

B. Species of Conservation Concern

The primary focus of this CWCS is **species of conservation concern**, meaning those wildlife species, vertebrate and invertebrate, that show evidence of population declines within Louisiana. In order to ensure the long-term survival of species of conservation concern and the habitats they depend upon, this plan will focus on:

- habitats in need of protection and restoration;
- species of conservation concern that depend upon these habitats;
- habitats that are presently secure but may be subject to future degradation and loss; and
- species that are considered to be stable at the present but exhibit the potential for future population declines.

This strategy follows a two tiered approach: a coarse filter approach focused on landscape-level habitats, and a fine filter approach focused on individual species. The coarse filter approach allows for identification of those habitats subject to the greatest amount of stress/threats, and most in need of conservation. It is anticipated that roughly 85%-90% of the species in Louisiana can be identified and protected within these habitats using this method (Hartley et al. 2000). The fine filter approach allows for those individual species not covered by the coarse filter approach to be identified and individually managed. Species that are wide-ranging or have very local distributions may benefit from strategies developed for high-ranked or umbrella species.

The species of conservation concern list for the CWCS was developed based on the Natural Heritage methodology (Stein and Davis 2000). In order to categorize the current rarity status of Louisiana's species and habitats, the LNHP within the LDWF assigns ranks to the state's natural communities, vascular plants, vertebrate, and key invertebrate species. Each species or community is assigned a state rank (S1 to S5) (Appendix E) based on the following factors:

- estimated number of Element Occurrences (EOs)
- estimated state abundance
- state range
- adequately protected EOs
- threat of destruction
- ecological fragility

NatureServe, the parent organization for the Natural Heritage Network, assigns global ranks (G1 to G5) to species and natural communities based on the same factors, expanded to include consideration of the status over the entire natural range of each species or natural community (Appendix E).

The LNHP maintains EO data in the Geographical Information System (GIS)-based Biotics data system used by the Natural Heritage Network. Data are collected only for those species that are considered rare or threatened. EO data are collected for both rare

and common natural communities (habitats) known to occur in the state. Species attaining a rank status of S1-S2-S3 form the base list for target species of conservation concern in this strategy.

C. Species Prioritization Process

This strategy focuses on those species of conservation concern that are experiencing population declines in Louisiana and in need of immediate conservation attention. In addition, the strategy will focus on those species that are migratory (primarily birds, butterflies, and to a lesser extent marine mammals) and use habitats within Louisiana during some part of their life cycle. With regard to terrestrial and aquatic invertebrates, the strategy will focus on butterflies, crawfish, and mussels in this first iteration. Future iterations of this strategy will attempt to construct conservation strategies for other groups of terrestrial and aquatic invertebrates in greater detail. However, it is expected that management strategies developed for the current taxonomic groups and their habitats will provide some benefit to terrestrial and aquatic invertebrates not mentioned in the first iteration of this plan.

The following criteria were used in the species prioritization process:

- Species classified as state species of conservation concern (S1-S2-S3)
- Species that are globally ranked as G1, G2, or G3
- Species that have been designated as needing immediate conservation attention through rangewide/nationwide status assessments. Examples include information contained in national bird conservation plans such as the Partners In Flight Conservation Plan, the U.S. Shorebird Conservation Plan, and the North American Waterfowl Plan
- Species which are locally endemic

The draft species list was developed and distributed to seven the technical expert committees (Appendix C) for review. These committees also provided input regarding species distributions by habitat type within Louisiana.

D. Taxonomic Groups

The following discussion by taxonomic group supplies information on the current status for each group within the state. These discussions also provide a supportive line of reasoning regarding development of the **species of conservation concern lists** for each group (Appendix F).

1. Amphibians and Reptiles

There are 134 species of amphibians and reptiles occurring within Louisiana and its adjacent waters (Dundee and Rossman 1989). However, Louisiana is unique among high-diversity states in that it has no endemic species. Most of the species of conservation