
Appendix B. Taxa specific criteria developed by the New Mexico Department of Game and Fish to determine the vulnerability of species for placement onto the SGCN list.

Fish Criteria– A list of all native and nonnative species of fish known to occur (historically and currently) in New Mexico was compiled from Sublette *et al.* (1990), NMDGF files, and the Bison-M database and excluded all non-native fish species, including those introduced as sport fish. Next, all native species extirpated from the State were excluded. The status of remaining species was determined from published sources. Species widespread and common in their native range, including New Mexico, were excluded. Exceptions to these general selection criteria were Pleistocene relicts and species whose natural distributional limits occurred within the political boundaries of New Mexico. The status (distribution and numeric) of the remaining species was evaluated. Additional species were removed if they: 1) had comparatively broad environmental tolerances, 2) were widespread and common where present, and 3) had no known or documented threats to their persistence.

Bird Criteria– The bird team used several available sources in evaluating which of New Mexico’s 506 bird species should be included in the state’s SGCN list. The bird team included all State and Federal threatened and endangered species, providing those species were regular and viable components of the State’s avifauna. Thus, the team excluded the brown pelican (*Pelecanus occidentalis*) (accidental vagrant), whooping crane (*Grus americana*) (experimental population extirpated), and piping plover (*Charadrius melodus*) (accidental vagrant), buff-collared nightjar (*Caprimulgus ridgwayi*) (possibly extirpated) and white-eared hummingbird (*Hylocharis leucotis*) (breeding status uncertain in New Mexico). The team also considered all priority, responsibility, and representative species for each habitat type as identified in the New Mexico Partners in Flight Bird Conservation Plan (2000). In addition, all species of conservation concern were included for each Bird Conservation Region in New Mexico (U.S. Fish and Wildlife Service 2002). Bird lists compiled by the New Mexico Partners in Flight and the U.S. Fish and Wildlife Service were developed from breeding bird surveys and expert opinion. They include all species considered sensitive, vulnerable, declining, or otherwise of concern. Finally, the bird team included several game species and species with high recreation value that had documented population declines or threats to their persistence.

Mammal Criteria– The mammal team employed several criteria for the inclusion of species. First, the team included species listed as State or Federal threatened or endangered. These species were listed because of habitat loss or vulnerability, endemism, and documented population declines. Second, the team selected several small mammal species that are either endemic to New Mexico or have extremely restricted ranges within the State. A few keystone species were included that are disproportionately beneficial to other wildlife species and the maintenance of community integrity. Finally, several species were included due to declining, vulnerable populations and/or unknown population status.

Amphibians and Reptiles Criteria– The amphibian and reptile team consulted numerous scientific publications and employed expert opinions to determine which species should be included as candidate SGCN. Several criteria were employed. First, the team included State or Federal threatened or endangered species. These species were listed because of habitat loss or vulnerability, endemism, and documented population declines. Second, the team selected several amphibian and reptile species that are either endemic to New Mexico or have extremely restricted ranges in New Mexico. Third, commercially exploited species were included. Finally, several species were included due to declining, vulnerable populations and/or unknown population status.

Molluscs and Crustaceans Criteria— The molluscs and crustacean technical group consulted scientific publications and employed expert opinion to identify a comprehensive set of molluscs and crustaceans considered representative of New Mexico’s diverse life zones, habitats, and natural heritage. These species included all State and Federally listed threatened or endangered species, Federal candidate and species of concern, and other species of conservation interest (e.g. endemic or vulnerable). For aquatic molluscs, this list consists of a diversity of taxa from bivalves (clams, mussels) to gastropods (aquatic and land snails). Species that were narrowly restricted endemics were included. More common or widespread species were also included if they were considered indicators of ecosystem health and integrity (due to their trophic roles as primary consumers or filter feeders and acute sensitivity to environmental conditions). In New Mexico, approximately 53% (62 of 117 native species and subspecies) of land snail fauna is endemic to the State. This pattern of endemism in the genera *Ashmunella*, *Oreohelix*, and *Sonorella* is responsible for the relatively large number of land snail species among the invertebrate SGCN. Crustaceans likewise play significant functional roles in aquatic ecosystems. Their persistence across the landscape of New Mexico is considered essential to sustain native fish, amphibian, and reptile communities, and populations of resident and migratory birds.
