Barbara Foley

From: Boehl, Kinsey <Kinsey.Boehl@nexteraenergy.com>
Sent: Friday, January 11, 2019 9:04 AM
To: John Lopez; Suzanne Egan (eganspe@gmail.com); Mary Parisella (maryparisella@gmail.com); StephenDuquet@yahoo.com; tbroadrick@gmail.com; 'Adrienne Lennon'; Althea B. Volper (abv@hdgpc.com)
Cc: Barbara Foley
Subject: RE: Battis Mowing
Attachments: Best-Management-Practices_Grasslands.pdf

We should put out an RFQ for farmers to provide haying services. The contract request should stipulate that there is a no disturb on the fields between May 15 and August 15 IAW "Best Management Practices for Nesting Grassland Birds," Mass Audubon, 2017. See attached.
I would like to see the previous year's mowing contracts for Battis and Woodsom.

Perhaps we could also tap the Commission's funds to post signage at the trail heads that require dogs to be leashed with information about grassland bird habitat.

John,
Please add this to the February administrative portion of the meeting and invite the Director of DPW to attend.

Thank You,
Kinsey

From: John Lopez [mailto:conservation@amesburyma.gov]
Sent: Thursday, January 10, 2019 9:23 AM
To: Suzanne Egan (eganspe@gmail.com); Mary Parisella (maryparisella@gmail.com); StephenDuquet@yahoo.com; tbroadrick@gmail.com; 'Adrienne Lennon'; Althea B. Volper (abv@hdgpc.com); Boehl, Kinsey
Cc: Barbara Foley
Subject: FW: Battis Mowing

CAUTION - EXTERNAL EMAIL

Please note that Commissioner Lennon serves as the concom representative on the open space committee. The open space committee has taken the lead on this issue working with the administration to reach a management plan that meets federal and state laws as it relates to ground nesting bird habitat. She deserves credit as this remains a sensitive issue.

From: Bernadette Lucas [mailto:blucas@northshore.edu]
Sent: Thursday, January 10, 2019 9:01 AM
To: kinsey.boehl@gmail.com; Evan Kenney; Robert Desmarais; Adrienne D Lennon; Dave Viale; John Lopez; Jonathan Sherwood; Mayor Gray; Nick Wheeler; Georgian, Bruce
Subject: Battis Mowing

Hi Everyone,

Hope you all had a great holiday. Now that our days are getting longer and spring is marching our way, it is time to think about our fields. Please read the attached.

B

--
Professor Bernadette Lucas MS.RD.
Nutritional Science Program Coordinator
North Shore Community College
978-762-4155
blucas@northshore.edu http://www.northshore.edu

Notice:
This email is subject to MGL: Chpt.66, Sec.10 Public Records Law.

Best Management Practices *for* Nesting Grassland Birds

Mass Audubon

Protecting the Nature of Massachusetts

Mass Audubon's Arcadia Wildlife Sanctuary

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Birds on the cover clockwise: Bobolink, Eastern Meadowlark, Upland Sandpiper, Grasshopper Sparrow

AUTHORS:

Jon Atwood, Bird Conservation Fellow

Jeff Collins, Director of Ecological Management

Lindall Kidd, Bird Conservation Associate

Margo Servison, Conservation Program Coordinator

Joan Walsh, Director of Bird Monitoring

Special thanks to Julia Osborne for editing this document.

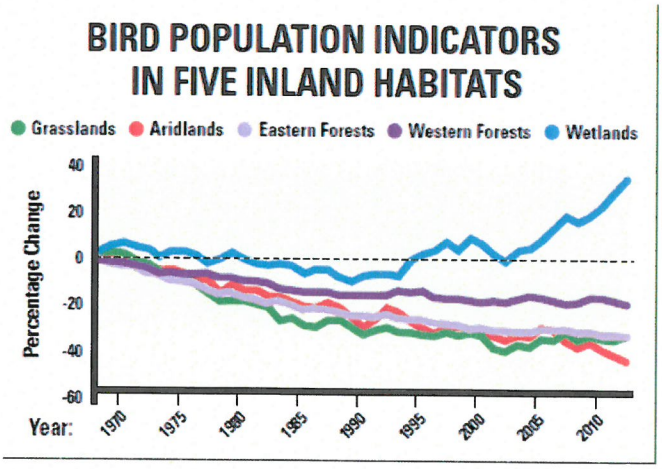
Vesper Sparrow

INTRODUCTION

Grassland-nesting birds are among the most imperiled birds in the nation. Between 1966 and 2012, these species experienced steeper, more consistent, and more widespread population declines than any other group of birds in North America (see graph at right). These declines have been the direct result of three factors: the conversion of grassland habitat to other uses; the natural reversion of grassland to forest; and the intensification of agricultural practices on the grasslands that remain. Fortunately, we have the tools and knowledge to halt the decline of grassland birds.

Mass Audubon has been a leader in grassland bird conservation since the 1990s, when our booklets on grassland habitat became the standard resources for land managers in the Northeast. But despite some gains, bird populations continue to decline and it is urgent that we take action. We have learned a lot during the last 25 years, and today we are offering these streamlined management recommendations with the goal of focusing on simple, effective measures that will protect birds and their habitat.

We at Mass Audubon are convinced that mowing for hay during the height of breeding season is now the leading threat to grassland-nesting birds in New England, and that adjusting mowing schedules is the most effective action we can recommend to aid their recovery. By making minor changes in the management of open fields and grasslands, landowners can contribute in a meaningful way to the recovery of these increasingly rare species. Each field of suitable size (10 acres or larger) is a critical component of grassland bird recovery, and we hope that all managers will work to adopt these bird-friendly management practices. In this document, however, we place special emphasis on lands that are either publicly-owned or owned and managed by land trusts and other conservation NGOs. Privately-owned grasslands are equally valuable habitat for birds, but the financial imperatives to mow on these lands may slow the adoption of our recommendations. Therefore, while we work to integrate habitat considerations into sustainable farming practices, it is especially critical that land ***held in the public trust*** by municipalities, land trusts, and conservation NGOs is managed to provide functional grassland habitat.

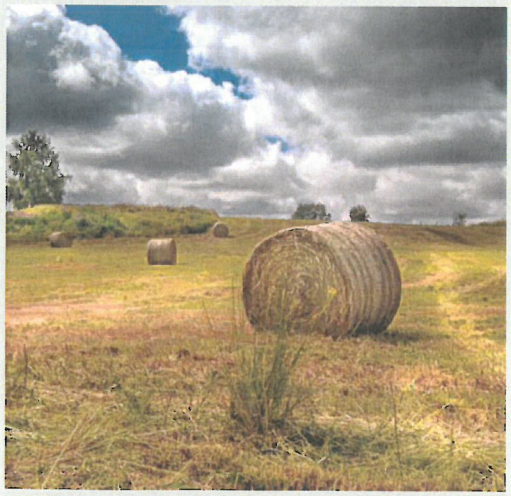


FINDING BALANCE BETWEEN MOWING AND BIRDS

In New England, grassland habitat managers face a fundamental challenge: grasslands must be regularly disturbed to prevent their succession to young forest and, eventually, mature forest. Fire or grazing will maintain a grassland, but most grasslands in New England are maintained through mowing, which usually means mowing for hay. Haying is an intensive practice, involving multiple passes with a tractor to cut the grass, tedder it to dry, rake it into rows, and bale it. When all of this occurs during the breeding season, haying destroys nests and eggs and kills nestling birds. American Crows and other scavengers know this and can often be seen scavenging in fields during and after mowing.

This destruction of eggs and nestlings is heartbreaking. Bobolinks and Upland Sandpipers, for example, survive the myriad hazards of long-distance migration to locations as far away as Argentina, return to New England to invest a year's worth of energy to reproduce in local fields, only to have all of their effort wasted under a sunny sky in June or early July when the fields are mown. Although pairs of adults might be counted in a bird census, they might as well not exist as breeders. Will the birds learn that a field isn't suitable habitat and choose another field next year? Not likely. Grassland birds have a high degree of nest-site fidelity, returning annually over their 5-8 year lifespan to the same site to attempt to breed, thus potentially wasting a lifetime of reproductive effort.

This loss caused by mowing affects more than just individual breeding pairs—it affects the entire population. Fields that are cut during June and July act as population sinks, in which mature birds waste their entire reproductive effort. We must find a balance between mowing and allowing grassland



Why are fields mown during the breeding season?

On working farms, hay provides feed and bedding for livestock and is also a source of income. However, hay cut at different times of the year varies in value and quality. In general, hay with the highest protein content (i.e., best for dairy cows and growing calves) and the highest yield per acre comes from the first cut, typically in mid to late June. New England's farmers, already working in an economically challenged industry could therefore find it very difficult to alter their mowing schedules.

birds to successfully raise their young so that all breeding pairs can contribute to the recovery of these species.

Fortunately, many grasslands are owned by towns, agencies, and land trusts. Agriculture may be one intended land use for these properties, but managers of these sites can choose to prioritize habitat for declining species by delaying mowing until after the breeding season. By reaching a compromise between agricultural production, aesthetics, and habitat, these managers can immediately contribute to halting the decline of grassland birds in New England.

It is not too late for us to reverse the trends for grassland birds. We have the habitat, we only need to adjust our management. Fortunately, that same nest-site fidelity that can doom repeated breeding efforts is also the key to species recovery: If we simply change mowing times on fields where birds have attempted to breed in the past, we will greatly increase their reproductive success and halt the decline of these species. If properly maintained, these sites can host breeding birds indefinitely, becoming population sources that can serve to restore these signature birds to the Massachusetts landscape.

As managers of properties in the public trust, we can demonstrate best management practices, thus making an immediate contribution to species recovery. We have been planning to use these properties to help species respond to future climate change, but we can also put our land to work today to meet conservation goals. Also, by framing our management practices in the context of the public good, we will be in compliance with federal laws, such as the Migratory Bird Treaty Act.

Bobolink (Male)

MIGRATORY BIRD TREATY CENTENNIAL 1916-2016

The Migratory Bird Treaty Act (MBTA) makes it illegal to pursue, hunt, take, capture, or kill any migratory bird, or any nest or egg of any such bird, unless otherwise permitted by federal regulations (e.g. legal hunting). After the Migratory Bird Treaty was signed in 1916, Mass Audubon played a central role in passing the MBTA in 1918. This act has served as a cornerstone of bird conservation efforts ever since. Mowing during the breeding season kills most or all eggs and nestlings in a field. Following the management recommendations outlined in this document will ensure compliance with the MBTA.

Bobolink (Female)

THE STATE OF GRASSLAND BIRDS IN MASSACHUSETTS

Our grassland bird conservation efforts are focused on 5 species, each of which is noted as a Species of Conservation Concern in the Massachusetts State Wildlife Action Plan:

Upland Sandpiper

Vesper Sparrow

Grasshopper Sparrow

Bobolink

Eastern Meadowlark

While these species have historically been more widespread and numerous in the grasslands of the Midwest, the smaller populations that persist in the Northeast are important for several reasons:

- Grassland species are declining nationwide and their conservation requires range-wide effort.
- Conserving species at the edge of their range, with the goal of maximizing genetic diversity and thus resilience of the species, is a central tenet of conservation biology
- Maintaining species across their range is a crucial element of the ability of these species to adapt to climate change.

BEST MANAGEMENT PRACTICES FOR GRASSLAND BIRD HABITAT

Minimum field size (acres) for six grassland birds in the Northeast

Mass Audubon's Canoe Meadows Wildlife Sanctuary

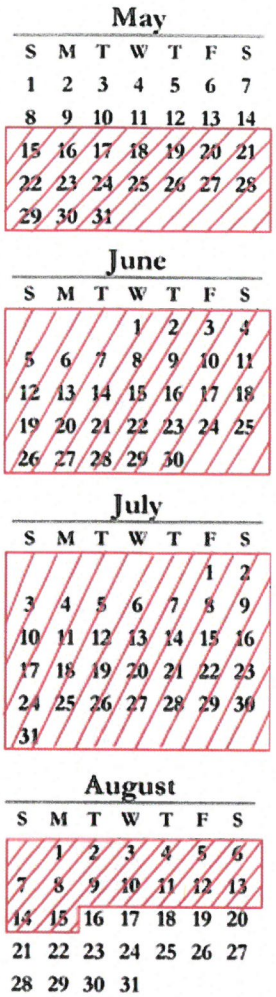
Eastern Meadowlark

While there are variations of these practices published by other organizations, Mass Audubon recommends this simple set of management practices for all fields that are larger than 10 acres. We use the 10-acre threshold for a few reasons. Grassland nesting birds are area dependent and edge sensitive: they will not nest in fields that are smaller than a certain size, and they tend to nest away from field edges, to avoid predation. Minimum area requirements range from more than 100 acres for Upland Sandpipers to roughly 10 acres for Bobolinks (see figure at left). While Bobolinks will occasionally nest in fields smaller than 10 acres, we are focusing our recommendations on larger fields that are more likely to host numerous pairs. Smaller fields can then be managed for hay production or pollinator habitat or to meet other goals.

While designed to benefit birds, these practices also benefit other kinds of imperiled wildlife, such as butterflies, insect pollinators, and nesting turtles. Our ultimate goals are to do no harm to the imperiled species and to increase our contribution to their regional success.
Several factors can help maximize the successful breeding of grassland birds. Managers can actively enhance grassland bird breeding habitat by following these best practices:

- Do not mow fields from May 15 through August 15
- Collect the cut hay at least every three years
- Discourage the growth of forbs and woody vegetation
- Reduce disturbance during the breeding season
- Reclaim field edges and enlarge fields where possible
- Coordinate management practices with neighbors

Mow Outside of Breeding Season



This is the most important management practice. In Massachusetts, the prime breeding season for grassland birds starts in mid-May and runs into early August. We recommend the following field management protocols:
Do not disturb fields between May 15 and August 15. Disturbance includes mowing, the use of any other mechanical equipment, and grazing. Leaving grasslands undisturbed until August 15 will ensure maximum survival of breeding birds and their young during the critical post-fledging period when young birds learn to forage and bulk up in preparation for migration. It will also ensure that the fields will accommodate adult and juvenile birds that are chased out of nearby fields by haying.

When possible, do not mow in the early spring. Mowing just prior to breeding season leaves very little cover in fields, making them much less attractive for nesting. If mowing is required to generate an early crop or to control woody vegetation or forbs, ensure that all operations are completed by May 15. Early season mowing should occur no more frequently than every other year.

If a field must be mowed during June or early July—a***nd we strongly hope such will not be the case for lands held in the public trust by municipalities, land trusts, and conservation NGOs***—intentionally make the site unsuitable for grassland-nesting birds by mowing every 2 or 3 weeks, beginning in late May and continuing through mid-July. Discouraging birds from nesting on such sites will prevent them from being lured into ecological traps; hopefully the frequent mowing will force them to relocate to other, more bird-friendly locations.

Discourage the Growth of Forbs and Woody Vegetation

Most of our grassland breeders prefer a field dominated by grasses. Increasing dominance by forbs (herbaceous plants that are not grasses) and woody plants make a field unattractive as breeding habitat. Optimal grassland vegetation can be maintained by doing the following:

Mow fields before September 15 each year to prevent the proliferation of forbs. Later mowing allows goldenrods, asters, and a wide variety of other wildflowers to mature and set seed, leading to a decline in grass cover and ultimately a decline in habitat quality.

Collect cut material at least every three years. Grassland birds prefer fields that are free of thatch. The adults often walk a short distance to and from the nest to avoid attracting predators; deep thatch inhibits this movement. In addition, if clippings are not removed, forbs tend to out-compete grasses so fields take longer to "green up" in the spring, making them less attractive as nesting sites.

Avoid Disturbances

Mass Audubon's Pierpont Meadow Wildlife Sanctuary

Like any nesting bird "colony", grassland birds will be stressed by disturbance. Eliminating foot traffic, farm equipment travel, dog walking, and other disturbing activities through the grassland is important:

- Route trails along field edges.
- Close field-edge trails to dogs between May 15 and August 15 or require that dogs be kept on-leash during this period.
- Use symbolic fencing to indicate the boundaries of the field. The "fencing" can be made of simple posts and rope or string with signs to explain the importance of staying out of the nesting area.

Maximize Field Size

Many grassland bird species will nest in only large fields. Visual openness is an important aspect of how such birds assess habitat size. For example, the property in the aerial photograph to the right comprises 27 acres (outlined in red), but grassland birds are likely to perceive only the 16 interior acres (green crosshatching) as potential breeding habitat.

To maximize the attractiveness of fields to nesting birds, consider the following practices:

- Enlarge fields by reclaiming field edges. Mow encroaching woody growth during the off-season, taking care to control invasive species.
- Remove hedgerows and tree lines between fields to increase the functional size of available grassland habitat. For example, a line of trees running down the middle of 16-acre field effectively divides it into two. Removing that line of trees maximizes the value of the grassland.
- Locate barns and other infrastructure along the edges of fields to minimize habitat fragmentation.
- Although row crops when grown next to a grassland contribute to the overall openness of a landscape, they do not provide habitat for grassland birds.

Case Study: Maximizing Field Size at Canoe Meadows

BEFORE

BEFORE

AFTER

AFTER

Prior to restoration work, the fields at Mass Audubon's Canoe Meadows Wildlife Sanctuary in Pittsfield, MA were a patchwork of small (by the birds' standards) grasslands. At 34, 11, and 10 acres, the three fields were too small to provide suitable habitat for many grassland bird species (see Figure 2 for minimum field size requirements per species). Mass Audubon staff recognized that we had the opportunity to create about 70 acres of prime grassland-bird habitat by removing the vegetation that was dividing the fields.

In the fall of 2016, Mass Audubon removed 3 acres of white and red pines and a 3-acre patch of invasive shrubs. As you can see in the above before-and-after photos, the change is stunning. The few trees remaining in these photos were also removed. The newly combined field should prove very attractive to grassland birds when they arrive in the spring of 2017.

Coordinate With Your Neighbors

In order to create a more cohesive landscape for grassland birds, it is important to coordinate your grassland management practices with those of your neighbors. Encourage your neighbors, town officials, and local land trusts to adopt bird-friendly mowing or grazing schedules, leaving fields free of disturbance from May 15 to August 15.

A NOTE ON COMMERCIAL HAY FARMING

This document is intended for managers of lands in the public trust. Commercial farmers may have additional constraints that make these mowing dates too restrictive. We encourage farmers who are interested in conserving grassland birds but worried about the financial impact of making these changes to investigate one of these two programs:

- The Bobolink Project—a collaborative effort between Mass Audubon, Audubon Vermont, and Audubon Connecticut—is an incentive program that supports wildlife-friendly farming. We raise funds from private donors and then pay participating farmers who are willing to restrict their harvests from May 15 through August 15. The number of participating farms is dependent on the funds we can raise. To learn more, support, or apply to have your farm included in The Bobolink Project, visit www.bobolinkproject.com.
- In Massachusetts and several other states, the USDA Natural Resources Conservation Service (NRCS) offers funding to landowners who adopt conservation practices. For more information visit www.nrcs.usda.gov/wps/portal/nrcs/main/ma/programs/financial/eqip/.

Both of these programs allow for at least two cuts per season while providing enough time for many birds to successfully reproduce between harvests.

Bobolink Nest and Young

American Kestrel Chick

Short-eared Owl

Northern Harrier

Savannah Sparrow

USEFUL RESOURCES

Migratory Bird Treaty Act:
www.fws.gov/birds/policies-and-regulations/laws-legislations/migratory-bird-treaty-act.php

The Bobolink Project: www.bobolinkproject.com/

Natural Resources Conservation Service (NRCS): www.nrcs.usda.gov

Environmental Quality Incentives Program: www.nrcs.usda.gov/wps/portal/nrcs/main/ma/programs/financial/eqip/

Mass Audubon State of the Birds: www.massaudubon.org/StateoftheBirds

Mass Audubon Breeding Bird Atlases: www.massaudubon.org/birdatlas

Atwood, J., J. Collins, L. Kidd, M. Servison and J. Walsh. 2017. Best Management Practices for Nesting Grassland Birds. Mass Audubon; Lincoln, Massachusetts. 10 pp.

PHOTO CREDITS

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