

The Forest Stewardship Plan

This Desert Natural Area Invasive Plant Removal Project is part of the Marlborough Conservation Commission's ongoing Forest Stewardship plan to improve the local pitch pine scrub oak habitat and overall forest health. Previous management of this property has included the 2009-2010 mapping of invasive species, cutting and chipping the winter of 2012-2013, and a prescribed burn of 14 acres in May 2014.

Removing invasive species from within this forested area will help native plants thrive and maintain a healthy, biodiverse community of plants to support all kinds of local wildlife. Invasive non-native plants tend to create monocultures that provide limited or no food or shelter for our native species.

Desert Natural Area 2017 Invasive Plant Removal Project

The Desert Natural Area is a very popular community resource in Marlborough used by walkers, birders, cross country skiers, and hunters alike. There is an excellent trail system on this property connecting to additional land managed by private, state, and federal entities totaling nearly 4000 acres.

Through a grant from the Mass Division of Fish and Wildlife – MassWildlife Habitat Management Grant - the Conservation Commission embarked on an invasive plant removal program with the goal of creating a healthier and more diverse forest. Removing invasive plants prevents them from spreading and displacing the native plants. As outlined in Marlborough's Forest Stewardship Plan, once the threat of spreading the invasive plants is reduced the Commission can explore other management options to restore the unique pitch pine - scrub oak habitat found here.

The invasive plants that we are targeting are not localized to just the Desert Natural Area, and can be found almost everywhere. Two of the most aggressive plant species being targeted in The Desert – Glossy Buckthorn and Bittersweet – can be dampened through repeated pulling and disposal away from soil so that their roots do not spread. We were able to cut and apply an herbicide to the stem (minimizing spread and use of chemicals) to kill the plants. If targeted when the patches are small, these invasive plants can be controlled and their spread stemmed before becoming a larger problem. We highly encourage monitoring and removal of these species when found. The control effort must often be carried out for several consecutive years to be effective. Since they are prevalent everywhere, if you see these species along the trails (and are sure of what it is), we encourage you to help us by pulling them up. See next page for how to identify these plants.

For additional information about the City of Marlborough's Forest Stewardship Plan, invasive plants, or the Desert Natural Area, or to help by volunteering to pull invasive plants you can contact us at:

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Glossy Buckthorn

Rhamnus cathartica

Glossy buckthorn has shiny leaves and many small fruits, and can grow either as a bush or a small tree up to 20 ft. tall.

Buckthorn is found along several of the trails within the Desert Natural Area, mainly along the Old Concord Road with some stands along the Cranberry Brook corridor.

Buckthorn that is greater than 1" in diameter has been treated by cutting the stems and wiping the stumps with herbicide (which must be done by a certified professional on public land). Anything smaller than 1" has been pulled by hand.. Removed plants were then dispersed in the woods. These areas will be monitored for the next few years to control any re-sprouting that might occur.



Oriental Bittersweet

Celastrus orbiculatus

Oriental Bittersweet is an extremely fast growing invasive plant that is commonly found in most New England Habitats, as is the case in the Desert Natural Area. (They should be called death by strangle vine as they choke and kill trees if left unchecked)

Bittersweet can be found along several of the trails within the Desert Natural Area, with high concentrations near the Cranberry Brook corridor and along Old Concord Road.

Climbing oriental bittersweet vines has been treated using a cut stem treatment approach, with plants smaller than 1" in diameter being mechanically treated by hand pulling. Treated plants were removed from site or left to dry in trees. Even small fragments of this plant will resprout so removal of this entire plant from the area needed to be done carefully and completely.

If one finds bittersweet on conservation land or at home, control can be achieved through hand pulling. Pull the entire plant up steadily and slowly, remove the dirt from the root mass, and place the vine somewhere out of contact with the soil so it dries out and dies. Or throw it in the trash.



Phragmites

Phragmites australis

Phragmites is a perennial non-native grass that grows to a height of up to 14 ft. each year. It is typically found on wetland borders or shallow marshes.

Within the Desert Natural Area, Phragmites can be found along Cranberry Brook, which flows through the property, and the surrounding wetlands.

Phragmites was treated with targeted herbicides, applied using the hand wiping method in order to limit the amount of surrounding plants that are affected. Because Phragmites is found in or on the edge of wetlands homeowners should contact the Conservation Commission before doing any control of stands near their home.

For all these non-native invasive plants, removal is key and we encourage you to educate yourselves and help us remove these nasty invasive plants.

