26
3	0	1	1	1	1	4
4	0	0	0	1	0	1
Total	44	54	60	58	55	271

Mark-Recapture of Alligators at Lake Waccamaw: Alligators captured during an ongoing collaborative research project at Lake Waccamaw have been marked in accordance with the Protocol. Over time, these data will be used to help estimate abundance, growth rates of individuals between genders and among size classes, and the population growth rate. This project also provides a unique opportunity to provide hands-on training on the Protocol for agency staff and external handlers of wild alligators. By the end of 2021, 171 people (46 NCWRC law enforcement officers, 22 Wildlife Management Division staff, 16 Land and Water Access staff, 17 other NCWRC staff, 47 Jurisdictional Alligator Handlers in-training, 8 Alligator Control Agents in-training, and 15 conservation partners) have been trained at Lake Waccamaw during these surveys, and 230 alligators have been marked (see Table 3).

Table 3. Alligators Captured During Mark-Recapture Surveys at Lake Waccamaw.

Capture Event	2017	2018	2019	2020	2021	Total
1	25	57	52	15	81	230
2	0	11	10	6	20	47
3	0	0	3	1	2	6
4	0	0	1	1	1	3
5	0	0	0	1	0	1
Total	25	68	66	24	104	287

Spatial Ecology of Alligators in North Carolina: Since November of 2018, agency staff have been deploying GPS transmitters on alligators for two separate spatial ecology projects. To date, a total of 12 GPS transmitters have been deployed on five males and nine females ranging from 6.1 to 10.6 ft in total length from Columbus, Hyde, Brunswick, Pender, Craven, Onslow, and Wake Counties (see Table 4; for the Gator ID, M = male and F = female; C = control, R = relocation, N = nesting project).

Table 4. Alligators equipped with GPS transmitters in North Carolina.

Gator ID	Deploy Date	Capture Location	Release Location	Distance ¹ Translocated	Total Length
MCI ²	11/6/2018	Lake Waccamaw, Columbus Co.	site of capture	N/A	6.4 ft
MRI ³	11/28/2018	Swan Quarter, Hyde Co.	Gull Rock Game Land, Hyde Co.	8.1 miles	10.6 ft
FR1 ⁴	12/6/2018	Ash, Brunswick Co.	Juniper Creek Game Land, Brunswick Co.	3.1 miles	7.6 ft
MR2 ⁵	5/6/2019	Oak Island, Brunswick Co.	Juniper Creek Game Land, Brunswick Co.	22.6 miles	7.7 ft
FN1 ⁶	5/29/2019	Lake Waccamaw, Columbus Co.	site of capture	N/A	7.4 ft
FN2 ⁷	6/13/2019	Holly Shelter Game Land, Pender Co.	site of capture	N/A	7.4 ft
FN3 ⁸	7/31/2019	Lake Ellis Simon, Craven Co.	site of capture	N/A	7.9 ft
FN4 ⁹	(1) 8/1/2019 (2) 8/9/2021	Lake Ellis Simon, Craven Co.	site of capture	N/A	8.2 ft
MR3 ¹⁰	8/8/2019	Jacksonville, Onslow Co.	Croatan National Forest, Craven Co.	22.7 miles	9.6 ft
FR2 ¹¹	5/4/2020	Willow Spring, Wake Co.	Juniper Creek Game Land Brunswick Co.	105.9 miles	7.5 ft
FN5	8/20/2020	Gull Rock Game Land, Hyde Co.	site of capture	N/A	6.1 ft
FR3 ¹²	10/23/2020	St. James, Brunswick Co.	Juniper Creek Game Land, Brunswick Co.	19.5 miles	7.1 ft
FN6	7/23/2021	Holly Shelter Game Land, Pender Co.	site of capture	N/A	6.9 ft
MR4	8/16/2021	Oak Island, Brunswick Co.	Holly Shelter Game Land, Pender Co.	49.4 miles	9.5 ft

¹straight-line distance between capture and release locations

²last data point received from transmitter on 6/18/2020. Battery is presumed dead.

³transmitter detached on/shortly after 8/31/2019.

⁴euthanized by NCWRC staff due to extreme emaciation on 10/19/2020.

⁵last data point received from transmitter on 7/8/2020. Transmitter detachment confirmed.

⁶last data point received from transmitter on 9/18/2021. Battery is presumed dead.

⁷found poached on 10/7/2020.

⁸last data point received from transmitter on 7/1/2021. Transmitter detachment visually confirmed.

⁹last data point received from transmitter 1 on 10/25/2020. Detachment confirmed and transmitter 2 deployed on 8/9/2021.

¹⁰last data point received from transmitter on 5/23/2021. Transmitter detachment is presumed.

¹¹last data point received from transmitter on 10/5/2020. Mortality or detachment is presumed.

¹²found poached on 6/16/2021.

Relocated Alligators: In effort to learn more about the fate of relocated alligators and examine fine-scale movements post-relocation, a telemetry project was initiated in fall of 2018 by NCWRC staff. To facilitate scheduled training of field staff on the attachment procedures and to serve as a control subject, the first transmitter was implanted on an alligator (MC1) captured at Lake Waccamaw and released on-site. To date, eight GPS transmitters have been deployed on alligators as part of this

project. Due to three transmitter detachments, one battery reaching end-of-life, one euthanization by NCWRC staff, one poaching, and one unknown cause, none of the seven transmitters deployed prior to 2021 are active.

Reproductive-Aged Females on NCWRC Game Lands: In May of 2019, NCWRC commenced deployment of GPS transmitters on reproductive-aged females to learn more about alligator nesting habits in North Carolina; attempts to locate adult females for this project are being focused in areas of predicted nesting habitat on game lands to aid ground-truthing efforts and inform decisions regarding potential designation of these areas as alligator sanctuaries. To date, a total of seven transmitters have been deployed on six adult females ranging from 6.1 to 8.2 ft TL. In 2021, the largest female tracked in each of these studies to date received a second transmitter. Nesting activity has not been observed during the three nesting seasons for which agency staff have tracked this female thus far.

Annual Spotlight Surveys for Alligators 10 AMU 1 Counties - Pilot Year Summary (2021): The objective of these surveys is to detect alligator population trends (i.e. compare numbers observed across years to detect changes in the trend) in the 10 Alligator Management Unit 1 counties (Columbus, Brunswick, New Hanover, Pender, Onslow, Jones, Carteret, Craven, Pamlico, and Hyde). It is important to note that these surveys are not going to (and cannot) be used to establish population estimates at the state or county level.

For survey consistency and maximum efficiency of agency resources, these surveys were conducted by boat. Except Louisiana, this method is used (either alone or with other methods) by all other state agencies within the range of the American alligator to monitor alligator populations.

Surveys were conducted during the height of the breeding season (1 May-15 June). A minimum of two survey routes were conducted for each county; for logistical reasons, two routes were split and conducted on separate nights. Each route was surveyed twice, resulting in a total of 44 night-time survey replicates. Each survey was conducted with a minimum of two staff per survey route (1 driver, 1 observer and recorder); if a third person was available to assist, observing and recording duties were split between two people.

Each survey was conducted using a 200,000-candlepower spotlight to detect alligator eyeshine. Surveyors recorded each alligator observed during the survey and estimated the size of each alligator whenever possible. Each observation was recorded in one of 7 available size categories: juvenile (<3 ft), subadult (3-6 ft), small adult (6-9 ft), large adult (>9 ft), unknown juvenile (<6 ft), unknown adult (>6 ft), or unknown.

All surveys were split into 2.5 mile transects. Time, GPS coordinates, air temperature (°F), relative humidity (%), barometric pressure (inHg), wind speed (MPH), cloud cover (>75%, 50-75%, 25-50%, or <25%), width of waterway (less than 10 m, 10-25 m, 26-50 m, 51-100 m, or over 100 m), water salinity (ppt), and water temperature (°F) were recorded at the start and stop of each transect, in addition to any time spent backtracking (in minutes) for each transect. As part of statistical analyses planned for these data, these covariates will be considered as factors that could have influenced detection probability and/or occupancy. The results of these analyses will be used to improve future survey efforts and detection of population trends.

Surveyors are unable to determine if alligators observed during different replicates of the same route are the same individuals. Therefore, total numbers of alligators observed during all replicates cannot be added together; rather, it must be assumed that, for each route, all of the alligators observed during the replicate with a lower total could have been observed while conducting the replicate with a higher number of observations. For this reason, only the replicate with the largest

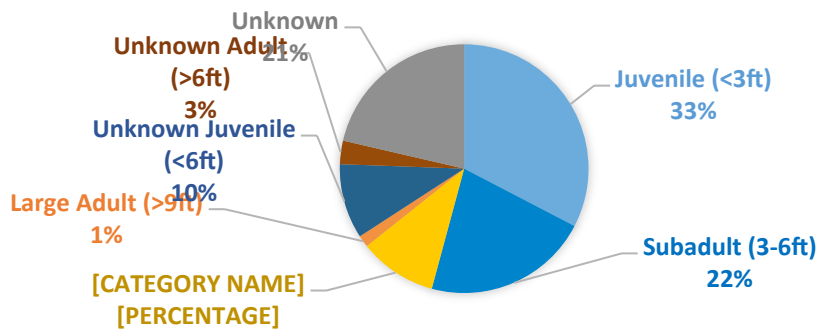
number of alligators observed was used for each survey route to determine the minimum number of alligators observed across all survey routes (see Table A). A minimum of 318 alligators were observed across 300 total miles of rivers and creeks, for an overall average of 1.06 alligators observed per mile of survey route (APM).

It's important to remember that the totals presented herein are inclusive of alligators of all size classes (see Chart A). Surveyors were unable to estimate the sizes of 21% of the alligators observed during the surveys. Of the total numbers of alligators observed across all surveys, 65% were estimated to be juveniles and subadults. None of the individuals in these size classes are reproductively mature and survival rates of juveniles are expected to be significantly low. Surveyors estimated that 11% of the alligators observed were large enough to be reproductively mature adults. This percentage is expected to be higher than that of the total alligator populations in the state, as much of the areas surveyed (e.g. open waters) are less habitable by juveniles and more suited to adults.

Table A. Summary of alligators observed during 2021 spotlight surveys.

Survey Route	County	Water Bod(ies)	Route Length (mi)	Date	Survey replicate	Largest Number of Alligators Observed in One Night
1A	Columbus	Waccamaw River	10	5/25/2021	2	7
1B	Columbus	Cape Fear River	15	6/8/2021	2	7
2A	Brunswick	Rice Creek, Town Creek	20	6/2/2021	1	29
2B	Brunswick	Lockwoods Folly River	12.5	5/13/2021	2	4
3A-I	New Hanover	Cape Fear River	15	6/8/2021	2	7
3A-II	New Hanover	Cape Fear River	15	6/15/2021	2	34
3B	New Hanover	NE Cape Fear River and Creeks	17.5	5/17/2021	1	7
4A	Pender	Black River	15	5/19/2021	1	4
4B	Pender	NE Cape Fear River	20	5/19/2021	1	9
5A	Onslow	New River	10	5/13/2021	2	13
5B	Onslow	Southwest and Northeast Creeks	10	6/9/2021	2	50
6A	Jones	Brice's Creek, Trent River	15	6/2/2021	2	4
6B	Jones	White Oak River	15	5/20/2021	2	22
7A	Craven	Neuse River	17.5	6/14/2021	1	5
7B-I	Craven	Slocum Creek	12.5	5/11/2021	1	8
7B-II	Craven	Hancock Creek	10	5/26/2021	2	59
8A	Carteret	Hadnot and Pettiford Creeks	10	5/27/2021	2	2
8B	Carteret	South River	12.5	6/7/2021	1	3
9A	Pamlico	Upper Broad Creek, Goose Creek	15	6/8/2021	2	2
9B	Pamlico	Bay River, Bear Creek	12.5	5/26/2021	1	0
10A	Hyde	Alligator River NWR	10	6/1/2021	1	39
10B	Hyde	Swanquarter NWR	10	6/1/2021	1	3
Total Miles of Rivers and Creeks Surveyed on All Routes			300	Minimum Number of Alligators Observed on All Survey Routes		318

Chart A. Sizes of Alligators Observed During 2021 Spotlight Surveys



Oklahoma - Tim Patton and Jake Pruett (Southeastern Oklahoma St. Univ) and Jared Wood (Southwestern Adventist Univ.):

Southeastern Oklahoma represents the approximate northwestern-most distribution of American alligators. They remain listed as a state species of special concern, and take is prohibited. The Oklahoma population is restricted to a few counties in the extreme southeastern corner of the state, and most of the population is in McCurtain County (the southeastern-most county, adjacent to southwest Arkansas and northeast Texas). There are two primary developments in what we know about alligators in Oklahoma: monitoring efforts continue to reveal an upward trend in the number of alligators, nests, and apparent recruitment, and The Oklahoma Department of Wildlife Conservation has tentatively approved funding two alligator research projects (for two years each) that will result in the most comprehensive alligator research in Oklahoma to date. In preparation for the funded work, the principal investigators have completed one year of pilot work.

Trends from Monitoring Efforts: The only location in Oklahoma in which alligators are regularly monitored is Red Slough WMA. Monitoring includes an annual diurnal count of individuals including estimates of sizes (lengths), annual nest surveys, and recording of nest success. A total of 60 alligators were detected on RSWMA during the annual count in Spring 2022. This is the highest number that has been recorded, though only slightly higher than the number detected last year. Nevertheless, the number of alligators detected during annual surveys continues to increase steadily. A total of 12 nests were identified on RSWMA during summer 2021. Seven of the nests successfully hatched and had a total of 137 hatchlings. This represents the highest number of nests, successful nests, and hatchlings since nest surveys were initiated.

Upcoming and Pilot Research: The Oklahoma Department of Wildlife Conservation has tentatively approved funding two companion projects: (1) “An assessment of American alligators in southeastern Oklahoma: Evaluating presence-absence, dispersal, movements and habitat requirements” by Jake Pruett and Tim Patton (Southeastern Oklahoma State University), and (2) “An assessment of population dynamics of American alligators in southeastern Oklahoma” by Jared Wood (Southwestern Adventist University).

The research objectives for the Pruett and Patton proposal are:

1. Determine presence-absence of American alligators in southeastern Oklahoma by surveying multiple sites.
2. Describe patterns of dispersal and movement of juvenile (age-2) alligators at RSWMA.
3. Describe patterns of space and habitat use for adult and juvenile (age-2) alligators at RSWMA.
4. Describe survival among various age and size classes of alligators at RSWMA.

The research objectives for the Wood proposal are:

1. Assess the population status at RSWMA by evaluating population size, density, sex ratios, size structure, body condition, and recruitment of new entrants into the population.
2. Determine nest success and monitor hatchling survival and recruitment rates over a two-year period. Past observations will be included in these analyses.
3. Develop a population model for American alligators at RSWMA.
4. Produce a comprehensive management plan for alligators in Oklahoma.

As mentioned, these are companion projects and all three investigators, as well as personnel with Oklahoma Department of Wildlife Conservation and the US Forest Service, are working collaboratively to meet all objectives. Pilot work began with nest surveys during summer 2021 and has continued. To date, approximately 115 alligators have been captured during the pilot work, though this number is strongly biased towards hatchlings. This research should provide considerable information on the status of the population and data that will be used for effective management of the population and habitat.

South Carolina - Morgan Hart (South Carolina Dept. of Natural Resources):

Alligator populations in South Carolina appear to be stable. Removal numbers have not changed much since legal harvest started, and population surveys are ongoing. All harvest is recreational, and export of hides remains a small portion of hide disposition.

Public Lands Hunt: The public hunting season consists of 4 hunt units in the coastal plain of South Carolina with 1,000 harvest tags available (250 in each hunt unit). In 2014, harvest tags were reduced from 1200 (300 per hunt unit) to 1000 (250 per hunt unit). Hunters are chosen in a computerized lottery drawing with a preference system to ensure all hunters that continue to apply annually will eventually be chosen.

In late 2018 hunting was disallowed on the two SC Department of Natural Resources' Wildlife Management Area (WMA) properties. Prior to 2018, those properties had limited alligator hunting and were included as a separate computerized drawing with a maximum of 32 alligators taken per year.

Private Lands Hunt: In the Private Lands Program, landowners with significant amounts of alligator habitat can apply for harvest tags that are issued for use only on their specific property. Private Lands tags cannot be used on public waters. The Private Lands season runs from September 1 from one year to May 31 the following year.

Nuisance Program: The nuisance alligator program allows permitting of individuals for removal of a specific animal on their property that poses a threat to people.

Other: Alligator propagation (farming) legislation was passed in 2014 and subsequent regulations were promulgated in 2015. To date, we still have not received any applications for a permit.

Yearly nightlight surveys are conducted in statewide alligator habitat. Ongoing mark recapture efforts along with satellite tagging adult alligators is providing population and movement information. Clemson University also has multiple long-term research studies on state properties.

Year	Harvest Numbers		
	Public	Private	Nuisance
2008	362	249	
2009	452	224	
2010	473	228	382
2011	472	219	426
2012	483	296	370
2013	452	377	467
2014	325	350	355
2015	333	228	294
2016	396	375	251
2017	352	374	327
2018	333	372	319
2019	336	389	336
2020	253	403	322
2021	311	Still Reporting	Still Reporting

Current Alligator Research Projects in South Carolina, USA (Thomas Rainwater, Clemson Univ.)

- Size- and age-related fertility, nesting frequency, and nest site fidelity of adult female American Alligators (*Alligator mississippiensis*) in coastal South Carolina – Phil Wilkinson, Tom Yawkey Wildlife Center
- Alligator home range size and composition in residential and non-residential landscapes - Anje Kidd-Weaver, Department of Forestry and Environmental Conservation, Clemson University
- Efficacy of capture as aversive conditioning for American alligators in human-dominated landscapes - Anje Kidd-Weaver, Department of Forestry and Environmental Conservation, Clemson University
- Relationships between contaminant bioaccumulation and movement behavior in the American alligator - Laura Kojima, Savannah River Ecology Laboratory, Odum School of Ecology, University of Georgia
- Factors influencing nest attendance by maternal female American alligators (*Alligator mississippiensis*) in coastal South Carolina - Randeep Singh, Tom Yawkey Wildlife Center & Department of Forestry and Environmental Conservation, Clemson University
- Ecotoxicology as a function of ontogenetic shift and diet in American alligators - Kristen Zemaitis, Savannah River Ecology Laboratory, Odum School of Ecology, University of Georgia
- Effect of maternally-transferred mercury on development, behavior, and survival in alligator (*Alligator mississippiensis*) hatchlings - Josiah Johnson, Savannah River Ecology Laboratory, Odum School of Ecology, University of Georgia
- Early-life survival depends on incubation temperature, but not sex, in the American alligator: exploring the adaptive value of temperature-dependent sex determination - Samantha Bock, Savannah River Ecology Laboratory, Odum School of Ecology, University of Georgia
- The DNA methylome harbors signatures of hatchling sex and past incubation temperature in blood cells of the American alligator, a species with temperature-dependent sex determination - Ben Parrott, Savannah River Ecology Laboratory, Odum School of Ecology, University of Georgia
- Parsing the relative contributions of incubation temperature, maternal provisioning, and anthropogenic contaminant exposure to phenotypic diversity across populations of American alligator - Chris Smaga, Savannah River Ecology Laboratory, Odum School of Ecology, University of Georgia

- Influence of complete egg removal during early incubation on nest attendance by maternal female American alligators (*Alligator mississippiensis*) (Clarissa Tuten, School of the Earth, Ocean and Environment, University of South Carolina)
- Exposure of American alligators (*Alligator mississippiensis*) to microplastics in coastal South Carolina - Stefanie Whitmire, Clemson University Baruch Institute of Coastal Ecology and Forest Science
- Winter basking behavior of American alligators in coastal South Carolina - Randeep Singh, Tom Yawkey Wildlife Center & Department of Forestry and Environmental Conservation, Clemson University
- Fauna associated with American alligator (*Alligator mississippiensis*) nests in coastal South Carolina, USA - Randeep Singh, Tom Yawkey Wildlife Center & Department of Forestry and Environmental Conservation, Clemson University
- Population genetics of American alligators along the U.S. Atlantic coast – Stacey Lance, Savannah River Ecology Laboratory, University of Georgia

Texas - Jonathan Warner (Texas Parks and Wildlife Dept.):

Alligators have been documented in 123 Texas counties, with highest population densities occurring along the Gulf Coast region in the southeast. Texas Parks and Wildlife Department (TPWD) has conducted spotlight and aerial nesting surveys for the last four decades to monitor Texas population dynamics. The statewide population likely approaches 500,000 individuals, with most populations stable or increasing. A limited public hunting program was initiated in 1984, with nuisance control harvest, alligator farming and egg collection programs following shortly thereafter. These programs successfully continue to this day, and apart from greater industry value, are integral to TPWD’s alligator population management through sustainable use.

Egg collection is permitted only on private lands, and hatchlings are sold by commercial collectors to alligator farmers primarily operating in Texas and Louisiana. For the 2022 collection season, mandatory testing for *Mycoplasma alligatoris* will be required for hatchling exports to Louisiana farms. With the exception of pandemic-related market complications in 2020, egg collection efforts remain high for Texas.

Egg Collection Year	2018	2019	2020	2021
Total Hatchlings	24,938	31,755	10,891	22,964

Texas is currently the only state that has a spring alligator hunting season (1 April-30 June). Also referred to as the “non-core county” season, the implementation of spring hunting was originally meant to provide landowners opportunity to harvest nuisance or unwanted alligators on private lands outside of core alligator range.

Hunting Season (Spring)	2018	2019	2020	2021
Total Harvest	165	212	220	184

For the traditional fall season (10-30 September) TPWD permits alligator hunting on private lands in addition to providing numerous public hunting opportunities on Wildlife Management Areas and

State Parks. Annual hunting and fishing license sales have more than doubled in Texas since the onset of the pandemic. Despite ongoing poor market conditions for wild hides, public interest in recreational alligator hunting has seen a resurgence in Texas and mirrors the overall statewide trend of citizenry actively pursuing new and diverse hunting, fishing and outdoor recreational activities.

Hunting Season (Autumn)	2018	2019	2020	2021
Total Harvest	1248	1216	1007	1384

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