United States Department of Agriculture
Natural Resources Conservation Service

New Jersey Deer Exclusion Fence Installation and Removal Guidance for (612) Tree and Shrub Establishment

Scope

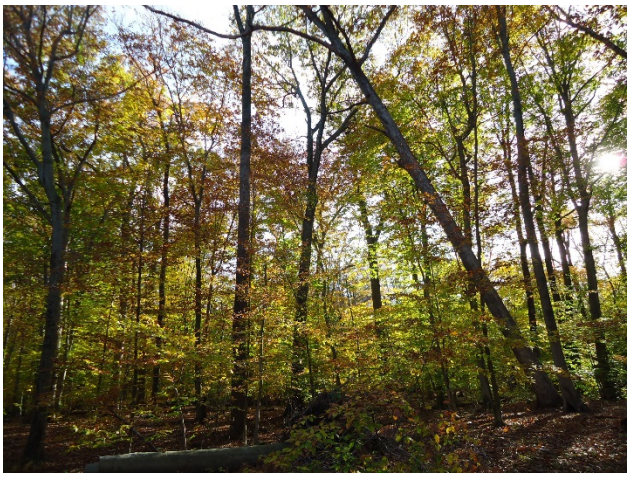
Browsing by white-tailed deer has continually been a major factor in the success of forest regeneration of quality hardwood stands. Deer exclosures have been widely used and are effective in increasing biodiversity and reducing regeneration failures caused by browsing. Although fences are not effective at excluding all deer, they can greatly increase regeneration success if used under the right conditions. To be effective, fences need to be properly planned, laid out, erected at the appropriate time, checked out frequently and maintained.

A deer exclusion fence should be considered if deer browsing is a problem, or expected to be a problem when the following results are expected: failure of the stand to successfully reproduce itself, elimination of species from the stand, and/or a reduction in species diversity. Deer exclusion fencing can be installed in conjunction with an approved Forest Management Plan or Forest Stewardship Plan and as a supporting practice to forestry treatments.

Woven wire deer exclosures should be erected as quickly as possible following the forestry treatment. The fence should be erected before the next growing season following harvesting; this will protect and new sprouts from browsing pressures.

Construction of fence is intended to be a temporary measure solely to exclude deer and allow for forest regeneration. The fence is to be removed once a qualified forester or biologist determines regeneration is successful and above deer browse level.

Hazard Trees



Hazard trees are dead or dying trees, split trees, heavily leaning trees, and/or root sprung trees that can potentially fall. Once the location of the fence has been

determined, all hazard trees within tree length of the fence must be felled. The trees must be marked by a qualified forester or biologist and felled before the construction of the fence.

Any trees that may have economic value will be required to be removed from the fencing site and to a landing area.

Clearing the Fence Area

Once the fence lines are determined, the following guidelines must be met:

1. A path at least six feet wide, but no more than eight feet wide, will be cleared of all brush, stumps, rocks, and other obstructions. This path will lie on the outside of the planned fence and will serve as the access corridor for installation equipment and maintenance purposes.
2. Certain obstructions may be left in place if their removal will result in problems with fence installation and/or maintenance. These obstructions will be determined by a qualified forester or biologist.

Erosion and Sedimentation Control

Equipment will not be allowed within the work area when conditions, such as weather, can cause excessive degradation to the area. Areas that become degraded or rutted will be required to be repaired.

Install water bars where necessary on slopes where erosion may occur. Areas that are prone to erosion and/or sedimentation along the fence line will be seeded and mulched according to the NJ 342 Critical Area Planting and the NJ 484 Mulching Practice Standards.

Any small intermittent or perennial streams, adjacent stream banks, or seeps, that are unavoidably in or along the planned fence line will be cleared by hand held equipment.

Fence Materials

The fence will be constructed of galvanized steel woven wire or fixed know fencing and must be at least 90" tall. Either one 8' roll, or two 47" rolls may be used. Stay wires will be at least 14 ½ gauge and all other wires will be at least 12 ½ gauge.

Aluminum materials are not allowed to be used for the installation of the fence.

The fencing must not have no more than 6" between stay wires. If using fence with graduated line wires, the larger stay spacings will be placed on the ground, or bottom side of the fence with the smaller graduated stays at the top. This will facilitate the passage of non-target wildlife through the fence.

Fence Supports and Fasteners

1. The fence will be installed by fastening the fence to posts or pole timber trees. No trees that have a diameter breast height of twelve inches or greater will be used. If these trees must be used, alternate means of attaching the fence to them will be used to prevent damage to the trees.

2. A 2” X 4” board of sufficient length will be placed between the fence and the tree to protect the tree from any potential additional damage from the fence. The nails used to attach the boards to the trees must be larger than #10 nails and must be able to hold the board securely to the tree when the fence is stretched. 1” of the nail will be left exposed to facilitate removal.
3. In-line posts must be treated and be at least 4” X 4” square posts, 4” round posts, or steel posts with a minimum weight of 2lbs./ft. The posts will be at least ten feet long and placed in the ground at least 2 feet.
4. Corner posts must be treated and be at least 6” X 6” square posts or at least a 5” round post. All corner posts must be braced and placed in the ground at least 2 feet.
5. Staples may be used to attach the fence to the boards. The staples must be 1 ½” galvanized steel. No staples are allowed to be driven into the tree.
6. All bracing, guide wires, or other safety hazard on the outside the fence must be clearly marked.
7. Ties used to secure the fence to metal posts will be a minimum gauge of 14 ½ stainless or galvanized steel.
8. Ties used to secure sections of fence together must be 14 ½ gauge stainless or galvanized steel.

Fence Installation and Stretching

The following requirements must be met for the installation of the fence:

1. Fence supports will be no greater than 30 feet between posts or 40 feet between trees.
2. The bottom six inches of the fence will be laid on the ground and pulled to the outside of the fenced area, be staked every ten feet with stakes driven into the ground 12 inches, stapled to sound wood every ten feet, or secured with stones or soil to prevent deer from crawling under the fence.
3. The fence will be stretched so the wire is pulled against a corner or turning support.
4. If two 47” rolls are being used, the top and bottom rolls will be fastened to each other every 3’ by twisting, tying, or fastening the bottom wire of the top roll to the top wire of the bottom roll. Stainless steel or galvanized hog rings can also be used to attach the top fence to the bottom fence. Where

posts occur, the top and bottom wires will be fastened to the post.
5. The fence must be fastened to the boards at the top, middle, and bottom.

Access Gates

Walk-through type gates are required on all fence projects (see attached diagram). The amount of gates and the locations for the gates will be determined by the landowner and/or forester.

Deer Drive

A section of fence at least 500 to 1,000 feet long should be left open to drive deer out of the enclosed area.

All deer must be driven from the fenced area prior to finishing the installation of the fence. The fence must be finished the same day the deer are driven from the enclosed area.

An adequate amount of people needs to be present during the day of the drive to ensure that all deer are removed from the enclosed area. One deer inside a 20 acre fenced area has a browsing pressure equivalent to 32 deer per square mile.

Operation and Maintenance

Regular inspection of fences should be part of an ongoing maintenance program to ensure continuing proper function of the fence. The operation and maintenance requirements must be conveyed to and agreed to by the landowner. The following are the minimum operation and maintenance requirements for the fence:

1. Complete regular inspections of the fence as well as after all major storm and disturbance events.
2. Repair or replace any supports, fasteners, gates, posts, etc. on the fence
3. Inspect the fence line to ensure the fence remains secure at all fastened and joined areas as well as along the ground.
4. Remove and trees and limbs along the fence. Any new hazard trees should be felled in a safe manner as to not damage the fence.
5. Repair of eroded areas along the fence as necessary
6. Repair or replace markers or other safety features.

Electric fences need to be regularly checked to determine the voltage on the fence. Clear brush, weeds, and other debris from the fence lines to maintain voltage.

Fence Removal

When the fence is deemed to be unnecessary because the risk of deer browsing has passed, the fence, posts, supports, signs, and gates must be removed, in entirety, from the site. If removal of the entire fence post is not possible, the post must be cut clean through flush to ground level.

All boards that were used to attach the fence to the trees will be removed along with all nails and/or staples that were used. Nails and staples must not be hammered into the trees, but be completely removed.

The fence removal will only occur at a time of the year when site conditions allow for the necessary equipment to operate without degrading the forestland. Any areas disturbed by the removal of the fence will be graded, if necessary, seeded, and mulched

according to the NJ 342 Critical Area Planting and the NJ 484 Mulching Practice Standards.

References

Pennsylvania Game Commission Forestry Division. 2013. Deer deterrent fence exclosure removal. Commonwealth of Pennsylvania.

Pennsylvania Game Commission Bureau of Wildlife Habitat Management. 2013. Deer deterrent fence installation project contract specifications. Commonwealth of Pennsylvania.

Photo Credits

Al Cambronne. Deer on the rt, no deer on left. http://alcambronne.com/press/olympus-digital-camera-108/

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