

II. Executive Summary: Vermont's Wildlife Action Plan

Over the past 10-years Vermont's Wildlife Action Plan helped guide the Fish & Wildlife Department, partners, stakeholders and others in the conservation of our Species of Greatest Conservation Need and efforts to keep common species common. This 10-year revision to the Action Plan has allowed us to: evaluate our implementation efforts; reassess the status of our wildlife and their habitats; investigate emerging issues; and, renew our vision for fish and wildlife conservation in Vermont.

Notable in this revision are the growing specters of climate change and diseases, the role pollinators play in the environment and the reminder that habitat loss and degradation remain the primary threats to most wildlife.

This Wildlife Action Plan has not changed its focus on implementation through collaboration. Conserving and managing Vermont's wildlife requires everyone's help. From landowners and land managers, to municipalities and regional planning commissions, state and federal agencies, and non-profit organizations and for-profit businesses all need to work together if we are to achieve our goal.

Problems and Solutions

The problems most frequently identified as impacting Species of Greatest Conservation Need have not changed from our first Wildlife Action Plan, and are not new to those concerned about wildlife conservation, they include:

- Loss of habitat (from conversion, degradation, fragmentation)
- Impacts of roads and transportation systems
- Pollution and sedimentation
- Invasive species
- Information needs and data gaps critical to conservation success
- Climate change

As a wildlife conservation guide for the entire state—not just the Fish & Wildlife Department—the Wildlife Action Plan includes strategies that almost any individual or organization can implement. The most common strategies proposed here to alleviate problems impacting Species of Greatest Conservation Need also aren't new: they include habitat restoration; the provision of education and technical assistance to landowner and land managers; providing financial and economic incentives and encouraging wildlife-compatible resource use.

Moreover, the recommendations in this report underscore the need for proactive, cost-effective conservation efforts and increased collaboration, coordination and sharing of data and expertise among all those interested in wildlife conservation. The Wildlife Action Plan and its recommended strategies help realize these needs by:

- Providing a common conservation vision to guide state and federal agencies as well as non-profit conservation and sportsmen's organizations.

- Putting existing land and resource management and conservation needs into a broader context, providing recognition for the contributions that landowners and land managers are already making towards a long-term conservation strategy.
- Building a reliable, science-based data set to provide a “big picture” view (biophysical region and statewide) of Vermont’s wildlife resources to establish current conditions and to measure changes into the future. These data will allow state agencies to work with the public and private sector more effectively.
- Identifying areas where conservation activities will provide the greatest benefit to cost ratio (thereby increasing the effectiveness of limited conservation resources).
- Allowing use of existing programs to more effectively provide incentives or technical assistance to private landowners for voluntary actions to conserve natural resources on private lands and identify the need for additional landowner incentive or technical assistance programs.

The Future of Wildlife Conservation

State Wildlife Grants funding comes at a critical time. The traditional funding source for wildlife conservation by state fish and wildlife agencies has been sportsmen. Hunting, fishing and trapping licenses and taxes on their gear account for nearly 70% of Vermont's wildlife conservation funds (down 10% since our first Wildlife Action Plan was released in 2005). But the pressures on wildlife have both changed and increased in intensity since these funding programs began in the early decades of the 1900's. Today, these funds, most of which are dedicated for game and sportfish species, are stretched thin as the Fish & Wildlife Department addresses new issues and problems such as development, Act 250 reviews, pollution, invasive species and overabundant wildlife. Furthermore, there are new and expanding constituencies interested in wildlife and putting pressure on wildlife including hikers and mountain bikers, bird watchers, and off-road vehicle users.

The State Wildlife Grants program is not intended to replace sportsmen's contributions. Rather, it will take some of the weight of conservation funding off the shoulders of sportsmen and broaden our capacity to conserve wildlife.

The task of conserving our Species of Greatest Conservation Need is challenging but we know success is possible from our history with wildlife conservation successes such as the wild turkey, white-tailed deer, moose, common loon, fisher and peregrine falcon. Conserving wildlife is in all our best interests. It means reducing the potential imposition of regulatory requirements on Vermont businesses and communities that come with threatened and endangered species listings. It means healthier ecosystems upon which we all depend. And it means a Vermont rich in wildlife which we can all enjoy.

The Wildlife Action Plan and State Wildlife Grants dollars mark the start of a new era in wildlife conservation, one where we can keep common species common.

Action Plan Overview

Congress created the State and Tribal Wildlife Grants Program (SWG) in 2001. To receive SWG funds, each state and territory is required to develop a Wildlife Action Plan. The goal of both the State Wildlife Grants program and the Action Plan is to prevent wildlife from becoming endangered through early, strategic efforts to conserve wildlife and habitat. SWG provides funding and the Action Plan provides the strategic guidance. SWG is now the nation's core program for preventing endangered species listings. Since 2001, Vermont has received or become eligible for more than \$8 million in State Wildlife Grant funds.

According to Congressional mandate, Wildlife Action Plan's must be updated at least every 10 years. This report represents the first revision of Vermont's Wildlife Action Plan, originally created in 2005. This revision has nine chapters and eight appendices as outlined here:

Chapter 1. Introduction describes the Vermont Fish & Wildlife Department's mission and approach to revising the Wildlife Action Plan. It discusses Vermonter's deep and abiding interest in fish and wildlife conservation, and the difficulties of conserving Vermont's natural heritage without stable and secure funding. The Congressional requirements for Wildlife Action Plans are presented along with a summary of the revision process and notable changes and additions to the 2015 Vermont Wildlife Action Plan, including: an in-depth consideration of climate change impacts to wildlife conservation; a design for landscape and habitat connectivity; greater attention to disease and pollinators. This chapter also contains the statewide goals and objectives for Wildlife Action Plan implementation.

Chapter 2. Vermont Overview describes Vermont's landscape and the ecological and land-use factors that contribute to Vermont's natural heritage. It provides both a historic and contemporary perspective on land use history and summarizes the significant threats and problems to Vermont's wildlife. It looks back at conservation successes and at the importance of education, law enforcement and recreation to wildlife conservation efforts—three areas not eligible for SWG funding.

Chapter 3. Climate Change and Wildlife Conservation is an in-depth look at climate change and wildlife conservation. It reviews the historic climate trends and predictions for future climate and summarizes the impacts of a changing climate on Vermont's ecology.

Chapter 4. Conservation at Multiple Scales explains how conservation is organized in this Wildlife Action Plan and how habitat classifications were developed for aquatic species and terrestrial species. From a focus on the status and needs of individual Species of Greatest Conservation Need (Appendix A) to their habitats (Appendix B) to taxon-wide conservation (Chapter 5) and landscape-scale conservation (chapter 6)

Chapter 5. Species of Greatest Conservation Need provides lists of Vermont's Species of Greatest Conservation Need and summarizes SGCN conservation needs by taxonomic group (amphibians and reptiles, birds, fishes, invertebrates, mammals and plants).

Chapter 6. Landscape Conservation describes the condition of Vermont's landscapes (historic, current and desired), provides a framework for identifying and prioritizing landscapes important to SGCN and natural heritage conservation based on six key landscape components (Interior Forest Blocks, Connectivity Blocks, Surface Waters and Riparian Areas, Riparian Areas for Connectivity, Physical Landscape Diversity Blocks, and Wildlife Road Crossings), identifies SGCN benefitting from landscape conservation, and identifies significant threats and priority conservation strategies.

Chapter 7. Monitoring, Implementation & Review outlines plans to track the status of Species of Greatest Conservation Need and their habitats, evaluate the effectiveness of conservation actions, implement the Wildlife Action Plan and keep it up-to-date.

Chapter 8. Action Plan Revision describes the efforts made to review and revise the Wildlife Action Plan. It describes the revision timeline, the planning team structure and outreach and public involvement efforts. It explains how SGCN were selected and how conservation actions were developed.

Chapter 9. Glossary and Acronym Key is our best effort to round-up and explain all the terms and acronyms used in this report.

Appendices A1-A5. Species of Greatest Conservation Need Conservation contains detailed reports on each SGCN exploring species status, distribution, habitat usage, threats and problems, research and monitoring needs and conservation actions.

Appendix B. Habitat & Community Summaries contains detailed reports on the 25 major habitat types found in Vermont. Reports explore habitat characteristics and locations, habitat condition (historic, current and desired future), efforts to benefit these habitats as part of 2005 Action Plan implementation, SGCN typically found in each habitat, threats and information needs, and priority conservation actions.

Appendix C. Threats and Actions defines the categories of threats, problems and conservation actions used in this report.

Appendix D. Vermont Species & Habitat Climate Vulnerability Assessment provides data from a 2013 effort to assess the vulnerability of fish, wildlife, plants and their habitats to climate changes. This Vermont Species & Habitat Climate Vulnerability Assessment investigated 18 species, 20 upland habitats, 11 wetland habitats, and 13 freshwater habitats.

Appendix E. Implementing the 2005 Wildlife Action Plan illustrates how that Action Plan has guided conservation in Vermont over the past decade. It provides multiple examples of how SWG funding has supported habitat and species population restoration, has helped leverage the conservation expenditures of other organizations, and has supported research and monitoring for a wide variety of species and the status of emerging threats such as White-nose Syndrome in bats.

Appendix F. Vermont Conservation Design: Maintaining and Enhancing an Ecologically Functional Landscape presents a landscape-level conservation design for protecting and enhancing ecological function. The lands and waters identified in this document are the areas of the state that are of highest priority for maintaining ecological integrity. Together, these lands comprise a connected landscape of large and intact forested habitat, healthy aquatic and riparian systems, and a full range of physical features (bedrock, soils, elevation, slope, and aspect) on which plant and animal natural communities depend. When conserved or managed appropriately to retain or enhance ecological function, these lands are expected to sustain Vermont's natural legacy into the future.

Appendix G. Mapping Vermont's Natural Heritage was developed to help municipal partners implement the Wildlife Action Plan. It is an essential guide to understanding natural resource data designed specifically for Vermont towns. It provides an understanding of available datasets, what they mean, and how to access them. It also serves as an important compliment to the 2004 "Conserving Vermont's Natural Heritage" that makes the case for why certain resources are critically important for conservation planning and provides an essential framework for looking at the landscape at different ecological scales. Using this same framework, "Mapping Vermont's Natural Heritage" provides the specific local data to help users connect ecological concepts to land-use planning tools and guides users through the next steps in ecological prioritization.

Appendix H. Vermont Big Game Management Plan is Vermont Fish & Wildlife Department's guide to managing the state's White-tailed Deer, Moose, Black Bear and Wild Turkey populations through 2020.

Appendix I. Crosswalk of Plant Species of Greatest Conservation Need by Habitat Type will help with coarse filter conservation planning.

Appendix J. A Landowner's Guide: Wildlife Habitat Management for Lands in Vermont