



Invasive Species Control

Ecological restoration at the Fernald Preserve has created over 900 acres of diverse habitat, including wetlands, prairies, and forests. Restoration efforts continue today, as the U.S. Department of Energy (DOE) maintains and enhances these restored communities. Nature knows best, and restoration projects were designed to take advantage of the natural processes that regulate native ecosystems. However, some plants and animals are not kept in balance naturally. These invasive species need to be controlled to keep from harming ecologically restored areas. This is especially important in the formative years of these ecosystems. DOE is using a variety of means to control invasive and non-native species and is required to manage state-listed noxious weeds pursuant to state regulations.

Invasive Plants

Ecological “newcomers”—invasive and non-native plants—can stress new and developing ecosystems. Without some control, invasive species may impede or prevent the natural succession process by out-competing native plants and alter the intended course of succession for restored areas.

Amur Honeysuckle (*Lonicera maackii*)

Honeysuckle is an aggressive, large-growing shrub. If not controlled, it can completely take over the understory along the edge of a wooded area. Control methods include hand or mechanical removal, herbicide application (applied to the leaves or cut stumps), or a combination of both methods. Herbicide application to the leaves is usually applied in late fall when most other plants are dormant.

Canada Thistle (*Cirsium arvense*)

Canada thistle spreads rapidly, taking over any area in which it becomes established. It is a perennial species, which means it lives for a number of years. Treatment of Canada thistle includes foliar herbicide application, mowing,

prescribed burning, or a combination of these methods. These methods are also used to control various other species of thistle and noxious weeds.

Nuisance Animals

While wildlife is desired at the Fernald Preserve, some animals can do more harm than good if they are not controlled. Unlike plants, nuisance animals are usually native. However, their natural population controls, such as habitat and predators, have been altered. Nuisance animals can prevent planted and seeded areas from becoming established if they are permitted to forage heavily in these areas; therefore, control is often necessary if restoration is to succeed.

White-Tailed Deer (*Odocoileus virginianus*)

White-tailed deer forage and rub on newly planted trees and shrubs, so 9-foot-high, black vinyl mesh fencing is installed around newly planted areas to keep the deer from contacting the plants. In places where there isn't a large planted area but only individual trees and shrubs, 5-foot-high, wire mesh fencing is installed around just the tree or shrub to deter the deer from foraging, browsing, or rubbing.





Canada Goose (*Branta canadensis*)

Within the past few decades, Canada geese have gone from being an exclusively migratory species to one that has established large, permanent-resident populations. Portions of the Fernald Preserve provide ideal habitat for Canada geese, which can cause numerous problems. They are very fond of young, tender vegetation and will forage on newly germinating seeds. Their droppings create messes on sidewalks and add unwanted nitrogen to the soil.

Canada geese are aggressive during the nesting season and can bother the public or site restoration personnel if they get too close to a nest. The geese also chase off other migratory and residential birds. They mate for life and will typically return to their same nesting area or birth place year after year. If the geese are permitted to nest, their numbers could increase dramatically on site as families return each year.

Border collies are used at the Fernald Preserve to help control the Canada goose population by harassing and hazing them. This hazing makes the site a less appealing home to the geese. Although the dogs are actually trying to herd the geese, the geese see the dogs as predators and fly off.

Although we will likely never rid the Fernald Preserve of Canada geese entirely, reducing their nesting and the size of their flock will still be beneficial. As prairie and wetland habitats mature across the preserve, tall grasses and wildflowers will make areas less hospitable to geese, since they prefer short, manicured vegetation.

