

## CHAPTER EIGHT

### PRIORITIES FOR CONSERVATION ACTIONS

#### General Discussion

Choosing site-specific locations and setting definitive priorities for implementing the conservation actions identified in Chapter 6 are beyond the scope of this *strategic plan*. Few of the wildlife, habitat, and management conservation actions will be implemented, however, without a substantial increase in conservation funding in Iowa. Planning for gathering the information needed to implement the recreation and education actions should be started immediately. Education programs must be developed to inform the public about the economic, social and recreation benefits of implementing the Plan so that the political support needed to acquire the needed funding can be generated.

During the development of the Plan it became obvious that there are important gaps in our knowledge about the distribution and abundance of Iowa's SGCN and their habitats (Chapter 7: *Research, Survey, Inventory and Monitoring Needs*). More information is needed before a comprehensive *implementation plan* can be written.

Establishing priorities for the Wildlife, Habitat, and Management visions is a complex task. The IWAP establishes habitat protection, restoration and enhancement as the foundation for improving the status of SGCN. At least three different approaches need to be taken:

**1) Protect and enhance existing habitats that benefit SGCN.** This approach gives priority to areas of the state with existing habitat for SGCN or that can be suitable with habitat enhancements. Areas with the greatest existing species diversity should be targeted, land acquired or permanent conservation easements developed, and the appropriate management plans implemented. This approach is the most cost-effective way to benefit the most species in the short term. But SGCN are declining with the amount of existing habitat available today. Enhancing these habitats may slow the decline in local populations, but in the Steering Committee's view will not by itself reverse statewide or regional declines.

The greatest potential to apply this approach is for SGCN that inhabit wooded habitats and some grasslands. These existing habitats are most abundant in the Paleozoic Plateau, the southern and easternmost portions of the Southern Iowa Drift Plain, the Loess Hills, and along the interior river systems

(Map 2-2). The Southern Iowa Drift Plain has extensive acreages of mostly cool season grasslands enrolled in the short term Conservation Reserve Program that could be permanently protected and enhanced to improve habitat for SGCN. Few if any wetlands or wetland-grassland complexes exist in private ownership.

**2) Develop new habitats for SGCN in areas where these habitats do not exist.** This approach would provide new habitat for SGCN but at a higher cost. Establishing new habitats and restoring populations will extend the range of these species, provide the potential for greater genetic diversity and interaction between populations, and reduce the chances of local population extinctions if travel corridors are also provided. It will also be necessary to meet the recreation goals (50% increase in wildlife-associated recreation in areas near home).

Partnerships between IDNR, USFWS, Iowa County Conservation Boards and private conservation organizations have had many successes restoring wildlife habitats on agricultural land. Agricultural lands too steep or too wet for economical farming have been targeted for acquisition or protection, then wetlands and grasslands have been restored or grazed pastures allowed to revert to forest. Research sponsored by IDNR has shown that birds, including several SGCN, re-colonize these areas quickly. Much is yet to be learned about the ability of less-mobile species to locate these habitats and establish new populations.

Opportunities to restore habitats for SGCN exist statewide. The Des Moines Lobe currently has the greatest acreage of restored wetland-grassland complexes in the state and nearly unlimited opportunities for further conservation activities. Similar opportunities exist on a more restricted basis in the NW Iowa Plain and the Iowan Surface. Riparian wetlands can be restored along most of the interior river systems.

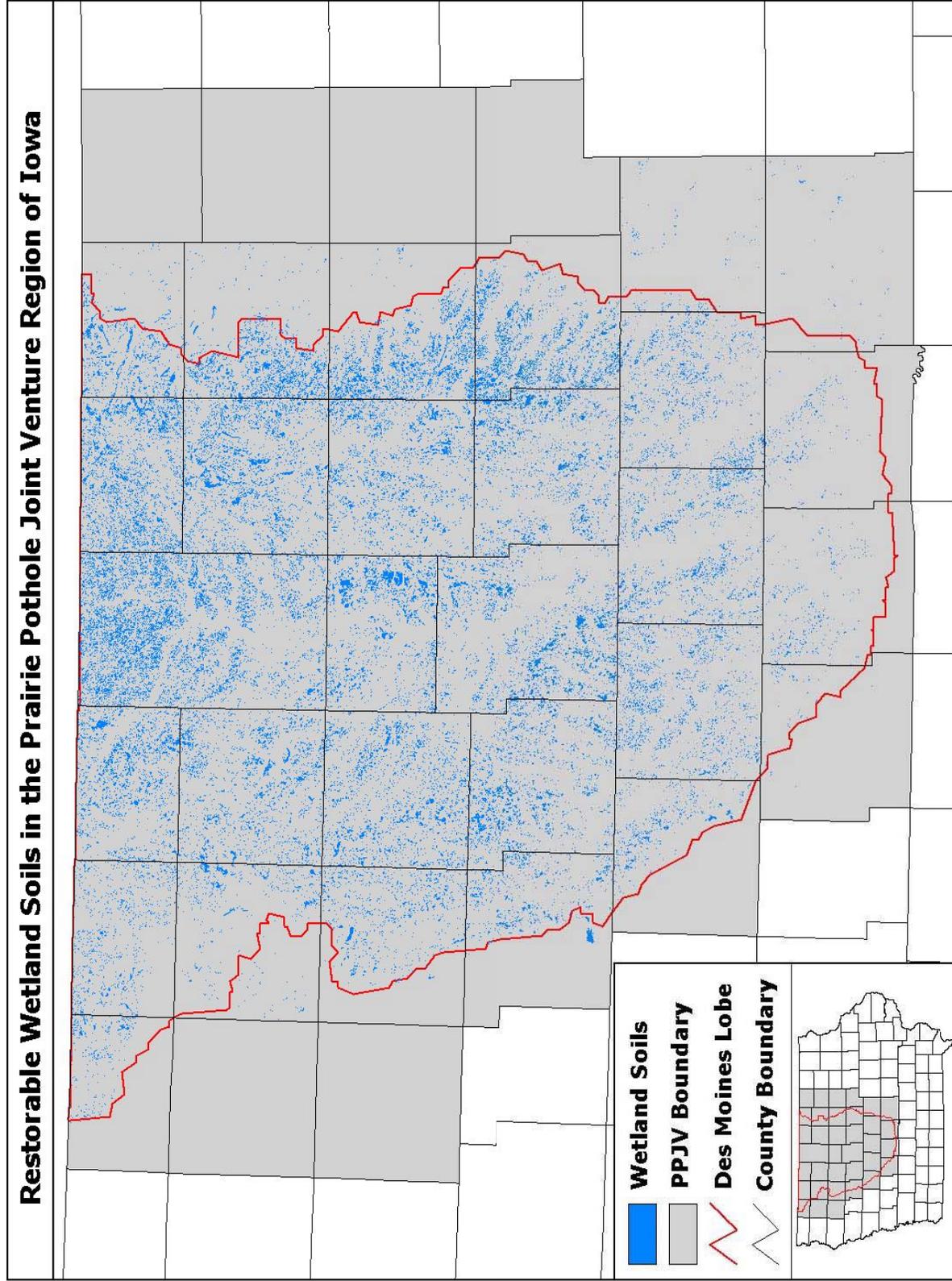
**3) Improving the status of aquatic SGCN will require a more broadly-applied conservation effort.** Habitat in rivers, streams, lakes, impoundments and wetlands can be improved only if soil erosion, siltation and all the associated problems are reduced (Chapter 5). Targeting areas to protect and restore habitats for terrestrial SGCN will help with this process but will not protect enough land by itself to help all aquatic systems. Vegetative cover must be returned to more of the landscape to hold soil in place. Existing soil-retention programs like terracing, buffer strips and no-till agriculture need to be expanded and new approaches explored to make soil conservation more widely acceptable and financially attractive to the farming community.

Targeting individual watersheds with a comprehensive conservation effort to improve the status of all SGCN and to serve as demonstration areas is the best initial approach to build support for more-widespread efforts. IDNR in cooperation with Iowa's CCBs, USDA's NRCS and FSA, Iowa Soil & Water Conservation Districts, U.S. EPA and local government entities has had success

in restoring selected watershed to provide a variety of wildlife, recreational, social and economic benefits to local communities. The most successful efforts have been in the Southern Iowa Drift Plain, but this approach can be applied selectively in most landforms.

**The Steering Committee believes a blend of all three approaches will be necessary to accomplish all the goals of the IWAP.** The plight of all SGCN in Iowa is caused by the loss of native vegetation from the landscape that provided wildlife habitat and kept soil and associated products out of the waters. Protecting existing habitats is a good strategy to prevent further losses, but it alone will not return SGCN to their former range or raise populations to a viable level. Habitats for SGCN need to be restored in socially-acceptable places. Widespread conservation practices will be needed to address water quality issues and are best approached on a watershed basis.

Map 8 - 1. Restorable Wetland Soils in the Prairie Pothole Region of Iowa



## PRIORITIES FOR VISION ELEMENTS

**Wildlife Vision:** Iowa will have viable wildlife populations that are compatible with modern landscapes and human social tolerance.

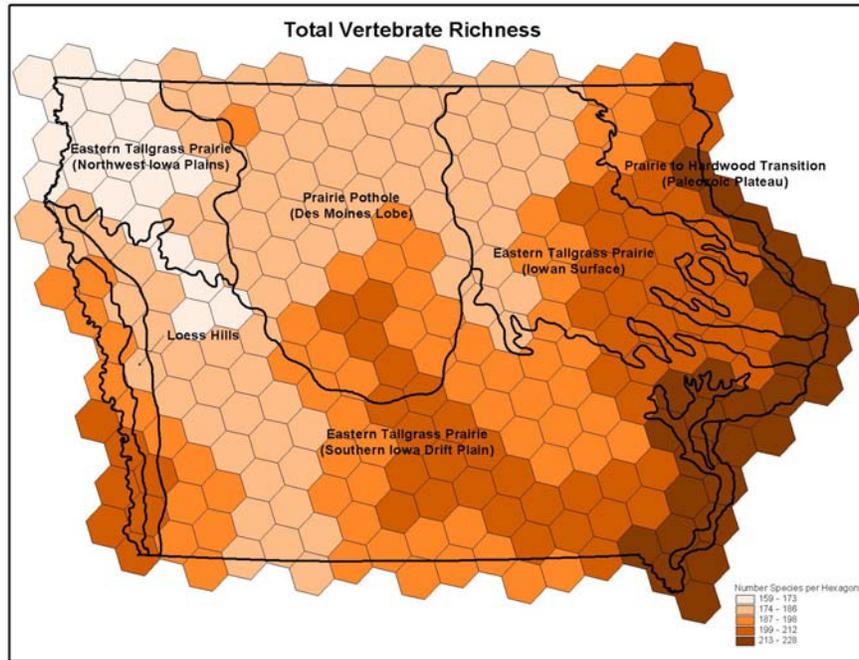
**Goal:** Common species will remain common.

Conservation activities to address the first goal should be directed to regions of the state having the greatest wildlife species diversity. Iowa GAP has produced maps that delineate regions of the state with the greatest potential *terrestrial vertebrate wildlife diversity* based on habitat distributions (Map 8-2). Hexagons shown on the species richness maps cover 635 square kilometers. Iowa has a total of 265 hexagon units either wholly or partially within the boundaries of the state.

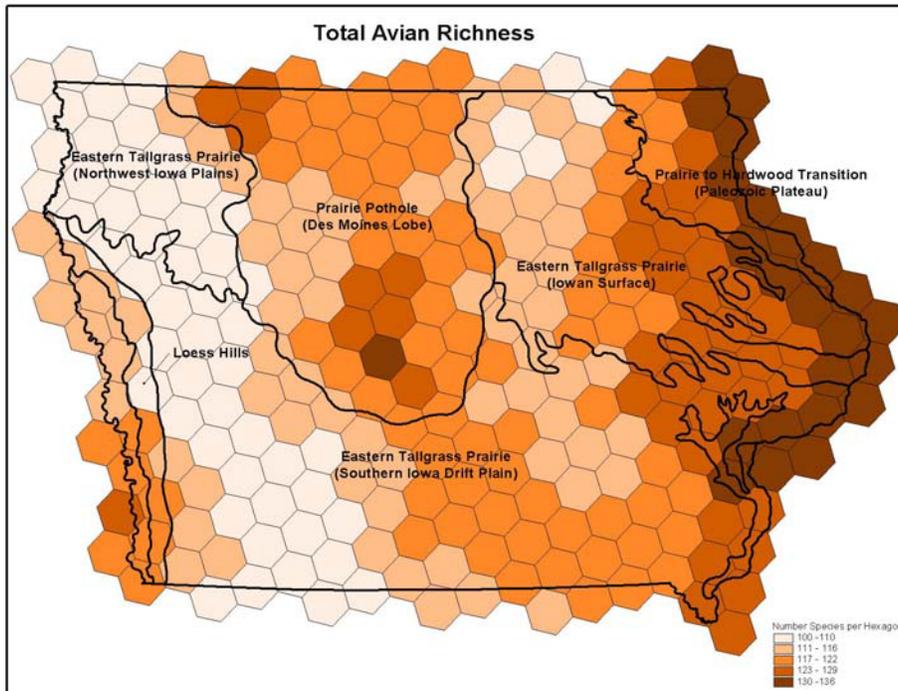
The statewide wildlife diversity map was based on individual habitat models for 288 species that were also included in this Plan. Individual species richness maps are provided for birds (170 modeled species), mammals (53 species), reptiles (44 species) and amphibians (21 species) (Map 8-3 through 8-6). Although these maps do not show distribution predictions for all Iowa terrestrial vertebrates included in the Plan, they can be used as indicators of regions of species richness for SGCN. Some SGCN may have specific habitat requirements or limited distributions that are not found within *species rich* portions of the state. The special needs of these animals must to be considered when specific management plans are prepared.

The species richness maps reflect the general distribution of existing wildlife habitats. The eastern and southeastern regions of the state and the southern Loess Hills have the greatest total species diversity (Map 8-2) and the greatest diversity of birds (Map 8-3), reptiles (Map 8-5) and amphibians (Map 8-6). This may be because wooded habitats in these regions serve as major migration corridors for birds and because they contain a substantial portion of the state's remaining mixed woodland-grassland-riparian habitats. Diversity tends to decline following the interior river valleys northwest into the heavily agricultural regions of the state (formerly prairie or prairie potholes).

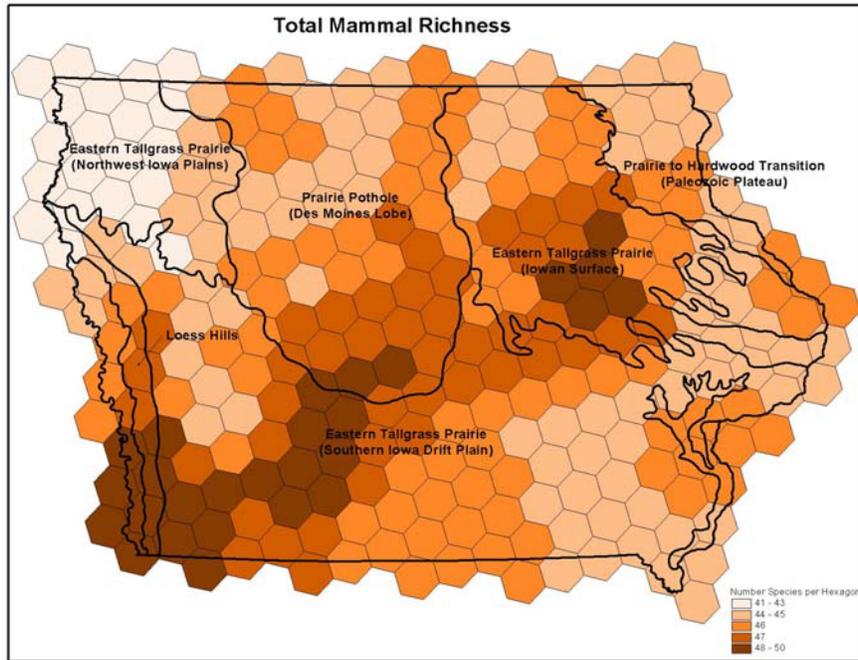
**Map 8-2. All Terrestrial Vertebrate Species Richness (from Iowa GAP)**



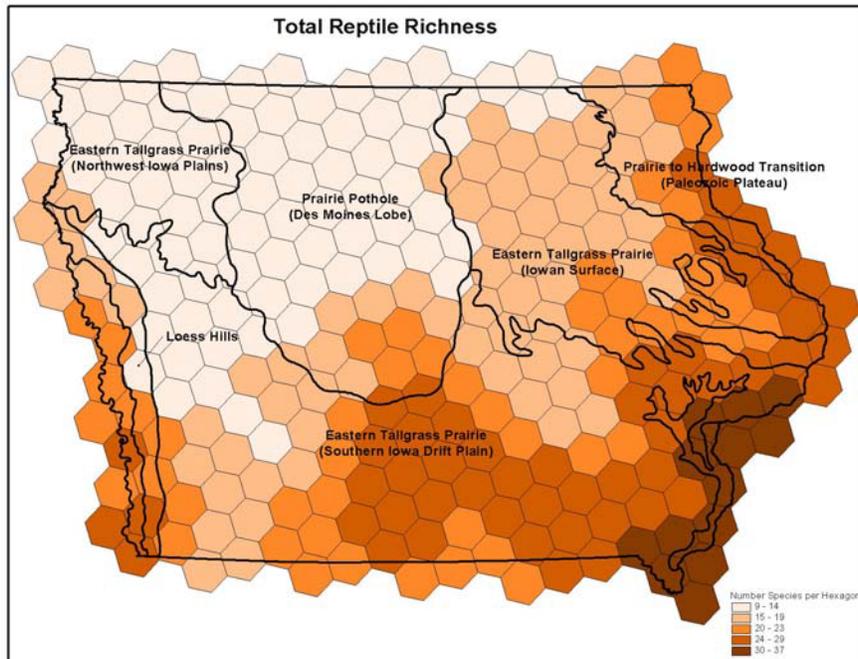
**Map 8-3. Bird Species Richness (from Iowa GAP)**



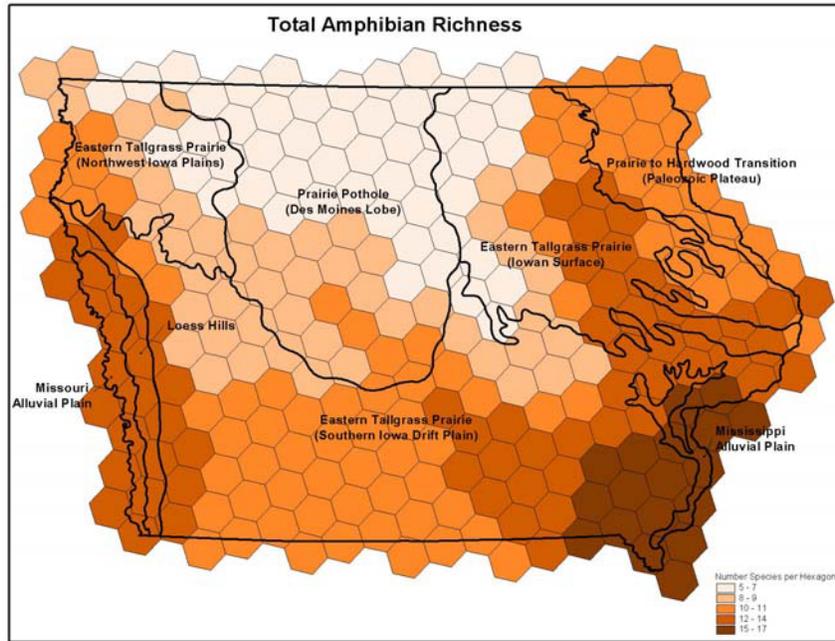
**Map 8-4. Mammal Species Richness (from Iowa GAP)**



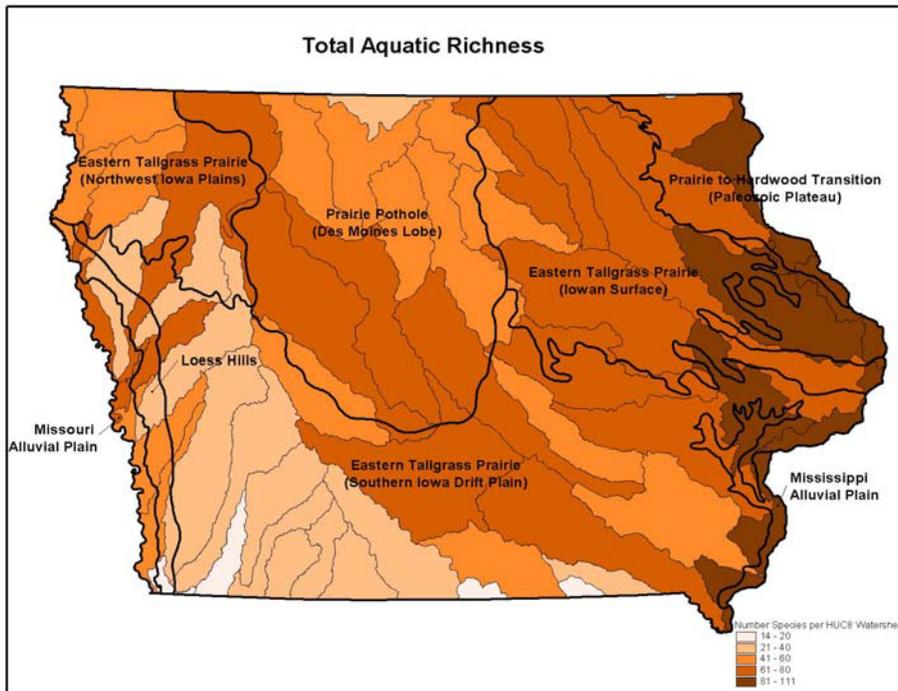
**Map 8-5. Reptile Species Richness (from Iowa GAP)**



**Map 8-6. Amphibian Species Richness (from Iowa GAP)**



**Map 8-7. Aquatic Species Richness (from Iowa Aquatic GAP)**



The exception to this pattern is the species richness of mammals (Map 8-4). Iowa GAP authors speculate that the concentration of mammal diversity in southwestern Iowa may be due to the influence of western species. Before fire suppression became widespread in the late 1800's, the Loess Hills were extensive grasslands (rather than today's forest) and probably represented the eastern extension of the range of several western species.

Iowa Aquatic GAP is being finished as this Plan is completed and can be used in future revisions to plot aquatic vertebrate species diversity. A preliminary map of 157 modeled species of aquatic vertebrates was provided to the Steering Committee for use in this version of the Plan (Map 8-7).

While these maps delineate general areas of species richness, much must be learned about the actual distributions and abundance of SGCN within these regions. Inventory and monitoring actions must take place before the needs of individual SGCN can be addressed (Chapter 7).

**Goal: Populations of SGCN will increase to viable levels**

To achieve this goal the second approach to habitat protection must be taken - creating new habitats for SGCN through land acquisition and management and by taking specific conservation actions designed to improve the status of SGCN that need more intensive assistance. This will take a combination of habitat protection, habitat management and scientific inventory and monitoring.

The habitat acquisition issues are discussed under the habitat vision goals below. The inventory and monitoring issues are discussed in Chapter 7. Once the distribution and abundance of SGCN are more fully understood, conservation actions can be tailored to their recovery. Specific habitat management prescriptions can be defined to assist key species, populations may need translocation to newly created habitats or to isolated tracts of existing habitat, connections may need to be developed between habitat blocks, etc.

**Goal: The abundance and distribution of wildlife will be balanced with its impact on the economic livelihood and social tolerance of Iowans.**

Past experience has shown that human social tolerance to wildlife must be cultivated and considered when implementing new conservation actions in a landscape dominated by private land. Expanding populations of white-tailed deer and giant Canada geese have created problems for citizens in some circumstances. Managing water levels on public wetlands during periods of

heavy rainfall have caused temporary but unacceptable flooding on adjacent private lands. Weed encroachment from public grasslands to private croplands also stirs controversy. Real or perceived, these problems need to be considered when implementing the conservation actions outlined in this Plan and steps taken to minimize impacts on neighboring landowners.

**Habitat Vision: Iowa will have healthy ecosystems that incorporate diverse, native habitats capable of sustaining viable wildlife populations.**

**Goal: By 2030, the amount of permanently protected wildlife habitat in Iowa will be doubled.**

Until recently land acquisition efforts in Iowa have been directed at purchasing the highest quality habitats available at the time funds were available. Too frequently this resulted in scattered small tracts of land that provided limited opportunity for biodiversity management, had little connectivity, and were difficult to manage logistically. Habitat blocks were too small to manage for more than one habitat class (e.g. grasslands or forest) on the area. If multi-species management was attempted the resulting habitat patches were too small to attract area-sensitive species. The recently developed Neal Smith National Wildlife Refuge is one notable example of a large-scale restoration (by Iowa standards) that is attempting to establish a functional tallgrass prairie ecosystem.

Since the 1980's habitat acquisitions have focused on the eventual development of major conservation areas of 3,000 - 5,000 acres in more or less continuous blocks. Experience has shown that areas of this size allow management for biodiversity between habitat classes and provide the ability to manage for multiple successional stages within one habitat class. This approach benefits multiple SGCN that need different successional stage on the same site or single species whose habitat needs change throughout the year. It also benefits game species that typically are more abundant in early successional stages as well as nongame. Partners-in-Flight has adopted a similar approach in designing Bird Conservation Areas.

Expanding existing large core conservation areas to the desired size should be given priority over work in smaller areas. Map 8-8 shows the location of existing habitat complexes of 2,000 acres or larger that are in public ownership that could reach the 3,000-acre threshold with comparative ease. These are permanently protected conservation lands owned by IDNR, county conservation boards, the federal government (USFWS - NWRs and WPAs, USACOE, NPS), the Nature Conservancy, Iowa Natural Heritage Foundation or protected under long-term federal WRP easements. Smaller scale maps of these public lands in each landform are shown in Appendix 19.



Land (or funding) is seldom available for acquisition in blocks of this size so initial purchases in a new geographical area should be screened for expansion potential. Conservationists working in target areas to acquire large tracts must exhibit patience. State government in Iowa has traditionally relied on willing sellers to acquire or protect land. Projects of this size can take a decade or longer to complete.

Map 8-8 also shows extensive areas of the state that do not have core habitat blocks to meet the habitat or recreation goals of this Plan. The western third of the Southern Iowa Drift Plain, the southern Loess Hills, the NW Iowa Plain and the southwestern portion of the Des Moines Lobe are notably devoid of these areas. Smaller geographic areas without permanently protected conservation lands can be found in all the other landforms as well.

Not all habitat protection efforts can be vested in acquiring large core blocks of habitat. Once the distribution of more SGCN is better understood, key smaller tracts of habitat may be identified that are required for the protection of exceptionally imperiled SGCN. Connectivity needs to be established between large core areas that are isolated from other tracts. A more dispersed approach may be needed to protect target watersheds and aquatic SGCN than concentrating efforts in one location. These decisions need to be made on a case-by-case basis.

Coordination with other wildlife and biodiversity conservation plans prepared by natural resource agencies and private conservation organizations should be a high priority. Prioritization criteria used by these organizations differ and may include different classes of species or different regional boundaries. Their cumulative site priorities are important in identifying significant locations for future habitat protection actions through partnerships (Maps 8-9 through 8-15).

The **Prairie Pothole Joint Venture** of the North American Waterfowl Management Plan is an effort by government agencies and conservation organizations to protect and restore waterfowl habitat within the Prairie Pothole Region of the United States and Canada. Existing and restorable wetland complexes within the Prairie Pothole Region of Iowa have been identified and are shown on Map 8-8. Although initially targeted at waterfowl species, emphasis within the Prairie Pothole joint Venture has been extended to nongame species as well. Research sponsored by IDNR and Iowa State University has demonstrated that a variety of birds and other SGCN have successfully re-colonized these restored habitats.

**Map 8-9. Prairie Pothole Joint Venture Priority Wetland Complexes**

