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13.2.2. The North American Waterfowl Management Plan: A New Approach to Wetland Conservation

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The decline of waterfowl populations and the loss of wetlands are high-ranking environmental concerns in North America. The importance of these issues is reflected in an ambitious wetland recovery plan, the North American Waterfowl Management Plan. Signed in 1986 by the U.S. and Canadian federal governments, the plan features specific strategies to reverse the declines in waterfowl numbers and wetland acreage. The goal is to restore waterfowl populations to a level common to the 1970's by improving and securing long-term protection of 6 million acres (2.4 million ha) of habitat in 34 areas of major concern.

The key to achieving this goal is partnerships: federal, state, provincial, territorial, and tribal governments joining forces with private conservation organizations and individuals. Early on, it was clear to authors of the plan that securing habitat for waterfowl would also yield benefits for a wealth of other wildlife and plants. Partners in the



plan looked beyond the protection of individual wetlands and single-species management to integrated management of ecosystems on public and private land.

More recently, national programs such as the North American Wetlands Conservation Act, major agricultural legislation, and agreements with Mexico stimulated new ways of approaching the challenge. Recognizing that objectives have increased since 1986 and that benefits to species other than waterfowl could be more explicitly addressed, the North American Waterfowl Management Plan Committee in 1992 initiated a process to update the plan. The update will reflect a thorough evaluation of the implemented plan. In this paper, we describe the current status of the plan, including accomplishments, benefited species, and plans for future projects.

North American Wetlands Conservation Act

The North American Wetlands Conservation Act, passed in 1989, provides matching grants to public-private partnerships for protecting and managing wetland habitats in North America. A key component of the legislation is "... to sustain an abundance of waterfowl and other migratory birds consistent with the goals of the North American Waterfowl Management Plan" Proposed projects by partners in Canada, Mexico, and the United States are ranked for their

potential benefits to wetland functions and for their ability to further the national and international goals of the plan. All projects must have at least a one-to-one match of non-federal U.S. dollars. Ducks Unlimited, Inc., the National Fish and Wildlife Foundation, and The Nature Conservancy have been primary sources of these matching dollars. A nine-member council appointed by the Secretary of the Interior recommends projects for approval of funding to the Migratory Bird Conservation Commission. The North American Waterfowl and Wetlands Office of the U.S. Fish and Wildlife Service then administers the projects.

Wetland creation, restoration, and acquisition are in all stages of implementation in the United States and Canada. Money appropriated under this act is also supporting conservation education in Mexico, designed to teach people in local communities the importance of wetlands to migratory birds and to other wetland-dependent wildlife and fishes.

Habitat Joint Ventures

The joint venture concept is based on the development of partnerships to meld resources for maximizing financial, organizational, and other in-kind support toward a common objective in a geographic region. A separate management board establishes priorities and direction for each joint venture, while participating federal, provincial, state, and private partners work through state steering committees to carry out projects at the local level. Although each joint venture has different strategies for accomplishing its stated objectives, all depend on multiple partnerships to protect, restore, and enhance targeted habitats.

Atlantic Coast Joint Venture

Scope: Extends from Maine to South Carolina; habitats range from freshwater inland and coastal marshes to estuaries and adjacent upland ecosystems.

Purpose: To provide habitat protection for fishes, shellfishes, mammals, waterfowl, shorebirds, songbirds, and raptors; initially focused on the American black duck. Coastal habitats were destroyed or degraded by commercial and agricultural industrialization.

Progress: Partners in New Jersey are building a bioserve to connect protected public and private

lands into an unfragmented tract for the survival of a unique diversity of animals and plants, including the largest known concentration of the sensitive joint vetch. The bioserve will also provide protection for migrating neotropical birds and nesting bald eagles.

Major Partners: Natural Lands Trust; New Jersey Division of Fish, Game, and Wildlife; New Jersey Green Acres Program; New Jersey Waterfowl Stamp Committee; The Nature Conservancy; and U.S. Fish and Wildlife Service.

Central Valley Joint Venture

Scope: The Central Valley of California where about 60% of the waterfowl in the Pacific Flyway spend the winter. The area is also the sole wintering ground for the endangered Aleutian Canada goose.

Purpose: To protect upland and wetland habitat for 55% of the species listed as threatened or endangered in California. Nearly 95% of the original wetlands in this part of California have been lost, primarily to agricultural drainage. This joint venture will provide additional winter habitat for northern pintails and other waterfowl to help disperse the birds and reduce potential threats from disease.

Progress: Secured 14,000 acres (5,666 ha) at Llano Seco Rancho, one of the largest unprotected parcels of riparian forest and wetland remaining in California's Central Valley.

Major Partners: California Department of Fish and Game; Dow Chemical Company; Ducks Unlimited, Inc.; National Fish and Wildlife Foundation; Parrott Investment Company; The Nature Conservancy; and U.S. Fish and Wildlife Service.

Eastern Habitat Joint Venture

Scope: Encompasses portions of Ontario, Quebec, New Brunswick, Nova Scotia, Newfoundland, and Prince Edward Island. Its focus is on coastal marshes, interior wetlands, and farmland wetlands.

Purpose: To protect 617,000 acres (249,700 ha) of habitat for breeding, staging, and migrating American black ducks, mallards, ring-necked

ducks, wood ducks, green-winged teals, and sea ducks as well as Canada geese, snow geese, and shorebirds.

Progress: Improving the quality of wetlands through vegetation management and installation of water-control structures. Partners are seeking agreements with landowners to leave green belts and trees with cavities and to manage beaver impoundments. Special private land programs will affect the management of another 3.9 million acres (1.6 million ha).

Major Partners: Agriculture Canada; Canadian Wildlife Service; Ducks Unlimited, Canada; Ducks Unlimited, Inc.; the provinces of Ontario, Quebec, New Brunswick, Nova Scotia, Newfoundland, and Prince Edward Island; U.S. Fish and Wildlife Service; and Wildlife Habitat Canada.

Gulf Coast Joint Venture

Scope: The coastal area bordering the Gulf of Mexico from Texas to Alabama, one of the most important sites for wintering waterfowl in North America.

Purpose: To protect coastal marshes and wetlands and associated uplands that are habitat for wintering waterfowl, endangered whooping cranes, peregrine falcons, and five species of sea turtles; to protect additional habitat for wintering mallards and northern pintails and to increase the carrying capacity for birds on already acquired lands and water. Implementation of this joint venture will also benefit numerous species of fishes, shellfishes, migrating shorebirds, and other wildlife.

Progress: Enhancing and restoring 23,000 acres (9,308 ha) of permanent and seasonal wetlands under 10-year agreements with private landowners on more than 600 sites in Texas, Louisiana, and Mississippi. Much of the habitat gains will be on actually farmed lands. The remaining acreage will be restored palustrine emergent and forested wetlands.

Partners: More than 100 landowners; state agencies; and U.S. Fish and Wildlife Service.

Lower Great Lakes/St. Lawrence Basin Joint Venture

Scope: Wetlands along the Lower Great Lakes and the St. Lawrence Basin in Vermont, New York, Pennsylvania, Ohio, and Michigan.

Purpose: To protect habitat of breeding and migrating birds by restoring privately owned

wetlands and enhancing federal- and state-owned areas.

Progress: The Ohio Division of Wildlife is leading the restoration of 5,200 acres (2,104 ha) of freshwater coastal marshes and estuaries along the Lake Erie shores. The division also plans to create 1,300 acres (526 ha) of wetlands and enhance 2,600 acres (1,052 ha) of state-owned waterfowl habitat.

Major Partners: Ducks Unlimited, Inc.; Ohio Division of Wildlife; Pennsylvania Game Commission and other state agencies; The Nature Conservancy; and U.S. Fish and Wildlife Service.

Lower Mississippi Valley Joint Venture

Scope: Encompasses sections of 10 states: Oklahoma, Texas, Missouri, Arkansas, Louisiana, Illinois, Indiana, Kentucky, Tennessee, and Mississippi. Most mid-continent waterfowl, especially mallards, winter in this area, which is also habitat for songbirds, shorebirds, wading birds, furbearers, reptiles, and invertebrates.

Purpose: To protect 300,000 acres (12,141 ha) of habitat in the Lower Mississippi River Valley and enhance 1.6 million acres (0.6 million ha) of additional habitat for wintering mallards and northern pintails, to increase the carrying capacity for wintering birds on land and water already acquired for waterfowl, and to provide higher quality habitat for other wetland wildlife.

Progress: Partners are compensating farmers for adopting conservation-farming practices and are sharing costs of water-control structures that benefit wildlife while improving soil and water conservation.

Major Partners: Ducks Unlimited, Inc.; state conservation agencies; private landowners; National Fish and Wildlife Foundation; The Nature Conservancy; and U.S. Fish and Wildlife Service.

Pacific Coast Joint Venture

Scope: Stretches from northern California to the Skeena River in British Columbia. This is the first joint venture with habitat in both the United States and Canada; the targeted area consists largely of islands, estuaries, freshwater wetlands, and agricultural lands on the floodplains of the creeks and rivers.

Purpose: Habitat protection sought by the United States for three birds of concern to both countries—the lesser snow goose, the black brant, and the trumpeter swan. Emphasis in Canada will also be placed on these birds as well as on the large

wintering and migrating populations of mallards and northern pintails. Shorebird habitats will be protected in the process.

Progress: Since inception of this joint venture in 1991, 20,000 acres (8,094 ha) of habitat affected at a cost of more than \$42 million.

Major Partners: Ducks Unlimited, Inc.; The Nature Conservancy; states.

Playa Lakes Joint Venture

Scope: More than 25,000 shallow basins known as playas scattered over the southern high plains in Colorado, Kansas, Oklahoma, Texas, and New Mexico. Playa lakes provide important habitat for migrating and wintering waterfowl and other migratory birds in the Central Flyway.

Purpose: To ensure adequate habitat (land and water) for breeding, migrating, and wintering waterfowl and other migratory birds through land acquisition and management.

Progress: Oklahoma Department of Wildlife Conservation received deed on a playa in Texas County in December 1991; will manage area for waterfowl and other migratory birds. In Kansas, easements to flood playas are in effect with five landowners. The Playa Lakes Joint Venture received recognition by President Bush in the first annual President's Environmental and Conservation Awards in October 1991.

Major Partners: Landowners joined in partnership with the National Fish and Wildlife Foundation, Phillips Petroleum, all five state wildlife agencies, The Nature Conservancy, and U.S. Fish and Wildlife Service. Because more than 99% of the playa lakes are privately owned, partnerships are critical to management of these unique wetlands.

Prairie Habitat Joint Venture

Scope: Prairie and parkland regions of Manitoba, Saskatchewan, and Alberta, which provide the continent's most important breeding areas for the mallard, the northern pintail, the blue-winged teal, other prairie ducks, and shorebirds and wading birds.

Purpose: To protect and enhance about 3.6 million acres (1.5 million ha) of habitat for breeding waterfowl and to preserve wetlands and improve the surrounding upland acres by planting nesting cover.

Progress: Prairie CARE (Conservation of Agriculture, Resources, and the Environment) programs used in the three provinces. Prairie CARE pays farmers to set aside parcels of land as natural habitat or to change management practices. The program also provides financial and technical assistance to farm and conservation associations for field demonstrations, allowing farmers to experiment with new farming methods, such as stubble mulching, fall seeding, direct seeding, and rotational grazing, without financial risk.

Major Partners: Canadian Wildlife Service; Ducks Unlimited Canada; provinces of Alberta, Manitoba, and Saskatchewan; and U.S. Fish and Wildlife Service.

Prairie Pothole Joint Venture

Scope: The prairie pothole region, including some 300,000 square miles from south-central Canada to the north-central United States. Although widely known for its excellent habitat for breeding ducks, the region also supports about 225 other species of birds, including endangered species, and small mammals, fishes, and reptiles.

Purpose: To protect and improve breeding habitat in the mid-continent at a ratio of 3 acres of upland nesting cover/acre of water. During the last 50 years, much of this vital habitat has been lost to increased agricultural production and drainage.

Progress: Partners are developing incentives for landowners who restore wetlands, alter grazing systems, delay hay-cutting to spare nests, cooperate on predator control, and practice no-till or minimum-till cultivation. The joint venture is accomplishing its goals through existing agricultural programs and education.

Major Partners: Ducks Unlimited, Inc.; National Audubon Society; National Wildlife Federation; five state fish and game departments; The Nature Conservancy; U.S. Fish and Wildlife Service; and Wildlife Management Institute.

Rainwater Basin Joint Venture

Scope: The Rainwater Basin of south-central Nebraska, which includes parts of 17 counties in the state that are critical habitat during spring and fall migration for millions of geese and ducks.

Purpose: To protect 9,000 acres (3,642 ha) of existing wetlands, restore or create an additional 15,000 acres (6,070 ha), and provide reliable water sources for at least one-third of protected wetlands. These areas have been severely degraded by agricultural operations over the years.

Progress: Recently formed joint venture in process of identifying restoration projects and forging partnerships. So far, the U.S. Fish and Wildlife Service has improved 560 acres (227 ha) of managed wetlands and indirectly benefited the entire 1,163 acres (471 ha) of wetlands on its Funk Lagoon Waterfowl Production Area in Phelps County, Nebraska.

Upper Mississippi River/Great Lakes Region Joint Venture

Scope: Boundaries stretch over Minnesota, Iowa, Missouri, Wisconsin, Illinois, Indiana, and Michigan; include important migration and staging areas that were converted to agriculture.

Purpose: To increase populations of waterfowl and other wetland wildlife by protecting, restoring, creating, and enhancing wetlands and associated upland habitats.

Progress: Partners are striving to increase public awareness through information and education and are providing incentives to private landowners.

Partners: Private landowners; National Fish and Wildlife Foundation; state agencies; and U.S. Fish and Wildlife Service.

Species Joint Ventures

In contrast with habitat joint ventures, which direct efforts to projects on the ground, species joint ventures were established to address critical information gaps for several species. This information is used to identify necessary research and monitoring, to assign priorities from a continental perspective, to promote and encourage funding and participation in priority research, and to facilitate timely dissemination of information.

Arctic Goose Joint Venture

Several species of geese nest primarily in arctic North America where research and monitoring are difficult and costly. As a result, knowledge of the

distribution, productivity, and other life-history factors of geese that nest in the arctic is limited. The goal of this international joint venture is to facilitate research and monitoring of these geese throughout their range and to improve communication among all partners. Attention is focused on subspecies of the brant, the greater white-fronted goose, the Canada goose, and the snow goose.

Black Duck Joint Venture

The American black duck, once the most abundant freshwater duck in eastern North America, reached a population low in the 1980's after a 30-year decline. Habitat loss, competition with mallards, hunting mortality, and a myriad of other problems contributed to this decline.

The charge of the Black Duck Joint Venture is to coordinate and promote data gathering—surveys, banding, and research—among flyway councils, universities, and federal, provincial, and state conservation agencies to improve population and habitat management. The gathered information will assist the existing habitat-based joint ventures that are central to the historic habitat of the American black duck.

What is in Store for the North American Plan

In January 1992, the North American Waterfowl Management Plan Committee endorsed a comprehensive evaluation to ensure that the habitat management programs are achieving the goals and objectives of the plan. The evaluation will include tracking of accomplishments, monitoring of habitat and population responses, assessing whether ventures are sufficiently extensive and appropriate, and providing information to guide further implementation. Research scientists have a major role in the evaluation.

To meet the challenges of wetland loss requires a shared vision and commitment among a multitude of partners for protecting, restoring, and enhancing critical habitat that supports wetland wildlife. These collective commitments will ensure that the natural areas needed by a diversity of wildlife will be preserved.

Appendix. Common and Scientific Names of the Birds and Plant Named in the Text.

Birds

Wood duck	<i>Aix sponsa</i>
Northern pintail	<i>Anas acuta</i>
Green-winged teal	<i>Anas crecca</i>
Blue-winged teal	<i>Anas discors</i>
Mallard	<i>Anas platyrhynchos</i>
American black duck	<i>Anas rubripes</i>
Greater white-fronted goose	<i>Anser albifrons</i>
Ring-necked duck	<i>Aythya collaris</i>
Brant	<i>Branta bernicla</i>
Black brant	<i>B. b. nigricans</i>
Canada goose	<i>Branta canadensis</i>
Aleutian Canada goose	<i>B. c. leucopareia</i>
Snow goose	<i>Chen caerulescens</i>
Lesser snow goose	<i>C. c. caerulescens</i>
Trumpeter swan	<i>Cygnus buccinator</i>
Peregrine falcon	<i>Falco peregrinus</i>
Whooping crane	<i>Grus canadensis</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>

Plant

Sensitive joint vetch	<i>Aeschynomene virginia</i>
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Note: Use of trade names does not imply U.S. Government endorsement of commercial products.



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