

To: Conservation Commission
From: Mary Anne Antonellis, Library Director
Date: May 18, 2024
Subject: Initial Treatment of Invasive Plants in BVW-1

We have contracted with Brian Colleran, a Professional Wetland Scientist (PWS) and Certified Ecological Restoration Practitioner (CERP), to prepare the Invasives Plant Management Plan required in Special Condition #14 in the Order of Conditions issued by the Shutesbury Conservation Commission on February 16, 2024 (NOI DEP File # 296-0304).

Following a field inspection with Colleran on May 7, he stated that in most locations on the site non-chemical means can be used to manage invasives. However, in two locations within BVW-1 there are heavy loads of invasives that would benefit from treatment soon, before we are ready to present the full Invasives Plant Management Plan for the Conservation Commission's approval.

We seek your approval to use of Aquaneat Aquatic Herbicide in June in these two areas.

Aquaneat is a glyphosate herbicide with minimal adjuvants that is approved by the Massachusetts Department of Agricultural Resources for use in sensitive areas. This proposed treatment is recommended in late spring/early summer for the most effective result from the smallest application of herbicide, thus we are asking the Conservation Commission's permission to move forward now. Colleran, who holds Commercial Pesticide License in the Commonwealth of Massachusetts, would apply the herbicide. Our recommendation is based on the following.

Multiflora Rose and Bittersweet in Stone Wall and within Wet Meadow in BVW-1 AURA

There is a significant presence of invasive plants, predominantly bittersweet and multiflora rose, along the entire length of the stone wall that parallels Leverett Road. There are also well established patches throughout the wet meadow.

Within the Stone Wall: Removing plants from the stonewall by hand would be a daunting, labor-intensive endeavor and, in the end, likely ineffective. Roots are deep within the stones.

Within the Field: The patches of multiflora rose and bittersweet within the wet meadow are now extensive. The disturbance of removing these patches with machinery or by hand will have a negative impact on the AURA. The invasive plants are so wide-spread that even pulling them by hand would cause widespread disturbance to the topsoil.

Digging out the invasive plants out of the stone wall would be ineffective. Given the extent of the prevalence bittersweet, it is unlikely that the bittersweet's deep and extensive root system could effectively mitigated by hand removal. The patches of multiflora rose and bittersweet within the field are also extensive, and again, beyond hand-pulling or hand-digging.

Therefore, Colleran recommends a single application of herbicide, in June. This will bring the population of invasive plants down to a level that can then be managed by a volunteer crew through less damaging means.

Knotweed along Leverett Road in BVW-1 AURA

The growing patch of knotweed alongside Leverett Road presents a different challenge. The difficulty with knotweed management, no matter the type of methodology, is that knotweed control often resembles a game of “whack-a-mole”. New plants will pop up where you least expect them.

Manual control of knotweed has mixed results, is not supported as an effective strategy by scientific literature, and can take up to a decade to achieve eradication, even for a relatively small patch.

Therefore, in line with the best available science, we recommend herbicide control at the first opportunity following Conservation Commission’s approval of our recommendation. There is a window in the late spring/early summer when the herbicide will be directed towards new rhizomes growth, deterring underground spread. Combining an early spring application with the more traditional autumn application will greatly limit growth and prevent expansion of the plant over the growing season, thus improving the efficacy of the fall herbicide treatment.

Knotweed re-growth will be monitored and follow-up applications of herbicide may be required.

We look forward to meeting with you on May 23 to discuss our proposal.