

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

HEDGEROW PLANTING

(Ft)

CODE 422

DEFINITION

Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.

PURPOSE

Providing at least one of the following conservation functions:

- Food, cover and corridors for terrestrial wildlife.
- Food and cover for aquatic organisms that live in watercourses with bank-full width less than 5 feet.
- Living fences
- Boundary delineation
- Contour guidelines
- Screens and barriers to noise and dust
- Improvement of landscape appearance

CONDITIONS WHERE PRACTICE APPLIES

This practice applies wherever it will accomplish at least one of the purposes stated above.

CRITERIA

General Criteria Applicable To All Purposes

Hedgerows shall be established using woody plants, or perennial bunch grasses producing erect stems attaining average heights of at least 6 feet and persisting well over winter.

Plants selected must be suited and adapted to the soils, climate and conservation purpose.

Trees and shrubs may need protection from browsing by deer and damage from rodents during the winter until the plants are well established. This will add to the cost and effectiveness of the hedgerow.

No plant listed by the state of Maine as a noxious weed shall be established in a hedgerow.

The practice shall be protected from livestock grazing and trampling, pesticide drift, to the extent necessary to ensure that it will perform the intended purpose(s).

Competing vegetation will be controlled until the hedgerow becomes established. Control may continue beyond the establishment period, if necessary. Natural woody vegetation (depending on species) may enhance the diversity or value of the hedgerow for wildlife.

All planned work shall comply with federal, state, and local laws and regulations.

Additional Criteria for Wildlife Food, Cover, and Corridors

Establish at least three species of native woody vegetation.

Selected plants shall provide cover and/or food to support the landowner's wildlife objectives.

Minimum hedgerow width, at maturity (stem to stem not crown cover), shall be 15 feet. This may necessitate the establishment of more than one row of plants.

In plantings adjacent to small watercourses and intermittent streams, the plantings shall be adapted to the site large enough at maturity, and installed close enough to shade the

<p>Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service. Contact Jeff Norment, NRCS State Biologist at 207-990-9571 or email comments and concerns to jeff.norment@me.usda.gov.</p>

**ME, NRCS
July, 2003**

watercourse. Plants that tolerate higher levels of moisture or flooding will be used in appropriate areas.

Additional Criteria For Living Fences

Selected plants shall attain a size adequate to create a barrier to contain livestock or humans as needed. Temporary or permanent fencing may be used while plants reach adequate size for intended purpose.

If the purpose is to contain livestock, selected plants shall not be poisonous or hazardous to the animals.

Additional Criteria For Boundary Delineation

Hedgerows shall be aligned along boundaries of fields, or forestlands to differentiate land management units.

Additional Criteria For Contour Guidelines

Hedgerows shall be aligned so they provide permanent contour markers supporting implementation of Contour Farming (330) or Contour Stripcropping (585) Conservation Practices. Refer to those conservation practices standards for alignment criteria.

Additional Criteria For Screens, Noise and Dust Barriers

Screening hedgerows provide privacy, hide unsightly areas from view or reduce noise.

Hedgerows shall be located where they most completely obstruct a line of sight, offensive sound, or dust.

Selected plants shall attain a height and fullness sufficient to break the line of sight, or baffle sound and dust.

Sound barriers will be planted as close to the source of sound as possible. The mature height of barrier plantings will be 16 feet at maturity. Planting stem density will be 2X the stem density as for other purposes. Pruning of lateral branches will increase the density of foliage to serve the intended purpose.

Additional Criteria For Improvement of Landscape Appearance

The hedgerow design shall meet the aesthetic objectives of the landowner and serve the intended purpose.

Plants shall be selected based upon the landowner's preferences for color, texture, and growth habitat and serve the intended purpose.

CONSIDERATIONS

General

Hedgerows can be planned in combination with other practices to develop complete conservation systems that enhance landscape aesthetics, reduce soil erosion, improve trapping of sediment, improve water quality, and provide improved conditions for wildlife.

Hedgerows following land contours can create meandering lines on the landscape, produce a natural appearance, and increase the availability of "edge" wildlife habitats.

Hedgerows containing a mixture of native shrubs and trees provide greatest environmental benefits.

Use of bare-root and containerized seedlings will accelerate hedgerow development. Use of starter fertilizer can improve growth and reduce effect of competition.

Consider the amount of shading a hedgerow will provide at maturity. Shading may affect the growth of adjacent plants, microclimate, and aesthetics.

Limiting renovation events to one-third of a hedgerow's length or width will prevent sudden elimination of the practice's wildlife habitat function.

Periodic root pruning can reduce nutrient and water robbing from adjacent cropland.

Consider avoiding the use of plants that spread by root suckers when the hedgerow may expand beyond the desired treatment area.

Wildlife Food, Cover, and Corridors

Hedgerows can provide travel lanes, or corridors that allow wildlife to move safely across a landscape.

Generally, wider corridors accommodate more use by some species of wildlife. Hedgerows should not be planted for wildlife when

pesticide drift can affect plants or animals, including insects that wildlife may use for food.

Linking fragmented habitats may increase wildlife use of an area.

In some grassland ecosystems, hedgerows may adversely affect area-sensitive nesting birds by fragmenting habitat patches and increasing the risk of predation.

Hedgerows can complement the availability of naturally occurring wildlife foods.

Hedgerows can provide wildlife with cover for feeding, loafing, traveling and nesting.

Dense or thorny shrub thickets can provide songbirds with important nesting sites and a refuge to escape predators.

Establishment of herbaceous vegetation along the edges of a hedgerow can further enhance the habitat values of a hedgerow.

Installation and maintenance of artificial nest boxes with predator guards can encourage cavity-nesting birds and small mammals to utilize a hedgerow.

Large stones (>16 inches) and logs (>10 inches in diameter and >4 feet long scattered throughout the hedgerow, but no further than 25 feet apart will enhance the value for general wildlife.

Living Fences

Thorny shrubs and trees can improve a living fence's effect as a barrier.

Screens and Noise Barriers

From eye-level, hedgerows reduce the line-of-sight across open areas, concealing objects behind them from view.

Consider the design from viewpoints on both sides of the screen.

Locate noise barriers as close to the source of noise as possible.

Combination of shrubs and/or trees will create more effective screens than single species plantings.

Establishment of evergreen plants provides year-round concealment and thermal cover for wildlife.

PLANS AND SPECIFICATIONS

Plans and specifications for installing manure transfer systems shall be in accordance with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

OPERATION AND MAINTENANCE

Operation and maintenance shall be in accordance with the requirements specified in the overall operation and maintenance plan required by the applicable Practice Standard 313, Waste Storage Facility, or 359, Waste Treatment Lagoon.

Evergreens provide foliage that can maintain a screen's year-round effectiveness.

Improving Landscape Appearance

Consider plants' seasonal display of colors on bark, twigs, foliage, flowers, and fruit.

Consider plants' growth habits (outline, height and width).

Water Quality and Quantity

Water quality benefits may arise from:

- Reducing movement sediment and trapping sediment-attached substances.
- Infiltration and assimilation of nutrients.
- Water cooling effects resulting from increased shade on small watercourses.

A hedgerow will increase surface water infiltration by improving soil structure around its root zone. However, evapotranspiration may reduce groundwater recharge benefits in some drier ecosystems.

Incidental Trapping of Snow or Sand

Although not usually a primary purpose, hedgerows may incidentally trap wind blown snow or sand.

Consider installing hedgerows on alignments that prevent trapping and accumulation of snow and sand on public roads.

Refer to the Windbreak/Shelterbelt Establishment (380) standard for criteria when snow or sand trapping is a primary conservation purpose.

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared for each site. Plans and specifications shall be recorded using approved specification sheets, job sheets, or narrative documentation in the conservation plan, or other acceptable documentation.

OPERATION AND MAINTENANCE

Supplemental planting may be required when survival is too low to produce a continuous hedgerow.

Vegetation shall be protected from unwanted fire and grazing throughout its life span.

Pests shall be monitored and controlled, as appropriate.

Periodic applications of nutrients may be needed to maintain plant vigor. Pruning to increase density of branches and foliage may also be needed to meet the intended purpose.

Renovation activities shall be scheduled to prevent disturbance during the nesting season for birds and other wildlife.

REFERENCES

National Biology Handbook, Part 614.4, "Conservation Corridor Planning at the Landscape Level". Natural Resources Conservation Service, August 1999.