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# NRCS Conservation Planning Resource Concerns Addressed by Grazing Land Practices

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# Resource Concerns on Cropland



## Soil Erosion

**Sheet and Rill Erosion –  
Concentrated Flow  
(Gully)**

Tools:

Revised Universal Soil Loss  
Equation

Water Erosion Prediction  
Equation

Gully Erosion Estimator

Client Input and Planner  
Inventory and Evaluation

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# Resource Concerns on Cropland



Severely Eroded Stream Bank

## Soil Erosion

**Excessive Bank Erosion  
from Streams, Shorelines,  
or Water Conveyances**

Tools to Measure:

Client input and planner  
inventory and evaluation

Field measurement, direct  
volume measurement.

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# Resource Concerns on Cropland



## Soil Quality Degradation

### Compaction

Tools to Measure:

Client input and planner inventory and evaluation

Field measurement, direct volume measurement.



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# Resource Concerns on Cropland



## Soil Quality Degradation

### Organic Matter Depletion

Tools to Measure:

Organic Matter Percentage  
< 1% for sands or < 3 % for  
fine textured soils.

RUSLE – Soil Conditioning  
Index (SCI) < 1

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# Resource Concerns on Cropland



## Water Quality Degradation

### Excess Nutrients in Surface and Ground Waters

Tools to Measure:

Winter manure spreading risks moderate to high.

Phosphorous index rating > 2 for outstanding water body or > 6.

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# Resource Concerns on Cropland



## Water Quality Degradation

### Excess Sediment in Surface Waters

Tools to Measure:

Sediment delivery of 0.2 tons/ac. per year at the downslope field edge.

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# Resource Concerns on Pasture



## Soil Quality Degradation

### Organic Matter Depletion

Tools to Measure:

Pasture Condition Score –  
Plant Residue <4, Plant  
Cover <4.

Client Input and Planner  
I&E.

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# Resource Concerns on Pasture



## Water Quality Degradation

### Excess Nutrients in Surface Water

Tools to Measure:

Pasture Condition Score –  
Plant Residue <4, Plant  
Cover <4.

Client Input and Planner  
I&E.

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# Resource Concerns on Pasture



## Degraded Plant Condition

### Undesirable Plant Productivity and Health

Tools to Measure:

Pasture Condition Score –  
Desirable Plants <4 &  
Plant Cover <4 &  
Plant Vigor <4

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# Resource Concerns on Pasture



## Degraded Plant Condition

### Excessive Plant Pest Pressure

Tools to Measure:

Pasture Condition Score-  
Site Adaptation Element < 4

Noxious and Invasive  
Plants Effect Pasture  
Production and Quality

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# Resource Concerns on Pasture



## Livestock Production Limitation

### Inadequate Feed and Forage

Tools to Measure:

Forage Supply is not  
Balanced with Animal  
Demand

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# Resource Concerns on Pasture



## Livestock Production Limitation

### Inadequate Livestock Water

Tools to Measure:

Pasture Condition Score –  
Overall Score < 40  
Uniformity of Use < 4  
And Livestock  
Concentration Area < 4

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# EQIP Resource Concerns by Practice – Prescribed Grazing



- Soil Erosion – Sheet and Rill Erosion
- Soil Erosion – Wind Erosion
- Soil Quality Degradation – Organic Matter Depletion
- Soil Quality Degradation - Compaction
- Degraded Plant Condition – Undesirable Plant Productivity and Health
- Degraded Plant Condition – Inadequate Structure and Composition
- Degraded Plant Condition – Excessive Plant Pressure
- Livestock Production Limitation – Inadequate Feed and Forage





# EQIP Resource Concerns by Practice – Forage and Biomass Planting

- Soil Erosion – Sheet and Rill Erosion
- Soil Erosion – Wind Erosion
- Soil Quality Degradation – Organic Matter Depletion
- Soil Quality Degradation - Compaction
- Degraded Plant Condition – Undesirable Plant Productivity and Health
- Degraded Plant Condition – Inadequate Structure and Composition
- Livestock Production Limitation – Inadequate Feed and Forage



# EQIP Resource Concerns by Practice – Fence



- Soil Erosion – Sheet and Rill Erosion
- Soil Erosion – Ephemeral Gully Erosion
- Soil Erosion – Classic Gully Erosion
- Soil Erosion – Streambank, Shoreline, Water Conveyance Channels
- Soil Quality Degradation - Compaction
- Water Quality Degradation – Nutrients in Surface Water
- Water Quality Degradation – Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Surface Water
- Water Quality Degradation – Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Groundwater
- Water Quality Degradation – Excessive Sediment in Surface Water
- Degraded Plant Condition – Undesirable Plant Productivity and Health
- Degraded Plant Condition – Inadequate Structure and Composition
- Livestock Production Limitation – Inadequate Feed and Forage
- Livestock Production Limitation – Inadequate Water





# EQIP Resource Concerns by Practice – Livestock Pipeline & Water Facilities



- Soil Quality Degradation - Compaction
- Water Quality Degradation – Nutrients in Surface Water
- Water Quality Degradation – Excess Pathogens and Chemicals from Manure, Bio-solids or Compost Applications in Surface Water
- Degraded Plant Condition – Undesirable Plant Productivity and Health
- Livestock Production Limitation - Inadequate Feed and Forage
- Livestock Production Limitation – Inadequate Water



# EQIP Resource Concerns by Practice – Trails and Walkways



- Soil Erosion – Sheet and Rill Erosion
- Soil Erosion – Ephemeral Gully Erosion
- Soil Quality Degradation - Compaction
- Water Quality Degradation – Excessive Sediment in Surface Water
- Degraded Plant Condition – Undesirable Plant Productivity and Health
- Livestock Production Limitation – Inadequate Feed and Forage





# Grazing Management Conservation Activity Plan (CAP)

**Definition - A site specific conservation plan developed for a client which addresses one or more resource concerns on land where grazing related activities or practices will be planned and applied.**

**Who - Only a NRCS “TechReg” Certified Technical Service Provider can write a Grazing Management CAP.**

## **Requirements –**

- **Must meet NRCS planning criteria for identified resource concerns**
- **Meet the client's objectives**
- **Comply with federal, state, tribal, and local laws, regulations, and permits**



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# Grazing Management Conservation Activity Plan (CAP)

## Criteria – Located on TechReg web site at:

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/tsp/>

### Background and Existing Conditions

- Landowner name, address, operation, and size
- Location and plan map of parcel
- Identify clients objectives
- Inventory of soils, including forage suitability groups
- Inventory of existing plants
- Inventory of animal types (species, class, and breed) and number
- Acres available for grazing
- Documentation of existing fences, watering system, and other practices
- Current pasture condition score
- Current animal demand and forage balance
- All resource concerns (not meeting planning criteria).



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# Grazing Management Conservation Activity Plan (CAP)

## Criteria – Located on TechReg web site at:

<https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/technical/tsp/>

### Desired Future Conditions

- Record keeping and monitoring plan
- Proper plant species composition
- Operation and maintenance for practices – post grazing heights, and rest periods
- Animal demand / forage availability is balanced
- Adequate fencing
- Adequate Water Source

### Documentation

- Conservation plan map – planned field boundaries, paddocks, watering system, fence, and lanes
- Soils Map – forage suitability groups
- Resource concerns addressed by the conservation plan (show on CPA-52 form)
- Planned animal demand/ forage balance sheet
- Site specific specification, e.g. stocking method, occupancy period, grazing heights (narrative or job sheet)
- Contingency plan for winter, drought, and wet conditions. (narrative or job sheet)
- Schedule of practices, amounts, and planned implementation dates (prescribed grazing, fence, forage and biomass planting, pipeline, etc.)
- Site specific designs for practices such as forage and biomass planting, forage harvest management, brush management, and fence.



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