CHAPTER 1.
INTRODUCTION

Problem and Need

For more than fifty years, state fish and wildlife agencies have benefited from funds provided by the Federal Aid in Wildlife Restoration Act (Pittman-Robertson), the Federal Aid in Sport Fisheries Restoration Act (Dingell-Johnson), and the Wallop-Breaux Act, to support the conservation and management of game fish and wildlife species. These funds, collected through federal excise taxes at the manufacturers' level, have been critical to the establishment of long-term agency conservation planning related to game species.

Yet conservation efforts for the majority of fish and wildlife species, those that are not hunted or fished, have in large part been opportunistic and crisis-driven, limited by a lack of funding, and by a lack of strategic approaches to species and habitat conservation. Today, with more than 1,000 species listed on the Federal Endangered and Threatened species list, and many more species in decline, the need has never been greater for a complimentary source of funding to support the conservation, protection, and restoration of the full array of wildlife species, especially those not covered under traditional funding strategies.

Legislative Mandate and Guidance

As a compromise following failed efforts to pass the Conservation and Reinvestment Act, in 2001 Congress developed new conservation funding legislation, the Wildlife Conservation and Restoration Program and the State Wildlife Grants Program. These programs were designed to assist states by providing annual allocations for the development and implementation of programs to benefit wildlife and their habitats. The funding was intended to supplement, not duplicate, existing fish and wildlife programs, and to target species in greatest need of conservation, species indicative of the diversity and health of the states' wildlife, and species with low and declining populations, as deemed appropriate by the states' fish and wildlife agencies.

Under these new funding measures, states were required to develop a Wildlife Action Plan by October 2005, integrating information across eight required elements :

1. Information on the distribution and abundance of species of wildlife, including low and declining populations as the state fish and wildlife agency deems appropriate, that are indicative of the diversity and health of the state's wildlife;

2. Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1);

3. Descriptions of problems which may adversely affect species identified in (1) or their habitats, and priority research and survey efforts needed to identify factors which may assist in restoration and improved conservation of these species and habitats;

4. Descriptions of conservation actions proposed to conserve the identified species and habitats and priorities for implementing such actions;

5. Proposed plans for monitoring species identified in (1) and their habitats, for monitoring the effectiveness of the conservation actions proposed in (4), and for adapting these conservation actions to respond appropriately to new information or changing conditions;

6. Descriptions of procedures to review the Plan at intervals not to exceed ten years;

7. Plans for coordinating the development, implementation, review, and revision of the Plan with federal, state, and local agencies and Indian tribes that manage significant land and water areas within the state or administer programs that significantly affect the conservation of identified species and habitats;

8. Documentation of broad public participation during development and implementation of the Plan.

The International Association of Fish and Wildlife Agencies and the US Fish & Wildlife Service established guidelines to supplement the eight required elements (Appendix A). These guidelines provided recommendations across four topics related to the development process: Planning Processes and Partnerships; Focus and Scope; Format and Content; and Completion, Outcomes, and Availability. States were encouraged to use these guidelines, both in the initial development process, and during future revisions, to improve and strengthen their Comprehensive Wildlife Conservation Strategies.

State Overview

In North Carolina, a huge diversity of fish and wildlife habitats exist across the three distinctive regions of the state: the Coastal Plain, the Piedmont, and the Mountains. These regions fall within larger ecoregions that span state borders and link North Carolina to neighboring states (Figure 1.1). Elevations ranging from sea level to over 6,000 feet provide habitat for over 1,000 species of birds, mammals, fish, reptiles, amphibians, mollusks, and crustaceans, in addition to thousands of other invertebrate species.
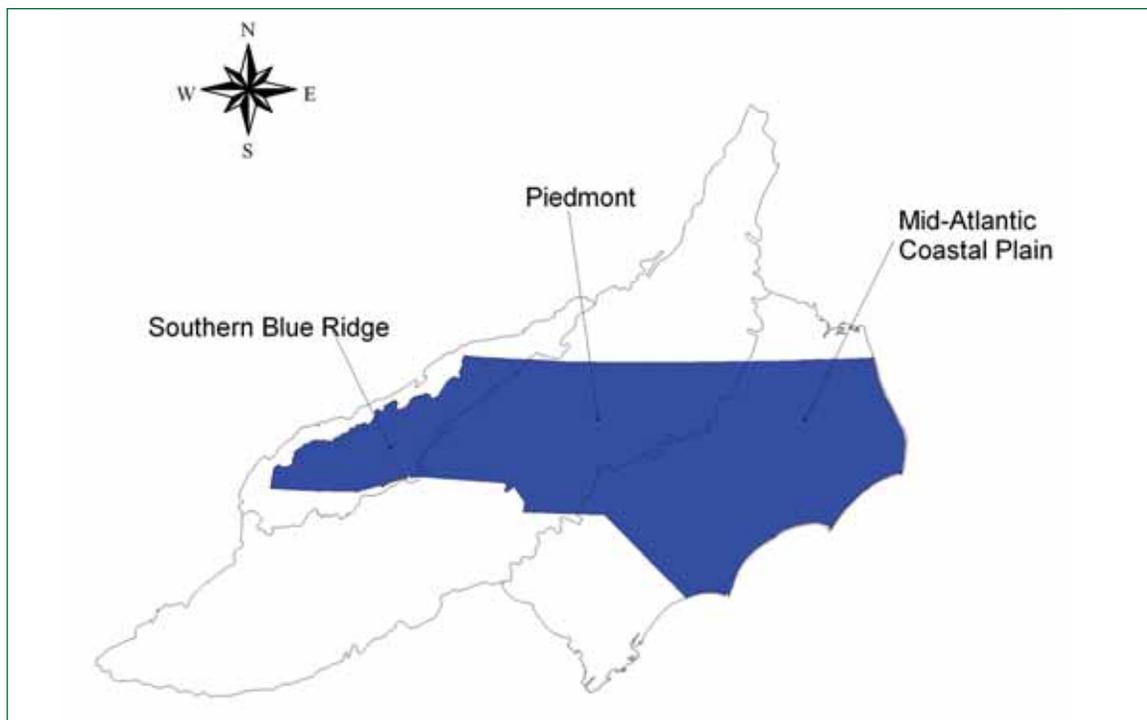

Figure 1.1. Ecoregional delineations in North Carolina (data source: NC GAP; ecoregions as defined by Bailey 1995).

The Coastal Plain region is characterized by flat lands extending from the coast inland an average of 125 miles. Elevations in the region increase inlandat approximately one foot per mile. The region covers almost two-fifths of the area of the state. The central Piedmont begins west of the coastal plain, separated by the "fall line" (a distinctive landscape change thought to have been the location of the shoreline thousands of years ago). The Piedmont is characterized by rolling hills ranging from 150–1,000 feet in elevation; the region covers another two-fifths of the state. The Mountain region, covering one-fifth of the state, is marked by numerous mountain ranges within the Southern Appalachians (principally the Blue Ridge and the Great Smoky Mountains). Forty-three peaks exceed 6,000 feet in elevation; 80 peaks exceed 5,000 feet.

The state of North Carolina is approximately 84% privately owned; this figure emphasizes the key role that private landowners play in determining the fate of the state's natural resources (NRCS 1997). Habitat degradation and loss due to development associated with human population growth are among the most threatening impacts to fish and wildlife species across the state. According to

the US Census Bureau, North Carolina experienced a 15% increase in population from 1990 to 1999, and growth continues unabated (2000). The Natural Resources Conservation Service reports that the state ranked sixth in the country for total acres of land developed between 1992 and 1997 (1997). As land development and population growth rates have increased, fish and wildlife habitats have been altered, fragmented and destroyed.

Today, more than 40 federally-listed endangered or threatened animal species and more than 60 state endangered or threatened animal species occur in the state. There are 115 state Species of Special Concern, and many more are at risk of being added to that list. North Carolina contains eight of the top 21 most endangered ecosystems in the country, based on extent of decline, present area (rarity), imminence of threat, and number of federally-listed threatened and endangered species associated with each type, including Southern Appalachian spruce-fir forest, longleaf pine forest and savanna, ancient Eastern deciduous forest, and southern forested wetlands (Noss et al., 1995). The state also contains many watersheds critical to the preservation of aquatic biodiversity in the southeast (Master et al., 1998). Clearly, the need is great for proactive conservation planning to address these concerns, in particular, and the full array of fish and wildlife species and habitat concerns in general.

Value and Goals

North Carolina's Wildlife Action Plan (hereafter Plan) is a guide to the North Carolina Wildlife Resources Commission (hereafter Commission) and to our partners in conservation for sound management of North Carolina's fish and wildlife resources into the future. Unlike many planning documents in the past, this Plan provides critical direction and serves as a blueprint for fish and wildlife conservation activities in the state. Within, we have identified significant wildlife resource and critical habitats across the state, as well as priorities for conserving those resources. We have addressed local, regional, and state-wide concerns across key terrestrial and aquatic habitats, using the best information currently available. In addition, we have identified critical knowledge gaps and future data needs. We have outlined a methodology for prioritizing activities that allows for allocation and reallocation of available manpower, funds, and material resources to meet changing conservation needs. And we have established a framework to measure the effectiveness of proposed strategies and monitor the results. Our Plan not only fulfills the requirements set forth by Congress; it also serves as a practical and essential resource for future fish and wildlife conservation planning in North Carolina.

The goals of our Plan are to:

- Improve our understanding of the species diversity in our state and enhance our ability to make conservation or management decisions for all species.

- Conserve and enhance habitats and the communities they support.

- Foster partnerships and cooperative efforts among natural resource agencies, organizations, academia and private industry.

- Support educational efforts to improve understanding of our wildlife resources among the general public and conservation stakeholders.

- Support and improve existing regulations and programs aimed at conserving habitats and communities.

The implementation of activities set forth in the Plan will result in maintaining our diverse fish and wildlife resources well into the future. Not only will North Carolina agencies and organizations dedicated to natural resource management and conservation benefit from the planning resource, but the citizens of the state will also benefit by the efforts put forth to maintain an environment favorable to wildlife. The continued availability of natural lands and wildlife populations will allow those engaged in wildlife-oriented recreation, be it consumptive or non-consumptive, to continue to enjoy their pursuits and will enhance those opportunities. More importantly, intact habitats and functioning ecosystems play a critical role in supporting all life on this planet, including our own.

Report Organization and Format

The following chapters build on one another in similar fashion as our Plan was developed. Within the **Approach** section are summaries of key processes and exercises that we carried out in order to develop the Plan, including our organizational framework, partnerships and stakeholder involvement, and our species prioritization process. Next, in the section entitled **The State of the State**, we review the condition of the state's natural resources, identify threats affecting species and habitats in the state, key conservation partners, and challenges faced in program administration and efficacy. In **Statewide Conservation Strategies** we address four broad scale conservation issues, including strategies on urban wildlife issues, private lands wildlife management, land conservation, and education and outreach. Following is the **Species and Habitat Assessments & Conservation Strategies** section, in which we detail the conservation needs of terrestrial and aquatic systems within the habitats, river basins and coastal waters of the state. Next we address cross-cutting strategies among habitats and basins within **Synthesis of Conservation Priorities**. In **Status and Trends Monitoring**, we discuss species and habitat monitoring needs. We outline ways to monitor and measure the implementation of conservation activities, adapt to new information, and review and revise future iterations of the Plan **in Implementation Monitoring, Adaptive Management, & Review and Revision Procedures**. Last, we present **Acknowledgements**, a comprehensive **Glossary**, a **Key to Abbreviations and Acronyms**, and multiple **Appendices**.

References

Bailey, R. G. 1995. Descriptions of the ecoregions of the United States. Report #1391. U.S. Department of Agriculture, Forest Service.

Master, L. L., S. R. Flack, and B. A. Stein, editors. 1998. Rivers of life: critical watersheds for protecting freshwater biodiversity. The Nature Conservancy, Arlington, VA.

Natural Resources Conservation Service (NRCS). 1997. 1997 Natural Resources Inventory, revised December 2000. Natural Resources Conservation Service, U.S. Department of Agriculture, Washington, D.C.

Noss, R. F., E. T. LaRoe, and J. M. Scott. 1995. Endangered ecosystems of the United States: a preliminary assessment of loss and degradation. Biological Report 28. National Biological Service, U.S. Department of the Interior, Washington, D.C.

U.S. Census Bureau. 2000. 1990 to 1999 total population estimates. U.S. Census Bureau, Population Distribution Branch. http://www.census.gov/population.html.