# Ohio Comprehensive Wildlife Conservation Strategy

Submitted By
Ohio Department of Natural Resources
Division of Wildlife

# Comprehensive Wildlife Conservation Strategy

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Ohio Department of Natural Resources
Division of Wildlife

# Comprehensive Wildlife Conservation Strategy

# Executive Summary

To provide additional funding for wildlife diversity, the U.S. Congress passed the Wildlife Conservation and Reinvestment Act in 2001 and the State Wildlife Grant (SWG) legislation in 2002. In addition to providing annually-approved federal funding the SWG program mandates each state and territory submit a Comprehensive Wildlife Conservation Strategy (CWCS) to the U. S. Fish and Wildlife Service by October 1, 2005. The goal of the SWG program is to help ensure healthy fish and wildlife populations and wildlife diversity throughout the United States, especially those species in greatest need of conservation.

Guidelines for development of the CWCS and the criteria for approval were provided to the state and territory fish and wildlife agencies from early 2003 through the summer of 2005. These guidelines indicated 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. Each CWCS must be coordinated and developed with significant land holders and natural resource management agencies in the state, a process that also must include broad public participation.

The Ohio Department of Natural Resources, Division of Wildlife (DOW), began development of its CWCS in late 2003 with a review of its Comprehensive Management System (CMS) and related supporting documents. The DOW has employed a CMS to guide its decision making process for more than 15 years. As part of the CMS, the DOW developed a general strategic plan, from which were developed tactical and focus area plans, that were developed with broad public and professional involvement and input. These documents focus primarily on habitat and landscape issues and provide the framework for all Division of Wildlife projects and activities and therefore are the primary documents for the Division's CWCS.

The Division of Wildlife Strategic Plan, 2001-2010 includes nine strategic issues and 14 program areas. Strategic issues are identified areas of concern that will affect the fish and wildlife resources of Ohio or the Division of Wildlife over the life of the strategic plan. Program areas are focused areas of concern, interest, or responsibility that is related to one or more of the strategic issues. Each program area has specific issues with direction statements and strategies to address the issue. The Division's CMS documents, including strategic plan, tactical plans, focus area plans, and other related documents provided the basis for development of the CWCS.

The Division of Wildlife's CWCS is a tactical document broadly divided into two areas of concern, terrestrial wildlife conservation and aquatic wildlife conservation. The terrestrial information is categorized by five habitat tactical plans and eight focus area plans representing forestland, wetland, grassland, and unique habitats. The terrestrial tactical plans directly address the issues, direction, and strategies related to the habitat type, while the strategies identified in the terrestrial focus area plans are designed to provide sufficient habitat for viable populations of the most area-sensitive terrestrial species that inhabit the habitat type. Each plan includes overviews of the habitat type or focus area, as well as information about the wildlife species present, the conservation issues associated with the area, the conservation actions that are proposed for the area, and plans for monitoring both the populations and the

success of the proposed actions. A focus area plan (Appalachian Foothills Focus Area Plan) and terrestrial wildlife tactical plan (Lake Erie Water Snake) follow this executive summary. These examples allow the reader to view how the eight elements of the CWCS criteria were satisfied by the Division's documentation. Similar information is available for each of the five habitat types and eight focus area plans as well as each species of greatest conservation need as identified in the Division's CWCS.

The aquatic portion of the strategy is divided into 11 watershed plans that represent the principal watersheds of Ohio. Each watershed plan identifies the characteristics of the watershed, the aquatic species present, the conservation issues concerning the area, as well as the proposed actions and plans for monitoring the area and the impacts of the conservation actions taken. A watershed plan (Grand River Watershed Plan) and an aquatic species plan (Shovelnose Sturgeon Plan) follow this executive summary and will give the reader an opportunity to view how the eight elements of the CWCS are met. Similar information is available for each of the 11 focus watersheds and each of the aquatic species of greatest conservation need as identified in the Division's CWCS.

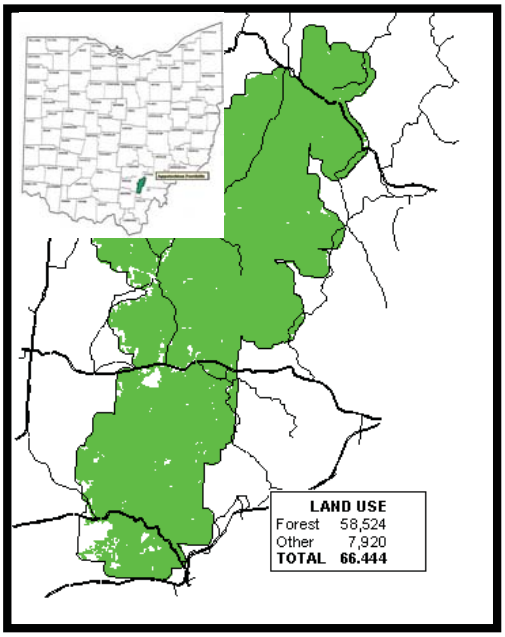
The technical portion of the CWCS (tactical plans, focus area plans, and watershed plans) was developed with input from a number of professional and public individuals from a variety of backgrounds, including academic, constituent groups, and non-governmental agencies. The plan is scheduled to be evaluated and appropriate modifications incorporated every five years.

The Division of Wildlife's CWCS 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 information about public involvement during development of the plan. A number of appendices also are included as reference materials.

Following development of the tactical portions of the Division's CWCS, the proposed plan was presented to a number of conservation organization leaders throughout the state through five regional meetings and one statewide presentation. Approximately 200 people attended these meetings and completed survey forms related to the CWCS. The comments and suggestions gained from these meetings were evaluated and the strategy adjusted accordingly. Additional public review was invited in March of 2006 at the Division of Wildlife's *Wildlife Diversity Conference* in Columbus. More than 700 people from the general public attended this conference and were invited to review and comment on the CWCS document. Approximately 50 surveys were completed and reviewed with relevant comments incorporated into the CWCS. The CWCS was also presented to approximately 30 individuals from the general public at the March, 2006 wildlife council meeting. No significant comments were received from this presentation.

In addition, during May and June of 2006, the Division of Wildlife advertised the draft CWCS on its website and interested parties were invited to review the entire document (via CD) and comment on the content, scope, and completeness of the strategy. Forty individuals requested the document and eight comment forms were received. Relevant comments and suggestions were reviewed and the CWCS modified accordingly. The CWCS was also presented to approximately 100 transportation planners at the *Ohio Transportation Planning Conference* in August, 2006. Copies of the CWCS (via CD) were distributed and comments were solicited from the individuals in attendance. No comments were received.

The pages that follow this executive summary include summary examples of tactical plans for two species of greatest conservation need (one terrestrial, one aquatic) and summary examples of two habitat-based tactical plans (one terrestrial, one aquatic). These summary documents represent basic information about the species and habitats however more extensive documentation is available.




# Appalachian Foothills Focus Area

The hill counties of southeast and southern Ohio currently exhibit the best examples of the forest wildlife habitat that existed in Ohio prior to European settlement. The Appalachian Foothills Focus Area, located in Vinton and Athens counties, includes the Zaleski State Forest, Waterloo Wildlife Area, Lake Hope State Park, and portions of the Mead Corporation's Public Hunting Lands. In addition, some private lands are included in the Focus Area. While no specific activities are planned for immediately adjacent lands and inholdings that are privately owned, current habitat conditions on these areas will be considered as forest management plans are developed for public lands. Private lands comprise nearly 19,000 acres or about 28% of the 66,000+ acre focus area.

**Habitat Condition:** During the early 1800s, a vibrant iron ore industry developed in this area which used huge amounts of timber to operate the furnaces. Between 1818 and 1873, 69 pig iron furnaces flourished throughout the hanging rock area with two furnaces within the boundaries of the Zaleski State Forest. In the late 1800s, better iron ore reserves were discovered in Michigan and Missouri, causing the iron industry to quickly fade within Ohio's Appalachian Foothills area. By the turn of the 20th century, the iron ore industry was completely gone from the Appalachian Foothills along with much of the timber. Subsistence farming was attempted in the area, but the steep slopes and thin soils proved too unproductive. It was during this time period that deep mining for coal developed as an important industry.

In 1930, the distribution of natural cover in the Appalachian Foothills area was 29% openland, 35% brushland, and 36% woodland. Today over 85% of the area is in some stage of forest cover. Current size class on Zaleski State Forest for all stands is 71% sawtimber, 22% poles and 7% seedling/sapling.

**Priority Stresses and Threats:** Ohio's forests are maturing resulting in less diversity in wildlife species utilizing this habitat. The increase in Ohio's forest land since 1940 was due primarily to the reversion of abandoned pasture to brush and then ultimately to mature forest in eastern Ohio. The brushy stage of forest succession is declining as Ohio's forests mature. Since 1968, acreage in the seedling/sapling size class (trees < 5 inches d.b.h.) decreased over 50% from 3.7 to 1.8 million acres, whereas acreage in the sawtimber size class (trees ≥ 11 inches d.b.h.) more than doubled from 1.9 to 4.0 million acres. As of 1991, the age/size class distribution of Ohio's forestland habitat base was 24% seedling/sapling, 23% pole timber, and 53% saw timber.

Forest composition also is changing. Forests once dominated by oak and hickory are becoming increasingly dominated by red maple and yellow poplar. Red maple has become the dominant tree species in growing stock volume in Ohio. Between 1979 and 1991, red maple saw timber volume

(board feet per acre) increased from 127 to 325, sugar maple from 191 to 295, and yellow poplar from 268 to 400. During that same time period, oak saw timber volume increased from 334 to 347, and hickory from 245 to 328.

Currently, tree age classes in the Appalachian Foothills Focus Area are shifting from less shrub/brush to more pole/mature with a slow but steady shift in tree species composition from oak and hickory dominated stands to maple and tulip poplar stands.

**Associated Species of Greatest Conservation Need:** The Division of Wildlife's approach to enhancing and maintaining the highest level of terrestrial wildlife diversity in the state is to use a "focus area" concept to sustain viable populations of as many native species of wildlife as possible. The idea is to concentrate efforts and resources to provide all the necessary habitat requirements in a few large units of the major habitat types, along with the remnants of several unique habitats, for species that are of limited distribution or have low populations. Typically focus areas are associated with relatively large holdings of public land where future land use practices can be managed.

Each Focus Area species list is a working draft and as such will be open for modifications and discussions. With the exception of species designated as pests and two extinct species, all native and naturalized terrestrial wildlife have been included in the suite of *Ohio's species of greatest conservation need.* Of the 380 species recognized as native and naturalized terrestrial wildlife species, 156 species are believed to have viable populations, are broadly distributed throughout their Ohio range, and utilize a variety of habitats. These species, along with 178 species discussed in the Tactical and Focus Area Plans, are anticipated to flourish if planned habitat management and restoration efforts are completed during the strategic plan period (for more details, see 1.1 Maintaining and Enhancing Ohio's Terrestrial Wildlife Diversity). Not all of the species, however, have the same probability of reaching viable levels because their populations may be impacted by factors other than habitat conditions on the Focus Area (e.g., location of Focus Area to species' geographic range or habitat quality and availability on migratory routes and wintering areas). Species expected to benefit within the Appalachian Foothills Focus Area are listed in Table 1.

**Priority Conservation Actions:** Managing forested landscapes for wildlife diversity involves managing patterns of succession. A forest landscape with stands of many age classes will have more kinds of wildlife than a single-aged forest landscape. For forest wildlife, age classes can be broken down into four stages: seedling-sapling, pole timber, saw timber and mature forest. Some wildlife species are restricted to the earliest stage, some are dependent upon the latter stages of succession, and some are generalists. To maximize forest wildlife diversity, all age classes must be present in suitable amounts across the forest landscape at any given time. If an age class is altered or missing, the wildlife species dependent upon that age class for survival and reproduction will be adversely affected.

Management opportunities for forest wildlife are influenced by the proportion and distribution of principal forest types and age classes, marketability of trees for commercial operations, and the composition and density of understory and ground layer food and cover plants. The unglaciated south-central, southeastern, and east-central regions of Ohio support more than 70% of the state's forestland. Forest habitat management should be emphasized in this part of the state. In glaciated Ohio, opportunities to manage large blocks of forestland are limited. However, many forest wildlife species can thrive where there is a mosaic of interconnected

**Table 1. Species of *greatest conservation need* which are expected to benefit within the Appalachian Foothills Focus Area***

| | | | |
|---|---|---|---|
| **Mammals** | | | |
| Bobcat | *Felis rufus* | Northern Long-eared Bat | *Myotis septentrionalis* |
| Evening Bat | *Nycticeius humeralis* | Pine Vole | *Microtus pinetorum* |
| Hairy-tailed Mole | *Parascalops breweri* | Pygmy Shrew | *Microsorex hoyi* |
| Hoary Bat | *Lasiurus cinereus* | Red Bat | *Lasiurus borealis* |
| Indiana Bat | *Myotis sodalist* | Silver-haired bat | *Lasionycteris noctivagans* |
| Meadow Jumping Mouse | *Zapus hudsonius* | Smoky Shrew | *Sorex fumeus* |
| **Birds** | | | |
| American Redstart | *Setophaga ruticilla* | Louisiana Waterthrush | *Seiurus motacilla* |
| Bewick's Wren | *Thryothorus bewickii* | Northern Parula | *Parula americana* |
| Black and White Warbler | *Mniotilta varia* | Pileated Woodpecker | *Dryocopus pileatus* |
| Black-billed Cuckoo | *Coccyzus erythropthalmus* | Pine Warbler | *Dendroica pinus* |
| Blue-headed Vireo | *Vireo solitarius* | Red-headed Woodpecker | *Melanerpes erythrocephalus* |
| Black-throated Green Warbler | *Dendroica virens* | Red-shouldered Hawk | *Buteo lineatus* |
| Blackburnian Warbler | *Dendroica fusca* | Rose-breasted Grosbeak | *Pheucticus ludovicianus* |
| Blue-gray Gnatcatcher | *Polioptila caerulea* | Sharp-shinned Hawk | *Accipiter striatus* |
| Blue-winged Warbler | *Vermivora pinus* | Summer Tanager | *Piranga rubra* |
| Broad-winged Hawk | *Buteo platypterus* | Veery | *Catharus fuscescens* |
| Cerulean Warbler | *Dendroica cerulean* | Whip-poor-will | *Caprimulgus vociferus* |
| Chestnut-sided Warbler | *Dendroica pensylvanica* | Worm-eating Warbler | *Helmitheros vermivorus* |
| Golden-winged Warbler | *Vermivora chrysoptera* | Yellow-billed Cuckoo | *Coccyzus americanus* |
| Great-crested Flycatcher | *Myiarchus crinitus* | Yellow-throated Vireo | *Vireo flavifrons* |
| Hermit Thrush | *Catharus guttatus* | Yellow-throated Warbler | *Dendroica dominica* |
| Hooded Warbler | *Wilsonia citrine* | | |
| **Reptiles & Amphibians** | | | |
| Black Kingsnake | *Lampropeltis getula nigra* | Mud Salamander | *Pseudotriton montanus* |
| Broadhead Skink | *Eumeces laticeps* | Northern Coal Skink | *Eumeces a.anthracinus* |
| Eastern Box Turtle | *Terrapene carolina carolina* | Northern Spring Salamander | *Gyrinophilus p. porphyriticus* |
| Eastern Smooth Earth Snake | *Virginia valeriae valeriae* | Rough Green Snake | *Opheodrys aestivus* |
| Ground Skink | *Scincella lateralis* | Smallmouth Salamander | *Ambystoma texanum* |
| Kentucky Spring Salamander | *Gyrinophilus porphyriticus duryi* | Timber Rattlesnake | *Crotalus horridus horridus* |
| Mountain Dusky Salamander | *Desmognathus ochrophaeus* | | |
| **Invertebrates** | | | |
| American burying beetle | *Nicrophorus americanus* | | |

*Doesn't include species with viable populations in Ohio as identified on the Native & Naturalized Species List

woodlots in that part of the state. With the exception of tracts being managed to meet the needs of grassland-dependent wildlife, all woodlots on public land in glaciated Ohio should be retained and, where appropriate, expanded. Efforts aimed at encouraging private landowners to retain woodlots should also continue.

The proportion and distribution of forest types and age classes need to be determined immediately. After determining what forest types and age classes are available, management plans can be developed to bring large forested landscape areas into the preferred 30% seedling/sapling, 25% pole timber, 25% sawtimber, and 20% mature forest age/size class distribution.

Forest inventory data will also be used to direct where the oak-hickory component of Ohio's forested landscape can be increased. Clearcutting should be emphasized to increase the proportion of these species in future stands. Research results from the effects of burning and thinning on oak regeneration should be incorporated on public and private forestlands throughout Ohio if these management practices are shown to increase the vigor of advance oak reproduction. In addition, oaks and other high value wildlife trees will be planted on selected sites on wildlife areas which have been surface mined.

More emphasis needs to be placed on educating the public about forest management practices. The Information and Education Group should be asked to emphasize making the public aware that clearcutting is a form of forest regeneration, not destruction. Private landowners should be encouraged to implement even-aged and uneven-aged forest management practices wherever appropriate. An early successional forest wildlife habitat management unit should be established on the larger wildlife areas in unglaciated Ohio. These management units should be >500 acres and placed on a long term (75-100 years depending on current age classes) timber harvest rotation that emphasizes small (<20 acres), well-distributed clearcuts. Controlled burns should be considered for these sites if research shows fire to be an effective management tool to increase the proportion of oaks and hickories.

To meet the habitat requirements of all of the forest-wildlife species found at the Appalachian Foothills, a variety of age and size classes of timber must be distributed throughout the Focus Area. An age/size class distribution of 30% seedling/sapling, 25% pole timber, 25% saw timber and 20% mature forest (i.e., no harvest activity) would meet the habitat needs required to sustain a healthy forest wildlife community (see section 3.1 Forest Habitat Tactical Plan). Achieving these goals will require a three-phased approach.

The Information Phase will involve presentation of the Plan to the stakeholders -- Division of Forestry, Division of Parks and Recreation and the Mead Paper Company -- to determine their willingness to cooperate with implementation. Assuming support, we would contact county commissioners, township trustees, private landowners, and other individuals in the vicinity of the Focus Area to inform them of the Plan.

Inventory Phase – After the Plan is approved, an inventory of the structure and composition of the wildlife habitat within the Appalachian Foothills Focus Area will be conducted. Inventory information will come from existing forest stand inventories of the Division of Forestry, Mead Paper Company records, GIS inventories and other available sources. An aerial inspection will be conducted of Division of Parks and Recreation land, Mead Paper Company land, privately owned inholdings, and a 1/4-mile buffer of privately owned land around the outer boundary of the Focus Area to inventory the wildlife habitat on those properties. Some limited inventories may be collected from the ground during this phase of the Plan. Additional habitat evaluation will be conducted at sites scheduled for vegetative treatment during the Implementation Phase of this Plan.

Planning and Implementation Phase – This phase of the Appalachian Foothills Plan will begin after the Inventory Phase is completed. Planning will involve comparing existing habitat inventories to planned habitat objectives (for more details, see 2.2.2.1 Appalachian Foothills Focus Area Plan) and determining what adjustments need to be made in the proportions of the various habitat types. The mature forest portion of the desired habitat will be partially represented by the habitat on Lake Hope State Park (3,103 acres). Based on the planned habitat objectives, the mature forest component of the Focus Area will need to encompass approximately 13,000 acres. Therefore, around 10,000 acres, in addition to the habitat on Lake Hope State Park, would be selected to comprise the mature forest component of the Focus Area. The habitat objectives will be achieved by: limiting management activities and allowing natural succession to continue in the designated mature forest tracts (e.g.,

riparian corridors, threatened and endangered plant communities that are found in maturing forest habitat, etc.) and on other selected portions of the Focus Area by slowing natural succession in stands of hawthorn/crabapple, old orchards, and other old field conditions; returning mature and pole habitats to seedling/sapling stands; and performing activities that will change the structure and/or composition of different forest stands. Some of the management options for achieving the desired habitat will include timber and firewood sales, controlled burning, herbicide application, release cutting, and mowing.

Habitat management decisions will relate to the current habitat inventory and the planned habitat objectives. Critical components of habitat planning and establishment must include: when to apply activities, where to apply activities, and the rate to apply activities. Ultimately, a diverse array of habitat types should be interspersed throughout the Focus Area versus locating all of the similar age/size/composition characteristics lumped together in a few large and widely spaced locations (the exception may be the mature forest component). The rate of applying management activities will vary with the degree of difference between the existing and desired amounts of the various habitat types. For instance, if the habitat inventory shows significantly higher percentages of mature forests than desired, the rate at which management occurs and the number of active sites will both be initially high. Once the desired structure and composition are reached, the rate of application and the number of sites will be reduced to maintaining the desired structure and composition. On the other hand, if the existing habitat is similar in structure and composition to the desired habitat, the rate of management activity and the number of sites will initially be lower. Regardless of the current habitat, the long-range amount of annual activity should eventually level off to a maintenance mode. A specific management plan that identifies what activities will be applied when and where will be developed and used to guide the "on the ground" progress toward meeting the planned habitat objectives.

Habitat objectives for all the focus areas were developed based on the best information currently available in terms of species-habitat relationships and the population ecology of associated wildlife species. Assumptions were made so that habitat work could proceed toward meeting plan goals and objectives. Clearly, evaluation and monitoring will be required periodically in each focus area for select species of interest to assess the validity of assumptions made during this planning process and to guide future revisions of these conservation activities. Thus, along with projects designed to attain focus area habitat goals, appropriate surveys and research evaluations need to be developed and implemented to ensure that habitat projects are producing measurable and desirable results for the intended wildlife community.

**Monitoring and Evaluation:** Wildlife monitoring programs are necessary to determine the effectiveness of wildlife management activities. The impact of the Forestland Tactical Plan and the associated Appalachian Foothills Focus Area Plan will be best determined by information collected from an intensive and extensive monitoring program. The monitoring portion of the focus area plans will entail two phases. First, a long-term population monitoring program will be established on at least one focus area within each habitat type. Several representative target species identified in the strategic plan will be surveyed to gauge population responses to focus area management activities while ensuring the highest statistical rigor possible. Surveys are currently underway or being developed in collaboration with Division staff and The Ohio State University faculty to ensure the highest statistical rigor possible. The second phase of the overall monitoring phase will involve developing a population viability model for the suite of wildlife associated with each of the principal habitat types identified in

each of the principal Focus Area Tactical Plans. Population viability estimates of forestland target species will be determined using estimates of abundance from the first phase of the monitoring program with productivity and survival measures from the literature. This modeling effort will help determine the long-term impact of focus areas on Ohio forestland bird populations in addition to determining needs for site-specific bird demographic data. This portion would begin after the long-term monitoring phase is initiated. This strategy will be employed as the first tier in the evaluation of effectiveness of the Appalachian Foothills Focus Area and Forestland Tactical Plans. Conservation actions for the focus areas will be adapted to meet the desired habitat structure for the area as identified during the monitoring and evaluation phase.

**Partnerships:**
The **Department of Natural Resources' Division of Forestry,** the **Division of Parks and Recreation,** the **U.S. Forest Service Athens District, Mead Paper Company, The Nature Conservancy** and the Division of Wildlife have worked on forest management inventories and plans for the Appalachian foothills Focus Area and will be cooperating on an extensive GIS based forest inventory project.

The **Ohio State University Terrestrial Ecology Laboratory** has been collaborating with the Division on numerous forest wildlife surveys, research, and habitat modeling projects within the focus area. Much of these data will be used as a foundation for developing timber management units, as well as drafting monitoring and evaluation protocols.

The Division of Wildlife has partnered with The **Ohio State University Entomology Department,** the **U.S. Fish and Wildlife Service,** the **Wilds,** and **U.S. Forest Service Athens District** to reintroduce the federally and state endangered American burying beetle into its historical range in Ohio. Many of the releases have been and will be within the Appalachian Foothills Focus Area because they offered extensive areas of quality habitat for the beetle.

## Lake Erie water snake
## *Nerodia sipedon insularum*


**Status:** The snake was listed as a threatened species in 1999 under the Endangered Species Act and elevated to state endangered in 2000.


**Range:** The Lake Erie water snake has one of the smallest geographic ranges of any vertebrate in the world; it is only found on the islands of Lake Erie.

The Lake Erie islands constitute an archipelago of 22 islands lying between the Canadian and American shores of the Western Basin of Lake Erie. Ohio has jurisdiction over 13 of the islands which range in size from the 1.2 acre Starve Island with 0.186 miles of shoreline to the 2,824 acre Kelleys Island which has 11.6 miles of shoreline. Although the Lake Erie islands are distinct from the neighboring mainland in climate, topography, surface geology and soils, they are considered vegetatively indistinguishable from the surrounding mainland. Shoreline characteristics vary from island to island but consist of beaches of sand, gravel, or small stones; loose rocks; limestone shelves; and sheer cliffs, all with varying amounts of vegetative cover. The islands comprise one of four "Unique Habitats" in Ohio.

**Threats:** Since the early 1900s, the islands have been developed at a quickening pace for summertime residences and to meet the needs of the growing tourism industry. Currently nearly a million tourists visit the islands each summer to camp, bike, boat, sail, fish, and sight see.

Human disturbance, habitat degradation and destruction, and shoreline alteration and development are the most serious threats to this island-dependent species. The Lake Erie water snake's population has suffered additional declines from direct mortality by people killing them.

**Priority Conservation Actions:**

- Protect habitat through land acquisition, conservation easements, and formal landowner management plan agreements
- Identify foraging habitat and prey base
- Conduct annual population surveys
- Characterize high quality hibernation sites and evaluate snakes' acceptance of artificial hibernacula
- Identify and provide property owners with non-lethal methods for minimizing unwanted snakes on portions of their property (e.g., patios, boats, and on top of docks)
- Reduce human-induced mortality
- Locate areas of high road mortality; identify and implement methods to reduce snake mortality along those sections
- Develop and distribute educational and informational materials and conduct programs to garner support for the protection of the snake and demonstrate its value as an island-dependent species

**Research Needs:**
Research is needed to 1) characterize hibernation site selection and evaluate the snake's ability to utilize artificial structures; 2) determine seasonal activity & movement patterns; 3) assess foraging behavior of the Lake Erie water snake; 4) investigate public attitudes about the snake; 5) analyze the level of mortality associated with roads and direct killing by people; and 6) determine the growth and stability of the population through annual population censuses using mark-recapture on all large islands. This information will aid in conservation and management decisions needed for the specie's recovery.

**Monitoring and Evaluation:**
The Division of Wildlife works within the structure of the Comprehensive Management System to facilitate an effective and efficient mechanism to guide the activities and operations of the agency. The wildlife management and research group works in concert with this system to identify and develop programs and activities to fulfill the goals and objectives established in the strategic plan.

Within this system the Division employs the tools necessary to ensure that an effective and efficient control mechanism is in place. This system provides for accountability while giving Division staff members who serve as project managers, the flexibility to get the job done. It reduces reactive situations because managers at all levels know what is expected. Collectively, it is the tool the Division uses to keep focused on the goals and objectives we have set with the ultimate benefit being stable wildlife populations and opportunities for the people of Ohio.

Individual projects in all tactical plans, including focus area plans and species-specific projects, will be evaluated and monitored through the Division's project monitoring framework. The purpose of the project monitoring system is to ensure that every effort is made to accomplish project objectives. The system monitors schedules, completion dates and fiscal information for a project's major activities or tasks. It allows managers to identify potential problems and resolve them before they have an irreversible impact on the project. Furthermore, the agency can easily adapt and modify our actions, if needed. This allows for the most flexibility in project design to meet the goals set forth in the tactical plans. This strategy will be employed for all individual projects in each tactical plan and project.

**Partnerships:**
The **Lake Erie Islands Chapter of the Black Swamp Conservancy** and the Division of Wildlife have executed an agreement to establish perpetual Lake Erie water snake conservation easements on the islands. The Division has granted monies to the Lake Erie Islands Chapter to use for expenses associated with securing donated easements (e.g., survey or appraisal costs) on the Lake Erie Islands.

The **Ohio Department of Natural Resources** (ODNR) and the Division of Wildlife have partnered to develop the document entitled, "Lake Erie Water Snake Habitat Management Planning for Lake Erie Island Properties Owned/Managed by ODNR." The Department owns or manages island shoreline and inland habitat that contribute a significant portion of the total habitat needed to be protected in perpetuity for the recovery of the Lake Erie water snake.

Since the early 1990s, the **U.S. Fish and Wildlife Service** and the Division of Wildlife have partnered on a variety of outreach materials and programs to minimize the amount of mortality caused by people killing the snakes. Measures have included quarterly newsletters, signs, brochures, and public programs on the islands.

## Grand River Habitat Protection

The Grand River Lowlands is a distinct ecosystem that developed from the ancestral lakebed. Draining 705 square miles, the Grand River gathers in morainal hills around the southern end of the Grand River Finger Lake Plain. The river meanders northward picking up drainage from relatively small tributaries. Larger tributaries join the Grand River from the east. At the north end of the Grand River Finger Lake Plain, the river turns west and meanders in a relatively deep, flat bottom valley in the Lake Escarpment. The river then cuts north across the narrow Erie Lake Plain to its mouth in the lake.

**Habitat Condition**: The Grand River stretches north to south from northern Trumbull County through the western half of Ashtabula County. Land use within the watershed is largely rural, relatively undisturbed and is considered high quality. The riparian corridor and the extensive wetlands within the lowlands provide water quality benefits for aquatic species and is home to state endangered species such as the river otter, massasauga rattlesnake and northern brook lamprey.

The main stem of the Grand River is designated by ODNR, Division of Natural Areas & Preservers as a wild and scenic river. Presently 30 miles of the Grand River is designated by Ohio Environmental Protection Agency (OEPA) as Exceptional Warmwater Habitat (EWH). The Grand River watershed has also been designated by the Natural Resource Conservation Service (NRCS) as a special project area.

**Priority Stresses and Threats:** As Ohio's population continues to increase, the suburbanization of rural land and resulting fragmentation of wildlife habitat threaten many of Ohio's most biologically diverse areas. Most of the natural communities in this area are relatively undisturbed and considered high quality despite the Lowland's position on the eastern edge of rapidly expanding suburban Cleveland. Approximately

43% of Ohio's population is located in northeast Ohio with over three million people living within 35 miles of the Grand River Lowlands. Unfortunately, the habitat and wildlife within this ecosystem is threatened by increasing land development in northeastern Ohio.

**Associated Species of Greatest Conservation Need:** The Division of Wildlife's approach to enhancing and maintaining the highest level of aquatic wildlife diversity in the state is to use a "focus area" concept to sustain viable populations of as many native species of wildlife as possible. The idea is to concentrate efforts and resources to provide all the necessary habitat requirements in a few large units of the major habitat types, along with the remnants of several unique habitats, for species that are of limited distribution or have low populations. Typically, focus areas are associated with relatively large riparian corridor areas (both public and private) where future land use practices can be managed. Species expected to benefit within the Grand River Focus Area are listed in Table 1.

**Table 1 Species of greatest conservation need which are expected to benefit within the Grand River Focus Area**

| | |
|---|---|
| **Fish** | |
| Bigeye Chub | *Hybopsis amblops* |
| Muskellunge | *Esox masquinongy* |
| River Redhorse | *Moxostoma carinatum* |
| Eastern Sand Darter | *Ammocrypta pellucida* |
| Northern Brook Lamprey | *Ichthyomyzon fossor* |
| Silver Lamprey | *Ichthyomyzon unicuspis* |
| **Mussels** | |
| Deertoe | *Truncilla truncate* |
| Salamander Mussel | *Simpsonaias ambigua* |
| Snuffbox | *Epioblasma triquetra* |
| **Aquatic Insects** | |
| Uhler's Sundragon | *Uler's sundragon* |

**Priority Conservation Actions:** An aggressive strategy is needed for the long-term conservation and enhancement of wildlife diversity, wetland and riverine habitats. Protection of this area is an opportunity to conserve what is believed to be the most biological diverse area of Lake Erie drainages. Key conservation actions include riparian corridor protection and public outreach.

Encourage the designation of the lowlands as a focus area under existing programs, i.e., Farm Bill programs, Clean Water Act (CWA) Section 401/404 wetland mitigation efforts, farmland preservation efforts, Nature Works, etc.

Solicit grants and assistance for habitat conservation and enhancement from private and public organizations such as the North American Wetlands Conservation Act (NAWCA), Land and Water Conservation Fund, Ducks Unlimited, Great Lakes Protection Fund, etc.

Conduct or support programs to inform local publics about the value of wildlife diversity and habitat conservation in the lowlands. Feature these subjects in displays at local fairs, sport shows, and home and garden shows. Work with local teachers who are graduates of the *Project Wild* program to have them incorporate these subjects into their curriculum. Produce *Wild Ohio* articles on these subjects. Maintain enforcement efforts to curtail poaching; with special focus on mussels and other listed species. Submit articles on these subjects to non-Division of Wildlife publications including the *Ohio Farmer, Farm Journal* and *Electric Cooperative*. Produce a *Wild Ohio* video segment on these subjects and distribute the *Ohio Streams* booklet.

Support nature-based tourism and local economic opportunities that help maintain compatible economic use of the Lowlands. Develop a new *Watchable Wildlife* site within the lowlands. Partner with The Nature Conservancy (TNC) on a compatible economic development study. Partner/ support a local nature-based tourism event. Partner on the development of a map that highlights unique areas and features in the Grand River Lowlands and surrounding region including nature preserves, wild & scenic river, wildlife areas, scenic by-ways, trails and covered bridges.

**Monitoring and Evaluation:** Maintain a GIS database for the watershed to assess progress and trends. Continue support of biodiversity survey work in the Grand River watershed. Support comprehensive analysis of existing mussel survey work, as will as, future surveys of the major tributaries. Partner and coordinate survey efforts for balance of the lowlands with other entities whenever possible (Ohio Biological Survey, Cleveland Museum of Natural History, The Nature Conservancy and Division of Natural Areas and Preserves). Partner/assist OEPA is assessing tributaries of the Grand River for appropriate aquatic life use designations.

**Partnerships:** DOW realizes that to effectively implement a watershed approach means recognizing that we are just one member of a diverse group that share many common goals regarding the health of this ecosystem. We must work consistently and closely with these partners who share common goals (i.e., individual and corporate landowners, communities, numerous conservation organizations, and other state and federal agencies). Numerous conservation-oriented organizations already have a presence in the lowlands or downstream, thus providing great opportunities to partner and complement each other's efforts. The other organizations include the Cleveland Museum of Natural History, The Nature Conservancy (TNC), Division of Natural Areas & Preserves, Grand River Partners, Inc., Boy Scouts of America, and several conservation clubs. Additionally, the Grand River Partnership has been formed, which is a loose confederation of agencies, private organizations, businesses and individuals that have worked over the past several years to bring protection to the Grand River watershed.

## Shovelnose Sturgeon
## *Scaphirhynchus platorynchus*

**Status:** The shovelnose sturgeon is a large river species that prefers sand and gravel substrates with a faster current, where they feed on aquatic invertebrates. Shovelnose sturgeons have not been seen since the mid-1900's and are listed as endangered in Ohio.

**Range:** Shovelnose sturgeon, and its larger cousin the lake sturgeon, were once common in the Ohio River and its larger tributary rivers. At no time, however, were lake sturgeons as abundant as shovelnose sturgeon. Milton Trautman reported that, "The older fishermen agree that this sturgeon was abundant upstream as far as Washington County until about 1910; that as many as 75 could be taken in a day on a trotline baited with worms, and especially during spawning runs in late February and March when the river was rising."

**Threats**: The damming of large rivers has contributed significantly to this species' decline by blocking access to ancestral spawning areas and greatly reducing its required habitat. The lack of pollution laws and increased siltation from changing land use patterns in the watershed also negatively impacted habitat and its primary food source of mussels and snails.

**Priority Conservation Actions:**

- Protect habitat through land acquisition, conservation easements, and formal landowner management plan agreements.
- Develope production techniques for this species which are similar to those used to produce paddlefish in Missouri and white sturgeon in California.
- Propagate shovelnose sturgeon from wild caught fish. All hatchery-raised fish will be injected with a fluorescent plastic tag to distinguish hatchery raised fish from naturally reproduced fish.
- Stock hatchery raised shovelnose sturgeon into the Scioto River. The Scioto River was selected as the initial reintroduction site because its lower reaches are free-flowing and because of improved water quality.
- Conduct annual population surveys to assess the success of the stocking efforts and to detect natural reproduction.
- Develop and distribute educational material to elevate awareness of the shovelnose reintroduction program.

**Research Needs:** Research is needed to 1) assess best areas to protect riparian corridor habitat, 2) develop shovelnose sturgeon production techniques, 3) Conduct river surveys to determine the success of stocking efforts and to monitor for natural reproduction.

**Monitoring and Evaluation:** The Ohio Division of Wildlife is currently refining the culture techniques for shovelnose sturgeon. These fish will be raised at Kincaid State Fish Hatchery. Once the technique is refined, we will stock approximately 5,000 advanced fingerlings annually over a five-year period in the lower Scioto River. Fish that are stocked will be marked with elastomer tags. These tags are a florescent implant that is easily identifiable with the naked eye. these tags will allow us to differentiate between stocked fish and fish that are the result of natural reproduction. After the five-year reintroduction effort, we will move into the monitoring phase. During low river flow periods, we will sample randomly selected locations in the lower Scioto River with a pulsed DC electrofishing boat. Shovelnose sturgeon that are collected will be examined for the elastomer tag, weighed, and measured before they are released back into the river. Shovelnose sturgeon will be monitored over a five-year period to determine the success of the project. The project will be considered a success if we can establish a self sustaining population of shovelnose sturgeon in the lower Scioto River.

**Partnerships:** The **Division of Wildlife** will partner with various **land conservation organizations** to protect riparian corridor on the Scioto River. The Division of Wildlife will also work with local **Soil and Water Conservation Districts** to promote best management practices on the Scioto River and its tributaries.

The **Division of Wildlife** and the **U.S. Fish and Wildlife Service** will work cooperatively to collect brood shovelnose sturgeon. These fish will be taken to **Kincaid State Fish Hatchery** for gamete collection. Advanced fingerlings will be stocked in the Scioto River at Circleville.

# Ohio Comprehensive Wildlife Conservation Strategy

# Guide to the Required Elements

**Element One:**
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.

**General Explanation:** The Division of Wildlife acquires information regarding the distribution and abundance of fish and wildlife species through a number of channels described in the text of the CWCS. For example, the Division regularly conducts surveys of species such as mourning dove, bobwhite quail, reptiles and amphibians, neo-tropical songbirds (breeding bird atlas), butterflies, waterfowl (aerial and land-based), as well as state-listed species. Aquatic species are surveyed similarly. For example, the Division has implemented a sampling/survey schedule on all inland waters to ascertain fish and aquatic wildlife populations. In addition, when necessary, both terrestrial and aquatic species are sampled or surveyed by third parties such as universities and colleges, private consultants, and non-governmental organizations. This arrangement assures that the division routinely obtains the most current and reliable information to make the best management decisions for Ohio's wildlife resource.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The Strategy indicates sources of information (e.g., literature, data bases, agencies, individuals) on wildlife abundance and distribution consulted during the planning process<br>**Examples of Sources of Information:**<br>• Ohio Breeding Bird Atlas<br>• North American Breeding Bird Survey<br>• Ohio Wetland Breeding Bird Survey<br>• Ohio Frog and Toad Call Survey<br>• Statewide Butterfly Monitoring Survey<br>• Salamanders of Ohio Atlas<br>• *Mammals of Ohio*<br>• Ohio Natural Heritage Database<br>• Annual *Wildlife Population Status Report*<br>• NatureServe<br>• The Nature Conservancy – Ohio Chpt.<br>• Midwest Biodiversity Institute<br>• Ohio Biological Survey, Inc.<br>• The Ohio State University<br>• ODNR, Division of Wildlife<br>• ODNR, Division of Natural Areas and Preserves | 104, 336, 479, 557 | Technical Materials:<br>Sections: 1.1, 8.1, 8.3.2, 8.3.3 |

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|---|---|---|
| B. The Strategy includes information about both abundance and distribution for species in all major groups to the extent that data are available. There are plans for acquiring information about species for which adequate abundance and /or distribution information is unavailable.<br>**Examples within the CWCS:**<br>The distribution and relative abundance of all terrestrial species can be found in section 1.2.X.X (various tables indicating species name, relative abundance, probability to persist, habitat type/focus area, source of information, etc.). Distribution of aquatic species of greatest conservation need is found on figures 1-43 (watershed maps indicating distribution of various taxa). Complete distribution and abundance of these taxa is being researched. | 199, 210, 222, 236, 247, 259, 270, 281, 308, 319, 336, 395 | Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 5.1, 6.1, 8.1, 8.2 |
| C. The strategy identifies low and declining populations to the extent data are available.<br>**Explanation:**<br>The distribution and relative abundance of all terrestrial species can be found in section 1.2.X.X (various tables indicating species name, relative abundance, probability to persist, habitat type/focus area, source of information, etc.). Distribution of aquatic species of greatest conservation need is found on figures 1-43 (watershed maps indicating distribution of various taxa). Complete distribution and abundance of these taxa is being researched. | 308, 336 | Technical Materials:<br>Sections: 5.1, 8.1 |
| D. All major groups of wildlife have been considered or an explanation is provided as to why they were not (e.g., including reference to implemented marine fisheries management plans). The state may indicate whether these groups are to be included in future Strategy revision.<br>**Explanation:**<br>All major groups have been addressed throughout the CWCS. Terrestrial species information can be found in sections 1.2.X.X. Aquatic species information can be found in section 8.1, Table 1 (page x). Groups of wildlife included in the CWCS include birds, mammals, reptiles, amphibians, invertebrates, fish, mussels, crustaceans | 104, 336 | Technical Materials:<br>Sections: 1.1, 8.1 |

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|---|---|---|
| E. The Strategy describes the process used to select the species in greatest need of conservation. The quantity of information in the Strategy is determined by the state with input from its partners, based on what is available to the State.<br>**Explanation:**<br>The process used to select the species included in the CWCS was slightly different for terrestrial species and aquatic species. While all terrestrial species are considered "species of greatest conservation concern," 178 species which occur within the focus areas and areas included in the associated tactical plans will be given increased attention. These species are anticipated to flourish, along with the 178 broadly distributed across their Ohio range, if planned habitat management and restoration efforts are completed as outlined in the CWCS. These species were selected based on historical and current distribution and abundance data and extensive input from species experts. Aquatic species were selected using input from a variety of sources, including:<br>• Midwest Biodiversity Institute<br>• The Nature Conservancy – Ohio Chapter<br>• ODNR- Div. of Natural Areas and Preserves<br>• ODNR- Div. of Wildlife<br>• Ohio Biological Survey, Inc.<br>• The Ohio State University – Dept. of Evolution, Ecology, and Organismal Biology | 104, 114, 127, 336 | Technical Materials<br>Sections: 1.1, 1.2, 1.2.1, 8.1 |

**Element Two:**
Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in the 1st element.

**General Explanation:** The Division of Wildlife acquires information regarding the habitats and communities through a number of activities as described in the text of the CWCS. For example, the Division regularly monitors key habitats and habitat focus areas and documents the wildlife populations associated with the habitat or focus area. Aquatic habitats are surveyed and monitored similarly. For example, the Division has implemented a sampling/survey schedule on all inland waters to ascertain fish and aquatic wildlife populations. In addition, when necessary, both terrestrial and aquatic habitats are surveyed or monitored by third parties such as universities and colleges, private consultants, and non-governmental organizations. This arrangement assures that the division routinely obtains the most current and reliable information possible to make the best management decisions for Ohio's wildlife resource. Examples of summary species and habitat plans are included in the Executive Summary of the CWCS.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The Strategy provides a reasonable explanation for the level of detail provided; if insufficient, the Strategy identifies the types of future actions that will be taken to obtain the information.<br>**Explanation:** Information regarding key habitats and community types can be found throughout focus area and habitat tactical plans. Information regarding aquatic habitats can be found in the various focus watershed plans. | 194-290, 308, 319, 336 | Technical Materials:<br>Sections: 2.0-2.4, 5.1, 6.1, 8.1 |
| B. Key habitats and their relative conditions are described in enough detail such that the State can determine where (i.e., in which regions, watersheds, or landscapes within the State) and to what conservation actions need to take place.<br>**Explanation:** Information regarding key habitats and community types can be found throughout focus area and habitat tactical plans. Information regarding aquatic habitats can be found in the various focus watershed plans. | 194-290, 308, 319, 395, 479 | Technical Materials:<br>Sections: 2.0-2.4, 5.1, 6.1, 8.2, 8.3.2 |

**Element Three**:
Descriptions of problems which may adversely affect species identified in the 1st element 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.

**General Explanation:**
The Division of Wildlife acquires information regarding individual species and their habitats and communities through a number of activities as described in the text of the CWCS. For example, the Division regularly monitors key habitats and habitat focus areas and documents the wildlife populations associated with the habitat or focus area. Aquatic habitats are surveyed and monitored similarly. For example, the Division has implemented a sampling/survey schedule on all inland waters to ascertain fish and aquatic wildlife populations. In addition, when necessary, both terrestrial and aquatic habitats are surveyed or monitored by third parties such as college students, private consultants, and non-governmental organizations. This arrangement assures that the division obtains the latest, most reliable information possible on a regular basis as needed for the best management of the various species involved. Examples of summary species and habitat plans are included in the Executive Summary of the CWCS.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The Strategy indicates sources of information (e.g., literature, data bases, agencies, or individuals) used to determine problems or threats.<br>**Explanation**: The Division utilizes a number of local, regional, statewide, and national surveys to determine potential threats and issues related to conservation of individual species and/or key habitats. These sources include, but are not limited to:<br>• Ohio Breeding Bird Atlas<br>• North American Breeding Bird Survey<br>• Ohio Wetland Breeding Bird Survey<br>• Ohio Frog and Toad Call Survey<br>• Statewide Butterfly Monitoring Survey<br>• Salamanders of Ohio Atlas<br>• *Mammals of Ohio*<br>• Ohio Natural Heritage Database<br>• Annual *Wildlife Population Status Report*<br>• NatureServe<br>• The Nature Conservancy – Ohio Chpt.<br>• Midwest Biodiversity Institute<br>• Ohio Biological Survey, Inc.<br>• The Ohio State University<br>• ODNR, Division of Wildlife<br>• ODNR, Division of Natural Areas and Preserves | 104, 336, 470, 479, 557 | Technical Materials:<br>Sections: 1.1, 8.1, 8.3.1, 8.3.2, 8.3.3 |

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|---|---|---|
| B. The threats/problems are described in sufficient detail to develop focused conservation actions (for example, "increased highway mortalities" or "acid mine drainage" rather than generic descriptions such as "development" or "poor water quality").<br>**Explanation:** Information regarding specific problems or issues associated with conservation of individual species and key habitats can be found throughout focus area plans, tactical plans, and watershed management plans. | 199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |
| C. The Strategy considers threats/problems, regardless of their origins (local, State, regional, national and international), where relevant to the State's species and habitats.<br>**Explanation**: Information regarding specific problems or issues associated with conservation of individual species and key habitats, regardless of origin, can be found throughout focus area plans, tactical plans, and watershed management plans. | 199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |
| D. If available information is insufficient to describe threats/problems, research and survey efforts are identified to obtain needed information.<br>**Explanation:** Information regarding survey and sampling needs associated with conservation of individual species and key habitats can be found in throughout focus area plans, tactical plans, and watershed management plans. | 199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |
| E. The priority research and survey needs, and resulting products, are described sufficiently to allow for the development of research and survey projects after the Strategy is approved.<br>**Explanation:** Information regarding priority survey needs associated with conservation of individual species and key habitats can be found throughout focus area plans, tactical plans, and watershed management plans. | 199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |

**Element Four:**
Descriptions of conservation actions determined to be necessary to conserve the identified species and habitats and priorities for implementing such actions.

**General Explanation:** The Division of Wildlife utilizes a number of conservation activities that maintain or improve key wildlife habitat (terrestrial and aquatic). These activities will be directed at identified species to help sustain or improve their populations. Examples of summary species and habitat plans are included in the Executive Summary of the CWCS.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The Strategy identifies how conservation actions address identified threats to species of greatest conservation need and their habitats.<br>**Explanation:** Throughout the CWCS (focus area plans, habitat plans, focus watershed plans) the threats and limiting factors to wildlife are identified along with the Division's approach to minimize or offset these factors as to sustain viable wildlife populations. | 39<br><br>199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Introductory Materials:<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |
| B. The Strategy describes conservation actions sufficiently to guide implementation of those actions through the development and execution of specific projects and programs.<br>**Explanation:** Threats to wildlife and its habitat are identified in the numerous focus area and habitat tactical plans, as well as in the Streams and Watersheds Tactical Plan. These threats are directly linked to projects/activities which are/will be employed to obtain optimal habitat composition and quantity to sustain viable wildlife populations. | 39<br><br>199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Introductory Materials:<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |
| C. The Strategy links conservation actions to objectives and indicators that will facilitate monitoring and performance measurement of those conservation actions (outlined in Element #5)<br>**Explanation:** Specifics are outlined in each focus area plan, habitat tactical plan, and Streams and Watersheds Tactical Plan with direct links to monitoring and evaluating our success. | 39<br><br>199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Introductory Materials:<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |
| D. The Strategy describes conservation actions (where relevant to the State's species and habitats) that could be addressed by Federal agencies or regional, national or international partners and shared with other States.<br>**Explanation:** The Division collaborates with many different partners on the local, regional, national, and international level and will continue these partnerships to ensure effective fish and wildlife management activities. | 39<br><br>199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Introductory Materials:<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |

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| E. If available information is insufficient to describe needed conservation actions the Strategy identifies research or survey needs for obtaining information to develop specific conservation actions.<br>**Explanation:** Priority research and survey needs are identified for each focus area plan, habitat tactical plan and Streams and Watersheds Tactical Plan. These are not the only research and survey actions to be undertaken however these represent the highest priority needs. | 39<br><br>199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Introductory Materials:<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |
| F. The Strategy identifies the relative priority of conservation actions.<br>**Explanation:** Priority conservation actions for terrestrial species are identified in the numerous focus area plans and tactical plans. Priority conservation actions for aquatic species are identified in Section 8.1, Streams and Watershed Tactical Plan. These are not the only actions to be undertaken however these represent the highest priority actions. | 39<br><br>199, 210, 222, 236, 247, 259, 270, 281, 293, 301, 308, 319, 332, 336 | Introductory Materials:<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.2.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1 |

**Element Five:**
Descriptions of the proposed plans for monitoring species identified in the 1st element and their habitats, or monitoring the effectiveness of the conservation actions proposed in the 4th element, and for adapting these conservation actions to respond appropriately to new information or changing conditions.

**General Explanation:** Monitoring species of greatest conservation need, their habitats, and our effectiveness achieving desired goals and objectives is routinely and systematically conducted by the Division. Modifying the way we manage species and habitats is directly related to the monitoring and evaluation process. Performance reports regarding the results of individual projects are required to be completed every two years, at the end of a fiscal biennium.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The Strategy describes plans for monitoring species identified in Element #1, and their habitats. **Explanation:** Plans for monitoring terrestrial species identified in #1 can be found in each focus area plan or tactical plan. Plans for monitoring aquatic species and their habitats can be found in the Streams and Watersheds Tactical Plan. | 199, 210, 222, 236, 247, 259, 281, 293, 301, 308, 319, 332, 336, 699, 770, 950 | Technical Materials: Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.3.1, 3.1, 4.1, 5.1, 6.1, 7.1, 8.1, 8.3.4, 8.3.5, 9.1 |
| B. The Strategy describes how the outcomes of the conservation actions will be monitored. **Explanation:** Species specific, as well as habitat-based monitoring and evaluation processes identify milestones for our conservation and management efforts. | 199, 210, 222, 236, 247, 259, 281, 308, 319, 336, 950 | Technical Materials: Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 8.1, 9.1 |
| C. If monitoring is not identified for a species or species group, then Strategy explains why it is not appropriate, necessary or possible. **Explanation:** Because our conservation strategies are based on the needs of the most sensitive species dependant upon that habitat, monitoring efforts for indicator species provide insight to the stability of most associated wildlife species within each habitat type. | 199, 210, 222, 236, 247, 259, 281, 308, 319, 336, 950 | Technical Materials: Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 8.1, 9.1 |
| D. Monitoring is to be accomplished at one of several levels, including individual species, guilds, or natural communities. **Explanation:** Monitoring will be conducted at various ecological levels based upon the information needed, including species, habitat type, and community. | 199, 210, 222, 236, 247, 259, 281, 308, 319, 336, 950 | Technical Materials: Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 8.1, 9.1 |
| E. The monitoring utilizes or builds on existing monitoring and survey systems or explains how information will be obtained to determine the effectiveness of conservation actions. | 199, 210, 222, 236, 247, 259, 281, 308, | Technical Materials: Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 8.1, 9.1 |

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|---|---|---|
| **Explanation:** Monitoring and evaluation utilize existing sampling and survey structure and will be conducted as needed. New survey or sampling protocols will be developed as needed in order to obtain the best and most useful information need to effectively manage terrestrial and aquatic species. | 319, 336, 950 | |
| F. The monitoring considers the appropriate geographic scale to evaluate the status of species or groups and the effectiveness of conservation actions.<br>**Explanation:** Monitoring will be conducted at the focus area/focus watershed level, as well as habitat-type, or on a statewide level. | 199, 210, 222, 236, 247, 259, 281, 308, 319, 336, 950 | Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 8.1, 9.1 |
| G. The Strategy is adaptive in that it allows for evaluating conservation actions and implementing new actions accordingly.<br>**Explanation:** The Division's Comprehensive Management System (CMS) requires that monitoring and evaluation information be utilized to modify or adjust management activities. | 199, 210, 222, 236, 247, 259, 281, 308, 319, 336, 950 | Technical Materials:<br>Sections: 2.2.1.1, 2.2.2.1, 2.3.1.1, 2.3.2.1, 2.3.3.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 8.1, 9.1 |

**Element Six:**
Descriptions of procedures to review the Strategy/Plan at intervals not to exceed ten years.

**General Explanation:** The Division operates under a Comprehensive Management System which mandates that the Division's planning documents (strategic plan, tactical plans, focus area plans, etc.) be reviewed mid-cycle of the life of the plan (every five years). The CWCS will be reviewed on the same schedule.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The state describes the process that will be used to review the Strategy within the next ten years.<br>**Explanation:** The Division will review the strategy in conjunction with the Division strategic plan and modify as needed, at intervals not to exceed ten years. | 95<br><br>699, 770, 950 | Introductory Materials<br>– Evaluation of the Ohio CWCS<br>Technical Materials<br>Sections: 8.3.4, 8.3.5, 9.1 |

**Element Seven:**
Descriptions of the plans for coordinating, to the extent feasible, the development, implementation, review, and revision of the Plan-Strategy 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.

**General Explanation:** The Division of Wildlife has a long standing tradition of partnering with other agencies, natural resource organizations, private landowners, and other natural resources-related parties. These partnerships have involved partnering on fish and wildlife management plans, management activities, land purchases, public displays, and other activities that further the conservation of fish and wildlife in Ohio.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The state describes the extent of its coordination with and efforts to involve Federal, State, and local agencies, and Indian tribes in the development of its Strategy.<br>**Explanation**: The Division coordinates all fish and wildlife management activities with all the significant land owners in the state, both private and public. Major landowners include:<br>• Wayne National Forest (US Forest Service)<br>• ODNR, Division of Parks and Recreation<br>• ODNR, Div. of Natural Areas and Preserves<br>• ODNR, Division of Forestry<br>• Cuyahoga National Park (National Park Service)<br>• The Nature Conservancy<br>• Ohio Historical Society<br>• U.S. Fish and Wildlife Service<br>• Numerous Metro Park and Local Park Agencies<br>All major and significant landowners, as well as natural resources agencies, were involved in development of the CWCS and were invited to comment on the strategy. There are no tribal lands in Ohio. | 97, 39<br><br>199, 222, 247, 270, 210, 236, 259, 281, 308, 319, 557, 950 | Introductory Materials<br>– Coordination. Of the Ohio CWCS with National, State, and Local Agencies and Organizations<br>– Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials<br>Sections: 2.2.1.1, 2.3.1.1, 2.3.3.1, 2.4.2.1, 2.2.2.1, 2.3.2.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 8.3.3, 9.1 |
| B. The State describes its continued coordination with these agencies and tribes in the implementation, review and revision of its Strategy.<br>**Explanation:** The Division coordinates all of its fish and wildlife management activities with the major landowners and natural resources agencies in the state. Major landowners include:<br>• Wayne National Forest (US Forest Service)<br>• ODNR, Division of Parks and Recreation<br>• ODNR, Division of Natural Areas and Preserves | 97<br><br>199, 222, 247, 270, 210, 236, 259, 281, 308, 319, 950 | Introductory Materials<br>– Coordination. Of the Ohio CWCS with National, State, and Local Agencies and Organizations<br>Technical Materials<br>Sections: 2.2.1.1, 2.3.1.1, 2.3.3.1, 2.4.2.1, 2.2.2.1, 2.3.2.1, 2.4.1.1, 2.4.3.1, 5.1, 6.1, 9.1 |

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|---|---|---|
| • ODNR, Division of Forestry<br>• Cuyahoga National Park (National Park Service)<br>• The Nature Conservancy<br>• Ohio Historical Society<br>• U.S. Fish and Wildlife Service<br>• Numerous Metro Park and Local Park Agencies<br>All major and significant landowners will be involved in the review of the CWCS, based on their interest and expertise. There are no tribal lands in Ohio. | | |

**Element Eight:**
Descriptions of the necessary public participation in the development, revision, and implementation of the Plan.

**General Explanation:** The Division of Wildlife has a long standing tradition of communicating with the public and seeking out input on all major fish and wildlife management issues, including development of planning documents such as the Comprehensive Wildlife Conservation Strategy (CWCS). Several activities were conducted to acquire public input into the development of the CWCS, including public meetings, meetings with constituent groups, advertisement on the Division's website, and statewide meetings.

| NAAT Guidance Statement | Page(s) | Sections |
|---|---|---|
| A. The state describes the extent of its efforts to involve the public in the development of its Strategy.<br>**Explanation:** The Division undertook numerous activities to gain both public input and agency/organization input into development of the CWCS. These activities included:<br>• Five Regional Meetings, with survey.<br>• One State Wide Conservation Summit<br>• CWCS introduction at the Statewide meeting of the Wildlife Council, with survey.<br>• CWCS introduction at the Division's annual Wildlife Diversity Conf., with survey.<br>• Advertisement on the Division's Website<br>• Mailing of the complete document (via CD) and survey to interested parties. | 83, 39<br><br>336, 950 | Introductory Materials<br>- Development of the Ohio CWCS<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials<br>Sections: 8.1, 9.1 |

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|---|---|---|
| B. The State describes its continued public involvement in the implementation and revision of its Strategy.<br>**Explanation:** The Division has a solid record of communicating with all parties associated with fish and wildlife management in Ohio, including local, state, regional, and national agencies/organizations. This information can be found in the introductory materials, *Development of the Ohio CWCS*. | 83, 97, 39<br><br>336, 950 | Introductory Materials<br>- Development of the Ohio CWCS<br>- Coordination of the Ohio CWCS with National, State, and Local Agencies and Organizations<br>- Div. of Wildlife Strategic Plan, 2001-2010<br>Technical Materials<br>Sections: 8.1, 9.1 |

Ohio Department of Natural Resources
Division of Wildlife

# Comprehensive Wildlife Conservation Strategy

# Introduction

The Ohio Department of Natural Resources (ODNR), Division of Wildlife (DOW) is the state agency responsible for the management of Ohio's resident fish and wildlife resources, including game fish and animals, non-game animals, and invertebrates. The Division has a long and proud history of wildlife conservation and looks forward to expanding its efforts in the 21st century. The Division originally started as the Ohio Fish Commission in 1873, but has since grown into a comprehensive agency of more than 440 dedicated employees, five wildlife districts, six research stations, more than 180,000 acres of wildlife areas, and an extensive network of local, state, and national partners.

Wildlife conservation in Ohio is an important and challenging task. The landscape and human population of the state is varied, with extremes of the highly developed urban environments of Cincinnati, Columbus, and Cleveland, to the largely undeveloped and forested environments of southeastern Ohio, to the highly productive farmlands of western Ohio, to the famous fishing waters of Lake Erie. More than 11 million people call Ohio home, yet very little of the state is in public ownership. This combination of high human population, urban and rural landscapes, extensive farmland, and multiple state and national boundaries makes Ohio a challenge for wildlife conservation and management.

Management and administration of the Division of Wildlife has been accomplished through a Comprehensive Management System (CMS) since the early 1990's. The CMS is an extensive system of checks, balances, and procedures that involves the public, Division employees, constituent leaders, and other interested parties in helping guide the future of the division and its activities. The CMS ensures that the Division responds to the needs of Ohio's citizens while ensuring the healthy future of the state's fish and wildlife resources through effective and efficient decision making. The Division's CMS provides direction for all aspects of the Division's activities and is therefore the foundation of the Ohio Comprehensive Wildlife Conservation Strategy (CWCS).

The purpose of the Division of Wildlife's CWCS is to provide tactical direction for conserving wildlife diversity in Ohio. It specifically addresses, but is not limited to, "species in greatest need of conservation," as described by the U. S. Congress in the enabling legislation. In order to accomplish this goal, Congress requires that each CWCS developed by a state or territory include the following eight 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; and,
2) Descriptions of locations and relative condition of key habitats and community types essential to conservation of species identified in (1); and,

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,
4) Descriptions of conservation actions proposed to conserve the identified species and habitats a priorities for implementing such actions; and,
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; and,
6) Descriptions of procedures to review the strategy at intervals not to exceed ten years; and,
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 with the State or administer programs that significantly affect the conservation of identified species and habitats.
8) Congress also affirmed through this legislation that broad public participation is an essential element of developing and implementing these plans, the projects that are carried out while these plans are developed, and the Species in Greatest Need of Conservation that Congress has indicated such programs and projects are intended to emphasize.

The Division of Wildlife has taken great effort to address each of these elements through either the established CMS or through efforts specific to development of the CWCS.

## History of the Division of Wildlife

After 70 years of statehood, the need to conserve Ohio's fish and wildlife resources was formally recognized with the establishment of the Ohio Fish Commission in 1873. In 1886, the three-seat Ohio Fish Commission was expanded to five, with the added responsibility of making "more productive" state lands; the commission's name was changed to the Commission of Fish and Game

In 1902, the Commission of Fish and Game was given more responsibility as it took over management of public lakes and lands. Beginning in 1904, nonresidents of the state were required to purchase hunting and trapping licenses, with the funds used to help finance the activities of the Commission. Residents continued to hunt for free until 1913 when resident hunting licenses were required; trapping became a part of the license four years later. Monies collected from licenses were used for the state's stocking and propagation programs.

Influenced by organized sportsmen wanting to see greater control of the resource, the Ohio General Assembly "revised and consolidated" laws related to fish and wildlife enforcement in 1908, giving the Commission and its game wardens greater authority to protect wildlife and regulate its harvest.

The Commission of Fish and Game had only five years to enact these reforms as Governor Cox abolished the organization in 1913. In its place he established the Division of Fish and Game, a part of the newly formed Agriculture Commission. With the next

administration in 1915 came more changes as the Agriculture Commission was abolished and replaced with a Board of Agriculture.

More reorganization within the Department of Agriculture in 1929 resulted in a new version of the Division of Fish and Game - the Division of Conservation. Nine bureaus were established within the new division, five of which have links to current Division of Wildlife operations: Education, Scientific Research, Inland Fish Propagation, Lake Erie Fisheries, and Game Propagation. Additionally, legislation called for the establishment of an eight-member, bipartisan Conservation Council to administer the Division's operations, including finances, programs, and policies.

In 1939, the General Assembly expanded the Department of Agriculture's conservation responsibilities with the establishment of the Division of Conservation and Natural Resources. The Division of Conservation and Natural Resources consisted of the Conservation and Natural Resources Commission, a Commissioner and any "bureaus and positions" designated by the Commission. Eight sections were created in this Division, including three predecessors of present Division administrative groups: Game Management, Fish Management, and Propagation and Law Enforcement.

In 1949 the Ohio Department of Natural Resources was established. The Division of Wildlife was one of seven charter divisions. The Conservation and Natural Resources Commission became the Wildlife Council. The Wildlife Council retained the powers of the Conservation and Natural Resources Commission – overseeing funding, policy and program development.

The Division of Wildlife underwent additional reorganization in 1963 when the Wildlife Council's function was revised to an advisory role. The chief of the Division was given full responsibility for program development and administration. The Council assumed responsibility for approving seasons and regulations. Additionally, the Wildlife Council's Chair was appointed to the Department's nine-member Recreation and Resources Commission, which advises the department on issues, programs and policies. Lastly, wildlife districts were realigned from the original seven to the current five.

Endangered wildlife, a growing concern nationally and internationally, received attention in Ohio also. With the passage of the state's endangered wildlife law in 1974, the Division expanded its focus yet again. An initial project was the restoration of the state's bald eagles. Throughout the years, efforts on behalf of endangered species have included the reintroduction of the river otter and introduction of peregrine falcons to the state's major cities.

Continuing to recognize a role outside the traditional focus of hunting and fishing, the Division formed the Information and Education Section in 1979. The section was charged with establishing educational programs for grade school children, non-hunters/anglers and other nontraditional constituents; developing public relations programs and materials and implementing programs to meet the education needs of first-time hunters and trappers now required to take mandatory safety training.

Citizen involvement in two new programs provided assistance to the Division's management efforts. In 1982, TIP (Turn In a Poacher) was created to allow citizens an easy

way to report wildlife violations they witnessed. From its beginning the program has yielded solid leads that have led to arrests and convictions. Legislation passed the following year to allow Ohioans to designate a portion of their state income tax refund for endangered and diverse wildlife. Donations from the tax check-off have helped fund various research and management activities that have aided in the enhancement and restoration of threatened, endangered, and extirpated species.

Existing under many names and structures and with varying degrees of authority, the Division of Wildlife has managed Ohio's fish and wildlife resources for more than 127 years. With an established foundation of research, enforcement, management, and educational resources, it is well placed for the future.

Ohio Department of Natural Resources
Division of Wildlife

# Comprehensive Wildlife Conservation Strategy

# Division of Wildlife Statutory Authority

The Ohio Division of Wildlife's authority and responsibility were established by the Ohio General Assembly. The powers and duties of the Division are found in three documents: the Ohio Constitution, the Ohio Revised Code, Sections 1531 and 1533, and the Ohio Administrative Code. The chief of the Division of Wildlife has been established as the executive officer who initiates and concurs on all statutory responsibilities which are either mandatory or directory in nature.

The ownership and title to all wild animals are held in trust by the Ohio Division of Wildlife. The management of these wild animals is to be for the benefit of all the people, and is based upon the premise that wildlife is a usable, renewable resource.

The chief of the Division of Wildlife has the authority to:

1. Acquire by gift, lease, purchase, or otherwise lands or surface rights upon lands and waters or surface rights upon waters for wild animals, fish or game management, preservation, propagation, and protection, outdoor and nature activities, public fishing and hunting grounds and flora and fauna preservation. The chief may also receive by grant, devise, bequest, or donation lands or surface rights upon lands and waters or the surface rights upon waters.
2. Make such rules for the protection of state owned or leased lands and waters, and property under division control against wrongful use or occupancy as to ensure the protection of such lands, waters, and property from depredations and to preserve these lands so destruction or any improper use or occupancy does not occur.
3. Make and issue orders benefiting wild animals, fish or game management, preservation, propagation, and protection, outdoor and nature activities, public fishing and hunting grounds, flora and fauna preservation, and regulate the taking and possession of wild animals on any lands or waters owned or leased or under division supervision and control.
4. Acquire by gift, lease, or purchase land for the purpose of establishing state fish hatcheries and game farms, and may erect thereon such buildings or structures as are necessary. The chief may also enter into agreements to improve public fishing access in all areas of the state.
5. Establish user fees for use of special public facilities or participation in special activities on lands and waters administered by the division. Such special facilities and activities may include hunting or fishing on special, designated public lands and waters intensively managed or stocked with artificially propagated game birds or fish, field trial facilities, wildlife nature centers, firearm ranges, boat mooring facilities, camping sites, and other similar
special facilities and activities. The chief shall set and collect the fees for concession rentals or other special projects; regulate through contracts between the division and concessionaires the sale of tangible objects at concessions or other special projects; and keep a record of all such fee payments showing the amount received, from whom received, and for what purpose the fee was collected. All money received as user fees, concession rentals, or for other special projects shall be paid into the

Wildlife Fund to be used for wildlife management projects. The chief shall also assure that all monies generated from the sale of hunting and fishing licenses and other wildlife permits shall not be directed for other uses. They shall be used solely for wildlife projects.

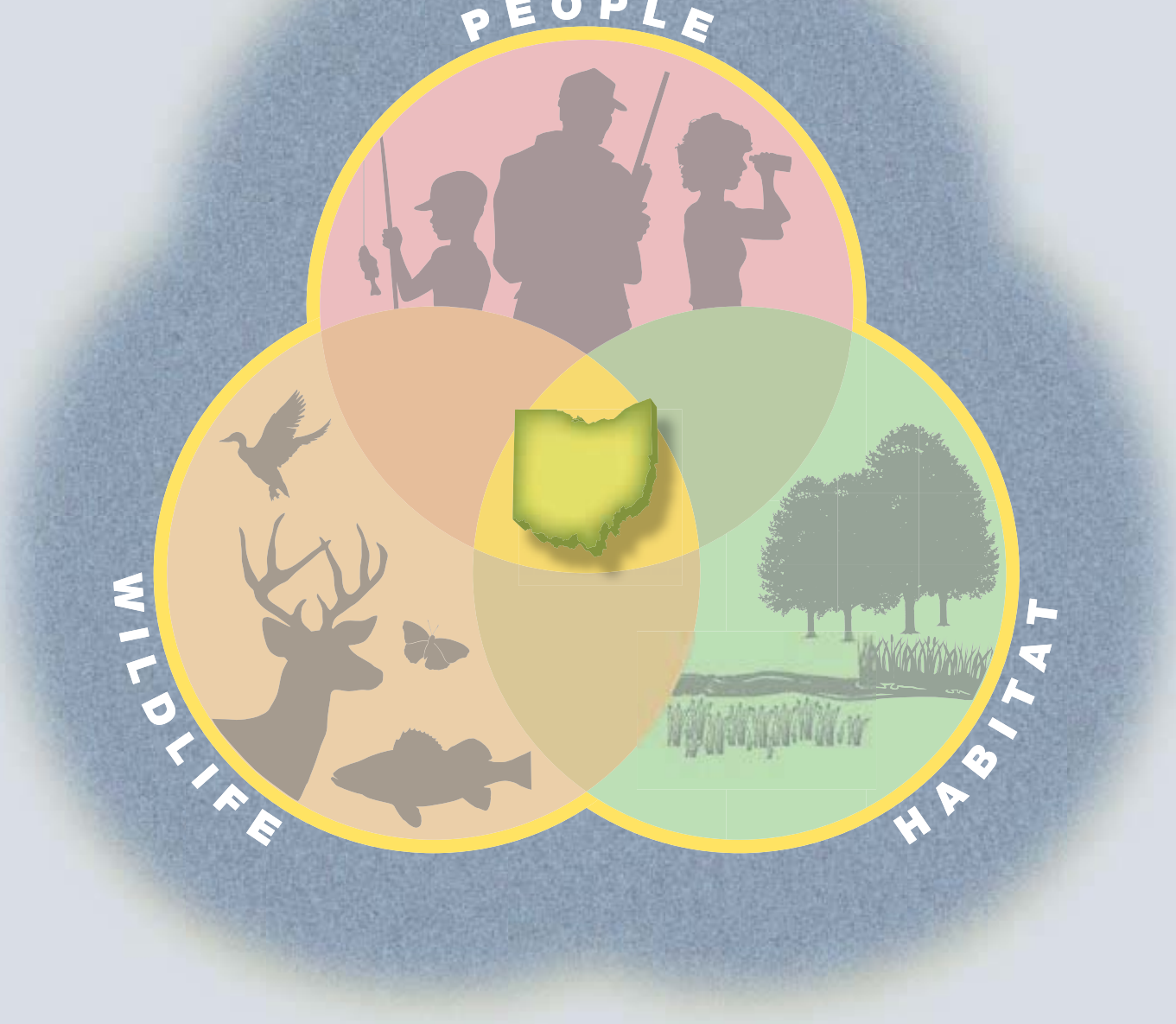
6. Sell conservation related items or items that promote wildlife conservation, including, but not limited to: pins, badges, books, bulletins, maps, publications, calendars, and any other educational article or artifact pertaining to wild animals; sell confiscated or forfeited items, sell surplus structures and equipment, and timber or crops from lands owned, administered, leased, or controlled by the Division of Wildlife.
7. The chief may sell, lease, or transfer minerals or mineral rights, with the approval of the director, when the chief and the director determine it to be in the best interest of the state. Upon approval of the director, the chief may make, execute, and deliver contracts, including leases, to mine, drill, or excavate iron ore, stone, coal, petroleum, gas, salt, and other minerals, upon and under lands owned by the state and administered by the division to any person who complies with the terms of such a contract.
   Consideration for minerals and mineral rights shall be by rental or royalty basis as prescribed by the chief and payable as prescribed by contract. Moneys collected shall be paid into the state treasury to the credit of the Wildlife Habitat Fund created in section 1531.33 of the Revised Code.
8. The chief may barter or sell wild animals to other states, or federal agencies, and conservation or zoological organizations. Moneys received from the sale of wild animals shall be deposited into the Wild Animal Fund created in section 1531.34 of the Revised Code.

Along with these powers the chief is mandated to plan, develop, and institute programs and policies for the general care and protection of all Division of Wildlife properties and to enforce through proper legal action all laws pertaining to the management of all wild animals in the state.

OHIO DEPARTMENT OF NATURAL RESOURCES

# DIVISION OF WILDLIFE

# STRATEGIC PLAN 2001–2010



# The Ohio Department of Natural Resources,
# DIVISION OF WILDLIFE
## District Offices



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Toll Free: 1-800-WILDLIFE
FAX (614) 262-1143
www.dnr.state.oh.us/odnr/wildlife

**Wildlife District One**
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FAX (614) 644-3931

**Wildlife District Two**
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Findlay 45840
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FAX (419) 422-4875

**Wildlife District Three**
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Phone: (330) 644-2293
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Athens 45701
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# MISSION STATEMENT

**We are dedicated to conserving and improving the fish and wildlife resources and their habitats, and promoting their use and appreciation by the people so that these resources continue to enhance the quality of life for all Ohioans.**

# THE OHIO DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WILDLIFE

The Ohio Department of Natural Resources (ODNR), Division of Wildlife is the state agency responsible for management of Ohio's fish and wildlife resources. The Division operates under a broad set of authorities found in the Ohio Revised Code. A portion of the Revised Code states that the Division of Wildlife holds title to all wild animals, which are not legally confined or held in private ownership, in trust for the benefit of all Ohioans. The Revised Code further directs the Division to plan, develop, and institute programs and policies that are designed for the general care, protection, and supervision of the wildlife resource in the state. The Division is also empowered to develop and enforce regulations for the protection, preservation, propagation, management, and wise use of wild animals and specific plant(s).

The primary source of funding for the Division comes from the sale of hunting and fishing licenses, federal excise taxes on hunting, fishing, and shooting equipment, and donations from the public.

The Division of Wildlife's activities are carried out by a staff of approximately 460 professionally trained employees. This staff is comprised largely of fisheries and wildlife biologists, law enforcement officers, and various communications, education, information management, clerical, computer, and administrative management professionals. The Division also relies on many volunteers who assist in various projects, most notably hunter and trapper education.

The Division of Wildlife's central office is located in the Fountain Square complex in Columbus, which is also the headquarters for ODNR and its other divisions and offices. The Division of Wildlife's district offices in Akron, Athens, Columbus, Findlay, and Xenia serve as our regional headquarters around the state. Additionally, the Division has Lake Erie research stations at Fairport Harbor and Sandusky and terrestrial wildlife research stations on the Delaware, Magee Marsh, and Waterloo wildlife areas. The Division also operates the Urbana Wildlife Unit for pheasant production and has fish hatcheries in Hebron, Latham, London, St. Marys, Castalia, and Senecaville. Educational visitor centers are located at the Hebron Fish Hatchery and the former Put-In-Bay Hatchery on South Bass Island.

The Division also maintains more than 172,000 acres of wildlife areas throughout the state. These properties are open to the public and are used for hunting, fishing, trapping, wildlife viewing, and other wildlife related recreation.

# Development of the Strategic Plan

Strategic plans, by definition, are long-range, broad-based documents that create a common, shared "vision" of the future. This strategic plan, the Division of Wildlife's third, was created to help guide the Division and its activities over the next decade. Unlike the previous two plans, which focused on fish and wildlife species or groups of species, this plan is more global in nature and encompasses a broader approach to fish and wildlife conservation. It was developed over a period of two years and involved a variety of Division employees, leaders of constituent groups, and representatives from many governmental agencies. Comments, concerns, and suggestions from these participants has truly made this strategic plan a shared vision for the future of fish and wildlife in Ohio.

Development of the strategic plan began in early 1999 with the identification of several strategic issues that are, or will be, of significance to the Division of Wildlife over the next decade. Strategic issues are broad, overriding issues, problems, or opportunities that will affect the Division of Wildlife. Nine strategic issues, ranging from access and opportunity for wildlife enthusiasts, to wildlife diversity, were identified as being of major significance for the Division of Wildlife. The Division of Wildlife administrative staff then developed a direction statement for each strategic issue. The direction statement supports the Division of Wildlife mission and provides direction as to how the Division is going to address the companion issue.

While the strategic issues and direction statements were being developed, the administrative staff of the Division also developed a series of management principles and tools that guide the Division of Wildlife's activities. Management principles are the ideas and beliefs that express the Division's most deeply held values and ideals. They help guide and direct the Division's resources and activities. Management tools are the primary mechanisms or approaches that will be used to achieve the preferred directions established in the strategic plan. They include actions and activities to help manage wildlife and wildlife habitat as well as activities to help manage the people who use the wildlife resource. The management principles and tools together describe how the Division of Wildlife does its job.

Using the strategic issues and accompanying direction statements along with the management principles and tools, employees of the Division of Wildlife, with input from a variety of constituent leaders and government officials, identified and developed the individual program plans of this strategic plan. Each of the 14 programs is a focused area of concern, interest, or responsibility that is related to one or more of the broader strategic issues identified earlier in the plan. The program issues, associated direction statements, and strategies provide a clear understanding of how the Division of Wildlife will proceed with the program.

Following the development of the individual program plans, including program issues, direction statements, and strategies, the draft of the strategic plan was sent to more than 800 conservation clubs, governmental agencies, and other interested parties for final review and comment. Substantive comments were considered and adjustments made to the strategic plan based upon this final review.

Implementation of the Division of Wildlife Strategic Plan 2001-2010 began in late 2000 as the Division of Wildlife planned for the upcoming fiscal year.

# The Ohio Department of Natural Resources, Division of Wildlife – A Historical Perspective

After 70 years of statehood, the need to conserve Ohio's fish and wildlife resources was formally recognized with the establishment of the Ohio Fish Commission in 1873. In 1886, the three-seat Ohio Fish Commission was expanded to five, with the added responsibility of making "more productive" state lands; the commission's name was changed to the Commission of Fish and Game

In 1902, the Commission of Fish and Game was given more responsibility as it took over management of public lakes and lands. Beginning in 1904, nonresidents of the state were required to purchase hunting and trapping licenses, with the funds used to help finance the activities of the Commission. Residents continued to hunt for free until 1913 when resident hunting licenses were required; trapping became a part of the license four years later. Monies collected from licenses were used for the state's stocking and propagation programs.

Influenced by organized sportsmen wanting to see greater control of the resource, the Ohio General Assembly "revised and consolidated" laws related to fish and wildlife enforcement in 1908, giving the Commission and its game wardens greater authority to protect wildlife and regulate its harvest.

The Commission of Fish and Game had only five years to enact these reforms as Governor Cox abolished the organization in 1913. In its place he established the Division of Fish and Game, a part of the newly formed Agriculture Commission. With the next administration in 1915 came more changes as the Agriculture Commission was abolished and replaced with a Board of Agriculture.

More reorganization within the Department of Agriculture in 1929 resulted in a new version of the Division of Fish and Game – the Division of Conservation. Nine bureaus were established within the new division, five of which have links to current Division of Wildlife operations: Education, Scientific Research, Inland Fish Propagation, Lake Erie Fisheries, and Game Propagation. Additionally, legislation called for the establishment of an eight-member, bipartisan Conservation Council to administer the Division's operations, including finances, programs, and policies.

In 1939, the General Assembly expanded the Department of Agriculture's conservation responsibilities with the establishment of the Division of Conservation and Natural Resources. The Division of Conservation and Natural Resources consisted of the Conservation and Natural Resources Commission, a Commissioner and any "bureaus and positions" designated by the Commission. Eight sections were created in this Division, including three predecessors of present Division administrative groups: Game Management, Fish Management, and Propagation and Law Enforcement.

In 1949 the Ohio Department of Natural Resources was established. The Division of Wildlife was one of seven charter divisions. The Conservation and Natural Resources Commission became the Wildlife Council. The Wildlife Council retained the powers of the Conservation and Natural Resources Commission – overseeing funding, policy and program development.

The Division of Wildlife underwent additional reorganization in 1963 when the Wildlife Council's function was revised to an advisory role. The chief of the Division was given full responsibility for program development and administration. The Council assumed responsibility for approving seasons and regulations. Additionally, the Wildlife Council's Chair was appointed to the Department's nine-member Recreation and Resources Commission, which advises

*continued*

the department on issues, programs and policies. Lastly, wildlife districts were realigned from the original seven to the current five.

Endangered wildlife, a growing concern nationally and internationally, received attention in Ohio also. With the passage of the state's endangered wildlife law in 1974, the Division expanded its focus yet again. An initial project was the restoration of the state's bald eagles. Throughout the years, efforts on behalf of endangered species have included the reintroduction of the river otter and introduction of peregrine falcons to the state's major cities.

Continuing to recognize a role outside the traditional focus of hunting and fishing, the Division formed the Information and Education Section in 1979. The section was charged with establishing educational programs for grade school children, non-hunters/anglers and other nontraditional constituents; developing public relations programs and materials and implementing programs to meet the education needs of first-time hunters and trappers now required to take mandatory safety training.

Citizen involvement in two new programs provided assistance to the Division's management efforts. In 1982, TIP (Turn In a Poacher) was created to allow citizens an easy way to report wildlife violations they witnessed. From its beginning the program has yielded solid leads that have led to arrests and convictions. Legislation passed the following year to allow Ohioans to designate a portion of their state income tax refund for endangered and diverse wildlife. Donations from the tax check-off have helped fund various research and management activities that have aided in the enhancement and restoration of threatened, endangered, and extirpated species.

Existing under many names and structures and with varying degrees of authority, the Division of Wildlife has managed Ohio's fish and wildlife resources for more than 127 years. With an established foundation of research, enforcement, management, and educational resources, it is well placed for the future.

# Division of Wildlife Statutory Authority

The Division of Wildlife's authority and responsibility were established by the Ohio General Assembly. The powers and duties of the Division are found in three documents: the Ohio Constitution, the Ohio Revised Code, Sections 1531 and 1533, and the Ohio Administrative Code. The chief of the Division of Wildlife has been established as the executive officer who initiates and concurs on all statutory responsibilities which are either mandatory or directory in nature.

The ownership and title to all wild animals are held in trust by the Division of Wildlife. The management of these wild animals is to be for the benefit of all the people, and is based upon the premise that wildlife is a usable, renewable resource.

The chief of the Division of Wildlife has the authority to:

1. Acquire by gift, lease, purchase, or otherwise lands or surface rights upon lands and waters or surface rights upon waters for wild animals, fish or game management, preservation, propagation, and protection, outdoor and nature activities, public fishing and hunting grounds and flora and fauna preservation. The chief may also receive by grant, devise, bequest, or donation lands or surface rights upon lands and waters or the surface rights upon waters.
2. Make such rules for the protection of state owned or leased lands and waters, and property under division control against wrongful use or occupancy as to ensure the protection of such lands, waters, and property from depredations and to preserve these lands so destruction or any improper use or occupancy does not occur.
3. Make and issue orders benefiting wild animals, fish or game management, preservation, propagation, and protection, outdoor and nature activities, public fishing and hunting grounds, flora and fauna preservation, and regulate the taking and possession of wild animals on any lands or waters owned or leased or under division supervision and control.
4. Acquire by gift, lease, or purchase land for the purpose of establishing state fish hatcheries and game farms, and may erect thereon such buildings or structures as are necessary. The chief may also enter into agreements to improve public fishing access in all areas of the state.
5. Establish user fees for use of special public facilities or participation in special activities on lands and waters administered by the division. Such special facilities and activities may include hunting or fishing on special, designated public lands and waters intensively managed or stocked with artificially propagated game birds or fish, field trial facilities, wildlife nature centers, firearm ranges, boat mooring facilities, camping sites, and other similar special facilities and activities. The chief shall set and collect the fees for concession rentals or other special projects; regulate through contracts between the division and concessionaires the sale of tangible objects at concessions or other special projects; and keep a record of all such fee payments showing the amount received, from whom received, and for what purpose the fee was collected. All money received as user fees, concession rentals, or for other special projects shall be paid into the Wildlife Fund to be used for wildlife management projects. The chief shall also assure that all monies generated from the sale of hunting and fishing licenses and other wildlife permits shall not be directed for other uses. They shall be used solely for wildlife projects.
6. Sell conservation related items or items that promote wildlife conservation, including, but not limited to: pins, badges, books, bulletins, maps, publications, calendars, and any other educational article or artifact pertaining to wild animals; sell confiscated or forfeited items, sell surplus structures and equipment, and timber or crops from lands owned, administered, leased, or controlled by the Division of Wildlife.
7. The chief may sell, lease, or transfer minerals or mineral rights, with the approval of the director, when the chief and the director determine it to be in the best interest of the state. Upon approval of the director, the chief may make, execute, and deliver contracts, including leases, to mine, drill, or excavate iron ore, stone, coal, petroleum, gas, salt, and other minerals, upon and under lands owned by the state and administered by the division to any person who complies with the terms of such a contract.

   Consideration for minerals and mineral rights shall be by rental or royalty basis as prescribed by the chief and payable as prescribed by contract. Moneys collected shall be paid into the state treasury to the credit of the Wildlife Habitat Fund created in section 1531.33 of the Revised Code.
8. The chief may barter or sell wild animals to other states, or federal agencies, and conservation or zoological organizations. Moneys received from the sale of wild animals shall be deposited into the Wild Animal Fund created in section 1531.34 of the Revised Code.

Along with these powers the chief is mandated to plan, develop, and institute programs and policies for the general care and protection of all Division of Wildlife properties and to enforce through proper legal action all laws pertaining to the management of all wild animals in the state.

# Management Principles

Management principles are the underlying beliefs which express our agency's most deeply held values or ideals. These statements will guide us as we plan, develop, and implement projects. By making them part of our strategic plan, we will be reaffirming to the people of Ohio, other agencies and our employees that these are the principles we believe are important.

- The Ohio General Assembly has charged the Division of Wildlife with the responsibility of managing Ohio's wildlife resource. The Division of Wildlife seeks the partnership and involvement of other government agencies, organized groups and individuals to manage and protect the wildlife resource.
- The rich traditions of fishing, hunting, and trapping are all part of Ohio's heritage. The Division of Wildlife supports the consumptive use of wildlife for recreation and as a management tool. The Division of Wildlife will continue to encourage these traditional activities and use them as management tools for our renewable wildlife resource for the enjoyment of Ohioans.
- The Division of Wildlife supports the right of people to own and use firearms in continuing the heritage of hunting and shooting sports.
- The Division of Wildlife encourages the use of its facilities for a wide variety of wildlife recreation. Wildlife viewing and photography are examples of a rising trend in varied recreational uses of Ohio's wildlife resource. This type of recreation is expected to increase in the future.
- The Division of Wildlife values its employees and will provide high quality training and equipment to enhance their long-term success and allow them to perform at their highest possible level in service to the people of Ohio.
- The Division of Wildlife recognizes that both quality and quantity of habitat are necessary to maintain diverse wildlife populations. The Division will give priority to efforts to preserve, protect, enhance, or acquire critical habitats, and increase its efforts to manage ecosystems.
- The Division of Wildlife believes the fish and wildlife law enforcement, information and education, management, and research functions best serve the wildlife resource and the people of Ohio when integrated into one Division.
- Wildlife areas comprise less than one percent of Ohio's landscape. The Division of Wildlife believes that it is very important that these lands be used for wildlife recreation, production, research, and study. The Division will establish regulations and programs to manage for these purposes and will not allow non-compatible activities to occur on its lands.
- Wildlife diversity is an important part of viable ecosystems. The Division of Wildlife believes that the protection, maintenance and restoration of wildlife diversity is best served by integrating it into all programs.
- Recognizing the high ecological, social, economic, and recreational value of wildlife for current and future Ohioans, the Division of Wildlife will make management decisions based on the best available management practices derived from professionally conducted research.
- The Division of Wildlife recognizes that quality customer service is critical to the long-term stability and success of the agency. The Division will continue to make quality customer service a top priority and will employ new technologies and methods to ensure that all customers receive timely, accurate, and efficient services.

# MANAGEMENT TOOLS

Management tools are the primary mechanisms that the Division of Wildlife employs to accomplish goals and objectives established in the strategic plan.

**Administration –** The act of setting policy, procedure, and direction for the operation of the Division of Wildlife.

**Communication –** The internal and external transfer of information through publications, media, and personal contact.

**Enforcement –** The application of law by Division of Wildlife officers to ensure compliance with regulations that have been established to manage and protect wildlife populations, properties of the Ohio Department of Natural Resources, and the waters of Ohio.

**Habitat Management –** The use of physical, biological or chemical means to shift the suitability of habitat composition to benefit a particular wildlife community.

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## MANAGEMENT TOOLS *continued*

**Partnerships –** Cooperative efforts between agencies, individuals or groups to accomplish common goals, including incorporating grants, contract services, or agreements.

**Planning –** The development of written direction to address issues, determine application of tools, and establish goals and objectives through strategic, tactical, and operational plans.

**Population Manipulation –** Stocking, transfer, movement, protection or harvest to alter a fish or wildlife population or its availability to the people.

**Property Management –** The acquisition, control, and development of land and water for wildlife and fish habitat and for access to wildlife related recreational opportunities.

**Regulation Development –** The ability to influence or establish law through Administrative Code, Ohio Revised Code, and federal law to protect, maintain or improve wildlife populations and regulate related human activities.

**Research and Survey –** Determines basic biological and demographic information or monitors attitudes and population trends from which wildlife management decisions are based.

**Wildlife Education –** The development of understanding of concepts regarding habitat, wildlife, regulations, ethics, and safety by the people of Ohio.

*Planting trees at Woodbury Wildlife Area for habitat improvement*

# STRATEGIC ISSUES

Strategic issues are broad, overriding issues, problems, or opportunities that will affect the Division of Wildlife during the next 10 years. These issues were identified by the Division of Wildlife following research into the long-term trends in the environment, demographics, technology, and other aspects of society. Each strategic issue is accompanied by a direction statement which supports the mission of the Division of Wildlife.

## ACCESS

The people of Ohio have a strong desire to participate in wildlife-related recreation and enjoy wild places; however difficulty in obtaining access to these places is limiting their participation and opportunities. Ohio ranks 47th per capita among the 50 states in the amount of public land available to its citizens for outdoor recreation. Ohio's private land base, encompassing over 95 percent of the state, must play an integral part in providing hunters, anglers, and wildlife observers a place to recreate. Wildlife population control by hunting and trapping cannot be effective without access to these lands. The current amount of public land available for wildlife recreation is not meeting public demand. The sprawl of urban and suburban landscapes into the rural countryside has reduced traditional hunting, trapping, and watchable wildlife opportunities on private lands, further increasing pressure on the available public lands. The insufficient amount of space results in user conflicts on lakes, rivers, streams, and lands. ***The Division will provide more access on public land, and encourage more access on private lands.***

## PUBLIC UNDERSTANDING OF WILDLIFE

Many Ohioans do not understand the importance of wildlife management and the role of habitat. For more than 125 years, the Division of Wildlife has been at the forefront of fish and wildlife management. Times have changed and more and more people live in urban environments where outdoor experiences are no longer a tradition and habitat and wildlife are no longer part of daily life. As a result, the Division must meet the challenge of creating an understanding of wildlife in the people of Ohio as well as continuing to manage our wildlife resources and their habitats. It is critical that the public understands the importance of scientifically sound, professional wildlife management. ***The Division of Wildlife will institute programs and projects to increase the public's understanding of wildlife and their habitats and the Division's management role.***


## HABITAT

The loss and degradation of wildlife habitat limits wildlife populations and wildlife diversity. Trends indicate that this loss and degradation of habitat will continue in the 21st century. The scope of this issue is wide, varied, and difficult for the Division of Wildlife to influence even though it is Ohio's leading authority on wildlife and its habitat. ***The Division of Wildlife will identify how it can realistically influence these trends, identify which habitats are most critical to accomplishing our mission and will develop programs to protect and enhance critical wildlife habitats in Ohio.***

## HUMAN-WILDLIFE CONFLICT

Many factors have contributed to increased conflict between humans and wild animals in Ohio. The root of the problem is changing land use and an increase in populations of some wildlife species, particularly raccoons, white-tailed deer, and Canada geese. Expanding urban development, development of rural areas, and intensified agricultural and horticultural production are the leading causes for human-wildlife problems. This puts more people in contact with wild animals, and creates less tolerance of problems associated with wildlife. The presence of increased populations of some wildlife species is further magnified by widely differing public attitudes toward wildlife control and the establishment of city and local laws that restrict hunting, trapping, and other traditional and effective measures of controlling wildlife populations. ***The Division will find ways to help people and wildlife coexist by providing the tools to minimize conflict situations.***

## RECREATIONAL OPPORTUNITIES

Wildlife related recreation such as hunting, viewing, fishing, trapping, and photography is very important to Ohioans. The demand for quality wildlife-based recreational opportunities is expected to increase. Faced with increasing urbanization and decreasing leisure time, the people of Ohio will expect the Division to provide them with recreational opportunities that are both convenient and enjoyable. The rich diversity of wildlife found in Ohio provides a variety of recreational opportunities to countless wildlife enthusiasts across the state. ***The Division will continue to develop projects to identify and address the changing recreational interests of wildlife enthusiasts and to increase their awareness of the opportunities that are available to them.***

## WILDLIFE DIVERSITY

A rich diversity of wild animals is a valuable ecological, social, and economic asset for Ohio. Unfortunately, many populations have been reduced or eliminated by a host of factors, including environmental degradation, utilization, and development. While some animals, once thought to be lost forever, have been restored to Ohio, there still is much work to do. Factors that reduced wildlife diversity in the past still exist and may be aggravated by the continued threat of exotic terrestrial and aquatic nuisance species. Probably the most important influence, however, is the quality and quantity of habitat to support Ohio's wildlife. ***The Division will integrate wildlife diversity strategies within all of its organizational units, striving to restore extirpated wildlife and enhance populations that have been reduced in their abundance and distribution, and protect those that remain healthy and viable.***

## RECRUITMENT AND RETENTION OF ANGLERS, HUNTERS, AND TRAPPERS

In recent years, the number of Ohioans participating in fishing, hunting, and trapping has declined. Bringing new people into fishing, hunting, and trapping and having people retain their interest in these activities is very important. It is vital for the future of wildlife conservation and for the future of our outdoor heritage that there is a core of people who have a passion for the wildlife resource. History has shown that time and time again anglers, hunters, and trappers have come to the aid of wildlife and the environment. Youths that begin fishing, hunting, and trapping today will be the conservationists of tomorrow and will be the citizens who steer the future of wildlife management. It is critical that more people are introduced to the outdoors for this reason. ***The Division of Wildlife will institute programs and projects designed to both increase the number of new anglers, hunters, and trappers and retain those who currently enjoy these outdoor pursuits.***

## PRESERVING THE HUNTING, FISHING, AND TRAPPING TRADITION

Ohio has a rich tradition of hunting, fishing, and trapping which are wise uses of the state's renewable natural resources. Our management strategies will continue to support these traditional activities. The Division of Wildlife supports the right of people to own and use firearms in continuing the heritage of hunting and shooting sports. Restrictions on firearm ownership, hunting, trapping, and shooting erode the rights of sportsmen and women to hunt, fish, trap or shoot. Enactment of such legislation is also detrimental to professional wildlife management practices. The Division of Wildlife will continue to provide educational materials and programs to all persons about the scientific wildlife management principles that are beneficial to wildlife and the people of Ohio. ***The Division of Wildlife will continue to support the traditional activities of hunting, trapping, and fishing and will continue to support and encourage the shooting sports.***


## FUNDING

Combined hunting and fishing license sales peaked in 1987 while license revenue was highest, adjusted for inflation, in 1995. Demand for services by traditional user groups as well as non-traditional constituents has increased steadily to the present. The increasing number of senior citizens that receive free licenses creates an additional financial challenge. These trends make it difficult to meet the customer service levels expected by the public and compel the Division to examine the current license structure as well as alternative funding sources. ***The Division of Wildlife will increase revenues through innovative licensing and new funding sources.***

# Key Terms

Readers of the Division of Wildlife's 2001–2010 Strategic Plan may wish to refer to the following important terms to help understand the concept and content of the plan.

**Angler Hours** – the time spent fishing, either individually or collectively

**Aquatic Nuisance Species** – an aquatic species that has been introduced into an area outside of its natural range and now has the potential of harming the ecosystem where it has been introduced (i.e., zebra mussel, round goby, sea lamprey)

**Biodiversity** – also known as biological diversity; a living system sustained by many different species in a natural order, rather than an artificial system managed by, or for, a few primary, usually predator or sport species

**Conservation** – the wise use of a natural resource, can be a consumptive or non-consumptive use, or both

**Conservation Reserve Program (CRP)** – a federal farm program that encourages landowners to remove highly erodible land from crop production and instead plant various types of cover that reduce erosion and conserve soil and water resources while also benefiting wildlife.

**Consumptive Use** – use of a natural resource that removes individuals from the environment

**Ecosystem** – a natural community of plants, animals, geologic features, and the physical environment; includes the interactions among the various components

**Endangered Species** – a species that is in danger of being eliminated from a region or its entire range

**Exotic Species** – a species that has been introduced into an area that is outside of its natural range

**Extinct Species** – a species that no longer exists

**Extirpated Species** – a species or subspecies has been eliminated from a specific area or region; it may be plentiful in another area or region

**Fishery** – a system composed of three interacting components: fish, aquatic habitat, and angling

**Habitat** – where an animal lives; usually described by the vegetation type, terrain, or aquatic features

**Harvest** – the lawful removal and use of a renewable natural resource, including hunting, trapping, fishing, logging, etc.

**Hydromodification** – the modification of water systems, including dredging, damming, channelizing, etc.

**Native Species** – a species of plant or animal that is naturally found in a given area; species that was present at the time of European settlement of North America

**Non-Consumptive Use** – any use of wildlife which does not result in the removal of animals from the environment, such as observing, feeding, photography, or nature study

**Non-Point Source Pollution** – pollution that cannot be traced back to a specific source

**Point of Sale License System (POS)** – a computer-based licensing system that allows Division of Wildlife fishing, hunting and trapping licenses and permits to be sold from terminals throughout the state

**Preservation** – no use, alteration, or management of a natural resource, or an area, for human-related needs or desires

**Riparian** – the land area immediately adjacent to a stream, river, or lake

**Soil and Water Conservation District (SWCD)** – local conservation agency that focuses on land use and conservation farming; funded by the county commissioners and state matching grants and guided by a board of supervisors from the local community

**Succession** – the natural process by which one type of habitat slowly changes into another type of habitat, resulting in a corresponding change in plant and animal communities

**Tactical Plan** – a plan that provides multi-year operational direction concerning a specific area of interest

**Threatened Species** – a species that is likely to become endangered unless some action is taken

**Watershed** – the total land area that drains into a specific stream or river

**Wildlife-Related Recreation** – outdoor recreation that is centered around wildlife; can be either consumptive or non-consumptive recreation

# ACCESS AND OPPORTUNITIES

## Introduction

The rich diversity of wildlife in Ohio provides a variety of recreational opportunities to countless wildlife enthusiasts across the state. The demand for quality, wildlife-based recreational opportunities is expected to increase. In addition, Ohioans have historically shown a desire for wild places to participate in wildlife-related recreation. The current sprawl of urban and suburban landscapes into the rural countryside has reduced wildlife-related opportunities. This program identifies direction and strategies to guide Division efforts to provide for sustained outdoor recreation opportunity and more public and private land access for hunting, trapping, fishing, and wildlife viewing opportunities.

## Facts

- Ohio had more than 1 million anglers and 438,000 hunters licensed in 1999.
- Ohio ranks 47th of the 50 states in the amount of public lands available for recreation per capita.
- Ohio's private lands encompass over 95 percent of the state.
- Approximately 500,000 deer hunters contribute $350 million to Ohio's economy each year.

**Issue:** The demand for wildlife-related recreation is expected to increase.

**Direction:** Maintain and enhance fish and wildlife populations for public use and recreation.

**Issue:** Public lands, waters, shooting facilities and other wildlife-related facilities are often overcrowded, detracting from the quality of recreational experiences at these sites.

**Direction:** Acquire and develop additional lands, waters and facilities in places that are convenient for people to pursue wildlife-related recreation and sport shooting.

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**Issue:** Access to navigable streams and private lands and waters is low and is becoming less available for wildlife-related recreation.

**Direction:** Increase access to navigable streams and private lands and waters for wildlife-related recreation.

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**Issue:** Physically challenged persons and specialized users need places for wildlife recreation.

**Direction:** Increase recreational opportunities for persons with disabilities or special needs.

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**Issue:** Conflicts between different user groups are increasing as facilities and areas become more crowded.

**Direction:** In addition to providing additional lands and facilities, conflicting activities should be more effectively separated by time and space to minimize conflicts.

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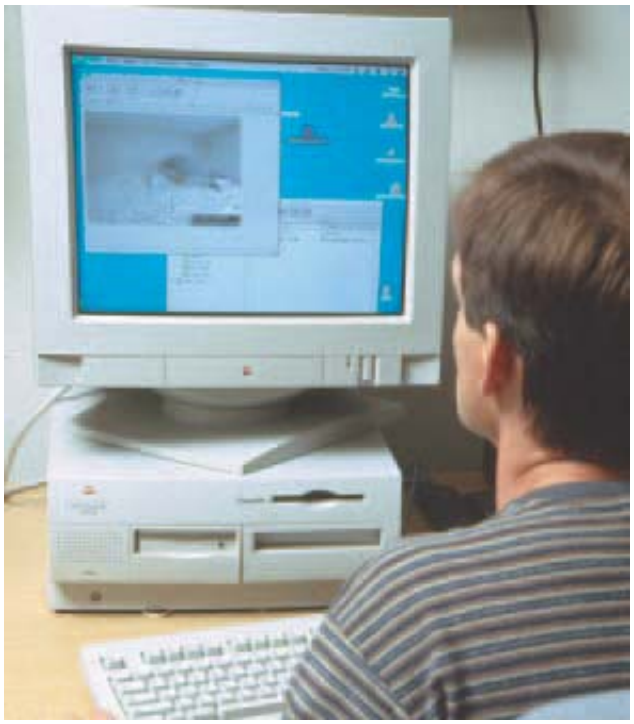
## Strategies

- Develop and implement new and innovative projects to identify and address the recreational interests of wildlife enthusiasts.
- Manage wildlife resources based on the best available information in combination with statutory authority and the needs of our customers.
- Increase wildlife area lands through acquisitions closer to population centers and focus on large tracts, riparian corridors, quality tracts, and inholdings.
- Seek legislation to provide more innovative funding sources for access to private and public lands.
- Provide more access to private land by using co-op agreements, easements, and tax incentives and develop partnerships within ODNR, and other state, private, and federal agencies.
- Construct new and renovate existing public fishing, hunting, and wildlife-related facilities.
- Determine the potential for additional waters on wildlife areas and construct more lakes, ponds, and wetlands.
- Implement more wildlife recreation programs for persons with disabilities or special needs and focus on improving accessible facilities.
- Obtain information using the Point of Sale License System to help identify user conflicts and guide facility development.
- Determine the rights of individuals to pursue wildlife-related recreation on Ohio streams.
- Develop regulations specific to areas to reduce user conflicts.
- Initiate studies to determine the best location and construct new shooting ranges.
- Advocate and encourage privately owned and supported shooting facilities.

## Related Supporting Documents

Ohio River Fisheries Management Team Tactical Plan
Fish Hatchery Tactical Plan
Angler Recruitment Tactical Plan
Angler Retention Tactical Plan
Hunter/Trapper Recruitment Tactical Plan
Hunter/Trapper Retention Tactical Plan
Deer Tactical Plan
Turkey Tactical Plan
Waterfowl Tactical Plan
Furbearer/Small Game Tactical Plan
Facility Development Tactical Plan
Wildlife Recreation Tactical Plan

# COMMUNICATION



## Introduction

Communication is the transfer and exchange of information between the Division of Wildlife and its customers. A strong communications program is essential to a greater public awareness of all our programs. It provides a conduit for the flow of information to the public, regarding our programs and regulations, and from the public, regarding their needs and desires. As more people know what we do and understand why we do it, we increase public support, thereby increasing the potential for accomplishing our mission. Since the future of the fish and wildlife resources depends on the public's commitment to act on its behalf, keeping the public well informed is crucial to our success.

## Facts

- There are 82 daily newspapers, over 200 weekly newspapers, 66 television stations, and hundreds of radio stations and magazines in Ohio.
- In 1999, the Division's 800-WILDLIFE telephone line received 125,000 calls, in addition to the hundreds of thousands of calls to field offices and wildlife officers. This was a 49 percent increase from 1997.
- In 1999, the Division's Web site had 187,000 individual visitors.

**Issue**: Inaccurate and/or misleading information about wildlife and wildlife management is widely disseminated by various sources.

**Direction:** Increase the number of people who come to the Division of Wildlife for information.

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**Issue:** There is increasing demand for easy, timely access to accurate, consistent information and services. Communications tools are rapidly changing.

**Direction**: Improve accessibility to accurate, consistent information to the public and to Division of Wildlife employees for dissemination.

## Strategies

- Make customer service a top priority in all information exchanges.
- Establish the Division as a clearinghouse from which other agencies and organizations receive wildlife information.
- Develop research techniques to keep us aware of our customer's needs.
- Keep pace with our customers changing needs.
- Develop ways to more effectively use new technology that will make the communications program more efficient.

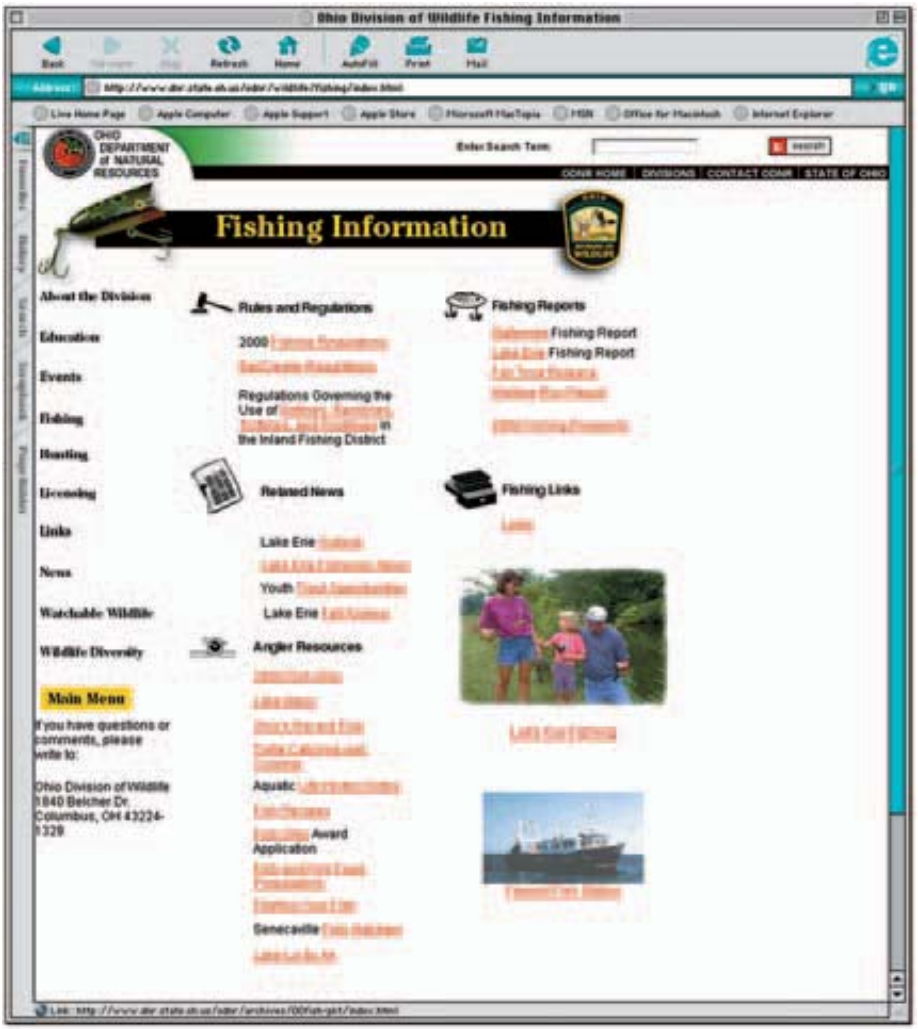
*continued*

- Make every effort to promote the expertise and public image of the Division of Wildlife by increasing awareness of our legal mandate and scientifically based management practices.
- Increase our efforts to provide information to non-traditional constituents.
- Continue our efforts to locate media resources and provide them with timely information.
- Raise awareness of available wildlife recreation opportunities.
- Provide internet access to information and capability to complete transactions anytime, from anywhere.

## Related Supporting Documents

Inter–Intranet Resources Tactical Plan

Marketing Tactical Plan



# WILDLIFE REGULATION COMPLIANCE

## Introduction

The Division of Wildlife is mandated to enforce all laws and rules pertaining to wild animals. Surveys have shown that enforcing laws and protecting endangered species were the top ranked programs in importance to the public. The basic foundation for regulations governing the taking, possession, and sale of wild animals is in Chapters1531 and 1533 of the Ohio Revised Code. Additional regulations can be found in Section 1501 of the Ohio Administrative Code. Compliance with these laws and rules is essential to effectively manage Ohio's wildlife.

## Facts

- The Division of Wildlife maintains a 97.4 percent conviction rate for offenses prosecuted.
- One hundred sixty-two commissioned officers with the Division of Wildlife contact more than 100,000 hunters and anglers annually.
- Surveys have shown that 98 percent of Ohioians highly support the enforcement of wildlife regulations.

**Issue:** Low compliance with wildlife regulations will negatively impact future wildlife populations and their habitat.

**Direction:** The Division of Wildlife will achieve a higher degree of compliance with wildlife regulations by contacting 125,000 hunters, fishermen, and trappers annually.

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**Issue:** Increasingly diverse demands on our wildlife officers will affect the amount of time they can devote to regulation compliance.

**Direction:** Assure the wildlife officers have enough time to get a higher degree of regulation compliance.

**Issue:** Wildlife regulations are by nature complex, causing lower compliance.

**Direction:** Write regulations that will be easier for the public to understand.

## Strategies

- Update regulations to protect the resource and habitat.
- Conduct investigations of violations involving threatened or endangered species.
- Develop specialized enforcement teams that are knowledgeable of endangered and threatened species.
- Revise and update species restitution values for pollution investigations every five years.
- Prioritize our enforcement efforts in relation to the resource needs and public demands.
- Conduct investigations that will reduce commercial wildlife violations.
- Use point-of-sale technology to increase regulation compliance.
- Use wildlife investigators to conduct investigations that will target major and repeat offenders of wildlife violations.
- Provide computer access to law enforcement officers to create and utilize statewide databases.

*continued*

- Review and rewrite, if needed, the Law Enforcement Operational Manual biannually to meet the current enforcement needs.
- Provide the public with simple, clear, and user friendly regulations.
- Provide a professional, high profile, positive law enforcement image.
- Develop a Web site to provide interactive information on rules and regulations.
- Be proactive in our law enforcement media contacts.

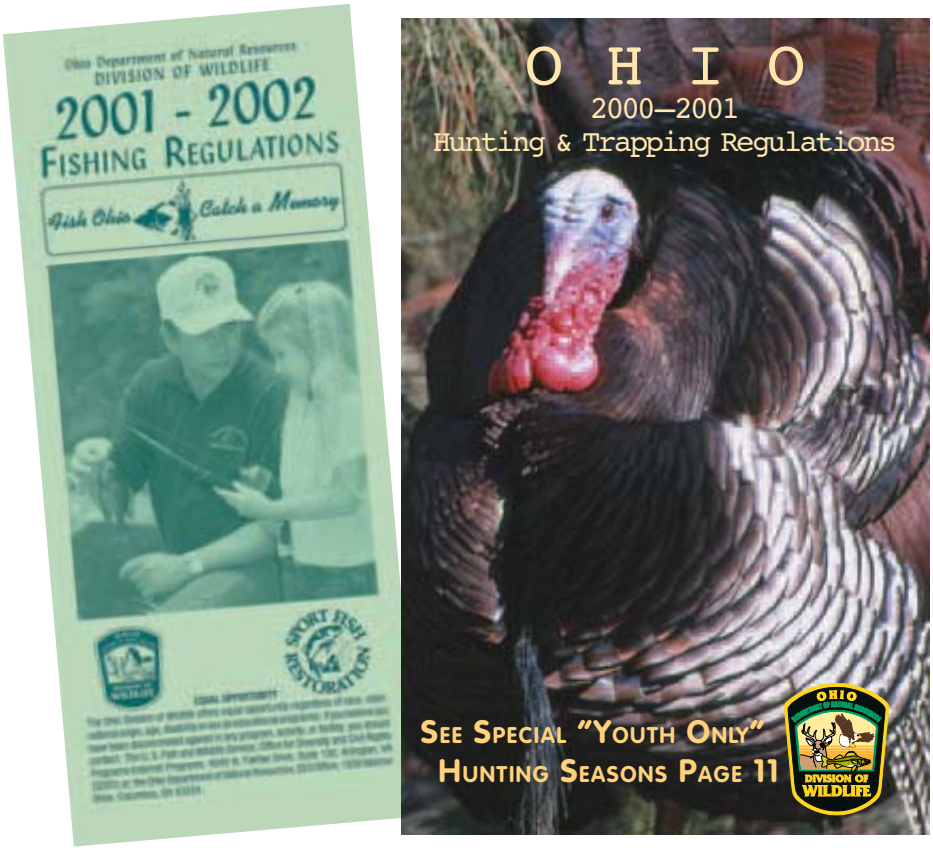
## Related Supporting Documents

Division of Wildlife Law Enforcement Operational Manual

Pollution Investigation Manual

Ohio Revised Code Sections 1531 and 1533

Ohio Administrative Code Section 1501



# HUMAN-WILDLIFE CONFLICT

## Introduction

Fifty years ago, the human population in Ohio was approximately seven million people. At that time, many species of wildlife were at low population levels due to aggressive agricultural and timber practices that resulted in drastic changes in the landscape statewide. Today, suburban areas have expanded into rural areas and traditionally rural communities have become increasingly urbanized. Ohio's current population of approximately 11 million people will continue to grow as much as 1 percent annually over the next 15 years, with the most rapid growth occurring in the counties surrounding its largest cities. This shift in human population, coupled with increases in some wildlife populations and changes in public attitude toward wildlife, has increased conflicts between humans and wildlife over the past 20 years. Many species have now adapted and thrive in areas of high human population because of the abundance of food, cover, and the near absence of predators, including man. Decreasing numbers of hunters and trappers in Ohio, combined with a depressed fur market, have resulted in population growth among furbearers, exemplified by raccoon population increases as high as 700 percent since 1992. High wildlife populations, many geographic in nature, have created a multitude of economic, social, health, and safety issues that must be addressed.

## Facts

- Fifty years ago, species such as white-tailed deer, Canada geese, and coyote were considered rare in Ohio.
- In 1996, a study by The Ohio State University, College of Agriculture found that wildlife damage to crops averaged about $3.00 per acre across the state.
- Since 1997, over 2.5 million baits injected with raccoon rabies vaccine have been dropped in six northeast Ohio counties.

**Issue:** Intensified agricultural production, development of rural areas, and an increase in population of some wildlife species will lead to increased human-wildlife conflicts.

**Direction:** Reduce the number of unresolved conflict situations.

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**Issue:** As Ohio's human population continues to grow, the number of orphaned and injured wildlife occurrences will increase.

**Direction:** Reduce the number of young animals mistakenly removed from the wild and meet the demand for technical assistance concerning orphaned and injured wildlife.

## Strategies

- Provide technical assistance, educational opportunities, and practical options to landowners, agricultural producers, and others as a means of addressing wildlife conflict concerns.
- Train employees, nuisance trappers, and Soil and Water Conservation District (SWCD) wildlife specialists in human-wildlife conflict abatement.
- Foster cooperative efforts with local, state, and federal agencies to help resolve and reduce human-wildlife conflicts.
- Continue to strengthen relationships with agricultural organizations.
- Encourage and assist cities and communities in initiating ordinances and long-range plans to allow hunting and trapping as a wildlife management option.
- Continue to support efforts to control and contain the spread of raccoon-strain rabies in Ohio.

*continued*

- Adjust harvest regulations in response to human-wildlife conflict situations.
- Survey attitudes of rural and urban landowners concerning wildlife damage.
- Conduct research to find ways to more effectively resolve human-wildlife conflicts.
- Maintain a strong working relationship with the Ohio Wildlife Rehabilitators Association.

## Related Supporting Document

Human-Wildlife Conflict Resolution Tactical Plan

# EDUCATION

## Introduction

Education is a process by which knowledge is obtained. Surveys show Ohioans care about wildlife and they need science-based data to make informed conservation decisions. As society changes from a traditional rural lifestyle to an increasingly urban culture, Ohioans are losing their ties to their natural heritage. By providing and developing wildlife education programs, we will increase Ohioans' knowledge and understanding of the link between a healthy ecosystem and our quality of life.

## Facts

- Ohio's population of 11.5 million residents is 75 percent urban and 25 percent rural.
- Ninety-four percent of respondents to a 1996 Division of Wildlife survey ranked educating and informing the public about wildlife conservation as important or very important.
- There are more than 2 million Ohio school children in more than 600 school districts.

**Issue:** People's knowledge and understanding about wildlife and their habitats is limited.

**Direction:** Increase people's knowledge and understanding of the relationship between wildlife, habitat, and people.

---

**Issue:** As we become more urban, our youth are not being exposed to wildlife management concepts.

**Direction:** The Division of Wildlife will increase the knowledge that Ohio children have about wildlife.

## Strategies

- Work with the Department of Education to include wildlife conservation principles in the state science model, a historical perspective in the history model, and develop related wildlife education materials to meet proficiency standards.
- Offer in-service training to Division of Wildlife staff to effectively present our materials in public.
- Develop curriculum and hold workshops for conservation organizations to work with their constituents.
- Incorporate science-based research into education materials and programs.
- Include consumptive use components and conservation funding information in all publications and programs.
- Provide public educational programs at Division of Wildlife facilities.
- Develop indicator projects to establish the level of wildlife knowledge in Ohio students.

*continued*

## Related Supporting Documents

Classroom Wildlife Education Tactical Plan

Curriculum and Publication Development Tactical Plan

Wildlife Education Training Tactical Plan

# FORESTLANDS

## Introduction

Ohio's forests have undergone dramatic changes since the late 1700s, when nearly 95 percent of Ohio was forested. Rapid settlement of the Ohio country reduced forest cover to a low of 12 percent in 1940. This massive loss of forest habitat was instrumental in the disappearance of many animals from Ohio including the timber wolf, elk, and mountain lion. Ohio's forestlands have been increasing since 1940 and, as of 1991, comprised 30 percent of the state's land area. Forestland in Ohio is not uniformly distributed across the state. Forest cover in glaciated, western counties averages 15 percent, whereas counties in unglaciated southeastern Ohio average over 35 percent. The 2.5-fold increase in forest habitat has been the major factor leading to the successful reintroduction, return, or resurgence of many forest-dependent species like deer, wild turkey, beaver, and black bear.

## Facts

- More than 95 percent of Ohio's forestland is privately owned.
- More than half of Ohio's forest acreage is in mature timber.
- Virtually all of Ohio's forests were harvested during the 19th and 20th centuries.

**Issue:** The ownership pattern of Ohio's forests is becoming increasingly fragmented and the land is being developed. As these changes continue, it will be more difficult to manage forests and forest wildlife resources.

**Direction:** Maintain and/or increase existing large, contiguous blocks of forest cover within designated focus areas.

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**Issue:** Acreage in the brushy stage of forest succession, and the animal populations dependent on it, are declining as Ohio's forests mature.

**Direction:** Increase the proportion of early successional stage forest habitat.

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**Issue:** Forests once dominated by oaks and hickories are becoming increasingly dominated by less desirable tree species such as maples and yellow poplar.

**Direction:** Increase the oak-hickory component of Ohio's forests.

## Strategies

- Continue land acquisition programs at the state and federal level.
- Implement forest management plans on public and private lands that incorporate both clearcutting and uneven-aged techniques.
- Continue to cooperate with researchers investigating forest management practices that result in oak and hickory regeneration.
- Increase awareness that proper forest resource management requires timber harvest.
- Convert some surface mined grasslands to forest lands.

*continued*

## Related Supporting Documents

Zaleski Focus Area Plan
Shawnee Focus Area Plan
Forest Habitat Tactical Plan
State Listed Terrestrial Wildlife Tactical Plan

# GRASSLANDS

## Introduction

At the time of settlement, Ohio's only grasslands consisted of native tallgrass prairie. Prairies comprised about 2.5% or 1,000 square miles of Ohio's land area, while most of the remaining pre-settlement landscape was forested. Over time, forests and native prairies were cleared for agriculture. These new croplands included significant acreage in pastures and hayfields, greatly increasing the total available grassland habitat in Ohio to a level that exceeded the original prairie in size. These new grasslands were mainly comprised of exotic cool-season grasses. Native prairies have all but disappeared as a result of land conversions for agricultural uses. The amount of high quality grassland habitat available to wildlife probably peaked in Ohio prior to World War II. Since the 1940s, the amount of available grassland habitat and the wildlife dependent upon it have declined. Today, much of the total grassland acreage in Ohio is provided by lands enrolled in the Conservation Reserve Program (CRP) and areas reclaimed after surface coal mining activities. These grasslands, however, are far from ideal for a number of reasons including the dominance of fescue grasses on reclaimed strip mines, and mowing practices or other disturbances that occur on CRP lands during the nesting season (May-July).

## Facts

- Grassland habitats are considered to be among the most threatened ecosystems in North America.
- Of Ohio's 15 grassland nesting birds, one has been extirpated (prairie chicken), and four are listed as state threatened (upland sandpiper) or endangered (Northern harrier, sedge wren, lark sparrow) species.
- Grasslands resulting from Conservation Reserve Program (CRP) enrollment in Ohio peaked at nearly 400,000 acres and have since declined to about 300,000 acres.
- More than 95 percent of Ohio's grassland habitat occurs on private lands.

**Issue:** Undisturbed grassland habitat and related wildlife species in Ohio have declined over the past 60 years.

**Direction:** Reverse this decline.

---

**Issue:** Existing grasslands occur in tracts that are too small or exist in a landscape too fragmented to benefit the species that require these habitats.

**Direction:** Increase the average size of existing grassland tracts within designated focus areas.

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**Issue:** Mowing during the nesting season and difficulties with management limit the quality of grassland habitat.

**Direction:** Increase the amount of grassland habitat that is undisturbed during the nesting season.

*continued*

## Strategies

- Inventory existing grasslands using the best available technology.
- Focus grassland management efforts on several watershed-sized areas in glaciated Ohio, especially in areas of known importance to Ohio's grassland birds.
- Monitor and influence federal agricultural programs and policies that have the potential to impact or improve grasslands.
- Determine attributes of grasslands that tend to be associated with self-sustaining (i.e., source) populations of grassland-dependent birds.
- Improve and maintain quality grassland habitats created by strip mine reclamation.
- Increase the use of native warm-season grasses for grassland management on public and private lands.
- Initiate and continue private land incentives, technical assistance, and education programs related to grasslands.
- Educate landowners and land managers about the adverse impacts of disturbance on grassland wildlife during the nesting season.
- Aggressively pursue cooperative grassland habitat and education efforts with other agencies and conservation organizations.
- Restore grassland species absent from suitable habitats in Ohio.

## Related Supporting Documents

Killdeer Plains/Big Island Focus Areas Plan

LaSuAn Focus Area Plan

Grassland Habitat Tactical Plan

State Listed Terrestrial Wildlife Tactical Plan

Paint Creek Focus Area Plan

# INLAND WATERS

## Introduction

Inland waters in Ohio — defined as those waters of the state excluding Lake Erie and the Ohio River — consist of 229 public lakes and reservoirs and more than 61,500 miles of rivers and streams. Approximately 1.5 *million* anglers fish in Ohio annually, many of them in inland waters. At slightly more than eight licensed anglers per surface acre, this makes Ohio's inland lakes some of the most heavily fished waters in the United States.

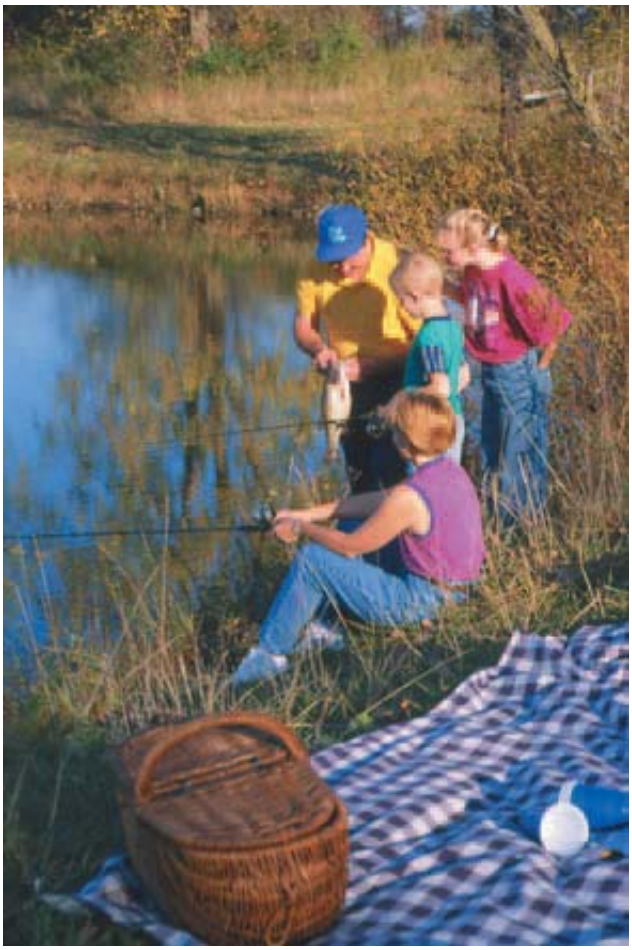
The focus of this program is on inland aquatic wildlife resources, but we recognize the relationship between aquatic and terrestrial systems, and the fact that issues affecting aquatic resources also impact their terrestrial counterparts.

## Facts

- There are 166 species of fish present in Ohio, at least 148 of which are found in inland waters.
- There are 24 species of fish listed as endangered in Ohio, at least 18 of which are found in inland waters.
- Bass, saugeye, walleye, crappies, and catfish are the most sought-after sport species in inland waters.
- An annual average of more than 9.2 million angler-hours are spent fishing inland waters.

**Issue:** Some native fish species in inland waters are unable to reproduce at rates that will sustain satisfactory sport fisheries.

**Direction:** In managing native and introduced fish populations, provide for a 10 percent increase above the current 9.2 million angler-hours spent fishing inland waters.



**Issue:** Native aquatic wildlife in inland streams and rivers has been negatively impacted by activities of humans resulting in habitat destruction and degradation.

**Direction:** Prevent further loss of existing species, and restore at least two native aquatic species during the next 10 years.

---

**Issue:** Aquatic nuisance species invasions threaten the diversity and abundance of aquatic wildlife in inland waters.

**Direction:** Prevent the introduction of new, control the spread of existing, and abate the harmful impacts of aquatic nuisance species in inland waters.

## Strategies

- Use regulations to ensure an equitable distribution of fisheries resources among Ohio's anglers.
- Use stocking to improve or create fisheries.

*continued*

- Use habitat improvements such as fish concentration devices to increase catch rates.
- On a lake-by-lake basis, use biological and chemical characteristics to develop appropriate management techniques.
- Prioritize areas for restoration and/or reintroduction of aquatic species based on physical, biological, and geographical features.
- Develop interagency partnerships related to species restoration.
- Explore methods and locations for rearing threatened and endangered species for restoration purposes.
- Implement prevention, control, and abatement strategies from the state management plan for aquatic nuisance species that are applicable for inland waters.

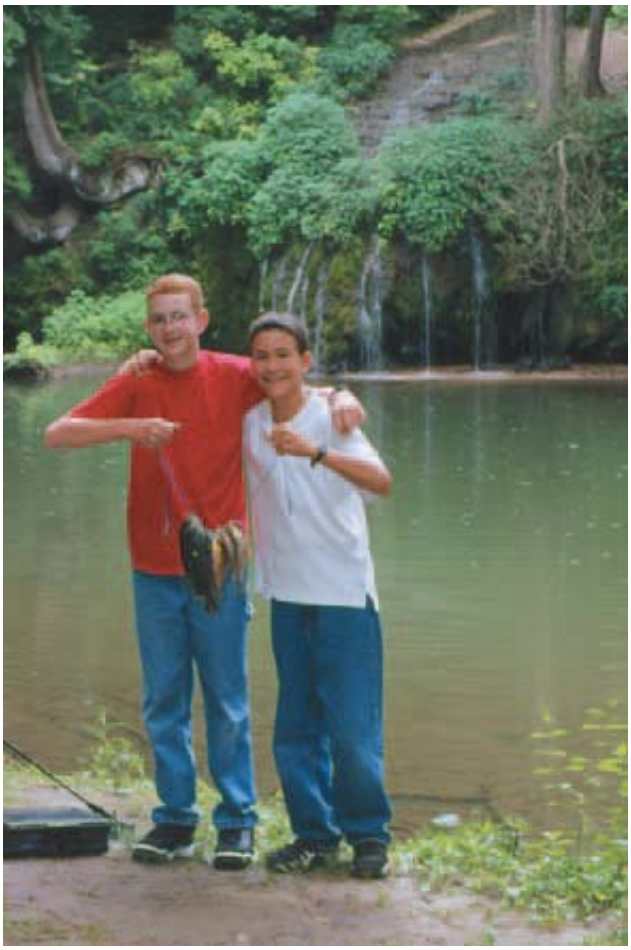
## Related Supporting Documents

Fish Hatchery Tactical Plan

Ohio State Management Plan for Aquatic Nuisance Species

Angler Recruitment Tactical Plan

Angler Retention Tactical Plan



# LAKE ERIE

## Introduction

This program addresses the 2.25 million acres of Lake Erie under Ohio's jurisdiction. While the focus of the program is on aquatic wildlife, the Division understands that Lake Erie aquatic resources are intricately linked to physical, chemical, and biological components of the lake and watershed. The Division also recognizes that Lake Erie fisheries have important social, cultural, economic, and biological components.

Historically, Lake Erie commercial and sport fisheries have been very important to Ohio. Sport fishing for walleye, yellow perch, and smallmouth bass amounts to 6 million hours a year of recreational activity on Lake Erie. Commercial fishing continues for yellow perch, white bass, and a variety of other species. Fisheries management is conducted under the guidance of the *Joint Strategic Plan for the Management of Great Lakes Fisheries*, to which Ohio, Michigan, Pennsylvania, New York, and Ontario are signatories.

## Facts

- Lake Erie is the most biologically productive of the Great Lakes, often producing more pounds of fish than the other Great Lakes combined.
- 11.6 million people live in the Lake Erie watershed.
- An estimated 450,000 people fish in the Ohio waters of Lake Erie every year, contributing $680 million to Ohio's economy.
- There are nearly 1,000 licensed Ohio charter guides.
- There are more than 300 marinas along Ohio's 262 miles of shoreline and more than 75,000 of Ohio's 408,000 registered boats use Lake Erie as their primary boating area.

**Issue:** The successive impacts of human disturbances are altering the structure and function of the Lake Erie ecosystem, making its aquatic wildlife communities less stable and less predictable. Future disturbances are almost certain, and will confound the Division's ability to manage aquatic wildlife resources.

**Direction:** Focus research toward: 1) understanding ecosystem functions, and 2) predicting the effectiveness of alternative management strategies in a constantly-changing environment.

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**Issue:** Aquatic nuisance species threaten the diversity and abundance of aquatic wildlife in Lake Erie.

**Direction:** Prevent the occurrence of new invaders, prevent the expansion of existing species into the Ohio River drainage, and abate and/or reduce existing species' impacts.

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**Issue:** Aquatic habitats are impaired by human development and affect the viability of Lake Erie aquatic wildlife resources. Sedimentation, urban and agricultural runoff, loss of wetlands, and dams have a detrimental effect on this resource.

**Direction:** The Division will support interagency efforts to improve the quantity and quality of aquatic habitats of importance to Lake Erie aquatic wildlife.

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**Issue:** Lake Erie fish populations support important sport and commercial fisheries. Fluctuations in fish populations and dependent fisheries can have significant social and economic implications.

**Direction:** Balance long-term stability of diverse fish stocks with demands for short-term economic and social benefits. Sustain 6 million angler-hours of fishing annually.

*continued*

## Strategies

- Implement the Aquatic Nuisance Species State Management Plan.
- Collaborate with other Lake Erie agencies for lakewide assessment, research, and harvest allocations.
- Promote and manage for multi-species sport fisheries (walleye, yellow perch, smallmouth bass, white bass, and steelhead trout).
- Manage for sustainable sport and commercial harvests while ensuring the social, economic, and biological integrity of Lake Erie resources.
- Identify, appraise, and inventory critical habitats for Lake Erie fishes and develop a prioritization scheme to achieve an efficient, cost-effective approach to habitat protection and restoration.
- Encourage tributary corridor restoration projects to address areas of highest priority.
- Participate in interagency projects that improve upstream fish passage.
- Continue participation in the *Lake Erie Remedial Action Plan* to restore degraded harbor and nearshore habitats in Ohio's Areas of Concern.
- Participate in interagency development of ecosystem-level models to forecast effects of disturbances and management strategies.
- Incorporate risk assessment into decision-making processes and endorse adaptive-management strategies.

## Related Supporting Documents

Ohio State Management Plan for Aquatic Nuisance Species

Fish Hatchery Tactical Plan

Angler Recruitment Tactical Plan

Angler Retention Tactical Plan

Lake Erie Committee Fish Community Goals and Objectives

Joint Strategic Plan for the Management of Great Lakes Fisheries

Lakewide Management Plan

# OHIO RIVER

## Introduction

This program addresses the 451 miles of the Ohio River and its tributaries to the first riffle or dam. The focus of the program is on the aquatic wildlife resources and habitats. The Ohio River is an extremely modified system; the numerous dams, hydropower projects, dredging, and commercial navigation have altered its natural composition. In spite of these disturbances, the river supports many unique aquatic wildlife populations, e.g., freshwater mussels and paddlefish. The river also supports important sport fisheries for sauger, white bass, hybrid striped bass, smallmouth and largemouth bass, and channel catfish. Approximately 2 million hours are spent fishing on the Ohio River annually. Fisheries management is conducted in collaboration with the Ohio River Fisheries Management Team, which is comprised of natural resource agencies from the six states bordering the river.

## Facts

- The Ohio River is 951 miles long starting at the confluence of the Allegheny and Monongahela Rivers in Pittsburgh, Pennsylvania and ending in Cairo, Illinois.
- Approximately 164 species of fish have been collected from the Ohio River.
- There are 20 dams on the Ohio River that are used for navigation and power generation.
- More than 60 species of mussels are found in the Ohio River adjacent to Ohio.
- More than 25 million people, almost 10 percent of the U.S. population, live in the Ohio River watershed.

**Issue:** Recreational demand is not consistently met by the remaining naturally reproducing fish populations in the Ohio River.

**Direction:** Manage native fish and sustain stocking levels to provide optimum recreational opportunities, on the order of 2.5 million angler hours annually, while maintaining ecosystem integrity.

---

**Issue:** Numerous physical alterations and chemical inputs diminish the Ohio River's habitat quantity and quality for aquatic wildlife resources.

**Direction:** Improve or restore one embayment, one riffle habitat, one wetland, one mile of riparian corridor, and 10 acres of bottomland forest in each Ohio River pool.

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**Issue:** The diversity of aquatic wildlife resources in the Ohio River ecosystem is impacted by human activities, e.g., point source pollution, non-point pollution, commercial navigation, mineral extraction, and dredging.

**Direction:** Support interagency efforts to protect and restore the biological diversity of the Ohio River ecosystem.

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**Issue:** The interjurisdictional nature, conflicting priorities, over-lapping regulatory responsibilities and limited Ohio ownership complicates management.

**Direction:** Continue to utilize existing multi-agency authorities to improve our ability to manage Ohio River aquatic wildlife resources.

## Strategies

- Work with other agencies to protect and enhance tributary mouths, embayments, islands, and their associated wetlands
- Pursue mitigation through state and federal authorities to replace lost habitat.
- Acquire land and riparian corridors to reduce habitat fragmentation.
- Increase habitat diversity by restoring embayments, shallow water habitat, wetlands, riparian corridors, and bottomland forests.
- Expand statutory authority to include aquatic wildlife habitat protection.
- Protect unique aquatic wildlife habitats, e.g., purchases, conservation easements.

*continued*

- Implement the Ohio State Management Plan for Aquatic Nuisance Species.
- Identify threats to native fish stocks, e.g., genetic introgression, fish passage, commercial navigation, aquatic nuisance species, and hydropower development.
- Reintroduce extirpated species when environmental conditions are suitable.
- Increase fish passage through lock and dam systems.
- Collaborate on interjurisdictional management strategies.
- Develop reciprocal agreements with other agencies.
- Determine Ohio's border in relation to the Ohio River so fish and habitat regulations can be more effectively enforced.
- Use statutory authorities to enhance and protect aquatic wildlife resources.
- Develop regulations that ensure long-term sustainability of the Ohio River fishery.

## Related Supporting Documents

Ohio River Fisheries Management Plan

Fish Hatcheries Tactical Plan

Ohio State Management Plan for Aquatic Nuisance Species

Ohio River Fisheries Management Team Memorandum of Understanding

# RETENTION AND RECRUITMENT

## Introduction

This program will address the Division's efforts to maintain and increase the number of people who hunt, fish, and trap in Ohio. Retention efforts are attempts to encourage both active and former sportsmen to continue to fish, hunt, and trap. This is extremely important because these are the sportsmen who introduce most new people to these activities. Recruitment efforts are attempts to get new people to fish, hunt, and trap. Many factors influence the recruitment of new anglers, hunters, and trappers such as increased competition with other recreational activities. Current attitudes on guns, gun control issues, and gun violence are also affecting the recruitment of new hunters. Effective retention and recruitment is vital to our agency, wildlife conservation, and the future of fishing, hunting, and trapping. While there are relationships between retention and recruitment, different approaches to address the issues will be required.

## Facts

- Overall, resident fishing, hunting, and fur taker license and permit sales decreased by 22 percent from 1989 to 1999.
- Demographic trends show that the numbers of our current highest user group (white males) will drop over the next 25 years in Ohio.
- People age 55 and older participate at much lower rates, and that portion of Ohio's population is growing.
- Many anglers are sporadic in their fishing efforts (only 45% purchase a license every year).
- Teenage participation in outdoor activities is the best predictor for adult participation.
- According to our Public Attitude Survey, 34 percent of non-hunters ages 12 to 17 would like to try hunting.

**Issue:** The number of active anglers, hunters, and trappers is declining.

**Direction:** Increase the number of people who continue to choose fishing, hunting, and trapping as recreational activities.

---

**Issue:** Each year fewer people are trying fishing, hunting, and trapping for the first time.

**Direction:** Increase the number of people who choose fishing, hunting, and trapping as new recreational activities.

## Strategies

- Increase the Division's efforts toward recruitment and retention.
- Fully analyze and incorporate information provided from the Point of Sale license system into recruitment and retention tactical plans and programs.
- Base retention and recruitment efforts, programs, and projects on the most current research regarding trends and motivators for participation in fishing, hunting, and trapping.
- Evaluate existing regulations, facilities, and programs, and incorporate recruitment and retention goals in the decision making process.

*continued*

- Develop new partnerships and expand involvement in existing partnerships that encourage family and social interaction.
- Manage Division properties and facilities to encourage family participation.
- Incorporate family and social values into Division programs and promotions that encourage hunting, fishing, and trapping participation.
- Employ both proven and newly developed marketing approaches in recruitment and retention efforts.

## Related Supporting Documents

Angler Recruitment Tactical Plan
Angler Retention Tactical Plan
Hunter and Trapper Recruitment Tactical Plan
Hunter and Trapper Retention Tactical Plan
Furbearer/Small Game Tactical Plan
Deer Tactical Plan
Wild Turkey Tactical Plan
Waterfowl Tactical Plan
Facility Development Tactical Plan
Wildlife Recreation Tactical Plan

# STREAMS AND WATERSHEDS

## Introduction

Varying in size from small creeks to large rivers, Ohio has a wide diversity of stream habitats that flow through terrain with a variety of land uses. Streams and their corridors are inhabited by a rich diversity of wildlife species that includes more than 153 fishes, 63 mussels, 1,200 aquatic insects, 170 birds, 12 mammals, 10 reptiles, and 14 amphibians. Streams also benefit all Ohioans by providing water supply, recreational opportunities, beautiful scenery, and drainage. The physical alteration and degradation of these habitats, however, has negatively impacted both resource and resource users in many ways. As the result of these changes, many streams today have fewer native species, fewer recreational opportunities, more rapid runoff, lower base flows, and higher pollutant loads.

While water quality in many streams has improved as the result of the Clean Water Act, only 53 percent of our monitored stream miles currently meet their aquatic life use designations. Habitat alteration, siltation, and flow alteration have evolved as major causes of use impairment, yet efforts remain focused on point and non-point sources of pollution which do not adequately address the degradation of stream habitats throughout Ohio. While the emphasis of this program is on the restoration and protection of physical habitats in and adjacent to streams, these strategies will also result in improved water quality, more miles meeting use designations, and increased benefits to all Ohioans.

## Facts

- Total Number of Stream Miles: 61,532
- Threatened and Endangered Stream Species: 81
- Percent of Miles Not Fully Meeting Clean Water Act Goals: 46.75
- Percent of Miles Impaired by Habitat Alteration: 22.3
- Percent of Miles Impaired by Flow Alteration: 7.6
- Number of Dams: >6,000

**Issue:** Natural stream habitats are degraded and fragmented by hydromodification (*e.g.,* channelization, culverts, dams, levees), encroachment (*e.g.,* removal of riparian forests, floodplain development, uncontrolled access by livestock), and excessive sedimentation from non-point runoff.

**Direction:** Restore 1,000 stream miles impaired by hydromodification, fragmentation, encroachment, and non-point sedimentation. Increase the number of protected miles of stream corridor along high quality streams by 1,500 miles.

---

**Issue:** Many Ohioans lack adequate knowledge and information about streams and watersheds.

**Direction:** Increase the knowledge Ohioans have about streams and watersheds (*e.g.,* habitat quality, water quality, ecology, biological diversity, beneficial uses).

*continued*

## Strategies

- Remove dams that are no longer needed or justified.
- Protect and restore forested riparian corridors, floodplains, and wetlands through conservation easements, acquisition, and landowner programs and incentives.
- Develop and support programs and incentives that encourage and maintain good stewardship practices for riparian and in-stream habitats.
- Protect high quality stream habitats and restore others based on the presence of a high aquatic diversity, rare and endangered species, good sport fishing, biological integrity, and other related criteria.
- Develop and implement stream protection best management practices on Division of Wildlife and other state-owned land.
- Through partnerships, collaboration, and coordination, participate in and support stream and watershed efforts by other agencies, non-governmental organizations (NGOs), and other groups.
- Protect and restore natural flow regimes including important ground water recharge areas, floodplains, wetlands, and stormwater retention areas.
- Develop and provide stream education to landowners, the general public, schools, and public officials.
- Review existing Division, state, and federal laws and regulations on stream habitat and propose new polices, rules, and laws where needed to strengthen statewide stream habitat protection initiatives and/or regulations.
- Help develop model stream protection guidelines (e.g., generic conservation easements, a riparian protection ordinance).
- Seek additional funding for the Streams and Watersheds Habitat Program.
- Develop and implement a Private Lands Aquatic Program.

- Collect baseline stream habitat data using quantitative and qualitative methods for the purpose of restoration and monitoring change over time.
- Participate in and support (e.g., technical assistance and funding) regional land use planning efforts in Ohio.

## Related Supporting Documents

Grand River Lowlands Focus Area Tactical Plan

ODNR Candidate Streams for Protection and Restoration

# UNIQUE HABITATS

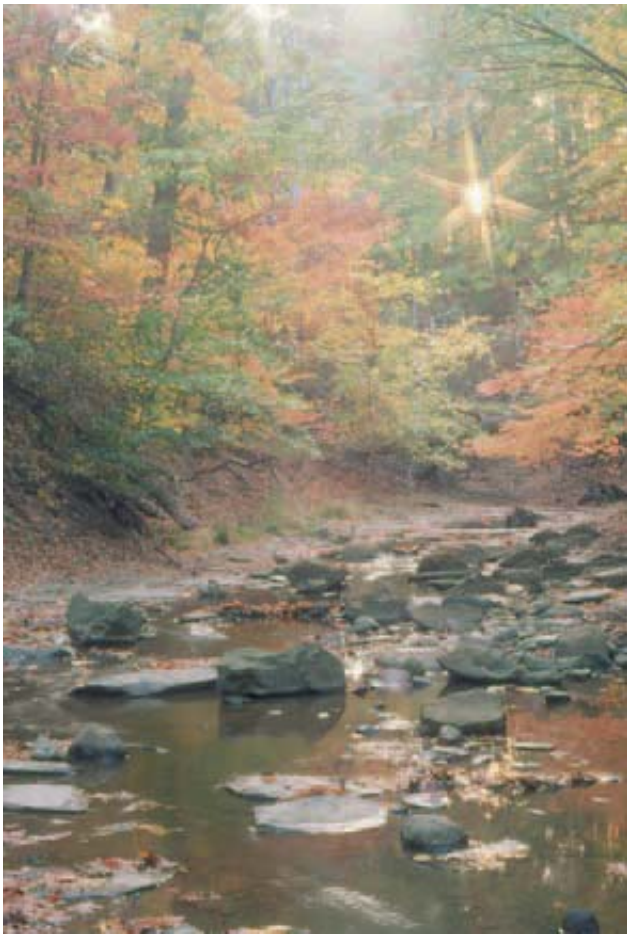
## Introduction

At the time of settlement by Europeans, Ohio's landscape was primarily a vast expanse of forest, with a few large grassland and wetland areas. Also scattered throughout the state, in smaller amounts, were other significant habitats, herein referred to as unique habitats. Unique habitats include but are not limited to: Lake Erie islands, oak savannas, Northeastern Ohio boreal (snowbelt) communities, blue holes, and caves. Rich and diverse assemblages of flora and fauna are associated with each unique habitat.

In addition to the 37 state-listed wildlife species dependent upon unique habitats, many other known and possibly yet to be discovered species occupy these areas. Because of the habitat specificity of some wildlife to the plant communities and micro-habitats of these areas, like the Karner blue butterfly to oak savannas, conserving and rehabilitating unique habitats are critical to sustaining these species as a part of Ohio's wildlife diversity.

Sound management decisions can only be made after acquiring more information about the locations of remnant unique habitats, their species composition, and life history data of some wildlife species such as the Lake Erie water snake, the Karner blue butterfly, the Indiana bat, and the Ohio cave beetle.

While natural unique habitats provide significant benefits to wildlife, opportunities also exist to enhance man-made structures that simulate natural habitats for some wildlife, such as utilizing mines as habitat for the Indiana bat and skyscrapers as nesting sites for peregrine falcons.



## Facts

- The Lake Erie water snake occurs nowhere else in the world except on the Lake Erie Islands.
- Five bat species, including the endangered Indiana bat, over-winter in Ohio's largest known bat hibernaculum (wintering location), an inactive underground mine.
- The first reintroduction of the state and federally endangered Karner blue butterfly in the U.S. occurred in the Oak Openings Region of Ohio.

**Issue:** Unique habitats and the wildlife species associated with them continue to decline.

**Direction:** Reverse this trend and restore unique habitats and state-listed wildlife species that depend upon them, where feasible.

*continued*

## Strategies

- Protect and conserve unique habitat communities through land acquisition, conservation easements, landowner incentive programs, and partnerships.
- Restore or enhance degraded unique habitats where feasible.
- Connect similar types of fragmented unique habitats.
- Reintroduce and/or augment extirpated and/or endangered wildlife species.
- Control competitive flora and fauna that threaten unique habitat communities.
- Minimize the effects of human disturbance and other threats on wildlife species occupying unique habitats.
- Enhance and use man-made structures that simulate natural habitats.
- Maintain and expand upon a comprehensive information base about unique habitat communities.
- Inform and educate Ohioans about the value of unique habitats for wildlife.

## Related Supporting Documents

Oak Savannas Tactical Plan

Boreal Communities Tactical Plan

Lake Erie Islands Tactical Plan

Caves Tactical Plan

State Listed Terrestrial Wildlife Tactical Plan

# WETLANDS

## Introduction

Prior to European settlement, there were an estimated 5 million acres of wetlands in Ohio. By 1987, Ohio's wetlands had been reduced to an estimated 706,000 acres, which included shallow marsh, wet woods, shrub-scrub wetlands, and wet meadows. A combination of factors led to the loss of Ohio wetlands, including agricultural and urban development, introduction of exotic species, and environmental degradation. Ohio's wetlands support a diversity of indigenous and migratory species, including 36 state-listed threatened and endangered species (16 avian, 3 mammal, 9 reptile and amphibian, and 8 moth and butterfly species). Many of the wetland-dependent groups of wildlife (e.g., reptiles and amphibians, furbearers, waterfowl, shorebirds, neotropical songbirds, marsh birds, wading birds, fish, bald eagles, etc.) that use Ohio's wetlands are important ecologically, socially, and economically. Remaining wetlands are being surrounded and encroached upon by agricultural and urban development. Wetlands continue to be lost, and various environmental threats negatively affect the quality of wetland habitats for wildlife.

## Facts

- By 2000, the Division of Wildlife had restored and developed 17,700 wetland acres.
- Breeding pairs of the wetland-dependent bald eagle increased from 4 in 1979 to 63 in 2000.
- By 1987, approximately 86 percent of Ohio's original wetland acreage had been lost.

**Issue:** The quantity of wetland habitat and number of wetland-dependent species in Ohio continues to decline.

**Direction:** Prevent a net loss of wetlands and increase wetland-dependent wildlife.

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**Issue:** Remaining wetland complexes are relatively small and fragmented.

**Direction:** Increase wetland acreage within designated focus areas.

## Strategies

- Use mitigation to offset unavoidable wetland losses due to development.
- Support, promote, and continue to provide input into the development of federal farm programs, and ensure that these programs maintain provisions for conservation and restoration of wetlands and associated upland nesting habitat.
- Support increased state and federal funding for the restoration and enhancement of wetlands, and cooperate with other agencies and non-governmental organizations to support, improve upon, and capitalize on existing wetland programs.

*continued*

- Update the Division's wetland inventory to identify priority areas to focus wetland acquisition, restoration, and enhancement efforts; develop comprehensive management plans for these wetland complexes; and integrate watershed connectivity into the program.
- Evaluate restored wetlands in regard to their biological benefits and cost effectiveness.
- Improve cooperation and resolve conflict regarding the management of aquatic and terrestrial wildlife, and the values, functions, and management of wetlands.
- Increase enrollment of private lands into permanent conservation easements.
- Support legislative efforts to protect farmland from urban and industrial development, and to prevent the encroachment of development adjacent to critical wetland areas.
- Support improvement of state and federal regulations to prevent or reduce the net loss of wetlands.
- Support the development of property tax incentives for conservation of private wetlands and associated upland cover.

## Related Supporting Documents

Lake Erie Marshes Focus Area Plan

Grand River Lowlands Focus Area Plan

Killbuck Focus Area Plan

Wetland Habitat Tactical Plan

State Listed Terrestrial Wildlife Tactical Plan

Upper Mississippi River and Great Lakes Region Joint Venture Implementation Plan – 1998

**We encourage you to comment on The Division of Wildlife's *Strategic Plan 2001–2010*. To comment or learn more about the Division of Wildlife and its programs, please write to:**

**Chief, Division of Wildlife**
**1840 Belcher Drive**
**Columbus, Ohio 43224-1300**

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OHIO DEPARTMENT OF NATURAL RESOURCES

# DIVISION OF WILDLIFE

**Bob Taft, Governor • Samuel W. Speck, Director • Michael J. Budzik, Chief**

## Equal Opportunity

The Division of Wildlife offers equal opportunity regardless of race, color, national origin, age, disability or sex (in educational programs). If you believe you have been discriminated against in any program, activity, or facility, you should contact: The U. S. Fish and Wildlife Service, Office for Diversity and Civil Rights Programs–External Programs, 4040 N. Fairfax Drive, Suite 130, Arlington, VA 22203; or, the Ohio Department of Natural Resources, EEO Office, 1930 Belcher Drive, Columbus, OH 43224.

# Comprehensive Wildlife Conservation Strategy

# Development of the Comprehensive Wildlife Conservation Strategy (CWCS)

## Public Input Regarding Ohio's Comprehensive Wildlife Conservation Strategy

The Division of Wildlife has a strong commitment to involving the public in all phases of its operation (see appropriate sections below) however additional efforts were made to gain public input into development of the Comprehensive Wildlife Conservation Strategy (CWCS).

A series of five regional meetings were conducted with conservation organization leaders during July and August of 2005. A summary of the Division's CWCS approach and proposed activities was presented at each meeting followed by an open house forum to exchange ideas and gain comments, questions, and concerns. A formal survey related to the Division's wildlife diversity activities and CWCS was also distributed and collected at the end of each meeting. A total of 131 constituent leaders, representing thousands of Ohioans, attended these meetings and completed the CWCS survey.

The Division of Wildlife also hosted a state wide "Conservation Summit" on August 23, 2005. Approximately 100 constituent leaders, academic professionals, and conservation organization leaders were invited to attend the summit. The summit involved a series of presentations regarding the CWCS, as well as the terrestrial and aquatic components of the Division's strategy, followed by an open house forum involving Division professionals and administrators. Participants at the summit were also invited and encouraged to complete a survey on the Division's wildlife diversity activities. No substantive comments were received.

General public input into development of the CWCS was obtained by several methods. In March, 2006, the annual wildlife diversity conference was hosted by the Division of Wildlife in Columbus. The conference is open to the general public and more than 700 participants attended the conference. The Ohio CWCS was a prominent component of the conference and all participants were invited to review the document and complete a survey about the CWCS. More than 50 surveys were received during and after the conference. Relevant comments were considered prior to development of the final draft of the CWCS.

The CWCS was presented to the general public at the March, 2006 wildlife council meeting also held in Columbus. The wildlife council is the primary liaison between the Division of Wildlife and the public, and all wildlife council meetings are open to the public. Approximately 30 participants attended the meeting and were invited to complete a CWCS survey, however no survey forms were returned.

Also, an invitation to review the entire CWCS document was posted on the Division's website from approximately May 18 through June 28, 2006. Forty people requested a CD of the complete document (draft) and survey form. The CDs and related surveys were sent to the requesting parties during the last week of June, 2006. Eight survey forms were completed and

returned and relevant comments were reviewed and considered prior to development of the final draft of CWCS.

Lastly, the CWCS was presented to approximately 100 transportation planners at the *Ohio Transportation Planning Conference* on August 23, 2006. The complete CWCS (draft) was distributed in CD format and comments and concerns were requested from the attending transportation professionals. No comments or concerns were received.

In summary, the Ohio CWCS has been presented to more than 1000 individuals from throughout Ohio. Information gained from these various opportunities for public input were evaluated and appropriate concerns addressed in the final CWCS document. Participants at each gathering were also encouraged to regularly communicate with the Division regarding wildlife diversity issues and activities.

## General Public and Constituent Involvement

Since adopting a Comprehensive Management System in the late 1980s, the Division of Wildlife has included the general public, special interest constituent groups, and academic specialists in its decision making and administrative processes. These groups have provided valuable information, opinions, and attitude assessments which have aided the Division with management, administrative, and regulatory decisions.

A variety of formal and informal approaches are used to gather information from the public and constituent groups, including public meetings, conferences, surveys, taxonomic and professional work groups, and personal communication. Each of these approaches provides valuable information for the Division of Wildlife.

## Informal Approaches to Assessing Public Attitudes, Opinions, Comments

The Division of Wildlife uses a variety of methods to assess public and constituent group opinions and attitudes. These approaches are not specifically designed to gather information; however, the information gained is still useful and valid. These information approaches include:

### WILD Ohio Magazine:

*WILD Ohio* magazine is published by the Division of Wildlife quarterly and distributed free to anyone interested in receiving the publication. In addition, the Division publishes an annual edition of the magazine called *WILD Ohio for Kids*, which is distributed free to libraries and schools. These magazines have a distribution of approximately 150,000 copies per edition, and are well received by the public. In recent years the Division has been soliciting photos of both youth and adults engaged in outdoor activities to include in the magazine, as well as questions about wildlife and wildlife management, some of which are also included in a special question and answer section of the publication. Both of these approaches have resulted in hundreds of submissions, many of which include comments about the status of wildlife in the reader's neighborhood, as well as opinions about the Division and the magazine. The Division has been publishing *WILD Ohio* magazine for approximately 15 years and the comments received about the Division and its activities have provided valuable input for the Division's decision making processes.

**WILD Ohio Video Magazine:**
Similar to *WILD Ohio* magazine, the Division of Wildlife has been producing a television series for approximately 12 years. The 30-minute show is distributed at no charge to Public Broadcasting Service Stations (via satellite link) and is also provided to local governments and cable stations. Currently there are approximately 25 stations around Ohio that air the show in a variety of markets. Currently the Division produces 26 shows per year.
*WILD Ohio* video magazine often highlights management activities and other aspects of the Division of Wildlife that result in comments from the public. The Division welcomes these comments and uses them as a gauge or barometer of the public's opinion of wildlife, wildlife management, the effectiveness of the Division of Wildlife, and overall opinions about the Division and its activities.

**Internet Communications**
Serving more than 2.5 million Internet visits each year, the Division of Wildlife Website serves the public through the dissemination of various technical publications, educational and instructional materials, and other value-added pieces of information. Public access to the Website allows for customers to efficiently request specific information, purchase licenses/ permits, send photographs and/or send e-mail with user request forms, as well as directly communicate with the Division.

Increasingly important for both the Division and its constituents are the sections of the Website that are devoted to the display of personal stories and photographs related to hunting, fishing, trapping or other wildlife-related activities. The Division's efforts to display these unique personal stories and photographs provide a public perspective of the Division's efforts and help create a virtual one-on-one relationship with Web users who are involved in the outdoors.

As part of the Division's efforts to improve communications and responses to customer needs, the Division has implemented an Internet customer reply survey to allow the Division to identify and respond quickly to the public's informational needs, replacing and adding Website content and visual aids as requested.

Use of the internet as a mode of communication continues to expand, with current (2004-05) statistics indicating an average 44% growth in Web visitors each year.

**Call Center Operations**
The Division of Wildlife maintains a toll-free line for public inquires, questions, and comments. This phone system is operated during regular work hours and receives more than 100,000 calls per year. Many of the calls are related to laws, regulations, hunter-trapper-aquatic education, magazine subscriptions, and other general questions, however many of the calls also relate to the general operation of the Division, the Division's effectiveness as an agency, and the status of wildlife in general. All calls are documented as to the nature of the call, and all comments, questions, or criticisms are directed to staff who are specialists in the subject. This public input tool has been in place for approximately 12 years and has resulted in thousands of comments concerning the Division, Ohio wildlife, habitat management, and other aspects of fish and wildlife management in Ohio.

**E-mail Communications**
As with most major government agencies, the Division of Wildlife has developed an extensive website of information for general public viewing and interaction. As part of the Division's

communications efforts, visitors to the website are invited and encouraged to submit comments, questions, or opinions directly to a wildlife specialist or other Division employee. The number of these e-mails has grown dramatically in recent years, and hundreds of constituent comments, criticisms, and opinions are recorded, answered, and documented annually. Many of these communications focus on laws and regulations, but they also include rare wildlife sighting information, opinions on seasons and bag limits, management questions, and other concerns.

**Hunter-Trapper-Aquatic Education Instructors**

Volunteer instructors have been the backbone of the Division's education efforts for more than 25 years. Currently the Division has more than 1,200 volunteer instructors who teach hunter, trapper, and aquatic education programs to more than 25,000 outdoor enthusiasts annually. Many of these instructors have volunteered for the Division for many years and are trusted to represent the Division in these efforts. In addition to providing a valuable service to the Division and the public, these instructors are also a significant source of public opinion and attitudes since they touch the lives of many outdoors people every year. The information they relay to the Division concerning the attitudes and opinions of the students they teach has proven valuable to the Division and its wildlife management activities. These instructors also help distribute Division publications, which in turn result in thousands of public inquires and opinions as described elsewhere in this section.

**Project WILD Instructors**

Similar to hunter-trapper-aquatic education instructors, another segment of society that is part of the Division's outreach efforts includes formal school teachers, naturalists, and other educators who are trained to conduct Project WILD activities to the audiences that they serve. The Division maintains direct contact with these educators who in turn reach thousands of youth with a message about the Division's wildlife management activities, wildlife management in general, and other aspects of natural resources management. The Division values the information that these educators relay about the opinions and attitudes of the youth that they teach. These educators also use a variety of Division publications that often result in further contact with the Division and ultimately more information about public attitudes and opinions. Annually the Division of Wildlife's Project WILD efforts reach thousands of Ohio youth in a variety of settings.

**Wildlife Officer Communications**

The most basic, yet perhaps most important, communication channel with the public comes in the form of grass roots communication between the county wildlife officer and the citizens of the county which he or she serves. Each of Ohio's 88 counties has a wildlife officer who is responsible for day to day wildlife law enforcement as well as local communication efforts of the Division. Typical wildlife officer activities include not only routine law enforcement activities, but also speaking engagements and presentations at schools, youth groups, conservation clubs, and other groups. With more than 700 local and statewide conservation clubs in Ohio, the interaction between the wildlife officer and the local conservation clubs is a critical avenue for communication with the Division's vast constituency. A goal of every wildlife officer is to visit and communicate with each conservation club in their assigned county at least once a quarter. Substantive comments and opinions gathered at these meetings and other events are forwarded through the proper channels for consideration and review. These visits and resulting communication is critical for the success of the Division's conservation efforts.

**Biologist and Technician Communications**

Similar to wildlife officers, both wildlife and fish biologists and technicians regularly participate in regular communications with local and statewide conservation clubs and organizations. This level of communication is a direct link between constituents and the Division of Wildlife decision-making staff. Wildlife and fish biologists also communicate with private land owners on habitat management and improvement practices for their respective properties.

**State and Local Fairs and Festivals**

Ohio is home to more than 100 local or county fairs and festivals throughout the year. The Division of Wildlife staffs booths or other information centers at more than half of these events every year and in turn reaches thousands of Ohio citizens with information about wildlife and wildlife management.

The largest and most attended fair in the state is the Ohio State Fair. Every year the 12-day fair is attended by more than 100,000 fair enthusiasts, many of whom visit the Ohio Department of Natural Resources outdoor park, which includes extensive wildlife displays and activities. The highlights of the Division of Wildlife's displays at the ODNR park include a well-stocked youth fishing pond, multiple wildlife displays, an air-rifle range, archery range, butterfly house, and fish cleaning and cooking station. The Division has been conducting these activities for more than 75 years and it is an invaluable public relations and communication tool for the Division. Throughout the duration of the fair, many Division employees, as well as dedicated volunteers, are on hand to answer questions, receive comments or concerns, or simply to help visitors with their day at the fair. Over the years hundreds of comments, complaints, and compliments have been received at the state fair and it continues to be a major avenue of communication with a segment of society that is not reached through other traditional means.

In addition to the Ohio State Fair, the Division of Wildlife staffs information booths at a number of county and local fairs and festivals. These local events are not as heavily attended as the Ohio State Fair, but they provide a more local, grassroots opportunity for citizens to converse and interact with their local wildlife officer or other Division of Wildlife representative. Much information about residents' beliefs and concerns about wildlife at the local level has been gained at these events.

**Sports Shows and Similar Events**

The Division of Wildlife takes an active role in all the major sports shows in the state, including outdoor shows in Columbus, Cleveland, Cincinnati, and Dayton. In addition, the Division staffs booths at garden shows and other similar shows that attract an audience that the Division rarely has an opportunity to reach.

These shows are typically attended by thousands of Ohioans whose leisure time activities include hunting, fishing, camping, bird watching, trapping, and other forms of outdoor recreation. The Division of Wildlife operates information booths at all of these major shows and actively seeks interaction with the visiting public. This interaction results in hundreds, if not thousands, of comments and concerns from the public, which in turn are relayed to biologists, administrators, and other Division employees who can respond accordingly during future planning efforts. The Division of Wildlife uses comments from these events as a barometer of the public's view of fish and wildlife and wildlife management in Ohio.

**Angler Creel Surveys**

Field surveys of anglers are conducted annually throughout Ohio's major water bodies: Lake Erie, the Ohio River, and inland lakes and streams. These surveys provide vital information on angling effort, catch, and harvest. Angler attitudes and behaviors also are documented. This is an important conduit for information exchange between the Division of Wildlife and its constituents regarding all facets of management and conservation of aquatic species and habitats.

**Deer and Wild Turkey Check Stations**

Ohio has mandatory in-person checking for harvested deer and wild turkeys. To accommodate this process, there are more than 1,000 check stations across the state. These facilities are often local convenience stores or other retail businesses that encourage hunters to gather and discuss their hunts while their game is being tagged and appropriate data collected from the harvested animal, which in many cases is done by a Division of Wildlife employee. This interaction immediately following a hunt gives the Division a unique opportunity to glean knowledge from individuals who are avid outdoors people and active constituents. This communication has proven to be an extremely valuable tool for the Division of Wildlife and has resulted in information about rare animals, unusual wildlife sightings, and other valuable information.

**Zoos, Museums, and Other Family Attractions**

Ohio is fortunate to be home of some of the world's best and most prestigious zoos and museums, including the Columbus Zoo, Cincinnati Zoo, Toledo Zoo, Cleveland Zoo, the Center of Science and Industry (COSI), the Cincinnati and Cleveland Museums of Natural History and the Ohio Historical Society. The Division of Wildlife has taken great strides to interact and partner with these professional institutions and in many cases has developed cooperative programs related to education, and perhaps most importantly, endangered species propagation and reintroduction. Current or recent cooperative efforts involving these zoos and museums include:

- Osprey rearing and hacking
- Bald eagle fostering, rehabilitation, and release
- Trumpeter swam rearing and reintroduction
- Endangered freshwater mussel research, propagation, and reintroduction
- American burying beetle propagation and reintroduction
- Karner blue butterfly propagation and reintroduction
- Eastern Plains garter snake propagation and reintroduction
- Western banded killifish propagation and reintroduction
- Pirate perch propagation and reintroduction
- Development and delivery of educational materials and workshops to promote understanding of stream conservation
- Division of Wildlife participation in zoo or museum sponsored symposia or professional meetings

In addition to the extensive partnerships noted above, the Division regularly seeks opinions, attitudes, and concerns about Ohio's wildlife from the professional staff of Ohio's premier zoos and museums. These professionals are often in touch with the citizenry of the state and can provide valuable insight that the Division may find difficult to obtain through alternative methods.

**Conferences and Meetings**

The Division of Wildlife hosts, co-hosts, or cooperates with a number of professional conferences and meetings that focus on wildlife and wildlife management. In general, these conferences and meetings are open to the public and offer a unique opportunity for Division employees to interact with other professionals in the field of wildlife management and research. A partial listing of these conferences and meetings includes:

- Ohio Outdoor Writers Annual Conference
- Ohio Fish and Wildlife Management Association
- Ohio Wildlife Diversity Conference
- Ohio Avian Ecology Conference
- Audubon's IBA Technical Committee
- Ohio Blue Bird Society Annual Meeting
- Ohio Lepidopterists Society Annual Meeting
- Ohio Prairie Conference
- Ohio Herpetalogic Work Group
- Bird Conservation Initiative Conference
- Ohio Farm Bureau Conference
- Ohio Natural History Conference
- Ohio Wildlife Rehabilitators Conference
- Wing Watch Birders Conference

**Point of Sale Licensee Vendors**

Ohio employs a "Point of Sale" licensing system for the primary method of the sale of hunting, fishing, trapping and other fish and wildlife-related licenses and permits. This system utilizes more than 1,300 license vendors who have daily contact with the hunting, fishing, and trapping constituents of the state.

As part of the maintenance of the point of sale system, Division of Wildlife employees, including local wildlife officers, must contact and interact with these license vendors to ensure that the system is working properly and efficiently. During these visits or communications, the vendors relay comments, questions, or concerns that they have received about the current wildlife management situation, especially about fish and wildlife populations, rare or unusual wildlife sightings, seasons and bag limits, and other information that the Division finds useful in its decision making process.

**Conservation Club Meetings**

Ohio has approximately 128 conservation clubs that take an active role in the Division's Point of Sale (POS) licensing system and in effect act as liaisons between the Division of Wildlife and local license vendors in the area. As part of this arrangement the conservations clubs, acting as license agents, troubleshoot local POS equipment and help deliver fish and wildlife harvest regulations brochures, POS equipment and supplies, and other license-related materials to the 1,000+ POS vendors. In order to have regular, formal communication with these clubs the Division conducts semi-annual meetings with these clubs to discuss their concerns and comments, as well as to inform them of current wildlife and wildlife management related news. These meetings have proven to be very useful and informative for both parties involved and have provided valuable information for the Division's decision making process.

## Formal Approaches to Public Involvement

In addition to the variety of informal approaches to public involvement, the Division of Wildlife also employees a wide array of more formal approaches for communicating and gathering information from the public, government agencies, conservation clubs, constituent groups, and other parties interested in wildlife and natural resources management.

### Wildlife Council

The Wildlife Council is the Division of Wildlife's formal connection to the public, and acts as the advisory group for hunting, fishing, and trapping seasons and bag limits. This and other responsibilities and authority of the Wildlife Council are found in Ohio Revised Code (ORC) Chapter 1531.03.

The concept of the Wildlife Council dates to 1929 when the state legislature established the new Division of Conservation – the predecessor of the Division of Wildlife. At this time it was recognized that there needed to be public input and oversight into the affairs of the new Division. This oversight came in the form of a new bipartisan, 10-member "Conservation Council." The role of the Conservation Council was to administer the Division of Conservation's operations, including finances, programs, and policies.

In 1939 the Division of Conservation became the Division of Conservation and Natural Resources. Accordingly, the Conservation Council became the Conservation and Natural Resources Commission, with the same responsibilities as the Conservation Council.

In 1949 the Division of Conservation was changed to the Division of Wildlife and the Conservation and Natural Resources Commission was changed to the Wildlife Council. The role of the Wildlife Council was similar to its predecessors – to administer the Division of Wildlife, including funding, policy, and program development.

In 1963 the administration of the Division of Wildlife and the Wildlife Council was changed to it current form. Unlike the earlier Conservation Council and the Conservation of Natural Resources Commission, the role of the Wildlife Council today is largely advisory, with an important role in the approval of hunting/trapping and fishing seasons and bag limits, as well as approval of wildlife diversity regulations such as the sale and collection of reptiles and amphibians. The responsibility of program development and administration is now fully the responsibility of the chief of the Division of Wildlife.

As found in ORC 1531.03, the Wildlife Council today is made up of eight members, with not more than four from the same political party and at least two members engaged in farming. Council members are appointed by the governor for a four-year term. The Wildlife Council is required to meet at least four times throughout the year, with additional meetings held as necessary. All Division rules related to the establishment of hunting, trapping, and fishing seasons, bag limits, size, species, method of taking, and possession, including traditional game species and non-game species such as reptiles and amphibians, shall be adopted only with approval of the Wildlife Council.

### Open Houses

The Division of Wildlife has adopted several formal methods for gathering public input concerning any proposed wildlife regulation, including bag and season limits. First, the Division holds five district open houses in March of every year. These open houses introduce the public

to the proposed rule revision or modification, including hunting/trapping and fishing seasons and limits. The proposals are developed by Division staff using the best science and management practices available, with consideration of statutory mandates. The public can offer comments, discuss the proposals with Division employees, and complete comment cards regarding the proposed regulations. This is an effective manner to collect public input and opinions on the proposed regulations. Letters from constituents are also considered.

**State Fish and Wildlife Hearings**

Following the district open houses, the Division reconsiders the proposed regulations and presents the final recommendations to the public at the statewide hearings in the spring and fall. At the statewide hearings there is a formal reading of the proposed regulations with adequate time for additional public input and formal comment. Both the open houses and the statewide hearings are publicized through Division publications and newspaper announcements and are open to all interested parties.

**Public Attitude Surveys (1995-1999)**

Between 1995 and 1999 the Division of Wildlife conducted a number of public attitude surveys to determine the public's opinion and knowledge of wildlife, wildlife management, endangered species, and other aspects of the Division's mission. These surveys were conducted by telephone calls to randomly selected Ohio residents and the results were analyzed and interpreted for use by Division employees. Following the respective survey (which may have involved dozens of questions concerning demographics, wildlife, wildlife management, etc.), the results were analyzed and published as in-service notes for Division review. The various surveys provided valuable insight into the views, opinions, and knowledge of Ohio citizens regarding wildlife, wildlife management, education, endangered species, and other topics related the mission of the Division of Wildlife.

**Professional Memberships**

The Division of Wildlife has been active in a number of professional wildlife and wildlife management organizations for many years. These organizations include the Ohio Biological Survey, the Ohio Fish and Wildlife Management Association, Ohio Chapters of the American Fisheries Society and The Wildlife Society, Ohio Lepidopterists and several national organizations. These organizations provide a valuable resource for the Division and encourage professional networking related to wildlife and wildlife management. In several cases, Division employees act as officers in these organizations and sit on the respective boards of directors or other governing body. This regular networking and communication has been an important tool in the Division's interaction with the professional and academic communities.

**Professional Communications**

In addition to the many, many ways that the Division accesses and measures public attitudes, opinions, and concerns, the Division also uses the basic approach of directly communicating with professionals and constituent leaders who can provide their professional views and opinions related to the subject of concern. These professionals and constituent leaders include:

- Academic professionals
- Non-governmental organization professionals
- State-wide constituent group leaders
- Professionals from governmental agencies and organizations

These individuals often provide a valuable view from outside the Division of Wildlife, which in turn can aid the Division with its decision-making process and information gathering.

**Academic Cooperatives**

Ohio is home to many major universities and colleges, and the Division of Wildlife has a long tradition of cooperation with these academic institutions. Currently the Division has cooperative programs with The Ohio State University (OSU) and several other colleges and universities. At The Ohio State University the Division supports both the Terrestrial Ecology Laboratory and Aquatic Ecology Laboratory which provide valuable research projects and results for the Division. These cooperative programs are extremely valuable to the Division because they provide academic expertise, logistical support, research assistants, and other in-kind support that the Division cannot arrange on a regular basis. The research conducted by these cooperative programs focuses on not only management issues, but also population status and habitat analysis, life history information, and other quantifiable research related to wildlife and wildlife habitat.

As part of the agreement with the OSU Terrestrial Ecology Laboratory and Aquatic Ecology Laboratory, the responsible departments host and conduct an annual review of their research and its findings. These gatherings of academic and agency professionals aides greatly in the exchange of ideas, topics of concern, future research needs, and other issues related to fisheries and wildlife management.

In addition to these formal arrangements with various academic institutions, the Division of Wildlife also has long-standing collaborations with the Fish and Mollusk divisions of The Ohio State University Museum of Biological Diversity, Otterbein College, Kent State University, Northern Illinois University, and Bowling Green State University. These partnerships have resulted in extensive communication and cooperation in regards to managing and restoring, if appropriate, Ohio's wildlife, fish, and mollusk communities and habitats.

**State-Wide Club Meetings**

Ohio is home to a number of constituent organizations that focus on natural resources and natural resources management, or whose mission is greatly influenced by natural resources management. These organizations include the following, plus many additional local or regional groups:

- Ohio Audubon Council
- Ohio Blue Bird Society
- Ohio Lepidopterists
- Buckeye Big Bucks
- Ohio Farm Bureau
- Friends of the National Rifle Association
- Ohio Chapter of Pheasants Forever
- Ohio Chapter of the National Wild Turkey Federation
- Ohio Chapter of Ducks Unlimited
- Ohio BASS Chapter Federation
- The Ohio Smallmouth Alliance
- The Ohio Huskie Muskie Club
- The Isaak Walton League
- The Lake Erie Charterboat Association
- Trout Unlimited
- The Nature Conservancy

- Rivers Unlimited
- Ohio Historical Society
- Grand River Partners Land Conservancy
- Ohio Greenways

Each of these organizations is greatly interested in the activities of the Division of Wildlife and the Division actively communicates with these organizations concerning their attitudes, opinions, and comments related to wildlife and wildlife management in Ohio. It very common for Division representatives to be invited to be speakers or guests at the various functions of these organizations, and the Division welcomes any and all concerns raised by these organizations.

**Development and Formal Review of the 2001-2010 Strategic Plan**

The Division of Wildlife has operated under a comprehensive management system (CMS) and associated strategic plans for the past 14 years. One of the major components of a CMS is extensive public input and review of the agency's activities, especially the long-term strategic plan. The following sections will provide an overview of development of the current strategic plan, including the public review/input.

Strategic plans, by definition, are long-range, broad-based documents that create a common, shared "vision" of the future. The 2001-2010 strategic plan, the Division of Wildlife's third, was created to help guide the Division and its activities over the next decade. Unlike the previous two plans, which focused on fish and wildlife species or groups of species, the 2001-2010 plan is more global in nature and encompasses a broader approach to fish and wildlife conservation. It was developed over a period of two years and involved a variety of Division employees, leaders of constituent groups, and representatives from many governmental agencies. Comments, concerns, and suggestions from these participants has truly made the strategic plan a shared vision for the future of fish and wildlife in Ohio.

Development of the strategic plan began in early 1999 with the identification of several strategic issues that are, or will be, of significance to the Division of Wildlife during the next decade. Strategic issues are broad, overriding issues, problems, or opportunities that will affect the Division of Wildlife. Nine strategic issues, ranging from access and opportunity for wildlife enthusiasts, to wildlife diversity, were identified as being of major significance for the Division of Wildlife. The Division of Wildlife administrative staff then developed a direction statement for each strategic issue. The direction statement supports the Division of Wildlife mission and provides direction as to how the Division is going to address the companion issue.

While the strategic issues and direction statements were being developed, the administrative staff of the Division also developed a series of management principles and tools that guide the Division of Wildlife's activities. Management principles are the ideas and beliefs that express the Division's most deeply held values and ideals. They help guide and direct the Division's resources and activities. Management tools are the primary mechanisms or approaches that will be used to achieve the preferred directions established in the strategic plan. They include actions and activities to help manage wildlife and wildlife habitat as well as activities to help manage the people who use the wildlife resource. The management principles and tools together describe how the Division of Wildlife does its job.

Using the strategic issues and accompanying direction statements along with the management principles and tools, employees of the Division of Wildlife, with input from a variety of constituent leaders and government officials, identified and developed the individual program

plans of this strategic plan. Each of the 14 programs is a focused area of concern, interest, or responsibility that is related to one or more of the broader strategic issues identified earlier in the plan. The program issues, associated direction statements, and strategies provide a clear understanding of how the Division of Wildlife will proceed with the program.

Following the development of the individual program plans, including program issues, direction statements, and strategies, the draft of the strategic plan was sent to more than 800 conservation clubs, governmental agencies, and other interested parties for final review and comment. Substantive comments were considered and adjustments made to the strategic plan based upon this final review.

Implementation of the Division of Wildlife Strategic Plan 2001-2010 began in late 2000 as the Division of Wildlife planned for the upcoming fiscal year.

Ohio Department of Natural Resources
Division of Wildlife

# Comprehensive Wildlife Conservation Strategy

# Evaluation and Modification

The core of the Division of Wildlife's Comprehensive Wildlife Conservation Strategy (CWCS) is its Comprehensive Management System (CMS). A key component of the CMS is strategic planning and the resulting strategic plan. Therefore, evaluation and modification of the Division's strategic plan is a critical process for evaluating the CWCS and a valuable tool for administrators and managers within the Division of Wildlife.

Evaluation of the Strategic Plan and CWCS is the step during which we measure the progress towards the preferred direction for each issue stated within each program area in the strategic plan. This is a vital process and the resulting information is vital for future decisions. It is the basis for adjusting or adapting operations (i.e., operational plan and resulting projects) and helps identify needed changes in the strategic plan (i.e., new programs, revised issues, etc.).

Evaluation of the strategic plan and CWCS is done in three ways, based upon the "life span" of the plan:

**On-Going Informal Evaluation**

Informal evaluation of the strategic plan is an ongoing process and is often done during the development of the Division's operational plan, during which the Division examines the successes of the past year and explores initiatives for the upcoming year. The informal evaluation focuses on the needs (problems or opportunities) and the strategies detailed in the strategic plan and CWCS. The Division's staff members, at all levels, confirm and/or modify existing strategies and may suggest new strategies, primarily during operational planning. These modifications will be reflected in a future strategic plan if deemed appropriate.

**Mid-Cycle Evaluation**

The Division of Wildlife undertakes a "self audit" of the strategic plan mid-way through the life of the strategic plan and CWCS (approximately 2005 and 2010, respectively). This effort focuses on the question "Are we making adequate progress?" If the existing efforts are making adequate progress, then changes or modifications to the strategic plan or operations may not be necessary. If existing efforts are not making adequate progress, then appropriate modifications to operations (projects) may be considered. This self-audit will include:

- a review of the current strategic plan and CWCS by the entire Executive Planning Group (EPG)

- the group administrators, with their staff and external specialists/constituent leaders (including general public, if appropriate), will review, analyze, and provide a written report to the EPG concerning their respective chapters of the current strategic plan. An "Importance-Performance" evaluation tool is suggested for the evaluation. Importance-Performance evaluations look at both the importance of an issue/topic and the performance of the agency in regards to that issue/topic. The results are then combined to determine which issues remain important and how the agency is performing in addressing that issue. This type of evaluation encourages adapting new approaches or strategies to solve issues or problems.
- The report will include a summary of the significant actions that indicate progress toward the preferred direction presented for each issue within the strategic plan and CWCS, along with recommendations for future actions and adjustments to the strategic plan.
- The EPG will review the reports and affirm the existing strategic plan and CWCS or make a recommendation to develop new programs or tactical plans. The need for a new plan will be triggered by the need for significant modifications to the current strategic plan and CWCS.
- Any significant changes to the strategic plan or CWCS will be communicated to the public through open houses and/or public forums.

In general, a completely new strategic plan or CWCS will not be necessary until the end of current strategic plan and CWCS. Should a new plan be necessary, development of the plan will closely, but perhaps not exactly, follow the development plan presented in the strategic planning section of the Division's Comprehensive Management System (CMS) handbook. Changes in this process may include abbreviated public input and review (based upon the strategic programs in question), abbreviated employee input and review, etc. If necessary, development of a new plan resulting from the mid-cycle evaluation will be coordinated by the planning administrator with approval of the EPG.

The mid-cycle evaluation of the strategic plan will be coordinated by the planning administrator with approval of the EPG. The evaluation will take place during the fall and winter following the end of the fiscal year that marks the mid-point in the life of the current strategic plan and CWCS. If determined necessary by the EPG and the Planning Administrator, public input may be sought in order to further evaluate the strategic plan during the mid-cycle evaluation.

**Final Evaluation**

The final evaluation of the strategic plan and CWCS is truly an evaluation of the success of the Division's efforts during the life of the plan. Did the Division reach its goals? If not, why not? What adjustments need to be made so those goals can be achieved during the next strategic plan, assuming those goals are still appropriate? The process for this evaluation will be similar to that used for the mid-cycle evaluation, with public and employee input adequate for development of the new plan.

# Comprehensive Wildlife Conservation Strategy

# Coordination with Federal, State, and Local Agencies

## Overview

The Division of Wildlife (DOW) is a complex agency that is managed with an extensive system of checks and balances know as a Comprehensive Management System (CMS). The Division of Wildlife's CMS ensures that the Division operates as efficiently and effectively as possible to manage the state's fish and wildlife resources for the citizens of Ohio. The CMS and its components, primarily the Division's strategic plan, provide the foundation for the Comprehensive Wildlife Conservation Strategy (CWCS) and provide the structure for coordinating fish and wildlife management activities with other state agencies and non-governmental agencies that focus on natural resources management.

To ensure that the Division's strategic plan was truly a common, shared vision of the future of fish and wildlife in Ohio, more than 800 national, regional, state, and local conservation agencies and organizations were invited at various levels to help develop, review, comment, and critique the Division of Wildlife's 2001-2010 strategic plan. In addition, many constituent leaders and professionals were included in the various writing teams responsible for developing the components of the strategic plan. This effort fosters an environment of cooperation and coordination for all fish and wildlife management activities in the state, which in turn creates a sense of ownership and responsibility for all agencies involved..

Coordination and modification of fish and wildlife management activities conducted by the Division of Wildlife is found at all levels within the structure of the Division, and at all levels of federal, state, and local government. As a state bordered by five states and one Canadian province, it is critical that all fish and wildlife management activities be conducted with coordination of all natural resource management agencies in both the state and the region.

As noted in the public involvement section of this document, there are many examples of how the Division of Wildlife coordinates its activities throughout the state and throughout the region.

## International Coordination and Cooperation

The Division of Wildlife participates in a number of international efforts to conserve and manage fish and wildlife resources in North America, most notably the Great Lakes Fisheries Commission, the Mississippi Flyway Council, and the Partners in Flight program. Each of these efforts involves cooperative activities across state and/or international boundaries, and the management efforts of the cooperating states, such as Ohio, is coordinated at an international or national level. Participating in these efforts ensures that the fish and wildlife

management activities in Ohio are part of a larger, regional or national effort to conserve fish and wildlife populations throughout North America. In addition, representatives from these efforts are consulted on a regular basis (including during development of the Division's strategic plan and CWCS) to ensure that Division activities support national and international goals and objectives.

Examples of internationally coordinated initiatives which the Division of Wildlife actively participates include:

- Lake Erie Committee of the Great Lakes Fisheries Committee – involve coordination of fish management activities in all the Great Lakes; members include all Great Lakes states and provinces.
- Lake Erie Water Snake Recovery Plan – involves population recovery of the federally endangered Lake Erie water snake; members and cooperators include Ohio DNR divisions, Toledo Zoo, Metropolitan Park District of the Toledo Area, The Nature Conservancy, Ohio Lepidopterists, Toledo/Lucas County Port Authority, Michigan DNR, American Zoological Association, and the U.S. Fish and Wildlife Service
- Convention on International Trade in Endangered Species (CITES) – a unit of the United Nations which focuses on international trade in endangered species. The Division of Wildlife coordinates the harvest of paddlefish and river otters with CITES and adheres to all relevant agreements.

## Coordination with National Agencies and Organizations

Significant federal land holdings in Ohio are limited to the Cuyahoga National Park near Cleveland, the Ottawa National Wildlife Refuge in northern Ohio, and the Wayne National Forest in the south eastern portion of the state. In addition, the Ohio Division of Wildlife cooperates extensively with the Ohio River Islands National Wildlife Refuge in West Virginia. These holdings are managed by the National Park Service, the U.S. Fish and Wildlife Service, and the U.S. Forest Service, respectively. There are no tribal lands in Ohio.

Active fish and wildlife management activities in the Cuyahoga National Park is limited, and is primarily focused on nuisance wildlife such as white tailed deer and Canada geese. As the state agency charged with the management of these animals, all control efforts of white tailed deer and Canada geese are coordinated with the Division of Wildlife and Division biologists regularly meet with National Park Service land managers to discuss the situation and consider what actions to take. Any control measures taken for nuisance animals must be permitted by the Division of Wildlife and must include a management plan and follow-up activities. The acreage of the Cuyahoga National Park is relatively small and management of the area does not greatly impact the overall fish and wildlife diversity of the state except in very specific instances. Nevertheless, National Park Service representatives are invited and encouraged to participate in all discussions with the Division of Wildlife related to fish and wildlife management or nuisance wildlife control. In general, the Division of Wildlife and the National Park Service meet annually to discuss and coordinate fish and wildlife management activities, the status of endangered species, nuisance wildlife, and other issues. Additional meetings and discussion are held as needed.

The Ottawa National Wildlife Refuge (and its satellite areas) primarily represents some of the last remaining wetland complexes in northern Ohio and the few remaining undeveloped islands in Lake Erie. Management of the area is conducted by the U.S. Fish and Wildlife Service and coordination of fish and wildlife management activities is done in cooperation with the Division of Wildlife, primarily development and management of wetlands, waterfowl and deer hunting opportunities, and migratory bird management. The refuge staff meets regularly with Division of Wildlife staff to coordinate management activities and the management goals of both agencies. Specific activities that are addressed with both agencies are controlled deer and waterfowl hunting on the refuge, public access for bird and wildlife viewing, endangered species monitoring and management (including bald eagles, common terns, piping plovers, etc.) and nuisance wildlife (Canada geese). All of these activities are identified in the Division's strategic plan and the Division's CWCS.

In recent years the management and possible control of the western Lake Erie population of double crested cormorants has been of interest to both the Division of Wildlife and the U.S. Fish and Wildlife Service. Management activities concerning the double-crested cormorant will be discussed and coordinated between the U.S. Fish and Wildlife Service and the Ohio Division of Wildlife. Specific information regarding this population of the double-crested cormorant, its impacts on local wildlife, and possible management concerns is addressed in the Unique Habitats Tactical Plan found elsewhere in this document.

The Wayne National Forest in south eastern Ohio represents the largest federal land holding in Ohio. As a multiple-use agency, the U.S. Forest Service manages the forest for timber, wildlife, recreation, and other sustainable uses. The Division of Wildlife is very interested in management of the Forest and Division representatives meet with the Forest superintendent on a regular basis to discuss common areas of interest and areas of concern, including completion of the Wayne National Forest strategic plan. In addition, representatives from the Forest have been included in discussions involving the Division's strategic and tactical plans, including the CWCS.

Wayne National Forest lands have been used for reintroduction of the American burying beetle in Ohio. This reintroduction was conducted with the cooperation of the U. S. Forest Service and the Ohio Division of Wildlife under the guidance of the Division's strategic and tactical plans, particularly the State Listed Wildlife Tactical Plan.

In addition to governmental agencies, the only national non-governmental organization that owns significant land holdings in Ohio is The Nature Conservancy (TNC). Most other non-governmental agencies that purchase land either sell or donate the land to state or local agencies for management and control. These organizations include the National Wild Turkey Federation and the Conservation Fund. Each of these organizations have purchased land in Ohio and donated or sold the property to the Division of Wildlife for management under the guidance of the Division's strategic and tactical plans.

The Edge of Appalachia preserve in southwestern Ohio and some properties in central Ohio represent the only significant land holdings of The Nature Conservancy in the state. These properties are managed by TNC primarily as nature reserves however limited deer hunting is permitted in some locations. These deer hunting opportunities are offered in cooperation with the Division of Wildlife under the guidance of the Division's strategic and tactical plans,

including the CWCS, which identifies a need to control white tailed deer populations in certain areas in order to protect endangered plants and animals.

Examples of nationally coordinated initiatives and organizations which the Division of Wildlife actively participates include:

- The Nature Conservancy (TNC) – critical habitat purchases
- American Zoological Association (AZA) – endangered species propagation and reintroduction.
- Ohio Bird Conservation Initiative
- Mississippi Interstate Cooperative Resource Association/Ohio River Fisheries Management Team – coordinates efforts to conserve and manage fisheries in the Mississippi River complex, including paddlefish

## Coordination with State Agencies and Organizations

Only three state and one quasi-governmental agencies hold title to significant land holdings in Ohio; the Ohio Divisions of Parks and Recreation, Forestry, and Natural Areas and Preserves, and the Muskingum Watershed Conservancy District, respectively. With the exception of the Ohio Division of Natural Areas and Preserves, these agencies manage their properties for a variety of uses, including wildlife habitat, wildlife and other outdoor recreation, timber production, and other sustainable activities. The Division of Natural Areas and Preserves primarily manages their properties for unique plant communities. Representatives from each of these agencies are included in any discussions concerning state-wide fish and wildlife management issues or activities, and local or regional issues are discussed on a case by case basis with the appropriate agency. Cooperative fish and wildlife management efforts involving these agencies and their properties include:

- Controlled Deer Hunts
- Fish Management Activities in Agency owned Lakes and Ponds
    - Fish Stocking
    - Fishing Regulations
    - Fishing/Boating Access Development
- Controlled Waterfowl Hunting
- Fishing Access Sites
- Wildlife Viewing Opportunities
- Small Game Hunting
- Timber Harvest Recommendations

These activities are coordinated and offered as described in the Division's strategic and tactical plans and the Division's CWCS.

Representatives from each of these agencies have been invited to provide input and comment on the Division's strategic and tactical plans and substantive comments have been evaluated and considered. In addition, representatives from the Ohio Division of Forestry, Ohio Division of Parks and Recreation, and the Ohio Division of Natural Areas and Preserves were invited to review and comment on the Division's CWCS.

Ohio also has several non-governmental agencies that are involved in natural resource management, including the Ohio Farm Bureau, the Ohio Forestry Council, Ohio Environmental Council, and Ohio Audubon. Representatives from each of these organizations, and others, have been included in all discussions and meetings involving state-wide fish and wildlife management activities, including development of the Division's strategic and tactical plans, as well as the Division's CWCS.

Examples of state-wide initiatives and organizations that the Division of Wildlife actively participates include:

- Grand River Partners – habitat protection in the Grand River watershed
- Soil and Water Conservation Districts (SWCD) – habitat restoration and protection projects
- Ohio Department of Transportation (ODOT) – habitat restoration and protection
- Columbus Zoo/The Wilds – endangered species propagation and research
- Ohio Departments of Health and Agriculture – coordinated efforts to control animal diseases such as raccoon strain rabies, chronic wasting disease, and West Nile Virus

## Coordination with Local Agencies and Organizations

Ohio is proud to be home to more than 700 local conservation organizations representing thousands of Ohioans concerned about fish, wildlife, and other natural resource issues. Each of these organizations has local interests and concerns, and the Division of Wildlife works closely with these organizations to ensure that local fish and wildlife management concerns are addressed as effectively and efficiently as possible. Each of these organizations was mailed a draft copy of the Division's strategic plan and invited to comment on the plan during its development. Substantive comments were evaluated and the strategic plan adjusted accordingly. In addition, many representatives from these organizations were included in the various writing teams responsible for developing the strategic plan.

Common areas of concern for local conservation organizations include deer management, wild turkey management, fish stocking rates, nuisance white tailed deer and Canada geese, access to private lands, and wildlife viewing opportunities. Each of these concerns, and others, are addressed using the guidance provided by the Division's strategic and tactical plans, and the Division's CWCS.

In addition to local conservation organizations, Ohio also has numerous local park agencies. These agencies represent tens of thousands of acres of parkland throughout the state and while management of individual parks does not significantly impact state-wide fish and wildlife issues, the overall management of local parks is important for the success of the Division's strategic and tactical plans, including the CWCS. Therefore representatives from the larger park districts in the state, as well as the professional organization representing Ohio's parks, the Ohio Parks and Recreation Association (OPRA), were invited and participated in various levels of development of the Division's strategic and tactical plans, including the CWCS.

Most fish and wildlife concerns for local park and recreation agencies involve either local fish and lake management including fish stocking, or nuisance wildlife, particularly white tailed deer and Canada geese control and management. Any actions or activities related to these

issues must be coordinated with the Division of Wildlife, as the permitting agency, using the guidance provided by the Division's strategic and tactical plans, including the CWCS.

In certain instances local park and recreation agencies have provided partnerships for acquiring valuable wildlife habitat, including critical habitat for the Karner Blue Butterfly in northwestern Ohio, near Toledo. In one case the Metropolitan Park District of the Toledo Area provided partial funding for purchasing Karner Blue Butterfly habitat in the Toledo area. The resulting wildlife area is managed in cooperation with the park district under the guidance of the Division of Wildlife's strategic and tactical plans, including the CWCS.

Examples of locally coordinated initiatives which the Division of Wildlife actively participates include:

- Local park district white tailed deer control and management
- Local/municipal control and management of Canada geese
- Monitoring and management of urban nesting peregrine falcons
- Raccoon strain rabies control

As Ohio's fish and wildlife resources face greater and more complex challenges, the Division of Wildlife must coordinate its efforts with other agencies and organizations in order to meet its goal of sustaining healthy fish and wildlife populations throughout the state. These efforts have resulted, in part, in the reintroduction of several extirpated species of wildlife, the stabilizing of endangered or threatened species, more widespread populations of common species, and increased opportunities for fish and wildlife related recreation. Additional success stories are on the horizon as the Division of Wildlife continues its mission with the cooperation of its national, state, and local partners.

# ***Section 1.0***

# Approach to Maintaining and Enhancing Ohio's Terrestrial Wildlife Diversity

# ***Section 1.1***

# Approach to Maintaining and Enhancing Ohio's Terrestrial Wildlife Diversity

# APPROACH TO MAINTAINING AND ENHANCING OHIO'S TERRESTRIAL WILDLIFE DIVERSITY


Figure 1. Approach to wildlife conservation using the focus area concept.

The Division of Wildlife's approach to enhancing and maintaining the highest level of terrestrial wildlife diversity in the state is to use a "Focus Area" concept (figure 1) to sustain viable populations of as many native species of wildlife as possible.

At the time of European settlement, Ohio's landscape consisted primarily of a vast expanse of forest, with a few large grassland and wetland areas. Scattered throughout the state, in smaller amounts, there were other significant habitats, referred to as unique habitats. Ohio's primary unique habitats include: Lake Erie islands, oak savannas, boreal (snowbelt) communities, and caves. These habitats were delineated from the native vegetative communities described and mapped by the Ohio Biological Survey in "The Natural Vegetation of Ohio In Pioneer Days" (figure 2).

The "Focus Area" approach is to concentrate efforts and resources to provide all the necessary habitat requirements in a few, relatively large units of the major habitat types, along with the remnants of unique habitats for species that are of limited distribution or have low populations (figure 3). This multi-scale conservation approach ensures the persistence and potential recovery of species at risk while simultaneously keeping the common species abundant. Several widely separated Focus Areas for each of the grassland, forestland, and wetland habitats have been selected to reduce the risk of extirpation of species as a result of natural disasters, disease outbreaks, etc. Typically, Focus Areas are associated with relatively large holdings of public land where future land practices can be managed. In addition, they were selected because they contain the largest amount of the best remaining habitat of that type currently available. Within each Focus Area the habitat requirements of the more vulnerable species were used to calculate the minimum area needed to maintain viable self-sustaining populations. This framework was applied for each Focus Area. For example, to address the *Goal and Objective* established for grassland Focus Areas, a total of 12,500 acres was delineated.

Once habitat work is accomplished, the 12,500 acre Focus Area is expected to provide all habitat requirements necessary to support a viable population of Ohio's area-sensitive bird species, and is thus likely to support viable populations of **all** other native grassland species, with the exception of northern harriers, short-eared owls, and prairie chickens (extirpated). Further, to meet the minimum habitat requirements of Ohio's area-sensitive bird species, at least 5,400 acres of undisturbed grassland will need to be provided within the Focus Area. This habitat must be in a landscape that is predominately open in nature, with relatively little forest acreage, to have the most benefit. Grasslands within the Focus Area must also be diverse in composition with some early successional woody habitat intermixed. The 5,400 acres of grassland should consist of one block of grassland habitat, at least 2,500 acres in size, with the remaining acreage in the Focus Area consisting of a minimum of 25% grassland habitat, furthermore 50% or more of the grassland tracts should be at least 250 acres in size.

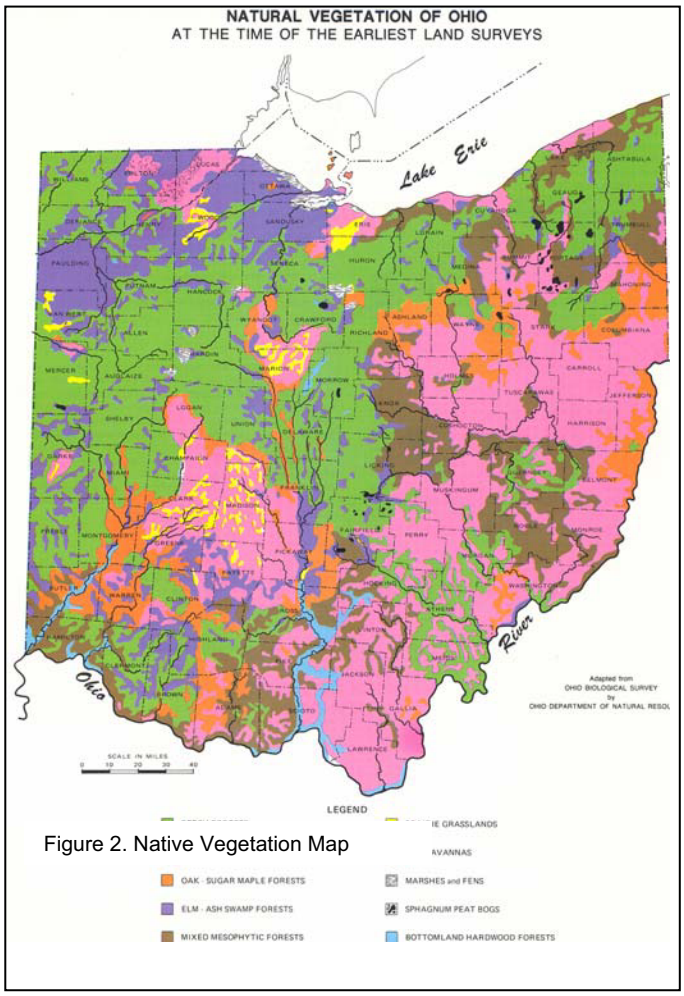

Figure 2. Native Vegetation Map

The Division's research staff directed several university professors, biologists from conservation organizations, and species and taxonomic experts developed a comprehensive list of native and naturalized species and evaluated their likelihood of persistence within each of the Focus Area community types. To develop the list of native and naturalized species, a plethora of resources were used including, but not limited to, Ohio Breeding Bird Atlas, North American Breeding Bird Survey, the Ohio Wetland Breeding Bird Survey, Ohio Frog & Toad Call Survey, Statewide Butterfly Monitoring Survey, Butterflies & Skippers of Ohio, Ohio Frog & Toad Atlas, Salamanders of Ohio Atlas, Mammals of Ohio, The Reptiles of Ohio, numerous Division surveys and inventory datasets, annual *Wildlife Population Status Reports*, Wildlife Diversity Database, as well as publications from organizations such as the Ohio Chapter of the Wildlife Society, and papers authored by some of Ohio's pioneering naturalists like Jared P. Kirtland and Roger Conant. Each Focus Area species list is a working draft and as such will be open for modifications and discussions. With the exception of species designated as pests and two extinct species, all native and naturalized terrestrial wildlife have been included in the suite of *Ohio's species of greatest conservation need*. As a result of this effort, three hundred and eighty species are recognized as native and naturalized terrestrial wildlife species (see Native and Naturalized Species Table). Of these, two avian species, the passenger pigeon and Carolina parakeet, are extinct (Section A). Ten mammals, four birds, and one invertebrate have been extirpated from the state (Section B). Seven naturalized species, such as the Norway rat, are classified as pests (Section C). While it is unlikely that these pest species can be eliminated from the state, their numbers will be minimized where possible. In addition, there are 22 avian species which occasionally breed in the state (Section D) but their densities are relatively low. Their numbers in Ohio, are dependent upon the

success of their rangewide population. Further, 156 species are believed to have viable populations, are broadly distributed throughout their Ohio range, and utilize a variety of habitats (Section E). These species along with 178 species (Section F) discussed in the Tactical and Focus Area Plans, are anticipated to flourish, if planned habitat management and restoration efforts are completed during the strategic plan period. Not all of the species in Section F, however, have the same probability of reaching viable levels because their populations may be impacted by factors other than habitat conditions on the Focus Area (e.g., location of Focus Area to species' geographic range or habitat quality and availability on migratory routes and wintering areas).

Each terrestrially based tactical plan is similarly structured. Included in each is a discussion of goals, introduction/background, needs/justification, objectives, and approach. These plans clearly define the opportunities and limiting factors for maintaining and enhancing Ohio's wildlife diversity.

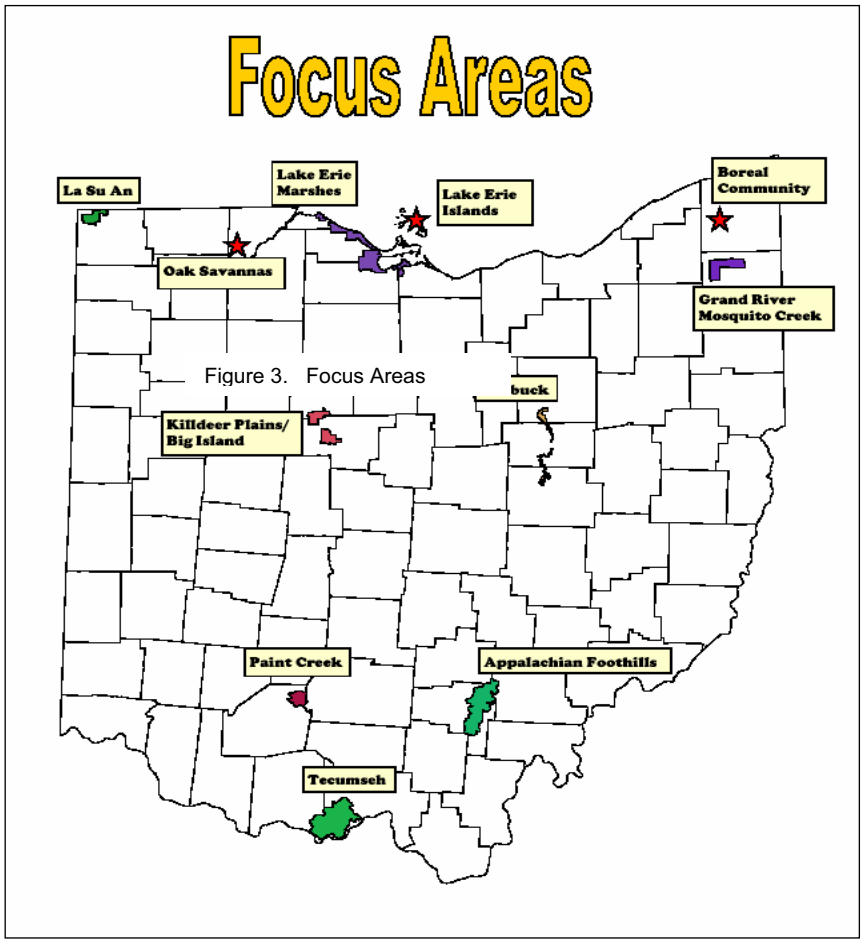

Figure 3. Focus Areas

While significant efforts are planned to restore habitats within designated Focus Areas, the Division recognized it is not likely that endangered and threatened species can be restored to the point of meeting the criteria for de-listing simply by working within Focus Area boundaries; for this reason the State-Listed Tactical Plan was developed to specifically and individually address the needs and threats to listed species.

Finally, because providing Ohioans with opportunities to enjoy wildlife resources is an important goal of the Ohio Division of Wildlife, a section is included containing tactical plans for recreational opportunities and singular species management like the white-tailed deer. While the Division recognizes these do not directly enhance wildlife diversity, they are an integral part of the Division's mission and therefore have been included.

Linkage between the Division's Strategic Plan 2001-2010 and the related terrestrial tactical plans can be found in section 1.1.1 entitled, "Linkage Between the Strategic and Tactical Plans."

# ***Section 1.1.1***

# Linkage Between Strategic Plan and Terrestrial Tactical Plans

# LINKAGE FROM STRATEGIC TO TACTICAL PLANS

The following provides the linkage from the Division's Strategic Plan 2001-2010 and the related terrestrial tactical plans.

## FORESTLAND PROGRAM

**Issue:** The ownership pattern of Ohio's forests is becoming increasingly fragmented and developed. As these changes continue it will become more difficult to manage forests and forest wildlife resources.

**Direction:** Maintain/increase existing large, contiguous block of forest cover within designated focus areas.

**Related Tactical Plans:**

1. **Appalachian Foothills Focus Area Plan**

2. **Tecumseh Focus Area Plan**

**Issue:** Acreage in the brushy state of forest succession and the animal populations dependent on it are declining as Ohio's forest's mature.

**Direction:** Increase the proportion of early successional stage forest habitat.

**Related Tactical Plans:**

1. **Forest Habitat Tactical Plan**

2. **State-listed Terrestrial Wildlife Plan**

**Issue:** Forests once dominated by oaks and hickories are becoming increasingly dominated by less desirable tree species such as maples and yellow poplar.

**Direction:** Increase the oak-hickory component of Ohio's forests.

**Related Tactical Plan:**

1. **Forest Habitat Tactical Plan**

## GRASSLAND PROGRAM

**Issue:** Existing grasslands occur in tracts that are too small or exist in a landscape too fragmented to benefit the species that require these habitats.

**Direction:** Increase the average size of existing grassland tracts within designated focus areas.

**Related Tactical Plans:**

1. **Killdeer Plains/Big Island Focus Areas Plan**
2. **Lake LaSuAn Focus Area Plan**
3. **Paint Creek Focus Area Plan**

**Issue:** Undisturbed grassland habitat and related wildlife species in Ohio have declined over the past 60 years.

**Direction:** Reverse this decline.

**Related Tactical Plans:**

1. **Grassland Habitat Tactical Plan**
2. **State-listed Terrestrial Wildlife Tactical Plan**

**Issue:** Mowing during the nesting season and difficulties with management limit the quality of grassland habitat.

**Direction:** Increase the amount of grassland habitat that is undisturbed during the nesting season.

**Related Tactical Plan:**

1. **Grassland Habitat Tactical Plan**

## UNIQUE HABITATS PROGRAM

**Issue:** Unique habitats and the wildlife species associated with them continue to decline.

**Direction:** Reverse this trend and restore unique habitats and state-listed wildlife species that depend upon them where feasible.

**Related Tactical Plans:**

1. **Unique Habitats Tactical Plan**

2. **State-listed Terrestrial Wildlife Tactical Plan**

## WETLAND PROGRAM

**Issue:** Remaining wetland complexes are relatively small and fragmented.

**Direction:** Increase wetland acreage within designated focus areas.

**Related Tactical Plans:**

1. **Lake Erie Marshes Focus Area Plan**

2. **Grand River Lowlands Focus Area Plan**

3. **Killbuck Focus Area Tactical Plan**

**Issue:** The quantity of wetland habitat and the number of wetland-dependent species in Ohio continues to decline.

**Direction:** Prevent a net loss of wetlands and increase wetland-dependent wildlife.

**Related Tactical Plans:**

1. **Wetland Habitat Tactical Plan**

2. **State-listed Terrestrial Wildlife Tactical Plan**

## ACCESS/OPPORTUNITIES PROGRAM

**Issue:** The demand for wildlife-associated recreation is expected to increase.

**Direction:** Maintain and enhance fish, and wildlife populations for public use and recreation.

**Related Tactical Plans:**

1. **Deer Tactical Plan**
2. **Turkey Tactical Plan**
3. **Waterfowl Tactical Plan**
4. **Furbearer/Small Game Tactical Plan**

**Issue:** Public lands, waters, shooting facilities and other wildlife-related facilities are often overcrowded, detracting from the quality of recreational experiences at these sites.

**Direction:** Acquire and develop additional lands, waters and facilities in places that are convenient for people to pursue wildlife-related recreation and sport shooting.

**Related Tactical Plans:**

1. **Wildlife Recreation Tactical Plan**
2. **Facility Development Tactical Plan**

**Issue:** Access to navigable streams and private lands and waters is low and is becoming less available for wildlife-related recreation.

**Direction:** Increase access to navigable streams and private lands and waters for wildlife-related recreation.

**Related Tactical Plan:**

1. **Wildlife Recreation Tactical Plan**

**Issue:** Physically challenged persons and specialized users need places for wildlife recreation.

**Direction:** Increase recreational opportunities for persons with disabilities or special needs.

**Related Tactical Plan:**

**1. Facility Development Tactical Plan**

**Issue:** Conflicts between different user groups are increasing as facilities and areas become more crowded.

**Direction:** In additional to providing additional lands and facilities, conflicting activities should be more effectively separated by time and space to minimize conflicts.

**Related Tactical Plan:**

**Wildlife Recreation Tactical Plan**

# ***Section 1.2***

# Native and Naturalized Species Table

## Native & Naturalized Terrestrial Species

| Common Name | Scientific Name | Comments |
|---|---|---|
| | | |
| **Section A: Extinct species** | | |
| **Avians** | | |
| Carolina Parakeet | *Conuropsis carolinensis* | |
| Passenger Pigeon | *Ectopistes migratorius* | |
| | | |
| **Section B: Extirpated species** | | |
| **Mammals** | | |
| American Buffalo | *Bison bison* | Habitat & space required is no longer present, no reintroduction will be attempted |
| American Elk | *Cervus elaphus* | Habitat & space required is no longer present, no reintroduction will be attempted |
| Fisher | *Martes pennanti* | Habitat & space required is no longer present, no reintroduction will be attempted |
| Gray Wolf | *Canis lupus* | Habitat & space required is no longer present, no reintroduction will be attempted |
| Lynx | *Felis lynx* | Habitat & space required is no longer present, no reintroduction will be attempted |
| Marten | *Martes americana* | Habitat & space required is no longer present, no reintroduction will be attempted |
| Mountain Lion | *Felis concolor couguar* | Habitat & space required is no longer present, no reintroduction will be attempted |
| Porcupine | *Erethizon dorsatum* | No reintroduction due to possible human conflicts |
| Black Rat | *Rattus rattus* | Nonnative, introduced in 1700s and extirpated by 1830 |
| Rice Rat | *Ochrotomys nuttalli* | Archaelogical site records only, no reintroduction will be attempted |
| **Avian** | | |
| American Swallow-tailed Kite | *Elanoides forticatus* | Habitat & space required is no longer present, reintroduction is not biologically feasible |
| Bachman's sparrow | *Aimophila aestivalis* | While suitable habitat exists in southeastern counties & there are no known competitors, the last documented sighting was in 1978. There is no clear reason for their disappearance from Ohio or other adjacent states. Restoration of this species is not biologically feasible. |
| Common Raven | *Corvus corax* | May expand their range into Ohio from Pennsylvania in the next decade |
| Greater Prairie-chicken | *Tympanuchus cupido* | Habitat & space required is no longer present, reintroduction is not biologically feasible |
| Ivory-billed Woodpecker | *Campephilus principalis* | Habitat & space required is no longer present, reintroduction is not biologically feasible |
| **Terrestrial Invertebrates** | | |
| Mustard White | *Pieris napi* | Reintroduction may not be biologically feasible and needs to be evaluated |
| | | |
| **Section C: Nonnative vertebrate pest species. While it is unlikely that these pest species can be eliminated from the state, their numbers will be minimized where possible.** | | |
| **Mammals** | | |
| House Mouse | *Mus musculus* | |
| Norway Rat | *Rattus norvegicus* | |
| Wild Boar | *Sus scrofa* | |
| **Avian** | | |
| House Sparrow | *Passer domesticus* | |
| Mute Swan | *Cygnus olor* | |
| Rock Dove (Pigeon) | *Columba livia* | |
| European Starling | *Sturnus vulgaris* | |
| **Reptile** | | |
| European Wall Lizard | *Podarcis muralis* | |
| | | |

**Section F: Management of these species will be addressed in Tactical and/or Focus Area Plans**
These species along with those in Section E, are anticipated to flourish, if planned habitat management and restoration efforts are completed during the strategic plan period. Not all of these species, however, have the same probability of reaching viable levels because their populations may be impacted by factors other than habitat conditions on the focus area.

| Common Name | Scientific Name | Comments |
|---|---|---|
| **Mammals** | | |
| Allegheny Woodrat | *Neotoma magister* | State-listed and Unique Habitats Tactical Plans |
| Badger | *Taxidea taxus* | State-listed Tactical Plan |
| Black Bear | *Ursus americanus* | State-listed Tactical Plan |
| Bobcat | *Felis rufus* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Eastern Small-footed Bat | *Myotis subulatus leibii* | State-listed and Unique Habitats Tactical Plans |
| Ermine | *Mustela erminea* | State-listed Tactical Plan, and the Boreal Community and Grand River Lowlands Focus Area Plans |
| Evening Bat | *Nycticeius humeralis* | Shawnee and Zaleski Focus Area Plans |
| Hairy-tailed Mole | *Parascalops breweri* | Shawnee and Zaleski Focus Area Plans |
| Hoary Bat | *Lasiurus cinereus* | Shawnee and Zaleski Focus Area Plans |
| Indiana Bat | *Myotis sodalis* | State-listed and Unique Habitats Tactical Plans, Shawnee, and Zaleski Focus Area Plans |
| Least Shrew | *Cryptotis parva* | Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans |
| Meadow Jumping Mouse | *Zapus hudsonius* | Shawnee and Zaleski Focus Area Plans |
| Northern Long-eared Bat | *Myotis septentrionalis* | Shawnee, Zaleski Focus Area Plans and the Unique Habitats Tactical Plan |
| Pine Vole | *Microtus pinetorum* | Shawnee and Zaleski Focus Area Plans |
| Pygmy Shrew | *Microsorex hoyi* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Rafinesque's Big-eared Bat | *Corynorhinus rafinesquii* | State-listed and Unique Habitats Tactical Plans and the Shawnee Focus Area Plans |
| Red Bat | *Lasiurus borealis* | Shawnee and Zaleski Focus Area Plans |
| River Otter | *Lutra canadensis* | State-listed Tactical Plan and the Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Silver-haired Bat | *Lasionycteris noctivagans* | Shawnee and Zaleski Focus Area Plans |
| Smoky Shrew | *Sorex fumeus* | Shawnee and Zaleski Focus Area Plans |
| Snowshoe Hare | *Lepus americanus* | State-listed Tactical Plan |
| Southern Bog Lemming | *Synaptomys cooperi* | Killbuck and Lake Erie Marshes Focus Area Plans |
| Southern Red-backed Vole | *Clethrionomys gapperi* | State-listed and Unique Habitats Tactical Plans |
| Star-nosed Mole | *Condylura cristata* | State-listed Tactical Plan and the Grand River Lowlands and Killbuck Focus Area Plans |
| Woodland Jumping Mouse | *Napaeozapus insignis* | State-listed and Unique Habitats Tactical Plans |
| | | |
| **Avian** | | |
| Alder Flycatcher | *Empidonax alnorum* | Wetland Habitat Tactical Plan |
| American Bittern | *Botaurus lentiginosus* | State-listed Tactical Plan and the Lake Erie Marshes and Grand River Lowlands Focus Area Plans |
| American Black Duck | *Anas rubripes* | Killbuck Focus Area Plan |
| American Coot | *Fulica americana* | Killbuck and Lake Erie Marshes Focus Area Plans |
| American Redstart | *Setophaga ruticilla* | Shawnee and Zaleski Focus Area Plans |
| Bald Eagle | *Haliaeetus leucocephalus* | State-listed Tactical Plan |
| Barn Owl | *Tyto alba* | State-listed Tactical Plan and the Paint Creek Focus Area Plans |
| Bewick's Wren | *Thryothorus bewickii* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Black and White Warbler | *Mniotilta varia* | Shawnee and Zaleski Focus Area Plans |
| Black Tern | *Childonias niger* | State-listed Tactical Plan and the Lake Erie Marshes Focus Area Plans |
| Black Vulture | *Coragyps atratus* | State-listed Tactical Plan |
| Black-billed Cuckoo | *Coccyzus erythropthalmus* | Shawnee and Zaleski Focus Area Plans |
| Black-crowned Night-heron | *Nycticorax nycticorax* | State-listed and Unique Habitats Tactical Plans |
| Black-throated Green Warbler | *Dendroica virens* | Shawnee and Zaleski Focus Area Plans |
| Blue-headed Vireo | *Vireo solitarius* | Shawnee and Zaleski Focus Area Plans |
| Blue-gray Gnatcatcher | *Polioptila caerulea* | Shawnee and Zaleski Focus Area Plans |
| Blue-winged Teal | *Anas discors* | Killbuck, Grand River Lowlands, Lake Erie Marshes, Killdeer Plains/Big Island, and the Paint Creek Focus Area Plans |
| Blue-winged Warbler | *Vermivora pinus* | Shawnee and Zaleski Focus Area Plans |
| Bobolink | *Dolichonyx oryzivorus* | State-listed and Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans |

**Section F: Management of these species will be addressed in Tactical and/or Focus Area Plans**
These species along with those in Section E, are anticipated to flourish, if planned habitat management and restoration efforts are completed during the strategic plan period. Not all of these species, however, have the same probability of reaching viable levels because their populations may be impacted by factors other than habitat conditions on the focus area.

| Common Name | Scientific Name | Comments |
|---|---|---|
| **Avian** | | |
| Broad-winged Hawk | *Buteo platypterus* | Shawnee and Zaleski Focus Area Plans |
| Cattle Egret | *Bubulcus ibis* | State-listed Tactical Plan |
| Cerulean Warbler | *Dendroica cerulea* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Chestnut-sided Warbler | *Dendroica pensylvanica* | Shawnee and Zaleski Focus Area Plans |
| Common Moorhen | *Gallinula chloropus* | State-listed, Killbuck, Grand River Lowlands, Lake Erie Marshes, Killdeer Plains/Big Island Focus Area Plans & Wetland Habitat Tactical Plans |
| Common Tern | *Sterna hirundo* | State-listed Tactical Plan and the Lake Erie Marshes Focus Area Plan |
| Dark-eyed Junco | *Junco hyemalis* | State-listed Tactical Plan |
| Dickcissel | *Spiza americana* | Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans |
| Double-crested Cormorant | *Phalacracorax auritus* | Lake Erie Islands and the Lake Erie Marshes Focus Area Plans |
| Eastern Meadowlark | *Sturnella magna* | Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans |
| Gadwall | *Anas strepera* | Lake Erie Marshes Focus Area Plan |
| Golden-winged Warbler | *Vermivora chrysoptera* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Grasshopper Sparrow | *Ammodramus savannarum* | Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans |
| Great Blue Heron | *Ardea herodias* | Killbuck, Grand River Lowlands, Lake Erie Marshes, and the L.E. Islands Focus Area Plans |
| Great Egret | *Casmerodius albus* | State-listed, Lake Erie Islands and Lake Erie Marshes Focus Area Plans |
| Great-crested Flycatcher | *Myiarchus crinitus* | Shawnee and Zaleski Focus Area Plans |
| Green-backed Heron | *Butorides striatus* | Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Henslow's Sparrow | *Ammodramus henslowii* | State-listed Tactical Plan, and the Paint Creek, Killdeer Plains/Big Island, and LaSuAn Focus Area Plans |
| Hermit Thrush | *Catharus guttatus* | State-listed Tactical Plan and the Zaleski Focus Area Plan |
| Herring Gull | *Larus argentatus* | Grand River Lowlands and Lake Erie Marshes Focus Area Plans |
| Hooded Merganser | *Lophodytes cucullatus* | Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Hooded Warbler | *Wilsonia citrina* | Shawnee and Zaleski Focus Area Plans |
| King Rail | *Rallus elegans* | State-listed Tactical Plan and the Lake Erie Marshes Focus Area Plan |
| Kirtland's warbler | *Dendroica kirtlandii* | State-listed Tactical Plan |
| Lark Sparrow | *Chondestes grammacus* | State-listed Tactical Plan |
| Least Bittern | *Ixobrychus exilis* | State-listed Tactical Plan and the Killbuck, Grand River Lowlands, and Lake LaSuAn Focus Area Plans |
| Least Flycatcher | *Empidonax minimus* | State-listed Tactical Plan |
| Loggerhead Shrike | *Lanius ludovicianus* | State-listed Tactical Plan |
| Louisiana Waterthrush | *Seiurus motacilla* | Shawnee and Zaleski Focus Area Plans |
| Marsh Wren | *Cistothorus palustris* | State-listed Tactical Plan and the Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Northern Bobwhite | *Colinus virginianus* | State-listed, Paint Creek, Killdeer Plains/Big Island, & LaSuAn Focus Area Plans & the Grassland Habitat & Furbearer/Small Game Tactical Plans |
| Northern Harrier | *Circus cyaneus* | State-listed Tactical Plan and the Paint Creek Focus Area Plan |
| Northern Parula | *Parula americana* | Shawnee and Zaleski Focus Area Plans |
| Osprey | *Pandion haliaetus* | State-listed Tactical Plan |
| Peregrine Falcon | *Falco peregrinus* | State-listed Tactical Plan |
| Pied-billed Grebe | *Podilymbus podicees* | Grand River Lowlands and Lake Erie Marshes Focus Area Plans |
| Pileated Woodpecker | *Dryocopus pileatus* | Shawnee and Zaleski Focus Area Plans |
| Pine Warbler | *Dendroica pinus* | Shawnee and Zaleski Focus Area Plans |
| Piping Plover | *Charadrius melodus* | State-listed Tactical Plan |
| Prairie Warbler | *Dendroica discolor* | Paint Creek and Killdeer Plains/Big Island Focus Area Plans |
| Prothonotary Warbler | *Protonotaria citrea* | State-listed, Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Purple Martin | *Progne subis* | State-listed Tactical Plan |
| Red-headed Woodpecker | *Melanerpes erythrocephalus* | Shawnee and Zaleski Focus Area Plans |
| Red-shouldered Hawk | *Buteo lineatus* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Ring-necked Pheasant | *Phasianus colchicus* | Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans and the Grassland Habitat Tactical Plan |

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These species along with those in Section E, are anticipated to flourish, if planned habitat management and restoration efforts are completed during the strategic plan period. Not all of these species, however, have the same probability of reaching viable levels because their populations may be impacted by factors other than habitat conditions on the focus area.

| Common Name | Scientific Name | Comments |
|---|---|---|
| **Avian** | | |
| Rose-breasted Grosbeak | *Pheucticus ludovicianus* | Shawnee and Zaleski Focus Area Plans |
| Sandhill Crane | *Grus canadensis* | State-listed Tactical Plan and the Killbuck Focus Area Plan |
| Savannah Sparrow | *Passerculus sandwichensis* | Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans |
| Sedge Wren | *Cistothorus platensis* | State-listed Tactical Plan, the Paint Creek, Killdeer Plains/Big Island, LaSuAn, and the Lake Erie Marshes Focus Area Plans |
| Sharp-shinned Hawk | *Accipiter striatus* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Snowy Egret | *Egretta thula* | State-listed Tactical Plan and the Lake Erie Marshes Focus Area Plan |
| Sora Rail | *Porzana carolina* | State-listed, Killbuck, Grand River Lowlands, Lake Erie Marshes, & Killdeer Plains/Big Island Focus Area Plans & the Wetland Habitat Tactical Plan |
| Spotted Sandpiper | *Actitis macularia* | Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Summer Tanager | *Piranga rubra* | Shawnee and Zaleski Focus Area Plans |
| Swamp Sparrow | *Melospiza georgiana* | Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Trumpeter Swan | *Cygnus columbianus* | State-listed Tactical Plan and the Killbuck and Lake Erie Marshes Focus Area Plans |
| Upland Sandpiper | *Bartramia longicauda* | State-listed Tactical Plan, and the Paint Creek and Killdeer Plains/Big Island Focus Area Plans |
| Veery | *Catharus fuscescens* | Zaleski Focus Area Plan |
| Vesper Sparrow | *Pooecetes gramineus* | Paint Creek, Killdeer Plains/Big Island, and the LaSuAn Focus Area Plans |
| Virginia Rail | *Rallus limicola* | State-listed, Killbuck, Grand River Lowlands, Lake Erie Marshes, & Killdeer Plains/Big Island Focus Area Plans & the Wetland Habitat Tactical Plan |
| Whip-poor-will | *Caprimulgus vociferus* | Shawnee and Zaleski Focus Area Plans |
| Wilson's Phalarope | *Phalaropus tricolor* | Lake Erie Marshes and Killdeer Plains/Big Island Focus Area Plans |
| Wood Duck | *Aix sponsa* | Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Worm-eating Warbler | *Helmitheros vermivorus* | Shawnee and Zaleski Focus Area Plans |
| Yellow Warbler | *Dendroica petechia* | Killbuck, Grand River Lowlands, and Lake Erie Marshes Focus Area Plans |
| Yellow-bellied Sapsucker | *Sphyrapicus varius* | State-listed Tactical Plan |
| Yellow-billed Cuckoo | *Coccyzus americanus* | Shawnee and Zaleski Focus Area Plans |
| Yellow-crowned Night-heron | *Nyctanassa violacea* | State-listed Tactical Plan |
| Yellow-throated Vireo | *Vireo flavifrons* | Shawnee and Zaleski Focus Area Plans |
| Yellow-throated Warbler | *Dendroica dominica* | Shawnee and Zaleski Focus Area Plans |
| | | |
| **Reptiles & Amphibians** | | |
| Black Kingsnake | *Lampropeltis getula nigra* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Blanding's Turtle | *Emydoidea blandingii* | State-listed Tactical Plan and the Killbuck and Lake Erie Marshes Focus Area Plans |
| Blue-spotted Salamander | *Ambystoma laterale* | State-listed and Unique Habitats Tactical Plans |
| Broadhead Skink | *Eumeces laticeps* | Shawnee and Zaleski Focus Area Plans |
| Butler's Garter Snake | *Thamnophis butleri* | Lake Erie Marshes Focus Area Plan |
| Cave Salamander | *Eurycea lucifuga* | State-listed and Unique Habitats Tactical Plans |
| Coal Skink | *Eumeces anthracinus* | State-listed Tactical Plan |
| Copperbelly Water Snake | *Nerodia erythrogaster neglecta* | State-listed Tactical Plan and LaSuAn Focus Area Plan |
| Eastern Box Turtle | *Terrapene carolina carolina* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Eastern Fox Snake | *Elaphe vulpina gloydi* | State-listed Tactical Plan and the Lake Erie Marshes Focus Area Plan |
| Eastern Massasauga | *Sistrurus catenatus catenatus* | State-listed Tactical Plan and the Killdeer and Grand River Lowlands Focus Area Plans |
| Eastern Plains Garter Snake | *Thamnophis radix radix* | State-listed Tactical Plan and Killdeer Plains/Big Island Focus Area Plan |
| Eastern Smooth Earth Snake | *Virginia valeriae valeriae* | Shawnee and Zaleski Focus Area Plans |
| Eastern Spadefoot | *Scaphiopus holbrookii* | State-listed Tactical Plan |
| False Map Turtle | *Graptemys pseudogeographica* | State-listed Tactical Plan |
| Four-toed Salamander | *Hemidactylium scutatum* | State-listed Tactical Plan and the Boreal Community, Killbuck, & Grand River Lowlands Focus Area Plans |
| Green Salamander | *Aneides aeneus* | State-listed Tactical Plan and the Shawnee Focus Area Plan |

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These species along with those in Section E, are anticipated to flourish, if planned habitat management and restoration efforts are completed during the strategic plan period. Not all of these species, however, have the same probability of reaching viable levels because their populations may be impacted by factors other than habitat conditions on the focus area.

| Common Name | Scientific Name | Comments |
|---|---|---|
| **Reptiles & Amphibians** | | |
| Ground Skink | *Scincella lateralis* | Shawnee and Zaleski Focus Area Plans |
| Kentucky Spring Salamander | *Gyrinophilus porphyriticus duryi* | Shawnee and Zaleski Focus Area Plans |
| Kirtland's Snake | *Clonophis kirtlandii* | State-listed Tactical Plan and the Killdeer Plains/Big Island, Killbuck, and the Lake Erie Marshes Focus Area Plans |
| Lake Erie Water Snake | *Nerodia sipedon insularum* | State-listed tactical Plan and the Lake Erie Islands Focus Area Plan |
| Mountain Dusky Salamander | *Desmognathus ochrophaeus* | Shawnee and Zaleski Focus Area Plans |
| Mud Salamander | *Pseudotriton montanus* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Northern Coal Skink | *Eumeces anthracinus anthracinus* | Zaleski Focus Area Plan |
| Northern Redbelly Snake | *Storeria occipitomaculata occipitomaculata* | Zaleski Focus Area Plan |
| Northern Ribbon Snake | *Thamnophis sauritus septentrionalis* | Killbuck, Grand River Lowlands, Killdeer-Big Island, and LaSuAn Focus Area Plans |
| Northern Spring Salamander | *Gyrinophilus porphyriticus porphyriticus* | Zaleski Focus Area Plan |
| Rough Green Snake | *Opheodrys aestivus* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| Smallmouth Salamander | *Ambystoma texanum* | Shawnee and Zaleski Focus Area Plans |
| Smooth Green Snake | *Liochlorophis vernalis* | Killdeer-Big Island Focus Area Plan |
| Spotted Turtle | *Clemmys guttata* | State-listed and Unique Habitats Tactical Plans |
| Timber Rattlesnake | *Crotalus horridus horridus* | State-listed Tactical Plan and the Shawnee and Zaleski Focus Area Plans |
| | | |
| **Endangered Terrestrial Invertebrate Species** | | |
| Frosted Elfin | *Incisalia irus* | State-listed and Unique Habitats Tactical Plans |
| Karner Blue | *Lycaeides melissa samuelis* | State-listed and Unique Habitats Tactical Plans |
| Mitchell's Satyr | *Neonympha mitchellii* | State-listed Tactical Plan |
| Persius Dusky Wing, Eastern | *Erynnis persius* | State-listed and Unique Habitats Tactical Plans |
| Purplish Copper, Eastern | *Lycaena helloides* | State-listed Tactical Plan |
| Regal Fritillary | *Speyeria idalia* | State-listed Tactical Plan |
| Swamp Metalmark | *Calephelis mutica* | State-listed Tactical Plan |
| | *Trichoclea artesta* | State-listed Tactical Plan |
| | *Ufeus satyricus* | State-listed Tactical Plan |
| | *Melanchra assimilis* | State-listed Tactical Plan |
| | *Hypocoena enervata* | State-listed Tactical Plan and the Lake Erie Marshes Focus Area Plan |
| | *Spartiniphaga inops* | State-listed Tactical Plan and the Lake Erie Marshes Focus Area Plan |
| | *Ufeus plicatus* | State-listed Tactical Plan |
| | *Lithophane semiusta* | State-listed Tactical Plan |
| | *Erythroecia hebardi* | State-listed Tactical Plan |
| | *Tricholita notata* | State-listed Tactical Plan |
| | *Papaipema silphii* | State-listed Tactical Plan |
| | *Papaipema beeriana* | State-listed Tactical Plan |
| American burying beetle | *Nicrophorus americanus* | State-listed Tactical Plan and the Zaleski Focus Area Plans |
| Kramer's cave beetle | *Pseudanophthalmus krameri* | State-listed and Unique Habitats Tactical Plans |
| Ohio cave beetle | *Pseudanophthalmus ohioensis* | State-listed and Unique Habitats Tactical Plans |
| Pointed sallow | *Epiglaea apiata* | State-listed Tactical Plan |

Section D: These species occur periodically and are capable of breeding in Ohio. They are at the edge of larger, contiguous ranges with viable population(s) within the core of their ranges. With the exception of efforts to conserve occupied areas, minimal management efforts will be directed for these species because it is unlikely to result in significant increases in their populations within the state (see the State-listed Terrestrial Wildlife Tactical Plan).

| **Common Name** | **Scientific Name** |
|---|---|
| **Avian** | |
| American Wigeon | *Anas americana* |
| Blackburnian Warbler | *Dendroica fusca* |
| Bell's Vireo | *Vireo bellii* |
| Black-throated Blue Warbler | *Dendroica caerulescens* |
| Blue Grosbeak | *Guiraca caerulea* |
| Brown Creeper | *Certhia americana* |
| Canada Warbler | *Wilsonia canadensis* |
| Chuck-will's-widow | *Caprimulgus carolinensis* |
| Common Snipe | *Gallinago gallinago* |
| Gadwall | *Anas strepera* |
| Golden-crowned Kinglet | *Regulus satrapa* |
| Green-winged Teal | *Anas crecca* |
| Little Blue Heron | *Egretta caerulea* |
| Long-eared Owl | *Asio otus* |
| Magnolia Warbler | *Dendroica magnolia* |
| Mourning Warbler | *Oporornis philadelphia* |
| Northern Pintail | *Anas acuta* |
| Northern Saw-whet Owl | *Aegolius acadicus* |
| Northern Shoveler | *Anas clypeata* |
| Northern Waterthrush | *Seiurus noveboracensis* |
| Pine Siskin | *Carduelis pinus* |
| Purple Finch | *Carpodacus purpureus* |
| Red-breasted Nuthatch | *Sitta canadensis* |
| Redhead Duck | *Aythya americana* |
| Ruddy Duck | *Oxyura jamaicensis* |
| Short-eared Owl | *Asio flammeus* |
| Western Meadowlark | *Sturnella neglecta* |
| Wilson's Phalarope | *Phalaropus tricolor* |
| Yellow-headed Blackbird | *Xanthocephalus xanthocephalus* |
| Winter Wren | *Troglodytes troglodytes* |

**Section E: Viable population broadly distributed throughout their Ohio range. These species are anticipated to be sustained without additional management efforts.**

| Common Name | Scientific Name | Habitat Association |
|---|---|---|
| **Mammals** | | |
| Beaver | *Castor canadensis* | Wetlands/Raparian Corridors |
| Big Brown Bat | *Eptesicus fuscus* | Forests/Unique Habitats |
| Coyote | *Canis latrans* | Generalist |
| Deer Mouse | *Peromyscus maniculatus* | Grasslands |
| Eastern Chipmunk | *Tamias striatus* | Forests |
| Eastern Cottontail | *Sylvilagus floridanus* | Generalist |
| Eastern Harvest Mouse | *Reithrodontomys humulis* | Grasslands |
| Eastern Mole | *Scalopus aquaticus* | Grasslands |
| Eastern Pipistrelle | *Pipistrellus subflavus* | Forests/Unique Habitats |
| Fox Squirrel | *Sciurus niger* | Forests |
| Gray Fox | *Urocyon cinereoargenteus* | Forests |
| Gray Squirrel | *Sciurus carolinensis* | Forests |
| Least Weasel | *Mustela nivalis* | Generalist |
| Little Brown Bat | *Myotis lucifugus* | Forests/Unique Habitats |
| Long-tailed Weasel | *Mustela frenata* | Forests |
| Masked Shrew | *Sorex cinereus* | Forests |
| Meadow Vole | *Microtus pennsylvanicus* | Grasslands |
| Mink | *Mustela vison* | Wetlands/Raparian Corridors |
| Muskrat | *Ondatra zibethicus* | Wetlands |
| Prairie Vole | *Microtus ochrogaster* | Grasslands |
| Raccoon | *Procyon lotor* | Generalist |
| Red Fox | *Vulpes vulpes* | Forests |
| Red Squirrel | *Tamiasciurus hudsonicus* | Forests |
| Southern Flying Squirrel | *Glaucomys volans* | Forests |
| Striped Skunk | *Mephitis mephitis* | Generalist |
| Thirteen-lined Ground Squirrel | *Spermophilus tridecemlineatus* | Forest |
| Virginia Opossum | *Didelphis virginiana* | Generalist |
| White-footed Mouse | *Peromyscus leucopus* | Forest |
| White-tailed Deer | *Odocoileus virginianus* | Forest |
| Woodchuck | *Marmota monax* | Generalist |
| | | |
| **Avian** | | |
| Acadian Flycatcher | *Empidonax virescens* | Forest |
| American Crow | *Corvus brachyrhynchos* | Generalist |
| American Goldfinch | *Carduelis tristis* | Grasslands |
| American Kestrel | *Falco sparverius* | Grasslands |
| American Robin | *Turdus migratorius* | Forest |
| American Woodcock | *Scolopax minor* | Forest |
| Bank Swallow | *Riparia riparia* | Riparian Corridors |

| | | |
|---|---|---|
| Barn Swallow | *Hirundo rustica* | Generalist |
| Barred Owl | *Falco sparverius* | Forest |
| Belted Kingfisher | *Ceryle alcyon* | Riparian Corridors/Wetlands |
| Black-capped Chickadee | *Parus atricapillus* | Forest |
| Blue Jay | *Cyanocitta cristata* | Generalist |
| Brown Thrasher | *Toxostoma rufum* | Forest |
| Brown-headed Cowbird | *Molthrus ater* | Generalist |
| Canada Goose | *Branta canadensis* | Generalist |
| Carolina Chickadee | *Parus carolinensis* | Forest |
| Carolina Wren | *Thryothorus ludovicianus* | Forest |
| Cedar Waxwing | *Bombycilla cedrorum* | Forest |
| Chimney Swift | *Chaetura pelagica* | Urban |
| Chipping Sparrow | *Spizella passerina* | Generalist |

**Section E: Viable population broadly distributed throughout their Ohio range. These species are anticipated to be sustained without additional management efforts.**

| Common Name | Scientific Name | Habitat Association |
|---|---|---|
| **Avian** | | |
| Cliff Swallow | *Hirundo pyrrhonota* | Generalist |
| Common Grackle | *Quiscalus quiscula* | Generalist |
| Common Nighthawk | *Chordeiles minor* | Generalist |
| Common Yellowthroat | *Geothlypis trichas* | Grasslands/Wetlands |
| Cooper's Hawk | *Accipiter Cooperii* | Forest |
| Downy Woodpecker | *Picoides pubescens* | Forest |
| Eastern Bluebird | *Sialisa sialis* | Grasslands |
| Eastern Kingbird | *Tyrannus tyrannus* | Grasslands |
| Eastern Phoebe | *Sayornis phoebe* | Forest |
| Eastern Screech Owl | *Otus asio* | Forest |
| Eastern Wood-pewee | *Contopus virens* | Forest |
| Field Sparrow | *Spizella pusilla* | Grasslands |
| Gray Catbird | *Dumetella carolinensis* | Forest |
| Great-horned Owl | *Bubo virginianus* | Forest |
| Hairy Woodpecker | *Picoides villosus* | Forest |
| Horned Lark | *Eremophila alpestris* | Grasslands |
| House Finch | *Carpodacus mexicana* | Generalist |
| House Wren | *Troglodytes aedon* | Generalist |
| Indigo Bunting | *Passerina cyanea* | Forest |
| Kentucky Warbler | *Oporornis formosus* | Forest |
| Killdeer | *Charadrius vociferus* | Generalist |
| Mallard | *Anas platyrhynchos* | Wetlands/Grasslands |
| Mourning Dove | *Zenaida macroura* | Forest/Grasslands |
| Northern Baltimore Oriole | *Icterus galbula* | Forest |
| Northern Cardinal | *Cardinalis cardinalis* | Generalist |
| Northern Flicker | *Colapte auratus* | Forest |
| Northern Mockingbird | *Mimus polyglottos* | Forest |
| N. Rough-winged Swallow | *Stelgidopteryx serripennis* | Riparian Corridors |
| Orchard Oriole | *Icterus spurius* | Forest |
| Ovenbird | *Seiurus aurocapillus* | Forest |
| Red-bellied Woodpecker | *Melanerpes carolinus* | Forest |
| Red-eyed Vireo | *Vireo olivaceus* | Forest |
| Red-tailed Hawk | *Buteo jamaicensis* | Grasslands |
| Red-winged Blackbird | *Agelaius phoeniceus* | Grasslands |
| Ring-billed Gull | *Larus delawarensis* | Generalist |
| Ruby-throated Hummingbird | *Archilochus colubris* | Generalist |
| Ruffed Grouse | *Bonasa umbellus* | Forest |
| Rufous-sided Towhee | *Pipilo erythrophthalmus* | Grasslands/Forest |

| | | |
|---|---|---|
| Scarlet Tanager | *Piranga olivacea* | Forest |
| Song Sparrow | *Melospiza melodia* | Generalist |
| Tree Swallow | *Tachycineta bicolor* | Wetlands/Grasslands |
| Tufted Titmouse | *Parus bicolor* | Forest |
| Turkey Vulture | *Cathartes aura* | Forests/Unique Habitats |
| Warbling Vireo | *Vireo gilvus* | Forest |
| White-breasted Nuthatch | *Sitta carolinensis* | Forest |
| White-eyed Vireo | *Vireo griseus* | Forest |
| Wild Turkey | *Meleagris gallopavo* | Forest |
| Willow Flycatcher | *Empidonax traillii* | Wetland |
| Wood Thrush | *Hylocichla mustelina* | Forest |
| Yellow Warbler | *Dendroica petechia* | Wetland |
| Yellow-breasted Chat | *Icteria virens* | Forest |

| Section E: Viable population broadly distributed throughout their Ohio range. These species are anticipated to be sustained without additional management efforts. | | |
|---|---|---|
| **Common Name** | **Scientific Name** | **Habitat Association** |
| **Reptiles & Amphibians** | | |
| American Toad | *Bufo americanus* | Generalist |
| Black Rat Snake | *Elaphe obsoleta obsoleta* | Forest |
| Blanchard's Cricket Frog | *Acris crepitans blanchardi* | Wetlands/Riparian Corridors |
| Black Racer | *Coluber constrictor constrictor* | Forest |
| Blue Racer | *Coluber c. flaviventrus* | Grasslands |
| Bullfrog | *Rana catesbeiana* | Generalist |
| Common Map Turtle | *Graptemys geographica* | Wetlands/Riparian Corridors |
| Common Musk Turtle | *Sternotherus odoratus* | Wetlands/Riparian Corridors |
| Common Snapping Turtle | *Chelydra serpentina serpentina* | Generalist |
| Cope's Gray Treefrog | *Hyla chrysoscelis* | Forest |
| Eastern Garter Snake | *Thamnophis sirtalis sirtalis* | Generalist |
| Eastern Hognose Snake | *Heterodon platirhinos* | Unique Habitats/Forest/Riparian Corridors |
| Eastern Milk Snake | *Lampropeltis t. triangulum* | Forest |
| Eastern Ribbon Snake | *Thamnophis sauritus sauritus* | Wetlands |
| Eastern Spiny Softshell | *Apalone spinifera spinifera* | Riparian Corridors |
| Eastern Tiger Salamander | *Ambystoma tigrinum tigrinum* | Forest/Wetlands |
| Eastern Worm Snake | *Carphophis amoenus amoenus* | Forest |
| Five-lined Skink | *Eumeces fasciatus* | Forest |
| Fowler's Toad | *Bufo woodhousii fowleri* | Riparian Corridors |
| Gray Treefrog | *Hyla versicolor* | Forests/Grasslands |
| Green Frog | *Rana clamitans melanota* | Generalist |
| Jefferson Salamander | *Ambystoma jeffersonianum* | Forest/Ephemeral Wetlands |
| Longtail Salamander | *Eurycea longicauda longicauda* | Forest/Riparian Corridors |
| Midland Brown Snake | *Storeria dekayi wrightorum* | Generalist |
| Midwest Worm Snake | *Carphophis amoenus helenae* | Forest |
| Marbled Salamander | *Ambystoma opacum* | Forest/Ephemeral Wetlands |
| Midland Painted Turtle | *Chrysemys picta marginata* | Riparian Corridors/Wetlands |
| Midland Smooth Softshell | *Apalone mutica mutica* | Riparian Corridors |
| Mountain Chorus Frog | *Pseudacris brachyphona* | Grasslands |
| Northern Brown Snake | *Storeria dekayi dekayi* | Generalist |
| Northern Copperhead | *Agkistrodon c. mokasen* | Forest |
| Northern Dusky Salamander | *Desmognathus fuscus fuscus* | Forest/Riparian Corridors |
| Northern Fence Lizard | *Sceloporus u. hyacinthinus* | Forest |
| Northern Leopard Frog | *Rana pipiens* | Wetlands/Grasslands |
| Northern Red Salamander | *Pseudotriton ruber ruber* | Forest/Riparian Corridors |
| Northern Redbelly Snake | *Storeria o.occipitomaculata* | Forest |
| Northern Ringneck Snake | *Diadophis punctatus edwardsii* | Forest |
| Northern Slimy Salamander | *Plethodon glutinosus* | Forest/Ephemeral Wetlands |

| | | |
|---|---|---|
| N. Two-lined Salamander | *Eurycea bislineata* | Forest/Ephemeral Wetlands |
| N. Ravine Salamander | *Plethodon richmondi* | Forest |
| Northern Spring Peeper | *Pseudacris crucifer crucifer* | Wetlands/Forest |
| Northern Water Snake | *Nerodia sipedon sipedon* | Wetlands/Riparian Corridors |
| Ouachita Map Turtle | *Graptemys p. ouachitensis* | Riparian Corridors |
| Pickerel Frog | *Rana palustris* | Wetlans/Forest |
| Queen Snake | *Regina septemvittata* | Riparian Corridors |
| Redback Salamander | *Plethodon cinereus* | Forest/Ephemeral Wetlands |
| Red-eared Slider | *Trachemys scripta elegans* | Riparian Corridors |
| Red-spotted Newt | *nerodia sipedon sipedon* | Forest/Wetlands |
| S. Two-lined Salamander | *Eurycea cirrigera* | Forest/Riparian Corridors |
| Spotted Salamander | *Ambystoma maculatum* | Forest/Riparian Corridors |
| Streamside Salamander | *Ambystoma barbouri* | Riparian Corridors/Forest |
| Western Chorus Frog | *Pseudacris triseriata triseriata* | Grasslands/Forest (edges) |
| Wood Frog | *Rana sylvatica* | Forest |

# ***Section 1.2.1***

# Terrestrial Species and Potential for Persisting Within the Focus Areas

# ***Section 1.2.1.1***

# Statewide Terrestrial Species and Potential for Benefit

# Focus Area Species List - Mammals

| | | WETLANDS | | | GRASSLANDS | | | FORESTLANDS | | UNIQUE HABITATS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | **Totals** | **Comments** |
| Allegheny woodrat | Neotoma magister | | | | | | | | | 1 | | | | 1 | |
| Badger | Taxidea taxus | | | | 0 | 0 | 0 | | | | | | | 0 | |
| Beaver | Castor canadensis | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Big Brown Bat | Eptesicus fuscus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Black Bear | Ursus americanus | | | | | | | 2 | 2 | | | | | 4 | |
| Bobcat | Felis rufus | | | | | | | 2 | 2 | | | | | 4 | |
| Coyote | Canis latrans | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Deer Mouse | Peromyscus maniculatus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Chipmunk | Tamias striatus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Cottontail | Sylvilagus floridanus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Harvest mouse | Reithrodontomys humulis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Mole | Scalopus aquaticus | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Eastern pipistrelle | Pipistrellus subflavus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Small-footed Bat | Myotis subulatus leibii | | | | | | | | | 1 | | | | 1 | |
| Ermine | Mustela erminea | 0 | 2 | 0 | | | | | | | | | 1 | 3 | |
| Evening Bat | Nycticeius humeralis | | | | | | | 1 | 1 | | | | | 2 | |
| Fox Squirrel | Sciurus niger | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Gray Fox | Urocyon cinereoargenteus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Gray Squirrel | Sciurus carolinensis | | | | | | | 2 | 2 | | | | | 4 | |
| Hairy-tailed Mole | Parascalops breweri | | | | | | | 2 | 2 | | | | | 4 | |
| Hoary Bat | Lasiurus cinereus | | | | | | | 2 | 2 | | | | | 4 | |
| Indiana Bat | Myotis sodalis | | | | | | | 2 | 2 | 2 | | | | 6 | |
| Least Shrew | Cryptotis parva | | | | 1 | 1 | 1 | | | | | | | 3 | |
| Least Weasel | Mustela nivalis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Little Brown Bat | Myotis lucifugus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Long-tailed Weasel | Mustela frenata | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Masked shrew | Sorex cinereus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Meadow Jumping Mouse | Zapus hudsonius | | | | | | | 2 | 2 | | | | | 4 | |
| Meadow Vole | Microtus pennsylvanicus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Mink | Mustela vison | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Muskrat | Ondatra zibethicus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Long-eared Bat | Myotis septentrionalis | | | | | | | 2 | 2 | 0 | | | | 4 | |
| Pine Vole | Microtus pinetorum | | | | | | | 2 | 2 | | | | | 4 | |
| Prairie vole | Microtus ochrogaster | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| | | | | | | | | | | | | | | | |
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| Focus Area Species List - Mammals | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Pygmy Shrew | Microsorex hoyi | | | | 0 | 0 | 0 | 1 | | | | | | 1 | |
| Raccoon | Procyon lotor | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Rafinesque's Big-eared Bat | Corynorhinus rafinesquii | | | | | | | 1 | 1 | 1 | | | | 3 | |
| Red Bat | Lasiurus borealis | | | | | | | 2 | 2 | | | | | 4 | |
| Red Fox | Vulpes vulpes | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Red Squirrel | Tamiasciurus hudsonicus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| River Otter | Lutra canadensis | 2 | 2 | 1 | | | | | | | | | | 5 | |
| Short-tailed Shrew | Blarina brevicauda | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Silver-haired bat | Lasionycteris noctivagans | | | | | | | 2 | 2 | | | | | 4 | |
| Smoky Shrew | Sorex fumeus | | | | | | | 2 | 2 | | | | | 4 | |
| Snowshoe Hare | Lepus americanus | | | | | | | | | | | | 0 | 0 | |
| Southern Bog Lemming | Synaptomys cooperi | 1 | 0 | 1 | | | | | | | | | | 2 | |
| Southern flying squirrel | Glaucomys volans | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Southern Red-backed vole | Clethrionomys gapperi | | | | | | | | | | | | 1 | 1 | |
| Star-nosed Mole | Condylura cristata | 2 | 2 | 0 | | | | | | | | | | 4 | |
| Striped Skunk | Mephitis mephitis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Thirteen-lined Ground Sq. | Spermophilus tridecemlineatus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Virginia opossum | Didelphis virginiana | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| White-footed mouse | Peromyscus leucopus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| White-tailed deer | Odocoileus virginianus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Woodchuck | Marmota monax | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Woodland jumping mouse | Napaeozapus insignis | | | | | | | | | | | | 2 | 2 | |
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| Focus Area Species List - Birds | | | | | | | | | | | | | | | |
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Acadian Flycatcher | Empidonax virescens | | | | | | | 2 | 2 | | | | | 4 | |
| Alder Flycatcher | Empidonax alnorum | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| American Bittern | Botaurus lentiginosus | 0 | 2 | 2 | | | | | | | | | | 4 | |
| American Black Duck | Anas rubripes | 1 | 0 | 1 | | | | | | | | | | 2 | |
| American Coot | Fulica americana | 1 | 0 | 2 | | | | | | | | | | 3 | |
| American Crow | Corvus brachyrhynchos | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| American Goldfinch | Carduelis tristis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| American Kestrel | Falco sparverius | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| American Redstart | Setophaga ruticilla | | | | | | | 2 | 2 | | | | | 4 | |
| American Robin | Turdus migratorius | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| American Wigeon | Anas americana | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| American Woodcock | Scolopax minor | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Bachman's Sparrow | Aimophila aestivalis | | | | | | | 0 | 0 | | | | | 0 | |
| Bald Eagle | Haliaeetus leucocephalus | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Baltimore Oriole | Icterus galbula | | | | | | | 2 | 2 | | | | | 4 | |
| Bank Swallow | Riparia riparia | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Barn Owl | Tyto alba | | | | 0 | 1 | 2 | | | | | | | 3 | |
| Barn Swallow | Hirundo rustica | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Barred Owl | Strix varia | | | | | | | 2 | 2 | | | | | 4 | |
| Bell's Vireo | Vireo bellii | | | | | | | 0 | 0 | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Belted Kingfisher | Ceryle alcyon | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Bewick's Wren | Thryothorus bewickii | | | | | | | 1 | 2 | | | | | 3 | |
| Black and White Warbler | Mniotilta varia | | | | | | | 2 | 2 | | | | | 4 | |
| Black Rail | Laterallus jamaicensis | | | | | | | | | | | | | 0 | Migratory species which pass through the state. |
| Black Tern | Childonias niger | 0 | 0 | 1 | | | | | | | 0 | | | 1 | |
| Black Vulture | Coragyps atratus | | | | | | | 1 | 2 | 0 | | | | 3 | |
| Black-billed Cuckoo | Coccyzus erythropthalmus | | | | | | | 2 | 2 | | | | | 4 | |
| Black-capped Chickadee | Parus atricapillus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Black-crowned Night-Heron | Nycticorax nycticorax | 0 | 0 | 0 | | | | | | | 2 | | | 2 | |
| Black-throated Blue Warbler | Dendroica caerulescens | | | | | | | 0 | 0 | | | | 0 | 0 | Note in Boreal Focus Area can't be maintained in viable numbers in this focus area. |
| Black-throated Green Warbler | Dendroica virens | | | | | | | 2 | 1 | | | | | 3 | |
| Blackburnian Warbler | Dendroica fusca | | | | | | | 2 | 1 | | | | | 3 | |
| Blue Grosbeak | Guiraca caerulea | | | | | | | 0 | 1 | | | | | 1 | |
| Blue Jay | Cyanocitta cristata | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Blue-gray Gnatcatcher | Polioptila caerulea | | | | | | | 2 | 2 | | | | | 4 | |
| Blue-winged Teal | Anas discors | 2 | 1 | 2 | 0 | 1 | 1 | | | | | | | 7 | |
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| Focus Area Species List - Birds | | | | | | | | | | | | | | | |
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Blue-winged Warbler | Vermivora pinus | | | | | | | 2 | 2 | | | | | 4 | |
| Bobolink | Dolichonyx oryzivorus | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Broad-winged Hawk | Buteo platypterus | | | | | | | 2 | 2 | | | | | 4 | |
| Brown Creeper | Certhia americana | | | | | | | 0 | 0 | | | | | 0 | Note in Forest Tactical can't be maintained in viable numbers in these focus areas. |
| Brown Thrasher | Toxostoma rufum | | | | | | | 2 | 2 | | | | | 4 | |
| Brown-headed Cowbird | Molthrus ater | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Canada Goose | Branta canadensis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Canada Warbler | Wilsonia canadensis | | | | | | | 1 | 0 | | | | | 1 | |
| Carolina Chickadee | Parus carolinensis | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Carolina Wren | Thryothorus ludovicianus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Cattle Egret | Bubulcus ibis | 0 | 0 | 0 | 0 | 0 | 0 | | | | 0 | | | 0 | |
| Cedar Waxwing | Bombycilla cedrorum | | | | | | | 2 | 2 | | | | | 4 | |
| Cerulean Warbler | Dendroica cerulea | | | | | | | 2 | 2 | | | | | 4 | |
| Chestnut-sided Warbler | Dendroica pensylvanica | | | | | | | 1 | 1 | | | 0 | | 2 | |
| Chimney Swift | Chaetura pelagica | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Chipping Sparrow | Spizella passerina | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Chuck-will's-widow | Caprimulgus carolinensis | | | | | | | 0 | 2 | | | | | 2 | |
| Clay-colored Sparrow | Spizella pallida | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Cliff Swallow | Hirundo pyrrhonota | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Common Grackle | Quiscalus quiscula | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Common Moorhen | Gallinula chloropus | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Common Nighthawk | Chordeiles minor | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Common Snipe | Gallinago gallinago | 0 | 1 | 1 | 0 | 0 | 0 | | | | | | | 2 | |
| Common Tern | Sterna hirundo | 0 | 0 | 1 | | | | | | | | | | 1 | |
| Common Yellowthroat | Geothlypis trichas | 2 | 2 | 2 | 2 | 2 | 2 | | | | | | | 12 | |
| Cooper's Hawk | Accipiter Cooperii | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Dark-eyed Junco | Junco hyemalis | | | | | | | | | | | | | 0 | Migratory species which pass through the state but do not breed in Ohio and are protected because of their rangewide status. |
| Dickcissel | Spiza americana | | | | 1 | 1 | 1 | | | | | | | 3 | |
| Double-crested Cormorant | Phalacracorax auritus | 0 | 0 | 1 | | | | | | | 1 | | | 2 | |
| Downy Woodpecker | Picoides pubescens | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Bluebird | Sialisa sialis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Kingbird | Tyrannus tyrannus | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Eastern Meadowlark | Sturnella magna | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Eastern Phoebe | Sayornis phoebe | | | | | | | 2 | 2 | | | | | 4 | |
| Eastern Screech Owl | Otus asio | | | | | | | 2 | 2 | | | | | 4 | |

| Focus Area Species List - Birds | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Eastern Towhee | Pipilo erythrophthalmus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Wood-pewee | Contopus virens | | | | | | | 2 | 2 | | | | | 4 | |
| Field Sparrow | Spizella pusilla | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Gadwall | Anas strepera | 0 | 0 | 1 | | | | | | | 0 | | | 1 | |
| Golden-winged Warbler | Vermivora chrysoptera | | | | | | | 1 | 1 | | | 0 | | 2 | |
| Grasshopper Sparrow | Ammodramus savannarum | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Gray Catbird | Dumetella carolinensis | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Great Blue Heron | Ardea herodias | 2 | 2 | 2 | | | | | | | 2 | | | 8 | |
| Great Egret | Casmerodius albus | 0 | 0 | 0 | | | | | | | 1 | | | 1 | |
| Great-crested Flycatcher | Myiarchus crinitus | | | | | | | 2 | 2 | | | | | 4 | |
| Great-horned Owl | Bubo virginianus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Green Heron | Butorides Striatus | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Green-winged Teal | Anas crecca | 0 | 0 | 1 | 0 | 1 | 0 | | | | | | | 2 | |
| Hairy Woodpecker | Picoides villosus | | | | | | | 2 | 2 | | | | | 4 | |
| Henslow's Sparrow | Ammodramus henslowii | | | | 1 | 1 | 1 | | | | | | | 3 | |
| Hermit Thrush | Catharus guttatus | | | | | | | 1 | 0 | | | | | 1 | |
| Herring Gull | Larus argentatus | 0 | 1 | 2 | | | | | | | 0 | | | 3 | |
| Hooded Merganser | Lophodytes cucullatus | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Hooded Warbler | Wilsonia citrina | | | | | | | 2 | 2 | | | | | 4 | |
| Horned Lark | Eremophila alpestris | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| House Finch | Carpodacus mexicana | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| House Wren | Troglodytes aedon | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Indigo Bunting | Passerina cyanea | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Kentucky Warbler | Oporornis formosus | | | | | | | 2 | 2 | | | | | 4 | |
| Killdeer | Charadrius vociferus | | | | | | | 2 | 2 | | | | | 4 | |
| King Rail | Rallus elegans | 0 | 0 | 1 | | | | | | | | | | 1 | |
| Kirtland's warbler | | | | | | | | | | | | | | | Migratory species which pass through the state but do not breed in Ohio and are protected because of their rangewide status. |
| Lark Sparrow | Chondestes grammacus | | | | 0 | 0 | 0 | | | | | 0 | | 0 | |
| Least Bittern | Ixobrychus exilis | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Least Flycatcher | Empidonax minimus | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Lesser Scaup | Aythya affinis | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
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Focus Area Species List - Birds

| | | WETLANDS | | | GRASSLANDS | | | FORESTLANDS | | UNIQUE HABITATS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Little Blue Heron | Egretta caerulea | 0 | 0 | 1 | | | | | | | 0 | | | 1 | |
| Loggerhead Shrike | Lanius ludovicianus | | | | 0 | 0 | 0 | | | | | | | 0 | |
| Long-eared Owl | Asio otus | | | | | | | 0 | 0 | | | | | 0 | |
| Louisiana Waterthrush | Seiurus motacilla | | | | | | | 2 | 2 | | | | | 4 | |
| Magnolia Warbler | Dendroica magnolia | | | | | | | 1 | 0 | | | | | 1 | |
| Mallard | Anas platyrhynchos | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Marsh Wren | Cistothorus palustris | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Mourning Dove | Zenaida macroura | | | | | | | 2 | 2 | | | | | 4 | |
| Mourning Warbler | Oporornis philadelphia | | | | | | | | | | | 0 | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Northern Bobwhite | Colinus virginianus | | | | 1 | 1 | 2 | | | | | | | 4 | |
| Northern Cardinal | Cardinalis cardinalis | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Flicker | Colapte auratus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern goshawk | Accipiter gentilis | | | | | | | | | | | | | | Migratory species which pass through the state but do not breed in Ohio and are protected because of their rangewide status. |
| Northern Harrier | Circus cyaneus | 1 | 1 | 1 | 0 | 1 | 1 | | | | | | | 5 | |
| Northern Mockingbird | Mimus polyglottos | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Parula | Parula americana | | | | | | | 2 | 2 | | | | | 4 | |
| Northern Pintail | Anas acuta | 0 | 0 | 1 | 0 | 0 | 0 | | | | | | | 1 | |
| N. Rough-winged Swallow | Stelgidopteryx serripennis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Saw-whet Owl | Aegolius acadicus | | | | | | | 0 | 0 | | | | | 0 | |
| Northern Shoveler | Anas clypeata | 0 | 0 | 2 | 0 | 1 | 0 | | | | | | | 3 | |
| Northern Waterthrush | Seiurus noveboracensis | | | | | | | 0 | 0 | | | | | 0 | |
| Orchard Oriole | Icterus spurius | | | | | | | 2 | 2 | | | | | 4 | |
| Osprey | Pandion haliaetus | 0 | 0 | 0 | | | | | | | | | | 0 | |
| Ovenbird | Seiurus aurocapillus | | | | | | | 2 | 2 | | | | | 4 | |
| Peregrine Falcon | Falco peregrinus | | | | | | | | | | | | | 0 | |
| Pied-billed Grebe | Podilymbus podicees | 0 | 2 | 2 | | | | | | | | | | 4 | |
| Pileated Woodpecker | Dryocopus pileatus | | | | | | | 2 | 2 | | | | | 4 | |
| Pine Siskin | Carduelis pinus | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Pine Warbler | Dendroica pinus | | | | | | | 2 | 2 | | | | | 4 | |
| Piping plover | | | | | | | | | | | | | | | Migratory species which pass through the state but do not breed in Ohio and are protected because of their rangewide status. |
| Prairie Warbler | Dendroica discolor | | | | 0 | 1 | 1 | | | | | | | 2 | |
| Prothonotary Warbler | Protonotaria citrea | 2 | 1 | 2 | | | | | | | | | | 5 | |
| Purple Finch | Carpodacus purpureus | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |

| Focus Area Species List - Birds | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Purple Gallinule | Porphyrula martinica | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Purple Martin | Progne subis | | | | | | | | | | | | | 0 | |
| Red-bellied Woodpecker | Melanerpes carolinus | | | | | | | 2 | 2 | | | | | 4 | |
| Red-breasted Nuthatch | Sitta canadensis | | | | | | | | | | | | | | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Red-eyed Vireo | Vireo olivaceus | | | | | | | 2 | 2 | | | | | 4 | |
| Red-headed Woodpecker | Melanerpes erythrocephalus | | | | | | | 1 | 1 | | | | | 2 | |
| Red-shouldered Hawk | Buteo lineatus | | | | | | | 2 | 2 | | | | | 4 | |
| Red-tailed Hawk | Buteo jamaicensis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Red-winged Blackbird | Agelaius phoeniceus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Redhead | Aythya americana | 0 | 0 | 1 | | | | | | | | | | 1 | |
| Ring-billed Gull | Larus delawarensis | 0 | 0 | 0 | | | | | | | 0 | | | 0 | Note in Wetland tactical Plan |
| Ring-necked Pheasant | Phasianus colchicus | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Rose-breasted Grosbeak | Pheucticus ludovicianus | | | | | | | 1 | 1 | | | | | 2 | |
| Ruby-throated Hummingbird | Archilochus colubris | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Ruddy Duck | Oxyura jamaicensis | 0 | 0 | 1 | | | | | | | | | | 1 | |
| Ruffed Grouse | Bonasa umbellus | | | | | | | 2 | 2 | | | | | 4 | |
| Sandhill Crane | Grus canadensis | 1 | 0 | 0 | 0 | 0 | 0 | | | | | | | 1 | |
| Savannah Sparrow | Passerculus sandwichensis | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Scarlet Tanager | Piranga olivacea | | | | | | | 2 | 2 | | | | | 4 | |
| Sedge Wren | Cistothorus platensis | 0 | 0 | 1 | 1 | 1 | 1 | | | | | | | 4 | |
| Sharp-shinned Hawk | Accipiter striatus | | | | | | | 2 | 2 | | | | | 4 | |
| Short-eared Owl | Asio flammeus | 0 | 0 | 0 | 0 | 0 | 0 | | | | | | | 0 | |
| Snowy Egret | Egretta thula | 0 | 0 | 2 | | | | | | | 0 | | | 2 | |
| Solitary Vireo | Vireo solitarius | | | | | | | 1 | 1 | | | | | 2 | |
| Song Sparrow | Melospiza melodia | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Sora | Porzana carolina | 1 | 1 | 2 | | | | | | | | | | 4 | |
| Spotted Sandpiper | Actitis macularia | 1 | 1 | 2 | | | | | | | | | | 4 | |
| Summer Tanager | Piranga rubra | | | | | | | 2 | 2 | | | | | 4 | |
| Swamp Sparrow | Melospiza georgiana | 2 | 2 | 2 | | | | | | | | | ? | 6 | |
| Tree Swallow | Tachycineta bicolor | | | | | | | 2 | 2 | | | | | 4 | |
| Trumpeter Swan | Cygnus columbianus | 1 | 0 | 2 | | | | | | | | | | 3 | |
| Tufted Titmouse | Parus bicolor | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Turkey Vulture | Cathartes aura | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Upland Sandpiper | Bartramia longicauda | | | | 0 | 2 | 2 | | | | | | | 4 | |
| Veery | Catharus fuscescens | | | | | | | 1 | 0 | | | | | 1 | |
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| Focus Area Species List - Birds | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | Totals | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | 0 | |
| Vesper Sparrow | Pooecetes gramineus | | | | 2 | 2 | 2 | | | | | | | 6 | |
| Virginia Rail | Rallus limicola | 1 | 1 | 2 | | | | | | | | | | 4 | |
| Warbling Vireo | Vireo gilvus | | | | | | | 2 | 2 | | | | | 4 | |
| Western Meadowlark | Sturnella neglecta | | | | | | | | | | | | | 0 | Occurs in low densities and may occasionally breed in OH; numbers in OH are dependant upon its rangewide pop. No specific mgt. |
| Whip-poor-will | Caprimulgus vociferus | | | | | | | 2 | 2 | | | | | 4 | |
| White-breasted Nuthatch | Sitta carolinensis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| White-eyed Vireo | Vireo griseus | | | | | | | 2 | 2 | | | | | 4 | |
| Wild Turkey | Meleagris gallopavo | | | | | | | 2 | 2 | | | | | 4 | |
| Willow Flycatcher | Empidonax trailii | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Wilson's Phalarope | Phalaropus tricolor | 0 | 0 | 1 | | | | | | | | | | 1 | |
| Winter Wren | Troglodytes troglodytes | | | | | | | | | | | | 0 | 0 | Note in Boreal Focus Area |
| Wood Duck | Aix sponsa | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Wood Thrush | Hylocichla mustelina | | | | | | | 2 | 2 | | | | | 4 | |
| Worm-eating Warbler | Helmitheros vermivorus | | | | | | | 2 | 2 | | | | | 4 | |
| Yellow Warbler | Dendroica petechia | 2 | 2 | 2 | | | | | | | | | | 6 | |
| Yellow-bellied Sapsucker | Sphyrapicus varius | | | | | | | 0 | 0 | | | | | 0 | |
| Yellow-billed Cuckoo | Coccyzus americanus | | | | | | | 2 | 2 | | | | | 4 | |
| Yellow-breated Chat | Icteria virens | | | | | | | 2 | 2 | | | | | 4 | |
| Yellow-crowned Night-Heron | Nyctanassa violacea | 0 | 0 | 0 | | | | | | | | | | 0 | |
| Yellow-headed Blackbird | xanthocephalus | 0 | 0 | 1 | | | | | | | | | | 1 | |
| Yellow-throated Vireo | Vireo flavifrons | | | | | | | 2 | 2 | | | | | 4 | |
| Yellow-throated Warbler | Dendroica dominica | | | | | | | 2 | 2 | | | | | 4 | |
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| Focus Area Species List - Herps | | | | | | | | | | | | | | | |
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| American Toad | Bufo americanus | | | | | | | | | | | | | 0 | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Black Kingsnake | Lampropeltis getula nigra | | | | | | | 2 | 2 | | | | | 4 | |
| Black Racer | Coluber constrictor constrictor | | | | 2 | 0 | 0 | | | | | | | 2 | |
| Black Rat Snake | Elaphe obsoleta obsoleta | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Blanchard's Cricket Frog | Acris crepitans blanchardi | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Blanding's Turtle | Emydoidea blandingii | 1 | 0 | 2 | | | | | | | | | | 3 | |
| Blue Racer | Coluber constrictor flaviventrus | | | | 0 | 1 | 2 | | | | | | | 3 | |
| Blue-spotted Salamander | Ambystoma laterale | | | | | | | | | | | 1 | | 1 | |
| Broadhead Skink | Eumeces laticeps | | | | | | | 2 | 2 | | | | | 4 | |
| Bullfrog | Rana catesbeiana | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Butler's Garter Snake | Thamnophis butleri | | | | | | | | | | | | | 0 | |
| Cave Salamander | Eurycea lucifuga | | | | | | | | | 1 | | | | 1 | |
| Common Map Turtle | Graptemys geographica | 0 | 0 | 2 | | | | | | | | | | 2 | |
| Common Musk Turtle | Sternotherus odoratus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Common Snapping Turtle | Chelydra serpentina serpentina | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Cope's Gray Treefrog | Hyla chrysoscelis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Copperbelly Water Snake | Nerodia erythrogaster neglecta | 0 | 0 | 0 | 2 | | | | | | | | | 2 | |
| Eastern Box Turtle | Terrapene carolina carolina | | | | | | | 2 | 2 | | | | | 4 | |
| Eastern Fox Snake | Elaphe vulpina gloydi | 0 | 0 | 1 | | | | | | | | | | 1 | |
| Eastern Garter Snake | Thamnophis sirtalis sirtalis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Hognose Snake | Heterodon platirhinos | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Massasauga | Sistrurus catenatus catenatus | 0 | 1 | 0 | | 1 | | | | | | | | 2 | |
| Eastern Milk Snake | Lampropeltis triangulum triangulum | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Plains Garter Snake | Thamnophis radix radix | | | | 0 | 1 | 0 | | | | | | | 1 | |
| Eastern Ribbon Snake | Thamnophis sauritus sauritus | 2 | 2 | 0 | 0 | 0 | 2 | | | | | | | 6 | |
| Eastern Smooth Earth Snake | Virginia valeriae valeriae | | | | | | | 2 | 2 | | | | | 4 | |
| Eastern Spadefoot | Scaphiopus holbrookii | | | | | | | 2 | 0 | | | | | 2 | |
| Eastern Spiny Softshell | Apalone spinifera spinifera | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Eastern Tiger Salamander | Ambystoma tigrinum tigrinum | | | | | | | 0 | 2 | | | | | 2 | |
| Eastern Worm Snake | Carphophis amoenus amoenus | | | | | | | 1 | 1 | | | | | 2 | |
| Five-lined Skink | Eumeces fasciatus | | | | | | | 2 | 2 | | | | | 4 | |
| Four-toed Salamander | Hemidactylium scutatum | 1 | 0 | 0 | | | | | | | | | 1 | 2 | |
| Fowler's Toad | Bufo woodhousii fowleri | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Gray Treefrog | Hyla versicolor | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Focus Area Species List - Herps | | | | | | | | | | | | | | | |
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Green Frog | Rana clamitans melanota | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Green Salamander | Aneides aeneus | | | | | | | 0 | 2 | | | | | 2 | |
| Ground Skink | Scincella lateralis | | | | | | | 2 | 2 | | | | | 4 | |
| Jefferson Salamander | Ambystoma jeffersonianum | | | | | | | 2 | 2 | | | | | 4 | |
| Kentucky Spring Salamander | Gyrinophilus porphyriticus duryi | | | | | | | 2 | 2 | | | | | 4 | |
| Kirtland's Snake | Clonophis kirtlandii | 1 | 0 | 1 | 0 | 1 | 0 | | | | | | | 3 | |
| Lake Erie Water Snake | Nerodia sipedon insularum | | | | | | | | | | 2 | | | 2 | |
| Longtail Salamander | Eurycea longicauda longicauda | | | | | | | 2 | 2 | | | | | 4 | |
| Marbled Salamander | Ambystoma opacum | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Midland Brown Snake | Storeria dekayi wrightorum | 1 | 2 | 1 | | | | | | | | | | 4 | |
| Midland Painted Turtle | Chrysemys picta marginata | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Midland Smooth Softshell | Apalone mutica mutica | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Midwest Worm Snake | Carphophis amoenus helenae | | | | | | | 2 | 2 | | | | | 4 | |
| Mountain Chorus Frog | Pseudacris brachyphona | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Mountain Dusky Salamander | Desmognathus ochrophaeus | | | | | | | 1 | 1 | | | | | 2 | |
| Mud Salamander | Pseudotriton montanus | 0 | 0 | 0 | | | | 1 | 1 | | | | | 2 | |
| Northern Brown Snake | Storeria dekayi dekayi | | | | | | | 2 | 2 | | | | | 4 | |
| Northern Coal Skink | Eumeces anthracinus anthracinus | | | | | | | 2 | 0 | | | | | 2 | |
| Northern Copperhead | Agkistrodon contortrix mokasen | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Dusky Salamander | Desmognathus fuscus fuscus | | | | | | | 2 | 2 | | | | | 4 | |
| Northern Fence Lizard | Sceloporus undulatus hyacinthinus | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Leopard Frog | Rana pipiens | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Red Salamander | Pseudotriton ruber ruber | | | | | | | 2 | 2 | | | | | 4 | |
| Northern Redbelly Snake | Storeria occipitomaculata occipitomaculata | | | | | | | 2 | 0 | | | | | 2 | |
| Northern Ribbon Snake | Thamnophis sauritus septentrionalis | 1 | 1 | 0 | 2 | 2 | 0 | | | | | | | 6 | |
| Northern Ringneck Snake | Diadophis punctatus edwardsii | | | | | | | 2 | 2 | | | | | 4 | |
| Northern Slimy Salamander | Plethodon glutinosus | | | | | | | 2 | 2 | | | | | 4 | |
| Northern Spring Peeper | Pseudacris crucifer crucifer | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Northern Spring Salamander | Gyrinophilus porphyriticus porphyriticus | | | | | | | 2 | 0 | | | | | 2 | |
| Northern Two-lined Salamander | Eurycea bislineata | | | | | | | 2 | 2 | | | | | 4 | |
| Northern Water Snake | Nerodia sipedon sipedon | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Ouachita Map Turtle | Graptemys pseudogeographica ouachitensis | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Pickerel Frog | Rana palustris | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Queen Snake | Regina septemvittata | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Ravine Salamander | Plethodon richmondi | | | | | | | 2 | 2 | | | | | 4 | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Focus Area Species List - Herps | | | | | | | | | | | | | | | |
| | | **WETLANDS** | | | **GRASSLANDS** | | | **FORESTLANDS** | | **UNIQUE HABITATS** | | | | | |
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | Totals | |
| Red-eared Slider | Trachemys scripta elegans | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Red-spotted Newt | Notophthalmus viridescens viridescens | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Redback Salamander | Plethodon cinereus | | | | | | | 2 | 2 | | | | | 4 | |
| Rough Green Snake | Opheodrys aestivus | | | | | | | 2 | 2 | | | | | 4 | |
| Smallmouth Salamander | Ambystoma texanum | | | | | | | 2 | 2 | | | | | 4 | |
| Smooth Green Snake | Liochlorophis vernalis | | | | | 1 | | | | | | | | 1 | |
| Southern Two-lined Sal. | Eurycea cirrigera | | | | | | | 1 | 1 | | | | | 2 | |
| Spotted Salamander | Ambystoma maculatum | | | | | | | 1 | 1 | | | 0 | | 2 | |
| Spotted Turtle | Clemmys guttata | | | | | | | | | | | | 1 | 1 | Note in Wetland Tactical about protection of species in fens in western Ohio |
| Streamside Salamander | Ambystoma barbouri | | | | | | | 1 | 1 | | | | | 2 | |
| Timber Rattlesnake | Crotalus horridus horridus | | | | | | | 1 | 2 | | 0 | | | 3 | |
| Wehrle's Salamander | Plethodon wehrlei | | | | | | | 2 | 0 | | | | | 2 | |
| Western Chorus Frog | Pseudacris triseriata triseriata | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| Wood Frog | Rana sylvatica | | | | | | | | | | | | | | Viable population broadly distributed throughout Ohio, no specific management will be directed toward this species. |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |

Focus Area Species List - Insects

| | | WETLANDS | | | GRASSLANDS | | | FORESTLANDS | | UNIQUE HABITATS | | | | Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Killbuck** | **Mosquito** | **Marshes** | **LaSuAn** | **Killdeer** | **Deer Ck** | **Appalac** | **Tecumseh** | **Caves** | **LE Islands** | **Savannah** | **Boreal** | 0 |
| Frosted elfin | Incisalia irus | | | | | | | | | | | 2 | | 2 |
| Karner blue | Lycaeides melissa samuelis | | | | | | | | | | | 2 | | 2 |
| Mitchell's satyr | Neonympha mitchellii | 0 | 0 | 0 | | | | | | | | | | 0 |
| Persius dusky wing, Eastern | Erynnis persius | | | | | | | | | | | 2 | | 2 |
| purplish copper, Eastern | Lycaena helloides | 0 | 0 | 0 | | | | | | | | | | 0 |
| regal fritillary | Speyeria idalia | | | | | | | | | | | | | 0 |
| swamp metalmark | Calephelis mutica | 0 | 0 | 0 | | | | | | | | | | 0 |
| | Trichoclea artesta | | | | | | | | | | ? | | | 0 |
| | Ufeus satyricus | | | | | | | | | | | ? | | 0 |
| | Melanchra assimilis | | | | | | | | | | | | | 0 |
| | Hypocoena enervata | 0 | 0 | 1 | | | | | | | | | | 1 |
| | Spartiniphaga inops | 0 | 0 | 1 | | | | | | | | | | 1 |
| | Ufeus plicatus | | | | | | | 0 | 0 | | | | | 0 |
| | Lithophane semiusta | | | | | | | 0 | 0 | | | | | 0 |
| | Erythroecia hebardi | | | | | | | 0 | 0 | | | | | 0 |
| | Tricholita notata | | | | | | | | | | | | | 0 |
| | Papaipema silphii | | | | | | | | | | | | | 0 |
| | Papaipema beeriana | | | | | | | | | | | | | 0 |
| American burying beetle | Nicrophorus americanus | | | | | | | 1 | 0 | | | | | 1 |
| Kramer's cave beetle | Pseudanophthalmus krameri | | | | | | | | | 2 | | | | 2 |
| Ohio cave beetle | Pseudanophthalmus ohioensis | | | | | | | | | 2 | | | | 2 |
| Pointed sallow | Epiglaea apiata | | | | | | | | | | | | | 0 |

To develop the list of native and naturalized species and determine the likelihood of persistence within the focus area, a plethora of resources were used including, but not limited to, the Ohio Breeding Bird Atlas, the North American Breeding Bird Survey, the Ohio Wetland Breeding Bird Survey, Ohio Frog & Toad Call Survey, Statewide Butterfly Monitoring Survey, Butterflies & Skippers of Ohio, Ohio Frog & Toad Atlas, Salamanders of Ohio Atlas, Mammals of Ohio, The Reptiles of Ohio, numerous publications from the Division as well as organizations such as Ohio Chapter of the Wildlife Society, and papers by Ohio's pioneering naturalists such as Jared P. Kirtland and Roger Conant. This focus area species list is a working draft and as such is open for modifications and discussions.

Present Currently: Only current breeding activity and/or breeding records were considered.

Potential for Future Viable Populations: Considered life history information (habitat preferences, reproductive parameters, population distribution, etc.) and "Present Currently" status to determine low, moderate or high probability of a future viable population.

0= Low: Species that are not currently present were assigned a low probability of having a viable population in the future.

1= Moderate: Species that are currently present but are near the edge of their range, are irruptive and unpredictable (e.g. Dickcissel) or require large amounts of land/territory (many raptors) were assigned a moderate probability of having a viable population in the future.

2= High: Species that are either common throughout the state or within the proposed focus area boundaries were assigned a high probability of having a viable population in the future.

# ***Section 1.2.1.2***

# Grassland Species and Potential for Benefit

Focus area GRASSLAND native species list prepared by OLWRS

| Species | Big Island/Killdeer Focus Area Present Historically | Present Currently | Potential for Viable Population | Deer Creek/Paint Creek Focus Area Present Historically | Present Currently | Potential for Viable Population | La Su An Focus Area Present Historically | Present Currently | Potential for Viable Population |
|---|---|---|---|---|---|---|---|---|---|
| American Goldfinch | y | y | high | y | y | high | y | y | high |
| American Kestrel | y | y | high | y | y | high | y | y | high |
| Barn Owl | n | y | moderate | n | y | high | n | n | low |
| Blue-winged Teal | y | y | moderate | y | y | moderate | y | n | low |
| Bobolink | n | y | high | n | y | high | n | y | high |
| Brown-headed Cowbird | y | y | high | y | y | high | y | y | high |
| Canada Goose | n | y | high | n | y | high | n | y | high |
| Cattle Egret | n | n | low | n | n | low | n | n | low |
| Clay-colored Sparrow | ? | n | low | ? | n | low | ? | n | low |
| Common Snipe | ? | n | low | ? | n | low | ? | n | low |
| Common Yellowthroat | y | y | high | y | y | high | y | y | high |
| Dickcissel | n | y | moderate | n | y | moderate | n | y | moderate |
| Eastern Bluebird | y | y | high | y | y | high | y | y | high |
| Eastern Kingbird | y | y | high | y | y | high | y | y | high |
| Eastern Meadowlark | y | y | high | y | y | high | y | y | high |
| Field Sparrow | y | y | high | y | y | high | y | y | high |
| Grasshopper Sparrow | y | y | high | y | y | high | y | y | high |
| Gray Partridge | n | n | low | n | n | low | n | n | low |
| Greater Prairie-Chicken | y | n | low | n | n | low | n | n | low |
| Green-winged Teal | y | y | moderate | y | n | low | y | n | low |
| Henslow's Sparrow | n | y | moderate | n | y | moderate | n | y | moderate |
| Horned Lark | n | y | high | n | y | high | n | y | high |
| Lark Sparrow | n | n | low | n | n | low | n | n | low |
| Loggerhead Shrike | n | n | low | n | y | low | n | n | low |
| Mallard | y | y | moderate | y | y | moderate | y | y | moderate |
| Northern Bobwhite | y | y | moderate | y | y | high | y | y | moderate |
| Northern Harrier | y | y | moderate | y | y | moderate | y | n | low |
| Northern Pintail | n | n | low | n | n | low | n | n | low |
| Northern Shoveler | n | y | moderate | n | n | low | n | n | low |
| Prairie Warbler | n | y | moderate | n | y | moderate | n | n | low |
| Red-tailed Hawk | y | y | moderate | y | y | moderate | y | y | moderate |
| Red-winged Blackbird | y | y | high | y | y | high | y | y | high |
| Ring-necked Pheasant | n | y | high | n | y | high | n | y | high |
| Sandhill Crane | y | n | low | y | n | low | y | n | low |
| Savannah Sparrow | n | y | high | n | y | high | n | y | high |
| Sedge Wren | y | y | moderate | y | y | moderate | y | y | moderate |
| Short-eared Owl | n | n | low | n | n | low | n | n | low |
| Upland Sandpiper | y | y | high | y | y | high | y | n | low |
| Vesper Sparrow | y | y | high | y | y | high | y | y | high |
| Western Kingbird | ? | n | low | ? | n | low | ? | n | low |
| Western Meadowlark | n | n | low | n | n | low | n | y | low |
| Wilson's Phalarope | n | n | low | n | n | low | n | n | low |

| | Big Island/Killdeer Focus Area | | | Deer Creek/Paint Creek Focus Area | | | La Su An Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| Species | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| American Elk | y | n | low | y | n | low | y | n | low |
| Badger | n | ? | low | n | ? | low | n | ? | low |
| Bison | y | n | low | y | n | low | y | n | low |
| Eastern Mole | y | y | high | y | y | high | y | y | high |
| Least Shrew | y | y | moderate | y | y | moderate | y | y | moderate |
| Pygmy Shrew | y | n | low | y | n | low | y | n | low |
| Short-tailed Shrew | y | y | moderate | y | y | moderate | y | y | moderate |
| E. Plains Gartern Snake | y | y | moderate | y | n | low | y | n | low |
| Black Racer | n | n | low | ? | ? | low | n | n | high |
| Blue Racer | y | y | high | y | y | high | n | n | low |
| Easten Ribbon Snake | n | n | low | y | y | high | n | n | low |
| Kirtland's Snake | y | ? | low | y | ? | low | y | n | low |
| Marbeled Salamander | y | y | high | y | y | high | y | y | high |
| Northern Leopard Frog | y | y | high | y | y | high | y | y | high |
| Northern Ribbon Snake | y | y | high | n | n | low | y | y | high |
| Southern Leopard Frog | n | n | low | n | n | low | n | n | low |
| Western Chorus Frog | y | y | high | y | y | high | y | y | high |
| Eastern Hognose Snake | y | y | high | y | y | high | y | y | high |

To develop the list of native and naturalized species and determine the likelihood of persistence within the focus area, a plethora of resources were used including, but not limited to, the Ohio Breeding Bird Atlas, the North American Breeding Bird Survey, the Ohio Wetland Breeding Bird Survey, Ohio Frog & Toad Call Survey, Statewide Butterfly Monitoring Survey, Butterflies & Skippers of Ohio, Ohio Frog & Toad Atlas, Salamanders of Ohio Atlas, Mammals of Ohio, The Reptiles of Ohio, numerous publications from the Division as well as organizations such as Ohio Chapter of the Wildlife Society, and papers by Ohio's pioneering naturalists such as Jared P. Kirtland and Roger Conant. This focus area species list is a working draft and as such is open for modifications and discussions.

Present Historically, y (yes) or n (no): Based primarily on the native species list compiled by Carolyn Caldwell, and known habitat preferences and historical habitat patterns.

Present Currently: Only current breeding activity and/or breeding records were considered.

Potential for Future Viable Populations: Considered life history information (habitat preferences, reproductive parameters, population distribution, etc.) and "Present Currently" status to determine low, moderate or high probability of a future viable population.

Low: Species that are not currently present were assigned a low probability of having a viable population in the future.

Moderate: Species that are currently present but are near the edge of their range, are irruptive and unpredictable (e.g. Dickcissel) or require large amounts of land/territory (many raptors) were assigned a moderate probability of having a viable population in the future.

High: Species that are either common throughout the state or within the proposed focus area boundaries were assigned a high probability of having a viable population in the future.

# ***Section 1.2.1.3***

# Forestland Species and Potential for Benefit

## Focus Area Species List - Mammals

| | | FORESTLANDS | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Appalac** | **Tecumseh** | Totals |
| Black Bear | Ursus americanus | 2 | 2 | 4 |
| Bobcat | Felis rufus | 2 | 2 | 4 |
| Evening Bat | Nycticeius humeralis | 1 | 1 | 2 |
| Gray Squirrel | Sciurus carolinensis | 2 | 2 | 4 |
| Hairy-tailed Mole | Parascalops breweri | 2 | 2 | 4 |
| Hoary Bat | Lasiurus cinereus | 2 | 2 | 4 |
| Indiana Bat | Myotis sodalis | 2 | 2 | 4 |
| Meadow Jumping Mouse | Zapus hudsonius | 2 | 2 | 4 |
| Northern Long-eared Bat | Myotis septentrionalis | 2 | 2 | 4 |
| Pine Vole | Microtus pinetorum | 2 | 2 | 4 |
| Pygmy Shrew | Microsorex hoyi | 1 | | 1 |
| Rafinesque's Big-eared Bat | Corynorhinus rafinesquii | 1 | 1 | 2 |
| Red Bat | Lasiurus borealis | 2 | 2 | 4 |
| Silver-haired bat | Lasionycteris noctivagans | 2 | 2 | 4 |
| Smoky Shrew | Sorex fumeus | 2 | 2 | 4 |

## Focus Area Species List - Birds

| | | FORESTLANDS | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Appalac** | **Tecumseh** | Totals |
| Acadian Flycatcher | Empidonax virescens | 2 | 2 | 4 |
| American Redstart | Setophaga ruticilla | 2 | 2 | 4 |
| Baltimore Oriole | Icterus galbula | 2 | 2 | 4 |
| Barred Owl | Strix varia | 2 | 2 | 4 |
| Bewick's Wren | Thryothorus bewickii | 1 | 2 | 3 |
| Black and White Warbler | Mniotilta varia | 2 | 2 | 4 |
| Black Vulture | Coragyps atratus | 1 | 2 | 3 |
| Black-billed Cuckoo | Coccyzus erythropthalmus | 2 | 2 | 4 |
| Black-throated Green Warbler | Dendroica virens | 2 | 1 | 3 |
| Blackburnian Warbler | Dendroica fusca | 2 | 1 | 3 |
| Blue Grosbeak | Guiraca caerulea | 0 | 1 | 1 |
| Blue-gray Gnatcatcher | Polioptila caerulea | 2 | 2 | 4 |
| Blue-winged Warbler | Vermivora pinus | 2 | 2 | 4 |
| Broad-winged Hawk | Buteo platypterus | 2 | 2 | 4 |
| Brown Thrasher | Toxostoma rufum | 2 | 2 | 4 |
| Canada Warbler | Wilsonia canadensis | 1 | 0 | 1 |
| Cedar Waxwing | Bombycilla cedrorum | 2 | 2 | 4 |
| Cerulean Warbler | Dendroica cerulea | 2 | 2 | 4 |
| Chestnut-sided Warbler | Dendroica pensylvanica | 1 | 1 | 2 |
| Chuck-will's-widow | Caprimulgus carolinensis | 0 | 2 | 2 |
| Eastern Phoebe | Sayornis phoebe | 2 | 2 | 4 |
| Eastern Screech Owl | Otus asio | 2 | 2 | 4 |
| Eastern Wood-pewee | Contopus virens | 2 | 2 | 4 |
| Golden-winged Warbler | Vermivora chrysoptera | 1 | 1 | 2 |
| Great-crested Flycatcher | Myiarchus crinitus | 2 | 2 | 4 |
| Hairy Woodpecker | Picoides villosus | 2 | 2 | 4 |
| Hermit Thrush | Catharus guttatus | 1 | 0 | 1 |
| Hooded Warbler | Wilsonia citrina | 2 | 2 | 4 |
| Kentucky Warbler | Oporornis formosus | 2 | 2 | 4 |
| Killdeer | Charadrius vociferus | 2 | 2 | 4 |
| Louisiana Waterthrush | Seiurus motacilla | 2 | 2 | 4 |
| Magnolia Warbler | Dendroica magnolia | 1 | 0 | 1 |
| Mourning Dove | Zenaida macroura | 2 | 2 | 4 |
| Northern Parula | Parula americana | 2 | 2 | 4 |
| Orchard Oriole | Icterus spurius | 2 | 2 | 4 |
| Ovenbird | Seiurus aurocapillus | 2 | 2 | 4 |
| Pileated Woodpecker | Dryocopus pileatus | 2 | 2 | 4 |
| Pine Warbler | Dendroica pinus | 2 | 2 | 4 |
| Red-bellied Woodpecker | Melanerpes carolinus | 2 | 2 | 4 |
| Red-eyed Vireo | Vireo olivaceus | 2 | 2 | 4 |
| Red-headed Woodpecker | Melanerpes erythrocephalus | 1 | 1 | 2 |
| Red-shouldered Hawk | Buteo lineatus | 2 | 2 | 4 |
| Rose-breasted Grosbeak | Pheucticus ludovicianus | 1 | 1 | 2 |
| Ruffed Grouse | Bonasa umbellus | 2 | 2 | 4 |
| Scarlet Tanager | Piranga olivacea | 2 | 2 | 4 |
| Sharp-shinned Hawk | Accipiter striatus | 2 | 2 | 4 |
| Solitary Vireo | Vireo solitarius | 1 | 1 | 2 |
| Summer Tanager | Piranga rubra | 2 | 2 | 4 |
| Tree Swallow | Tachycineta bicolor | 2 | 2 | 4 |
| Veery | Catharus fuscescens | 1 | 0 | 1 |
| Warbling Vireo | Vireo gilvus | 2 | 2 | 4 |
| Whip-poor-will | Caprimulgus vociferus | 2 | 2 | 4 |
| White-eyed Vireo | Vireo griseus | 2 | 2 | 4 |
| Wild Turkey | Meleagris gallopavo | 2 | 2 | 4 |
| Wood Thrush | Hylocichla mustelina | 2 | 2 | 4 |
| Worm-eating Warbler | Helmitheros vermivorus | 2 | 2 | 4 |
| Yellow-billed Cuckoo | Coccyzus americanus | 2 | 2 | 4 |
| Yellow-breated Chat | Icteria virens | 2 | 2 | 4 |
| Yellow-throated Vireo | Vireo flavifrons | 2 | 2 | 4 |
| Yellow-throated Warbler | Dendroica dominica | 2 | 2 | 4 |

## Focus Area Species List - Herps

| | | FORESTLANDS | | |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Appalac** | **Tecumseh** | Totals |
| Black Kingsnake | Lampropeltis getula nigra | 2 | 2 | 4 |
| Broadhead Skink | Eumeces laticeps | 2 | 2 | 4 |
| Eastern Box Turtle | Terrapene carolina carolina | 2 | 2 | 4 |
| Eastern Smooth Earth Snake | Virginia valeriae valeriae | 2 | 2 | 4 |
| Eastern Spadefoot | Scaphiopus holbrookii | 2 | 0 | 2 |
| Eastern Tiger Salamander | Ambystoma tigrinum tigrinum | 0 | 2 | 2 |
| Eastern Worm Snake | Carphophis amoenus amoenus | 1 | 1 | 2 |
| Five-lined Skink | Eumeces fasciatus | 2 | 2 | 4 |
| Green Salamander | Aneides aeneus | 0 | 2 | 2 |
| Ground Skink | Scincella lateralis | 2 | 2 | 4 |
| Jefferson Salamander | Ambystoma jeffersonianum | 2 | 2 | 4 |
| Kentucky Spring Salamander | Gyrinophilus porphyriticus duryi | 2 | 2 | 4 |
| Longtail Salamander | Eurycea longicauda longicauda | 2 | 2 | 4 |
| Midwest Worm Snake | Carphophis amoenus helenae | 2 | 2 | 4 |
| Mountain Dusky Salamander | Desmognathus ochrophaeus | 1 | 1 | 2 |
| Mud Salamander | Pseudotriton montanus | 1 | 1 | 2 |
| Northern Brown Snake | Storeria dekayi dekayi | 2 | 2 | 4 |
| Northern Coal Skink | Eumeces anthracinus anthracinus | 2 | 0 | 2 |
| Northern Dusky Salamander | Desmognathus fuscus fuscus | 2 | 2 | 4 |
| Northern Red Salamander | Pseudotriton ruber ruber | 2 | 2 | 4 |
| Northern Redbelly Snake | Storeria occipitomaculata occipitomaculata | 2 | 0 | 2 |
| Northern Ringneck Snake | Diadophis punctatus edwardsii | 2 | 2 | 4 |
| Northern Slimy Salamander | Plethodon glutinosus | 2 | 2 | 4 |
| Northern Spring Salamander | Gyrinophilus porphyriticus porphyriticus | 2 | 0 | 2 |
| Northern Two-lined Salamander | Eurycea bislineata | 2 | 2 | 4 |
| Ravine Salamander | Plethodon richmondi | 2 | 2 | 4 |
| Redback Salamander | Plethodon cinereus | 2 | 2 | 4 |
| Rough Green Snake | Opheodrys aestivus | 2 | 2 | 4 |
| Smallmouth Salamander | Ambystoma texanum | 2 | 2 | 4 |
| Southern Two-lined Salamander | Eurycea cirrigera | 1 | 1 | 2 |
| Spotted Salamander | Ambystoma maculatum | 1 | 1 | 2 |
| Streamside Salamander | Ambystoma barbouri | 1 | 1 | 2 |
| Timber Rattlesnake | Crotalus horridus horridus | 1 | 2 | 3 |
| Wehrle's Salamander | Plethodon wehrlei | 2 | 0 | 2 |

## Focus Area Species List - Insects

| | | FORESTLANDS | | Totals |
|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Appalac** | **Tecumseh** | 0 |
| American burying beetle | Nicrophorus americanus | 1 | 0 | 1 |

To develop the list of native and naturalized species and determine the likelihood of persistence within the focus area, a plethora of resources were used including, but not limited to, the Ohio Breeding Bird Atlas, the North American Breeding Bird Survey, the Ohio Wetland Breeding Bird Survey, Ohio Frog & Toad Call Survey, Statewide Butterfly Monitoring Survey, Butterflies & Skippers of Ohio, Ohio Frog & Toad Atlas, Salamanders of Ohio Atlas, Mammals of Ohio, The Reptiles of Ohio, numerous publications from the Division as well as organizations such as Ohio Chapter of the Wildlife Society, and papers by Ohio's pioneering naturalists such as Jared P. Kirtland and Roger Conant. This focus area species list is a working draft and as such is open for modifications and discussions.

Present Currently: Only current breeding activity and/or breeding records were considered.

Potential for Future Viable Populations: Considered life history information (habitat preferences, reproductive parameters, population distribution, etc.) and "Present Currently" status to determine low, moderate or high probability of a future viable population.

Low (0): Species that are not currently present were assigned a low probability of having a viable population in the future.

Moderate (1): Species that are currently present but are near the edge of their range, are irruptive and unpredictable (e.g. Dickcissel) or require large amounts of land/territory (many raptors) were assigned a moderate probability of having a viable population in the future.

High (2): Species that are either common throughout the state or within the proposed focus area boundaries were assigned a high probability of having a viable population in the future.

# ***Section 1.2.1.4***

# Unique Habitat Species and Potential for Benefit

| | | UNIQUE HABITATS | | | | |
|---|---|---|---|---|---|---|
| **Common Name** | **Scientific Name** | **Caves** | **LE Islands** | **Savanna** | **Boreal** | Totals |
| Allegheny woodrat | Neotoma magister | 1 | | | | 1 |
| Eastern Small-footed Bat | Myotis subulatus leibii | 1 | | | | 1 |
| Ermine | Mustela erminea | | | | 1 | 1 |
| Indiana Bat | Myotis sodalis | 2 | | | | 2 |
| Northern Long-eared Bat | Myotis septentrionalis | 0 | | | | 0 |
| Rafinesque's Big-eared Bat | Corynorhinus rafinesquii | 1 | | | | 1 |
| Snowshoe Hare | Lepus americanus | | | | 0 | 0 |
| Woodland jumping mouse | Napaeozapus insignis | | | | 2 | 2 |
| Black Tern | Childonias niger | | 0 | | | 0 |
| Black Vulture | Coragyps atratus | 0 | | | | 0 |
| Black-crowned Night-Heron | Nycticorax nycticorax | | 2 | | | 2 |
| Warbler | Dendroica caerulescens | | | | 0 | 0 |
| Cattle Egret | Bubulcus ibis | | 0 | | | 0 |
| Chestnut-sided Warbler | Dendroica pensylvanica | | | 0 | | 0 |
| Double-crested Cormorant | Phalacracorax auritus | | 1 | | | 1 |
| Gadwall | Anas strepera | | 0 | | | 0 |
| Golden-winged Warbler | Vermivora chrysoptera | | | 0 | | 0 |
| Great Blue Heron | Ardea herodias | | 2 | | | 2 |
| Great Egret | Casmerodius albus | | 1 | | | 1 |
| Herring Gull | Larus argentatus | | 0 | | | 0 |
| Lark Sparrow | Chondestes grammacus | | | 0 | | 0 |
| Little Blue Heron | Egretta caerulea | | 0 | | | 0 |
| Mourning Warbler | Oporornis philadelphia | | | 0 | | 0 |
| | | | | | | |
| Ring-billed Gull | Larus delawarensis | | 0 | | | 0 |
| Snowy Egret | Egretta thula | | 0 | | | 0 |
| Swamp Sparrow | Melospiza georgiana | | | | ? | 0 |
| Blue-spotted Salamander | Ambystoma laterale | | | 1 | | 1 |
| Cave Salamander | Eurycea lucifuga | 1 | | | | 1 |
| Four-toed Salamander | Hemidactylium scutatum | | | | 1 | 1 |
| Lake Erie Water Snake | Nerodia sipedon insularum | | 2 | | | 2 |
| Spotted Salamander | Ambystoma maculatum | | | 0 | | 0 |
| Spotted Turtle | Clemmys guttata | | | | 1 | 1 |
| Timber Rattlesnake | Crotalus horridus horridus | | 0 | | | 0 |
| Frosted elfin | Incisalia irus | | | 2 | | 2 |
| Karner blue | Lycaeides melissa samuelis | | | 2 | | 2 |
| Eastern | Erynnis persius | | | 2 | | 2 |
| | Trichoclea artesta | | ? | | | 0 |
| | Ufeus satyricus | | | ? | | 0 |
| Kramer's cave beetle | Pseudanophthalmus krameri | 2 | | | | 2 |
| Ohio cave beetle | Pseudanophthalmus ohioensis | 2 | | | | 2 |
| Pointed sallow | Epiglaea apiata | | | | | 0 |

To develop the list of native and naturalized species and determine the likelihood of persistence within the focus area, a plethora of resources were used including, but not limited to, the Ohio Breeding Bird Atlas, the North American Breeding Bird Survey, the Ohio Wetland Breeding Bird Survey, Ohio Frog & Toad Call Survey, Statewide Butterfly Monitoring Survey, Butterflies & Skippers of Ohio, Ohio Frog & Toad Atlas, Salamanders of Ohio Atlas, Mammals of Ohio, The Reptiles of Ohio, numerous publications from the Division as well as organizations such as Ohio Chapter of the Wildlife Society, and papers by Ohio's pioneering naturalists such as Jared P. Kirtland and Roger Conant. This focus area species list is a working draft and as such is open for modifications and discussions.

Present Currently: Only current breeding activity and/or breeding records were considered.

Potential for Future Viable Populations: Considered life history information (habitat preferences, reproductive parameters, population distribution, etc.) and "Present Currently" status to determine low, moderate or high probability of a future viable population.

0 = Low: Species that are not currently present were assigned a low probability of having a viable population in the future.

1 = Moderate: Species that are currently present but are near the edge of their range, are irruptive and unpredictable (e.g. Dickcissel) or require large amounts of land/territory (many raptors) were assigned a moderate probability of having a viable population in the future.

2 = High: Species that are either common throughout the state or within the proposed focus area boundaries were assigned a high probability of having a viable population in the future.

# ***Section 1.2.1.5***

# Wetland Species and Potential for Benefit

| Species | Lake Erie Marshes Focus Area | | | Killbuck/Funk Focus Area | | | Grand River Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| beaver | 0 | 0 | low | 1 | 1 | high | 1 | 1 | high |
| Ermine^ | 0 | 0 | low | 0 | 0 | low | 1 | 1 | high |
| mink | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| Muskrat | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| Rice rat (X) | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| river otter* | 1 | 1 | moderate | 1 | 1 | high | 1 | 1 | high |
| South. bog lemming | 1 | 1 | moderate | 1 | 1 | moderate | 0 | 0 | low |
| star-nosed mole^ | 0 | 0 | low | 1 | 1 | high | 1 | 1 | high |
| TOTAL | 4 | 4 | | 6 | 6 | | 6 | 6 | |

| Species | Lake Erie Marshes Focus Area | | | Killbuck/Funk Focus Area | | | Grand River Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| alder flycatcher | 0 | 0 | low | 0 | 0 | low | 1 | 1 | moderate |
| american wigeon | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| American bittern* | 1 | 1 | high | 0 | 0 | low | 1 | 1 | high |
| American coot | 1 | 1 | high | 1 | 1 | moderate | 0 | 0 | low |
| bald eagle* | 1 | 1 | high | 0 | 1 | high | 0 | 1 | high |
| belted kingfisher | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| black tern* | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| black rail^ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| black duck^ | 1 | 1 | moderate | 1 | 1 | moderate | 0 | 0 | low |
| black-crn night heron@ | 1 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| blue wing teal | 1 | 1 | high | 1 | 1 | high | 0 | 1 | moderate |
| Canada goose | 0 | 1 | high | 0 | 1 | high | 0 | 1 | high |
| cattle egret@ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| comm yellowthroat | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| common moorhen^ | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| common tern* | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| common snipe^ | 1 | 1 | moderate | 0 | 0 | low | 1 | 1 | moderate |
| double crs cormorant^ | 0 | 0 | moderate | 0 | 0 | low | 0 | 0 | low |
| gadwall | 0 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| great egret | 1 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| great blue heron | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| green heron | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| green wing teal | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| herring gull | 0 | 1 | high | 0 | 0 | low | 0 | 1 | moderate |
| hood merganser | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| king rail* | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |

| | Lake Erie Marshes Focus Area | | | Killbuck/Funk Focus Area | | | Grand River Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| Species | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| least bittern | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| lesser scaup | 1 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| little blue heron* | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| mallard | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| marsh wren^ | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| mute swan | 0 | 1 | high | 0 | 1 | high | 0 | 0 | low |
| north shoveler | 0 | 1 | high | 0 | 0 | low | 0 | 0 | low |
| north pintail | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| northern harrier* | 1 | 1 | moderate | 1 | 1 | moderate | 1 | 1 | moderate |
| osprey* | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| p-b grebe | 1 | 1 | high | 0 | 0 | low | 1 | 1 | high |
| piping plover* | 1 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| prothonotary warbler | 1 | 1 | high | 1 | 1 | high | 1 | 1 | moderate |
| purple gallinule | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| r-w blackbird | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| redhead | 0 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| ring-billed gull | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| ruddy duck | 0 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| sandhill crane* | 0 | 0 | low | 0 | 1 | moderate | 0 | 0 | low |
| sedge wren* | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| short-eared owl^ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| snowy egret* | 1 | 1 | high | 0 | 0 | low | 0 | 0 | low |
| sora^ | 1 | 1 | high | 1 | 1 | moderate | 1 | 1 | moderate |
| spotted sandpiper | 1 | 1 | high | 1 | 1 | moderate | 1 | 1 | moderate |
| swamp sparrow | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| trumpeter swan* | 1 | 1 | high | 0 | 1 | moderate | 0 | 0 | low |
| virgina rail^ | 1 | 1 | high | 1 | 1 | moderate | 1 | 1 | moderate |
| willow flycatcher | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| wilson’s phalarope | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| wood duck | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| y-headed blackbird | 0 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| yellow rail^ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| yellow warbler | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| yellow-crn night heron* | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| TOTAL | 41 | 45 | | 22 | 27 | | 23 | 27 | |

| | Lake Erie Marshes Focus Area | | | Killbuck/Funk Focus Area | | | Grand River Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| Species | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| blanchard cricket frog | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| bullfrog | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| four toed salamander^ | 0 | 0 | low | 1 | 1 | moderate | 0 | 0 | low |
| mud salamander^ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| north leopard frog | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| north spring peeper | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| pickerel frog | 0 | 0 | low | 1 | 1 | high | 1 | 1 | high |
| TOTAL | 4 | 4 | | 5 | 5 | | 4 | 4 | |

| | Lake Erie Marshes Focus Area | | | Killbuck/Funk Focus Area | | | Grand River Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| Species | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| blanding's turtle^ | 1 | 1 | high | 1 | 1 | moderate | 0 | 0 | low |
| common map turtle | 1 | 1 | high | 0 | 0 | low | 0 | 0 | low |
| common musk turtle | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| copperbelly water snake* | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| east fox snake^ | 1 | 1 | high | 0 | 0 | low | 0 | 0 | low |
| east ribbon snake | 0 | 0 | low | 1 | 1 | high | 1 | 1 | high |
| east massasauga* | 1 | 0 | low | 0 | 0 | low | 1 | 1 | moderate |
| kirtland's snake@ | 1 | | moderate | 1 | 1 | moderate | 0 | 0 | low |
| brown snake | 1 | 1 | moderate | 1 | 1 | moderate | 1 | 1 | high |
| midlnd painted turtle | 1 | 1 | high | 1 | 1 | moderate | 1 | 1 | high |
| north ribbon snake | 0 | 0 | low | 1 | 1 | moderate | 1 | 1 | moderate |
| north water snake | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| spotted turtle^ | | | | | | | | | |
| TOTAL | 7 | 5 | | 6 | 6 | | 6 | 6 | |

| | Lake Erie Marshes Focus Area | | | Killbuck/Funk Focus Area | | | Grand River Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| Species | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| acadian hairstreak | 1 | 1 | moderate | 0 | 0 | low | 1 | 1 | moderate |
| Baltimore | 0 | 0 | low | 1 | 1 | moderate | 1 | 1 | moderate |
| black dash skipper | 0 | 0 | low | 1 | 1 | high | 1 | 1 | high |
| broad-winged skipper | 1 | 1 | moderate | 1 | 1 | moderate | 1 | 1 | moderate |
| brown elfin | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Delaware skipper | 1 | 1 | moderate | 1 | 1 | moderate | 1 | 1 | moderate |
| Dion skipper | 1 | 1 | high | 0 | 0 | low | 1 | 1 | high |
| duke’s skipper | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Dun skipper | 1 | 1 | high | 1 | 1 | high | 1 | 1 | high |
| east. purple copper* | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| eyed brown | 1 | 1 | moderate | 1 | 1 | high | 1 | 1 | high |
| gray comma | 0 | 0 | low | 1 | 1 | moderate | 0 | 0 | low |
| Harris checkerspot | 0 | 0 | low | 0 | 0 | low | 1 | 1 | moderate |
| harvester | 0 | 0 | low | 1 | 1 | moderate | 0 | 0 | low |
| mitchell’s satyr* | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| mulberry wing skippr | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| mustard white (X) | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| silver-border frill.@ | 0 | 0 | low | 1 | 1 | moderate | 1 | 1 | moderate |
| swamp metalmark* | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| two-spotted skipper | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Brachylomia algens^ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Capis curvata | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Fagitana littera@ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Hypocoena enervata* | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| Macrochilo bivittata | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Melanchra assimilis* | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Osmunda borer moth^ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| Phalaenostola hanhami^ | 0 | 0 | low | 0 | 0 | low | 0 | 0 | low |
| sedge borer moth^ | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| Spartiniphaga inops* | 1 | 1 | high | 0 | 0 | low | 0 | 0 | low |
| Spartiniphaga panatela@ | 1 | 1 | moderate | 0 | 0 | low | 0 | 0 | low |
| TOTAL | 10 | 10 | | 9 | 9 | | 10 | 10 | |

| Species | Lake Erie Marshes Focus Area | | | Killbuck/Funk Focus Area | | | Grand River Focus Area | | |
|---|---|---|---|---|---|---|---|---|---|
| | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population | Present Historically | Present Currently | Potential for Viable Population |
| Total Mammals | 4 | 4 | | 6 | 6 | | 6 | 6 | |
| Total Birds | 41 | 45 | | 22 | 27 | | 23 | 27 | |
| Total Amphibians | 4 | 4 | | 5 | 5 | | 4 | 4 | |
| Total Reptiles | 7 | 5 | | 6 | 6 | | 6 | 6 | |
| Total Butterflies & Moths | 10 | 10 | | 9 | 9 | | 10 | 10 | |
| Total Species | 66 | 68 | | 48 | 53 | | 49 | 53 | |

Key (X)=Extirpated, *=Endangered, @=Threatened, ^=Special Interest

To develop the list of native and naturalized species and determine the likelihood of persistence within the focus area, a plethora of resources were used including, but not limited to, the Ohio Breeding Bird Atlas, the North American Breeding Bird Survey, the Ohio Wetland Breeding Bird Survey, Ohio Frog & Toad Call Survey, Statewide Butterfly Monitoring Survey, Butterflies & Skippers of Ohio, Ohio Frog & Toad Atlas, Salamanders of Ohio Atlas, Mammals of Ohio, The Reptiles of Ohio, numerous publications from the Division as well as organizations such as Ohio Chapter of the Wildlife Society, and papers by Ohio's pioneering naturalists such as Jared P. Kirtland and Roger Conant. This focus area species list is a working draft and as such is open for modifications and discussions.

Present Historically, 1 (yes) or 0 (no): Based primarily on the native species list compiled by Carolyn Caldwell, and known habitat preferences and historical habitat patterns.

Present Currently: Only current breeding activity and/or breeding records were considered.

Potential for Future Viable Populations: Considered life history information (habitat preferences, reproductive parameters, population distribution, etc.) and "Present Currently" status to determine low, moderate or high probability of a future viable population.

Low: Species that are not currently present were assigned a low probability of having a viable population in the future.

Moderate: Species that are currently present but are near the edge of their range, are irruptive and unpredictable (e.g. Dickcissel) or require large amounts of land/territory (many raptors) were assigned a moderate probability of having a viable population in the future.

High: Species that are either common throughout the state or within the proposed focus area boundaries were assigned a high probability of having a viable population in the future.

# ***Section 1.2.2***

# Terrestrial Wildlife Occurrence and Habitat Association

# Terrestrial Wildlife Occurrence and Habitat Association

| Common Name | Scientific Name | State List | Present in 1615 | Disappearence (E = Extirpated X= Extinct) | Appearance (I= Immigration, In= Introduction, R= Reintroduction) | Habitat Association |
|---|---|---|---|---|---|---|
| | *Fagitana littera* | Threatened | | | | Wetland |
| | *Paectes abrostolella* | Species of Concern | | | | Grassland/Prairie |
| | *Phalaenostola hanhami* | Species of Concern | | | | Wetland |
| | *Macrochilo bivittata* | Species of Concern | | | | Wetland |
| | *Cicindela macra* | Species of Concern | | | | Riparian Corridors/ Rivers & Streams |
| | *Cicindela cuprascens* | Species of Concern | | | | Riparian Corridors/ Rivers & Streams |
| | *Cicindela cursitans* | Species of Concern | | | | Riparian Corridors/ Rivers & Streams |
| | *Cicindela ancocisconensis* | Species of Concern | | | | Riparian Corridors/ Rivers & Streams |
| | *Cicindela splendida* | Species of Concern | | | | Riparian Corridors/ Rivers & Streams |
| | *Capis curvata* | Species of Concern | | | | Wetland |
| | *Ufeus satyricus* | Endangered | | | | Riparian Corridors/ Rivers & Streams |
| | *Hypocoena enervata* | Endangered | | | | Wetland |
| | *Spartiniphaga panatela* | Threatened | | | | Wetland |
| | *Melanchra assimilis* | Endangered | | | | Wetland |

| Common Name | Scientific Name | State List | Present in 1615 | Disappearence (E = Extirpated X= Extinct) | Appearance (I= Immigration, In= Introduction, R= Reintroduction) | Habitat Association |
|---|---|---|---|---|---|---|
| | *Spartiniphaga inops* | Endangered | | | | Wetland |
| | *Ufeus plicatus* | Endangered | | | | Forest |
| | *Lithophane semiusta* | Endangered | | | | Forest |
| | *Erythroecia hebardi* | Endangered | | | | Forest |
| | *Tricholita notata* | Endangered | | | | Grassland/Prairie |
| | *Papaipema silphii* | Endangered | | | | Grassland/Prairie |
| | *Papaipema beeriana* | Endangered | | | | Grassland/Prairie |
| | *Trichoclea artesta* | Endangered | | | | Lake Erie Islands |
| | *Chytonix sensilis* | Species of Concern | | | | Oak Savanna |
| | *Protorthodes incincta* | Species of Concern | | | | unknown |
| | *Euchlaena milnei* | Species of Concern | | | | unknown |
| | *Agonopterix pteleae* | Species of Concern | | | | Grassland/Prairie |
| | *Brachylomia algens* | Species of Concern | | | | Wetland |
| | *Trichosilia manifesta* | Species of Concern | | | | Oak Savanna |
| | *Amolita roseola* | Species of Concern | | | | unknown |
| | *Cicindela hirticollis* | Threatened | | | | Riparian Corridors/ Rivers & Streams |

| Common Name | Scientific Name | State List | Present in 1615 | Disappearence (E = Extirpated X= Extinct) | Appearance (I= Immigration, In= Introduction, R= Reintroduction) | Habitat Association |
|---|---|---|---|---|---|---|
| | *Apamea mixta* | Species of Concern | | | | unknown |
| | *Tarachidia binocula* | Species of Concern | | | | Grassland/Prairie |
| | *Agroperina lutosa* | Species of Concern | | | | Grassland/Prairies; Wetland |
| Acadian Flycatcher | *Empidonax virescens* | | | | | Forest |
| Acadian hairstreak | *Satyrium acadicum* | | | | | Wetland |
| Alder Flycatcher | *Empidonax alnorum* | | ? | | new species designation 1973 | Forest; Wetland |
| alfalfa butterfly | *Colias eurytheme* | | | | | Grassland/Prairie |
| Allegheny woodrat | *Neotoma magister* | Endangered | | | | Forest (cliffs and rocky outcrops); Caves & Mi |
| American Bittern | *Botaurus lentiginosus* | Endangered | | | | Wetland |
| American Black Duck | *Anas rubripes* | | | | | Wetland |
| American Buffalo | *Bison bison* | Extirpated | | E = 1803 | | Grassland/Prairie |
| American burying beetle | *Nicrophorus americanus* | Endangered | | | | Forest |
| American Coot | *Fulica americana* | | | | | Wetland |
| American copper | *Lycaena phlaeas americana* | | | | | Grassland/Prairie; Oak Savanna |
| American Crow | *Corvus brachyrhynchos* | | ? | | | Generalist |
| American Elk | *Cervus elaphus* | Extirpated | | E = by 1830 | | Grassland/Prairie |

| Common Name | Scientific Name | State List | Present in 1615 | Disappearence (E = Extirpated X= Extinct) | Appearance (I= Immigration, In= Introduction, R= Reintroduction) | Habitat Association |
|---|---|---|---|---|---|---|
| American Goldfinch | *Carduelis tristis* | | | | | Grassland/Prairie |
| American Kestrel | *Falco sparverius* | | | | | Grassland/Prairie |
| American painted lady | *Vanessa virginiensis* | | | | | Grassland/Prairie |
| American Redstart | *Setophaga ruticilla* | | | | | Forest |
| American Robin | *Turdus migratorius* | | | | | Forest |
| American snout | *Libytheana carinenta bachmanii* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| American Swallow-tailed Kite | *Elanoides forticatus* | Extirpated | ? | | | Forest |
| American Toad | *Bufo americanus* | | | | | Generalist |
| American Wigeon | *Anas americana* | | no | | I = 1936 | Wetland |
| American Woodcock | *Scolopax minor* | | | | | Forest |
| Aphrodite fritillary | *Speyeria aphrodite* | | | | | Grassland/Prairie; Forest |
| Appalachian blue | *Celastrina neglectamajor* | | | | | Forest |
| Appalachian eyed brown | *Satyrodes appalachia* | | | | | Forest |
| Atlantis fritillary | *Speyeria atlantis* | | | | | Forest |
| Bachman's Sparrow | *Aimophila aestivalis* | Species of Concern | no | 1974 | I = 1898 | Forest |
| Badger | *Taxidea taxus* | Species of Concern | no records | | I = early 1800s | Grassland/Prairie |

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|---|---|---|---|---|---|---|
| Bald Eagle | *Haliaeetus leucocephalus* | Endangered | | | | Riparian Corridors/ Rivers & Streams; Forest; |
| Baltimore | *Euphydryas phaeton* | | | | | Wetland |
| Baltimore Oriole | *Icterus galbula* | | | | | Forest |
| banded hairstreak | *Satyrium calanus falacer* | | | | | Forest |
| Bank Swallow | *Riparia riparia* | | | | | Riparian Corridors/ Rivers & Streams |
| Barn Owl | *Tyto alba* | Thrteatened | no | | I = 1850's | Grassland/Prairie |
| Barn Swallow | *Hirundo rustica* | | ? | | | Generalist |
| Barred Owl | *Strix varia* | | | | | Forest |
| Beaver | *Castor canadensis* | | | E = by 1830 | I = 1930s | Wetland; Riparian Corridors/ Rivers & Stream |
| Bell's Vireo | *Vireo bellii* | | no | | I = 1968 | Forest |
| Belted Kingfisher | *Ceryle alcyon* | | | | | Riparian Corridors/ Rivers & Streams; Wetlan |
| Bewick's Wren | *Thryothorus bewickii* | Endangered | no | | I late 1800s | Forest |
| Big Brown Bat | *Eptesicus fuscus* | | | | | Forest; Caves & Mines |
| Black and White Warbler | *Mniotilta varia* | | | | | Forest |
| Black Bear | *Ursus americanus* | Endangered | | E = by 1850 | I = 1980 | Forest |
| black dash skipper | *Euphyes conspicuus* | | | | | Wetland |

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|---|---|---|---|---|---|---|
| Black Kingsnake | *Lampropeltis getula nigra* | Species of Concern | | | | Forest |
| Black Racer | *Coluber constrictor constrictor* | | | | | Grassland/Prairie; Forest |
| Black Rail | *Laterallus jamaicensis* | Species of Concern | no | | ? | Wetland |
| Black Rat | *Rattus rattus* | | no | E = 1830 | In = 1700s | Generalist |
| Black Rat Snake | *Elaphe obsoleta obsoleta* | | | | | Forest |
| black swallowtail | *Papilio polyxenes* | | | | | Grassland/Prairie |
| Black Tern | *Childonias niger* | Endangered | | | | Wetland; Lake Erie Islands |
| Black Vulture | *Coragyps atratus* | Species of Concern | no | | I = 1900 | Forest; Caves & Mines |
| Black-billed Cuckoo | *Coccyzus erythropthalmus* | | | | | Forest |
| Blackburnian Warbler | *Dendroica fusca* | | no | | I = 1932 | Forest |
| Black-capped Chickadee | *Parus atricapillus* | | no | | | Forest |
| Black-crowned Night-Heron | *Nycticorax nycticorax* | Threatened | | | | Wetland; Lake Erie Islands |
| Black-throated Blue Warbler | *Dendroica caerulescens* | | no | | I = 1928 | Forest |
| Black-throated Green Warbler | *Dendroica virens* | | | | | Forest |
| Blanchard's Cricket Frog | *Acris crepitans blanchardi* | | | | | Wetland; Raparian Corridors/Rivers & Stream |
| Blanding's Turtle | *Emydoidea blandingii* | Species of Concern | | | | Wetland (Lake Erie) |

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|---|---|---|---|---|---|---|
| Blue Grosbeak | *Guiraca caerulea* | | no | | I = 1942 | Forest |
| Blue Jay | *Cyanocitta cristata* | | | | | Generalist |
| Blue Racer | *Coluber constrictor flaviventrus* | | | | | Grassland/Prairie |
| Blue-gray Gnatcatcher | *Polioptila caerulea* | | | | | Forest |
| Blue-spotted Salamander | *Ambystoma laterale* | Endangered | | | | Oak Savanna |
| Blue-winged Teal | *Anas discors* | | | | | Wetland; Grassland/Prairie |
| Blue-winged Warbler | *Vermivora pinus* | | | | | Forest |
| Bobcat | *Felis rufus* | Endangered | | E = by 1850 | | Forest |
| Bobolink | *Dolichonyx oryzivorus* | | no | | I late 1800s | Grassland/Prairie |
| Bracken borer moth | *Papaipema pterisii* | Species of Concern | | | | Oak Savanna |
| Broadhead Skink | *Eumeces laticeps* | | | | | Forest |
| Broad-winged Hawk | *Buteo platypterus* | | no | | I early 1900s | Forest |
| broad-winged skipper | *Poanes viator viator* | | | | | Wetland |
| bronze copper | *Lycaena hyllus* | | | | | Grassland/Prairie |
| Brown Creeper | *Certhia americana* | | no | | I = 1931 | Forest |
| brown elfin | *Incisalia augustinus croesoides* | | | | | Forest; Wetland |

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|---|---|---|---|---|---|---|
| Brown Thrasher | *Toxostoma rufum* | | | | | Forest |
| Brown-headed Cowbird | *Molthrus ater* | | no | | I early 1800s | Grassland/Prairie |
| Buck moth | *Hemileuca maia* | Species of Concern | | | | Forest; Oak Savanna |
| Buckskin cave pseudoscorpion | *Apochthonius hobbsi* | Species of Concern | | | | Caves & Mines |
| Bullfrog | *Rana catesbeiana* | | | | | Wetland; Raparian Corridors/Rivers & Stream |
| Butler's Garter Snake | *Thamnophis butleri* | | | | | Grassland/Praire |
| Cabbage butterfly | *Pieris rapae* | | no | | In = 1873 | Grassland/Prairie |
| Canada Goose | *Branta canadensis* | | no | | In = 1963 | Wetland; Grasslands; Riparian Corridors/ Rive |
| Canada Warbler | *Wilsonia canadensis* | Endangered | no | | I = 1929 | Forest |
| Carolina Chickadee | *Parus carolinensis* | | | | | Forest |
| Carolina Parakeet | *Conuropsis carolinensis* | Extinct | | 1862 | | Forest |
| Carolina satyr | *Hermeuptychia sosybius* | | | | | Forest |
| Carolina Wren | *Thryothorus ludovicianus* | | | | | Forest |
| Cattle Egret | *Bubulcus ibis* | Threatened | no | | I = 1978 | Wetland; Grassland/Prairie; Lake Erie Islands |
| Cave Salamander | *Eurycea lucifuga* | Endangered | | | | Mines & Caves |
| Cedar Waxwing | *Bombycilla cedrorum* | | | | | Forest |

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|---|---|---|---|---|---|---|
| Cerulean Warbler | *Dendroica cerulea* | Species of Concern | | | | Forest |
| Chestnut-sided Warbler | *Dendroica pensylvanica* | | no | | I = 1907 | Oak Savanna; Forest |
| Chimney Swift | *Chaetura pelagica* | | | | | Urban |
| Chipping Sparrow | *Spizella passerina* | | | | | Generalist |
| Chuck-will's-widow | *Caprimulgus carolinensis* | Species of Concern | no | | I = 1930's | Forest |
| Clay-colored Sparrow | *Spizella pallida* | | ? | ? | ? | Grassland/Prairie |
| Cliff Swallow | *Hirundo pyrrhonota* | | no | | I = 1820's | Generalist |
| clouded sulphur | *Colias philodice* | | | | | Grassland/Prairie |
| Cobblestone tiger beetle | *Cicindela marginipinis* | Threatened | | | | Riparian Corridors/ Rivers & Streams |
| cobweb skipper | *Hesperia metea* | | | | | Grassland/Prairie; Forest (edge) |
| Columbine borer | *Papaipema leucostigma* | Species of Concern | | | | unknown |
| Common Grackle | *Quiscalus quiscula* | | | | | Generalist |
| Common Map Turtle | *Graptemys geographica* | | | | | Riparian Corridors/Rivers & Streams; Wetland |
| Common Moorhen | *Gallinula chloropus* | | | | | Wetland |
| Common Musk Turtle | *Sternotherus odoratus* | | | | | Wetlands; Riparian Corridors/Rivers & Stream |
| Common Nighthawk | *Chordeiles minor* | | | | | Generalist |

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|---|---|---|---|---|---|---|
| Common Raven | *Corvus corax* | Extirpated | | 1879 | | Forest |
| Common Snapping Turtle | *Chelydra serpentina serpentina* | | | | | Generalist |
| Common Snipe | *Gallinago gallinago* | | ? | | | Wetland; Grassland/Prairie |
| common sooty wing | *Pholisora catullus* | | | | | Grassland/Prairie |
| Common Tern | *Sterna hirundo* | Endangered | | | | Wetland |
| common wood nymph | *Cercyonis pegala F. alope* | | | | | Grassland/Prairie |
| common wood nymph | *Cercyonis pegala F. alope* | | | | | Grassland/Prairie |
| Common Yellowthroat | *Geothlypis trichas* | | | | | Grassland/Prairie; Wetland |
| Compton tortoise shell | *Nymphalis vau-album* | | | | | Forest |
| Cooper's Hawk | *Accipiter Cooperii* | | | | | Forest |
| Cope's Gray Treefrog | *Hyla chrysoscelis* | | | | | Forest |
| Copperbelly Water Snake | *Nerodia erythrogaster neglecta* | Endangered | | | | Forest; Wetlands |
| coral hairstreak | *Satyrium titus* | | | | | Grassland/Prairie; Oak Savanna; Forest (ed |
| Coyote | *Canis latrans* | | no | | I = 1919 | Generalist |
| crossline skipper | *Polites origenes* | | | | | Grassland/Prairie; Forest (edge) |
| Dark-eyed Junco | *Junco hyemalis* | Endangered | | | | Forest |

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|---|---|---|---|---|---|---|
| Deer Mouse | *Peromyscus maniculatus* | | | | | Grassland/Prairie |
| Delaware skipper | *Atrytone logan* | | | | | Grassland/Prairie; Wetland |
| Diana | *Speyeria diana* | | | | | Forest |
| Dickcissel | *Spiza americana* | | no | | I mid 1800s | Grassland/Prairie |
| Dion skipper | *Euphyes dion* | | | | | Wetland |
| Double-crested Cormorant | *Phalacracorax auritus* | Species of Concern | no | 1880s | I = 1875, I = 1987 | Wetland; Riparian Corridors/ Rivers & Stream |
| Downy Woodpecker | *Picoides pubescens* | | | | | Forest |
| dreamy dusky wing | *Erynnis icelus* | | | | | Forest |
| Dukes' skipper | *Euphyes dukesi* | | | | | Wetland; Forest |
| Dun skipper | *Euphyes vestris metacomet* | | | | | Grassland/Prairie; Wetland |
| dusky azure | *Celastrina nigra* | | | | | Forest |
| dusted skipper | *Atryonopsis hianna* | | | | | Oak Savanna |
| early hairstreak | *Erora laetus* | | | | | Forest |
| Eastern Bluebird | *Sialisa sialis* | | | | | Grassland/Prairie |
| Eastern Box Turtle | *Terrapene carolina carolina* | Species of Concern | | | | Forest |
| Eastern Chipmunk | *Tamias striatus* | | | | | Forest |

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|---|---|---|---|---|---|---|
| Eastern Cottontail | *Sylvilagus floridanus* | | | | | Generalist |
| Eastern Fox Snake | *Elaphe vulpina gloydi* | Species of Concern | | | | Wetland |
| Eastern Garter Snake | *Thamnophis sirtalis sirtalis* | | | | | Generalist |
| Eastern Hellbender | *Cryptobranchus alleganiensis alleg* | Endangered | | | | Riparian Corridor/ Rivers & Streams |
| Eastern Hognose Snake | *Heterodon platirhinos* | | | | | Oak Savanna; Forest; Riparian Corridor/ River |
| Eastern Kingbird | *Tyrannus tyrannus* | | | | | Grassland/Prairie |
| Eastern Massasauga | *Sistrurus catenatus catenatus* | Endangered | | | | Wetland |
| Eastern Meadowlark | *Sturnella magna* | | | | | Grassland/Prairie |
| Eastern Milk Snake | *Lampropeltis triangulum triangulum* | | | | | Forest |
| Eastern Mole | *Scalopus aquaticus* | | | | | Grassland/Prairie |
| Eastern Phoebe | *Sayornis phoebe* | | | | | Forest |
| eastern pine elfin | *Incisalia niphon* | | | | | Forest |
| Eastern pipistrelle | *Pipistrellus subflavus* | | | | | Forest; Caves & Mines |
| Eastern Plains Garter Snake | *Thamnophis radix radix* | Endangered | | | | Grassland/Prairie |
| Eastern Ribbon Snake | *Thamnophis sauritus sauritus* | | | | | Wetland; Grassland/Prairie |
| Eastern Screech Owl | *Otus asio* | | | | | Forest |

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|---|---|---|---|---|---|---|
| Eastern Small-footed Bat | *Myotis subulatus leibii* | Species of Concern | | E = possibly | | Forest; Caves & Mines |
| Eastern Smooth Earth Snake | *Virginia valeriae valeriae* | | | | | Forest |
| Eastern Spadefoot | *Scaphiopus holbrookii* | Endangered | | | | Forest; Wetland |
| Eastern Spiny Softshell | *Apalone spinifera spinifera* | | | | | Riparian Corridors/Rivers & Streams |
| eastern tailed blue | *Everes comyntas* | | | | | Grassland/Prairie; Forest |
| Eastern Tiger Salamander | *Ambystoma tigrinum tigrinum* | | | | | Forest |
| Eastern Towhee | *Pipilo erythrophthalmus* | | | | | Forest |
| Eastern Wood-pewee | *Contopus virens* | | | | | Forest |
| Eastern Worm Snake | *Carphophis amoenus amoenus* | | | | | Forest |
| Edwards' hairstreak | *Satyrium edwardsii* | | | | | Grassland/Prairie; Oak Savanna; Forest (ed |
| Ermine | *Mustela erminea* | Species of Concern | | | | NE OH Boreal;Wetland |
| European skipper | *Thymelicus lineola* | | no | | In = 1927 | Grassland/Prairie |
| European Starling | *Sturnus vulgaris* | | no | | I = 1920 | Generalist |
| European Wall Lizard | *Podarcis muralis* | | no | | In = 1800s | Raparian Corridors/Rivers & Streams |
| Evening Bat | *Nycticeius humeralis* | | | | | Forest |
| eyed brown | *Satyrodes eurydice* | | | | | Wetland |

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|---|---|---|---|---|---|---|
| falcate orange tip | *Anthocharis midea annickae* | | | | | Forest |
| Fern cave isopod | *Caecidotea filicispeluncae* | Species of Concern | | | | Caves & Mines |
| Field Sparrow | *Spizella pusilla* | | | | | Grassland/Prairie |
| Fisher | *Martes pennanti* | Extirpated | | E = by 1850 | | NE OH Boreal |
| Five-lined Skink | *Eumeces fasciatus* | | | | | Forest |
| Four-toed Salamander | *Hemidactylium scutatum* | Species of Concern | | | | Forest; Wetlands (bogs) |
| Fowler's Toad | *Bufo woodhousii fowleri* | | | | | Riparian Corridors/Rivers & Streams |
| Fox Squirrel | *Sciurus niger* | | no | | I = early 1800s | Forest |
| Frost cave isopod | *Caecidotea rotunda* | Species of Concern | | | | Caves & Mines |
| frosted elfin | *Incisalia irus* | Endangered | | | | Oak Savanna |
| Gadwall | *Anas strepera* | | no | | I = 1970 | Wetland; Lake Erie Islands |
| gemmed satyr | *Cyllopsis gemma* | | | | | Forest |
| giant swallowtail | *Papilio cresphontes* | | | | | Grassland/Prairie;Forest |
| Goat sallow | *Homoglaea hircina* | Species of Concern | | | | unknown |
| gold-banded skipper | *Autochton cellus* | | | | | Forest |
| Golden-crowned Kinglet | *Regulus satrapa* | | ? | ? | ? | Forest |

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|---|---|---|---|---|---|---|
| Golden-winged Warbler | *Vermivora chrysoptera* | Endangered | | ? | | Oak Savanna; Forest |
| Grasshopper Sparrow | *Ammodramus savannarum* | | | | | Grassland/Prairie |
| Gray Catbird | *Dumetella carolinensis* | | | | | Forest |
| gray comma | *Polygonia progne* | | | | | Wetland; Forest |
| Gray Fox | *Urocyon cinereoargenteus* | | | | | Forest |
| gray hairstreak | *Strymon melinus humuli* | | | | | Grassland/Prairie; Forest |
| Gray Partridge | *Perdix perdix* | | no | 1960s | In = 1909-1916 | Grassland/Prairie |
| Gray Squirrel | *Sciurus carolinensis* | | | | | Forest |
| Gray Treefrog | *Hyla versicolor* | | | | | Forest; Grassland/Prairie |
| Gray Wolf | *Canis lupus* | Extirpated | | E = by 1850 | | Forest |
| Great Blue Heron | *Ardea herodias* | | | | | Wetland; Riparian Corridors/ Rivers & Strea |
| Great Egret | *Casmerodius albus* | | no | | I = 1940 | Wetland; Riparian Corridors/ Rivers & Strea |
| great spangled fritillary | *Speyeria cybele* | | | | | Forest; Grassland/Prairie |
| Great-crested Flycatcher | *Myiarchus crinitus* | | | | | Forest |
| Greater Prairie-Chicken | *Tympanuchus cupido* | Extirpated | | | | Grassland/Prairie |
| Great-horned Owl | *Bubo virginianus* | | | | | Forest |

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|---|---|---|---|---|---|---|
| Green Frog | *Rana clamitans melanota* | | | | | Generalist |
| Green Heron | *Butorides Striatus* | | | | | Wetland; Riparian Corridors/ Rivers & Stream |
| Green Salamander | *Aneides aeneus* | Endangered | | | | Forest (limestone cliffs) |
| Green-winged Teal | *Anas crecca* | | no | | I = 1937 | Wetland; Grassland/Prairie |
| grizzled skipper | *Pyrgus centaureae wyandot* | Species of Concern | | | | Forest |
| Ground Skink | *Scincella lateralis* | | | | | Forest |
| hackberry butterfly | *Asterocampa celtis* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| Hairy Woodpecker | *Picoides villosus* | | | | | Forest |
| Hairy-tailed Mole | *Parascalops breweri* | | | | | Forest |
| Harris checkerspot | *Chlosyne harrisii liggetti* | | | | | Grassland/Prairie; Wetland |
| harvester | *Feniseca tarquinius* | | | | | Forest; Wetland |
| Henry's elfin | *Incisalia henrici* | | | | | Forest |
| Henslow's Sparrow | *Ammodramus henslowii* | Species of Concern | no | | I late 1800s | Grassland/Prairie |
| Hermit Thrush | *Catharus guttatus* | Endangered | no | | I = 1932 | Forest |
| Herring Gull | *Larus argentatus* | | no | | I = 1945 | Wetland; Lake Erie Islands |
| hickory hairstreak | *Satyrium caryaevorum* | | | | | Forest |

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|---|---|---|---|---|---|---|
| Hoary Bat | *Lasiurus cinereus* | | | | | Forest |
| hoary edge skipper | *Achalarus lyciades* | | | | | Forest (edge) |
| Hobomok skipper | *Poanes hobomok* | | | | | Forest |
| Hooded Merganser | *Lophodytes cucullatus* | | | | | Wetland; Riparian Corridors/ Rivers & Stream |
| Hooded Warbler | *Wilsonia citrina* | | | | | Forest |
| hop merchant (comma) | *Polygonia comma* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| Horace's dusky wing | *Erynnis horatius* | | | | | Forest |
| Horned Lark | *Eremophila alpestris* | | no | | I = 1880s | Grassland/Prairie |
| House Finch | *Carpodacus mexicana* | | no | | I = 1964 | Generalist |
| House Mouse | *Mus musculus* | | no | | In = 1700s | Generalist |
| House Sparrow | *Passer domesticus* | | no | | In = 1869 | Generalist |
| House Wren | *Troglodytes aedon* | | | | | Generalist |
| Indian skipper | *Hesperia sassacus* | | | | | Grassland/Prairie; Oak Savanna |
| Indiana Bat | *Myotis sodalis* | Endangered | | | | Forest; Caves & Mines |
| Indigo Bunting | *Passerina cyanea* | | | | | Forest |
| Ivory-billed Woodpecker | *Campephilus principalis* | Extirpated | ? | | archaeol. evidence only | Forest |

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|---|---|---|---|---|---|---|
| Jefferson Salamander | *Ambystoma jeffersonianum* | | | | | Forest |
| Juvenal's dusky wing | *Erynnis juvenalis* | | | | | Forest |
| Karner blue | *Lycaeides melissa samuelis* | Endangered | | E = 1983 | In = 1998 | Oak Savanna |
| Kentucky Spring Salamander | *Gyrinophilus porphyriticus duryi* | | | | | Forest (springs) |
| Kentucky Warbler | *Oporornis formosus* | | ? | | | Forest |
| Killdeer | *Charadrius vociferus* | | | | | Generalist |
| King Rail | *Rallus elegans* | Endangered | | | | Wetland |
| Kirtland's Snake | *Clonophis kirtlandii* | Threatened | | | | Grassland/Prairie; Wetlands |
| Kirtland's Warbler | *Dendroica kirtlandii* | Endangered | | | | Forest |
| Kramer's cave beetle | *Pseudanophthalmus krameri* | Endangered | | | | Caves & Mines |
| Lake Erie Water Snake | *Nerodia sipedon insularum* | Endangered | | | | Lake Erie Islands |
| Lark Sparrow | *Chondestes grammacus* | Endangered | no | | I = 1861 | Grassland/Prairie; Oak Savanna |
| Least Bittern | *Ixobrychus exilis* | Endangered | | | | Wetland |
| Least Flycatcher | *Empidonax minimus* | | | | | Forest |
| Least Shrew | *Cryptotis parva* | | | | | Grassland/Prairie |
| least skipper | *Ancyloxpha numitor* | | | | | Grassland/Prairie (wet meadow) |

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|---|---|---|---|---|---|---|
| Least Weasel | *Mustela nivalis* | | | | | Generalist |
| Leonard's skipper | *Hesperia leonardus* | | | | | Grassland/Prairie; Forest |
| Lesser Scaup | *Aythya affinis* | | no | | I early 1900s | Wetland |
| Little Blue Heron | *Egretta caerulea* | Endangered | no | | I = 1983 | Wetland; Riparian Corridors/ Rivers & Stream |
| Little Brown Bat | *Myotis lucifugus* | | | | | Forest; Caves & Mines |
| little glassywing skipper | *Pompeius verna* | | | | | Grassland/Prairie |
| little wood satyr | *Megisto cymela* | | | | | Forest (edge) |
| Loggerhead Shrike | *Lanius ludovicianus* | Endangered | no | | late 1800s | Grassland/Prairie |
| long dash skipper | *Polites mystic* | | | | | Grassland/Prairie (wet meadow) |
| Long-eared Owl | *Asio otus* | Species of Concern | no | | I = 1930s | Forest |
| Longtail Salamander | *Eurycea longicauda longicauda* | | | | | Forest |
| Long-tailed Weasel | *Mustela frenata* | | | | | Forest |
| Looper moth | *Euchlaena milnei* | Species of Concern | | | | unknown |
| Louisiana Waterthrush | *Seiurus motacilla* | | | | | Riparian Corridors/ Rivers & Streams |
| Lynx | *Felis lynx* | Extirpated | | E = by 1850 | | NE OH Boreal |
| Magnolia Warbler | *Dendroica magnolia* | Endangered | no | | I = 1929 | Forest |

| Common Name | Scientific Name | State List | Present in 1615 | Disappearence (E = Extirpated X= Extinct) | Appearance (I= Immigration, In= Introduction, R= Reintroduction) | Habitat Association |
|---|---|---|---|---|---|---|
| Mallard | *Anas platyrhynchos* | | | | | Wetland; Grassland/Prairie |
| Marbled Salamander | *Ambystoma opacum* | | | | | Grassland/Prairie; Forest |
| Marsh Wren | *Cistothorus palustris* | Species of Concern | | | | Wetland |
| Marten | *Martes americana* | Extirpated | | E = by 1850 | | Forest |
| Masked Shrew | *Sorex cinereus* | | | | | Forest |
| meadow fritillary | *Boloria bellona* | | | | | Grassland/Prairie |
| Meadow Jumping Mouse | *Zapus hudsonius* | | | | | Generalist |
| Meadow Vole | *Microtus pennsylvanicus* | | | | | Grassland/Prairie |
| Midland Brown Snake | *Storeria dekayi wrightorum* | | | | | Forest; Wetlands |
| Midland Painted Turtle | *Chrysemys picta marginata* | | | | | Riparian Corridors/Rivers & Streams; Wetland |
| Midland Smooth Softshell | *Apalone mutica mutica* | | | | | Riparian Corridors/Rivers & Streams |
| Midwest Worm Snake | *Carphophis amoenus helenae* | | | | | Forest |
| Milbert's tortoise shell | *Nymphalis milberti* | | | | | Grassland/Prairie; Forest |
| Mink | *Mustela vison* | | | | | Wetland; Riparian Corridors/ Rivers & Stream |
| Mitchell's satyr | *Neonympha mitchellii* | Endangered | | E =tby 1955 (susp) | | Wetland; Forest |
| monarch | *Danaus plexippus* | (true migrant) | | | | Grassland/Prairie; Riparian Corridors/ Rivers |

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|---|---|---|---|---|---|---|
| mottled dusky wing | *Erynnis martialis* | | | | | Forest; Grassland/Prairie |
| Mountain Chorus Frog | *Pseudacris brachyphona* | | | | | Grassland/Prairie |
| Mountain Dusky Salamander | *Desmognathus ochrophaeus* | | | | | Forest |
| Mountain Lion | *Felis concolor couguar* | Extirpated | | E = by 1850 | | Forest |
| mourning cloak | *Nymphalis antiopa* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| Mourning Dove | *Zenaida macroura* | | no | | | Forest; Grassland |
| Mourning Warbler | *Oporornis philadelphia* | | ? | 1960 | I = 1983 | Oak Savanna; Forest |
| Mud Salamander | *Pseudotriton montanus* | Species of Concern | | | | Wetland |
| Mudpuppy | *Necturus maculosus maculosus* | | | | | Riparian Corridor/ Rivers & Streams |
| mulberry wing skipper | *Poanes massasoit* | | | | | Wetland (fen) |
| Muskrat | *Ondatra zibethicus* | | | | | Wetland |
| Mustard white | *Pieris napi* | Extirpated | | E = by 1910 | | Wetland; Forest |
| Mute Swan | *Cygnus olor* | | no | | I = 1987 | Wetland |
| Nashville Warbler | *Vermivora ruficapilla* | | no | | I = 1930 | Forest |
| Northern Bobwhite | *Colinus virginianus* | | | | | Grassland/Prairie |
| northern broken dash skipper | *Wallengrenia egeremet* | | | | | Grassland/Prairie; Forest |

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|---|---|---|---|---|---|---|
| Northern Brown Snake | *Storeria dekayi dekayi* | | | | | Forest; Wetlands |
| Northern Cardinal | *Cardinalis cardinalis* | | | | | Generalist |
| northern cloudy wing | *Thorybes pylades* | | | | | Forest (edge); Grassland/Prairie |
| Northern Coal Skink | *Eumeces anthracinus anthracinus* | Species of Concern | ? | no verified records | | Forest |
| Northern Copperhead | *Agkistrodon contortrix mokasen* | | | | | Forest |
| Northern Dusky Salamander | *Desmognathus fuscus fuscus* | | | | | Forest |
| Northern Fence Lizard | *Sceloporus undulatus hyacinthinus* | | | | | Forest |
| Northern Flicker | *Colapte auratus* | | | | | Forest |
| Northern Goshawk | *Accipiter gentilis* | Species of Concern | no | | ? | Forest |
| northern hairstreak | *Fixsenia favonius ontario* | | | | | Grassland/Prairie; Forest (edge) (largest East |
| Northern Harrier | *Circus cyaneus* | Endangered | | | | Grassland/Prairie; Wetland |
| Northern Leopard Frog | *Rana pipiens* | | | | | Grassland/Prairie; Wetland |
| Northern Long-eared Bat | *Myotis septentrionalis* | | | | | Forest; Caves & Mines |
| northern metalmark | *Calephelis borealis* | | | | | Forest (edge) |
| Northern Mockingbird | *Mimus polyglottos* | | no | | I late 1800s | Forest |
| Northern Parula | *Parula americana* | | ? | | | Forest; Riparian Corridors/ Rivers & Streams |

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|---|---|---|---|---|---|---|
| northern pearly eye | *Enodia anthedon* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| Northern Pintail | *Anas acuta* | | no | | I = 1930 | Wetland; Grassland/Prairie |
| Northern Red Salamander | *Pseudotriton ruber ruber* | | | | | Forest |
| Northern Redbelly Snake | *Storeria occipitomaculata occipito* | | | | | Forest |
| Northern Ribbon Snake | *Thamnophis sauritus septentrionali* | | | | | Wetland; Grassland/Prairie |
| Northern Ringneck Snake | *Diadophis punctatus edwardsii* | | | | | Forest |
| Northern Rough-winged Swallo | *Stelgidopteryx serripennis* | | | | | Riparian Corridors/ Rivers & Streams |
| Northern Saw-whet Owl | *Aegolius acadicus* | Species of Concern | | | | Forest |
| Northern Shoveler | *Anas clypeata* | | no | | I = 1932 | Wetland; Grasslands/Prairie |
| Northern Slimy Salamander | *Plethodon glutinosus* | | | | | Forest |
| Northern Spring Peeper | *Pseudacris crucifer crucifer* | | | | | Forest; Wetland |
| Northern Spring Salamander | *Gyrinophilus porphyriticus porphyri* | | | | | Forest |
| Northern Two-lined Salamander | *Eurycea bislineata* | | | | | Forest |
| Northern Water Snake | *Nerodia sipedon sipedon* | | | | | Wetland; Riparian Corridors/ Rivers & Stream |
| Northern Waterthrush | *Seiurus noveboracensis* | Endangered | no | | I = 1928 | Forest |
| Norway Rat | *Rattus norvegicus* | | no | | I = 1830 | Generalist |

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|---|---|---|---|---|---|---|
| Ohio cave beetle | *Pseudanophthalmus ohioensis* | Endangered | | | | Caves & Mines |
| olive hairstreak | *Mitoura grynea* | | | | | Grassland/Prairie; (Cedar glades) |
| Olive-sided Flycatcher | *Contopus borealis* | | no | | I = 1932 | Forest |
| Olympia marble | *Euchloe olympia* | Species of Concern | | E = 1990 (suspected) | I = 1984 | Forest (edge); Grassland/Prairie |
| One-eyed sphinx | *Smerinthus cerisyi* | Species of Concern | | | | Oak Savanna |
| Orchard Oriole | *Icterus spurius* | | | | | Forest |
| Osmunda borer moth | *Papaipema speciosissima* | Species of Concern | | | | Wetland |
| Osprey | *Pandion haliaetus* | Endangered | | | R = 1996 | Riparian Corridors/ Rivers & Streams; Forest; |
| Ouachita Map Turtle | *Graptemys pseudogeographica ou* | Species of Concern | | | | Riparian Corridors/Rivers & Streams |
| Ovenbird | *Seiurus aurocapillus* | | | | | Forest |
| Passenger Pigeon | *Ectopistes migratorius* | Extinct | | 1900 | | Forest |
| pearl crescent | *Phyciodes tharos* | | | | | Generalist |
| Peck's skipper | *Polites peckius* | | | | | Grassland/Prairie |
| pepper & salt skipper | *Amblyscirtes hegon* | | | | | Forest |
| Peregrine Falcon | *Falco peregrinus* | Endangered | | | R = 1989 | Urban |
| Persius dusky wing, Eastern | *Erynnis persius* | Endangered | | | | Oak Savanna |

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|---|---|---|---|---|---|---|
| Pickerel Frog | *Rana palustris* | | | | | Forest; Wetland |
| Pied-billed Grebe | *Podilymbus podicees* | | | | | Wetland |
| Pileated Woodpecker | *Dryocopus pileatus* | | | | | Forest |
| Pine Siskin | *Carduelis pinus* | | no | | I early 1900s | Forest |
| Pine Vole | *Microtus pinetorum* | | | | | Forest |
| Pine Warbler | *Dendroica pinus* | | no | | I = 1898 | Forest; Riparian Corridors/ Rivers & Streams |
| pipe-vine swallowtail | *Battus philenor* | | | | | Forest (edge) |
| Piping Plover | *Charadrius melodus* | Endangered | no | 1942 | I = 1900 | Wetland |
| Pointed sallow | *Epiglaea apiata* | Endangered | | | | Unknown |
| Porcupine | *Erethizon dorsatum* | Extirpated | | E = by 1900 | | NE OH Boreal |
| Prairie Warbler | *Dendroica discolor* | | no | | I = 1908 | Grassland/Prairie; Forest |
| Precious underwing | *Catocala pretiosa* | Species of Concern | | | | unknown |
| Prothonotary Warbler | *Protonotaria citrea* | | | | | Wetland |
| Purple arches | *Polia purpurissata* | Species of Concern | | | | unknown |
| Purple Finch | *Carpodacus purpureus* | | no | | I = 1911 | Forest |
| Purple Gallinule | *Porphyrula martinica* | | no | | 1 nest record 1962 | Wetland |

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|---|---|---|---|---|---|---|
| Purple Martin | *Progne subis* | Species of Concern | | | | Generalist |
| purplish copper, Eastern | *Lycaena helloides* | Endangered | | | | Wetland |
| Pygmy Shrew | *Microsorex hoyi* | Species of Concern | | | | Grassland/Prairie |
| Queen Snake | *Regina septemvittata* | | | | | Raparian Corridors/Rivers & Streams |
| question mark | *Polygonia interrogationis* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| Raccoon | *Procyon lotor* | | | | | Generalist |
| Rafinesque's Big-eared Bat | *Corynorhinus rafinesquii* | | | | | Forest; Caves & Mines |
| Ravine Salamander | *Plethodon richmondi* | | | | | Forest |
| red admiral | *Vanessa atalanta rubria* | | | | | Grassland/Prairie; Forest; Riparian Corridors/ |
| Red Bat | *Lasiurus borealis* | | | | | Forest |
| Red Crossbill | *Loxia curvirostra* | | no | | 1 nest record 1973 | Forest |
| Red Fox | *Vulpes vulpes* | | no | | In = 1700s | Forest |
| Red Squirrel | *Tamiasciurus hudsonicus* | | | | | Forest |
| Redback Salamander | *Plethodon cinereus* | | | | | Forest |
| red-banded hairstreak | *Calycopis cecrops* | | | | | Forest (edge) |
| Red-bellied Woodpecker | *Melanerpes carolinus* | | | | | Forest |

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|---|---|---|---|---|---|---|
| Red-breasted Nuthatch | *Sitta canadensis* | | no | | I = 1929 | Forest |
| Red-eared Slider | *Trachemys scripta elegans* | | | | | Riparian Corridors/Rivers & Streams |
| Red-eyed Vireo | *Vireo olivaceus* | | | | | Forest |
| Redhead | *Aythya americana* | | no | | I = 1961 | Wetland |
| Red-headed Woodpecker | *Melanerpes erythrocephalus* | | | | | Forest |
| Red-shouldered Hawk | *Buteo lineatus* | Species of Concern | | | | Forest |
| Red-spotted Newt | *Notophthalmus viridescens viridescens* | | | | | Forest |
| red-spotted purple | *Limenitis arthemis astyanax* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| Red-tailed Hawk | *Buteo jamaicensis* | | | | | Grassland/Prairie |
| Red-winged Blackbird | *Agelaius phoeniceus* | | | | | Grassland/Prairie; Wetland |
| regal fritillary | *Speyeria idalia* | Endangered | | | | Grassland/Prairie |
| Rice Rat | *Ochrotomys nuttalli* | Extirpated | no | E = by 1615 | | Wetland |
| Ring-billed Gull | *Larus delawarensis* | | no | | I = 1966 | Wetland; Lake Erie Islands |
| Ring-necked Pheasant | *Phasianus colchicus* | | | | In = 1896 | Grassland/Prairie |
| River Otter | *Lutra canadensis* | | extremely rare | | R = 1986 | Wetland; Riparian Corridors/ Rivers & Stream |
| roadside skipper | *Amblyscirtes vialis* | | | | | Forest (edge); Grassland/Prairie |

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|---|---|---|---|---|---|---|
| Rock Dove | *Columba livia* | | | | | Urban |
| Rose-breasted Grosbeak | *Pheucticus ludovicianus* | | | | | Forest |
| Rough Green Snake | *Opheodrys aestivus* | Species of Concern | | | | Forest; Riparian Corridors/Rivers & Streams |
| Ruby-throated Hummingbird | *Archilochus colubris* | | | | | Generalist |
| Ruddy Duck | *Oxyura jamaicensis* | | no | | I = 1961 | Wetland |
| Ruffed Grouse | *Bonasa umbellus* | | | | | Forest |
| Sandhill Crane | *Grus canadensis* | Endangered | | 1926 | I = 1987 | Wetland; Grassland/Prairie |
| Savannah Sparrow | *Passerculus sandwichensis* | | no | | I = 1920s | Grassland/Prairie |
| scalloped sooty wing | *Staphylus hayhurstii* | | | | | Forest (edge) |
| Scarlet Tanager | *Piranga olivacea* | | | | | Forest |
| Scurfy quaker | *Homorthodes f. furfurata* | Species of Concern | | | | unknown |
| Sedge Wren | *Cistothorus platensis* | Endangered | | | | Grassland/Prairie; Wetland |
| Sharp-shinned Hawk | *Accipiter striatus* | Species of Concern | | | | Forest |
| Short-eared Owl | *Asio flammeus* | Species of Concern | no | | I = 1928 | Grassland/Prairie; Wetland |
| Shorthead Garter Snake | *Thamnophis brachystoma* | Species of Concern | | | | Forest |
| Short-tailed Shrew | *Blarina brevicauda* | | | | | Grassland/Prairie |

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|---|---|---|---|---|---|---|
| silver-bordered fritillary | *Boloria selene myrina* | Threatened | | | | Grassland/Prairie; Wetland |
| Silver-haired bat | *Lasionycteris noctivagans* | | | | | Forest |
| silver-spotted skipper | *Epargyreus clarus* | | | | | Forest; Generalist |
| silvery blue | *Glaucopsyche lygdamus* | | | | | Forest (edge) |
| silvery checkerspot | *Chlosyne nycteis* | | | | | Forest |
| Six-banded longhorn beetle | *Dryobius sexnotatus* | Species of Concern | | | | Grassland/Prairie |
| sleepy dusky wing | *Erynnis brizo* | | | | | Forest |
| Slender clearwing | *Hemaris gracilis* | Species of Concern | | | | Oak Savanna |
| Smallmouth Salamander | *Ambystoma texanum* | | | | | Forest |
| Smoky Shrew | *Sorex fumeus* | | | | | Forest |
| Smooth Green Snake | *Liochlorophis vernalis* | | | | | Grasslands/Prairie |
| Snowshoe Hare | *Lepus americanus* | Endangered | | E = by 1940 | In = 1950s, 2000 | Ne Oh Boreal |
| Snowy Egret | *Egretta thula* | Endangered | no | | I = 1983 | Wetland; Lake Erie Islands |
| Solitary Vireo | *Vireo solitarius* | | no | | I = 1937 | Forest |
| Song Sparrow | *Melospiza melodia* | | | | | Generalist |
| Sora | *Porzana carolina* | | | | | Wetland |

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|---|---|---|---|---|---|---|
| Southern Bog Lemming | *Synaptomys cooperi* | | | | | Wetland;Grassland/Prairie |
| Southern cloudy wing | *Thorybes bathyllus* | | | | | Forest (edge); Grassland/Prairie |
| Southern Leopard Frog | *Rana utricularia* | | | E = possibly | | Grassland/Prairie |
| Southern Red-backed vole | *Clethrionomys gapperi* | Species of Concern | | | | NE OH Boreal |
| Southern Two-lined Salamande | *Eurycea cirrigera* | | | | | Forest |
| spicebush swallowtail | *Papilio troilus* | | | | | Forest; Oak Savannas |
| Spotted Salamander | *Ambystoma maculatum* | | | | | Forest |
| Spotted Sandpiper | *Actitis macularia* | | | | | Wetland; Riparian Corridors/ Rivers & Stream |
| Spotted Turtle | *Clemmys guttata* | Species of Concern | | | | Wetland (bogs) |
| spring azure | *Celastrina ladon* | | | | | Grassland/Prairie; Forest |
| Star-nosed Mole | *Condylura cristata* | Species of Concern | | | | Wetland |
| Streamside Salamander | *Ambystoma barbouri* | | | | | Forest |
| striped hairstreak | *Satyrium liparops strigosum* | | | | | Grassland/Prairie; Forest |
| Striped Skunk | *Mephitis mephitis* | | | | | Generalist |
| Subflava sedge borer moth | *Archanara subflava* | Species of Concern | | | | Wetland |
| Summer azure | *Celastrina neglecta* | | | | | Grassland/Prairie; Forest |

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|---|---|---|---|---|---|---|
| Summer Tanager | *Piranga rubra* | | | | | Forest |
| swamp metalmark | *Calephelis mutica* | Endangered | | E = suspected | | Wetland |
| Swamp Sparrow | *Melospiza georgiana* | | | | | Wetland; NE OH Boreal |
| swarthy skipper | *Nastra lherminier* | | | | | Grassland/Prairie |
| tawny emperor | *Asterocampa clyton* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| tawny-edged skipper | *Polites themistocles* | | | | | Grassland/Prairie |
| Thirteen-lined Ground Squirrel | *Spermophilus tridecemlineatus* | | | | | Forest |
| tiger swallowtail | *Papilio glaucus* | | | | | Forest; Grassland/Prairie |
| Timber Rattlesnake | *Crotalus horridus horridus* | Endangered | | | | Forest |
| Tree Swallow | *Tachycineta bicolor* | | | | | Generalist |
| Trumpeter Swan | *Cygnus columbianus* | Endangered | ? | | R = 1996 | Wetland |
| Tufted Titmouse | *Parus bicolor* | | | | | Forest |
| Turkey Vulture | *Cathartes aura* | | | | | Forest; Caves & Mines |
| two-spotted skipper | *Euphyes bimacula* | Species of Concern | | | | Wetland |
| Upland Sandpiper | *Bartramia longicauda* | Threatened | | | | Grassland/Prairie |
| Veery | *Catharus fuscescens* | | ? | | | Forest |

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|---|---|---|---|---|---|---|
| Vesper Sparrow | *Pooecetes gramineus* | | | | | Grassland/Prairie |
| viceroy | *Limenitis archippus* | | | | | Grassland/Prairie; Wetland |
| Virginia opossum | *Didelphis virginiana* | | | | | Generalist |
| Virginia Rail | *Rallus limicola* | | | | | Wetland |
| Warbling Vireo | *Vireo gilvus* | | | | | Forest |
| Wehrle's Salamander | *Plethodon wehrlei* | | | | | Forest |
| West Virginia white | *Pieris virginiensis* | | | | | Forest |
| Western Chorus Frog | *Pseudacris triseriata triseriata* | | | | | Grassland/Prairie; Forest (edges) |
| Western Kingbird | *Tyrannus verticalis* | | ? | | 1 nest record 1933 | Grassland/Prairie |
| Western Meadowlark | *Sturnella neglecta* | | no | | I = 1930 | Grassland/Prairie |
| Whip-poor-will | *Caprimulgus vociferus* | | | | | Forest |
| White-breasted Nuthatch | *Sitta carolinensis* | | | | | Forest |
| White-eyed Vireo | *Vireo griseus* | | | | | Forest |
| White-footed Mouse | *Peromyscus leucopus* | | | | | Forest |
| white-m hairstreak | *Parrhasius m-album* | | | | | Forest (edge) |
| White-tailed deer | *Odocoileus virginianus* | | | E = 1904 | R = 1932; I = 1930s | Forest |

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|---|---|---|---|---|---|---|
| White-throated Sparrow | *Zonotrichia albicollis* | | no | | I = 1913 | Forest |
| wild indigo dusky wing | *Erynnis baptisiae* | | | | | Grassland/Prairie |
| Wild Turkey | *Meleagris gallopavo* | | | 1900 | R = 1956 | Forest |
| Willow Flycatcher | *Empidonax traillii* | | | | | Forest; Wetland |
| Wilson's Phalarope | *Phalaropus tricolor* | | no | | I = 1980 | Wetland; Grassland/Prairie |
| Winter Wren | *Troglodytes troglodytes* | Endangered | ? | | I = 1964 | Forest |
| Wolverine | *Gulo luscus* | Extirpated | | E = by 1800 | | NE OH Boreal |
| Wood Duck | *Aix sponsa* | | | | | Riparian Corridors/ Rivers & Streams; Forest |
| Wood Frog | *Rana sylvatica* | | | | | Forest |
| Wood Thrush | *Hylocichla mustelina* | | | | | Forest |
| Woodchuck | *Marmota monax* | | | | | Generalist |
| Woodland jumping mouse | *Napaeozapus insignis* | Species of Concern | | | | NE OH Boreal |
| Worm-eating Warbler | *Helmitheros vermivorus* | | | | | Forest |
| Yellow Rail | *Coturnicops noveboracensis* | Species of Concern | ? | | 1 nest record 1909 | Wetland |
| Yellow Warbler | *Dendroica petechia* | | | | | Forest; Wetland |
| Yellow-bellied Sapsucker | *Sphyrapicus varius* | Endangered | no | | I = 1891 | Forest |

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|---|---|---|---|---|---|---|
| Yellow-billed Cuckoo | *Coccyzus americanus* | | | | | Forest; Riparian Corridors/ Rivers & Streams |
| Yellow-breated Chat | *Icteria virens* | | | | | Forest |
| Yellow-crowned Night-Heron | *Nyctanassa violacea* | Endangered | no | | I = 1930s | Wetland; Riparian Corridors/ Rivers & Stream |
| Yellow-headed Blackbird | *Xanthocephalus xanthocephalus* | | no | | I = 1938 | Wetland |
| Yellow-throated Vireo | *Vireo flavifrons* | | | | | Forest |
| Yellow-throated Warbler | *Dendroica dominica* | | | | | Forest |
| Zabulon skipper | *Poanes zabulon* | | | | | Forest |
| zebra swallowtail | *Eurytides marcellus* | | | | | Forest; Riparian Corridors/Rivers & Streams |