

dcr

Massachusetts



The newsletter for owners of land protected by a Watershed Preservation Restriction (WPR) held by the Department of Conservation and Recreation (DCR), Division of Water Supply Protection.

Winter 2015

Contents

- Managing Meadows
- Meet the Staff:
Joel Zimmerman
- DCR and MWRA
- Wildlife Profile:
The Bobolink and Tree Swallow

Contact

Caroline Raisler
Watershed Preservation
Restriction Coordinator
508-792-7806 x 609
caroline.raisler@state.ma.us

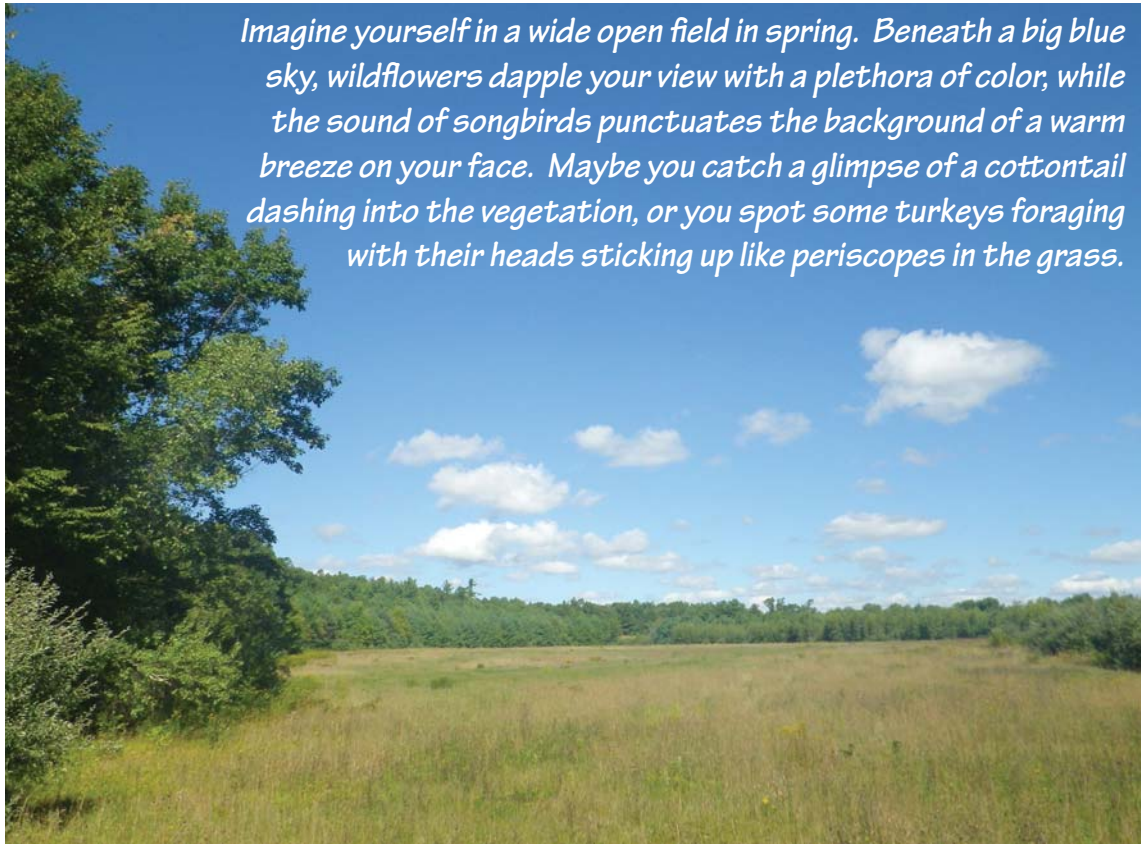


Meadow
Songbirds
see Page 4

Watershed Currents

Outstanding in One's Field

Meadow Wildlife Habitat Management



Imagine yourself in a wide open field in spring. Beneath a big blue sky, wildflowers dapple your view with a plethora of color, while the sound of songbirds punctuates the background of a warm breeze on your face. Maybe you catch a glimpse of a cottontail dashing into the vegetation, or you spot some turkeys foraging with their heads sticking up like periscopes in the grass.

This is a scene that even the hardiest winter loving New Englander can envy. It is one that is also rapidly disappearing in Massachusetts. Grasslands in Massachusetts have been in decline over the past century, and many of the species that depend on these open spaces are also in decline, threatening to reduce the overall biodiversity in the Commonwealth.

A field on your WPR, or on another part of your property, therefore has the potential to serve as a critically needed habitat type. A field managed specifically for wildlife supports a wide variety of species that can be observed while walking on your land or from your kitchen window.

In the spring and summer, ground nesting songbirds, such as Bobolinks (see Page 4) use open fields to raise their young; other birds live near fields so that they can feed off of the prodigious amounts of flying insects. Many small mammals, such as meadow voles and cottontail rabbits, inhabit meadows, and in turn they act as a food source for predators

like foxes and owls. Fields with an assortment of wildflowers can attract an array of pollinators, including butterflies.

Not all fields, however, are created equal in the eyes of wildlife. If you are interested, there are specific management techniques you can do in order to maximize the habitat quality of your field. These management techniques are generally simple and easy to implement on your own.

Maintaining Your Field for Wildlife

Fields in New England need to be regularly managed to prevent them from transitioning into forest. Maintaining fields through periodic mowing represents the easiest and most convenient option available to small, private landowners. It is also the primary method used by DCR Division of Water Supply Protection on its properties. Unfortunately, the mowing regime that is best for wildlife is not very compatible with high quality hay management. You should usually only consider managing fields for wildlife if you do not want to use them for producing high quality hay.

Meadow Habitats, continued on Page 3

Meet the Staff

Joel Zimmerman:**Working in the city to protect the watersheds**

Joel Zimmerman plays a role in many facets of the Division of Water Supply Protection's programs, where he has worked since 1997. Joel's desk in Boston doesn't provide beautiful views of the Quabbin or Wachusett Reservoirs, but it does give him the vantage point to facilitate a variety of planning, financial, and administrative tasks.

These duties include managing the Payment in Lieu of Taxes program, implementing the Watershed Protection Act, and developing both long range plans, like Watershed Protection and Public Access Plans, as well as annual Work Plans. Joel's work intersects with the WPR program in



Joel pursues his musical passion at a recent recital.

Photo:
Jim Taylor

the land acquisition process, as he helps with the paperwork necessary to complete purchases. You will also see his handiwork in the production of newsletters, reports, and the website.

Joel grew up in Framingham, but ranged far away, obtaining a BA

in Environmental Studies from the University of California, Santa Cruz, before returning to the Bay State to earn a Masters in Regional Planning from UMass, Amherst. Little did he know that a graduate studio on unfiltered water supplies would directly influence his future employment, or that he would be responsible for writing plans for the Sudbury Reservoir watershed in the town where he was raised.

Joel lives in Melrose with his wife and two teenage sons. There is lots of music in their house, as all three guys play brass instruments; Joel enjoys performing on the trumpet in community bands, especially summertime town common concerts. Everyone in his family takes great satisfaction drinking water directly from the tap, having insider's knowledge of the land, water, and people that comprise the greater Boston water supply system.

FYI

DCR and MWRA**A cooperative relationship**

Over the past 150 years, there have been a dozen different names of government organizations responsible for the Boston area drinking water supply. Today, the Office of Watershed Management within DCR's Division of Water Supply Protection (DWSP) and the Massachusetts Water Resources Authority (MWRA) manage this vast resource. Why two agencies?

The MWRA's 1985 enabling legislation mandated the new independent authority to finance and repair the Boston region's water and sewer infrastructure, and act as the wholesale distributor of these utilities to the local cities and towns. While MWRA got all the pipes and treatment facilities, the legislature maintained state control of the land and reservoirs, creating a Division of Watershed Management within the Metropolitan District Commission (MDC), DCR's predecessor agency (MDC and the Department of Environmental Management were merged in 2003 to become DCR). DWSP is required to provide "a sufficient supply of pure water to the [MWRA], and shall utilize and conserve said water and other natural resources in order to protect, preserve and enhance the environment of the commonwealth and to assure the availability of pure water for future generations."

dcr
Massachusetts



In simple terms, DWSP handles watershed management, while MWRA takes over when the water enters the Quabbin and Wachusett Reservoirs' intakes. Reservoir management is a joint responsibility. The inter-agency relationship, of course, is much more complicated. In reality, DWSP and MWRA work closely together to provide 2.5 million people some of the best drinking water in the world.

The functions of each agency are spelled out in a Memorandum of Understanding. Most importantly, MWRA – and its ratepayers – entirely fund DWSP's operating budget through the Water Supply Protection Trust. This financing also includes land acquisition; MWRA money paid for your WPR. The DCR/MWRA watershed system is a partnership that makes both short- and long-term investments from the system's users in the permanent protection and management of the source water supply.

The cooperation between the two agencies, and their ability to maintain a successful watershed management program, was a critical component to a federal judge's ruling that allows the system to be one of the few unfiltered water supplies in the country. DCR and MWRA staff will continue to collaborate on a wide range of issues – such as water quality, reservoir operations, dam maintenance, sewers, and other watershed issues – in order to quench the thirst of a third of the state.

- Joel Zimmerman

Meadow Habitats - From Page 1

A view from the shadows. With a pond on the far side, this WPR meadow thrives on a warm summer day.

Photo:
Jim Taylor



The time of year you choose to mow is one of the most important pieces of a successful mowing plan. Specifically, you want to mow after the bird nesting season, which typically lasts from April 15- August 1. Some grassland birds make their nests on the ground, relying on the thick grasses and shrubs for cover, so mowing during the nesting season can destroy eggs or young and disturb nesting adults. Other species, such as many types of butterflies (see sidebar), can also suffer from mowing too early in the year.

The height of the mower is also a critical consideration. Make sure that the grass is mowed 8-10" off the ground to prevent disturbing or crushing small mammals and wood turtles.

Most experts recommend mowing once every one to three years to maintain an ideal grassland habitat. Whether you choose to mow once every year or once every three really comes down to your personal preference. A less frequent mowing schedule will result in a field with a mixture of grasses, legumes and other herbaceous plants, while a more frequent schedule will create a field with a greater proportion of grasses. Your choice will likely attract different sorts of wildlife. In New England, either type of field would benefit a variety of different species.

If you have multiple fields next to each other then there are a few extra things that you can do that are helpful but not required. Consider mowing each field on a different schedule. Adjacent fields with different management plans

WPRs and Field Maintenance

Not every WPR has a field: 43 WPRs have fields and eight more have fields just on the exclusion. We thought that this information on field maintenance would be useful to some of these landowners, as their WPR allows the activities described in the article. However, if your WPR does not already have a field, this information likely does not apply to your land management, as most WPRs do not allow for the clearing of forest to create new fields. No matter your situation, we hope you find the story interesting. As always, if you have any questions about the management of your WPR, contact WPR Coordinator Caroline Raisler (contact information on the front page).

create a more complex field matrix, thereby providing a range of habitat conditions for a greater abundance and diversity of species. In addition, you may want to consider cutting down any tall hedgerows in between your fields. Cutting down trees between fields on your WPR would also be helpful for wildlife but against the terms of most WPRs as it would be considered a conversion of forest to a maintained field. Multiple fields adjacent or near each other can function as one larger field so long as there are few barriers of thick vegetation between them. A lack of a vegetation barrier allows certain species, particularly birds, to see farther which creates the "impression" of a larger continuous grassland. Larger fields are generally more desirable than smaller ones because they support a wider range of organisms, and many grassland adapted songbirds, for example, will not utilize fields under a certain acreage. - Nick Rossi

Managing Your Fields for Butterflies

Butterflies represent one of the most colorful and beloved groups of invertebrates often found in open fields. You may be excited to know that there are a few ways to manage a field specifically for butterflies.



Photo: Ken MacKenzie

To start, a single mowing session in late fall is the best practice for butterfly habitat. Different butterflies lay and hatch their eggs at various times over the year, so mowing in the late fall ensures that your management strategy will benefit the greatest number of species. Late fall mowing allows the seeds of important host and nectar plants, like milkweed and Queen Anne's lace, to disperse so that they will come back robustly the next year.

When you do mow, you should leave out a section of the field each year, even if it is a relatively small section. This un-mowed portion will serve as an "insect refuge" for next year. Perhaps most importantly, always remember to keep the mower blades about eight inches off the ground in order to minimize the impact on overwintering eggs, pupa and adults (the overwintering form depends on the species).

More information on Massachusetts butterflies and their conservation can be found from the Massachusetts Butterfly Club at: www.massbutterflies.org

Wildlife Profile

A tale of two songbirds

The Bobolink

If you manage a field on your property, a Bobolink is one bird species you will likely see. Bobolinks were once very common in New England, but populations have declined significantly over the last century. The loss of suitable hayfields, reforestation, and suburban sprawl has chipped away at their habitat in Massachusetts. Bobolinks prefer old fields dominated by grasses with a mixture of forbs and small shrubs. If you'd like to attract these birds, it is especially important to consider your mowing time because they build their nests on the ground hidden in tall grass. Brooding occurs between late May and early July so mowing before mid-July is detrimental to nesting Bobolinks.

Bobolink males look a bit unusual during mating season, with white marking on their back and a black underside. They also sport a prominent straw colored patch on top of their head. These males are quite conspicuous in spring as they fly in helicopter patterns or perch on fence posts and shrubs, singing their long bubbly song.

Few songbirds travel as far as Bobolinks. Each year they migrate about 12,500 miles to and from their breeding grounds in North America, spending the winter in central South America. They find their way using earth's magnetic field with the aid of iron oxide bristles in their nasal cavity. In fact, Bobolinks can navigate so well that they often return to the same field each year.



A male Bobolink (at left) and Tree Swallow (right) are two likely inhabitants you may find in a meadow environment.

Photo left and cover: USFWS Digital Library; right: kentthomas.us



The Tree Swallow

Tree Swallows are another local songbird that you may find in your field. They eat prodigious amounts of insects and help keep the local mayfly, mosquito, and other flying insect populations in check. Easily one of the most acrobatic birds native to New England, you can often observe

them zip and dive from dawn until dusk usually flying no more than 40 feet off the ground. They also have quite striking plumage. The males in particular sport an iridescent blue green plumage with a white underside.

Tree Swallows do not require fields for habitat but still benefit greatly from them. They can be found in a variety of open areas with a good supply of insects, including fields, wetlands, and ponds. Areas with an abundance of dead trees are particularly suitable, because Tree Swallows make their nests in the cavities of dead trees. They will also make use of nesting boxes placed 3-12 feet off the ground (see picture on page 1). Wherever they make their nests, Tree Swallows have an interesting habit of lining them with feathers, and they can travel widely in their search for materials. Ever the adept fliers, these birds will sometimes play with the feathers they find by dropping them and then snatching them up again in midair.

- Nick Rossi

For more information on songbirds see: www.allaboutbirds.org (Cornell Lab of Ornithology) or www.audubon.org/field-guide (National Audubon Society's Guide to North American Birds).

dcr
Massachusetts



Department of Conservation and Recreation
Division of Water Supply Protection
Office of Watershed Management
180 Beaman Street
West Boylston, MA 01583

Watershed Currents is produced semi-annually for WPR landowners in the DCR water supply watersheds.

Governor: Charlie Baker
Lt. Governor: Karyn Polito
EOEEA Secretary: Matthew A. Beaton
DCR Commissioner: John P. Murray
DWSP Director: Jonathan L. Yeo
Editor: James E. Taylor