

NATURAL RESOURCES CONSERVATION SERVICE
MONTANA CONSERVATION PRACTICE STANDARD

FENCE (FEET)

CODE 382

DEFINITION

A constructed barrier to animals or people.

PURPOSE

This practice is applied to facilitate the application of conservation practices by providing a means to control movement of animals and people.

CONDITIONS WHERE PRACTICE APPLIES

This practice may be applied on any area where management of animal or people movement is needed. Fences are not needed where natural barriers will serve the purpose.

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 topographic challenges of the site.

Fences shall be positioned to facilitate management requirements. The fence design and installation shall follow all federal, State and local laws and regulations. **Montana State law prohibits fencing across any navigable waterway.**

Height, size, spacing, and type of materials used will provide the desired control and management of animal and people of concern.

All power fences must be grounded to protect humans, animals, wildlife and power fence equipment and materials from lightning. Safety guidelines for each type of fence must be strictly adhered to.

When constructing power fences, it is critical that the energizer is of sufficient output, the fence is grounded correctly, ample cut-off switches are installed in necessary locations, and fence height and wire spacing is adhered to as outlined in the Field Office Technical Guide (FOTG), Section IV – Practice Specification, Power Fence (Code 382).

CONSIDERATIONS

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

Where applicable, cleared rights-of-way may be established which would facilitate fence construction and maintenance.

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

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

Design the fence for the appropriate level of protection and time for protection needed. For example, if protection is needed for only one to two years, a temporary power fence may be all that is needed.

Sandy soils may require more braces and closer spacing than firm soils. Rocky soils may require fences built of rock jacks with figure-four posts or straddle jacks. Marshy areas may require the construction of figure-four or straddle jack posts with long flotation boards that keep the fence on top of the marsh.

NRCS, MT
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Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard contact the Natural Resources Conservation Service.

NOTE: This type of font (**AaBbCcDdEe 123..**) indicates NRCS National Standards.
This type of font (**AaBbCcDdEe 123..**) indicates Montana Supplement.

Chromated Copper Arsenate (CCA) treated wood posts have not been shown to leach their chemical treatments into ground water or surface water. However, it is recommended that they should not be used where treated wood may come into contact with water sources (wetlands, streams, high water tables, etc.). Other chemically treated and pressure-treated wood posts may be used in these areas (EPA 2002). Areas of light snow usually do not require special fencing designs. However, blown snow will approximate heavy snow conditions and may require special fence designs. Fences exposed to heavy snow may require sturdier stays, straddle jacks with wire or pole fencing, or worm, block and log, post and pole wood fences, or let-down fences.

Additional Considerations for Wildlife

Where possible, the fence design should account for safe passage of wildlife. Where deer, elk or moose are a concern, fences should not exceed 42 inches in height.

Where deer are a concern, 12 to 15 inches of space between the top and second wire will help prevent animals from hooking their back legs between the wires when they jump.

Antelope can generally pass under wire fences that are 16 to 18 inches above the ground. They can also jump woven-wire fences that do not exceed 32 inches in height. Appropriate fence openings can be installed across known antelope trails to facilitate safe crossings.

PLANS AND SPECIFICATIONS

Plans and specifications are to be prepared for specific sites based on this standard.

Plans and specifications for installing fences shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve all of its intended purposes.

Manufacturer's guidelines will be followed closely during installation of each type of fence to assure that all components are assembled properly.

It is essential to coordinate planning with anyone who will be affected by the fence. When constructing a fence on private land, wildlife migration routes or corridors may be disturbed. Consult wildlife managers as needed.

OPERATION AND MAINTENANCE

Regular inspection of fences should be part of an ongoing maintenance program. Inspection of fences after storm events is necessary to insure the continued proper function of the fence. Maintenance and repairs will be performed in a timely manner as needed. **Minimum life expectancy is 20 years.**

Retain and properly discard all broken fencing material and hardware. All necessary precautions should be taken to ensure the safety of construction and maintenance crews.

Electric fences need to be inspected periodically to remove grasses, forbs, shrub branches and tree limbs that are touching the wires. It is essential to remove all vegetation from the path of electrical fence wires, especially before snowfall. This permits proper grounding of the fence in all seasons.

REFERENCES

Structures and Environment Handbook, MWPS-1, Midwest Plan Service, Eleventh Edition, 1983 (revised 1987).

Specifications for Structural Range Improvements, PNG-GTR-250, H. Reed Sanderson, Thomas M. Quigley, Emery E. Swan, and Louis R. Spink, September 1990.

Fences, USDI-Bureau of Land Management and USDA-Forest Service, July 1988.

Planning Fences, American Association for Vocational Instructional Materials, Third Printing, 1997.

Building Fences, American Association for Vocational Instructional Materials, 1974.

Beef Housing and Equipment Handbook, MWPS-6, Midwest Plan Service, Fourth Edition, 1987.