

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:

- Wildlife habitat, including food, cover, and corridors.
- Pollinator habitat, to enhance pollen, nectar, and nesting habitat for native pollinators.
- To provide substrate for predaceous and beneficial invertebrates as a component of integrated pest management.
- To intercept airborne particulate matter.
- To reduce chemical drift and odor movement.
- Screens and barriers to noise and dust.
- To increase carbon storage in biomass and soils.
- Living fences.
- Food, cover, and shade for aquatic organisms that live in adjacent streams or watercourses.
- Boundary delineation and contour guidelines.

CONDITIONS WHERE PRACTICE APPLIES:

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

CRITERIA

Hedgerows shall be established using woody plants or perennial bunch grasses producing erect stems attaining average heights of at least 3 feet persisting over winter.

There is no minimum width, beyond a single row, required except where wildlife, pollinator or beneficial insect habitat is an objective.

Plants selected must be suited and adapted to site conditions, climate, and conservation purpose.

- No plant listed by the state as a noxious weed shall be established in a hedgerow.
- Native species and/or local ecotypes will be used wherever possible. Refer to the site's Ecological Site Description (ESD), soils, aspect and climate to assist in selecting the most appropriate species.
- Species shall be selected that do not host pests or diseases that could pose a risk to nearby crops.
- Site preparation, planting dates, and planting methods shall optimize vegetation survival and growth.

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

Competing vegetation shall be controlled until the hedgerow becomes established. Control shall continue beyond the establishment period, if necessary.

Users of this standard shall comply with applicable federal, state, and local laws, rules, regulations. This standard does not provide the details of each required law.

- All necessary local, state, and federal permits shall be obtained by the landowner (or designee) prior to the restoration.

Hedgerow renovation shall be restricted during critical periods such as nesting, fawning, or during pollination periods.

ADDITIONAL CRITERIA

Criteria for Wildlife, Pollinator and Beneficial Insect Habitat

Minimum hedgerow width, at maturity, shall be at least 15 feet wide; measured from the outside edge of the mature vegetation on the left side of the hedgerow to the outside edge of the mature vegetation on the right. Attempt to establish the widest hedgerow possible.

Establish at least two compatible plant species which provide cover and/or food to support the wildlife objectives. Consider selecting a greater diversity of plant species; to increase habitat value and to reduce plant pest and disease risk.

Hedgerows that contain dead wood (woody debris) and plant litter provide a valuable habitat for many wildlife species. Woody debris and litter should be promoted and maintained whenever possible.

When targeting pollinators or beneficial insects, hedgerow plants must provide abundant pollen and nectar resources:

- Mixtures shall consist of at least two (2) different species of pollinator friendly flowering plants, which may include shrubs, small woody shrub/herbs, or trees.
- Select species to provide a flowering hedgerow during periods where the surrounding landscape is lacking flowering plants (remember to also consider timing of flowering crops).
- Hedgerows will be protected from pesticides (herbicides, insecticides) or other disturbances that may harm pollinators or beneficial insects or the flowering plants. If pest control is required, only non-blooming plants will be treated, and/or only pesticides non-toxic to pollinators shall be used.

Criteria to Reduce Odor Movement, Chemical Drift and/or to Intercept Airborne Particulate Matter

Orientation of the hedgerow shall be as close to perpendicular to the prevailing wind direction during the period of concern as possible, and between the source and the sensitive areas.

Hedgerows shall be located upwind of the odor/chemical drift and/or particulate matter.

Hedgerow density on the upwind side shall be at least 50% at maturity. Hedgerow density adjacent to the source shall be at least 65% at maturity.

Tree and shrub species used shall have foliar and structural characteristics that optimize interception, adsorption and absorption of airborne chemicals or odors. Plant species shall be selected that are tolerant of anticipated chemical use.

Criteria for Visual and Noise Barriers (Screens)

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.

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

Plant several species of shrubs and trees to create a more effective screen; evergreens provide foliage that can maintain a screen's year-round effectiveness.

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

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

Criteria for Living Fences

Plantings intended partially for snow control along roads and highways will be located in conformance to state, county or local regulations.

CONSIDERATIONS

Where linear plantings of woody plants are desired and suited for controlling wind, noise, and visual resources; consider if NRCS practice Windbreak/Shelterbelt Establishment (code 380) is more appropriate for use.

Where herbaceous plantings are desired and suited for intercepting particulate organic matter or dissolved contaminants; consider if NRCS practice Filter Strip (code 380) is more appropriate for use.

Wider, longer and more diverse hedgerows with a vegetative understory will promote a healthier more functional hedgerow.

Avoid fragmenting grassland ecosystems; woody hedgerows can adversely affect grassland dependant nesting birds by fragmenting habitat patches and increasing the risk of predation. In these cases, if a hedgerow must be planned only use herbaceous plantings.

Hedgerows following land contours create meandering lines on the landscape, produce a natural appearance.

Consider any potential land use conflicts, such as ditch or road right-of-ways where vegetation may be cleared by a third-party.

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

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

Maintain a vegetative buffer at least three feet wide on either side of the hedgerow.

Consider posting habitat boundary markers; where areas will need to be managed differently than the larger field (such as pollinator/wildlife habitat).

Avoid spray drift from adjacent or nearby fields which can have a detrimental effect on the hedgerow and invertebrates living within it.

Consider installing tree guards to protect against wildlife damages and/or environmental damages such as solar heat and wind.

Limit extensive renovation events to one-third of a hedgerow's length or width, per year, to prevent sudden elimination of the practice's function.

PLANS AND SPECIFICATIONS

Site specific planning for this practice shall follow the Standard and Specifications, and be recorded using the appropriate, approved job sheet(s). Narrative statements in the conservation plan or other documentation may provide supplemental information.

In addition to conservation plan requirements, the plan shall identify and describe:

- the baseline (pre-treatment) condition,
- the desired condition and purpose (goals & objectives) of the hedgerow,

- the design elements such as species suitability, number of rows, configuration, etc.
- management actions necessary to achieve the goals and objectives. Including the method, timing and intensity of each action (i.e. competing plant suppression, etc.).

OPERATION AND MAINTENANCE

The following actions shall be carried out to ensure that this practice functions as intended. These actions include normal repetitive activities in the application and use of the practice (operation), and repair and upkeep of the practice (maintenance):

- Conditions shall be evaluated and compared to desired conditions on a regular basis (at least annually); to be able to quickly adjust the conservation plan to ensure the desired conditions are met.
- Any adjustments to treatments and/or management must be made in consultation with the local NRCS conservationist.
- Identify the critical nesting, fawning and/or pollination periods that require deferment of activities.

O&M Recommendations

- Replace dead plants (annually) for at least 3 years after the initial planting.
- Reduce plant competition by removing invading plants by hand, mechanical or chemical means.
- Inspect tree guards every year to ensure that they are not restricting the plants growth. Make adjustments as needed.

REFERENCES

USDA. 2003. [National Biology Handbook](#), Part 613, "Conservation Corridor Planning at the Landscape Level". Natural Resources Conservation Service.

USDA. 2004. [National Forestry Handbook](#), Part 636.4 "Planning Considerations". Natural Resources Conservation Service.

USDA. Plants Database. [New Mexico Invasive and Noxious Weeds](#). Online: www://plants.usda.gov