

## LANDSCAPE FEATURES & CONSERVATION NEEDS

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## INTRODUCTION TO LANDSCAPE FEATURE SUMMARIES

Michigan's Wildlife Action Plan has been developed to address conservation of all wildlife species (by definition, both aquatic and terrestrial) using a coarse-filter/fine-filter approach, where the coarse-filter is based on habitat needs of wildlife and the fine-filter is based on species of greatest conservation need (SGCN). This approach has been designed to benefit SGCN and other wildlife species through maintaining and restoring ecological diversity and functional processes of ecosystems. 'Landscape features' are the units of organization for the coarse-filter; they are broadly defined as 'components of the overall landscape used by wildlife, differentiated by vegetative, geologic, hydrologic and structural elements, which may occur at various scales.' In some cases, human-maintained landscape features act as surrogates for 'natural' landscape features that may have been severely reduced or eliminated. This action plan recognizes that these 'unnatural' systems are part of Michigan's landscape. Information provided on these landscape features is not intended to encourage expansion, but is intended to aid in improving their capacity to benefit wildlife when restoration to a more natural landscape feature is not realistic. A more thorough discussion of landscape features can be found in the Approach chapter of the Introductory Text & Statewide Assessments section.

The landscape feature summaries provide detailed information on the landscape features found in each of the four terrestrial ecoregions and the four Great Lakes basins. Each landscape feature summary identifies the locations in which the landscape feature occurs, associated SGCN, significant threats to the landscape feature, associated natural communities, and recommended conservation actions, research, surveys and monitoring. These data are described in more detail below. These summaries represent the current state of knowledge of the various landscape components used by wildlife.

This information is expected to be valuable to conservation partners, including local and regional land managers, conservation organizations, individual landowners and other individuals, interested in conserving lands for wildlife. By using local data in conjunction with the information available within the landscape feature summaries, planners and managers will be able to identify those landscape features important to wildlife diversity in their areas and apply appropriate conservation actions.

### Priorities

Priority threats and conservation needs at the statewide level are identified in the Statewide Conservation chapter of the Introductory Text & Statewide Assessments section. Regional priority threats for each ecoregion and lake basin are identified in the introductory text that precedes the landscape feature summaries for that region. This text also identifies regional priority conservation actions within landscape feature categories.

### Data Descriptions

#### Location Maps

Maps associated with landscape features are not intended to be site specific but to provide a broad picture of the feature across the ecoregion or lake basin. Maps with a 'No Data' label indicate that spatially explicit data are lacking or that the landscape feature is not found in that ecoregion or lake basin. These maps reflect the current state of knowledge, and species or natural communities may occur outside of areas indicated.

Terrestrial maps indicate the probable distribution within an ecoregion of the landscape feature in question, based primarily on remotely sensed data. These maps also include point locations for known associated natural communities, when available.

The aquatic maps show locations of each landscape feature within each Great Lake basin. They also include known location data for SGCN, when locations occur in association with a landscape feature

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and spatial data are available. The SGCN point location data include both current and historical SGCN location data to more accurately reflect the potential range of the species. These maps can be used to show areas of importance for particular taxonomic groups or areas that likely support a variety of taxonomic groups. In some instances, point location data for taxonomic groups are presented, but specific associations with the landscape feature are not provided in the literature. These cases are noted within the Associated Species of Greatest Conservation Need portion of the summary.

Description

Each landscape feature summary includes a general description that provides information on the structure and composition of the landscape feature and other information that will assist in identifying its presence within a landscape.

General Condition of Feature

Attendees at regional technical workshops (natural resource professionals from State, Federal and local agencies, non-governmental organizations, and universities) were asked to estimate the percentage of each landscape feature across an entire ecoregion or lake basin within each of five relative condition categories (Excellent, Good, Fair, Degraded, Highly Degraded). Averages of these values were used to provide general condition information for each landscape feature. When applicable, regional and global statuses of associated natural communities are also provided as a measure of condition.

Associated Natural Communities

Many conservation partners use the Natural Communities classification described by Michigan Natural Features Inventory (MNFI 2003) for terrestrial systems within their conservation planning and implementation processes. When identified within a landscape, natural communities are frequently indicative of high quality systems. Therefore, associated natural community types are included in each terrestrial landscape feature summary.

Associated Species of Greatest Conservation Need

Within each ecoregion and lake basin, the importance of each landscape feature to each SGCN was assessed based on information found in the scientific literature and provided by natural resource professionals and experts on specific wildlife taxonomic groups in Michigan. See the Methods chapter in the Introductory Text & Statewide Assessments section for additional information on the process used to identify SGCN.

Each landscape feature summary includes those SGCN which principally or occasionally use the feature, and excludes SGCN which never or infrequently use the feature. Also included are SGCN that are believed to have an association with the landscape feature, but the importance or frequency of use by the species is unknown.

Associated Threats

Standardized threat categories and individual threats to landscape features and wildlife were identified by modifying previously existing threat classifications for terrestrial and aquatic systems (Salafsky et al. 2003, Richter et al. 1997). Associations between threats and landscape features within each ecoregion and lake basin were based primarily on opinion of natural resource professionals who attended regional technical workshops, because the scientific literature rarely presented information on regional differences in susceptibility to threats for landscape features or wildlife species.

Threats, conservation actions, research and survey needs, and monitoring activities were derived from a variety of sources, including regional natural resource professionals from international, Federal, State, and local agencies, non-governmental organizations, universities, species experts, existing strategies

and plans developed by State and national conservation partners, and published literature. Hence, the information provided represents the collective ideas of a variety of the State's conservation partners.

#### Conservation Actions Needed

Conservation actions are those programs, projects or activities needed to address threats to wildlife species and their habitats. Recommended conservation actions provided in the landscape feature summaries are based primarily on discussions held at regional technical workshops and subsequent communication with participants and other knowledgeable individuals. Previously existing strategies and plans developed by State and national conservation partners and published literature were also referenced. Conservation actions, as presented, do not differentiate between efforts that may already be ongoing and those yet to be initiated. No implication of priority was intended in the order of the actions.

#### Research and Survey Needs

Research and survey needs generally address gaps in the collective knowledge of Michigan's conservation partners regarding species natural history, natural resource relationships, or the effects of threats on landscape features and species. Research and survey needs listed within the landscape feature summaries were identified using the same sources as those for the conservation actions. No implication of priority was intended in the order of the research and survey needs.

#### Monitoring

Monitoring addresses the needs to periodically and systematically measure and assess changes to landscape feature conditions and species to determine whether their health/quality is changing and whether implemented conservation actions have been successful. Each landscape feature summary outlines the monitoring required to meet these needs. Sources for the monitoring information included in the landscape feature summaries are the same as those for the conservation actions. No implication of priority was intended in the order of the monitoring recommendations.

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