

**Project Name** | Millbrook**Date** | 12.20.2020**To / Contact info** | Karen Kill**Cc / Contact info** |**From / Contact info** | Kevin Biehn**Regarding** | Response to Millbrook HOA questions on Buckthorn Management

## BACKGROUND

The Millbrook outlots are known to contain invasive, non-native shrubs, which can reduce property values, damage the environment and harm human health. Common buckthorn (*Rhamnus cathartica*), is perhaps the most well-known invader, but the outlots are known to also contain stands of the following invasive species:

- Amur maple (*Acer ginnala*)
- Glossy buckthorn (*Frangula alnus*)
- Common buckthorn (*Rhamnus cathartica*)
- Non-native bush honeysuckles

When invasive species, such as buckthorn becomes established, it chokes out all native woodland vegetation by replacing and shading out the existing understory. The woodland understory is the foundation of a diverse habitat for pollinators and other wildlife. The understory plants are the building blocks of an entire ecosystem. When buckthorn becomes pervasive on your property it contributes to a larger loss of habitat on a regional scale. It also reduces plant community biodiversity by minimizing the variety of plants that can grow by choking out sunlight and extracting soil nutrients. Why are invasives such a problem?

- Out-competes native plants for nutrients, light, and moisture
- Degrades wildlife habitat
- Threatens the future of forests, wetlands, prairies, and other natural habitats
- Contributes to erosion by shading out other plants that grow on the forest floor
- Serves as host to other pests, such as crown rust fungus and soybean aphid
- Forms an impenetrable layer of vegetation
- Lacks "natural controls" like insects or disease that would curb its growth

## PROPOSED AREA

The area considered for woody invasive species management by the Browns Creek Watershed District (BCWD), includes the two Millbrook outlot parcels that contain reaches of Browns Creek (Figure 1 & Figure 2). Other Millbrook outlots most likely include woody invasive species, but the following parcels are a priority to BCWD. The total acreage of the two parcels is 23.602 acres and the approximate acreage proposed for management is 13.0 acres.

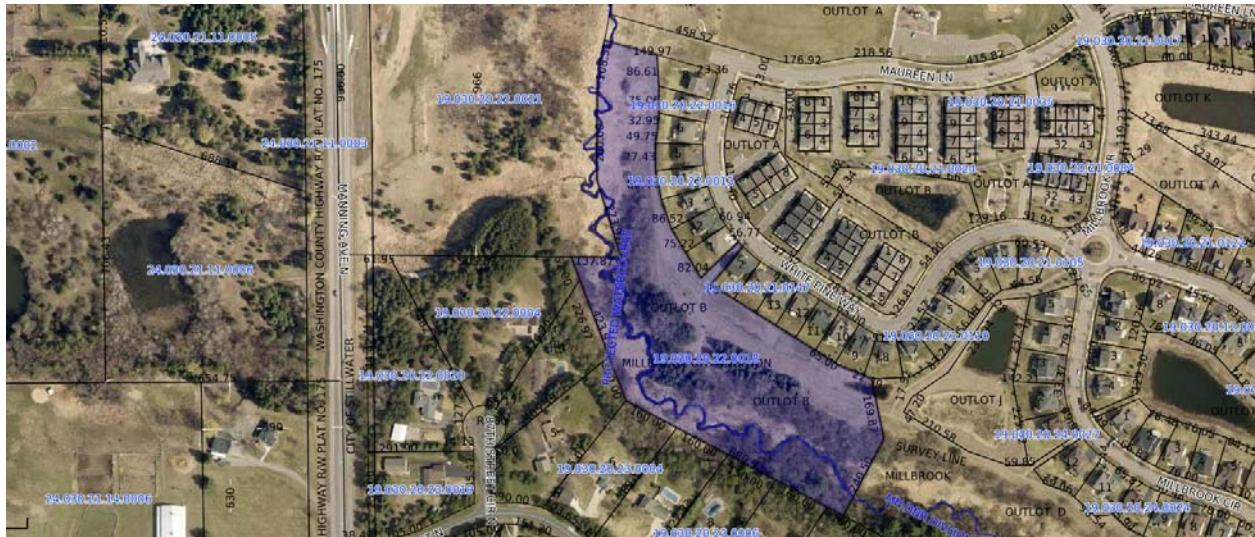


Figure 1 – Parcel 19.030.20.22.0018



Figure 2 – Parcel 19.030.20.24.0015

Table 1 - Parcel ID's and Acres

PARCEL ID	ACRES	ESTIMATED WOODY INVASIVE ACREAGE
19.030.20.22.0018	9.640	6.00
19.030.20.24.0015	13.962	7.00
	23.602	13.00

**PROPOSED MAINTENANCE & ASSOCIATED COST**

The BCWD is considering completing the 1<sup>st</sup> step in managing woody invasive species if the Millbrook HOA commits to necessary follow up management for ≥ 5 years.

BCWD Proposal

The mature plants (≥ 0.5” diameter stem) will be cut at the stump with a chainsaw or brush cutter. Immediately after cutting, the stump will be treated with an herbicide via a paintbrush, dauber, or low volume sprayer. Without herbicide treatment most plants will vigorously regrow.

### HOA Maintenance

After cutting, resprouts and new growth (via seed) will occur. Regrowth can come in even more densely than the starting condition, so follow up maintenance is essential. Buckthorn seed is viable for ~5 years so a minimum of 5 years of treatment is essential. Note that birds and other vectors will continue to bring in new viable seed so ongoing, periodic maintenance is prudent.

The HOA would be expected to complete an annual foliar application of herbicide on young and emerging woody invasive plants across the project area for  $\geq 5$  years. The cost to contract this service is expected to range between \$8,000 and \$13,000 for the full 5 years of treatment over ~13 acres.