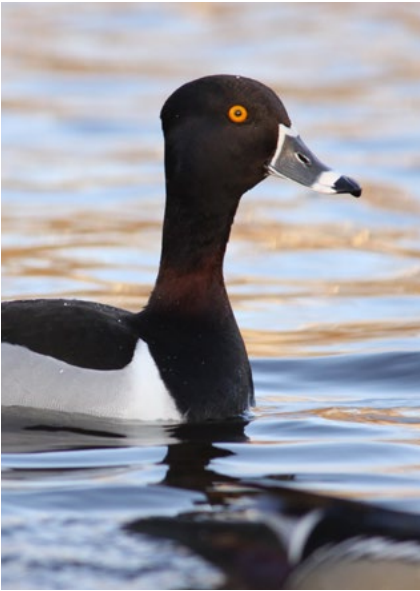


DUCK ACTION PLAN

2020–2023



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Wetlands provide critical habitat for ducks, filter sediment and store floodwater.

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Executive Summary

Conservation of ducks and the diverse mix of wetland, grassland and forest habitats they need is important for many reasons. Duck populations provide recreational opportunities for hunters and birdwatchers. Duck habitat supports many other species and provides floodwater storage, groundwater recharge, carbon storage and sediment filtration that improve the quality of life of all Minnesotans.

To achieve these benefits, the Minnesota Department of Natural Resources (DNR) developed a new, four-year Duck Action Plan. The plan will help the DNR focus strategic funding and conservation efforts, enhance and develop partnerships, and foster Minnesotans' stewardship of duck populations and habitats. It identifies the DNR's goals, objectives and strategies to implement during the next four years, and identifies strategic issues that influence duck conservation. The scope includes both ducks that breed in Minnesota and those that stop in Minnesota during migration.

The DNR's Role

The DNR strives to be a forward thinking leader for duck management in Minnesota. Implementing this plan will involve dedication and commitments to collaborative work with conservation partners, including support for their work with landowners because private land stewardship is critical for the conservation of ducks and their habitat. The DNR will be a leader, partner and active participant on the national stage because waterfowl are a continental resource. The DNR also will continue to commit to management, research and monitoring in accordance with the department's mission.

In Minnesota, for both breeding and migrating duck populations, the DNR's goals are to:

1. Increase the amount of wetland and grassland habitat for ducks.
2. Maintain and enhance wetland, grassland and forest habitats for ducks.
3. Increase opportunities for and participation in outdoor recreation related to ducks and their habitats.
4. Increase public awareness and appreciation of wetland conservation for ducks and people.

In addition to working closely with partners to implement this plan, the DNR will report progress and successes using specific performance measures identified in the plan.



Minnesota provides important migratory habitat for many ducks that nest outside the state.

Introduction

Duck Management Vision for the Future

Abundant duck populations and habitat in Minnesota provide excellent duck hunting and wildlife viewing opportunities. Ducks and other bird species benefit from a diverse mix of wetland, grassland and forest habitat to meet their annual lifecycle needs, including quality nesting, feeding and resting areas. Duck habitat helps secure other societal benefits—such as floodwater storage, groundwater recharge, sediment and chemical filtration and carbon storage—that sustain a high quality of life for all Minnesotans. Minnesotans recognize the breadth of benefits from duck habitat conservation and support actions that benefit duck management.

Purpose of Plan

This new, four-year Duck Action Plan will help the DNR focus strategic funding and conservation efforts, enhance and develop partnerships, and foster Minnesotans' stewardship of duck populations and habitats.

This plan builds upon the DNR's 50-year Long Range Duck Recovery Plan, which identified challenges

and suggested strategies to substantially increase breeding duck numbers in the state, and to restore hunter numbers and harvest to levels observed during the 1970s. Since adopting the long-range plan in 2006, Minnesota's human population has grown, pressures for land use and development have increased, the climate has continued to change, new state and federal policies have been enacted, and recreation demands and preferences have changed. Substantial opportunities emerged for duck conservation, including development of various conservation plans, partnerships and new funding sources. This four-year action plan serves as a complement to the Long Range Duck Recovery Plan to address these management challenges, leverage opportunities and guide short-term actions.

This plan identifies strategic issues that pose substantial challenges for achieving the 50-year plan's original goals, and shows how the agency will evaluate those long-range goals in the future. It helps agency staff coordinate with conservation partners and informs the public and those who fund conservation work by identifying the DNR's goals, objectives and strategies to implement during the next four years.



Conservation partners gathered for a scoping workshop to kick-off the planning process (spring 2019).

Plan Development

The plan was created with input from conservation partners during a DNR scoping workshop in spring of 2019. The DNR conducted ongoing engagement with tribal partners and partner organizations, in addition to gathering public comment on draft versions of the plan and analysis from technical experts.

Background and Current Conditions

Ducks are migratory and therefore are influenced by multiple factors beyond the boundaries of Minnesota, including climate, weather patterns, and land-use throughout North America. Both duck populations and the number of permanent wetlands in Minnesota have been relatively stable over the past 10 years but are lower than during periods of the 1990s and early 2000s. Duck populations are important to hunters, birdwatchers and others. Duck hunters in Minnesota have reported relatively high satisfaction over the past 20 years. Duck hunter support for various hunting regulations and youth waterfowl hunting has been consistently high. Despite high satisfaction, the number of Minnesota duck hunters continues to decline, in line with national trends.

DNR Duck Management

Minnesota waterfowl management actively promotes abundant duck populations, the high-quality habitats they need, clean water and soil conservation benefits, and opportunities for outdoor recreation. This work happens at state, regional and national levels.

Habitat needed by ducks varies throughout the year, and the scope of DNR management includes both ducks that breed in Minnesota and those that stop in Minnesota during migration. Therefore, management focuses on providing high quality habitat for nesting, brood rearing and migration. Breeding ducks in the prairies are dependent on the abundance of wetlands, especially habitat complexes that provide a range of wetland types in conjunction with sufficient upland nesting habitat. Outside the prairie portion of Minnesota, wetlands are more permanent, although seasonal wetlands still play an important role. Wild rice lakes, slow moving streams, shallow areas of deeper lakes and vernal ponds, along with nesting uplands or nesting cavities

in trees, are important habitat components for ducks. Permanent protection and continued enhancement of wetlands and nearby uplands is critical to ensure these important habitats and populations exist into the future.

Work by the DNR to benefit ducks and their habitats supports the DNR’s mission “to work with Minnesotans to conserve and manage the state’s natural resources, to provide outdoor recreation opportunities, and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.”

This work is enabled by statute 97A.045, which states:

“The commissioner shall do all things the commissioner determines are necessary to preserve, protect, and propagate desirable species of wild animals. The commissioner shall make special provisions for the management of fish and wildlife to ensure recreational opportunities for anglers and hunters.”



DNR researchers strive to understand habitat requirements and the life history of ducks to improve management.

In brief, work done by the DNR to benefit duck populations falls within the following three broad categories:

1. **Duck population management**, which includes population monitoring, disease surveillance and management, population research, surveys of hunters, coordination with tribal biologists, and development of state hunting regulations, which are based on a federal framework that applies to all states in the Mississippi Flyway, the bird migration route that includes Minnesota.

2. **Habitat management**, which includes:

- Long-term habitat protection through land acquisition programs.
- Maintenance of existing wetland infrastructure, management of water levels for wild rice and research to inform wetland habitat management.
- Enhancement of existing habitat to improve its value for wildlife.

- Financial support of Farm Bill Assistance Partnership biologists to deliver voluntary private lands conservation through Federal, State and local programs, working directly with landowners and partners to identify programs (e.g., RIM, CREP, CRP, EQIP) that fit their operation and to provide technical assistance for conservation on private lands.

- Restoration of drained or developed wetlands by the U.S. Fish and Wildlife Service, U.S. Department of Agriculture's Natural Resources Conservation Service, the DNR and nongovernmental organizations to restore lost wetland functions.

3. **Promotion of waterfowl-related recreation and benefits of ducks and their habitats**, which includes maintaining programs to promote the recruitment, retention and reactivation of waterfowl hunters, and promoting how duck management actions benefit ecological systems and social communities.



Recruitment, retention, and reactivation of waterfowl hunters is important for preserving Minnesota's outdoor heritage.

Strategic Issues

The DNR has identified several issues that affect its work and will influence the success of both this 2020–2023 Duck Action Plan and the 2006 Long Range Duck Recovery Plan.

- **Legacy amendment funding.** This is a key time in Minnesota to implement priority conservation actions due to the Clean Water, Land and Legacy Amendment, which Minnesota voters passed in 2008. It designates portions of sales tax to be allocated toward various conservation initiatives through 2034. Part of the Legacy Amendment, the Outdoor Heritage Fund (OHF), specifically supports habitat (prairies, forests and wetlands) protection, restoration and enhancement. The OHF alone provides approximately \$100 million annually in legislative appropriations for critical habitat work. This funding has fostered new partnerships among agencies and conservation partners that leverage Duck Action Plan implementation. The DNR and partners also still benefit from other funding sources such as the North American Wetlands Conservation Act.

OHF has fostered new partnerships among agencies and conservation partners.

- **Private lands and the need for partnerships.** The majority of land in Minnesota’s grassland and forest transition regions are privately owned; Minnesota’s forested region is a patchwork of private, public and tribal ownerships; and 700,000 acres of Conservation Reserve Program (CRP) were lost in Minnesota between 2007 and 2018. Therefore, private land stewardship is critical for the conservation of ducks and duck habitat. Although local DNR staff engage with private landowners in the course of our work, other agencies and organizations are better positioned to influence conservation on private lands. We need to maintain and enhance our partnerships to support their private lands work.
- **Continued loss and degradation of habitat.** As Minnesota’s human population grows, pressures for land use and development increase. Grasslands and wetlands have declined more than 95% in western and southern Minnesota since the mid-1800s, and Minnesota has seen a decline in wetland and shallow lake quality. Increased agricultural tile drainage removes temporary wetlands and continues to hamper the management of water levels for ducks and other wetland-dependent species. Excess nutrients from runoff, point sources, and sediment disturbance by bottom-feeding fish, like common carp, impair water clarity, which decreases aquatic vegetation. Hybrid cattails and other invasive species also degrade wetland quality. Roughly two-thirds of the lakes surveyed in the prairie region of Minnesota have poor water quality and lack submersed aquatic vegetation, an important direct food source for migrating ducks and habitat for invertebrates, which are also consumed by ducks. Many grasslands have trees and invasive species due to lack of sufficient management, which lowers the habitat value for wildlife. Some ducks nest in tree cavities, so forest management, especially near water, is also important. Duck habitat in the forested parts of Minnesota is managed in the context of a patchwork of public, private and tribal ownerships and variations in active forest management. Forested wetlands are degraded by shoreline development and invasive species.
- **Recreation demands and preferences have changed, which affects funding for state duck management activities.** The number of duck hunters in Minnesota peaked in the 1970s at greater than 160,000 hunters and has declined to an average of about 80,000 hunters in recent years. Although hunting recently declined nationally by 16% in just five years, wildlife watching increased by 20%. Social, economic and resource trends are expected to continue influencing changes in the public’s recreational preferences and participation. Despite opportunities from dedicated funding, the decline in hunting license sales presents a significant challenge because DNR wildlife management activities are funded largely by hunting license revenues and associated federal Wildlife Restoration Grants from an excise tax on shooting and archery equipment.

There is no mechanism identified yet to adequately replace or supplement the declines in this funding.

- **Need for multiscale collaboration.** Because ducks migrate, agencies and partners need to coordinate their management and conservation efforts across large areas, including the continental scale of migration flyways, which span many ecological regions and administrative jurisdictions. This necessitates enhanced coordination to ensure funding is used effectively and the most important

work is prioritized. Collaboration requires time and effort.

- **Climate change.** Global and regional climate patterns are changing. This has both known and unanticipated effects on ecosystems and communities throughout Minnesota. For example, increasing frequency and intensity of storms and warmer winters both affect wetlands. Climate-related changes also complicate habitat management efforts.

Goals

1. Increase the amount of wetland and grassland habitat for ducks.
2. Maintain and enhance wetland, grassland and forest habitats for ducks.
3. Increase opportunities for and participation in outdoor recreation related to ducks and their habitats.
4. Increase public awareness and appreciation of wetland conservation for ducks and people.



ALISON MICKELSON

The grasslands used by prairie ducks provide water quality protection and soil conservation.

Objectives, Strategies and Performance Measures

The DNR has identified the following objectives and outlined supporting strategies to meet these goals:

Objective 1. Maintain the current pace of Wildlife Management Area (WMA) acquisitions overall while increasing the proportion of acquisitions within priority areas.

STRATEGIES

- 1.1 Focus WMA acquisitions primarily in southern and western Minnesota and secondarily in other open land and forest transition areas of Minnesota.

Performance measure: Maintain an average rate of 4,500 acres per year of WMA acquisitions in open land and forest transition areas including WMA acquisitions initiated by partners.

- 1.2 Work with partners, especially the U.S. Fish and Wildlife Service's Habitat and Population Evaluation Team, to identify grassland bird habitat complexes in which to focus protection of habitat for ducks and grassland wildlife and, where possible, other environmental benefits like protecting sources of drinking water.
- 1.3 Adjust the DNR's WMA acquisition parcel scoring criteria and regional ranking to place highest priority on parcels located within the boundaries of a grassland bird habitat complex.

Performance measure: Increase the number of approved WMA acquisition projects in grassland bird habitat complexes each year.

- 1.4 Continue to coordinate with partners on land acquisition activities.
- 1.5 Strengthen the DNR's relationships with counties on land acquisition and management activities.

Objective 2. Increase the quality and quantity of duck habitat management on state-administered lands.

STRATEGIES

- 2.1 Continue development of and increase external funding for the DNR's Small Wetlands Management Program to expand and increase active management of wetlands in WMAs.

Performance measure: Secure additional external funding through the next biennial OHF proposal in 2020.

- 2.2 Identify wetlands in need of management within WMAs, starting in the prairie portion of the state.

Performance measure: Increase the number of wetlands assessed for management need each year.

- 2.3 Implement management on small wetlands in WMAs. Management actions include water level management, chemical treatment to control invasive vegetation, sediment removal, prescribed fire, and conservation grazing.

Performance measure: Increase the number of small wetland basins enhanced through management each year.

- 2.4 Monitor results of wetland management actions through vegetation, water quality and invertebrate surveys to inform future management actions.

- 2.5 Continue the work of the DNR's Shallow Lakes Program, including in-lake management, habitat assessments on managed basins, promotion of best management practices, and development of shallow lake and wetland habitat enhancement proposals.

Performance measures: Maintain the number of lakes assessed each year, and maintain the acreage of shallow lakes enhanced through management each year.

- 2.6 Increase the number of lakes managed for wildlife benefits through Wildlife Lake Designation under M.S. 97A.101 and other authorities (acquisition, easements, M.S. 103G.408).

Performance measure: Increase the number of new shallow lakes authorized for management through Wildlife Lake Designation or other authority each year.

Performance measures address the overall objective and are included below the strategy most closely related to the described metric.

-
- 2.7 Review the adequacy of waterfowl refuges and feeding and resting areas in the state.
 - 2.8 Increase duck nesting habitat on state-administered forest lands.

Objective 3. Support the work of partners to protect and enhance duck habitat on private and federal lands.

- 3.1 Continue financial contributions to the Farm Bill Assistance Partnership, which funds staff in partner organizations to assist private landowners.
- 3.2 Continue sharing funding and other resources with the U.S. Fish and Wildlife Service and U.S. Department of Agriculture Forest Service for prescribed burning.

Objective 4. Increase coordination of duck plan implementation actions within Minnesota and support priority management actions within the Mississippi Flyway.

STRATEGIES

- 4.1 Bring partners together to explore additional ways to improve duck habitat management on private lands.
- 4.2 Regularly engage with both of the U.S. Fish and Wildlife Service’s Migratory Bird Joint Ventures in Minnesota to coordinate the protection, restoration and management of additional waterfowl habitat.
- 4.3 Engage with the Prairie Pothole Joint Venture (PPJV) to increase investments in Minnesota and support waterfowl conservation throughout the PPJV.
- 4.4 Convene a meeting with USFWS Habitat and Population Evaluation Team, Migratory Bird Joint Venture staff, tribal partners, and nongovernmental organizations to review waterfowl habitat models for Minnesota and identify waterfowl priority areas in the forested regions of the state to focus habitat acquisition, restoration and enhancement work.

Performance measure: Identify waterfowl priority areas and communicate them to staff and partners by January 2021.

- 4.5 Work with tribal and other wetland managers to increase the number of actively managed wild rice lakes in Minnesota.

Performance measure: Increase the number of actively managed wild rice lakes.

- 4.6 Coordinate annually with partners, both in-state and regionally, to secure financial support for ongoing and new waterfowl habitat initiatives.
- 4.7 Identify new partnerships within and beyond the traditional conservation community to accomplish plan objectives.

Performance measure: Pilot at least one new wetland- or waterfowl-focused partnership by 2023.

Objective 5. Improve access to land for outdoor recreation and wetland appreciation.

STRATEGIES

- 5.1 Seek federal funding to sustain and expand the DNR’s Walk-In Access program.
Performance measure: Increase the number of acres enrolled in the Walk-In Access program.
- 5.2 Continue to work with partners to provide appropriate water access to large publicly owned wetlands, wild rice lakes and managed wildlife lakes.
- 5.3 Adjust the DNR’s WMA acquisition parcel scoring criteria and regional ranking to place higher priority on parcels located within 30 miles of a population center of at least 15,000 to 20,000 people to provide “close to home” recreation opportunities.
Performance measure: Increase the number of approved WMA acquisition projects within 30 miles of a population center of at least 15,000 to 20,000 people.
- 5.4 Develop and pilot a new model at select WMA sites located near population centers, with a focus on enhanced facilities, wildlife and habitat

education, and connecting new users with information about the broader WMA system and associated recreational opportunities.

Performance measure options:

- The new model is defined, developed and operationalized.
- Number of identified opportunities to apply the new model to existing WMAs.
- Amount of grant funding secured for WMA acquisitions using the new model, including associated development and operational costs.

Objective 6. Develop and deliver messages on wetlands and associated upland habitats, highlighting private land stewardship, recreational opportunities and the contribution of these habitats to a vibrant Minnesota.

STRATEGIES

6.1 Update the DNR private lands website to better inform landowners about conservation programs, how they can improve habitat for ducks, and where to go for assistance and more information.

Performance measure: Increase in number of referrals from the DNR website to partners and partner-developed resources each year. Monitor website use and effectiveness annually.

6.2 Promote hunting seasons through digital advertisements and direct email reminders.

6.3 Promote and enhance existing resources for connecting people with the outdoors by helping them decide where to go and what to do (e.g., online WMA finder, Walk-In Access maps).

6.4 Increase efforts to connect new users with WMA information and to make duck habitat and viewing more approachable.

6.5 Develop and deliver issue briefs about local duck habitats to community groups and elected officials.

Performance measure: Increase number of public interactions to discuss topics in the plan.

6.6 Host or co-host an annual workshop or tour with local stakeholders, elected officials and partners to highlight our work, build awareness, discuss progress on implementation, and incorporate the plan into partner work plans; attend local community events to discuss grassland and wetland habitats; and expand conservation partnerships within diverse communities.

Performance measures: Document the number of local community events and other interactions. Record the estimated number of participants and document the number of new projects and partnerships as a result of these conversations.

6.7 Distribute the plan and communicate its key messages to internal leadership and staff, and annually provide area staff with an updated list of resources that includes partners' existing interpretive materials, initiatives and educational materials on habitat issues.

Performance measure: Evaluate increased staff use and effectiveness of these materials and resources.



Wildlife viewing and photography are becoming increasingly popular forms of outdoor recreation.

6.8 On an annual editorial calendar, include regular communications and media articles that highlight wetland and grassland habitat work and conservation values. Update messages annually.

Performance measure: Annual summary of media coverage.

6.9 Communicate the results of research on and monitoring of ducks and their habitats to diverse audiences, including scientists, natural resource managers, waterfowl hunters, birdwatchers and the general public. In addition, actively seek reciprocal communication from these groups back to DNR.

Performance measure options:

- Create a communication plan outlining how information will be shared both within and beyond the DNR.
- Create a periodical that highlights hunting heritage, regulations, research, monitoring and public interest topics related to migratory and upland gamebirds.

Objective 7. Define research and monitoring priorities for ducks and their habitats, and work with partners to address these priorities.

STRATEGIES

7.1 Lead efforts to identify and prioritize research and monitoring needs related to ducks and their habitats through engagement with biologists from within the DNR as well as with tribal nations and partner organizations, including federal agencies, conservation organizations and academic institutions.

Performance measure: Create a list of priority research and monitoring projects, including a list of collaborators, funding and timelines for planned research and monitoring projects.

7.2 Annually monitor the status of duck populations, wetland resources and waterfowl hunting in Minnesota and surrounding regions of North America. Evaluate and adapt existing monitoring programs to achieve these goals.

Performance measure: Create a list of ongoing or new monitoring and survey programs, describing their purposes and value.

7.3 Conduct research that informs the management of duck populations and associated wetland resources.



Performance measure: Document the investment in research as well as the number of research projects, DNR Wildlife Research Summaries, peer-reviewed publications, professional presentations, and public interest articles.

Tree cavities near wetlands are important nesting sites for some ducks.

Appendix

Relationship to Other Plans

The DNR will implement this plan in conjunction with existing DNR plans and plans adopted by conservation partners. This table highlights some of those plans along with their purposes and connections to overlapping work within the Duck Action Plan.

DNR PLANS AND PLANS ADOPTED BY CONSERVATION PARTNERS

Plan Name	Year	Purpose	Connection to this Duck Action Plan
North American Waterfowl Management Plan	2018	Sustain North American waterfowl populations; broaden engagement to increase conservation support.	Coordinate with Migratory Bird Joint Ventures in Minnesota to advance NAWMP habitat and engagement objectives.
Prairie Pothole Joint Venture Implementation Plan	2017	Provide goals for protecting, restoring and enhancing wetlands and grasslands; uses a working lands approach to conservation; and promotes hunter access and retention.	Identify and prioritize duck habitat priority areas that overlap with PPJV focal areas.
Upper Mississippi River and Great Lakes Joint Venture	2017	Provide habitat objectives for emergent wetland habitat and forest habitat.	Identify and prioritize duck habitat priority areas that overlap with Joint Venture focal areas, focusing on wetland quality, long-term forest management and nest cavities.
DNR Shallow Lakes Plan	2010	Increase management of shallow lakes (implementation plan resulting from 2006 Duck Plan).	Shallow lake management direction supports 2006 Duck Plan and 2020–2023 Duck Action Plan.
50-year Long Range Duck Recovery Plan	2006	Sets a long-term aspirational vision for duck management in Minnesota.	2020–2023 Duck action plan compliments this effort with actionable strategies.
DNR Pheasant Action Plan	2020–2023	Improve grassland habitat in Minnesota to benefit pheasants and other grassland-dependent species.	Coordinate on acquisition, partnering and habitat enhancement strategies that overlap.
Minnesota Prairie Conservation Plan	2018	Focus efforts of conservation community into priority areas, uses a working lands approach to conservation.	Coordinate efforts among partners for protection, restoration and enhancement in the same priority areas.
DNR State Wildlife Action Plan	2015–2025	Focus efforts of conservation community into specific areas, focuses on Species of Greatest Conservation Need.	Conservation focus areas inform duck habitat priority areas.
One Watershed, One Plan (Minnesota Board of Water and Soil Resources)	Multiple	Comprehensive watershed management plans.	Informs a strategic landscape-level approach to watershed management.
WMA/AMA (Aquatic Management Area) Strategic Plan	2018	Focus acquisition priorities in Minnesota.	Geographic priority areas and existing WMA/AMAs inform priority wetland acquisition.



500 Lafayette Road
St. Paul, MN 55155-4040
888-646-6367 or 651-296-6157
mndnr.gov

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