



Harvest Management of Mallards in the Atlantic Flyway

Background and development of a new harvest strategy

In response to sharp and sustained declines in mallard populations breeding in the northeastern US and parts of eastern Canada, the Atlantic Flyway Council (AFC) and the United States Fish and Wildlife Service (USFWS) restricted the mallard bag limit from 4 per day (no more than 2 hens) to 2 per day (no more than 1 hen). The change in bag limit was made as an interim step while Atlantic Flyway biologists could develop a new population model and strategy to guide mallard harvest management. As part of that process, managers had to determine the goals for mallard management in the flyway. The fundamental objectives for mallard management in the Atlantic flyway are to:

- 1) Sustain an eastern mallard population that meets legal mandates and provides hunters and non-hunters the opportunity to enjoy this species; and
- 2) Maximize harvest opportunity in accordance with hunter desires (i.e., minimize closed seasons, maximize the average season length, maximize the population size, minimize the frequency of regulatory changes).

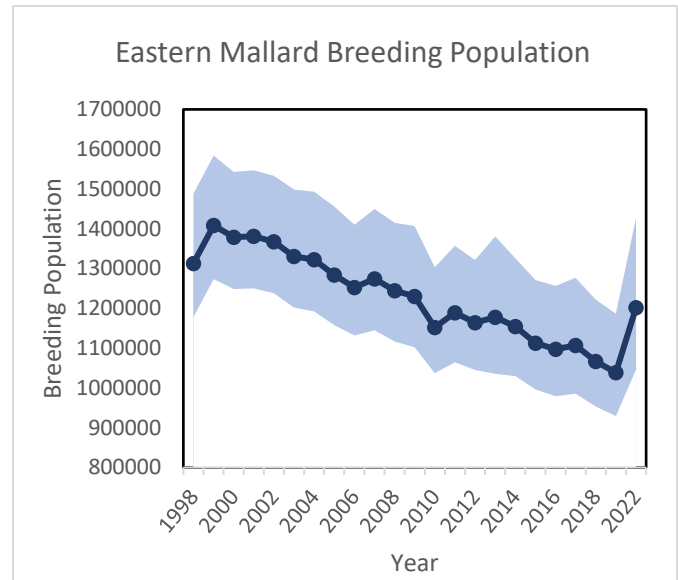


Figure 1- Eastern Mallard Population Estimates from 1998 - 2022

The new harvest strategy uses data from the nearly 10,000 mallards that are banded annually in the Atlantic Flyway, population estimates from large aerial and ground surveys that extend from eastern Canada to Virginia, harvest information from the [USFWS parts survey](#), and recovery information from hunters who report the band numbers on harvested birds. This data helps managers understand what drives populations for eastern mallards and in turn, select bag limits that accomplish the two objectives. Annually, based on the most recent population information and a prediction of how various harvest rates will result in the following year's mallard population, the mallard bag limit will be either a liberal package of 4 birds (no more than 2 hens), a moderate package of 2 birds (no more than 1 hen), or one bird of either sex, as part of the regular duck bag limit.

Current population status and trends

The new harvest strategy accounts for mallards breeding in areas of eastern Canada that were not previously considered in Eastern Mallard Adaptive Harvest Management. The increase in geographic scope enables managers to account for most breeding mallards that are harvested in the Atlantic Flyway rather than just those that are hatched here. **The breeding population estimate for eastern mallard in 2022 was 1.2 million mallards, resulting in a liberal recommendation of 4 mallards per day (no more than 2 hens) for the 2023-2024 hunting season.** Since harvest restrictions went into place in 2019, mallard numbers have rebounded slightly, mostly driven by increases in eastern Canada. Although the increase is encouraging, the northeastern US population continues a stable to slightly decreasing trend. Hunters should understand that the mallard regulation can go back the other way should population numbers and other data warrant a more conservative harvest regimen. Each year, the decision will be revisited with new population and demographic data to determine the optimal bag limits for mallards. This may result in a return to more moderate bag limits if the data supports such a change.



Questions and answers

Question: Mallard numbers are similar to what they were in 2019 when hunting seasons were restricted, why can we now harvest 4 per day?

Answer: The bag limit reduction was in response to sharp mallard population decline and an interim step while a new mallard harvest strategy and population model was developed. Importantly, the interim step was static and did not account for new data. The new harvest strategy utilizes all the relevant data collected by biologists and is updated annually. This helps managers to identify drivers of the eastern mallard population and the amount of harvest the population can sustain. Since 2019 when bag limits were restricted, the mallard population has rebounded slightly. The current population of approximately 1.2 million birds and the underlying information on harvest, productivity, and survival suggest that harvest regulations can be liberalized to increase opportunity for hunters. Bag limits are reassessed annually, and the bag limit will change if necessary to maintain mallard populations. By understanding harvest, productivity, and population estimates better, managers can determine the degree of impact harvest does or does not have on a population. In some cases, even with a declining population the bag limits can remain liberal for short periods of time.

Question: What happens if mallard numbers start declining again?

Answer: Depending on the cause and degree of the decline, bag limits may be restricted if the data suggests harvest is exceeding the capacity of the eastern mallard population. In the current harvest strategy a liberal bag limit (4 mallards 2 of which can be hens) is expected about 80% of the time. That means we anticipate moderate bag limits about 20% of the time. Through these simulation efforts we assume population dynamics (survival, productivity, etc.) and how mallards interact with the environment remains constant.

Question: Why are mallard numbers declining in the Northeast United States?

Answer: At this time, biologists are unable to pinpoint exactly why the decline has occurred but suspect a combination of several factors. The updated modeling suggests juvenile survival and low recruitment (i.e., either low nest success or low survival of ducklings) has the greatest effect on population trajectories for eastern Mallards. During the early 2000s when the population experienced the steepest declines, the productivity estimates were low and likely were the primary driver of the decline when paired with liberal bag limits. There are several hypotheses as to the underlying cause of the poor productivity or juvenile survival, but the exact cause is unclear at this point. It is important to recognize, that low or declining productivity reduces the harvest capacity of the population and may warrant more conservative regulations. More research is needed and is currently underway to help answer these questions.

Question: What are states wildlife agencies in the Atlantic Flyway doing to help mallard populations in eastern North America?

Answer: States in the Atlantic Flyway, the USFWS, and the Canadian Wildlife Service have partnered to fund one of, if not the, largest telemetry projects ever conducted on a wild bird. Biologists are deploying more than 1,100 GPS transmitters on female mallards from South Carolina through the Maritimes of Canada to better understand survival, productivity, habitat usage, and migration chronology of mallards in the Atlantic Flyway. Data from this study will help inform both habitat and harvest management decisions in the future. To learn more and follow along with migration, please visit: <https://atlantic-flyway-waterfowl-gps.weebly.com/>



Question: If mallard populations begin to decline again, will general duck season length or bag limits of other species be affected?

Answer: No, in 2019 the AFC and the USFWS began setting the regular duck season length and bag limits under a new strategy termed “multi-stock management.” If changes to mallard harvest are warranted, it will be handled by restricting mallard bag limits rather than affecting the season length or bag limits for all ducks. Similar to the current harvest strategies for species like scaup, canvasback and pintail. For setting the regular duck season length and bag, managers use the population status of a representative sample of species (e.g., wood ducks, ring-necked ducks, American green-winged teal, and common goldeneye). The new process uses four species that represent the various life history strategies and species that occur in most or all states within the flyway. For more information on multi-stock, please visit: (<https://portal.ct.gov/DEEP/Hunting/Migratory-Bird-Guide/Multi-stock-Harvest-Management-in-the-Atlantic-Flyway>)