

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

**FENCE
(Ft.)**

CODE 382

DEFINITION

A constructed barrier to animals or people.

PURPOSE

This practice facilitates the accomplishment of conservation objectives by providing a means to control movement of animals and people, including vehicles.

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied on any area where management of animal or human movement is needed.

CRITERIA

General Criteria Applicable to All Purposes

Fencing materials, type and design of fence installed shall be of a high quality and durability. The type and design of fence installed will meet the management objectives and site challenges. Based on objectives; fences may be permanent, or temporary.

Fences shall be positioned to facilitate management requirements. Ingress/egress features such as gates and cattle guards shall be planned. The fence design and installation should have the life expectancy appropriate for management objectives and shall follow all federal, state and local laws, regulations, easements, right-of-ways, and access agreements. The landowner shall obtain all necessary permits prior to construction and installation.

Height, size, spacing and type of materials used will provide the desired control, life expectancy, and management of animals and/or people of concern.

Fences shall be designed, located, and installed to meet appropriate local wildlife and land management needs and requirements. Selection and design of fences shall adhere to manufacturer's recommendations to ensure suitability to use and site conditions.

Additional criteria to implement fencing associated with prescribed grazing management

Improve resource management by locating fences to separate areas with differences in forage seasons of growth and palatability, use, topography, or production potential.

Pasture/paddock divisions shall be consistent with grazing needs as projected by a grazing plan developed under Pennsylvania Conservation Practice Standard *Prescribed Grazing (Code 528)*.

Any permanent fencing for grazing livestock should allow flexibility to facilitate implementation of the prescribed grazing plan and permit land management activities such as nutrient application, pest control, forage harvest, and other appropriate practices.

Additional criteria to implement fencing associated with Waste Storage Facilities (WSF), Waste Transfer (WT), and Heavy Use Areas (HUA)

All WSF, some WT systems, and HUA with exterior drops greater than 3.5 feet shall be fenced to exclude children and small animals. Typically openings are limited to 4" for horizontal members unless distance is limited to 6" and then spacing can be up to 6". Fencing on WSF with vertical walls exceeding 4' is optional. HUA for animal inclusion only allows for greater vertical spacing of horizontal members. WT system openings with grate spacing exceeding 4" will require fencing for exclusion.

CONSIDERATIONS

The fence design and location should consider: topography, soil properties, livestock management and safety, livestock trailing, wildlife class and movement, location and adequacy of water and feeding facilities, development of potential grazing systems, human access and safety, landscape aesthetics, erosion problems, moisture conditions, flooding potential, stream crossings,

and durability of materials. When appropriate, natural barriers should be utilized instead of fencing.

Where applicable, cleared rights-of-way may be established that facilitate fence construction and maintenance. Avoid clearing of vegetation during the nesting season for migratory birds. Consider movement needs of livestock when locating fences. Fence wire heights and spacing may require adjustments to repel predators or to avoid entanglement.

The type and class of livestock as well as degree of control needed will have a specific influence on type of fence selected to perform intended function. The number and spacing of wires, spacing of vertical stays (for woven wire fence), and height of fence as well as need for an electric component to the system should be considered during the planning process.

When using electric fences to control livestock, a training area should be planned to condition livestock to fences.

Fences across gullies or streams may require special bracing, designs or approaches.

Fence design and location should consider ease of access for construction, repair and maintenance.

Fence construction requiring the removal of existing unusable fence should provide for proper disposal of scrap materials to prevent harm to animals, people and equipment.

Safety is also a concern with Waste Storage Facilities, Waste Transfers Systems and certain situations with Heavy Use Areas. Exclusion of small children and animals requires smaller spacing.

SAFETY

Safety is a concern when constructing electric fences. The following are safety guidelines to adhere to:

1. Do not erect wires or ground wires near overhead power lines, telephone wires, or radio antennas. It is illegal to cause interference.
2. Install energizers inside a building when possible. Energizers need not be attached to a power pole. All power supply lines should comply with local electrical codes.

3. All energizers must be connected to a separate grounding system. Never attach an energizer to other farm related grounding devices (e.g. electric panels, ground rods, lightning rods on buildings, houses, barns, etc).

4. Fence charger ground rods need to be at least 50 feet away from grounding rods that are not part of the fencing system.

5. Only one energizer should be installed onto a fence line.

6. Where there is public access to the fence, both interior and exterior fence, warning signs should be placed at a minimum of 300 feet apart.

7. Warn all children that electric fencing is being used and let neighbors know where and how to shut off the current.

8. Install lightning arrestors and chokes to protect fence.

PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for all fence types, installations and specific sites. Requirements for applying the practice to achieve all of its intended purposes shall be described.

OPERATION AND MAINTENANCE

Regular inspection of fences should be part of an ongoing maintenance program to ensure continuing proper function of the fence.

Operation and Maintenance (O&M) includes the following: A schedule for regular inspections and maintenance as well as after storms and other disturbance events. Maintenance and repairs shall be performed in a timely manner to maintain the desired control.

Maintenance activities:

- Repair or replacement of loose or broken material, gates and other forms of ingress/egress
- Removal of trees/limbs
- Replacement of water gaps as necessary
- Repair of eroded areas as necessary
- Repair or replacement of markers or other safety and control features as required.
- Annual clearing of weeds and brush under and near the fence systems will prolong life expectancy.

REFERENCES

ASTM STANDARD 116.

www.astm.org/Standards/A116.htm

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