

USDA
NATURAL RESOURCES
CONSERVATION SERVICE
DELAWARE
CONSERVATION
PRACTICE STANDARD

HEDGEROW PLANTING

CODE 422
(Reported by Ft.)

DEFINITION

Establishing a living fence of shrubs and/or trees in, across, or around a field.

PURPOSE

This practice may be applied for one or more of the following purposes:

- Delineate field boundaries;
- Establish contour guidelines;
- Provide wildlife food, cover, and travel corridors;
- Provide visual screens or improve the landscape.

**CONDITIONS WHERE PRACTICE
APPLIES**

This practice may be applied in, across, or around agricultural fields and other open areas.

This practice does not apply to plantings which are intended to function primarily as field borders or riparian forest buffers, for which other standards are applicable. (Refer to the conservation practice standards for Field Border, Code 386; and Riparian Forest Buffer, Code 391.)

CONSIDERATIONS

Consider the long-term land use objectives of the client. For example, if the land user is interested in using the hedgerow to provide wildlife habitat, consider the plant species which may be suitable for these uses.

Assess site conditions including surrounding land uses, soils, residual herbicides (to the extent known), available moisture during the growing season, and existing vegetation on the site and in adjacent areas, including any noxious weeds which may be present.

Restrictions or considerations on the site, such as power lines, tile lines, or snowdrift, may limit species selection.

Consider selecting plant species that are native to Delaware, or are naturalized and non-invasive, and have multiple values such as those suited for nesting habitat, fruit, seeds, browse, aesthetics, and tolerance to locally used herbicides.

Avoid plant species which may be alternate hosts to undesirable pests or that may be considered invasive or undesirable. Species diversity should be encouraged in order to minimize problems due to species-specific pests.

If additional wildlife habitat is desired, consider adding a herbaceous field border at least 35 feet wide adjacent to the hedgerow to provide nesting and feeding cover for grassland wildlife.

Consider the adverse impacts of high populations of nuisance wildlife, such as deer and groundhogs, on the establishment and maintenance of vegetation. When feasible, select plant species which are not preferred foods of the nuisance animals and utilize methods for protecting the plants until they become well established.

Also consider the potential for attracting nuisance wildlife into an area, either intentionally or unintentionally. Plantings which contain preferred wildlife foods may be used to attract nuisance wildlife away

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ornamental plantings, but may also result in attracting additional nuisance wildlife into an area.

Take note of other constraints such as Take
Take note of other constraints, such as economic feasibility, access, regulatory or program requirements, the need for permits or approvals, and visual aspects.

Consider long-term maintenance requirements of the established vegetation.

Refer to the Maryland Wildlife Biology and Management Handbook for additional habitat considerations for upland wildlife species.

CRITERIA

Criteria Applicable to All Purposes

Hedgerows shall be a minimum of 6 feet wide if seeded, or a minimum of one row wide if planted with seedlings or larger stock. Shrub and/or tree species shall be used.

Select plant species that are native to Delaware or are introduced and are non-invasive (i.e., not likely to spread rapidly beyond the planted area). Only viable high quality and regionally adapted seed shall be used.

Spacing between and within rows shall be as follows:

Plant Type	Spacing (feet) for:	
	Visual Screens	Wildlife Habitat, Landscaping, and Other Uses
Shrubs*	2 - 4	4 - 8
Deciduous Trees	5 - 8	8 - 12
Evergreen Trees	4 - 6	6 - 12

*Use a spacing of 1 foot between rows if drilling seeds of leguminous shrubs.

Use staggered spacing in multiple row

plantings. Plant taller-growing trees or shrubs in center rows, and medium or lower growing species in outer rows. For a more "natural appearing" effect, intersperse trees and shrubs in the hedgerow.

Establishment of vegetation by planting is the preferred method for creating hedgerows. Plant species shall be selected based on the proposed uses of the hedgerow, preferences of the land user, and conditions of the site. Plant growth rates, shade tolerance, soil moisture requirements, and other plant characteristics shall be considered when selecting species. Plantings consisting of two or more species, especially locally native plant species, shall be encouraged.

Existing hedgerows may be improved by removing or topping selected less desirable trees or shrubs, thus improving growing conditions for the remaining species. More desirable species can also be interplanted in the hedgerow.

Site preparation and planting to establish vegetative cover shall be done at a time and manner to insure survival and growth of selected species. Supplemental moisture shall be applied if needed to assure early survival and establishment of selected species.

Only viable, high quality seed and planting stock shall be used. The method of planting shall include hand or machine planting techniques, suited to achieving proper depths and placement for the selected plant species.

Livestock shall be controlled or excluded as necessary so that the vegetative cover can be established and maintained to meet its intended purpose.

Plant and animal pest species shall be controlled to the extent feasible to achieve and maintain the intended purpose of the vegetative cover. Noxious weeds shall be controlled as required by state law.

Note: Specific cost-sharing programs or other funding sources may impose criteria in addition to, or more restrictive than, those specified in this standard.

Additional Criteria for Wildlife

Where wildlife habitat is identified as the primary purpose, plants shall be selected to provide wildlife food and/or cover for the desired wildlife species. Hedgerows shall be at least 20 feet wide and shall consist of two or more species distributed throughout the planting. Use of locally native species shall be encouraged.

At least 25 percent of the planting can consist of evergreen clumps at least 400 square feet in size. The evergreen clumps shall be distributed throughout the length of the hedgerow to provide wildlife with ready access to winter protective cover.

Hedgerows that are intended to serve primarily as wildlife travel corridors shall be a minimum of 50 feet wide.

Additional Criteria for Visual Screens and Landscaping

Hedgerows that are intended to serve primarily as visual screens, to reduce noise, or to buffer other disturbances, shall consist of evergreens in at least one row of the planting to provide year-round screening.

For landscaping purposes, plants shall be selected based upon their aesthetic values, such as colorful flowers, fruits, foliage, and plant shape.

Note: Specific cost-share programs or other funding sources may impose criteria in addition to, or more restrictive than, those specified in this standard.

PLANS AND SPECIFICATIONS

Plans and specifications for establishment of the hedgerow shall be prepared in accordance with the previously listed criteria. Plans and specifications shall contain sufficient detail concerning site preparation and establishment to ensure successful installation of the practice. Documentation shall be in accordance with the section "Supporting Data and Documentation" in this standard.

For most sites and intended uses of the hedgerow, shrubs and/or trees species shall be selected in accordance with the conservation practice standard for Conservation Cover (Code 327), Tables 3 and 4.

In addition, follow the establishment recommendations provided in the Delaware Job Sheet for tree and shrub plantings. The completed job sheet can serve as the planting plan for the hedgerow.

OPERATION AND MAINTENANCE

Job Sheet(s) or site specific management plans shall be developed and provided to the client to assure performance of the practice as intended. At a minimum, the following components shall be addressed:

Vegetation in the Hedgerow

Describe the extent of management needed to maintain vegetation in the desired species composition or age class (if applicable) or no management required (e.g., natural area).

Nuisance Plants and Animals

Describe the extent to which plant and animal pest species, including noxious weeds, will need to be controlled.

Acceptable Uses

Describe the acceptable uses (e.g., grazing, hunting, nature preserve, etc.) and time of year/frequency of use restrictions, if any.

Pay particular attention to cost-share program requirements as they relate to acceptable vs. restricted uses and other management restrictions.

Frequency of Inspections

At a minimum, require annual inspections of the hedgerow.

SUPPORTING DATA AND DOCUMENTATION

The following is a list of the minimum data and documentation to be recorded in the case file:

1. Completed copy of the appropriate Job Sheet(s), including species planted and spacing, or appropriate documentation, and management plans.
2. Field location, extent of the hedgerow in length & width, and assistance notes. Also note the location of the planting on the conservation plan map.

REFERENCES

1. Delaware Natural Heritage Program, DNREC, McAvoy, W.A. and K.A. Bennett, 2001. The Flora of Delaware, an Annotated Checklist.
2. Fish and Wildlife Service, Chesapeake Bay Field Office with the Natural Science Center and Adkins Arboretum, 1995. Native Plants for Wildlife Habitat. Annapolis, MD.
3. Natural Resources Conservation Service, Conservation Practice Standard for Conservation Cover (Code 327).
4. Natural Resources Conservation Service, Conservation Practice Standard for Field Border (Code 386).
5. Natural Resources Conservation Service, Conservation Practice Standard for Riparian Forest Buffer (Code 391).
6. Natural Resources Conservation Service, Maryland Wildlife Biology and Management Handbook.