

MANAGING YOUR HABITAT FOR WHITE-TAILED DEER:

A SMALL WOODLOT OWNER'S GUIDE



Whitetail Habitat Needs	3
Improving Your Habitat for Deer	5
Wildlife Openings	5
Small-scale Cutting Techniques	8
Food Plots	13
Deer Wintering Cover	17
Invasive Species Control	18
Improving Your Habitat for Deer and Other Species	19
Other Considerations	20

WHITETAIL HABITAT NEEDS

The primary needs of deer that may be improved through habitat management are food, cover, and water. Of these, landowners will primarily be managing for food and cover.

Food

Deer have very diverse diets and are known to consume a very wide variety of plants. Beyond plant matter, deer are also known to consume other things such as mushrooms and even occasionally meat, such as young birds and small mammals. A deer's diet varies by season with deer focusing their foraging efforts on whatever is most nutritious and palatable during a given period. In the springtime, deer will feed primarily on new succulent growth of forbs, trees, shrubs, and grasses. In the summer, deer will continue to consume primarily succulent green growth. In fall, deer will consume mast crops such as acorns as they become available, green growth, and fallen leaves to increase fat stores to carry through the lean winter months. In winter, a deer's metabolism slows, and their diet turns to less nutritious foods such as dormant buds, mast that is accessible through the snow, and evergreen trees such as cedar and hemlock.

Cover

Adequate cover is vital to deer for escaping and hiding from threats, protection from the elements, providing security while bedding, and hiding fawns in the spring.

Escape cover may take many forms including tall grasses and forbs, shrubby areas, and dense growth



of young trees. The purpose of cover is ultimately to provide deer with protection and security in their environment. An additional cover need of deer is for winter shelter, particularly in the northern and western parts of the state. Deer wintering cover consists of primarily closed-canopy softwood stands of cedar, hemlock, fir, and spruce and is typically used only when snow conditions are the most restrictive. These restrictive conditions may last for only a few weeks or as long as a few months depending on winter severity and location in the state.

Water

Deer can get much of the water that they need from the foods that they eat. During times when succulent growth is abundant, deer may make only infrequent use of standing water. When needed, Maine has an abundance of fresh water in rivers, ponds, lakes, and ephemeral pools, so it is typically not necessary to provide deer with additional water sources. While it's typically not necessary to provide additional water in Maine, a well-placed watering hole can be an attractive feature to deer.

IMPROVING YOUR HABITAT FOR DEER

Improving habitat for deer requires you to make a thorough examination of your property and consider how you are meeting the needs of your area whitetails. Take a look throughout your property: What areas are most being used by deer? What areas are seeing very little activity? What resources are attracting deer in the heavily used areas, and what is lacking in the areas with little activity? How does deer activity vary throughout the year? What resources are available on neighboring properties? By better understanding a deer s needs and what your property and the surrounding area has and does not have to offer, you may begin to formulate a plan to improve your deer habitat.

Wildlife Openings

Maine is nearly 90% forested, and not all forests are created equally in terms of their food and cover values for deer. Forests with ample palatable understory such as tree seedlings, forbs, and herbs will be very productive forests for deer whereas forests with mostly open understory or understory dominated by unpalatable species such as ferns will not be very productive for deer.

While most of Maine s forested areas produce good regenerative growth in the understory, some forests may have little or no young growth at ground level. There are several reasons why our forests may be without much understory, and these reasons include lack of sunlight reaching the forest floor, overabundant deer, and lack of seed stock. Among these, the first is the most common and easiest to remedy.



Take some time to walk through your forest in the summer. Is there much young tree growth and many seedlings? Are there forbs and herbs growing in the understory? Or is your understory mostly open with primarily just blown down trees and perhaps ferns present? If the latter is the case, and if your property is not a deer wintering area, then creating some wildlife openings in your forest may be a good step towards improving your habitat for deer. If your property is or contains part of a deer wintering area, you should contact your local office of MDIFW to speak with a wildlife biologist about options for appropriate management. [Click here to find your local regional MDIFW office.](#)

Ideal deer habitat consists of different cover types and ample edge habitat. Edge habitat occurs where two different habitat or land feature types meet, such as a forest meeting a meadow or flat land meeting a hilly area. These areas are attractive to deer (and many other species) because they offer a greater variety of food and cover resources in a concentrated area compared to areas of a single habitat type.



Photo by Evelyn Simak

Creating wildlife openings in your forest will create attractive edge habitat and encourage young regenerative tree growth. As this young tree growth begins to fill in the opening, the new growth will be excellent food and cover for deer. The process of creating a wildlife opening is very simple; you need to pick your ideal location, remove trees, and then tidy up the area. Here are some tips to consider when selecting your site, removing trees, and maintaining the site.

- Plan out your wildlife opening before you begin. Have a plan for the opening boundaries, how you will remove the wood and where you will pile it, and which- if any- trees you may want to leave growing.
- While even very small wildlife openings can be beneficial, take note of how much sunlight is reaching the ground as you cut. If your opening is too small, trees at the edge may still shade the opening and hinder regeneration of some species. It will be helpful to note the sun's direction and height above the horizon and try to orient the opening to receive the most sunlight.
- If you live in a very high deer-density area or if the area of regenerating growth is small, you may find that deer are browsing seedlings and stump sprouts down to the ground too quickly for them to establish. If deer browsing is proving to be an issue, consider fencing around some preferred trees for a few years. You may also cut and leave some tree trunks, slash, and branches on the ground for a couple of years to make deer movement through the area difficult and provide some protection for seedlings and other regrowth. If you want to remove these trunks and branches later, you should cut them to size from the start so that they can be easily removed without damaging the young growth.
- Note that many tree species will vigorously stump sprout; a maple stump, for example, may send up dozens of stump sprouts, which grow quickly and will provide excellent food for deer.
- Be aware that forest openings may also provide opportunities for invasive species or undesirable species to take over. Familiarize yourself with the invasive species in your area and

be prepared to begin treatment if your opening is colonized by these. See the section on invasive species control for more information.

Small-scale Cutting Techniques

There are many smaller scale techniques that can be used to improve your deer habitat. None of these should be viewed as either-or, rather they should be viewed as helpful components to include in your overall habitat management plans.

Hinge cutting- It may be surprising to learn that if you cut only partway through a tree and push it over, the part that remains connected to the trunk will continue to feed nutrients to the crown of the tree for several years. This is a technique referred to as hinge cutting. This is best used on small hardwood trees that are 3-6" in diameter. Some hinge cut trees will continue to live and grow for several years, and while the crown is still producing new growth, the horizontal trunk may also sprout growth. This leafy growth near the ground provides food and ground-level cover for deer.



These types of cuts are best made on hardwood trees and in the winter or early spring before trees begin putting on new green growth.

While hinge cutting some trees can provide excellent ground-level food and cover, this should not be used to completely replace normal tree regeneration on the ground as these hinge cut trees will not live nearly as long as their upright neighbors, and they may outcompete some of the regeneration occurring at ground level. Some preferred applications of hinge cutting include:

- Provide ground-level cover alongside wildlife openings, natural feeding areas, bedding areas, and food plots. You can also establish bedding areas by strategically hinge cutting in areas where you'd like deer to bed such as nearby to food sources; you don't need to hinge cut a lot of trees, just enough to provide good horizontal cover that deer will relate to. Remember, deer prefer to bed on a flat spot and to have a good view of their surroundings, so plan your cuts accordingly.
- Provide stands of ground-level vegetation for feeding. If this is your aim, you will produce more growth on your downed hinge cut trees if they receive more sunlight, so you may need to remove additional trees from the canopy. Hinge cutting should not be viewed as a way to provide a primary food source, rather you should use this technique to augment other landscape features in the area such as travel corridors or bedding areas.
- Establish travel corridors by creating a path for travel and hinge cutting trees perpendicular to this trail. This will provide browse and cover to deer using the travel corridor. Note that in areas with primarily open woods, deer will prefer more open travel corridors as opposed to very tight and framed-in corridors.

Winter cuts- The winter months can be very challenging for deer, particularly in Maine where they must endure low temperatures and very deep snow in some areas. During the winter, a deer's metabolism slows down, and their body goes into maintenance mode with the goal of foraging being to slow the decline in body weight rather than to maintain or gain weight. Because a deer's diet naturally shifts throughout the seasons with dormant buds and woody browse making up a large portion of their winter diet, providing more food of this type can be very beneficial to overwintering deer. If you have plans to do any cutting on your property, it may be worth leaving some of the work until winter. The downed branches and tops of hardwood trees will provide great additional winter forage for deer.

This type of cutting may prove very attractive to deer during the winter, so you should not cut trees to provide deer food near roads where the additional deer activity could result in deer-vehicle collisions.



Crop tree release and improving mast production- If your property has mast or other food-producing trees, such as oak, beech, and apple, you may assist the more productive trees towards greater food production by doing a crop tree release. Most mast and fruit production comes from a relatively small number of larger mature trees, whereas smaller trees with little or no canopy presence are less productive.

By removing these smaller, less-productive trees, which still compete for soil resources, you may aid the larger trees towards producing more acorns, nuts, and fruit for your local wildlife to enjoy. If you have beech trees on your property and would like to encourage beech nut production, be aware that beech bark disease is common in Maine and may hinder your ability to produce quality trees and nuts, and beech leaf disease has arrived in Maine as well. If this is your goal, consult with a forester first. [Learn more about beech bark disease](#) and [beech leaf disease](#).



Cleaning up blowdowns- Travelling through the woods can be very difficult if there are a lot of blown down trees and branches. If you find that your forest is difficult for you to walk through, then it is probably also difficult for deer to walk through.

Clean up select sections of your forest by breaking down some of these blowdowns, particularly in areas of high deer travel and use or in areas where you can create a travel corridor between other attractive landscape features. These blowdowns provide some very useful cover and habitat for deer and other species and are an important part of a healthy forest, so it is not advisable to remove them all; however, removing some of the downed trees and brush in select areas may encourage deer to travel through and use those areas more frequently. If you have deer wintering on your property, take note of where they travel during restrictive snow conditions, and be careful not to obstruct these travel corridors with debris from your cutting activities.



Food Plots

If you have a bit of the farming spirit in you and are willing to put in the effort to cultivate your land, a well maintained and placed food plot can provide additional food for deer and a tailored hunting location for your favorite stand. Extensive resources exist providing guidance for your food plot project, so here we will cover just some of the basics and tips.

Choosing a site for your food plot- Consider the following when choosing a location for your food plot:

- You should first evaluate what will need to be done to the land to prepare for planting and how you will get needed equipment and supplies to the plot.
- You should choose a location that is already relatively clear or a location where you will be able to remove tree cover.
- Locate your plot near escape cover, or if it is large, leave some cover strips within the plot to encourage deer to move deeper into the plot.
- If you intend to hunt in a blind in or near the food plot, it should be located so that you can get into and out of the blind quietly. Spooking deer away from food plots or bedding areas adjacent to food plots is a surefire way to turn your deer nocturnal.



- Be aware that small plots (less than ½ acre) can be browsed so heavily that it will appear as if nothing is growing. Try growing slightly larger plots or multiple small plots if this is an issue. You can also try growing some higher yield species if over-browsing is an issue.
- Wild-growing apple trees are very common in much of Maine. These may be a good addition to a food plot or the area around a food plot, or you can maintain a few wild apple trees as a standalone food resource. You may also establish food plots around existing apple trees. Planting apple or other food trees may take some patience as they will take several years to produce fruit, but they require relatively little area and will provide food for many years once established and if maintained.

Preparing the site for planting- Having the appropriate soil pH levels is important. You can pick up a soil pH testing kit from your local garden supply or home improvement store and make sure your soil will be compatible with what you want to plant. Each plant will have its own range of acceptable soil acidity, and your seed supplier or online resources will be able to tell you what will work best for your seeds. Amending soil to the correct pH level can be quite a bit of work, so if the pH in your first choice location is not agreeable to what you re planting, you may want to test some other possible sites before putting in the effort to amend the soil pH. Similarly, you may want to have nutrient levels in your soil tested so that you can fertilize the soil appropriately. While pH and soil testing will improve your results, neither is absolutely necessary if you lack the resources to do them or want a low frills approach. One alternative would be to try growing your preferred food plot plants in a very small area near the intended plot location or in a pot full of soil from the intended plot area to get some idea of whether the soil in that area will support the plants you want to grow.

Another very important step to preparing the site is controlling the vegetation that is currently growing. If you are working a forested area, this will require you to remove trees to promote sunlight in the plot and will be hard work. In more brush, forb, or grass-dominated areas, you will need to control competing growth just the same using brush removal equipment or other mechanical means and/or herbicide application. Depending on what you are planting, you may also need to disc or till the soil to break it up.

Planting your site- Once your site has been prepped, you are ready to plant. Broadcast seed as indicated by the seed supplier. While some species may be broadcast over the surface of the soil, many other will need to be covered by soil or drilled into the soil. Note and adhere to the recommended seeding rate as overcrowded seeding may lead to stunted growth.

When selecting what to plant, consider the following:

- Do you want to plant an annual or perennial food plot? Common annuals include soybeans, corn, cereal grains, buckwheat, and brassicas. Common perennials include alfalfa, clovers, and chicory.



- What foods are already available in your area? Planting something that is already abundant in the area may not be as attractive to deer.
- What time of year do you want the plot to be the most productive? Do you want to provide food during spring and summer months when deer are packing on body mass and growing

antlers? Common choices for this include many clover species, alfalfa, chicory, and soybeans. Or do you want to provide foods that are beneficial and attractive in the fall and winter? Then brassicas and/or cereal grains could be the right option for your plot. Be advised, a strong summer food plot is likely going to attract a lot of attention from does and fawns; this may result in bucks being only infrequent visitors to the plot. If you want to ensure that bucks are not deterred from visiting your plots by high numbers of does and fawns, create multiple plots or use cover to segment plots. If your area already has a lot of summer food sources, consider forgoing summer foods and only planting fall food plots.

- Look for locally sourced seeds or buy your seeds from a local farm or seed supply store. Local seeds will more likely be appropriate for your area and are often significantly cheaper than buying commercial seed mixes, which may contain undesirable filler seeds such as ryegrass seed (not to be confused with cereal rye grain, winter rye, etc.)
- If you're working with a poor-quality site with shallow, rocky, or dry soils, consider dedicating a few years to planting buckwheat and winter rye in the summer and fall respectively. These two crops- while not among the most favored plants for food plots- are very tolerant of a wide range of soil conditions (moisture, pH, textures, etc.), produce a lot of biomass, may be surface sown, and are relatively low maintenance. Prepare your site and seed a buckwheat crop in mid-June. Allow the buckwheat to grow until late August, and then flatten it to the soil. Seed winter rye (again, not to be confused with ryegrass) over the downed buckwheat. The first frost will kill the buckwheat, and it will break down very quickly providing a natural mulch for your winter rye crop. The winter rye will grow slowly in the late summer and early fall cool soils providing succulent green growth at a time when there is little of that available on the landscape. The rye will go dormant after soils freeze and begin growing again in the spring. Bring the process full circle by cutting your remaining rye and re-seeding buckwheat again in June. This process- repeated for a few years- will help you build up the organic matter content of your soil and allow you to plant other food plot crops later on once improved. While not required, tilling or discing the plot prior to each planting will improve results.

Maintaining and monitoring your plot- After your food plot is established, you may choose to apply fertilizer as needed or on an annual basis to encourage maximum yield. Controlling competing weed growth will also be an ongoing task. For early growing spring food plots, mowing in the spring will help limit weed growth and establish desirable growth in your plot into the summer. It is worth noting, however, that deer don't care how neat your plot looks, and



many weeds will also be good food for deer. If weeds are not overtaking your plantings, you may be better off leaving them. If you d like to monitor browsing pressure on your new plot, consider erecting a small enclosure, which consists of a small section (5-10 square feet) of your plot protected by fencing. This will give you some idea of how much growth your plot would be showing if there were no browsing pressure.

You will likely also want to monitor deer use of the plot, and if you have access to any remote game cameras, these will be your best option for this. Spending too many in-person hours at your plot may deter deer, but cameras are not intrusive and can monitor around the clock.

Deer Wintering Cover

In much of Maine, deer have traditionally relied on deer wintering cover to make it through the most difficult parts of the winter. This softwood-dominated cover provides protection from the elements and intercepts snow resulting in lower snow depths on the ground and easier travel conditions. Depending on location in the state and snow conditions, deer will migrate from summer grounds to

winter grounds typically between the middle of November and January, though not all deer will make these seasonal migrations. Deer that migrate to deer wintering cover will typically remain there until March or April.

Primary winter shelter for deer consists of softwood trees, with preferred species being cedar, hemlock, spruce, and fir. Ideal stands have 70% or greater canopy closure and trees that are primarily 35 feet tall or greater. This primary shelter is used when snow conditions are the most restrictive.



Secondary winter shelter consists of softwood species >35 feet tall with 50-70% canopy closure; this shelter is adequate in all but the most restrictive snow conditions. In addition to these cover qualities, deer will benefit from surrounding hardwood stands where they can feed on dormant buds and shoots when snow conditions permit movement through these areas.

While managing for deer wintering cover typically requires management of large parcels with suitable cover, if your small parcel is in an existing deer wintering area, you may be able to contribute to the better management of this cover. [Learn more about managing deer wintering cover.](#)

Invasive Species Control

Invasive species are those that are not native to the area and may cause harm to the environment or to people. Many invasive plants make for poor deer food, and they may outcompete native plants thus reducing plant diversity. This decrease in plant diversity impacts many wildlife species by limiting diversity of cover and food resources and displacing many other plants that are important to wildlife.

Some common invasive plants in Maine that are of little value to deer and that you may encounter in your forest include: common buckthorn, garlic mustard, giant and Japanese knotweed, shrubby honeysuckles, multiflora rose, and Japanese barberry. While controlling invasive species is often a very difficult task, options may include treatment with herbicide, mechanical removal, and livestock grazing. For more information about invasive species and what you can do to combat the species present in your woodlot, please visit: [Learn More about Invasive Plants in Maine.](#)

IMPROVING YOUR HABITAT FOR DEER AND OTHER SPECIES

While your primary objective may be improving your habitat for deer, you may want to tailor your plans to benefit not only deer but other species groups like songbirds, game birds, small mammals, reptiles and amphibians, and/or pollinators. Many of the habitat management techniques used for deer to encourage regeneration and cover development will prove attractive to other species as well. A greater diversity of habitat, stages of growth, and tree species on your property will likely result in a greater diversity of wildlife.

If you continue to remove most of the regenerating tree and shrub growth from your wildlife clearing and ensure that ample sunlight reaches the ground over a long period of time, it will eventually colonize with forbs and grasses, including wildflowers. Forbs and young grass growth, especially once established and lush, will provide food and cover for deer and will be valuable cover for hiding fawns in the spring. Grass and flower seeds and young buds will be attractive to deer as well as a wide range of birds and small mammals, and the flowering plants will attract a whole host of insects. Be wary of invasive plant species. If you create your opening near a roadway or near an existing patch of an invasive species, you can expect that invasive plant to be one of the early colonizers of your wildlife opening.

If your deer habitat management involves any brush or tree cutting, you can strategically build and place brush piles using some of the downed woody debris. Structure your brush piles to leave a cavity underneath. Brush piles built in this manner will be valuable as perches for birds, hiding places for small mammals, reptiles, and amphibians, and a large enough cavity underneath may house hares,

foxes, or other medium-sized animals. If these brush piles are created in the winter, deer will browse any hardwood buds present on piled limbs.

Large dead or dying trees, or snags, are also valuable habitat components. Insects use them for habitat and as egg laying substrate, and these insects and their eggs and larvae are excellent food for many animals. Cavities in snags may also house nesting insects, birds, and small animals. If your deer habitat management involves tree cutting throughout your property, leave some of these snags intact.

To see how your habitat improvements for deer may be tailored to meet the needs of other species, or to plan your overall habitat management approach with other species in mind, visit [Beginning with Habitat.](#)

OTHER CONSIDERATIONS

Managing your property for better deer habitat in Maine is often going to be focused around managing the trees that you have. This being the case, you will benefit greatly by visiting with a district forester. To find the district forester in your area, [click here.](#)



Always keep in mind what the greater landscape and deer population in your area look like. It is important to understand that small-scale improvements on a small private land holding should not be expected to rapidly increase deer numbers in your area. If you are able to actively manage a lot of acreage, you may produce a noticeable impact on the local deer population, but for most landowners, these habitat projects should be about improving resources on your own property and improving opportunities to view or hunt deer there. With your expectations being set at improving the habitat on your own property, spending some quality time in the field, and having fun getting your hands dirty while getting to know your woods, your efforts will be well worth it.

Last Revised: Aug. 2023

Overview

Maine Department of Inland Fisheries of Wildlife (MDIFW) preserves, protects, and enhances the inland fisheries and wildlife resources of the state. Established in 1880 to protect big game populations, MDIFW has since evolved in scope to include protection and management of fish, non-game wildlife, and habitats, as well as restoration of endangered species like the bald eagle. In addition to its conservation duties, MDIFW is also responsible for enabling and promoting the safe enjoyment of Maine's outdoors — from whitewater rafting to boating, snowmobiling, hunting, fishing, and wildlife observation. The agency's constituents include the fish, wildlife, and people who call Maine home, as well as the visiting outdoor enthusiasts and ecotourists who call Maine Vacationland and contribute hundreds of millions of dollars each year to the state's economy.