U.S. Fish & Wildlife Service

Wildlife and Habitat Management

The National Wildlife Refuge System is one of America's greatest conservation success stories. In its first hundred years, it helped save our national symbol, the American bald eagle, from extinction and has protected hundreds of other wild species—including—fish, migratory birds, and many other plants and animals and the habitats that support them.

On National Wildlife Refuges, wildlife comes first. All land within the National Wildlife Refuge System is managed toward a single goal: conserving and restoring the nation's fish and wildlife habitat. Each wildlife refuge has unique treasures and faces special challenges, however, and the mosaic of management approaches and conservation methods is as diverse as the lands themselves.

Controlling Invasive Species

Protecting native plants and animals on wildlife refuges often includes defending them against non-native species that have invaded their habitat, begun to thrive, and now threaten to take over. Invasive species may be attractive to the eye, but they can spell disaster for native species struggling to survive. Today, thousands of acres of natural areas are taken over by invasive species. Aquatic invasive plants such as hydrilla and water hyacinth choke our lakes and waterways. Kudzu in the Southeast, purple loosestrife in the Midwest, mile-a-minute vine in the Northeast, and yellow starthistle in the West are just a few examples of the hundreds of invasive plants of foreign origin that have been introduced in this country.

Biological control. Purple loosestrife is a plant—lovely enough to be imported from Europe as an ornamental—but it now runs rampant through the nation's ever-scarcer wetlands. It's nearly impossible to root out these weeds fast enough to keep them from choking precious wildlife habitat, and chemical treatment can cause more problems than it solves. Biologists at wildlife refuges around the country, including Shiawassee National Wildlife Refuge in Michigan, are now turning to biological control, releasing European beetles known to gobble up loosestrife.

Physical and chemical control. Water hyacinth is an aquatic plant that chokes ponds and open waterways, stopping the flow of water. Using a combination of chemical and manual processes, biologists are working to eradicate water hyacinth at California's Stone Lakes National Wildlife Refuge and many others across the United States.

Recovering Rare Species

Sometimes it is not enough simply to preserve existing habitat. Particularly for wild species on the verge of extinction, additional intervention may be needed. This can take many forms, including reintroducing wildlife into an area where it once thrived, or helping wildlife get a headstart on predators. More than 50 wildlife refuges have been acquired for the benefit of threatened and endangered species. In Florida, the Crystal River Refuge was established to protect gentle manatees, the Hakalau Forest Refuge protects colorful Hawaiian birds, and the Julia Butler Hansen Refuge supports Columbian white-tailed deer. Today, wildlife refuges provide homes for more than 250 endangered plants and animals.

Additional destinations for rare migratory birds. To establish a second migratory flock of whooping cranes and help ensure the long-term success of the species, some members of the last surviving flock were trained to migrate from Wisconsin to a second wintering ground in Florida, as others continued to head for their accustomed destination in Texas. Whooper chicks were introduced into a flock of sandhill cranes that followed an ultralight aircraft to Chassahowitzka National Wildlife Refuge in Florida. The next year, those same whooping cranes again followed the ultralight to Florida, this time as adults. This second flock of migrating whooping cranes will protect the species should a natural catastrophy occur in the birds' central range.

A headstart on predators. Staff at the Massasoit National Wildlife Refuge in Massachusetts collect tiny Plymouth redbelly turtle hatchlings and raise them for nine months before releasing them on the wildlife refuge. On a hearty diet provided by the wildlife refuge's biologists, the turtles quickly grow to adult size, making them less vulnerable to predators and giving them a better chance of surviving in the wild. Local schools and aquariums also get involved, raising turtles and releasing them into the shallow, muddy ponds they favor.

Land Management and Rehabilitation

Ensuring adequate and appropriate habitat is a critical part of managing wildlife. This includes restoring cultivated land to its original wild state, reclaiming blighted or contaminated land, and managing both the destructive and generative aspects of fire to benefit wildlife and the habitat that supports it.

Restoring tallgrass prairie. Native prairie, which once covered most of the midwestern United States, now is America's most endangered ecosystem. In Iowa, where 99.9 percent of the original prairie landscape has been replaced by farmland, the Neal Smith National Wildlife Refuge is returning about 8,000 acres of cornfields to prairie and oak savannas. Collecting rare prairie and savanna seeds from graveyards and roadsides, they have sown, nurtured, burned, harvested, and replanted—creating a rolling sea of tallgrass where bison and elk roam once more.

From weapons to wildlife. Formerly a chemical weapons manufacturing facility owned and operated by the Army, Rocky Mountain Arsenal National Wildlife Refuge is being cleaned up and transformed into a shortgrass prairie teeming with wildlife. Visitors driving through the blossoming landscape see a thriving deer herd and cavorting prairie dogs within sight of the Denver skyline.

Fire Management

Fire is a vital consideration on every wildlife refuge. Recognized as a unique ecological process that shapes wildlife habitat structure and function, fire is managed and used by wildlife refuges to further their mission of protecting wildlife and habitat. While the most popular element of fire management is fighting the fires that threaten wildlife and people, prescribed burning is vital to the maintenance of healthy wildlife habitat.

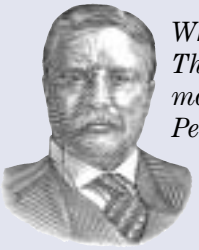
Prescribed burning on wildlife refuges dates back to the 1920s, when biologist Herbert Stoddard reported on his research into the relationship between fire and bobwhite quail in *The Bobwhite Quail, Its Habitats, Preservation, and Increase*. Since that time, wildlife refuges have used prescribed burning to maintain habitat needed for the bobwhite and many other species of wildlife. During the 1930s, when other agencies stopped burning programs because of the notion that all fire was "bad," some wildlife refuges quietly continued prescribed burning. The National Wildlife Refuge System has been recognized by other agencies as a pioneer in developing and implementing scientifically based prescribed fire plans for managing habitat and protecting wildlife.

Refuge personnel even help their neighbors manage fire by entering into prescribed burning agreements with land owners adjacent to or within a refuge. Depending on the specific situation and available resources, such agreements may consist only of informal fire planning and implementation advice or may include designing and funding a project.

Law Enforcement

Safeguarding the National Wildlife Refuge System and its visitors is the responsibility of more than 600 refuge law enforcement officers. Beginning with the first officer at the first refuge, refuge officers have a long history of ensuring the safety of nearly 40 million visitors that come to refuges each year. Protecting wildlife from poachers and preventing the defacing of our historic treasures are just some of the things refuge officers do to ensure that visitors enjoy their time on refuges. But with a growing population and social change, refuge officers face considerable challenges. To keep pace with the changes, officers begin their careers with more than 28 weeks of intense natural resource enforcement training. Refuge officers are schooled in defensive tactics, firearms, behavioral sciences, and safety and survival skills. The training prepares refuge officers to handle special situations such as public safety, and search and rescue. Refuge officers handle more than 20,000 cases each year protecting the National Wildlife Refuge System's visitors and resources.

America's Best Kept Secret



When President Theodore Roosevelt made Florida's tiny Pelican Island a refuge for birds in 1903, he wrote the first chapter of a great American conservation success story. And the story of safeguarding America's migratory birds, endangered species, and other wildlife keeps getting better and better. Entering its second century, the National Wildlife Refuge System comprises 95 million acres, protected within more than 535 refuges and thousands of small prairie wetlands that serve as waterfowl breeding and nesting areas. There are wildlife refuges in every state, and at least one within an hour's drive of every major American city, providing much-needed refuge for people as well as wildlife.

The U.S. Fish and Wildlife Service is a Federal agency whose mission, working with others, is to conserve fish and wildlife and their habitats for the continuing benefit of the American people. Under the management of fish and wildlife professionals, the National Wildlife Refuge System has become the world's premier network of wildlife habitats.

U.S. Department of the Interior
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