



NORTH CAROLINA
WILDLIFE RESOURCES
COMMISSION

CONSERVATION PAYS OFF!

Wildlife Yields Substantial Economic
Impacts to North Carolina



\$3.3 BILLION POSITIVE IMPACT TO N.C. ECONOMY

- \$2.4 Billion - Fishing and hunting
 - 335,000 Hunters
 - 1,525,000 Anglers
- \$930 Million - Wildlife watching
 - 2.4 Million Wildlife watchers

Source: USFWS National Survey of Fishing, Hunting, and
Wildlife-Associated Recreation 2011

NORTH CAROLINA WILDLIFE RESOURCES COMMISSION VISION

The North Carolina Wildlife Resources Commission is providing safe, comprehensive, effective and efficient fisheries, wildlife and boating programs that conserve the diversity and abundance of the state's wildlife resources...

—N.C. Wildlife Resources Commission
Strategic Plan 2009

THE HONORABLE PATRICK L. McCRORY

Governor of North Carolina

MEMBERS OF THE GENERAL ASSEMBLY

Raleigh, North Carolina



Dear Governor McCrory and Members of the General Assembly:

Sixty-six years ago, the North Carolina General Assembly authorized creation of the North Carolina Wildlife Resources Commission and since that time, this agency has been responsible for the management of those resources. I am pleased to present this Report on the Status of Wildlife Conservation.

Primary to good management of the state's wildlife resources is the well-being of its wildlife animals—a value documented by man since the earliest days of human communication. As far back as 15,000 B.C., cave paintings have demonstrated our dependence on and our wonder of wildlife.

Much has changed since those pre-historic days but our appreciation of wildlife has not. The North Carolina Wildlife Resources Commission provides ready access to hunting, fishing and wildlife viewing opportunities and to education for the public about wildlife, wild places and wildlife-related recreation. We manage wildlife populations through research and science, wise use and public input, and by regulation and enforcement. Because of these efforts and your support, hunting, fishing, and other forms of outdoor recreation are popular and sustainable.

Our successes are many and each one precious.

Today, the agency is responding to many important challenges. The impacts of human population growth and urban development on wildlife species and their habitats can have disrupting and far-reaching consequences. We must recognize the demographic trends that show most North Carolinians live in urban areas, well isolated from daily contact with wildlife and the outdoors. Future conservation successes must be built with the support and participation of this changing customer base. This can only be accomplished through understanding their needs and designing our programs and services to meet them.

The North Carolina Wildlife Resources Commission is well prepared to meet these challenges by following the guidelines set out in our Strategic Plan. We are aligning our work to match our vision and in this Report, you will see brief alignment summaries from two areas of our organization that have already begun restructuring, Enforcement and Engineering/Lands Management. Strategic reviews and reorganization are taking place and will be ongoing, agency-wide.

We have also included written snapshots of our work and updates on our progress. A great many of our successes are reflected in financial returns to the State of North Carolina's economy and the amount of those returns is immense. Conservation pays off, both in financial and conscientious ways.

On behalf of the Board of Commissioners and our employees, thank you for your initial faith and continuing support. Our combined efforts on behalf of wildlife conservation add great value to the beautiful State of North Carolina. Truly, a value beyond measure.

Respectfully submitted,

A handwritten signature in black ink, reading "Gordon S. Myers".

Gordon Myers, Executive Director

North Carolina Wildlife Resources Commission

CONSERVATION PAYS OFF BIG IN

HUNTING & FISHING

*Hunting and fishing has a huge impact on the N.C. economy. **Numbers of resident hunters are increasing and North Carolina is ranked No. 10 in the nation for number of non-resident hunters (SOURCE: National Shooting Sports Foundation 2012). Just this year, Bassmaster magazine ranks four of our lakes among the top bass fishing spots in the nation. The American Sportsfishing Association ranks North Carolina No. 4 in visiting non-resident angler destinations, and Field & Stream magazine ranks our whitetail deer hunting some of the best in the country. We continuously pursue ways to manage game populations for the conservation of the species and for the continued enjoyment of outdoor sports participants. Here are a few examples of projects underway:***

HUNTER RECRUITMENT AND MENTORING

The social support of a hunting mentor is critical for the continuation of the new student in the pleasure of hunting. For many people, hunting contains a valued social component that can be as important as the actual hunting itself. Mentors bring experience and fellowships.

In 2010, the agency launched its first “Hats On” hunting mentor campaign, a pilot program with the goal of asking existing hunters to mentor a new hunter. Hats On was created to bring awareness to the importance of hunter mentoring in maintaining our hunting heritage. Studies have found that most new hunters come to the activity through introduction by a friend or family member.

In addition, the Commission began placing more information for new hunters on its web site, and began partnering with other groups, such as the Quality Deer Management

Association, to provide workshops for new hunters. **Over 3,500 mentors signed up. A second campaign (2012) signed-up 5,900, a 69% increase.**

Other strategies are also being implemented. The Commission continues to hold special hunts, recruit new sportsmen through the Youth Hunter Safety tournament, and has adopted a week-long, youth-only turkey season for 2013, with the goal of getting more young hunters in the field.

The Commission recently held its first Strategic Recruitment and Retention Initiative, a retreat that brought together staff members, commissioners and other state agency program leaders to hear ideas from other states and to discuss new methods of hunter recruitment.

The bulk of the monetary support for wildlife conservation comes from the hunter and angler in the form of license fees and federal excise taxes on hunting and fishing related equipment.

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Source: USFWS National Survey of Fishing, Hunting, and
Wildlife-Associated Recreation 2011



Deploying a fish attractor.

MELISSA MCGAW/NCWRC



Mentoring brings young hunters to the field

MELISSA MCGAW/NCWRC

- Thanks to Hunter Mentoring, Hunter Education, and Becoming an Outdoors-Woman Programs, the number of women hunters has increased 42% in the last 6 years:

of licenses sold to women:

2006–07 : 12,994

2011–12 : 18,429

- What is the economic impact of a single hunter/fisherman?

\$1,115 per year - fisherman

\$4,930 per year - hunter

SOURCE: Economic Impact Report, Congressional Sportsmen's Foundation 2006

NEW MINIMUM-LENGTH LIMITS Smallmouth Bass in Western North Carolina Rivers and Streams

Commission biologists collected more than 2,800 smallmouth bass from over 40 rivers and streams in western North Carolina as part of a three-year study to determine the distribution and quality of these sport fisheries. Smallmouth bass occurred in a wide variety of streams and habitat types, and some of the best fisheries were found at surprisingly low elevations and warm temperatures in rivers of the western Piedmont. Although most smallmouth bass averaged 8 to 10 inches long, many streams produced good numbers of fish, and 20-inch fish were found at some locations. Data on growth and mortality rates allowed biologists to predict effectiveness of different fishing regulations, and a new minimum length limit was implemented in 2012 based on the analysis of these data. Biologists also used the data to provide anglers with guidance on the locations and quality

of smallmouth bass streams through directional brochures and from information on the Commission website.

EFFECTIVENESS OF FISH ATTRACTORS

Fish attractors are often used to enhance fish habitat and congregate fish in specific areas for anglers with the objective of increasing catch rates. The study was conducted using sonar equipment capable of producing video imaging. Sets of three types of artificial structures as well as traditional Christmas tree attractors were deployed in Lake Townsend in Greensboro and Lake Cammack in Burlington. The study demonstrated that all of the fish attractors held fish, but artificial structures remained intact and did not degrade over time when compared to the traditional Christmas tree attractors. Staff time and resources will be more efficiently used deploying artificial fish attractors, and this information will guide the Commission's work in this area.

ECONOMIC VALUE OF MOUNTAIN TROUT FISHING:

- **\$146 Million in direct spending, adding to the N.C. economy**

- **92,729 Mountain trout anglers per year**

SOURCE: Responsive Management Report (2008)

To sustain mountain trout fishing, the NCWRC produces and stocks more than:

- **800,000 catchable-size trout from 3 state hatcheries.**

CONSERVATION PAYS OFF THROUGH

WILDLIFE SCIENCE & HABITAT

When habitat is protected and improved for N.C. wildlife species, habitat is protected and improved for N.C. human residents as well. Many of our smallest wildlife animals serve as harbingers of water quality or air quality issues. What benefits wildlife conservation benefits us all.

Wildlife Science and Management activities include

- *Monitoring health and status of wildlife populations*
- *Developing and administering scientific research*
- *Addressing human-wildlife interactions through technical guidance*
- *Promoting and developing public fishing and hunting opportunities*
- *Recommending hunting and fishing regulations*
- *Addressing wildlife disease issues such as chronic wasting disease in deer and white-nose syndrome in bats*
- *Stocking public waters with warmwater and coldwater game fish species.*

Here are three examples of our ongoing scientific work:

BOG TURTLES

Every year, NCWRC wildlife diversity biologists search for the secretive bog turtle, a tiny species that is a state-listed threatened species, and a priority species in North Carolina's Wildlife Action Plan.

Commission staff heads up the effort to survey the bog turtle at sites where populations have been documented in the past as part of a long-term monitoring program for this species.

Bog turtles spend most of their time under the water, buried in mud, or hiding in thick vegetation, making them difficult to locate. Therefore, their population numbers are often hard to estimate. Fewer than 100 bog turtle populations have been documented in North Carolina. Habitat loss is the

greatest threat to their existence. Wetlands have been drained and filled for development, and many bogs are overgrown with trees, which dry out moss and grass habitats. Another threat to the wild bog turtle population in North Carolina is illegal collection for the pet trade.

This year's monitoring effort included surveying for bog turtles at 20 sites in four counties (Alleghany, Ashe, Henderson and Wilkes), with two sites visited twice. During these surveys, the crew captured 59 turtles that had been captured and marked previously and 28 turtles that had never been captured.

The Commission has been surveying for bog turtles since the 1980s to determine the status of populations. Information such as gender, age and shell length is recorded. Biologists are also working to conserve the rare wetland habitats in the upper Piedmont and Mountains where the turtles live.

CONSERVATION AQUACULTURE CENTER

NCWRC has converted an old storage shed at the Marion Fish Hatchery in McDowell County into the Conservation Aquaculture Center (CAC), using federal funding from the State Wildlife and Preventing Extinction grants along with other funds. The CAC is a propagation and holding facility for native freshwater mussels and nongame fishes, used to keep these species from entirely disappearing from North Carolina waters by providing a temporary home where they can reproduce and grow big enough to release into rivers where they were once found in abundance.

Some are short-term residents, like the wavy-rayed lamp-mussels and rainbow mussels, which were propagated from



Wildlife technicians probe wetlands in search of bog turtles.

USFWS



North Carolina bog turtle

NCWRC

Little Tennessee River brood stock and reared for one year at the CAC before being released into the Cheoah River in 2011. Others, such as the federally endangered Carolina heelsplitter and Tar River spiny mussel, will stay indefinitely until suitable habitat is found. Staff conducts all aspects of mussel culture—including the “grow-out” of juveniles—at the Center. From the water that constantly flows through the tanks to the substrate at the bottom of the tanks to the temperature of the air in the building, everything is set up to mimic, as closely as possible, the natural environment of freshwater mussels.

In addition to propagating and growing mussels, NCWRC staff uses the CAC to raise spotfin chubs, small fish that once were found in abundance in the tributaries of the Tennessee River but are now listed as federally threatened. In cooperation with the U.S. Fish and Wildlife Service and Conservation Fisheries, Inc., which propagate the spotfin chub at its facility in Tennessee, Commission biologists are working to keep the species from being listed as an Endangered Species.

CHEOAH RIVER / PIGEON RIVER (Spotfin Chub Restoration)

Biologists with the N.C. Wildlife Resources Commission continue their efforts to restore fish and mussels in the Cheoah and Pigeon rivers using animals propagated in hatcheries as well as some moved from other streams.

The restoration work, guided by the N.C. Wildlife Action Plan, reintroduces aquatic animals into waters where they were once found in abundance. In 2011, biologists placed several

thousand spotfin chub, a federally threatened fish, in the Cheoah River.

The goal of these restoration efforts is two-fold: to restore native fauna into rivers where they were found historically, and to improve the overall ecological health of the rivers. While most of these reintroductions were accomplished by collecting large numbers of relatively common fishes from places where they were abundant and releasing them into the Pigeon, some species were not plentiful enough to make collecting and releasing feasible. In those cases, the Commission worked with conservation partners, such as Conservation Fisheries, Inc., to hatch and raise species to release in these restoration projects.

Annual surveys to monitor the status of reintroduced species in the Cheoah and Pigeon rivers have shown the restorations to be great successes. Biologists have documented that reintroduced spotfin chubs have reproduced in the Cheoah River.

Restoration efforts began on the Pigeon River in 2004, where water quality has been recovering following decades of industrial pollution. The Commission partnered with the University of Tennessee, Evergreen Paper, the N.C. Division of Water Quality and others to conduct the restoration work. In the Cheoah River, biologists began work in 2008 after changes in operation at Santeetlah Dam restored water flow in the river sufficient to support the chub and other native species. Restoration efforts were funded through Alcoa Power’s Cheoah Restoration Fund, a mitigation measure brought about through the relicensing process for the Santeetlah hydroproject. As conditions in these rivers and others continue to improve, the Commission will continue to work with corporate, governmental, and non-governmental organizations to restore and sustain North Carolina’s natural heritage.

CONSERVATION AND PUBLIC SAFETY ARE ENHANCED THROUGH

WILDLIFE LAW ENFORCEMENT

N.C. Wildlife Enforcement Officers play a special role in both enforcement and conservation. Along with enforcing laws that involve hunting, fishing, trapping and boating on N.C. waterways, wildlife enforcement officers are involved in public safety and education. Their Hunter Education and Boating Safety courses and Pre-Launch Boating Safety Checks not only save life and limb but also help to prevent costly fines and penalties. Each encounter with the public is an opportunity to help sports and recreation enthusiasts become more aware of the need to conserve and enjoy North Carolina's wildlife resources.

NCWRC Law Enforcement activities address

- Public Safety
- Enforcement of rules and regulations established by the WRC and General Assembly
- Protection of state public trust resources by gaining compliance with game, fish and boating laws

WILDLIFE LAW ENFORCEMENT IS UNIQUE

North Carolina Wildlife Resources Commission wildlife law enforcement officers are authorized by the State of North Carolina to enforce fish and game laws. The NCWRC Wildlife Enforcement Mission Statement also pledges to conserve wildlife resources, promote safe responsible boating, and provide public safety for those enjoying wildlife related recreation.

As a primary directive, NCWRC Wildlife Enforcement Officers focus on the need to conserve wildlife and their habitat along with the need for public safety. Wildlife Enforcement

Officers also take a proactive approach during their interactions with the public and use those opportunities to educate and create awareness of conservation issues.

An ever-increasing responsibility is enforcing laws concerning the North Carolina's growing illegal wildlife trafficking activity. An example of this activity is noted here:

Illegal Wildlife Trafficking— One Officer's report:

"Several months ago, N.C. Wildlife enforcement officers became aware of three men collecting reptiles. We stopped them as they were headed out of town. They had in their possession, spotted turtles from Tyrrell County, a woods turtle from West Virginia along with a total of 230 additional specimens, illegal to possess. The wholesale value of these reptiles would have been \$25,592 which is equal to the current market value of over 25 pounds of marijuana. They were selling the catch to a middleman who would then resell them in China for \$3,000 each, many for medicinal purposes."

Illegal wildlife trafficking is the second largest threat to many species, only after loss of habitat. And this is a fast-growing crime.

Only Wildlife Enforcement Officers work the Illegal Wildlife Trafficking trade in North Carolina.



Wildlife officers on the water.

GEOFF CANTRELL / NCWRC



Hunter Education is a required course in N.C.

MELISSA MCGAW / NCWRC

NCWRC STRATEGIC REORGANIZATION: Aligning Work with Vision

The Law Enforcement section of NCWRC recently implemented a more effective and efficient operational protocol resulting from recommendations indicated by an agency-wide, ongoing administrative review.

Here is a summary of changes to date:

In June of 2011, the Division was authorized to fully implement a new district organization that included one lieutenant rather than two in each district. This implementation will be made as retirements and promotions create vacancies in lieutenant positions. As of August 2012, this structure has been implemented in six of the nine districts. Concurrent with this new lieutenant organization, the Division has also reduced the number of airplane pilots from four to three.

Restructuring in this manner addresses the goals of the agency's strategic planning and organizational review processes by examining efficiencies, eliminating redundancies, and enhancing effectiveness within current boundaries of fiscal and staff resources.

As a result of these reductions in supervisory staff, four new Wildlife Enforcement Officer positions have been allocated to the field in areas of the state with the greatest need for additional personnel. A special investigations unit was created that will focus its efforts on the commercialization of wildlife (trafficking) and other investigations that are time sensitive. *"This is a total of seven positions that were once largely administrative in nature being reallocated to field positions where the true law enforcement work is being done."*

THE VALUE OF WILDLIFE LAW ENFORCEMENT

N.C. Wildlife Enforcement Officers annually conduct, on average:

- 300 free Pre-launch Boating Safety Checks
- 100+ free Boating Safety Courses
- 1100 free (required) Hunter Education Courses
- 236,000 checks for safety and compliance.

Pre-launch safety checks help boaters prevent accidents and expensive fines. Not having an operational fire extinguisher on board, for example, can mean a \$35 fine and \$180 in court costs.

Boating Safety Courses can prevent even costlier experiences. Operating a vessel in a reckless or negligent manner can not only mean a substantial fine but can result in imprisonment.

N.C. Wildlife Enforcement works to eliminate non-compliance of state regulations by concentrating on safety awareness and education.

ON THE ROAD, ON THE WATER— DON'T DRINK AND DRIVE!

This is a partnership campaign with NCWRC Law Enforcement, N.C. State Highway Patrol, N.C. Alcohol Law Enforcement, N.C. Forensic Tests for Alcohol and N.C. Mothers Against Drunk Driving. Partnerships such as this one are efficient and effective for all agencies and have **greater** impact.

The results of this awareness and enforcement campaign indicate that arrests for operating a boat on the water while intoxicated have gone down 29% over 3 years.

CONSERVATION IS ASSURED BY

LANDS MANAGEMENT & CONSERVATION

By applying best practices to protect and enhance good water and air quality on managed lands, prevent soil erosion, and protect and preserve forested land and wetlands, habitat is protected, the economy is unencumbered, people live in a healthier climate and North Carolina remains one of the most beautiful states in the nation.

- **Landowners who want to protect wildlife species or N.C. Wildlife Action Plan priority wildlife habitats on their properties can apply for a reduced property tax assessment through the Wildlife Conservation Land Program. To date, more than 2,400 acres have been enrolled in the program, with more acreage added every year.**

- Longleaf pine forests are one priority wildlife habitat eligible for the Wildlife Conservation Land Program. A few of the species that depend on this type of habitat are bobwhite quail, a variety of songbirds and fox squirrels.

- Small wetland communities, another type of priority wildlife habitat, also qualify for the Program.

State Wildlife Grants enable NCWRC staff to conduct surveys to determine the status of the Northern pine snake, Southern hognose snake and many other species on Commission gamelands, private lands and other public lands.

Here are a few of our ongoing activities:

ACQUISITION OF WILDLIFE HABITATS

In keeping with the agency's mission to conserve North Carolina's wildlife resources and their habitats, the North Carolina Wildlife Resources Commission now owns or manages over 2

million acres of land that includes working forests, wetlands, stream banks and other habitats.

Thanks largely to North Carolina's Clean Water Management and Natural Heritage Trust Funds, and the assistance of numerous other federal and private conservation partners, these acquisitions will protect important wildlife habitats in perpetuity, as well as provide our State's sportsmen and sportswomen with public opportunities for hunting, fishing, trapping, and other wildlife-related activities.

TECHNICAL GUIDANCE TO LANDOWNERS

Wildlife Resources Commission biologists work with private landowners to apply appropriate wildlife management strategies on their properties and to implement practices that improve habitat conditions on their lands. Prescribed burning and planting of native warm season grasses are greatly enhanced by the direct assistance provided through the technical guidance program. Wildlife biologists also provide advice and guidance toward addressing human/wildlife conflicts in multiple scenarios and settings across the state.

Staff biologists provide professional expertise and direction to local, state and federal agencies regarding wildlife management and best conservation practices for lands they control. On Corporate Upland Habitat Restoration and Enhancement Program (CURE) properties managed by NCWRC biologists, **breeding bobwhite quail have increased by approximately 50% since**

Added Value Of Ecosystems

- 2 Million acres of NCWRC owned and managed land, contains HIGH Ecosystem value in flood protection, and positive effects on air and water quality, and erosion control.
- Such protection can prevent the need for additional environmental regulations.

SOURCE on Values: The Trust for Public Land: Conservation Economics (2011)

- Properties near natural protected areas realize nearly a 20% boost in property value.

SOURCE: The Economics Associated with Outdoor Recreation, Natural Resources Conservation and Historic Preservation in the United States (Lutzenhiser and Netusil (2001) For: The National Fish and Wildlife Foundation, By: Southwick Associates, (October 2011)

the program was initiated. Additionally, native grass and field border habitats managed on Corporate CURE properties can have 10–16 more winter songbirds per acre than traditional unmanaged row crop fields and pastures.

Small Game is Big Business in N.C.

- 150,000 small game hunters
- \$1,595 is the average expenditure of each hunter
- 3,132 jobs depend upon this sport

SOURCE: The Economic Benefit of Hunting, Fishing, & Wildlife Watching in N.C.—Southwick Associates 2006

NCWRC STRATEGIC REORGANIZATION: Aligning Work with Vision

NCWRC is reviewing and reorganizing our work processes agency-wide, to meet the goals of our Strategic Plan.

One of the first areas looked at was the efficiency of field-technician location across the state, including those in Lands Management. The review determined that, while many technicians in three separate divisions share the same skillset and do similar jobs, they were performing those jobs only for the division to which they were assigned. As a consequence, technicians were often traveling great distances to do work when another technician working for a different division was much closer to the work site.

Skillsets and geographic locations have now been cross-referenced and organized under a new agency-wide structure to achieve greater work efficiency. This realignment also allowed for the removal of several layers of supervision between leadership and workers, resulting in greater cost-savings and effectiveness.



KEN TAYLOR/NCWRC

OUR INFRASTRUCTURE

- 2 Million acres of public game lands:
 - 500,000 acres of gamelands owned
 - 1.6 Million managed through cooperative agreement
- 49 lakes and ponds, including 31 dams
- 73 waterfowl impoundments
- 39 camping areas on game lands
- 130 parking areas on game lands
- 1,878 miles of road maintained
- 6 Fish Hatcheries (7 Million fish stocked annually)
- 58 public fishing areas
- 211 public boating access areas
- 1,400 navigational aids
- 4 education centers
- 3,570 sq. miles of water in NC and 52,712 sq. miles of land, patrolled by Wildlife Law Enforcement.

CONSERVATION PAYS OFF IN

BOATING ACTIVITIES

NCWRC boating programs assure access to our waterways so that all North Carolina residents and visitors can enjoy this spectacular resource. Safe, aesthetically pleasing and plentiful docks, piers and navigational aids help to make boating experiences user-friendly, fun and relaxing.

- Southwick Associates fishing surveys (2008) indicate that the chief concern among fishermen is the need for improved or additional access to inland and coastal waters. The North Carolina Wildlife Resources Commission has made a concentrated effort to meet that concern.
- We conducted a statewide survey to determine boating access needs. NCWRC worked with the Division of Marine Fisheries and the N.C. General Assembly on legislation that resulted in the approval of \$20 Million in Water Access and Marine Industry funds for acquisition and construction of boating and waterfront projects. It also spearheaded an agreement with the N.C. Department of Transportation that made it possible for DOT and NCWRC to work together on access areas at bridge crossings throughout the state.
- NCWRC has designed a user-friendly online and mobile device interactive mapping system of all boating access areas in the state and implemented a funding plan to upgrade all access areas within a five-year period. And NCWRC has renovated or constructed nearly 70 boating access sites in the past four years.

Here is a summary of a few more of our activities on behalf of the boating community:

BOATING ACCESS AREAS IN N.C.

Boating services provided by the North Carolina Wildlife Resources Commission are some of our most popular activities. NCWRC boating access areas can provide vessel launching ramps and courtesy docks; restrooms and security lighting; parking areas, access roads and walkways; dock signage and

waterway navigational signs. The Commission maintains a database of statewide water access locations. We also issue fishing tournament weigh-in and special use permits for each Boating Access Area.

We also manage the Wildlife Inmate Services program in partnership with N.C. Department of Corrections, using inmate labor to build signs, docks, and grow native horticulture products used at boating and fishing areas. These products help standardize the look and feel of all NCWRC public boating areas. The program also sells these products to local governments furthering the Commission's goals and objectives.

NCWRC BOATING SERVICES INVOLVE

- A work area of 35,790 square miles of water in all 100 counties.
- Registering 135,000 vessels annually with over 350,000 registered boats in N.C. waters.
- Providing safety instruction to operators and enforcing boating laws.
- Partnering with nearly 150 local municipalities to build and maintain over 200 free public boating access areas and to provide over 1,400 buoys and navigational aids.
- We maintain 76 public fishing areas and we issue fishing tournament weigh-in permits, statewide.
- We provide services and assistance to N.C. State Parks and the U.S. Corps of Engineers.

From one of our stakeholders:

"One branch of our government that shows the taxpayer exactly how (where) our hard-earned money is going is the North Carolina Wildlife Resources Commission's Division of Engineering Services.

Wildlife conservation across North America is facing unprecedented challenges. North Carolina is no exception. The impacts of population growth and development on our natural areas and habitat are growing. -And with far-reaching consequences.

Fortunately, our Strategic Plan was designed to meet these challenges and we are actively aligning our work with that Strategic Vision.

Most North Carolinians now live in urban areas, well isolated from daily contact with wildlife and the outdoors. But popular NCWRC programs like hunting, fishing, wildlife viewing and recreational boating are motivating more and more of our newest residents to spend more time outside.

Fishermen, hunters and boaters from across the state are constantly amazed at the numbers of new, renovated or under construction boating access facilities they are seeing from one end of our state to the other. —The best we've ever seen, anywhere!"

—Fred Bonner,

Contributing Writer – Garner (NC) News, 6/9/2011.

Added Value Of Boating Projects

- 15+ new or renovated boating access areas annually
 - 1400+ navigational aids provided by NCWRC to N.C. communities
 - Brings in small businesses like bait stores, food and fuel providers and specialty shops.
 - N.C. 4th in Nation in # of recreational boats, trailers and accessories sold.
SOURCE: National Marine Manufacturers Association 2010
 - Total N.C. small boat manufacturers = 204
 - Total employees, boating industry = 8,301
SOURCE: NC Dept. of Commerce (September 2012) Press Release VisitNC
- Properties with passive recreation like boat ramps, realize nearly a 20% boost in property value.

SOURCE: The Economics Associated with Outdoor Recreation, Natural Resources Conservation and Historic Preservation in the United States (Lutzenhiser and Netusil (2001) For: The National Fish and Wildlife Foundation, By: Southwick Associates, (October 2011)



CONSERVATION INTO THE FUTURE WITH

EDUCATION & AWARENESS

The Commission's Wildlife Education Program is unique in that no other agency or institution in the state provides targeted wildlife education opportunities to all citizens, statewide. The program is essential to educating and informing the public on the importance of wildlife conservation and maintaining the management cycle that ensures the diversity and abundance of North Carolina's public trust wildlife resources. Wildlife Education is a vital part of a cycle that depends on recruitment of hunters, anglers, wildlife viewers and conservationists—an ongoing strategy that generates funding for wildlife research for Commission biologists; tourist and out-door industry dollars for local economies; and wildlife-related recreational opportunities for today's North Carolinians and future generations. Conservation Education activities involve:

- Education and outreach efforts designed to facilitate conservation of the state's wildlife and wild places
- Public Information and Communication activities
- Production of *Wildlife in North Carolina* magazine and other special publications.

Here are some examples of our work:

WILDLIFE PROGRAMS

Four NCWRC wildlife education centers conduct programming in wildlife conservation, management, and wildlife-related recreation, **teaching more than 20,000 students and teachers and 22,000 general public participants every year.** Centers are located in the Mountains, Piedmont, Sandhills and Coastal Plain regions, and provide introductory programs in wildlife conservation, aquatic resources, and hunting heritage for all ages. Aquatic resources education is funded in part by the federal Aquatic Resources Education program administered by the U.S. Fish and Wildlife Service, providing opportunities for public use, understanding and awareness of freshwater

fisheries and fishing in North Carolina. Centers provide all ages with the opportunity to engage in citizen-science wildlife projects, including the Box Turtle Initiative; NEST (Network for Endangered Sea Turtles); and Marine Mammal Stranding Network.

Our regional education specialists conduct educator workshops across the state. School teachers, teachers in training at colleges and universities, and youth leaders learn how to incorporate wildlife conservation into the classroom through Project WILD, CATCH and special-topic wildlife workshops. Regional specialists recently added a new wildlife curriculum for early childhood educators called Growing Up WILD.

WILDLIFE SKILLS WORKSHOPS

Our four Wildlife Education centers offer outdoor skills training for youth through onsite summer camps; Scout, 4-H, church and other youth group programs; and workshops for families. People of all ages come to the centers for wildlife-related skills in hunting and shooting sports, fishing, game and outdoor cooking, wildlife observation and nature photography. More than 200 Fish for Fun clinics are held each year across the state, reaching around 16,000 participants. Facilitated youth hunts and summer wildlife conservation camps immerse young people in intensive wildlife training that includes lifetime skills in recreation, safety, ethics, and the benefits of wildlife conservation. Becoming an Outdoors-Woman weekends for women and free clinics for adults provide similar lifetime skills training in fishing, hunting, game processing and cooking, shooting sports and wildlife watching.

Through outreach events, NCWRC education staff works with community partners to inform citizens of programs and opportunities to enjoy the state's wildlife resources.



Wildlife In North Carolina Wins National Award

Wildlife in North Carolina magazine, the official publication of the N.C. Wildlife Resources Commission, earned another honor this year, winning third place in the nation for wildlife magazines. The award came from the Association for Conservation Information, a nonprofit peer group for natural resource, environmental and wildlife communicators. The magazine has five times been named the nation's best publication and has numerous second- and third-place recognitions. *Wildlife in North Carolina* began publishing in 1937 and has been published continuously since, with the exception of a few months during World War II.

We touch hearts and minds to inspire North Carolina's People.

We go into classrooms with pelts and skulls and microscopes, and we accompany young people into the fields and to the streams to see for themselves the wonder of wildlife and magnificence of diversity.

We create stewards by showing land-owners how our work and their support is critical to the survival of the ancient longleaf pine, and how forests and habitat on farmlands can help assure the survival of our diverse and plentiful songbirds.

Stewardship helps assure sustainability for abundant and diverse wildlife resources and builds a caring, involved public supportive of North Carolina's wildlife conservation efforts.



MELISSA MCGAW/NCWRC



MELISSA MCGAW/NCWRC

RECOGNIZED

LEADERSHIP IN CONSERVATION

North Carolina Wildlife Resources Commission is dedicated to a sustainable conservation effort that provides safe, comprehensive, effective and efficient fisheries, wildlife and boating programs that conserve the diversity and abundance of the State's wildlife resources. Such a complex state-wide focus requires a team effort and strong leadership. With both of those valuable assets in place, the future of our State's wildlife is sound and secure.

2011 RECOVERY CHAMPION AWARD - USFWS

Wildlife Diversity Biologist Christine Kelly was awarded a 2011 Recovery Champion Award by the U.S. Fish and Wildlife Service, a prestigious award given to nine individuals across the country.

It honors U.S. Fish and Wildlife Service partners for outstanding efforts to conserve and protect threatened species of fish, wildlife and plants. Kelly was honored for her work with the Carolina Northern flying squirrel, an endangered species found isolated in small populations in only the highest mountains in North Carolina.

Kelly's work included designing launch poles to help the squirrels cross Cherohala Skyway in Western North Carolina.

The crossing structures, installed by Duke Energy in 2008, give the small mammals access to more foraging habitat, den sites and mates. The U.S. Fish and Wildlife Service award also honored Kelly for a partnership with the U.S. Forest Service and Appalachian Mountain Joint Ventures to plant red spruce, an important habitat for the squirrel. The balsam woolly adelgid has reduced Fraser fir trees and the hemlock woolly adelgid is reducing high elevation Eastern hemlocks, both important conifers for the squirrel.

FEDERAL HIGHWAY'S AWARD OF EXCELLENCE IN ECOSYSTEMS, HABITAT AND WILDLIFE

In 2011, the North Carolina Wetland Assessment Method Team received the Federal Highway Administration's Award of Excellence in Ecosystems, Habitat and Wildlife. The Team included staff from 10 government departments including NCWRC's David Cox, Habitat Conservation's Technical Guidance supervisor. Since 2003, Federal and State agencies worked toward the goal of developing a method to identify

On every page in this report we point out the value of conservation. But there are many things we focus on that are impossible to monetize. One of the greatest benefits to our work, one that doubles and triples the value of our work every single day is partnerships.

Whether partnering by mucking together through sandy creek beds in boots and coveralls looking for a tiny fish, or meeting in a board room to discuss precious shared resources, or participating in conversations seeking answers to mutual challenges, our partnerships are priceless. Together, we accomplish more.

The North Carolina Wildlife Resources Commission was created more than 60 years ago, born into partnerships with other state agencies and outdoor sports enthusiasts. Partners now number in the hundreds. They continue to be one of our most valuable assets.

and rate the functionality of a wetland. The resulting North Carolina Wetland Assessment Method takes no more than 15 minutes to apply, has been field tested at more than 200 sites across the state, and exemplifies how technology can be leveraged to reduce project time and cost while preserving ecosystem integrity and function.

EXCEPTIONAL ENVIRONMENTAL EDUCATION PROGRAM AWARD

Our Pisgah Center for Wildlife Education won the 2012 Exceptional Environmental Education Program Award from the Environmental Educators of North Carolina organization, recognizing excellence in environmental education.

NATIONAL BOATING ACCESS PROGRAM EXCELLENCE AWARD

In 2012, the States Organization devoted to the acquisition, development and administration of public recreational boating facilities, awarded the North Carolina Wildlife Commission the State Boating Access Program Excellence Award. The Commission maintains more than 200 free, public boating access areas for over 350,000 registered North Carolina vessels and for vessels trailered from other states.

The award reflects a concerted effort among partners, such as local governments, the N.C. Division of Marine Fisheries and the N.C. General Assembly. Outcomes of these partnerships allow the Commission to maintain open access to North Carolina's public waters.

2012 GOVERNOR'S AWARD FOR EXCELLENCE FOR OUTSTANDING SERVICE

Sgt. Anthony Sharum, a wildlife law enforcement officer with the N.C. Wildlife Resources Commission, received the 2012 Governor's Award for Excellence for Outstanding Service.

The award acknowledges and expresses appreciation for outstanding accomplishments that do not fall entirely within the scope of normal duties.

Sgt. Sharum performed above and beyond the call of duty last December. While charging a hunter for not having a hunting license, he discovered that the man was an unemployed single father with a 9-year old daughter at home. They were living in a rented trailer with little furniture and a kerosene heater. Food was limited.

Sgt. Sharum initiated a project to help the family through his network of professional colleagues and on social media. A local businessman donated a hunting license. Local churches, civic groups and neighbors provided clothes, household items and food. A fund was established to assist with immediate utility bills, fuel costs and other financial needs.

Sgt. Anthony Sharum's service was recognized to be singularly outstanding and deserving of the highest award an N.C. state employee can receive.

WILDLIFE MANAGEMENT EXCELLENCE AWARD

Benjy Strobe, a technical assistance biologist with the N.C. Wildlife Resources Commission, was given the Wildlife Management Excellence Award from the Southeastern Section of The Wildlife Society. The award recognizes his work in establishing and managing early-successional habitat on corporate-owned agriculture lands and farms in southeastern North Carolina.

Strobe, who has worked at the Commission for 11 years, has been instrumental in securing and managing \$566,000 in grant funds to implement more than 1,000 acres of habitat improvements. This year, the area in which he worked demonstrated what is likely the highest density of quail populations in North Carolina.

Strobe mainly works with corporate farmers, successfully entering this agricultural community and convincing farmers that making a profit can be accomplished while providing habitat and improving water quality.

THE N.C. SEA TURTLE PROJECT

2012 was a good year for sea turtle nesting on North Carolina's coast. Sea turtles laid 1,103 nests along North Carolina's coast—up from 967 in the previous year and 883 in 2010, the second highest since the project beginning, thanks to the help of over 600 volunteers.

MANY FIRSTS IN CUSTOMER SERVICE

ADMINISTRATIVE SERVICES



MELISSA MCGAW/NCWRC

The Information Technology (IT) and Customer Support Services (CSS) Sections of NCWRC's Administrative Services Division provide front-line interaction with the public through the sales of hunting, trapping and fishing licenses and vessel registration, as well as behind-the-scenes support in a number of other areas related to technology. ALVIN is an in-house system developed and maintained solely by agency staffs, who are on call 24/7 to maintain and support the application. **ALVIN processes over \$23,000,000 in license and vessel transactions each year.**

The CSS Section consists of three units responsible for administering the sale of hunting, inland, and coastal fishing licenses, permitted hunting opportunities, registration and titling of vessels. **This section is also responsible for the administration of more than 900 wildlife service agents statewide who provide license and registration services on behalf of the Wildlife Resources Commission.** Services for agents include training, administrative and technical support.

Here's a bird's eye view of our strong interaction with the North Carolina public:

- 1 Million+ hunting/fishing licenses sold
- 400,000 North Carolina Rules and Regulations books distributed (2012)
- \$23 Million+ in license and vessel transactions each year
- 400,000 coastal fishing licenses for N.C. Division of Marine Fisheries
- 135,000 vessels registered annually with more than
- 350,000 currently registered vessels in North Carolina
- IT supports technology for license sales, vessel registration and the processing of titles at
- 960 wildlife service agent locations across the state, 24/7
- 200,000 telephone /mail customer service contacts, annually
- NCWRC is one of **first** agencies in the nation to offer 100% real-time Internet-based license sales
- One of the **first** agencies to offer online licensing, vessel registration, big game reporting
- One of the **first** states to allow purchase of licenses from a mobile device
- Customers can also access GIS maps for game lands, hunting, fishing, and boating access areas
- 2 Million+ web site visits to agency Internet and Intranet per year
- 281 desktop computers, 437 laptops maintained (160 in enforcement vehicles)
- 236,000+ enforcement compliance checks a year

1.5 Million customers are affected by NCWRC's technology dedication to streamline operations, offer enhanced customer service and reduce expenses wherever possible.

REVENUES AT A GLANCE

AGENCY RECEIPTS

RECEIPTS - JULY 1, 2010–JUNE 30, 2012

	2010–2011	2011–2012
Hunting & Fishing License	16,360,399.95	16,852,736.25
Vessel Registration	5,156,905.00	5,150,285.00
Vessel Titling	947,520.00	989,450.00
Federal Funding	18,967,068.91	18,009,611.35
Sales Tax	21,500,000.00	
Appropriations		18,438,511.00
Gas tax	2,020,515.00	2,136,851.00
Non Game Checkoff	215,014.76	355,414.99
WRC License Plate Sales	19,960.00	19,700.00
Transfer - DOT	141,324.00	143,399.00
Transfer - DENR	821,515.64	144.92
Transfer - DOA	776,795.90	
Transfer - Endowment Fund	179,485.00	183,561.00
Transfer - CI	200,000.00	530,004.23
Sale of Timber Products	2,320,544.46	2,440,386.62
Sale of Surplus Property	88,932.78	73,978.72
Sale of Publications	448,465.68	308,782.66
Beaver Damage Control - County Funds	168,000.00	
Local Funds	70,561.87	90,662.84
Private Grants	454,610.96	260,189.59
State Grants	401,943.20	186,462.46
Interest Income - Short Term	199,598.67	144,295.23
Other Sales of Goods & Services	1,092,054.40	866,252.20
Professional Services	1,556,321.28	2,042,735.37
Rental of State Property	61,201.03	50,021.35
Fees, Registrations, Permits & Fines	270,048.32	282,085.34
Private Donations & Gifts	35,527.12	26,911.52
Miscellaneous	562,801.06	264,504.69
TOTAL RECEIPTS	\$75,037,114.99	\$69,846,937.33

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NORTH CAROLINA WILDLIFE RESOURCES COMMISSION

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NCWILDLIFE.ORG



February 2013

Cover photo © Russell Graves.

The N.C. Wildlife Resources Commission is an Equal Opportunity Employer, and all wildlife programs are administered for the benefit of all North Carolina citizens without prejudice toward age, sex, race, religion or national origin. Violations of this pledge may be reported to the N.C. Wildlife Resources Commission, Equal Employment Officer, Personnel Office, 1751 Varsity Drive, Raleigh, NC 27606. Telephone 919-707-0101.