

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD
FENCE
(Feet)
CODE 382**

DEFINITION

A constructed barrier to animals or people.

PURPOSES

This practice facilitates the accomplishment of conservation objectives by providing a means to control movement of animals and people, including vehicles. Including (1) exclude livestock from areas that should be protected from grazing; (2) control livestock where permanent fencing is installed as a component of a rotational grazing system; (3) confine livestock on an area; (4) control domestic livestock while permitting wildlife movement; (5) regulate access to areas by people, to prevent trespassing, or for purposes of safety.

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied to sites or areas where management of animal or human movement is needed. Fences are not needed where natural barriers will service the purpose. This standard does not include portable fencing described in the prescribed grazing standard.

CRITERIA

General Criteria for all Purposes

Fencing shall consist of acceptable fencing designs to control the animal(s) or people of concern and meet the intended life of the practice.

Property line fence shall comply with State laws and standards for construction (see references 4 and 8).

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.

Fences shall be positioned to facilitate management requirements.

Material used shall be new and have a 20 year life expectancy.

Ingress/egress shall be planned.

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

CONSIDERATIONS

Consider planning and installing fences in locations that will facilitate maintenance, livestock management and safety, livestock movement, watering facilities, and avoid irregular terrain such as gullies and water crossings. Fence construction requiring the removal of existing unusable fence should provide for the proper disposal of scrap materials to prevent harm to animals. Consider wildlife movement needs when locating fences.

Consider soil erosion potential when planning and constructing a fence on steep slopes.

Consider raising lower wire of fences located in the floodplain.

Wire should be attached on the side of the post receiving the most animal pressure.

PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for all fence types, installations and specific field site based on this standard. Operation and maintenance requirements will be included. Requirements for applying the practice to achieve all of its intended purposes shall be described. The Ohio Utilities Protection Service (OUPS) and the Ohio Oil and Gas Association will be called by the planner and landowner to locate underground utilities.

The following construction specifications for fence shall be considered part of this standard:

| | |
|--|-----------|
| Standard Barb Wire Fence (SBWF) | (4 pages) |
| Woven Wire Fence (WWF)..... | (4 pages) |
| High Tensile Non-Electric Wire Fence (HTNEWF)..... | (4 pages) |
| Permanent Electric Wire Fence (PEWF)..... | (7 pages) |
| Feedlot Fence (FF)..... | (2 pages) |
| Flexible Rail Fence (FRF)..... | (2 pages) |
| Wooden Board Fence (WBF) | (1 page) |
| Chain Link Fence (CLF) | (1 page) |

The attached 8 ½" x 11" standard drawings (Exhibit OH-382-1, 2, 3, 4, 5, 6) can be used as part of the construction plans and specifications. Larger standard drawings are also available as listed in the References section of this standard. These can be found on the NRCS website:

http://www.oh.nrcs.usda.gov/technical/engineering/cadd2_dwg_d_to_p.html

OPERATION AND MAINTENANCE

Routine inspection of fences should be part of an on-going management program. Inspection of fences after storm events is needed to facilitate the function of the intended use of the fence. Maintenance and repairs will be performed as needed to facilitate the intended operation of the installed fence. Remove fallen limbs and maintain proper tension on the fence wires and water gap replacement. Overhanging trees and limbs should be trimmed or removed as needed.

Electric fences will be regularly checked to determine the voltage on the fence. If voltage is not sufficient, determine the cause and correct. During dry weather, grounding rods may need water applied to soil around them. Remove brush from the fence line to reduce voltage loss. Vegetative control can be achieved by herbicides applied per the manufacturer's label. Electrified floodgates must be maintained and kept clear of debris. During extended flooding periods, switch the floodgates off.

Construction and maintenance safety is a primary concern. Wire that is overstretched may break and recoil. Eye and hand protection should be worn. Remove and properly discard all broken fencing material and hardware.

DEFINITIONS

Bend Assembly – An in-line series of fence posts placed to support the entire curve or arc in the fence line or circular shaped fence. The posts are spaced according to the degree of the curve.

Boundary Fence – A fence constructed to confine livestock to a grazing system.

End Assembly - A single or double H-brace assembly at the end of the fence or gate opening, with a brace wire for tension from the bottom of the end post to the top of the brace post.

Exclusion Fence – Excludes livestock from areas that should be protected.

Fence Height – Height of a fence is determined from the ground to the top of highest wire. For woven wire fence, it will be the top of the highest barb or high tensile smooth wire.

High Tensile Wire - High tensile wire that exceeds 170,000 psi tensile strength or 1,300 lbs. breaking strength. All high tensile wires shall have Class 3 zinc coating. Class 3 wire carries three times as much zinc coating per unit area as Class 1 wire.

High voltage - Low Impedance - An energizer, which has a pulse length of less than .003 seconds.

Interior Fence – A fence that divides and controls the livestock in grazing areas within a grazing system.

Non-High Tensile Fence - Any fence that does not fit the criteria for High Tensile Wire.

Off Set Brackets - Brackets used on barbed or smooth wire fences to renovate existing fence lines.

Pull Assembly - An in-line single or double H-brace assembly, which aids in tightening the wires.

Stay/Batten - A strip of wood, fiberglass or insul-timber, which is used between the line posts to maintain stability and desired wire spacing within the fence.

REFERENCES

1. Fences, USDA Forest Service Technology and Development Program, USDI Bureau of Land Management.
2. Missouri Agronomy Technical Note MO-19 Installation of Electrified Hi-Tensile Fence Systems by James R. Gerrish.
3. Specifications for Farm Fence Construction, ASAE Standard EP250.2.
4. Ohio Line Fence Law, The Ohio State University Fact Sheet ALS-1001-00.
5. High-Tensile Wire Fencing, NRAES-11. Revised 1987, Cooperative Extension Northeast Regional Agricultural Engineering Services.
6. Gallagher Power Fence manual. 10th Edition.
7. Ohio Standard Fence Drawings, OH070806 and OH070906.
8. Ohio Fence Law, Ohio Revised Code, Title IX, Agriculture, Chapter 971.
9. Material Specification 585, NRCS NEH Part 642.
10. USDA, NRCS 2003 National Range and Pasture Handbook Revision 1, Washington, D.C.

THIS PAGE WAS INTENTIONALLY LEFT BLANK