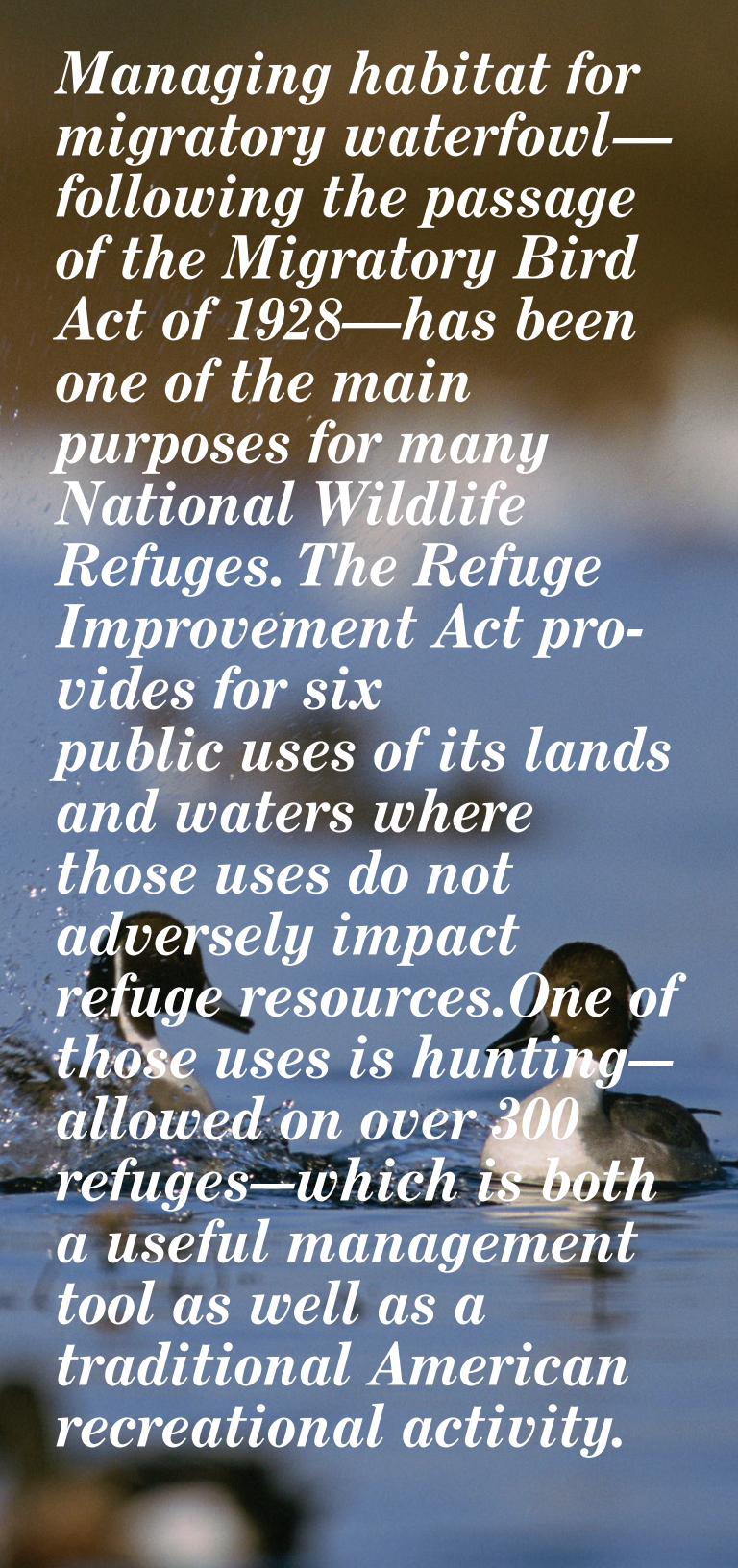
U.S. Fish & Wildlife Service

Refuges, Flyways and Migratory Waterfowl

Photo: Northern Pintail Flock USFWS/ Gary Kramer

Cover Photo: Chincoteague National Wildlife Refuge USFWS/Steve Hillebrand



Managing habitat for migratory waterfowl—following the passage of the Migratory Bird Act of 1928—has been one of the main purposes for many National Wildlife Refuges. The Refuge Improvement Act provides for six public uses of its lands and waters where those uses do not adversely impact refuge resources.One of those uses is hunting—allowed on over 300 refuges—which is both a useful management tool as well as a traditional American recreational activity.

Introduction

National wildlife refuges around the country provide important hunting opportunities for waterfowl hunters. In many parts of the country, refuges are premier hunting destinations for both local and out-of-state hunters. Whether or not you hunt waterfowl on a National Wildlife Refuge, undoubtedly, the ducks and geese you hunt have spent a part of their life cycle on a refuge. They may have been hatched or reared on a Waterfowl Production Area or national wildlife refuge. Or they may have stopped to rest and refuel at one of the refuges strategically located along one of the four flyways during their annual spring and fall migrations. Or maybe they use a refuge on the wintering grounds to rest, feed and establish pair bonds before heading back north to start the cycle all over again. All species of ducks, geese and swans have unique preferences for nesting, migration and wintering habitats. Collectively, they need food, cover and water in order to survive.

Conscience Point
National Wildlife Refuge
USFWS/Hollingsworth

The Life Cycle of Waterfowl and the National Wildlife Refuge System

Nesting

The annual cycle for waterfowl begins each spring on the traditional nesting grounds of the United States and Canada. Each year, waterfowl hunters eagerly await word of the conditions on the breeding grounds for ducks, geese and swans knowing that good nesting conditions can lead to a memorable waterfowl season.

Blue-winged teal brood, J. Clark Salyer NWR USFWS/John and Karen Hollingsworth.

The U.S. Fish and Wildlife Service provides for this important habitat need by managing its Refuge System, including its component Waterfowl Production Areas. These Areas preserve wetlands and grasslands critical to waterfowl and other wildlife. Nearly 95 percent of Waterfowl Production Areas are located in the prairie pothole areas of North and South Dakota, Minnesota, and Montana. Other key states are Michigan, Nebraska, Wisconsin and Iowa. To date, there are 2,996 of these areas covering 668,000 acres.

The entire National Wildlife Refuge System plays an important role in providing waterfowl breeding habitat from Maine to the Prairie Pothole Region to California and Alaska. The main purpose for many of the national wildlife refuges is to manage habitat to benefit migratory birds, particularly waterfowl.

Another tool the Service uses to benefit waterfowl is conservation easements on private lands. These easements and National Wildlife Refuges account for less than two percent of the landscape in the Prairie Pothole Region, yet they are responsible for producing nearly 23 percent of the area's waterfowl. Just as important, Service staff work extensively with private landowners through voluntary partnerships that enhance private lands for waterfowl and other wildlife.

Migration

The annual waterfowl migrations, both spring and fall, are one of the most amazing spectacles in nature. Driven by changing weather conditions and the search for food, certain species of waterfowl will migrate thousands of miles, stopping only briefly to rest and replenish their nutrient reserves. Others migrate more slowly and have longer stopovers en route. Yearly variation in weather and food supplies will greatly affect these migration patterns.

Largely because of the success of early banding programs, it became possible in the early 1930s to map the main migration corridors or flyways, used by waterfowl on their annual fall migration (see map on last page). Utilizing the concept of these four flyway corridors—Atlantic, Mississippi, Central and Pacific—the Service and its partners in the states, Canada and many conservation organizations, have built the world's best waterfowl management program.

Along the north-south corridors that make up the flyways, national wildlife refuges dot the landscape. Along those corridors over the past 75 years, the Service has strategically established many of its refuges and all of its Waterfowl Production Areas to help meet widely held waterfowl conservation goals.

Snow Goose
USFWS/Hollingsworth.

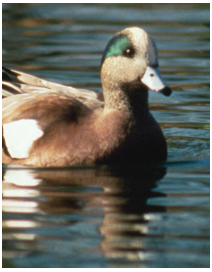
Photos (right)
Top
USFWS/
Pat Hagan

Bottom:
Mallard ducks
USFWS/Erwin
and Peggy Bauer

Wintering

Wintering habitat is just as important to the life cycle of waterfowl as are breeding and migration habitats.

The Service uses the Refuge System as a foundation for waterfowl management at the southern end of the flyways to provide wintering habitat for migrating ducks and geese. Along with Joint Ventures, which are public-private partnerships that have conserved nearly 5 million acres of wetlands, the Service uses its refuges in a variety of ways to achieve the greatest benefit for this resource.



American wigeon
USFWS/Steve Farrell

Refuge managers use a variety of management techniques for both migration and wintering habitats.

On some refuges, crops are planted to supplement naturally occurring waterfowl foods. These crops help provide high energy foods to allow migrating waterfowl to withstand the rigors of migration and to prepare for the spring journey to their nesting grounds. Many of these planted crops help prevent migrating and wintering waterfowl from depredating commercial crops on nearby privately owned farmlands. None of the refuges supplement planted crops by dumping or scattering grain or corn.

Another tool used by wildlife managers to provide food to waterfowl is moist soil management. This technique uses water manipulation and carefully timed soil disturbance to produce natural foods,

like wild millet, smartweed, nutgrass, and other sedges for wintering waterfowl. By timing the flooding and distribution of these areas, refuge managers can provide these important natural foods for use by migrating and wintering waterfowl over a long period.

A feature prevalent to refuges is closed areas. Closed areas allow waterfowl the opportunity to feed and rest without disturbance. Resting and feeding are vital to meet the requirements of migrating and wintering waterfowl. In addition, closed areas provide opportunity for molting, preening, pair bonding and fat storage—all of which help build healthier and bigger waterfowl populations. Closed areas also help maintain regional populations of waterfowl in and around refuges, providing hunting opportunity on nearby private land as well as the refuge. State wildlife agencies and many private clubs also use this method of improving hunting success on lands they manage.

Canada geese, Blackwater National Wildlife Refuge USFWS/Shallenberger

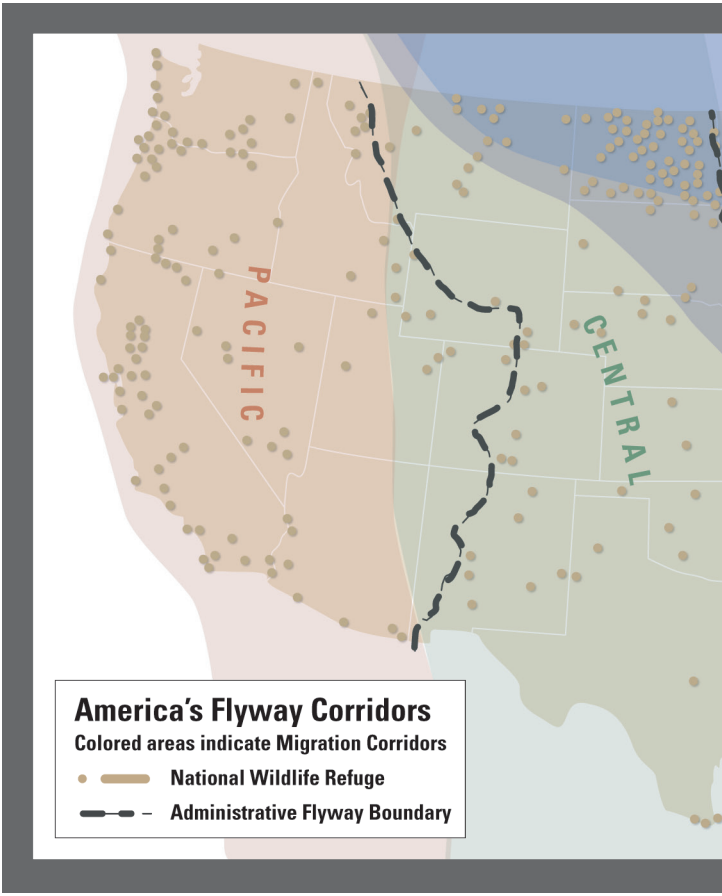
The value of closed areas would decline if they were moved around. Closed areas are selected for habitat values. Once selected, closed areas are signed, the public is notified, and refuge officers enforce the closure. When working with multiple species of waterfowl and other wildlife, rotating closed areas would reduce the effectiveness of a closed area as a waterfowl management practice, and also result in a decline of overall hunting opportunity on the refuge and surrounding private lands.

Conclusion

The U.S. Fish and Wildlife Service manages most of the national wildlife refuges to meet the critical needs of waterfowl. These refuges are vital to accomplishing the mission of ensuring healthy and sustainable waterfowl populations into the future. In turn, refuges provide sportsmen and women with quality waterfowl hunting opportunities.

Weather is cyclical, so are waterfowl populations. Weather is one of the main factors that drive waterfowl migration.

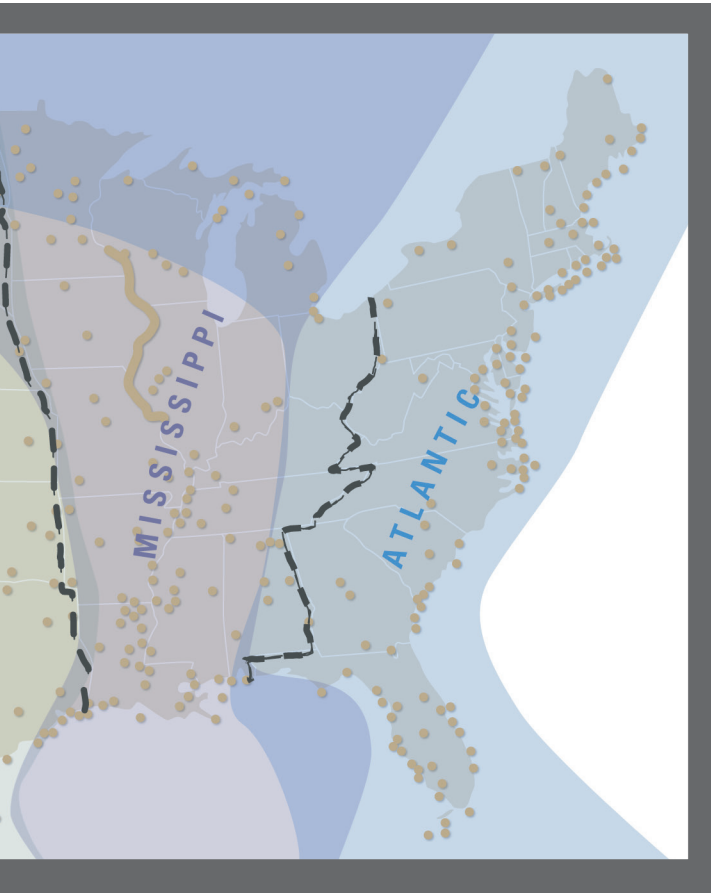
Closed, cropped and moist-soil managed areas on refuge lands account for a very small percent of total waterfowl habitat in the United



States. Given all the habitat on private lands, the Service appreciates all its partners, public and private, that help insure future healthy populations of waterfowl.

If you haven't visited a refuge, the Service encourages you to do so soon to learn more about the National Wildlife Refuge System and the role it plays in conserving waterfowl and other wildlife for all Americans to enjoy.

For more information please visit our web site at http://www.fws.gov or call 800/344 WILD.



There are more than 540 refuges in the National Wildlife Refuge System. More than 300 of these units are open to hunting.

For more information on refuges that are open to hunting; please see <http://hunting.fws.gov>.

For more information on migratory bird management, including nesting and breeding surveys, hunting regulations and population status, please see http://migratorybirds.fws.gov

May 2010

Item FW 2005