



**Natural Resources Conservation
Service CONSERVATION PRACTICE
STANDARD FENCE**

CODE 382

(ft)

DEFINITION

A constructed barrier to animals or people.

PURPOSE

This practice is used to accomplish the following purpose:

- Provide a means to control the movement of animals, people, and vehicles to accomplish specific conservation objectives.

CONDITIONS WHERE PRACTICE APPLIES

Apply this practice on any area where management of animal or human movement is needed.

CRITERIA

General Criteria Applicable to All Purposes

Plan, design, and construct this practice to comply with all Federal, State, and local laws and regulations. The landowner must obtain all necessary permissions from regulatory federal, state, and county agencies or document that no permissions or permits are required.

The landowner and/or contractor is responsible for locating all buried utilities in the project area, including drainage tile and other structural measures.

Ensure all fencing materials installed are new (unless otherwise stated and approved) durable, of high quality, and the type and design of the fence installed meets the management objectives and site challenges.

Position fences to facilitate changes in management strategies, access requirements, or otherwise meet conservation objectives. The fence design and installation must include height, size, spacing, type of materials, and location of features such as (but not limited to) gates and cattle guards.

The permanent fence design and materials must have a 20-year life expectancy appropriate for the management system and resource objectives. Base the durability of materials in the

NRCS reviews and periodically updates conservation practice standards. To obtain the current version of this standard, contact your Natural Resources Conservation Service State office or visit the Field Office Technical Guide online by going to the NRCS website at <https://www.nrcs.usda.gov/> and type FOTG in the search field.

USDA is an equal opportunity provider, employer, and lender.

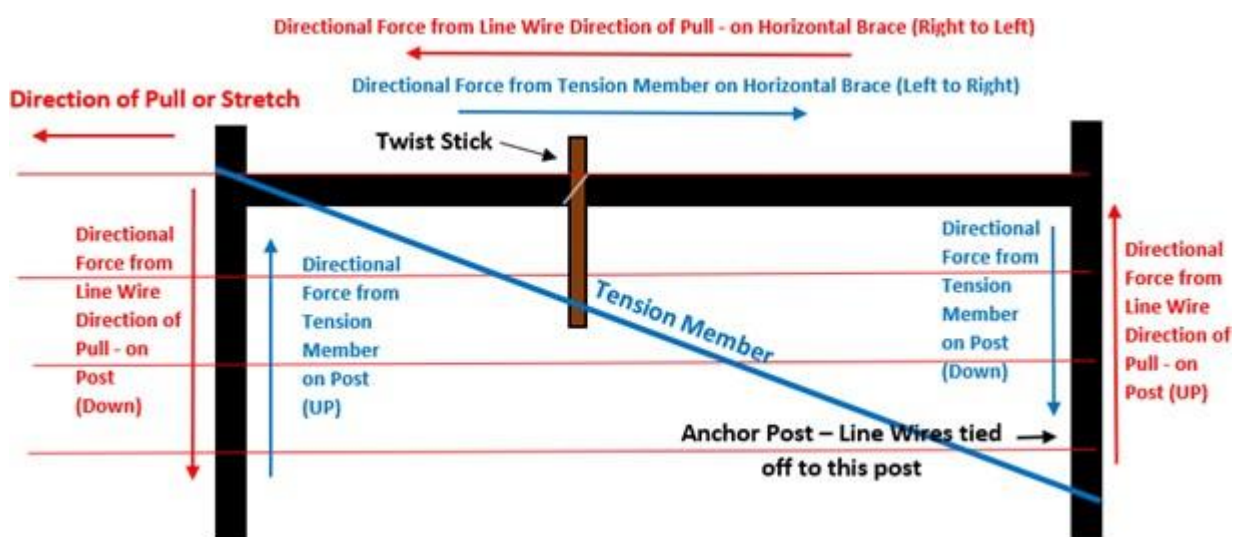
NRCS, WY
September 2022

design and location of fences on topography, environment, purpose, and management objectives. Specialized bracing, designs, and materials may be necessary to cross features such as gullies, canyons, and streams.

Design, locate, and install fences to minimize impacts on wildlife as appropriate. NRCS Wyoming maintains a 'wildlife friendly' position on fences. Only fences with a reduced wildlife mortality design that are identified in the Plans and Specifications section of the standard (Barbed and Barbless, Buck and Pole (3 and 4 Pole), and Permanent Power) are approved and promoted designs. These fence types adhere to the latest and best science available to be considered 'wildlife friendly'. Only exceptions are the Buck and

Pole 5-Pole, Small Area Protection types, and Exclusion - Wildlife, these must exclude livestock and wildlife for practices that need protection from all large animals, such as establishing a windbreak, critical areas, and spring developments.

Must incorporate a tension member in all standard horizontal (H) braces, this includes both wood and steel pipe H-braces.



Plan practices consistent with the Governor's Sage Grouse Executive Order. Mark all fences located within the high collision risk areas (collision class 2), as identified by the Sage Grouse fence collision GIS layer.

Provide for proper disposal of materials when fence construction requires the removal of existing fencing materials to prevent harm to animals, people, or equipment.

CONSIDERATIONS

Consider soil properties, soil moisture conditions, and erosion concerns.

Consider livestock management and adaptive grazing strategies, trailing, access to water facilities, and wildlife deterrence or passage.

Consider animal and human safety concerns by enhancing visibility of fences through design materials, fence markers, signage, or fladry systems (line of rope mounted along the top of a fence, with strips of fabric or colored flags suspended on the rope that will flap in a breeze).

Consider using natural barriers where appropriate and design and locate fences to ease access for construction, maintenance, and landscape aesthetics.

Establish cleared rights-of-way to facilitate fence construction and maintenance where applicable. Avoid clearing of vegetation during the nesting and brood rearing seasons for migratory and ground nesting birds.

PLANS AND SPECIFICATIONS

The practice must be planned and applied according to the requirements, guidelines, and specifications of this standard and associated fence type Implementation Requirements. Use the 382 - All fence types job sheet to document the appropriate fence type and design requirements.

NRCS Wyoming has developed Specifications and Implementation Requirements for six (6) permanent fence types.

Specifications in the associated Implementation Requirements are MINIMUMS unless specified otherwise.

At a minimum, the construction materials must meet or exceed the strength, size, weight, and durability of the following approved specifications:

1. Barbed and Barbless - (See 382 - Fence Barbed and Barbless Implementation Requirements)

- 4 - Wire - Cattle - Barbed with Barbless Bottom
- 4 - Wire - Cattle - All Barbed
- 3 - Wire - Cattle - Barbed with Barbless Bottom
- 3 - Wire - Cattle - All Barbed
- 4 - Wire - Sheep - Barbed with Barbless Bottom
- 4 - Wire - Sheep and Cattle - Barbed with Barbless Bottom
- 4 - Wire - Lay-down

2. Pole Top Barbed and Barbless - (See 382 - Fence Pole Top Barbed and Barbless Implementation Requirements)

- 2 - Wire - All Barbed
- 2 - Wire - Barbed with Barbless Bottom
- 3 - Wire - All Barbed
- 3 - Wire - Barbed with Barbless Bottom

3. Buck and Pole - (See 382 - Fence Buck and Pole Implementation Requirements)

- 3 - Pole
- 4 - Pole
- 5 - Pole (Wildlife Exclusion)

4. Exclusion - Livestock and Wildlife - (See 382 - Fence Livestock/Wildlife Exclusion Implementation Requirements)

5. Permanent Power - (See 382 - Fence Permanent Power - High Tensile Implementation Requirements)

- 2 - Wire - Cattle (1)
- 2 - Wire - Cattle (2)
- 3 - Wire - Cattle, Bison, and Horses
- 4 - Wire - Cattle, Bison, and Horses
- 4 - Wire - Sheep or Goats (1)
- 4 - Wire - Sheep or Goats (2)

6. Small Area Protection - (See 382 - Fence Small Area Protection Implementation Requirements)

NOT to be used for livestock handling facilities of any kind. ONLY to be used on areas less than or equal to one (1) acre or less than or equal to 850 feet, if applied linear.

- Manufactured Fence
- Post and Pole
- Welded Wire Livestock Panels

This specification covers fence designs, types, and materials currently approved, without WY NRCS State Resource Conservationist (SRC) review IF following as specified. ANY deviation of the approved designs must be reviewed and approved by the WY SRC, design modifications or additions departing from this specification will be reviewed on a case-by-case basis. The requester of a design modification must submit the WY-TCH-02 Waiver form found in the the Field Office Technical Guide, Section 1, Tools & Forms, TCH Forms must be routed through the proper channels specified on the WY-TCH-02. The requester must receive an approved WY-TCH-02 from the WY SRC prior to modifying this specification, associated practice drawings, and implementation requirements, before implementing the practice, and before starting installation.

ANY fence TYPE not included here in the Standard - Plans and Specifications MUST go through the WY-TCH-01 variance process. This form is found on the Field Office Technical Guide, Section 1, Tools & Forms, TCH Forms. This variance may need National Headquarters approval and MUST allow the appropriate timeframe for such approval process.

If using railroad ties or utility poles, they must be sound, free from decay, and they must meet the minimum diameter and length requirements for the type of fence constructed. **NRCS personnel with appropriate Job Approval Authority must inspect and approve the railroad ties or utility poles prior to installation.**

Appropriate Job Approval Authority for inspecting Railroad ties or utility poles is a minimum of jobclass I - Design.

OPERATION AND MAINTENANCE

Regular inspection of permanent, temporary, and portable fences is a part of an ongoing maintenance program that ensures proper function of the fence for the lifespan of the

practice. As a minimum, include the following in the operation and maintenance plan:

- Conduct inspections of fences after storms and other disturbance events
- Repair or replacement of loose or broken material, gates, and other forms of ingress and egress
- Removal of trees and limbs
- Repair or 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
- Maintain fladry or signage as necessary

REFERENCES

Bell, H.M. 1973. Rangeland Management for Livestock Production. University of Oklahoma Press. Norman, OK.

Heady, H.F. and R.D. Child. 2002. Rangeland Ecology and Management, Third Edition.

Routledge, NY. Holechek, J.L., R.D. Pieper, and C.H. Herbel. 2001. Range Management: Principles and Practices. Prentice Hall, NJ.

Jakes, A.F., P.F. Jones, L.C. Paige, R.G. Seidler, M.P. Juijser. 2018. A Fence Runs Through It: A Call for Greater Attention to the Influence of Fences on Wildlife and Ecosystems. Biological Conservation, vol. 227, pp. 310–318. doi:10.1016/j.biocon.2018.09.026.

Paige, C. 2012. A Landowner's Guide to Fences and Wildlife: Practical Tips to Make Your Fences Wildlife Friendly. Wyoming Land Trust. Pinedale, WY.

Sherry, J. 2020. IB: 20-10-A. Installing Turbo Fladry: An Informal Guide, Issue Brief. The Natural Resources Defense Council, NY.

Stoddard, L.A., A.D. Smith, and T.W. Box. 1975. Range Management. McGraw-Hill Book Company.

USDA NRCS. 2003. National Range and Pasture Handbook (Title 190). Washington, D.C. <https://directives.sc.egov.usda.gov/>

USDA NRCS. 2005. Electric Fencing for Serious Graziers. Columbia, MO.

United States Department of Interior, Bureau of Land Management and United States Department of Agriculture, Forest Service. 1988. Fences. Missoula Technology and Development Center.

Vallentine, J.F. 1989. Range Development and Improvement, Third Edition. Brigham Young University Press. Provo, UT.

Worley, J.W. 2015. Fences for the Farm, Circular 774. University of Georgia Extension. Athens, GA.