

**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**

Use durable high quality fencing materials. Construct fences to meet the intended management objectives and site challenges. Based on need and purpose, fences may be permanent, portable, or temporary.

Position fences to facilitate management requirements. Plan ingress/egress features such as gates and cattle guards to meet fence system needs.

Fence height, size, spacing and type of materials used shall provide the desired control, life expectancy, and management of animals and people of concern.

Use Fence Selection Criteria in Table 1 to determine and design the appropriate type of fence to meet project needs.

Design and install fences to meet the life expectancy of the practice and to comply with all federal, state and local laws and

regulations.

**CONSIDERATIONS**

Permanent fencing is intended to be in place for long periods of time with minimum maintenance requirements; therefore it should be built with durable materials and constructed to endure a longer life span. Permanent fences are most often used for exterior grazing or property boundaries or where animals or humans are prohibited.

Temporary fencing is designed to be in place for short periods of time. Temporary fences are best used as subdivision fences for frequent movement or control of animals and where the exact location of the fence may not be the same from time to time. This fencing offers maximum flexibility in rotational grazing systems for subdividing pastures to enhance grazing efficiency, livestock movement, and afford temporary stream and riparian protection.

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

Design and locate fences to provide ease of access for construction, repair and maintenance.

Establish clear rights-of-way to facilitate fence construction and maintenance. Avoid clearing of vegetation during the nesting season for

migratory birds (April 15<sup>th</sup> – August 15<sup>th</sup>).

Special bracing, designs or approaches may be required where fences cross gullies and streams.

High tensile smooth wire is recommended along stream corridors instead of woven wire. Refer to Fence Selection Criteria in Table 1 and plan the appropriate number of wires to control the specific animal type.

Consider installation of maintenance gates on stream fences.

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

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

## PLANS AND SPECIFICATIONS

Prepare plans and specifications for all fence types, installations and specific sites.

Individual fence type specifications are found in the VA Fence Job Sheets. Complete the applicable VA Fence Job Sheets in accordance with fence criteria and include it in the design package.

## CHECK DATA

As a minimum, record and maintain the following check data:

- Map with fence types and locations identified.
- Completed specifications sheet, located within the appropriate job sheet, for each fence type installed.
- Additional information as needed to describe the requirements for applying the practice to achieve all of its intended purposes (i.e. conservation notes, narrative, conservation plan, job sheets, or other means).
- As built changes documented with red pen and ink notes.

## OPERATION AND MAINTENANCE

Inspect fences regularly, especially in flood prone areas after storm events, as part of an ongoing maintenance program to insure the continued proper function of the fence.

Maintain and repair fences in a timely manner including tree/limb removal and water gap replacement.

Remove and properly discard all broken fencing material and hardware. Take all necessary precautions to ensure the safety of construction and maintenance crews.

## REFERENCES

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**VA NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD FENCE (382)**

**Table 1. Fence Selection Criteria**

Fence design and construction must meet the minimum requirements for controlling specific animal types.

Animal type to control	Fence type	Purpose of Fence							Spacing inches above ground level ww fences start 2-3 " above the ground	Line posts & stay (maximum spacing)			
		Permanent				Temporary				Inches	Post w/o stay	Post with stay	Stay spacing
		Perimeter	Travel lanes	Interior subdivision	Surface water exclusion	Travel lanes	Interior subdivision	Surface water exclusion					
Minimum Criteria									Feet				
<b>Cattle</b>	Barbed 3-wire	NO	Meets	Meets	Meets	Meets	Meets	Meets	18, 30, 42	16.5	na	na	
<b>Cattle</b>	Barbed 4-wire	NO	Exceeds	Exceeds	Exceeds	Meets	Exceeds	Exceeds	16 to 48 evenly spaced	16.5	na	na	
<b>Cattle</b>	Barbed 5-wire	Meets	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	14 to 48 evenly spaced	16.5	na	na	
<b>Cattle</b>	Non-Electric 4-wire high tensile smooth	NO	Meets	Exceeds	Meets	Meets	Exceeds	Meets	12 to 42 evenly spaced	30	60	15	
<b>Cattle</b>	Non-Electric 6-wire high tensile smooth	NO	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	12 to 44 evenly spaced	30	60	15	
<b>Cattle</b>	Non-Electric 8-wire high tensile smooth	Meets	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	12 to 44 evenly spaced	30	60	15	
<b>Cattle</b>	Electric 1-wire high tensile smooth	NO	NO	Meets	NO	Meets	Meets	NO	32	100	na	na	
<b>Cattle</b>	Electric 2-wire high tensile smooth	NO *	Meets	Exceeds	Meets	Meets	Exceeds	Meets	20, 32, both wires hot	100	150	50	
<b>Cattle</b>	Electric 3-wire high tensile smooth	NO	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	18, 30, 42, mimimum 2 hot	50	150	50	
<b>Cattle</b>	Electric 4-wire high tensile smooth	Meets	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	12 to 42 evenly spaced, minimum 2 hot	50	150	50	
<b>Cattle</b>	Electric 5-wire high tensile smooth	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	12 to 44 evenly spaced, minimum 2 hot	50	150	50	
<b>Cattle</b>	Electric 1-wire Polywire or Polytape (1 hot wire)	NO	NO	NO	NO	Meets	Meets	Meets	32	60	na	na	
<b>Cattle</b>	Electric 2-wire Polywire or Polytape (2 hot wires)	NO	NO	NO	NO	Meets	Exceeds	Exceeds	20, 32	60	na	na	
<b>Cattle</b>	Woven wire plus one or more HT or barbed top wire	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	47 min, 6" max between top wires	16.5	na	na	
<b>Cattle</b>	Wood or Composition boards (6" wide)	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6, 6, 8, 10 between boards	8	na	na	
<b>Cattle</b>	HT Woven wire plus one or more top wires	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	47 min, 6" max between top wires	25	na	na	
<b>Goats &amp; sheep</b>	Barbed 5-wire	NO	Meets	Meets	Meets	Meets	Meets	Meets	6 to 32 evenly spaced	16.5	30	10	
<b>Goats &amp; sheep</b>	Barbed 6-wire	NO	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6 to 36 evenly spaced	16.5	30	10	
<b>Goats &amp; sheep</b>	Barbed 8-wire	Meets	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6 to 48 evenly spaced	16.5	30	10	
<b>Goats &amp; sheep</b>	Non-Electric 5-wire high tensile smooth	NO	Meets	Meets	Meets	Meets	Meets	Meets	6 to 32 evenly spaced	16.5	30	15	
<b>Goats &amp; sheep</b>	Non-Electric 6-wire high tensile smooth	NO	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6 to 36 evenly spaced	16.5	30	15	
<b>Goats &amp; sheep</b>	Non-Electric 7-wire high tensile smooth	Meets	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6 to 42 evenly spaced	16.5	30	15	
<b>Goats &amp; sheep</b>	Electric 3-wire high tensile smooth	NO	Meets	Meets	Meets	Meets	Meets	Meets	8, 18, 30	50	100	25	
<b>Goats &amp; sheep</b>	Electric 4-wire high tensile smooth	NO	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6 to 36 evenly spaced	50	100	25	
<b>Goats &amp; sheep</b>	Electric 5-wire high tensile smooth	Meets	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6 to 38 evenly spaced, minimum 2 hot	50	100	25	

**VA NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE STANDARD FENCE (382)**

**Table 1. Fence Selection Criteria Continued**

Fence design and construction must meet the minimum requirements for controlling specific animal types.

Animal type to control	Fence type	Purpose of Fence							Spacing inches above ground level ww fences start 2-3 " above the ground	Line posts & stay (maximum spacing)		
		Permanent				Temporary				Post w/o stay	Post with stay	Stay spacing
		Perimeter	Travel lanes	Interior subdivision	Surface water exclusion	Travel lanes	Interior subdivision	Surface water exclusion				
Minimum Criteria									Inches	Feet		
Horses	Electric 1-wire Polywire or Polytape	NO	NO	NO	NO	Meets	Meets	NO	34	60	na	na
Horses	Electric 2-wire Polywire or Polytape	NO	NO	NO	NO	Exceeds	Exceeds	Meets	28, 48	60	na	na
Horses	Woven wire w/1 wire HT on top	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	48 + HT at 54	16.5	na	na
Horses	Mesh "No climb" 2"x4" spacing	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	48 + HT at 54"	16.5	na	na
Horses	Wood or Composition boards (6" wide)	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	18 min. 12 max. between boards	8	na	na
Hogs	Electric 2-wire high tensile smooth	NO	Meets	Meets	Meets	Meets	Meets	Meets	8, 16	20	30	15
Hogs	Electric 3-wire high tensile smooth	NO	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	8, 16, 24	20	30	15
Hogs	Woven wire 32" w/ 1 wire barb or HT	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	32 + barb or HT at 38	16.5	na	na
Hogs	Woven wire 32" w/ 1 HT electric inside	Meets	Meets	Meets	Meets	Meets	Meets	Meets	32 + 1 electric wire 8" off ground, 8" inside of fence.	16.5	na	na
Deer	Woven wire 96" tall	Meets	Meets	Meets	Meets	Meets	Meets	Meets	96"	12	na	na
Deer	Electric 7-wire High tensile smooth wire slanted	Meets	Meets	Meets	Meets	Meets	Meets	Meets	see diagram of slant measurements	30	100	25
Deer	Electric 9-wire High tensile smooth wire	Meets	Meets	Meets	Meets	Meets	Meets	Meets	8, to 72 evenly spaced	30	100	25
Deer	Electric 12-wire High tensile smooth wire	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	6, to 72 evenly spaced	30	100	25
Deer	Electric 15-wire High tensile smooth wire	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	2, to 96 evenly spaced	30	100	25
Buffalo	Electric 4-wire high tensile smooth	NO	Meets	Meets	Meets	Meets	Meets	Meets	16 to 42 evenly spaced	30	100	25
Buffalo	Electric 5-wire high tensile smooth	NO	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	16 to 48 evenly spaced	30	100	25
Buffalo	Electric 6-wire high tensile smooth	Meets	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	12 to 52 evenly spaced	30	100	25
Chickens/turkey	Woven wire 2"x4" 1 wire HT or barb above	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	72	16.5	na	na
Emu and ostrich	Woven wire 6"x6" 1 wire HT or barb above	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	72	16.5	na	na
Chickens/turkey	HT Woven wire 2"x4" 1 wire HT or barb above	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	72	25	na	na
Emu and ostrich	HT Woven wire 6"x6" 1 wire HT or barb above	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	Exceeds	72	25	na	na
People	Chain link	Meets	Preferred option**						60 with 1 barb above	8	na	na
People	Electric 5-wire	Meets							12 to 60 evenly spaced	50	100	25
People	Woven wire 47 inch plus 1 or 2 barbed wires or HT electric	Meets							47 min. HT or barb at 6 spacing to 48. HT may be electrified	16.5	na	na

Alternative fencing and bracing systems may be approved by the Area Resource Conservationist. (Special or non-conventional fencing systems may be considered for approval if determined to be a quality fencing material that will meet the expected lifespan of the practice and meet the intended purpose of the fence for the particular type of livestock being controlled.

\* In situations where the grazing perimeter boundary fence is along a stream (an area sometimes flooded during storm events) electric 2-wire HT smooth meets the minimum standard criteria for boundary fence.

\*\* When controlling access of people for safety concerns (i.e. around a waste pit), a chain link fence is preferred.