American Black Duck
Minnesota Conservation Summary

Audubon Minnesota
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The Blueprint for Minnesota Bird Conservation is a project of Audubon Minnesota written by Lee A. Pfannmuller (leepfann@msn.com) and funded by the Environment and Natural Resources Trust Fund. For further information please contact Mark Martell at mmartell@audubon.org (651-739-9332).
American Black Duck

Priority for Minnesota’s Bird Conservation Plan:
- Boreal Hardwood Transition: Highest Level Priority

Other Status Classifications:
- Federally protected migratory game bird in Canada, U.S. and Mexico
- Minnesota Species in Greatest Conservation Need
- Identified on Audubon Minnesota’s Action List
- USFWS Focal Species (2005)
- Focal Species for Upper Mississippi Valley/Great Lakes Joint Venture Region
- Continental Priority: High (North American Waterfowl Plan)
- Classifications in BCR11: None
- Classifications in BCR12:
  - Breeding Importance: Moderately High
  - Breeding Need: High
  - Non-breeding Importance: Moderately Low
  - Non-breeding Need: Moderate
- Classifications in BCR22:
  - Non-breeding Importance: Moderately High
  - Non-breeding Need: Moderately High
- Classifications in BCR23:
  - Breeding Importance: Moderately High
  - Breeding Need: High
  - Non-breeding Importance: Moderately High
  - Non-breeding Need: High

The American Black Duck is a game species in Minnesota. The daily limit for waterfowl is 6 birds but the bag must not contain more than one American Black Duck; the possession limit is 12 birds (which cannot include more than two Black Ducks). The Minnesota harvest in 2007 was 540; the Minnesota harvest in 2008 was 1,120. Black Duck’s comprised 0.1% of the total Minnesota harvest in 2007; 0.19% in 2008.

Population Information:
- The American Black Duck was once the most abundant dabbling duck in eastern North America.
- The continental population is now half of its historical size (BNA).
- Population Trend: Decreasing
- Population estimate for the mid-continental population survey: 31,000 (of the majority of the population occurs outside of this survey area) (NAWMP Strategic Guidance 2004)
- American Black Duck population declines were noted beginning in the mid-1950s. In 1983 restrictive regulations substantially reduced the harvest of birds and helped to stabilize the downward trend.
- Mid-winter counts in 2006 (Mississippi and Atlantic Flyway data combined) increased 2% relative to 2005 counts, but remained 18% lower than the 10-year mean.
- Numbers of breeding pairs in all but 1 stratum of the eastern survey are still undergoing nonsignificant declines, but declining counts in early years have been partly offset by increases in recent years as Canadian harvest has declined (BNA)
- Recent analysis of the Mid-winter Waterfowl Inventory and the Christmas Bird Count data suggests declines observed on the MWI could be a result of redistribution of birds north of the MWI survey
area into Canada. Species appears to be wintering farther north in recent years, however, wintering population in the UMVGL JV region has generally declined

- Breeding population goal in the Upper Mississippi Valley/Great Lakes Joint Venture region is 8,400; the current population estimate is 7,000
- Minnesota population estimate: No Data available from PIF

**BBS Data:**
- Red Level of Credibility
- 1966-2009: decreasing trend (not statistically significant) of -7.6; 1999-2009; decreasing trend of -7.7
- Minnesota does not include one of the species centers of highest abundance
- 2.5% of the American Black Duck’s North American breeding range occurs in Minnesota

**Minnesota Residency:**
- Breeds mostly in northeastern and north central Minnesota

**Minnesota Waterfowl Population Trend:** Data are very sporadic

![Graph showing waterfowl population trend](image)

**Habitat Requirements:** Lake/Pond

The American Black Duck inhabits seasonal wetlands; semi-permanent and deep-water marshes and open water; forested islands, riparian areas; woodland wetlands, shallow lakes with emergent vegetation, bogs & wooded swamps; large rivers with seasonal floodplains, and smaller alder-lined brooks (Birds of North America/Cornell Lab of Ornithology).

**From WBCI Species Profile:**
- Throughout its range, the American Black Duck breeds in a wide variety of riparian habitats including freshwater wooded swamps, beaver-created and modified wetlands, bogs in boreal forests, and smaller alder-lined brooks in northern –forested regions.

**From Upper Mississippi Valley/Great Lakes Joint Venture Species Profile:**
- Uses most types and sizes of herbaceous and wooded wetlands, especially beaver-created and modified wetlands, shallow lakes with emergent vegetation, bogs in boreal forests, and swamps.
• Newly created or reflooded beaver meadows, which are rich in invertebrates, are favored for brood rearing.
• Species will often select nutrient rich patches within less productive wetland complexes where brood concentrations and predation rates are lower, enhancing recruitment.
• Assume wetlands greater than 0.5 ha are preferred.

Migration: Temperate

Climate Change Vulnerability: Medium (2)

Threats/Issues:

From BNA Species Profile:
• Acid waters may affect some populations. 17% of American Black Duck’s breeding range has low acid-neutralizing capacity and is exposed to acid rain. Some important waterfowl foods may be eliminated by acidification but others may become more abundant when predators decline. Yet, the ability of Black Ducks to exploit low-pH (<5.0) and low-conductivity wetlands to raise broods suggests minimal effects of acidification on productivity.
• Ingested lead shot causes sickness and death.
• Species impacted by habitat loss and degradation.

From WBCI Species Profile:
• Agricultural drainage and urban development remain threats to wetland ecosystems and local populations of wetland-associated birds.
• Human activities that alter hydrology and introduce invasive plant species also threaten wetland habitats.
• Also, beaver control programs in northern counties may reduce the habitat suitability in some areas.

From Upper Mississippi Valley/Great Lakes Joint Venture Species Profile:
• There are five competing hypotheses to explain apparent declines:
  1. Breeding habitat limitation
  2. Winter/spring habitat limitation
  3. Excessive harvest
  4. Competition with Mallards
  5. Diseases and parasites.
• Recent model analysis did not identify any single factor contributing to observed population declines
• Current assumption is population growth in the JV region is not limited by breeding habitat, but maybe limited by availability of coastal marsh and large (>10 ha) marsh/open water complexes with abundant food resources in winter and during spring migration.

From Hinterland Who’s Who Species Profile:
• In shared habitat, competition and cross-breeding with the genetically dominant Mallard could be contributing to the decline of the American Black Duck as a distinct species.
OVERALL MINNESOTA GOAL: Increase current populations by supporting Minnesota Department of Natural Resources Long Range Duck Plan and the Upper Mississippi Valley/Great Lakes Joint Venture habitat protection goals (6,582 ha in BCR12, 22 and 23 for non-breeding habitat in Minnesota)

BEST MANAGEMENT PRACTICES
From MNDNR Long Range Duck Plan:
• Broad habitat strategies are listed in the Long Range Duck Plan that, when implemented, will help increase American Black Duck populations in Minnesota.

From WBCI Species Profile:
• Management should focus on increasing open water areas, while preserving some cattail cover (>14%) to provide refuge from predators.
• Restoring wetlands near freshwater rivers (< 160 meters) may provide movement corridors for Black Duck broods.
• Water drawdowns that encourage growth of mudflat annuals, regenerate stands of emergent vegetation, stimulate primary productivity, and in turn improve the detrital base, are all beneficial for many species of wetland wildlife and should benefit American Black Ducks as well.

From UMVGL JV Species Account:
• The highest suitability is palustrine and littoral emergent and forested scrub/shrub deciduous wetlands greater than 5 ha in size

MONITORING RECOMMENDATIONS
• Through efforts of the Black Duck Joint Venture of the North American Waterfowl Management Plan, established in 1986, an aerial survey was initiated in 1990 to monitor, for the first time, the number of breeding pairs of American Black Ducks in eastern North America.
• Winter season data are primarily used to track population changes but this approach also has problems. The ability to track changes in wintering Black Duck populations is confounded by indications that black ducks may be wintering further north in largely unsurveyed areas, possibly a consequence of climate change.
• The Mid-winter Waterfowl Inventory has been the primary survey to monitor abundance; however, it lacks an adequate sampling frame and visibility correction. (UMVGL JV Species Account)
• Surveys across the breeding range were initiated in 1990 by the Canadian Wildlife Service using a helicopter plot survey and the USFWS via fixed-winged transects.
• Recommendation: The Waterfowl Breeding Population and Habitat Survey (WBPHS) does not adequately cover northern portions of the UMVGL JV region and must be expanded and enhanced to target breeding Black Ducks, at least periodically (UMVGL JV Species Account).
• The WBPHS lacks precision needed to identify a 20% population change.

CONSERVATION ACTIONS
• Identify and target high priority landscapes and habitats for conservation action
  Action: Identify Important Bird Areas that are a priority for this species in Minnesota

• Upper Mississippi Valley/Great Lakes Joint Venture Region
  Action: Maintain (protect) existing 6,582 ha of breeding habitat area and quality at sites within current or historic range (4,259 ha in BCR12; 122 ha in BCR22 and 2,201 ha in BCR23). Concentrate on improved habitat for migration/staging and wintering.
**Note:** In the Upper Mississippi Valley/Great Lakes Joint Venture Region the American Black Duck is considered a Deep Water Marsh species so the habitat recommendations above are for deep water marsh habitat.

- **Minnesota**

  **Action:** Support implementation of the Minnesota Department of Natural Resources Long Range Duck Recovery Plan

  **Background:** The following vision, goals and strategies are from the Long Range Duck Recovery Plan (2006)

  **Strategic Vision**
  By 2056, Minnesota’s landscape will support a productive spring breeding population of ducks averaging 1 million birds. The landscape necessary to support this population will also provide spring and fall migration habitat attracting abundant migrant waterfowl, 140,000 waterfowl hunters and 600,000 waterfowl watchers.

  **Goal**
  Recover historical breeding and migrating populations of ducks in Minnesota for their ecological, recreational, and economic importance to the citizens of the state. Progress towards this goal will be measured by the following long-term objectives: 1) A breeding population of 1 million ducks producing a fall population of 1.4 million ducks. 2) A fall duck harvest that is 16% or more of the Mississippi Flyway harvest. 3) An average of 140,000 waterfowl hunters and 600,000 waterfowl watchers.

  **Primary Strategies:**
  1. Protect 2 million additional acres of habitat (30% wetland, 70% grassland) in wetland/grassland habitat complexes. Assuming no net loss to the existing habitat base, Minnesota will need to protect and restore an average of approximately 40,000 additional acres of habitat per year.
  2. Continue the ongoing management of 1800 shallow lakes across Minnesota.

  **RESEARCH NEEDS**

  *From WBCI Species Profile:*
  - More research is needed on the ecological factors limiting American Black Duck productivity, such as predation, habitat characteristics, and nutrient availability in the species core breeding range.
  - The extent and degree of American Black Duck/Mallard interactions across the range of breeding, staging, and wintering habitats needs to be better understood.
  - Studies that examine methods for effectively managing important staging and wintering habitats are warranted.

  *From UMVGL JV Species Account:*
  - Controversy remains regarding the effects of hunting and Mallard interactions on population declines of this species.
  - An understanding of population influences (breeding and non-breeding seasons), migration timing and corridors, and food resources is needed on the west side of the species range.

  **Effectiveness Measures:** Eliminating the current population deficit requires a 20% population increase or an average annual increase of 1% over a 15 year period.
Note: Background on the Black Duck Joint Venture can be found at:
http://www.blackduckjv.org/populationMonitor.html