Chapter Eleven

Implementation Highlights

Introduction

The Wildlife Action Plan (Plan) serves as a guide for conservation efforts seeking to improve Iowa's ecosystems and the status of wildlife populations across the state. Many agencies, organizations, and private individuals in Iowa are dedicated to the goal of conserving wildlife, an effort that consistently requires cooperation among many stakeholders. This chapter highlights a small portion of the work being done in Iowa to ensure people will continue to enjoy Iowa's wildlife and their ecosystems for years to come. Chapter 6 outlines the larger vision for wildlife conservation in Iowa and the conservation actions required to achieve that vision. This chapter features efforts in Iowa that have applied that vision from words on a page to real actions that benefit wildlife.

Implementing the IWAP through Cooperative Natural Resources Management

Vision #1: Iowa will have viable wildlife populations by the year 2030

Conserving viable wildlife populations requires keeping common species common and increasing populations of Species of Greatest Conservation Need to self-sustaining levels. Information about the distribution and abundance of wildlife populations is crucial to these efforts so managers can focus their work on target species and ecosystems and understand the impact of their work. The Multiple Species Inventory and Monitoring Program and the Volunteer Wildlife Monitoring Program have arisen as tools to understand the distribution and status of wildlife throughout Iowa. When combined with long-standing survey methods for game species, the collective body of monitoring efforts allows managers to target help for populations that are in decline through specific habitat management and protection actions, as well as reintroduction of species, where appropriate.

The Multiple Species Inventory and Monitoring Program

MSIM Aquatic Surveys

The largest effort directed towards increasing knowledge about the status of Iowa's non-game wildlife is the Multiple Species Inventory and Monitoring (MSIM) program. Seasonal field technicians are employed each year through a partnership between Iowa State University and the Iowa Department of Natural Resources to survey for fish, mussels, crayfish, amphibians, reptiles, dragonflies, damselflies, birds, butterflies, and mammals, and to conduct habitat assessments across the state (see Chapter 7 for a more detailed description of the program). The MSIM program data collection was launched in 2006, has produced 20 years of data through 2025, and continues to inform wildlife experts on the status of Iowa's wildlife populations. This information helps ensure that conservation management is appropriate and effective. A few exciting records from the MSIM program have been the documentation of the extremely rare Olympia marble butterfly in 2014, the first state records of stream cruiser and spring time darner in 2012, and in 2024 the first documentation of the starhead topminnow in more than 85 years.

Citizen Science: The Volunteer Wildlife Monitoring Program

Iowans contribute directly to wildlife monitoring through the Volunteer Wildlife Monitoring Program. This program makes it possible to track a larger number of species than the Iowa Department of Natural Resources would be able to keep up with on its own, and is a meaningful way for Iowans to learn about and contribute to wildlife conservation. The DNR partners with citizens to help monitor frogs and toads, nesting bald eagles, peregrine falcons, ospreys, and bats.

Volunteer Wildlife Monitoring Program Training

Bolstering Iowa's Wildlife Populations through Relocation and Reintroduction

"Wildlife conservation programs have returned adaptable wildlife like deer and wild turkey to our forests, Canada geese and trumpeter swans to our wetlands, bald eagles and peregrine falcons to our skies, and river otters to our streams." - *IWAP Chapter 6*

Nesting Trumpeter Swans - Photo by Jayden Jech

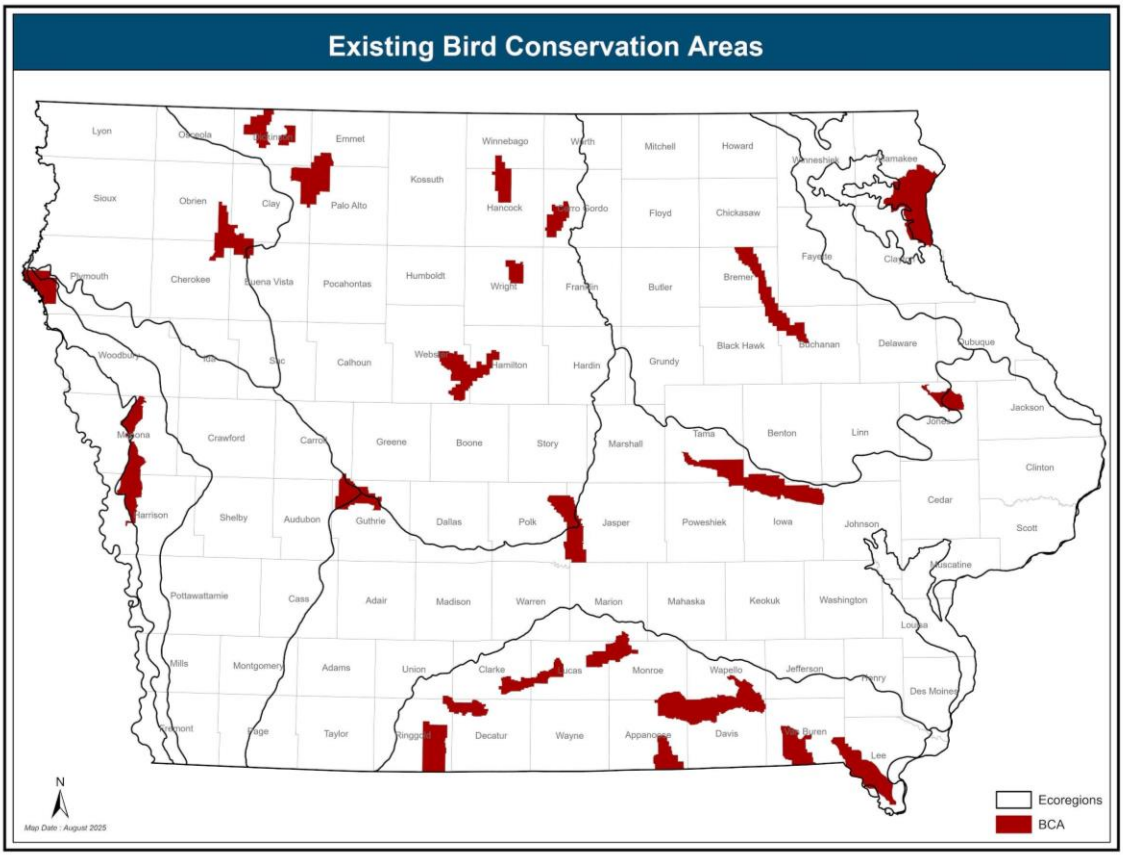
Efforts to restore wildlife populations through relocation and reintroduction have been going on in the state since the early 1900s. They began with game species and eventually expanded to non-game species as well. Since the 1990s, wildlife biologists at the Iowa DNR have partnered with other agencies, organizations, and motivated citizens to reintroduce or translocate trumpeter swans, greater prairie chickens, peregrine falcons, osprey, barn owls, Higgins eye pearly mussels, and pallid sturgeon. Some of these reintroductions were highly successful, such as the ever-growing and thriving population of breeding trumpeter swans seen around Iowa. The program has been so successful, in fact, that this Plan downlisted the once-extirpated swan to no longer be a species of conservation need in Iowa: a true conservation success story.

Vision #2: Provide healthy ecosystems that incorporate diverse, native habitats capable of sustaining viable wildlife populations.

The second vision of the Plan requires permanently protecting, restoring, and reconstructing habitat across the state. This goal could not be achieved without cooperation between natural resource agencies and non-government organizations to identify important habitat types, landscapes, and travel corridors in all regions of the state. Work has already been done to identify high opportunity areas for conservation actions. These areas are determined based on combined data from various conservation entities across the state on the regions that contain key habitat for wildlife. Prioritizing conservation efforts in those areas is important for providing essential ecosystems for wildlife. This information is also useful for providing private land owners with technical guidance on how to benefit wildlife on their land, which is especially important in Iowa, where the majority of the land is privately owned.

Iowa's Bird Conservation Areas

The Bird Conservation Area (BCA) program was established in 2001 by the Wildlife Diversity Program of the Department of Natural Resources as part of the North American Bird Conservation Initiative (NABCI). NABCI is a broad collective of national and international bird conservation efforts directed towards reducing the serious declines in North American avian species that have been observed over the last three decades. Although the BCA program was established before the Plan was written, it has been an exemplary mode of Plan implementation, serving to achieve multiple Plan goals.



There are no legal regulations that come with the establishment of a BCA. Rather, these places serve to encourage and focus protection in areas where birds and other wildlife are most likely to benefit. The BCA model is based on research suggesting that viable bird populations require habitat spread across a large landscape. Under this model, a BCA must be at least 10,000 acres in size, with a minimum area of 2,000 acres at the core being permanently protected. In addition to the core area, blocks of habitat greater than 40 acres need to be scattered throughout the complex. A portion of these blocks are on public land that is managed for bird habitat. Private pastures, easements, prairie remnants, and land that is idle, or land enrolled in a Conservation Reserve Program (CRP) can also help meet the habitat requirements within the BCA.

NABCI designated three bird conservation regions in Iowa: Eastern Tallgrass Prairie, Prairie Potholes, and Prairie-Hardwood Transition. Iowa now has at least one Bird Conservation Area in each of the three regions that serve to conserve woodland, savanna, wetland, and grassland habitats. Seven BCAs have been strategically positioned to extend up to a state border in order to encourage partnership with other states.

Stream restoration project

Stream restoration for freshwater mussels

Water quality is the focus of many conservation efforts in Iowa. People and wildlife, in Iowa and beyond, stand to benefit from the positive outcomes of programs and projects being implemented across the state that seek to improve water quality. Aquatic species are particularly vulnerable to poor water quality, and Iowa's declining mussel populations are one indicator of the need to implement practices that

improve Iowa's aquatic ecosystems. One example of work being done to improve water quality and aquatic ecosystems is a restoration project conducted from 2016 to 2021 through a cooperation among a private landowner, four county conservation boards, and the Iowa DNR in Clay, Dickinson, Lyon and Osceola counties. This project sought to benefit mussels using three different approaches. One approach was to create low areas along stream and river banks where floodwater can spread out and slow down, which helps reduce erosion and allows sediment to settle out of the water. Another was to place boulders in streams, which creates riffles that increase oxygen in the water, create space where mussels and their fish hosts can be protected during strong flows, and increase access to food. The third strategy was to add native prairie buffers along streams and rivers, which reduces erosion and nutrient run-off that negatively impact water quality. This project directly improved more than 50 acres of aquatic habitat for mussels and also included mussel releases and population monitoring.

Enhancing and expanding native prairies for butterflies

Regal fritillary

Iowa was once primarily covered in an abundant, diverse prairie. Restoring and reconstructing prairie ecosystems in Iowa benefits many different wildlife species and creates excellent opportunities for people to enjoy the beauty of Iowa's natural resources. Much of Iowa's wildlife specifically depends on prairie ecosystems to survive. Two examples of this are the monarch and the regal fritillary. Restoring prairie ecosystems in Iowa that benefit these two species requires ensuring that the milkweeds that monarch larvae eat and the violets that regal fritillary larvae eat are present among the many other prairie plants. In addition to plants for larvae, the adult butterflies need certain plants for nectar. There are many ongoing efforts to restore ecosystems that support pollinators in Iowa. One large-scale project that was done from 2017 to 2021 focused on improving existing prairies by removing trees, shrubs, and invasive plants and implementing prescribed fire to prevent the return of woody species. The project also focused on restoring and reconstructing additional prairies with a high diversity of native broad-leaved flowering plants, especially those that monarchs and regal fritillaries need. This project leveraged the Iowa DNR Prairie Resource Unit to grow birdfoot violets to be planted in the prairies. This project helped improve more than 5,900 acres of existing prairie, and 109 new acres of prairie were planted on public land. Private landowners are essential for the success of habitat restoration and management efforts. This project included one-on-one meetings with landowners in the focus area, and financial assistance was leveraged to support interested landowners who wanted to manage prairies on their properties. Over 350 acres of private land across 11 different properties were improved to support monarchs and regal fritillaries for this project.

Putting Iowa SGCN on the map

A collaboration between Iowa State University and the Iowa DNR used MSIM data and modern, sophisticated statistical procedures to create species distribution maps for more than 100 species of conservation concern across the state. As explored in Box 7.1 in Chapter 7, these maps can be combined to highlight hotspots of biological diversity across the state or leveraged by local land managers to understand species likely to benefit from conservation actions.

Vision #3: Develop diverse wildlife communities through science-based adaptive ecological management.

Sustaining the diversity of wildlife within the state requires managing a variety of native ecosystems. Prairie once covered over 80% of Iowa's landscape. Trees, shrubs, and wetlands were interspersed within the expanse of grassland, creating a wide variety of habitat that supported a huge diversity of wildlife. Now, less than 0.1% of this native prairie habitat remains and managers are working to recreate prairie ecosystems through a variety of restoration techniques. Land managers strive to create habitat diversity and connectivity across the state in order to provide high quality habitat and winter cover for many different species. This improves the survival and reproduction of species of conservation concern and helps increase local populations of wildlife. The management plans implemented across the state use methods that have been successful in the past to support healthy wildlife populations and also incorporate innovative approaches to solve ecological problems in a variety of ways.

Restoring native ecosystems is only one component of wildlife management. With much of the landscape being used for agriculture, it can be difficult for species to find areas that fit their specific needs. For instance, reptiles require places to hibernate through the winter and areas to bask during cool periods in order to regulate their body temperature. The Grand River Unit in southern Iowa repurposed a large pile of unused riprap at the headquarters in order to construct a snake hibernaculum and basking area. A long trench was dug and the riprap was placed in the trench. It was then covered with soil, leaving rock exposed to the south for the entrance and basking area. The snakes crawl in through the spaces in the rocks and make their way underground where they will be protected from freezing in the winter. A similar structure was built for snakes at McCoy Wildlife Management Area in Boone County Iowa and a turtle hibernaculum was created there as well. These structures were created based on designs provided by the Natural Resources Conservation Service which employs engineers to create a wide variety of designs for conservation efforts.

Another important component of land management is invasive species control. Invasive species tend to spread aggressively and take over an area. When this happens, they choke out native plants, reducing species diversity and making ecosystems less suitable for wildlife. Invasive plant species are often removed from an area through chemical sprays or mechanical approaches which include pulling plants by hand and mowing. These approaches have varying levels of effectiveness depending on the hardiness of the plants and the persistence of treatments.

Vision #4: More Iowans will participate in wildlife-associated recreation, and all Iowans will have access to publicly owned recreation areas to enjoy wildlife in its many forms.

Iowa continues to expand wildlife-associated recreation opportunities through land protection, programming, and maintaining public access to public land. Chapter 10 discusses the gains in public land holdings over the past 10 years. One example of a new public area is the Heritage Hills Wildlife Management Area (WMA), which started out as a 700-acre WMA in Warren County in 2019. About an hour drive from downtown Des Moines, this WMA has expanded to several units that span about 2,300 gently rolling acres in Warren, Clarke, and Madison counties. The managers emphasize restoration of remnant prairie, combatting encroachment of cedar trees into grassland areas, and controlling invasive species.

In an effort to provide useful information and resources for bird watchers, DNR consulted with a focus group to find out what the needs of the birdwatching community are. Having received guidance from that group that the existing DNR resources weren't all that useful and that the best place for DNR to focus its efforts is with beginning bird watchers, the Department compiled resources for novice bird watchers into a landing page that addresses the gaps identified by the focus group.

- DNR Birding webpage

Vision #5: Iowans will respect wildlife for its many values and they will advocate effectively for conservation of wildlife and wildlife habitats.

Providing opportunities for people to experience wildlife firsthand is one of the best ways to pique their interest in outdoor recreation and appreciate the benefits of having healthy and diverse wildlife populations. Getting people involved in outdoor activities also contributes to the state's economy and increases public health. Iowa has over 450 state-managed wildlife areas and numerous county wildlife areas, state forests, and other public areas across the state that are open to the public for hunting, wildlife viewing, and other outdoor recreation activities. The DNR website offers user-friendly, interactive maps of these areas to help people find public areas near their home or favorite vacation spot in the state. The many conservation efforts ongoing on private land also provide people with opportunities to enjoy Iowa's wildlife and native ecosystems right in their own backyard.

- DNR Public Hunting Atlas webpage
- DNR Private Landowner Assistance webpage

Vision #6: Stable, permanent funding dedicated to wildlife management at a level adequate to achieve plan goals

Chapter 6 states that in order to achieve this vision, there will need to be a marketing campaign to convince citizens, conservation professionals, activists, leaders, and lawmakers of the need to fund the plan. Although funding has never been dedicated to wildlife conservation at a level adequate to achieve plan goals, partnerships between agencies have

made many projects possible that could not be completed by any entity on its own. Two state based funding sources in Iowa for non-game wildlife are the income tax Chickadee Checkoff and natural resources license plates. At the national level, a few collaborative efforts including the Alliance for America's Fish and Wildlife and Recovering America's Wildlife Act (RAWA) have spotlighted the need for a solution to the problem of inadequate wildlife diversity funding.

The Chickadee Checkoff

The Chickadee Checkoff provides Iowans the opportunity to donate money directly to the Wildlife Diversity Program when they fill out their Iowa 1040 tax form. Although the Chickadee Checkoff was enacted in 1981, long before the publication of the Plan, the money that has been raised through this means has been used to benefit non-game wildlife and has contributed to Plan implementation since the Plan was formed. All of the money donated through the Chickadee Checkoff goes to the Wildlife Diversity Program and helps fund projects that help achieve Plan goals, such as wildlife research, monitoring and restoration, educational events about wildlife, and public land acquisition and management. Over the years, donations to the Chickadee Checkoff have declined. Efforts have been made to spread awareness about the existence of this important funding source for Iowa's non-game wildlife, including the design and distribution of Chickadee Checkoff posters. As an increasing number of people have turned to tax preparation services, the importance of tax preparers' awareness of this option on the tax form has increased. Therefore, members of the Wildlife Diversity Program of the Iowa Department of Natural Resources bring the posters to tax schools where tax preparers are trained, and discuss the importance of the Chickadee Checkoff with those attending the trainings. Postcards are also mailed to those who have donated in previous years, to thank them for their past donations and remind them about the Chickadee Checkoff as the next tax season approaches.

Natural Resources License Plates

Iowans can contribute to wildlife conservation in the state by purchasing one of several natural resources license plates. All of the proceeds from the initial purchase of the plate and the annual renewal fee provide funding for natural resources in Iowa. A portion of the funding is dedicated to the Iowa DNR Wildlife Diversity Program, which focuses on conserving nongame species. They leverage funding from license plates to conserve and restore native ecosystems, monitor threatened and endangered species, and provide public education on the diversity of wildlife that depend on Iowa's ecosystems. Funding from license plates also supports the Resource Enhancement and Protection (REAP) program, which supports county conservation boards, soil and water improvement, city parks and open spaces, preservation of cultural resources, conservation education programs, and other efforts that benefit Iowa's wildlife.

Conclusion

Iowa hosts thousands of vertebrate and invertebrate species in need of conservation and worthy of celebrating for the rich beauty and diversity they bring to our lives. Continuing to develop a diverse base of native ecosystems and movement corridors for wildlife is essential for the preservation of Iowa's wildlife populations. Maintaining Iowa's rich natural resource legacy also creates a wide variety of enjoyable recreational opportunities for Iowans and visitors alike, thereby improving public health and contributing to the state's economy. This chapter highlights just a few of the many projects that are being conducted across the state to preserve and restore Iowa's natural resources as well as provide opportunities for people to enjoy them. As implementation of the Iowa Wildlife Action Plan continues, more benefits will be seen across the state for wildlife as well as for the people who enjoy outdoor recreation and who value wildlife and wild spaces.