

Appendix A: Birds

American Black Duck

Anas rubripes [B,W]

Federal Listing	N/A
State Listing	SGCN
Global Rank	G5
State Rank	S4
Regional Status	Very High



Photo by Pamela Hunt

Justification (Reason for Concern in NH)

In the past 20 years, mid-winter black duck surveys indicated that populations were declining from 1995-2005, but have somewhat stabilized during 2006-2015. Wintering black duck numbers have declined dramatically both in total and in the Atlantic Flyway from population numbers observed in the 1950s (USFWS 2015). The American Black Duck was ranked as the highest conservation concern (HH) for both Bird Conservation Regions (BCR) 14 and 30 and ranked high Regional priority (rank = 3). The black duck is the most important harvested duck in Canada and is considered a trophy species in the United States. The black duck was once the most common duck in New Hampshire (Lacaillade 1975), though since 2001 it has been only the third most abundant puddle duck harvested (NHFG duck harvest unpublished data).

Distribution

Black ducks primary breeding range is in Eastern Canada, the Maritime Provinces, and south to northern New England. Wintering populations are found primarily along the Atlantic Coast from New England south to the Carolinas and inland locations extending to the Mississippi River and its tributaries (Baldassarre, G. A. 2014). In New Hampshire, black ducks are found throughout the state and are the third most common duck species harvested (Northeast Breeding Plot Survey 2015, unpublished data). Black ducks winter primarily in coastal salt marshes and on Great Bay and are the most common winter dabbling duck in coastal marshes (MWS 2015, unpublished data). During spring and fall migration, black ducks are observed statewide but are most common in coastal areas.

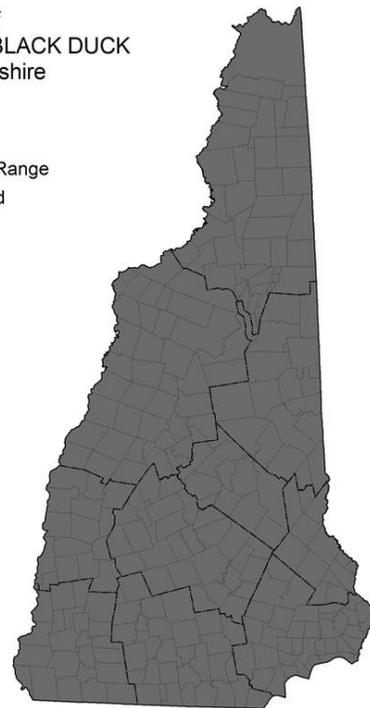
Habitat

American Black Duck breeding habitat includes a variety of coastal and freshwater habitats, including brackish marshes, estuaries, rivers, lakes, and pond edges, forested swamps, bogs, beaver ponds, emergent wetlands, and open boreal and mixed hardwood forests. Nests are usually laid on the ground and may be a mile from water. Wintering habitat includes brackish marshes bordering bay, estuaries, and open water areas on freshwater rivers and ponds (DeGraaf and Yamasaki 2001). The black duck diet varies greatly with habitat. In marine habitats, black ducks feed primarily on mollusks, and in fresh water they feed mostly on aquatic plants. Ducklings and egg-laying females consume significant quantities of protein. Other foods include seeds, acorns, berries, waste corn, crustaceans, and amphibians.

NH Wildlife Action Plan Habitats

Distribution of
AMERICAN BLACK DUCK
in New Hampshire

■ Current Range
▨ Localized



Distribution Map

Current Species and Habitat Condition in New Hampshire

Between 1950 and 1980, black ducks declined more than 50% which triggered increased research and management (Baldassarre 2014). The American Black Duck population in North America and in New Hampshire is now considered stable but below desired abundance levels. In response to concerns about the population, flyway harvest restrictions were instituted in the United States in 1983 and in Canada in 1984, and reduced harvest by over 40%. Mid-winter waterfowl survey data indicate that population sizes have remained generally stable during the period of harvest restrictions, and breeding surveys in Canada have shown increases (Kehoe 1990).

Black ducks are the fourth most common breeding waterfowl species in the State (average of 3,503 breeding pairs) and breed in highest numbers in northern areas (NHFG Waterfowl Plot Surveys 1993-2015, unpublished data). Great Bay and coastal salt marshes winter an average of 1,385 black ducks annually (NHFG Mid-winter surveys [MWS] 1952-2005, unpublished data). A small number of black ducks, 390 per year on average, winter at inland sites in rivers below dams (NHFG Inland Winter Survey 1988-2015, unpublished data).

Population Management Status

The USFWS and the Canadian Wildlife Service (CWS) have jurisdiction over harvest regulations in their respective countries. In the Atlantic Flyway, provinces, federal agencies, and all states cooperatively fund and conduct population monitoring surveys that inform annual North American hunting regulations for the American Black Duck. State and provincial wildlife agencies establish annual hunting regulations according to frameworks established by the USFWS and CWS within the context of the Flyway system of waterfowl management.

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Regulatory Protection (for explanations, see Appendix I)

- Harvest permit - season/take regulations
- Migratory Bird Treaty Act (1918)
- USFWS Federal Trust Species - 50 CFR Part 20

Quality of Habitat

See Marsh and Shrub Wetlands and Salt Marsh Habitat Profiles.

Habitat Protection Status

The North American Waterfowl Management Plan (NAWMP) and the subsequent ACJV plan were established to conserve the most important habitats for waterfowl (breeding, migration, and wintering). Each state was asked to identify the most important areas for future protection work. In New Hampshire, three waterfowl focus areas were established to protect habitat for black ducks: Lake Umbagog National Wildlife Refuge (for breeding), Connecticut River Silvio O. Conte National Wildlife Refuge (for migration), and Great Bay National Wildlife Refuge (for wintering). In all three areas, state, federal, and private partnerships provide tens of millions of dollars to protect thousands of acres of waterfowl habitat. In all wetland protection efforts, a minimum 91m (300 ft) wide upland buffer area is also protected to provide nesting habitat for waterfowl.

It is anticipated that significant acquisition of waterfowl habitat will continue in each area. It is also anticipated that the Merrimack River Corridor will be designated as a planning area in a future NAWMP update. The NHFG has protected habitat along the Merrimack River Corridor, and partnerships are being established to conserve thousands of acres of wildlife habitat along the river. The Merrimack River is a significant migration corridor for black ducks and is worthy of a “Planning Status” under the NAWMP. Future efforts will focus on establishing that designation.

Habitat Management Status

Habitat management and protection in New Hampshire began in the late 1940s. NHFG, in coordination with the Atlantic Flyway Council, began acquiring wetland habitat and constructing low-head water control structures to create and maintain habitat for native waterfowl species, including the American black duck. From the late 1940s through 1983, protection and management of these habitats was made possible by donated property value used to match Federal Aid Pitman-Robertson and Dingell-Johnson monies. In 1983, State legislation was passed which established a State Duck Stamp. Revenues from the sale of \$4.00 stamps and associated artwork are placed in a dedicated account for waterfowl management in the state. Today, NHFG owns or manages 49 State Waterfowl Management Areas, which include over 3,557 ha (8,790 ac) of habitat. Thirty of the Department’s Wildlife Management Areas include water control structures that allow water level manipulations to stimulate the growth of desirable aquatic plants.

Most waterfowl habitat in New Hampshire is in private ownership and is created and managed primarily by beaver (*Castor canadensis*). A healthy beaver population provides the majority of waterfowl habitat in the state for all life stages, with the exception of wintering habitat, which is primarily salt marsh. Historically, salt marsh habitat was degraded by ditching and draining salt marshes for hay production and mosquito control. Today, Ducks Unlimited, along with the other partners in the Great Bay Resource Protection Partnership (NHA, Great Bay National Estuarine Research Reserve, NHFG, TNC, Society for the Protection of New Hampshire Forests, USEPA, USFWS, and the NRCS) have conducted open water marsh management in a number of salt marsh locations to restore various drainage situations to improve black duck habitat.

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Threats to this Species or Habitat in NH

Threat rankings were calculated by groups of taxonomic or habitat experts using a multistep process (details in Chapter 4). Each threat was ranked for these factors: Spatial Extent, Severity, Immediacy, Certainty, and Reversibility (ability to address the threat). These combined scores produced one overall threat score. Only threats that received a "medium" or "high" score have accompanying text in this profile. Threats that have a low spatial extent, are unlikely to occur in the next ten years, or there is uncertainty in the data will be ranked lower due to these factors.

Species impacts from increased precipitation in spring leading to poor reproductive success (Threat Rank: Medium)

Numerous aspects of climate change will affect wetlands and the waterfowl that use them. An increase in carbon dioxide (CO₂) will trap heat in the atmosphere causing a rise in air, water, and soil temperature including in wetlands, lakes, streams, rivers, estuaries, and oceans, which will produce challenges to wetland plants and animals (Kusler 2006).

Depending on the rate and scale, climate change may only intensify preexisting limiting factors of black ducks. Urbanization and rising sea levels along the Atlantic coast will result in an accelerated loss of winter habitat and a decline in winter carrying capacity. Black ducks could also experience new limiting factors such as new diseases introduced to eastern North America as a result of warmer and wetter conditions (Devers and Collins 2011). Changes in precipitation and more intense weather events will also impact wetland systems through heavy rainfall and erosion. Sea level rise resulting from thermal expansion of the oceans and freshwater input was 4.7 - 8.6 inches for the 20th century (IPCC 2007). The amount of sea-level rise in coastal NH is of concern as black ducks rely on the marshes year-round.

Species impacts from hybridization (with mallards) (Threat Rank: Medium)

Black ducks and Mallards readily hybridize throughout the black duck breeding range. As Mallards continue to occupy traditional black duck range in eastern Canada and northern New England, the opportunity for hybridization also increases. There is still significant disagreement among waterfowl experts about the extent and seriousness of hybridization by Mallards and black ducks. Where Mallards occupy black duck habitat, they tend to do so permanently. Mallards are generally significantly more tolerant of people and their associated disturbances and more tolerant of agricultural practices. It is anticipated that as residential development and agricultural operations expand, the Mallard will continue to replace the black duck in breeding habitats.

It has been hypothesized that the cause of decline in black ducks was due to inter-specific competition with Mallards based on the trends of increasing Mallards and decreasing black ducks (Barclay 1970, Ankney et al. 1987, Belanger and Lehoux 1994, Merendino and Ankney 1994). In New Hampshire, Mallards over the last 30 years have replaced the black duck as the most common breeding and harvest species. In New Hampshire, during the 1999 to 2002 hunting seasons, 4.3% of the total number of Mallards and black ducks shot by hunters were classified as hybrids (Serie and Raftovich 2003).

Competition between Mallards and black ducks during the winter is considered minimal in New Hampshire. Black ducks winter primarily in coastal habitats where they often outnumber mallards (MWS 2015, unpublished data). Mallards winter in larger numbers on open fresh water sites where they outnumber the black duck. Between 1988 and 2015, an average of 4,198 Mallards per year wintered at inland sites, compared to only 390 black ducks (NHFG Inland Winter Survey, unpublished data). It is unclear if the increase in the Mallard population has caused the decline of black ducks or if it is a coincidence (Devers and Collins 2011).

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List of Lower Ranking Threats:

Habitat degradation and species impacts from declining water quality
Mortality from subsidized or introduced predators
Habitat degradation from sea level rise
Habitat conversion due to development

Actions to benefit this Species or Habitat in NH

Habitat protection and management

Primary Threat Addressed: Habitat conversion due to development

Specific Threat (IUCN Threat Levels): Residential & commercial development

Objective:

Protect and manage marsh and shrub wetlands and saltmarsh habitat for American black duck populations.

General Strategy:

The NHFG has protected habitat along the Merrimack River Corridor, and partnerships are being established to conserve thousands of acres of wildlife habitat along the river. The Merrimack River is a significant migration corridor for black ducks and is worthy of a "Planning Status" under the NAWMP. Future efforts will focus on establishing that designation. See 'Habitat Management Status' for further details. For other habitat-based actions, see Marsh and Shrub Wetlands and Salt Marshes habitat profiles.

Political Location:

Statewide

Watershed Location:

Statewide

References, Data Sources and Authors

Data Sources

Information on American Black Ducks was collected from the North American Waterfowl Management Plan (NAWMP), The Atlantic Coast Joint Venture (ACJV) Plan, Long-term Eastern Waterfowl Survey, the federally coordinated Mid-Winter Waterfowl Survey, the Atlas of Breeding Birds in New Hampshire, NHFG survey data, Waterfowl and Their Management in New Hampshire, Atlantic Flyway Waterfowl Harvest and Population Survey data, The American Black Duck Symposium publication.

Data Quality

North American waterfowl population and harvest surveys were initiated in 1952. The database pertaining to North American waterfowl species, including the American Black Duck, is one of the most reliable and extensive wildlife data sets in the world.

2015 Authors:

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2005 Authors:

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NHFG

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