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NRCS CONSERVATION PRACTICE STANDARDS

Building Blocks for Conservation Plans

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Resource Concern

Planning & Implementation

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46 Resource Concerns, including:

- Sheet and rill erosion
- Soil Compaction
- Organic matter depletion
- Inefficient irrigation water use
- Nutrients transported to surface water
- Pesticides transported to groundwater
- Petroleum, heavy metals, and other pollutants transported to surface water
- Objectionable odors
- Plant productivity and health
- Plant pest pressure
- Terrestrial habitat for wildlife and invertebrates
- Aquatic habitat for fish and other organisms
- Feed and forage imbalance
- Inadequate livestock water quantity, quality and distribution
- Energy efficiency of equipment and facilities


328 – Conservation Crop Rotation
329 – Residue Management – No Till
590 – Nutrient Management
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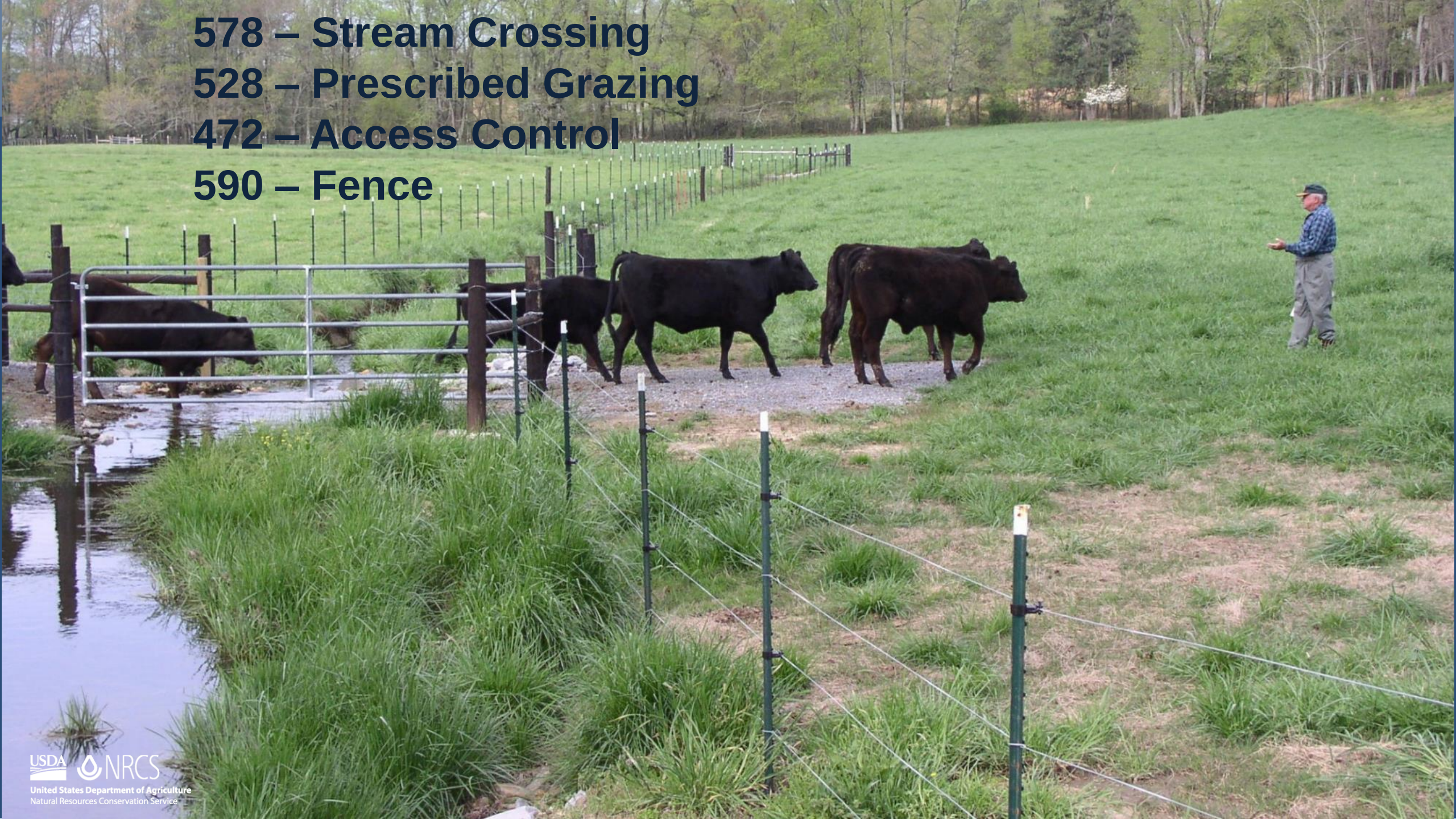
Natural Resources Conservation Service



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Interim Practices

- Sometimes there is a Resource Concern, but we don't have a conservation practice that addresses the problem
- States can request Interim Conservation Practices
  - Agree to evaluate the practice each year and submit yearly reports to National
  - At the end of 3 years, decide - recommend National adoption, drop the practice, or incorporate the technology into an existing national practice

Interim
CONSERVATION PRACTICE STANDARD

RAISED BED (CPS: 812)

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Purpose:

- Reduce concentration of salts or other chemicals in the soil that limit the desired use
- Increase plant health and productivity
- Reduce field operation-induced particulate emissions within the raised bed footprint

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RAISED BED (CPS: 812)

- This practice applies to land where the desired use is for crop production and where the existing growing media is unsuitable for production.

- Must receive at least 6 hours of direct sunlight per day.
- Framed beds should be constructed using untreated, rot resistant lumber such as cedar, white oak, locust, etc.
- Not Allowed: Tires, chemically treated lumber, landscape timbers, railroad ties, and methyl bromide treated pallet are not suitable framing material.

RAISED BED Evaluation

- Did implementation of raised beds improve the identified resource concern?
- Was a barrier needed (such as 4 oz. heavy duty non-woven landscape fabric); was it effective?
- Other feedback from participants

Interim
CONSERVATION PRACTICE STANDARD

LOW TUNNEL SYSTEMS (CPS: 821)

Need:

- Extending growing and marketing season,
- Protecting crops from pest,
- Protecting crops from extreme weather events,
- Maximize profits with high value locally produced fruits and vegetables.

Opportunity:

- To use low tunnels.

PRACTICE DESCRIPTION

- An enclosed *polyethylene*, *polycarbonate*, *plastic*, or f*abric* covered structure that is used to cover and protect crops from:
  - Sun,
  - Wind,
  - Excessive rainfall, or cold,
  - Extend the growing season,
  - Reduce pest pressure.

PURPOSE

- Improve plant productivity and health
- Reduce plant pest pressure

	Growing Season				Purpose	
Crop	Spring	Summer	Fall	Winter	Plant Productivity and Health	Reducing Pest Pressures
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

Benefits

- **Season extension.**
- **Crop protection** from damage.
- **Protect crops** from insects and herbivore pests.
- **Reduction of disease** issues.
- **Increased yield and crop quality.**

Low tunnels over high tunnels:

- **Ease of assembly and disassembly.**
- **Low cost.**
- **Improved soil management.**

CONDITIONS WHERE PRACTICE APPLIES

- Where sun or wind intensity, frost, or insect pests may damage crops,
- Where an extension of the growing season is needed due to climatic conditions.
- May be applied over crops grown inside of a high tunnel system.
- Better suited for shorter crops. Low tunnels are less than 4 feet high at the peak.
- When a tunnel height greater than 4 feet is needed, better to use the High Tunnel System (CPS 325).

Source: Oregon State University

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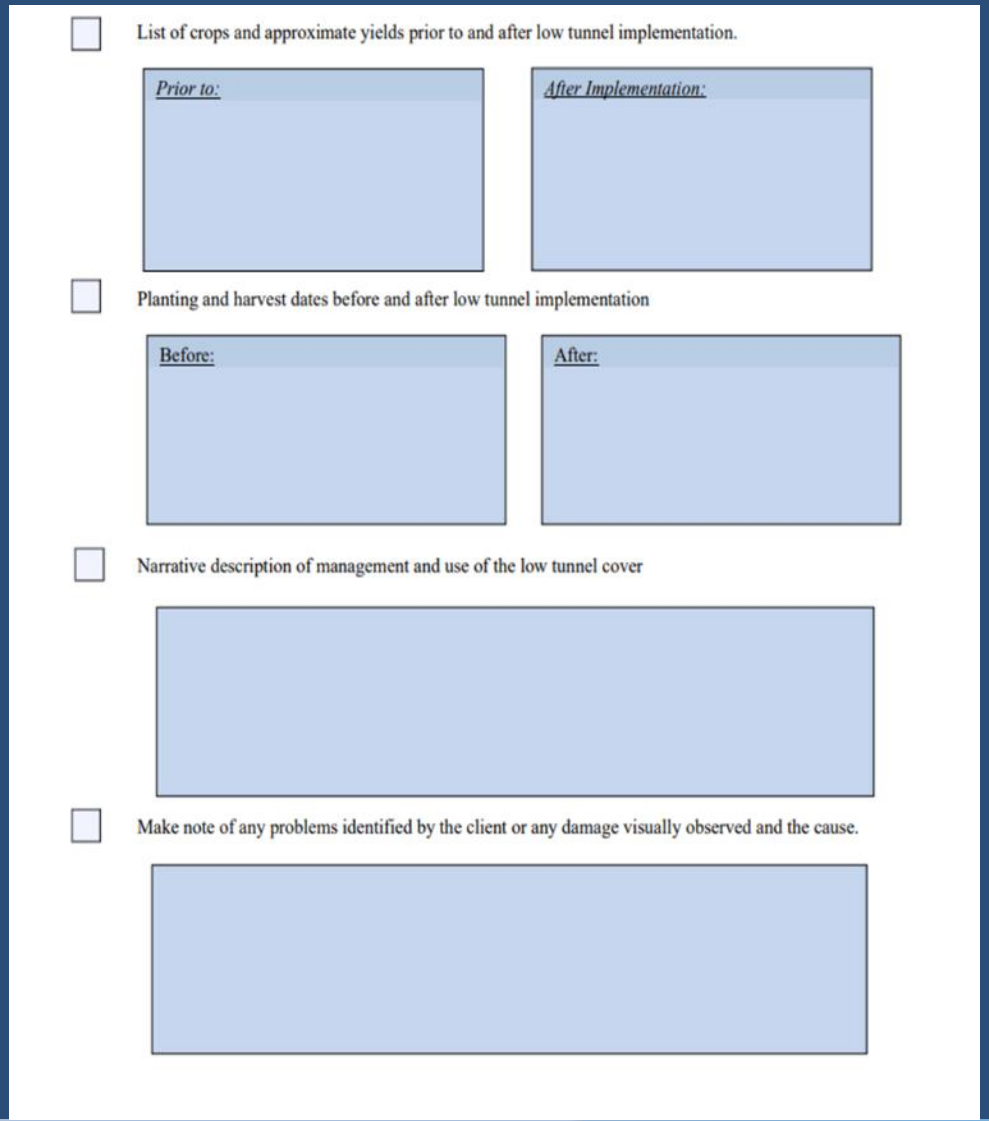
PRACTICE SPECIFICATIONS

- Floating row covers, protect against frost, heavy freezes and pests.
- Hoop-supported covers with one or more planting rows or cover individual plants.
- Shade cloth is made from knitted or woven material, such as polyethylene or polyester, and is used to protect plants from sunburn and to keep them cooler.
- Insect barriers are made of porous fabric with a mesh sufficiently small to exclude certain insects, preventing them from damaging
- A frost blanket is a sheet of fabric, plastic, or other material used to cover plants in cold.

NOTE: Only systems with hoops are currently eligible for NRCS financial assistance

Record of Specifications and Evaluation Process

- The purpose.
- Document the planned growing season and crops to be covered.
- Identify the type and quality of cover required.
- Layout and location(s) of the low tunnel system.
- Any required site preparations.
- Planned type and size of the system (e.g., length and width of covering, number of individual coverings, etc.).
- Actions and management needed to operate the cover to achieve the desired objective.
- Identify required supporting practices.
- Maps indicating fields and acreages where low tunnels are used
- Dates of implementation with photo documentation.
- Description and dates of any pest outbreaks within the low tunnel.



☐ List of crops and approximate yields prior to and after low tunnel implementation.

Prior to: | *After Implementation:*

☐ Planting and harvest dates before and after low tunnel implementation

Before: | After:

☐ Narrative description of management and use of the low tunnel cover

☐ Make note of any problems identified by the client or any damage visually observed and the cause.

CRITERIA

- Some General Criteria Applicable to All Purposes:

- Plan supportive conservation practices to address all resource concerns associated with the installation and use of the low tunnel system such as erosion.
- Low tunnel systems may be applied over crops grown inside of a high tunnel system. May be used prior to planting or over already established crops and raised beds.
- Supported systems must have frames or hoops constructed of metal, 9 to 10-gauge wire, electrical conduit, or durable plastic such as polyvinylchloride (PVC) tubing; and be less than 4 feet in height at the peak.
- For polyethylene covers, use a minimum 4 mil greenhouse grade material.

Additional Criteria to Extend the Growing Season
Additional Criteria to Protect from Sun
Additional Criteria to Reduce Plant Pest Pressure

THANK YOU!

Proposed Interim CONSERVATION PRACTICE STANDARD

Annual Forages for Grazing Systems (CPS: ???)

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Annual Forages for Grazing Systems

- Focus has been on perennial forage types (512) Pasture & Hay Planting

Purpose:

- Offer another alternative for feed and forage balance
- Extend Grazing Season
- Improve soil microbial life and soil aggregate stability

Grazing Land Sub-committee

- Cooperative Extension
- Cattlemen's Association
- Hassey Brooks, AL Ag & Industries
- Soil & Water Conservation Committee
- Thomas Kirkland, Farmer
- Shnequie Bowman-Green, Farm Service Agency


Thank you for your Attention
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AN EQUAL OPPORTUNITY EMPLOYER, PROVIDER, AND LENDER