

Executive Summary

To provide additional funding for wildlife diversity, the U.S. Congress passed the Wildlife Conservation and Reinvestment Act in 2001 and State Wildlife Grant (SWG) legislation in 2002. In addition to providing annually-approved federal funding, the SWG program mandates each state and territory have a U. S. Fish and Wildlife Service approved State Wildlife Action Plan (formerly CWCS). Plans are to be revised and approved at 10 year intervals. This Action plan represents Ohio's first complete revision of the original CWCS that was approved in October 2005. The goal of the SWG program is to help ensure healthy fish and wildlife populations and wildlife diversity throughout the United States, especially species of greatest conservation need (SGCN).

State Wildlife Action Plan (SWAP) guidelines indicate that the document must include information on distribution and abundance of species of wildlife, location and condition of key habitats, problems associated with populations or their habitats, necessary actions for conserving priority species, plans for monitoring results, and a plan to review the document on a regular basis. In addition, each SWAP must be coordinated and developed with significant land holders and natural resource management agencies in the state, as well as involve broad public participation.

Ohio's Action Plan was assembled in part from existing strategic, tactical, and operational plans whose development included broad public and professional involvement and input. Updated information on SGCN, habitats, and conservation threats and actions was developed with input from a number of professional and public individuals from a variety of backgrounds, including academic, constituent groups, and non-government organizations.

The Action Plan also includes information about the process of reviewing the document, as well as information related to coordination of the plan with other conservation agencies and organizations, and detailed information about public involvement during development of the plan. The Plan is scheduled to be evaluated and updated every five years, although new data and emerging issues may be addressed at any time during plan implementation.

Ohio's Action Plan is organized into the following chapters and sections which describe the state, the conservation landscape, issues impacting Ohio's wildlife ecosystems, and the roadmap of actions to a better place for our species, habitats, and the people of Ohio.

Introduction to Ohio's State Wildlife Action Plan

The Introduction describes what the Action Plan is and its role in conservation in Ohio. It describes the development of the SWAP in terms of public participation and coordination with federal, state, and local agencies. In addition, a discussion of evaluation and adaptation of the Action Plan is included.

The Ohio Landscape

This chapter is intended to paint a picture of everything in Ohio that affects how conservation is practiced. It includes information on Ohio's climate and landscape, processes that influenced the state's natural resources as we know them today, and Ohio's wildlife and ecosystems. Information on demographics and economics is also contained in this chapter. This chapter includes a discussion of statewide threats and key conservation challenges, as well as Ohio's approach to conservation.

Ohio's First 10 Years of CWCS Implementation

This chapter highlights conservation efforts that occurred during, and facilitated by Ohio's first Comprehensive Wildlife Conservation Strategy. Projects accomplished by the Division of Wildlife and conservation partners are contained in lists organized by species and habitats. The fundamental differences between the original CWCS and revised SWAP are discussed in the context of what 10 years of experience has taught us. The chapter wraps up with a discussion of key goals for the next 10 years under the SWAP.

Monitoring, Evaluation, and Adaptive Management

Proper monitoring is key to our ability to track the success of conservation actions, ensuring the most efficient and effective use of staff, funds, and resources. As conditions change (e.g., land use patterns, climate change, population trends, new data and information acquired), adaptive management and implementation of the conservation actions identified in the Action Plan will allow us to respond appropriately.

This chapter describes how Ohio will use tools for information management and conservation planning to track the implementation and effectiveness of conservation actions. These tools are described in the Measuring the Effectiveness of State Wildlife Grants (AFWA 2011) final report, and the national Wildlife Tracking and Reporting Actions for the Conservation of Species (*TRACS*) database funded by U.S. Fish and Wildlife Service. The framework starts with a specific conservation action, and then a basic results chain is created linking the action to objectives, relevant threats, and targets (habitats and species). Appropriate indicators and measures are determined for each step in the chain, and monitoring data are used to track and populate those indicators. Information about the results chain, indicators, and measures is then entered into the *Wildlife TRACS* database. Effectiveness Measures is the process, and *TRACS* is the IT system used for reporting and tracking. Measurement of indicators for each step in the results chain provides the essential information needed for evaluating the effectiveness of conservation actions. Conservation actions will be monitored and measured throughout the 10-year implementation of Ohio's Action Plan.

Species of Greatest Conservation Need

This chapter begins with an explanation how Ohio's SGCN were chosen, and the rationale behind the choices made. It describes which taxa groups are included in the Action Plan, and how conservation status ranks for each species were calculated.

Following that, historical information and current status of "listed" species under each taxa group is presented. This section is intended to give the reader some perspective on how natural and anthropogenic changes have affected each of the taxa groups since Ohio was settled. Following the history/status of each taxa group is the SGCN table for that group. This table contains all of the species within that taxa group, ranked by conservation status score. Also contained in the SGCN table is the State and Federal listing designation (if one applies), habitat association, rangewide occurrence, statewide occurrence, and Ohio population trend. The SGCN chapter contains the 9 species groups (amphibians, birds, butterflies/skippers, crayfish, dragonflies/damselflies, fish, mammals, mussels, reptiles) for which enough information was available to calculate conservation status ranks.

Climate Change

The chapter on the effects of climate change discusses the status of the science of climate change as a threat to species and habitats in Ohio. Regional climate changes are described, and regional species and habitats at greatest risk and most vulnerable to climate impacts are highlighted. A general discussion of the impacts of and biological responses to climate change covers the most likely and most discussed impacts/responses in current scientific literature. Lastly, a table of adaptation strategies and actions in response to climate change is included.

Ohio's Habitats

A discussion of Ohio's 15 habitat categories and related conservation threats and actions constitutes the most extensive chapter of Ohio's Action Plan. This chapter begins with a listing of the habitat categories chosen for Ohio's SWAP, and the rationale behind the choices of those categories. A general description of each habitat category is presented. The next section describes the conservation threats and actions related to the habitat categories, including how the threat/action classifications were determined. A description of how "threat impact scores" and "conservation action priority ranks" were calculated is included. Maps indicating the general distribution of terrestrial and aquatic habitats follow. Accompanying tables contain conservation threats and actions for each habitat category.

Individual habitat category sections within this chapter include a distribution map, and information on status, habitat description, and associated SGCN. Within each habitat section, Conservation Opportunity

Areas (terrestrial habitats) and Conservation Opportunity Watersheds (aquatic habitats) are identified and described. Within each of the individual habitat category sections are Conservation Threat and Conservation Action tables that are specific to that habitat. Both use the categories and classification system described in Salafsky et al. (2008). In the Conservation Threats table, each individual threat has an accompanying threat impact rank calculated using the NatureServe Conservation Status Assessments system in Master et al. (2012). In the Conservation Actions table, each individual action has an accompanying priority rank calculated using the system developed by the Georgia DNR and described in their SWAP. Each individual action also carries a reference to the specific threat(s) it addresses from the habitat conservation threats tables.

The Plan concludes with a literature cited section and 3 appendices.