

Minnesota Ecological Science Job Approval Authority Fact Sheet

Fence (382)

DEFINITION:

A constructed barrier to animals or people.



ESJAA INFORMATION:

Job Classes	Control Factors	
	Fence Types	Livestock Species
Job Class I	Conventional Fence Types, < 15% Slopes, No Special Landscape/Soil/Wildlife Considerations	Single species Beef or Dairy
Job Class II	Conventional, Electrified or Virtual Fence Types, < 15% Slopes, <=1 Special Landscape/Soil/Wildlife Consideration	Single species Sheep
Job Class III	All Fence Types, < 30% Slopes, ≤ 2 Special Landscape/Soil/Wildlife Considerations/Safety Fence	Multi species Horse, Goats, Swine
Job Class IV	All Fence Types, < 45% Slopes, ≤ 3 Special Landscape/Soil/Wildlife Considerations	All
Job Class V	All Fence Types, All Slopes, All Special Considerations	All

CONTROL FACTORS:

Based on Fence Types, Percent Slope and Special Landscape/Soil Conditions, Wildlife Considerations for the practice identified above. For building a safety fence for Agricultural Waste or Wastewater Confinement areas, a Job Class III is required.

Conventional fence types are: Barbed wire, and woven wire.

Electrified fence types are: High tensile electric fence and temporary electric fence here (polywire).

All Fence Types are: Conventional fence types, electrified fence types, safety fence, wildlife friendly fence, and virtual fence.

Special Landscapes are: Sensitive landscapes such as: riparian areas, wetlands/wet areas and timber/forest.

Soil Conditions are: Sandy/gravelly/low-strength soils and soils with restrictive root layers, such as perched water tables and shallow to bedrock. Poorly to very poorly drained soils. All sites identified on the "Fencing, Post Depth 36 inches or less" or "Fencing, Post Depth 24 Inches or Less" suitability reports found within the Web Soil Survey. The report can be found in the Soil Data Explorer> Suitabilities and Limitations> Land Management folder.

Wildlife Considerations are: Fencing options when wildlife or Threatened and Endangered (T&E) species are resource concerns, and they can only navigate through specific fences.

Other Special Considerations: Areas where heavy snow cover/drifted snow may impact fences, fencing for multi-species grazing, cellular signal reception when planning virtual fence.

KNOWLEDGE, SKILLS, AND ABILITIES (KSA):

1. Knowledge of conservation practice standard 382.
2. Knowledge of livestock management for grazing lands of the locale.
3. Knowledge of wildlife relationships with fence in the locale.
4. Knowledge of grazing management issues in the locale.
5. Knowledge of MN safety fence requirements.

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ADDITIONAL KSAs BASED ON PRACTICE PHASES:

Inventory and Evaluation (I&E) Planning

- Understand the conservation practice standard, specifications, implementation requirements, and statement of work.
- Ability to use soils information for placement of appropriate fence type and location considerations.
- Ability to measure slopes where the fence is planned to be installed.
- Ability to recognize sensitive areas and other landscape features that may impact fence construction and maintenance.
- Ability to recognize wildlife impacts in the area.
- Knowledge of virtual fence technologies and how it works.
- Knowledge of the proper use, installation, and maintenance of virtual fence technology.
- Knowledge of livestock types and classes that are compatible with virtual fence.
- Ability to discuss pros and cons of virtual fencing and compare various fence types (including costs) with producers to assist them with deciding what type of fence best fits their operation.

Design and development of the conservation practice requirements.

- Knowledge of livestock types and appropriate fence for the situation (perimeter, interior, access control).
- Knowledge of fence construction techniques.
- Ability to develop a fence plan, complete the implementation requirements, and communicate the requirements to customers and fence installers.
- Knowledge of operation and maintenance for fence.
- Knowledge of fence requirements for safety fence (Job Class III and higher).
- Ability to plan virtual fence systems to address resource concerns (Job Class II or higher).
- Ability to plan other facilitating practices that may be needed to properly support grazing management with virtual fencing, such as other fence types and watering systems.
- Ability to assist the producer with planning the correct virtual fence system for their operation.

Installation oversight and certification

- Knowledge of approved materials for fence installation.
- Ability to complete pre-construction meeting and determine materials are acceptable.
- Ability to determine if construction of fence meets the conservation practice standard, material specifications, and standard drawings.
- Ability to determine that the fence is built to the dimensions specified in the standard drawings.

COMMON ASSOCIATED PRACTICES:

Fence (382) is commonly applied with practices such as Prescribed Grazing (528), Stream Crossing (578), Waste Storage Facility (313), Heavy Use Protection (561), and Access Control (472).

ADDITIONAL MATERIALS:

- 382 Fence Material Specifications and Standard Drawings are found within section IV of the Field Office Technical Guide (FOTG)
- Safety Fence standard drawing designs can be found in section I of the eFOTG.
- Web Soil Survey for information on site specifics of soil strength. Look under the Soil Data Explorer tab, then Land Management.

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