LOUISIANA'S ALLIGATOR MANAGEMENT PROGRAM

2010-2011 ANNUAL REPORT



THE HOUSE COMMITTEE ON NATURAL RESOURCES AND ENVIRONMENT AND THE SENATE COMMITTEE ON NATURAL RESOURCES

Prepared by

The Louisiana Department of Wildlife and Fisheries,
Office of Wildlife, Coastal and Nongame Resources Division
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Introduction

The Louisiana Department of Wildlife and Fisheries (Department) manages the American alligator (*Alligator mississippiensis*) as a commercial, renewable natural resource. The Department's sustained use program is one of the world's most recognizable examples of a wildlife conservation success story. Louisiana's program has been used as a model for managing various crocodilian species throughout the world. Since the inception of the Department's program in 1972, over 836,000 wild alligators have been harvested, over 6.8 million alligator eggs have been collected, and over 4.1 million farm raised alligators have been sold bringing in millions of dollars of revenue to landowners, trappers and farmers. Conservative estimates have valued these resources at over \$802,000,000, providing significant, direct economic benefit to Louisiana.

This report, per R.S. 56:279 (E), provides a historical perspective; outlines the basis and philosophy of the Department's management program; reviews the federal government's oversight and approval role for management of the alligator in the United States; discusses wild, farm and nuisance alligator programs; lists research activities; and reviews the revenue and expenditure information associated with the management program and the Louisiana Alligator Resource Fund. A separate report, furnished by the Department, details the activities and expenditures of the Alligator Advisory Council.

Historical Perspective

Alligators have been used commercially for their valuable leather since the 1800s. This harvest was generally unregulated throughout the 1900s, until a gradual population decline resulted in severely reduced harvests in the early 1950s. In 1962, the alligator season in Louisiana was closed, and research studies, focusing on basic life history factors, were undertaken which led to development of a biologically sound management program. Of tremendous importance was the establishment of a rigorous survey method to estimate and monitor population trends.



From 1962 through August 1972, alligators were totally protected. During this time a myriad of state and federal laws regulating harvest distribution and allocation of take, methods of harvest and possession, transportation and export of live alligators, alligator skins and their products was enacted. Similarly, in 1970 the Louisiana legislature recognized that the alligator's value, age at sexual maturity, and vulnerability to hunting required unique consideration and passed legislation providing for a closely regulated experimental commercial harvest.

The goals of the Department's alligator program are to manage and conserve Louisiana's alligators as part of the state's wetland ecosystem, provide benefits to the species, its habitat and the other species of fish and wildlife associated with alligators. The basic philosophy was to develop a sustained use management program which, through regulated harvest, would provide long term benefits to the survival of the species, maintain its habitats, and provide significant economic benefits to the citizens of the state. Since Louisiana's coastal alligator habitats are primarily privately owned (approximately 81%), our sustained use management program provides direct economic benefit and incentive to private landowners, and alligator hunters who lease land, to protect the alligator and to protect, maintain, and enhance the alligator's wetland habitats. One of the most critical components of the management program was to develop the complex set of regulations which required individual applications for each property to be considered for tag allocation, landowner permission, proof of ownership and detailed review of habitat quality related to alligator abundance, all of which combined to equitably distribute the harvest in relation to population levels.

During the period of total protection (1962-1971) alligator populations increased quickly and by 1972 the Department was ready to initiate its new sustained use management program. On September 5, 1972 the alligator season was reopened in Cameron Parish and a total of 59 hunters harvested 1,350 alligators. The season was expanded to include Vermilion Parish in 1973, Calcasieu Parish in 1975, an additional nine coastal parishes in 1979 and statewide in 1981 (Table 1). In 2010, 26,508 wild alligators were harvested by 2,248 licensed alligator hunters. In 2009 harvest was severely reduced due to worldwide economic recession which lowered price and demand for farm-raised and wild alligators. In 2010, demand and price for wild harvested alligators increased as the economic recovery began in Europe, Asia and in the United States.

Oversight by the U.S. Fish and Wildlife Service

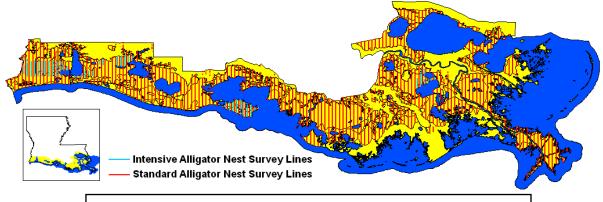
Five years after Louisiana closed the alligator harvest season, the alligator was listed on the federal Endangered Species Act in 1967. At this time the alligator was considered an endangered species throughout its range. In March of 1974, Louisiana petitioned the Secretary of the Interior, requesting that populations of the alligator in Louisiana be removed from the list of threatened and endangered species in Cameron, Vermilion and Calcasieu Parishes. In subsequent years, similar petitions sought to reclassify the alligator, first in nine additional coastal parishes in 1978 and then statewide in 1981. Each of these petitions was based on results of detailed scientific study and the demonstrated success of the early harvest programs.

Export of alligator skins and products out of the United States is regulated by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). This treaty, which was enacted in 1975, regulates the international trade in protected species; its aim is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. The U.S. Fish and Wildlife Service (USFWS) administers CITES requirements and controls for the United States. The species covered by CITES are listed on one of three Appendices, according to the degree of protection needed. Currently, the alligator is listed on Appendix II of CITES, because of their similarity of appearance to other crocodilians that are truly endangered or threatened.

In order to fulfill CITES requirements, the USFWS through a series of rulemakings, has developed a complex set of requirements with which the individual states, including Louisiana, must comply in order to be granted export approval for harvested alligators skins and products. The most critical component in these requirements is that the Department must certify, on an annual basis, that the harvest programs we administer will not be detrimental to the survival of the species. The "no detriment" finding is predicated on our assessment of the current condition of the alligator population, including trends, population estimates or indices, data on total harvest, harvest distribution and habitat suitability evaluation. Additionally, the management program must provide for a rigorously controlled harvest with calculated harvest level objectives. All alligators and eggs harvested must be taken from specifically identified properties and all hides individually tagged (with approved, serially marked CITES export tags furnished by the USFWS). The USFWS requires strict accountability for each tag allocated to the harvester, requiring all unused tags be returned at the close of the season.

Wild Alligator Management Program

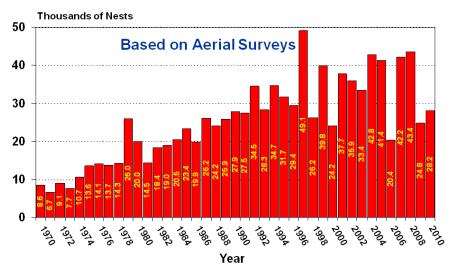
In 1970, the Louisiana State Legislature (Act 550) gave the Department of Wildlife and Fisheries full authority to regulate the alligator season in Louisiana. Since that time, the Department has annually inventoried alligator nest production throughout coastal Louisiana in order to assess the status of alligator populations. Results of annual alligator nest surveys are compiled to provide estimates of nest density (acres per nest) by parish and by habitat type (brackish, intermediate, or fresh). Private and publicly owned lands (State and Federal Refuges, and Wildlife Management Areas) are compiled separately.



2010 Coastal marsh aerial alligator nest survey lines

In June/July 2010, over 2,800 miles of transects were flown, surveying 135,000 acres of wetland habitat. The sampling intensity covers approximately 3.4% of 2.3 million acres of private coastal wetlands, and 3.4-10.8% of some 622,000 acres of public coastal wetlands. During summer 2010 we estimated that 28,168 alligator nests were present in the coastal marsh habitats (Figure 1). Although coastal habitats have significantly recovered from the devastating hurricanes in 2005 and 2008, nest production remained below average as drought conditions plagued the coastal parishes during spring and summer 2010.

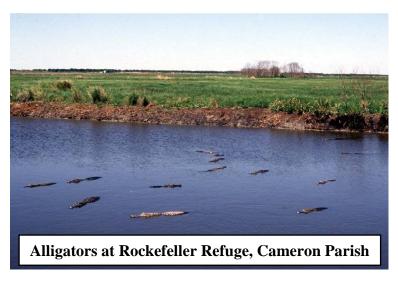
Figure 1. Louisiana Coastal Marsh Alligator Nest Production, 1970-2010



Nest density and alligator population estimates are combined with a detailed review of harvest parameters and a general assessment of environmental factors observed during each survey to determine final harvest level objectives. Over 50 individual alligator harvest quotas are developed annually in order to distribute the harvest in relation to alligator abundance in the various habitats across the state. A listing of the 2010 wild alligator harvest quotas is appended as Exhibit 1. In the best habitat one alligator is harvested per 55 acres, while in the poorer habitats one alligator is harvested per 500 acres.

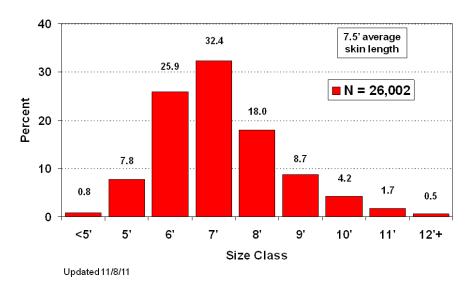
Alligator hunters annually submit a description of the property on which they have permission to hunt. The Department assesses the habitat quantity and quality and determines the number of alligators that can be harvested by each hunter. This methodology ensures that alligators are harvested in proportion to their population levels and that the harvest will not negatively impact populations at any location. The currently approved quota system represents an allowable wild alligator harvest, which coupled with the state authorized wild alligator egg harvest program represents a level of population utilization currently unparalleled in the world of crocodilian management.

Under this sustained use alligator program, over 836,000 wild alligators have been harvested since 1972 (Table 2). The annual harvest takes place in September to specifically target the adult males and immature segments of the alligator population. Adult females, which typically inhabit interior marshes in September, would be more susceptible to harvest if the season was scheduled during the spring or summer. During the 2010 wild season, a total of 26,508 alligators



were harvested by 2,248 licensed alligator hunters. Alligators harvested averaged 7.5 feet in length (Figure 2), with an estimated value of \$5.3 million.

Figure 2. Louisiana Wild Alligators Harvested, 2010 Regular Harvest Skin Lengths



Each year the alligator program staff works closely with landowners and alligator hunters to provide assistance regarding alligator management on their respective properties. We have provided numerous habitat base maps to landowners for their use in participation of both the wild and alligator egg harvest programs. Harvest reports summarizing average lengths and size class frequency distribution of harvested alligators are available upon request.

Farming/Ranching Program

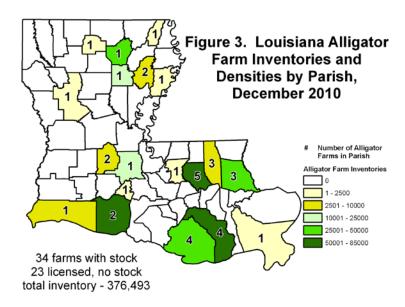
Early alligator farms in Louisiana were generally small, family owned operations; and often run more as a hobby/curiosity than a commercial enterprise. Extensive studies done by Department biologists showed alligators could be efficiently cultured and grown in captivity. Egg ranching (collection of alligator eggs from the wild) proved more economical and successful than captive breeding; private egg collections were first permitted, on a limited basis, in 1986.

Louisiana's alligator ranching program increased dramatically between 1986 and 1990. To ensure wild alligators were not depleted as a result of egg collections, and to provide future recruitment of sub-adult alligators to the breeding population, the Department currently requires a quantity of juvenile alligators equal to 12% of the eggs hatched by the rancher be returned to the wild within two years of hatching.

A variable return rate was established based on the estimated survival rates for wild juvenile alligators. Using the relationship of survival between size classes, we extrapolated return rates based on expected survival rates for alligators from 36 to 60 inches. More alligators must be returned if the average total length is smaller, and fewer animals are required if the average length is larger. Close monitoring of the survival of these alligators will continue for many years.

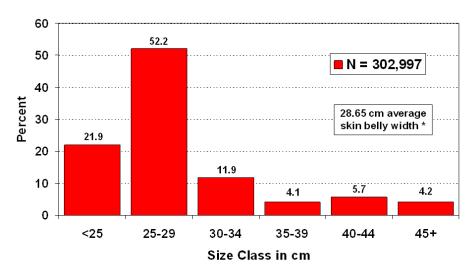
Enormous effort has been made by the Department to monitor the fate of the alligators released to the wild. In FY 2011 we released a total of 10,028 farm raised alligators into the wild to maintain wild alligator populations. The number of alligators released was lower than normal due to the reduced alligator egg collections during the summer of 2009. Each alligator released is measured, sexed, tail-notched, tagged and recorded prior to release to the same area where the farmers had originally harvested the eggs. Although it is costly to the ranchers to fulfill the "returns to the wild" obligation, it is an integral necessity of the program, considering the large number of eggs collected. In 2010, 205,261 wild alligator eggs were collected producing 173,483 hatchling alligators (Table 3).

Currently there are 57 licensed farmers in Louisiana. On farm inventory as of December 2010 was 376,493 alligators (Figure 3). During the 2009 tag year (September 2009 through August 2010) a total of 303,028 farm alligators were harvested, averaging 28.65 cm belly width (4.58 feet in length) (Figure 4). The total estimated value of these alligators was \$47.5 million (Table 4). Although the data are still being



compiled as skins are exported out of Louisiana, only an estimated 160,000 farm-raised alligators were harvested during the 2010 tag year.

Figure 4. Louisiana Farm Alligators Harvested, 2009 Skin Belly Widths



* Skin Lengths Averaged Approximately 55 Inches, 2009 Tag Year, Updated 11/8/11

Beginning late winter and continuing into spring and summer of 2009, worldwide economic recession significantly impacted world trade in raw and tanned alligator skins and manufactured products. Price and demand for farm-raised alligator skins dropped precipitously during this period. The drop in price and demand coincided with the economic recession and with tanners implementing stricter quality standards. Throughout this period many farmers were unable to sell any skins; several farmers exported skins for crust tanning and later sale. Two of the largest alligator skin tanneries in the world made recommendations to the Department and alligator industry participants, urging actions which would act to reduce existing inventories of both live on-farm alligators and alligator skins. In June 2009 many farmers decided to forego egg collections in July 2009 thereby reducing on-farm inventories of live alligators during the 2009-2010 FY. Coastal flooding associated with a tropical weather event during July 2010 limited egg collections to 205,261 eggs. Since early 2010, price and demand for both wild and farm raised alligators has continued to rebound. Both the 2011 alligator egg harvest and the wild alligator harvest are expected to increase in FY 2011-12.

In order to better meet the needs of the alligator industry, the Department sponsors meetings for all segments of the industry (farmers, hunters, and landowners) which give the industry participants an opportunity to prioritize and discuss the current issues facing the state's alligator industry. The Department also created specific e-mail (<u>LAalligatorprogram@wlf.la.gov</u>) and website (<u>www.lagatorprogram.com</u>) addresses for the alligator program to provide additional and easier methods for alligator industry participants and the general public to ask

questions and acquire information. Alligator program staff continues-to compile and update contact information, including e-mail addresses, which are used to promptly notify participants of available and arising program information. In addition to the on-site visits, the staff communicate with farmers on a regular basis to schedule releases, hide inspections, live animal inspections, coordinate farm transfers, alligator egg collection permits, and to issue and follow up on CITES harvest tag disposition.

The Department contracts with the LSU School of Veterinary Medicine to provide various services to the alligator industry. On numerous occasions the staff arranged for transportation of sick or problem alligators and sample skins from farms to the LSU Vet School for necropsy or skin evaluation. One of these contracts provides for the availability of a veterinarian to respond to farm related problems. Farmers know they can contact the program staff or Dr. Nevarez and get a rapid response to their problem. We also arranged collection and delivery of alligator research specimens to numerous graduate students and university faculty.

Despite setbacks from Hurricanes Rita and Ike, numerous wildlife groups, including university and graduate students, were hosted at Rockefeller Wildlife Refuge for educational purposes; as were professional representatives from domestic and international organizations. Presentations were made at various civic organizations and captive alligators were often loaned out for educational purposes.

Nuisance Alligator Program

The Louisiana Department of Wildlife and Fisheries manages a statewide nuisance alligator control program. The nuisance program is designed to remove problem alligators in order to avoid potential human/alligator conflicts. Through the process of nuisance alligator hunter appointments and annual renewals the Department maintains a statewide network of qualified nuisance alligator hunters. Nuisance alligator complaints are phoned into various Department offices, where complaints are recorded and then forwarded to a nuisance alligator hunter in the vicinity of the complaint. Nuisance hunters respond promptly and catch and remove the alligator as deemed necessary. Hunters are allowed to harvest the nuisance alligator and to process the meat and skin of the alligator for commercial sale. This process provides for immediate response to problem alligators and for payment to the nuisance alligator hunter, thereby minimizing the program operating costs to the Department.

During the winter and spring of 2009, the worldwide economic recession had a devastating impact on price and demand for alligator skins. Nuisance hunters were unable to sell large skins at profitable levels and had no sales for small (under 6' total length) alligator skins. In June 2009, the Department instituted a policy change which allows for nuisance alligator hunters to charge the complainant a fee of \$30.00 when they catch and remove a nuisance alligator under 6' in length. Depending on market conditions next fiscal year, further nuisance alligator policy changes may be necessary to ensure that appointed nuisance alligator hunters remain in the nuisance alligator program.

During 2010-11, a total of 63 nuisance alligator hunters were enrolled in the program; annually the nuisance hunters respond to an estimated 5,000 complaints and harvest approximately 2,250 alligators.

Research Activities

The following list provides a summary of the various research and monitoring projects that the alligator program staff conducted and/or participated in during the 2010-2011 fiscal year.

Monitoring

- 1. Evaluation of survival, growth, and reproduction in farm released alligators---This activity involves numerous projects related to survival analysis, growth and reproductive success (farm-released vs. native wild). Due to the recent reduction of the 14% release rate to 12%, it is imperative to monitor survival closely. The 12% return rate started with the 2007 permits (releases "due" in 2009). Information on size class frequency distribution of wild alligator populations and susceptibility to harvest is provided annually to enhance survival estimates. Although some growth information has been published we plan to evaluate growth rates in more detail; we now have "retraps" that were captured over 15 years since release, and this is undoubtedly one of the largest mark-recapture projects currently in progress. Staff from the LSU Department of Experimental Statistics assists with annual evaluation of survival and growth based on farm "retraps" recovered in September harvests.
- **2.** Coast wide nest survey---The annual coastal nesting survey is essential for monitoring our alligator population, and is used annually to determine wild alligator and wild alligator egg harvest quotas (for the adult harvest each September as well as egg ranching quotas). This is an integral part of our required "finding of no detriment" needed for export authority. For the 2011 survey a new alligator program employee will serve as the navigator; the observer will serve his second year as full time observer.
- **3. Evaluation of statewide harvest program**----We continue to analyze size class frequency distribution, average size, sex ratios, etc. for alligators harvested each year. This project, coupled with coast wide nest survey will be continued as long as a harvest program is in place. Data generated from these projects provides the basis for evaluating the impact of our current harvest strategies, and for establishment of annual wild harvest quotas.
- **4. Evaluation of alligator nest density---**LDWF biologists work with cooperating alligator farmers to gain access to their GPS data from annual egg collections. This study will facilitate comparisons between our coast wide nest survey and estimates of nest density as recorded by the farmer during egg collections. Some farmers have advised staff of reduced nest production on selected wetlands; this study will allow us to evaluate nest distribution and density changes over time.

- **5. WNV (West Nile Virus)**---The Department, in conjunction with LSUSVM, continues to monitor occurrence of WNV on alligator farms in Louisiana. Initial mortality related to WNV occurred in fall/winter 2003. Aggressive mosquito control on farms has reduced on farm mosquito populations and seems to have reduced the incidence of WNV in 2010-2011. Studies have determined that WNV exposure is a predisposing factor in development of "PIX/LPSA" skin lesions. We also collected blood samples (plasma and serum) from wild alligators in September 2010 during the sanctioned harvest, to screen for WNV in wild alligators. During fiscal year 2010-2011 we continued to collect samples from farm alligators to monitor for exposure to WNV and other health surveillance parameters.
- **6. Best management practices---**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 euthanasia. This document will be updated as new information regarding any pertinent topic to alligator faming becomes available. The intent of this document is to ensure that licensed alligator farms/ranches are employing humane methods of working with alligators. Additionally we worked closely with Dr. Nevarez at LSU's School of Veterinary Medicine to investigate methods of euthanasia on commercial farms, and determine the most humane practice to recommend to the alligator farming industry. Results are currently being analyzed.

FOR LOUISIANA ALLIGATOR FARMING



Louisiana Department of Wildlife and Fisheries,
Office of Wildlife, Coastal and Nongame Resources Division and
Louisiana State University, School of Veterinary Medicine
Endorsed by
Louisiana Alligator Farmers and Ranchers Association

Contracts

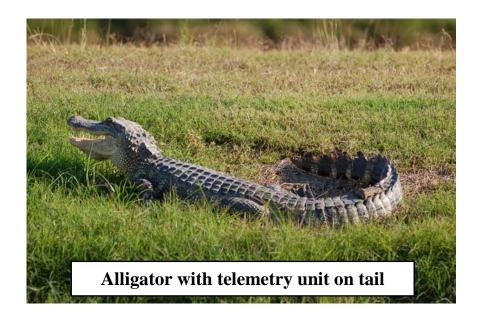
- **1. Diagnostic services LSUSVM (Dr. Nevarez)**—Dr. Nevarez is contracted to provide diagnostic services as needed for the alligator industry. Farmers may consult with Dr. Nevarez at any time for assistance with any alligator husbandry or disease issue. Our staff often assists with logistics and transport of alligators/samples to LSUSVM in Baton Rouge for evaluation.
- **2. LSU Experimental Statistics**—The LSU Department of Experimental Statistics is under contract to provide technical statistical expertise for numerous alligator projects; most importantly the evaluation of survival of farm-released alligators, population trends from nesting survey data, and more recently with hide grade/length correlations. Assistance was provided with refining statistical analyses of dispersal of wild alligators initially marked on Rockefeller Refuge

but caught off site, to determine relationship between size at initial capture and sex and dispersal distance. We evaluated dispersal of animals from initial capture sites and submitted a manuscript which was accepted for publication in the scientific literature.

- 3. Conduct physical property analysis and biochemical evaluations of farm-raised and wild alligator skins and biochemical evaluations of commercial alligator rations---New conditions, skin wrinkling and double scaling, have recently become problematic for alligator farmers. Associated with these conditions, farmers are reporting a general observance of weakness of the skin and there appears to be a link to nutritional issues associated with the commercial rations being feed to captive alligators. Biochemical methods will be used to evaluate alligator skins for potential defects and relate to physical tests. The physical method will include the Instron test to evaluate the physical properties of alligator skins. The biochemical tests will include (1) the analysis and comparison of feeds, and (2) analysis and comparison of skin collagen and keratin. Protein profiles in feed samples will be analyzed by electrophoresis to evaluate any difference between the feeds as a result of processing. Feed samples will also be sent out to a certified laboratory for amino acids profile, especially the sulfur containing amino acids. Alligator skins will be analyzed for collagen and keratin and amino acid profiles will be conducted.
- **4. Evaluate the health status of farm released alligators**—A total of 40 alligators originating from two different farms were sampled in fiscal year 2010-2011 to evaluate their overall health at the time of release. Study results indicate that the release alligators are healthy, that West Nile virus remains the most important infectious disease for captive reared alligators and that continued surveillance in necessary. Alligators brought into Louisiana from Georgia for release previously were found to be of poorer health than Louisiana reared alligators and further release of these animals should be closely monitored. Continuation of this study is planned for the future as funding allows.

Other Research

In recent years we have spent considerable effort testing telemetry units for practical methods to attach to juvenile alligators and test range of reception. This may be helpful in monitoring the survival of farm-released alligators. Our biological staff constructed an outside holding pen to test the telemetry unit attachment on wild and farm alligators. Unfortunately the pen was damaged by Hurricane Ike in September 2008 and alligators escaped. The telemetry units remained in place on the few animals that were recaptured. We continued to house these animals at Rockefeller demonstrating long-term retention of the telemetry units during 2009-2010. Subsequently the telemetry units were removed by staff and alligators released. Recently several of the escaped alligators were recovered and we prepared a paper which has been accepted for publication on site fidelity of these alligators.



Dr. Dan Janes from Harvard University continued molecular biology work on alligator embryos provided by LDWF; as did other collaborators and university professors and graduate students. We co-authored a manuscript with Dr. Janes and colleagues which is currently "in review" and being considered for publication in the scientific literature.

We assisted again this fiscal year with a Ph.D. student from LSU's Chemistry Department evaluating peptides by providing large volumes of blood for leukocyte extraction.

We have several years of data on alligator dispersal (caught live on Rockefeller, and subsequently harvested "off" Rockefeller). Several have migrated very long distances (20-35 miles) which is important data to consider in evaluating our farm "release to the wild" program. Additional data collected in September 2009 and 2010 helped us evaluate effects of Hurricanes Rita and Ike and severe drought on alligator displacement.

We continued to support and collaborate with post-doctoral research associates with their work on oxygen levels in developing alligator embryos and cardiovascular physiology under varying conditions. Associates from several universities (University of North Texas, University of California at San Francisco, Harvard University, Yale University, Indiana University School of Medicine, University of California at Irvine, Vanderbilt University, University of Arizona, and University of Utah) were hosted at Rockefeller in June 2011 to collect additional samples for several studies. Several collaborators made presentations with LDWF staff as co-authors at meetings including the Society for Integrative and Comparative Biology in Salt Lake City, Experimental Biology meetings in Washington, D. C., and the Society of Vertebrate Paleontology in Pittsburgh.

We updated a document on alligators for the Status Survey and Conservation Action Plan for the Crocodile Specialist Group (CSG). Future research priorities for the species were included. We also published a note in the CSG Newsletter on possible consumption of corn at wildlife feeders by alligators.

We previously assisted a graduate student from California with his research on use of stable isotopes to determine alligator diet (non-invasive); the manuscript is in review and follow up references have been obtained. We also supported Dr. Uriel Zapata with his doctoral research on material properties of alligator mandibular cortical bone. These studies were published in the journal "Bone" and follow up studies are underway, with a presentation being made at the Experimental Biology meetings in Washington, D. C. in April 2011.

We assisted a graduate student from UCLA again in 2010-2011 with samples for her study of intestinal parasitology.



We published a paper this year on the development of the manus in alligators in collaboration with Dr. Hans Larsson.

Our research efforts have been hampered in large part by lack of holding facilities for alligators. We had a small functioning laboratory, but the tremendous physical plant losses due to Hurricanes Rita and Ike have limited our progress. This lab was a shared room in the maintenance workshop and is now not usable due to repairs to the shop. Our biological staff constructed a cover/awning to the semi-repaired holding tanks, which has helped. Initial work done to supply adequate heat to holding tanks was completed in spring 2009 and minor repairs continued this fiscal year. We met several times again this year to discuss schematic drawings for a new lab and holding facility.

Revenue and Expenditure Information

In recognizing that the Louisiana alligator industry is a vital aspect of Louisiana's economy and recognizing the many varied national and international impediments to industry development, and the need to develop and maintain a total alligator conservation program, the Louisiana legislature established the Louisiana Alligator Resource Fund in 1991 (R.S. 56:279). This Act established a dedicated source of revenue intended to help defray the costs of the alligator program within the Coastal and Nongame Resources Division of the Department. The specific goals of the legislation are:

- 1. To provide salaries and financial support including associated indirect costs for the following positions, to provide a minimum of two full-time technical positions (biologists) and eight nontechnical positions such as computer operators, secretaries, and wildlife specialists existing within the Coastal and Nongame Resources Division of the Louisiana Department of Wildlife and Fisheries.
- 2. To assist with funding for law enforcement activities associated with the alligator farm industry when surplus funds are available and recommended by the Louisiana Alligator Advisory Council.
- 3. To assist with funding marketing programs recommended by the Louisiana Alligator Advisory Council when surplus funds are available.
- 4. To actively fund research on all aspects involved with alligator conservation and to develop the techniques needed to enhance the commercial alligator industry.
- 5. To assist in funding management of the alligator population through proper management, harvest and farm facility management.

This legislation provides all the enabling language required to establish the Louisiana Alligator Resource Fund including sources of income, investing of the fund, and expenditures from the fund. Further R.S. 56: 253 establishes the alligator hide tag fee and the alligator shipping label fee, specifies the details of collection of these fees, and establishes that these fees shall be no more than \$4.00 per hide or live alligator. R.S.56:256, provides for the collection of a \$0.25 severance tax on each alligator hide taken within the state. R.S. 56:279 C (1) provides that all revenues received by the state from tag fees, alligator shipping label fees, and from the severance tax on alligator skins shall be credited to the Louisiana Alligator Resource Fund. During the 2010-11 FY, only \$922,730 was deposited into the Louisiana Alligator Resource Fund. Harvest of farm raised alligators was reduced this fiscal year, due the impact of the economic recession on demand and price of alligator skins. Both the 2011 alligator egg harvest and the wild alligator harvest are expected to increase in FY 2011-12. The alligator industry should be applauded for supporting these legislative endeavors to create a self-generated source of revenue to develop and maintain the state's alligator management program. Annual income and expenditure data for the Louisiana Alligator Resource Fund is reported in Table 5.

Table 6 summarizes the Louisiana Alligator Resource Fund expenditures by the alligator management program for FY 2009, 2010 and 2011. Expenditures by the alligator management program totaled \$1,078, 912 in 2010-11, a reduction in spending of 11%. Currently the alligator

program staff consists of 5.5 biologists, 3 wildlife technicians, 1.5 administrative coordinators and 1 data manager.

All expenditures from the Louisiana Alligator Resource Fund are provided for in R.S. 56:279. The Department carefully approves and monitors all expenditures to ensure compliance with all legal requirements. The Department's fiscal office can produce a variety of expenditure and budget reports upon request.

Hurricane Impacts

Coastal Louisiana was impacted by devastating hurricanes in 2005 and 2008. In both of these years, storm surges inundated coastal marshes with high salinity waters across virtually the entire coast of Louisiana; which is prime alligator habitat. Some direct alligator mortality was observed; but overall long-term impact of these storms on alligator habitat remains to be seen. Direct physical damage to wetlands through scour, scrapes, erosion, and rolling has been noted, and high salinities were accentuated by lower than usual winter rainfall after the storms, which might have tempered the deleterious salinities. Effects of these storms on the subsequent wild alligator harvest were significant in 2006; but harvest numbers in 2007 and 2008 returned to prestorm levels.

Results of the 2006 coastal nest survey indicated significant habitat damages in southwest Louisiana and extreme southeast Louisiana resulting from Hurricanes Rita and Katrina respectively. Nest production in 2006 was the lowest on record since 1986. During the fall and winter of 2006-2007 marsh water levels returned to near normal and the habitat recovered significantly. In 2007, coastal alligator nest production increased dramatically as wetland habitats and alligator populations recovered. Alligator farmers collected near record numbers of wild alligator eggs in 2007. In 2008, nest production was excellent and farmers collected a record of 529,527 wild alligator eggs. Hurricanes in the fall of 2008 and lower than normal Spring water levels in 2009 resulted in reduced nest production in 2009 as compared to 2008 (Figure 1). Nest production recovered gradually in 2010, however drought conditions continue to plague Louisiana during the first half of 2011.

Habitat Concerns

One threat or potential limiting factor to Louisiana's alligator population is habitat loss. Because the vast majority of Louisiana's alligators are in the coastal parishes, saltwater intrusion and wetlands/marsh deterioration from numerous causes are very real threats. Additionally, the combined impact of recent hurricanes will likely result in long term reduction of alligator habitat quality in coastal Louisiana.

Vast resources by numerous state and federal agencies have been expended to attempt to limit these losses. Projects to restore/enhance marshes include construction of earthen terraces (to reduce wave action and turbidity), "breakwaters" and protection levees along coastlines, and freshwater diversions. Alligators benefit directly from these efforts to maintain/enhance

wetlands. The freshwater diversion projects (Davis Pond and Caernarvon) shift water from the Mississippi River in hopes of re-establishing more favorable salinity conditions for numerous fish and wildlife species. Some preliminary data suggests alligator nesting has improved in the areas enhanced by lower marsh salinity levels. It is critical that habitat changes are monitored, mapped and incorporated periodically into the alligator program. This will ensure that our harvest programs are adjusted accordingly for corresponding alligator population and habitat changes.

Summary

Louisiana's alligator management program has clearly illustrated that controlled sustained use of the species is feasible. The wild harvest has been in place for 39 years and the egg ranching program for 25 years and may appear to operate unchanged every year. However, constant adaptations are made to try to improve both programs. Constant requests by user groups (farmers, egg ranchers, trappers, landowners, buyers, dealers and other industry personnel) are received and considered as the Department strives to safely manage the alligator resource to the benefit of many user groups with varied interests.

Louisiana's alligator industry is unique. It has recognized the necessity of establishing a self-generated revenue source to provide the necessary regulatory and management efforts to effectively manage the alligator resource. The Department will continue to protect the alligator resource while striving to ensure long term, sustainable harvest programs. During 2010-11 FY, the Department, through the use of the Louisiana Alligator Resource Fund, has worked toward achievement of the goals established by the Louisiana Legislature.



Table 1. Louisiana Alligator Season Dates, Area Open, Harvest Level and Tag Cost, 1972-2010

Voor	Sassan Datas	No. of Days	Darichas	Tag Fee		
Year	Season Dates	No. of Days	Parishes -	Amount	Paid By	
1972	5 Sept – 17 Sept	13	Cameron	\$5.00 ²	hunter/farmer	
1973	10 Sept – 28 Sept	19	Added Vermilion	\$5.00 ²	hunter/farmer	
1975	20 Sept - 19 Oct	30	Added Calcasieu	\$5.00 ²	hunter/farmer	
1976	9 Sept – 8 Oct	30	No change	\$5.00 ²	hunter/farmer	
1977	1 Sept – 30 Sept	30	No change	\$5.00 ²	hunter/farmer	
1979	7 Sept – 7 Oct	31	Coastwide 1	\$5.00 ²	hunter/farmer	
1980	4 Sept – 4 Oct	31	No change	\$5.00 ²	hunter/farmer	
1981	31 Aug – 30 Sept	31	Statewide	\$5.00 ²	hunter/farmer	
1982	4 Sept – 3 Oct	30	Statewide	\$5.00 ²	hunter/farmer	
1983	10 Sept – 9 Oct	30	Statewide	\$5.00 ²	hunter/farmer	
1984	8 Sept – 7 Oct	30	Statewide	\$5.00 ²	hunter/farmer	
1985	31 Aug- 30 Sept	31	Statewide	\$5.00 ²	hunter/farmer	
1986	6 Sept – 6 Oct	31	Statewide	\$5.00 ²	hunter/farmer	
1987	5 Sept – 5 Oct	31	Statewide	\$5.00 ²	hunter/farmer	
1988	10 Sept – 10 Oct	31	Statewide	\$2.00/tag	hunter/farmer	
1989	9 Sept – 8 Oct	30	Statewide	\$4.00/tag	hunter/farmer	
1990	1 Sept – 30 Sept	30	Statewide	\$4.00/tag	hunter/farmer	
1991	31 Aug – 29 Sept	30	Statewide	\$4.00/tag	hunter/farmer	
1992	10 Sept – 4 Oct	25	Statewide	\$4.00/tag	hunter/farmer	
1993	11 Sept – 10 Oct	30	Statewide	\$4.00/tag	fur dealer/shipp	
1994	3 Sept – 2 Oct	30	Statewide	\$4.00/tag	fur dealer/shipp	
1995	2 Sept – 1 Oct	30	Statewide	\$4.00/tag	fur dealer/shipp	
1996	7 Sept – 6 Oct	30	Statewide	\$4.00/tag	fur dealer/shipp	
1997	6 Sept – 5 Oct	30	Statewide	\$4.00/tag	fur dealer/shipp	
1998	2 Sept – 1 Oct	30	Statewide	\$4.00/tag	fur dealer/shipp	
1999	1 Sept – 30 Sept	30	Statewide	\$4.00/tag	fur dealer/shipp	
2000	30 Aug – 30 Sept	32	Statewide	\$4.00/tag	fur dealer/shipp	
2001	29 Aug – 30 Sept	33	Statewide	\$4.00/tag	fur dealer/shipp	
2002	28 Aug – 30 Sept	34	Statewide	\$2.00/tag	fur dealer/shipp	
2003	3 Sept – 2 Oct	30	Statewide	\$2.00/tag	fur dealer/shipp	
2004	1 Sept – 30 Sept	30	Statewide	\$3.00/tag	fur dealer/shipp	
2005 ³	14 Sept – 30 Oct	46	Statewide	\$4.00/tag	fur dealer/shipp	
2006	6 Sept – 5 Oct	30	Statewide	\$4.00/tag	fur dealer/shipp	
	29 Aug – 27 Sept	30	East Zone	•		
2007 4	5 Sept – 4 Oct	30	West Zone	\$4.00/tag	fur dealer/shipp	
2008 4	27 Aug – 25 Sept 3 Sept – 2 Oct	30 30	East Zone West Zone	\$4.00/tag	fur dealer/shipp	
2009 ⁴	26 Aug – 24 Sept 2 Sept – 1 Oct	30 30	East Zone West Zone	\$4.00/tag	fur dealer/shipp	
2010 ⁴	25 Aug – 23 Sept 1 Sept – 30 Sept	30 30	East Zone West Zone	\$4.00/tag	fur dealer/shipp	

Added Iberia, St. Mary, Terrebonne, Lafourche, St. Charles, Jefferson, Plaquemines, St. Bernard and St. Tammany
Per issuance, regardless of number
Opening date was postponed and season was extended due to Hurricanes Katrina and Rita
State was divided into alligator hunting zones (east and west) from 2007 to present

Table 2. September Wild Alligator Harvest in Louisiana, 1972-2010 ¹

	Commercial	Tags	ngs Number Percent Avg T. L. Skin Value		n Value	Mea	t ⁴		
Year ²	Hunters	Issued	Taken	Success	in Feet	Avg/foot	Total	Amount (lbs)	Value
1972	59	1,961	1,350	68.8	6.92	\$8.10	\$75,670	3	3
1973	107	3,243	2,921	90.1	7.58	\$13.13	\$290,714	3	3
1975	191	4,645	4,420	95.2	7.51	\$7.88	\$261,570	3	3
1976	198	4,767	4,389	92.1	7.09	\$16.55	\$515,003	3	3
1977	236	5,760	5,474	95	7.35	\$12.23	\$492,061	3	3
1979	708	17,516	16,300	93	6.92	\$15.00	\$1,691,940	100,089	\$125,000
1980	796	19,134	17,692	92.5	6.59	\$13.00	\$1,515,674	100,089	\$125,000
1981	913	15,534	14,870	95.7	6.92	\$17.50	\$1,800,757	100,089	\$125,000
1982	1,184	18,188	17,142	94.2	6.82	\$13.50	\$1,578,264	100,089	\$125,000
1983	945	17,130	16,154	94.3	6.92	\$13.00	\$1,453,214	100,089	\$125,000
1984	1,104	18,386	17,389	94.6	6.99	\$21.00	\$2,552,531	100,089	\$125,000
1985	1,076	17,466	16,691	95.6	7.09	\$21.00	\$2,485,123	150,133	\$675,000
1986	1,207	23,267	22,429	96	6.92	\$23.00	\$3,569,800	310,275	\$1,395,000
1987	1,370	24,635	23,892	97	7.09	\$40.00	\$6,775,771	500,444	\$2,250,000
1988	1,545	24,111	23,526	98	7.25	\$48.00	\$8,187,048	600,533	\$3,000,000
1989	1,769	25,492	24,846	97.4	7.25	\$50.00	\$9,006,675	747,448	\$3,000,000
1990	1,916	25,920	25,644	98.9	7.25	\$57.00	\$10,597,383	701,063	\$3,000,000
1991	2,001	24,646	24,011	97.4	7.45	\$32.00	\$5,724,222	684,109	\$2,935,000
1992	1,696	25,551	24,313	95.2	7.25	\$23.00	\$4,054,193	687,835	\$2,951,520
1993	1,702	24,805	23,991	96.7	7.25	\$23.00	\$4,000,499	687,615	\$2,889,000
1994	1,774	27,694	27,120	97.9	7.35	\$37.00	\$7,375,284	771,610	\$3,243,000
1995	1,877	28,931	28,442	98.3	7.35	\$41.00	\$8,570,997	809,088	\$3,400,000
1996	1,947	26,578	25,793	97.0	7.41	\$25.00	\$4,778,153	734,793	\$3,967,800
1997	1,973	29,900	29,085	97.3	7.08	\$18.00	\$3,706,592	828,423	\$4,473,000
1998	1,888	30,198	28,639	94.8	7.08	\$15.00	\$3,041,462	804,679	\$4,350,000
1999 regular	1,902	33,239	32,064	96.5	7.17	\$22.00	\$5,057,775	909,398	\$4,881,000
1999 bonus	.,002	3,348	3,206	95.8	5.75	\$15.50	\$285,735	44,335	\$237,250
2000 regular	1,941	31,999	30,532	95.4	7.17	\$27.00	\$5,910,690	1,061,903	\$5,702,419
2000 bonus	1,011	3,299	3,146	95.4	5.75	\$23.00	\$416,059	56,785	\$303,801
2001 regular	1,916	32,669	31,867	97.5	7.33	\$22.00	\$5,138,872	732,941	\$3,298,235
2001 bonus	1,010	3,402	3,281	96.4	5.83	\$20.00	\$382,565	75,463	\$339,584
2002 regular	1,955	31,757	30,451	95.9	7.25	\$16.00	\$3,532,316	700,373	\$3,151,679
2002 bonus	1,000	3,370	2,932	87.0	5.83	\$16.00	\$273,497	67,436	\$303,462
2002 bondo 2003 regular	1,873	30,513	28,555	93.6	7.17	\$13.00	\$2,661,612	656,765	\$2,955,443
2003 bonus	1,070	3,290	3,026	92.0	5.83	\$13.00	\$229,341	69,598	\$313,191
2004 regular	1,859	31,530	30,406	96.4	7.17	\$22.50	\$4,905,248	699,338	\$3,147,021
2004 logular	1,000	3,705	3,518	95.0	5.83	\$22.50	\$461,474	80,914	\$364,113
2005 regular	1,933	32,487	27,668	85.2	7.25	\$34.50	\$6,920,459	636,364	\$2,863,638
2005 regular 2005 bonus	1,955	4,078	3,507	86.0	5.83	\$34.50	\$705,380	80,661	\$362,975
2006 regular	1,872	28,501	27,319	95.9	7.42	\$39.00	\$7,905,572	628,337	\$2,827,517
2006 regular 2006 bonus	1,072	3,710		95.9 95.4				81,374	
	2.051		3,538 31 127	93.4 92.9	6.00 7.50	\$39.00 \$38.50	\$827,892 \$8,987,921		\$366,183 \$3,221,645
2007 regular	2,051	33,498	31,127			\$38.50	\$8,987,921	715,921	\$3,221,645
2007 bonus	2 222	4,226	3,884	91.9	6.00	\$38.50	\$897,204	89,332	\$401,994
2008 regular	2,222	36,299	31,774	87.5	7.50	\$34.50	\$8,221,523	730,802	\$3,288,609
2008 bonus	4 00=	4,425	3,851	87.0	6.00	\$34.50	\$797,157	88,573	\$398,579
2009 ⁵	1,687	24,427	9,141	37.4	7.42	\$7.50	\$508,697	210,243	\$946,094
<u>2010</u>	2,051	31,881	26,508	83.1	7.50	\$13.00	\$2,584,530	609,684	\$2,743,578

¹ Does not include Salvador WMA harvests from 1972-2003 and Marsh Island experimental, nuisance, and farm harvests from 1972-present.

² The bonus tag program was initiated in 1999 to increase the overall number of wild alligators harvested without putting any additional pressure on the 6' and over portion of the wild population. The bonus tag program was suspended in 2009.

³ Sale of meat not permitted; La. Health Department regulations first allowed meat sales in 1979.

⁴ Bone in from 1979-1984, deboned from 1985-present.

⁵ Worldwide economic recession caused alligator hide demand to decline dramatically.

Subject to change, numbers updated November 8, 2011.

Table 3. Louisiana Alligator Ranching, 1986-2010 **Total Eggs** Number **Percent** Number **Alligators Permitted Hatched Returned to Wild** Year Collected Collected 1986 2.903 2.903 100.0% 1,985 none 19,641 18,041 13,782 1987 91.9% none 1988 90,305 64.887 71.9% 50,394 1.680 1989 265,051 181,819 68.6% 137,323 7,078 231,434 1990 366,055 293.412 80.2% 6.088 1991 333,451 198,089 59.4% 44,405 165,054 1992 297,125 164,892 55.5% 133,463 35,531 279,405 1993 55.8% 28,512 155,891 123,666 362,835 1994 73.4% 223,011 266,408 21,633 1995 402,830 314,371 78.0% 261,428 20,749 1996 467,545 279,237 59.7% 233,076 40,919 1997 476,115 377,636 79.3% 321,641 48,171 1998 52.1% 240,118 36,733 539,216 280,870 574,731 1999 382,611 66.6% 332,428 44,169 279,217 236,313 2000 593,625 47.0% 39,559 57.5% 2001 616,465 354,636 294,405 48,288 2002 304,448 639,145 354,523 55.5% 32,716 651,207 357,757 307,805 2003 54.9% 50,657 2004 619,730 397,569 64.2% 350,661 47,431 2005 694,694 507,315 73.0% 441,298 35,752 271,790 2006 739,844 36.7% 224,724 40,694 2007 766,115 501,075 65.4% 426,385 61,913 2008 801,679 529,527 66.1% 459,928 48,578 2009 * 7.4% 400,875 29,822 25,077 54,391 710,204 173,483 27,121 2010 205,261 28.9%

57.8%

5,713,330

822,768

6,769,559

11,710,791

Total

^{*} Worldwide economic recession caused alligator hide demand to decline dramatically. Updated April 4, 2011

Table 4. Farm Alligator Harvest in Louisiana, 1972-2009 ¹

	No.	Farms	No. Skins	Avg T. L.	Ski	in Value	Меа	nt ³
Year ¹	Licensed	Sold Skins	Sold	in Feet	Avg/foot	Total	Amount (lbs)	Value
1972	8	3	35	5	\$8.10	\$1,418	2	2
1973	8	5	103	6.33	\$13.13	\$8,561	2	2
1975	8	3	83	5.5	\$7.88	\$3,597	2	2
1976	8	3	360	5.75	\$16.55	\$34,259	2	2
1977	8	4	376	5.25	\$12.23	\$24,142	2	2
1980	8	1	191	4.67	\$13.00	\$11,596	957	\$3,342
1981	8	3	360	4.67	\$17.50	\$29,421	1,801	\$6,300
1982	8	1	113	4	\$13.50	\$6,102	452	\$1,582
1983	14	6	1,449	4.58	\$13.00	\$86,273	7,253	\$25,357
1984	12	7	2,836	4.25	\$21.00	\$253,113	11,354	\$39,704
1985	15	12	4,430	4.25	\$21.00	\$395,378	17,736	\$79,740
1986	22	15	5,925	4.5	\$23.00	\$613,238	26,687	\$119,983
1987	30	23	10,670	4.42	\$24.00	\$1,131,874	48,060	\$216,067
1988	47	38	27,749	4.25	\$36.00	\$4,245,597	111,094	\$554,980
1989	83	68	66,737	3.98	\$32.00	\$8,499,624	300,877	\$1,202,362
1990	123	80	88,424	4.03	\$24.00	\$8,552,369	397,732	\$1,786,059
1991	134	91	118,976	4.13	\$15.00	\$7,370,563	536,379	\$2,380,000
1992	125	85	128,026	4.04	\$12.00	\$6,206,700	578,289	\$2,566,000
1993	101	70	121,700	3.87	\$17.00	\$8,006,643	388,010	\$1,720,000
1994	89	62	136,126	3.67	\$20.00	\$9,991,648	277,780	\$1,197,000
1995	83	50	125,460	3.88	\$20.00	\$9,735,696	331,395	\$1,323,000
1996	81	51	161,845	3.91	\$15.50	\$9,808,616	511,668	\$2,297,900
1997	75	36	169,988	3.74	\$16.75	\$10,648,898	542,332	\$2,435,700
1998	73	38	154,399	3.79	\$17.00	\$9,947,928	490,990	\$2,209,455
1999	64	35	187,570	3.64	\$17.00	\$11,606,832	552,693	\$2,487,119
2000	66	35	219,827	3.81	\$20.50	\$17,169,588	659,481	\$2,967,665
2001	63	32	180,391	3.79	\$20.50	\$14,015,479	541,173	\$2,435,279
2002	62	32	237,808	3.73	\$23.50	\$20,845,060	713,424	\$3,210,408
2003	61	32	277,604	3.81	\$24.00	\$25,384,110	832,812	\$3,747,654
2004	58	32	297,376	3.87	\$26.00	\$29,921,973	892,128	\$4,014,576
2005	55	31	256,432	3.91	\$38.00	\$38,100,667	769,296	\$3,461,832
<u>2006</u>	57	29	272,570	4.05	\$42.50	\$46,916,111	817,710	\$3,679,695
	No.	Farms	No. Skins	Belly Width	Ski	in Value	Меа	nt ³

	No. Farms		No. Skins	No. Skins Belly Width Skin Value Meat ³		Skin Value		nt ³
Year 1	Licensed	Sold Skins	Sold	(cm) ⁴	Avg/cm	Total	Amount (lbs)	Value
2007	62	29	305,176	24.79	\$7.25	\$54,848,520	915,528	\$4,119,876
2008 ⁵	60	31	290,027	26.40	\$5.50	\$42,111,920	870,081	\$3,915,365
2009	59	27	303,028	28.65	\$5.00	\$43,408,761	909,084	\$4,090,878

¹ Tag year extends from September of the year designated to the next September (example: 1997 = 9/97 to 8/98).

² Sale of meat not permitted; La. Health Department regulations first allowed meat sales in 1979.

³ Deboned from 1980-present.

⁴ Average total length for 2007 is 4.08', 2008 is 4.25' and 2009 is 4.58'.

Worldwide economic recession caused alligator hide demand to decline dramatically.
 Subject to change, numbers updated November 8, 2011.

Table 5. Alligator Resource Fund Income, Expenditures, and Balance, FY 2005-2011

	FY 2005 ¹	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Severance Tax	83,732	76,166	77,224	78,112	80,485	87,725	47,795
Interest Earned	38,120	72,961	93,166	80,489	32,371	8,312	5,558
Shipping Label Fees	94,900	69,196	9,800	74,192	126,608	56	20,096
Collection Permit Fees	5,850	3,050	3,150	6,175	2,650	3,375	3,925
Alligator Hide Tag Fees	884,266	1,095,344	1,235,580	1,249,788	1,295,270	1,403,600	764,720
Res. Alligator Hunter Licenses					56,025	43,025	52,200
N/R Alligator Hunter Licenses					18,900	21,600	26,700
Misc income			22			4	1,736
Reduction by Executive Order		-79,847			-100,821		
Total Revenue	1,106,868	1,236,870	1,418,942	1,488,756	1,511,488	1,567,697	922,730
Less Expenditures	-1,165,338	-1,230,310	-1,317,939	-1,577,739	-1,543,289	-1,495,350	-1,335,694
Net annual income	-58,470	6,560	101,003	-88,983	-31,801	72,347	-412,964
Add balance from prior year	1,673,453	1,614,983	1,621,543	1,722,546	1,633,563	1,601,762	1,674,109
YEAR-END BALANCE	1,614,983	1,621,543	1,722,546	1,633,563	1,601,762	1,674,109	1,261,145

¹ Due to the reduction in the alligator hide tag fee, ARF expenditures exceeded ARF income, thereby resulting in a net annual loss of revenue in the ARF.

Table 6. Alligator Management Program Expenditures for Fiscal Years 2009, 2010 and 2011

Budget Category	2009	2010	2011
Daaget Gategory	2000	2010	2011
Personal Services	\$953,812	\$913,720	\$817,028
Travel	\$10,942	\$8,342	\$10,081
Operating Services	\$42,134	\$73,848	\$106,741
Supplies	\$97,521	\$56,070	\$38,109
Professional Services	\$28	\$0	\$56
Other Charges	\$57,550	\$73,456	\$68,566
Acquisitions	\$19,301	\$49,904	\$1,243
Major Repairs	\$7,454	\$2,215	\$3,679
Interagency Billings	\$47,461	\$33,404	\$33,409
Totals	\$1,236,203	\$1,210,959	\$1,078,912

EXHIBIT 1

2010 MARSH ALLIGATOR TAG ALLOTMENT BY PARISH

	Tag Allotment/Marsh Type					
	Brackish	Intermediate	Fresh			
(A)Cameron East	1:225	1:100	1:100			
(A)Cameron Central	1:400	1:225	1:115			
^(A) Cameron West	1:225	1:100	1:130			
Calcasieu	1:250	1:110	1:80			
Jeff Davis			1:90			
(B)Vermilion West	1:90	1:85	1:125			
(B)Vermilion East	1:175	1:175	1:75			
Iberia		1:120	1:120			
St. Mary		1:65	1:65			
Terrebonne	1:125	1:55	1:55			
Lafourche	1:140	1:55	1:90			
St. Charles	1:75	1:65	1:65			
St. John the Baptist		1:55	1:55			
Jefferson	1:200	1:55	1:60			
Orleans	1:400	1:400				
(C) Plaquemines West	1:250	1:150	1:55			
(D) Plaquemines East	1:400	1:100	1:55			
Plaquemines Delta	1:225	1:175	1:160			
St. Bernard	1:400	1:100				
St. Tammany	1:125	1:60	1:60			
Tangipahoa		1:55	1:120			

Cypress-Tupelo Swamp Dewatered Marsh 1:160 1:500

^(A)The dividing line for Cameron East and Central is the Mermentau River, the dividing line for Cameron

⁽E)Transitional Marsh 1:400 (except transitional marsh in Plaquemines East will be issued at the rate of 1 tag: per 300 acres)

Central and West is the Calcasieu River/Calcasieu Lake.

(B) The dividing line for Vermilion East and West is the Vermilion River Cutoff (4-mile cut).

⁽C) Marsh west of Mississippi River.

⁽D) Marsh east of Mississippi River.

⁽E) Marsh areas which are characterized by a generally declining alligator population caused by degradation of habitat.

2010 NON-MARSH ALLIGATOR TAG ALLOTMENT BY OFFICE AND PARISH LAKE REGION

OFFICE	PARISH	HABITAT	ACRES OF HABITAT	TAG ALLOTMENT	REMARKS
		ПАВПАТ	ПАВПАТ	ALLOTWENT	REWARRS
Minden	Bienville/				
	Bossier/	Lake Bistineau	1,720	30	Public Lake Lottery Harvest
	Webster				
	Caddo	Wallace Lake	2,000	20	Public Lake Lottery Harvest
	Bossier	Black/Cypress Lake	400	30	Public Lake Lottery Harvest
	Caddo	Cross Lake	500	30	Public Lake Lottery Harvest
	Bienville	Kepler Lake	250	20	Public Lake Lottery Harvest
	Jackson	Caney Lake	5,000	8	Public Lake Lottery Harvest
	Rapides	Kincaid Lake	1,000	2	Public Lake Lottery Harvest
	Winn	Saline Lake	3,000		Public Lake Lottery Harvest
	Saline, DeSoto	Toledo Bend	4,000		Public Lake Lottery Harvest
	Rapides	Cotile Lake	400		Public Lake Lottery Harvest
	Grant	Nantachie Lake	800		Public Lake Lottery Harvest
	Grant	latt Lake	4,000		Public Lake Lottery Harvest
	Rapides	Indian Creek	500	2	Public Lake Lottery Harvest
SUB TOTAL			23,570	168	
	Ouachita	Bayou Desaird	580	6	Public Lake Lottery Harvest
	Ouachita/	Bartholomew Lake	405	6	Public Lake Lottery Harvest
Monroe	Morehouse				
	Tensas	Big Lake WMA	1,000	15	WMA Lottery Harvest
		Buckhorn WMA	300	12	WMA Lottery Harvest
		Lake St. Joseph	800		Public Lake Lottery Harvest
		Lake Bruin	2,800		Public Lake Lottery Harvest
		Lake St. John	200	20	Public Lake Lottery Harvest
	Caldwell	Beouf WMA	2,200	36	WMA Lottery Harvest
	Concordia	Lake Concordia	800	16	Public Lake Lottery Harvest
SUB TOTAL			9,085	141	

2010 NON-MARSH ALLIGATOR TAG ALLOTMENT BY OFFICE AND PARISH LAKE REGION

-		LAKE KEO			•
OFFICE	PARISH	HABITAT	ACRES OF HABITAT	TAG ALLOTMENT	REMARKS
Lake Charles	Evangeline	Chicot Lake	1,625	20	State Parks (Experimental Harvest)
	Vernon	Anacoco Lake	1,000	6	Public Lake Lottery Harvest
SUB TOTAL			2,625	26	
Opelousas	Avoyelles	Grassy Lake WMA Grassy Lake WMA Spring Bayou WMA	1,000 5,000	9 25 24	WMA Lottery Harvest Highest Bidder Basis WMA Lottery Harvest
		Spring Bayou WMA Pomme-de-Terre WMA	800	70 12	Highest Bidder Basis Highest Bidder Basis
	Iberia/St. Martin	Attakapas WMA	26,300	25	Highest Bidder Basis
	Assumption	Elm Hall WMA	2,843	15	WMA Lottery Harvest
Opelousas	Iberville, Pt. Coupee	Sherburne COE Lands	3,300	33	Highest Bidder Basis
	Iberville, St. Martin, Pt. Coupee	Sherburne WMA	11,780	12	WMA Lottery Harvest
	Concordia	Three Rivers WMA Red River WMA	4,500 3,500	60 51	WMA Lottery Harvest WMA Lottery Harvest
	La Salle	Dewey Wills WMA	8,000	25	Highest Bidder Basis
SUB TOTAL			67,023	361	
LAKE REGION TOTALS			102,303	696	Experimental Harvests

2010 NON-MARSH ALLIGATOR TAG ALLOTMENT BY OFFICE AND PARISH CYPRESS-TUPELO SWAMP REGION

		ACRES OF	TAG		
OFFICE	PARISH	HABITAT	ALLOTMENT	ACRES/TAG	REMARKS
Opelousas	Iberville Lafayette	29,880 1,200	187 8	160 160	Tag allotment based upon review of prior years harvest statistics, night counts and alligator model.
	Pointe Coupee	1,000	6	160	
	W. Baton Rouge	7,040	44	160	
SUB TOTAL		39,120	245	160	
Baton Rouge	Ascension E. Baton Rouge	40,320 2,000	252 13	160 160	Tag allotment based upon review of prior years harvest statistics, night counts and alligator model.
	Livingston	66,720	417	160	
	Tangipahoa	36,181	226	160	
SUB TOTAL		145,221	908	160	
New Orleans	St. Charles St. James	39,340 76,960	246 481	160 160	Tag allotment based upon review of prior years harvest statistics, night counts and alligator model.
	St. John	104,320	652	160	
SUB TOTAL		220,620	1,379	160	
New Iberia - Bourg	Assumption	98,560	616	160	Tag allotment based upon review of prior years harvests statistics,
	Iberia	31,550	197	160	night counts and alligator model.
	Lafourche	112,350	702	160	
	St. Mary	60,190	376	160	
	Terrebonne	43,014	269	160	
SUB TOTAL		345,664	2,160	160	
SWAMP TOTAL		750,625	4,692	160	

ATCHAFALAYA BASIN ALLIGATOR HABITAT

REGION	ACREAGE	DESCRIPTION
A. Henderson Lake	15,000	Bounded on the west by the West Guide Levee, on the North by Little Fordoche Bayou, on the east by the Haha Bay and Gim Slough and on the south by La. Hwy. 3177.
B. Crook Chen Cove- Buffalo Cove	32,000	Beginning at the northwest corner of Attakapas W.M.A.: A line north along Lake Fausse Point Cut to Bayou Benoit; west to the West Guide Levee, north to the East-West Canal located approximately 3 miles south of Catahoula, La.: East approximately 2 miles to canal; southeast on the same canal to Bayou Crook Chene; east to the main channel of the Atchafalaya River; south to the north boundary of Attakapas W.M.A.; west to point of beginning.
C. Spike Bay-Berry Lake	8,000	Beginning at a point 1-1/2 miles northwest of Bayou Sorrel Landing: west along canal 5 miles; south along Spike Bay for 2 miles; east to intersect Bayou Sorrel then continue east along Bayou Sorrel to East Guide Levee; north to point of beginning.
D. Upper Grand River Flats	12,000	Beginning at Upper Grand River Landing: north along East Guide Levee approximately 9 miles to a canal running northwest; northwest along that canal 2-1/2 miles to King's Ditch; south approximately 5 miles to include Billy Little Lakes; southeast approximately 4 miles to intersection of Upper Grand River and Little Tensas Bayou, east along Upper Grand River to point of beginning.
E. Bayou Pigeon-Belle River-Flat Lake	140,000	Beginning at Bayou Pigeon Landing; south along East Guide Levee to Morgan City (excluding Flat Lake); north-northwest along east side of the main channel of Six Mile Lake approximately 10 miles to 21-Inch Canal; northeast on 21-Inch Canal to Bayou Boutte; north on Bayou Boutte to the east boundary line of Attakapas W.M.A.; then north along its east boundary to Grand Lake; north along the east bank of Grand Lake to Keelboat Pass; northeast along Keelboat Pass and Flat Lake Pass to intersection of Williams Canal and a canal running southwest-northeast; northeast along that canal to intersection of Intracoastal Canal (East Guide Levee); south to Bayou Pigeon Landing.
TOTAL ALLIGATOR HABITAT WITHIN BASIN TYPE	207,000	Tags may be issued at the rate of one tag per 500 acres of habitat.

2010 NON-MARSH ALLIGATOR TAG ALLOTMENT BY REGIONS

REGION	ACRES OF HABITAT	ALLOTMENT	ACRES/TAG	REMARKS
Public Lakes/Non-Coastal WMAs	102,203	696		Includes public lakes and non-coastal Wildlife Management Areas. Tag allotment may vary depending on alligator populations.
Cypress-Tupelo Swamp	750,625	4,692	160	Swamp habitat outside the Atchafalaya Basin.
Atchafalaya Basin	207,000	414	500	That portion of the Atchafalaya Basin determined to be Cypress- Tupelo swamp containing permanent water as determined by aerial observations as well as approximately 400 miles of travel by boat during April-June, 1985.
GRAND TOTAL	1,059,828	5,802		

Additionally:

Any private cypress-lake region habitat or coastal marsh alligator habitat determined by Department personnel to have a reproducing population may be issued tags at the rate of one tag per 80 acres of habitat; exceptionally dense alligator populations on a localized area may be issued tags at the rate of 1 tag per 25 acres of habitat (requires coordination and annual evaluation with Coastal and Nongame Resources or Wildlife Division personnel). In areas containing minimal acreage of isolated parcels of non-contiguous wetland habitat, an individual landowner may apply for an alligator harvest tag to remove an alligator from his property during the open alligator season. Such habitats include fresh marsh, cypress-tupelo swamp, lake habitat, ponds/borrow pits.

Approved by:

Robert J. Barham, Secretary
La. Dept. of Wildlife and Fisheries

DATE

7-21-2010