



Ranch Sustainability Assessment for Business Planning

*“Incorporation of Business Planning and
Assessment into NRCS Conservation Programs”*

***Society for Range Management Annual
Meeting – Billings, MT***

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Objectives

- Build on NRCS support
- Basic overview of NRCS programs
- Review of statute requirements
- What are:
 - Conservation practices?
 - Resource concerns?
 - Payment schedules?
- Putting it all together!
- Questions?



What do you think?

- NRCS Programs do not provide financial payments that support conservation activities on ranch operations
- NRCS Programs can & do provide financial payments that support conservation activities on ranch operation
- Something “in between”?



SAF Program Assistance

Key to your answer to this question may be a good understanding of SAF program statute and policy.

Typical programs:

EQIP

CSP

EWP

~~WEP~~

WHIP

WRP

MRBI

CIG

~~WA~~

FRPP

CCPI

GRP



Environmental Quality Incentives Program (EQIP) Program Statutory Purpose

“Provide flexible assistance to producers to install and maintain conservation practices that sustain food and fiber production while enhancing soil, water, and related natural resources, including grazing land, forestland, wetland, wildlife, conserving energy; and



Environmental Quality Incentives Program (EQIP)

..assisting producers to make beneficial, cost effective changes to production systems (including conservation practices related to organic production), grazing management, fuels management, forest management, nutrient management associated with livestock, pest or irrigation management, or other practices on agricultural and forested land;"



Environmental Quality Incentives Program (EQIP)

What does this purpose & statute mean?

NRCS is authorized to:

- Provide technical assistance
- Provide financial assistance to:
 - Implement conservation practices which address an identified natural resource concern.
 - Develop conservation plans.



Environmental Quality Incentives Program (EQIP)

- ❑ *Payment* means financial assistance provided to the participant based on the estimated costs incurred in performing or implementing conservation practices, including costs for: planning, design, materials, equipment, installation, labor, maintenance, management, or training, as well as the estimated income foregone by the producer for designated conservation practices.




Environmental Quality Incentives Program (EQIP)

❑ What is a conservation practice?

<http://www.nrcs.usda.gov/technical/efotg>

United States Department of Agriculture


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Technical Resources

- ▶ Agronomy & Erosion
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- ▶ Nutrient & Pest Management
- ▶ Range and Pasture
- ▶ Pollinators
- ▶ Social Sciences
- ▶ Soils
- ▶ Water Resources

Welcome to eFOTG

[What is eFOTG?](#)

Technical guides are the primary scientific references for NRCS. They contain technical information about the conservation of soil, water, air, and related p resources.

Technical guides used in each field office are localized so that they apply specifically to the geographic area for which they are prepared. These documents Office Technical Guides (FOTGs).

Appropriate parts of the Field Office Technical Guides are automated as data bases, computer programs, and other electronic-based materials such as thos based pages.

[What is in eFOTG?](#)

Section I – General References

 In this section you will find general state maps, descriptions of Major Land Resource Areas, watershed information, and links to NRCS reference manuals a contains links to researchers, universities, and agencies we work. Section I also contains conservation practice costs, agricultural laws and regulations, cul information about protected plant and animal species.

Section II – Soil and Site Information

 In this section you will find detailed information about soil, water, air, plant, and animal resources. NRCS Soil Surveys, Hydric Soils Interpretations, Ecology Forage Suitability Groups, Cropland Production Tables, Wildlife Habitat Evaluation Guides, Water Quality Guides, and other related information can be found available.

Section III – Conservation Management Systems

 In this section you will find information on NRCS Quality Criteria, which establish standards for resource conditions that help provide sustained use.

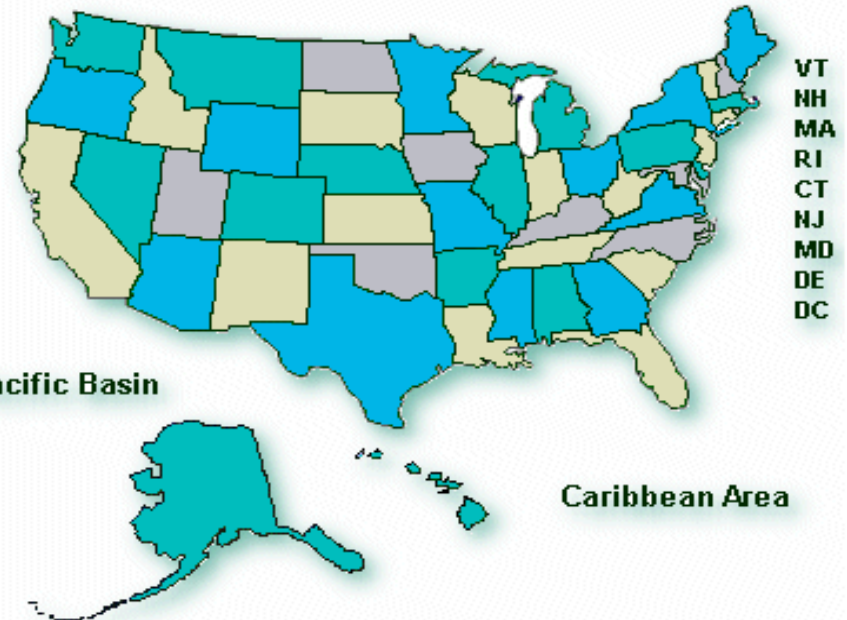
Section IV – Practice Standards and Specifications

 In this section you will find the NRCS Conservation Practices. Practice Standards define the practice and where it applies. Practice specifications are detaile installing the practice in the state.

Section V – Conservation Effects

Access eFOTG

eFOTG State Locator — Click on





Environmental Quality Incentives Program (EQIP)

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

PRESCRIBED GRAZING

(Ac.)

CODE 528

DEFINITION

Managing the harvest of vegetation with grazing and/or browsing animals.

the physiological needs of forage plants and the nutritional needs of the animals.

Adequate quantity and quality drinking water will be supplied at all times during period of occupancy.

PURPOSE

This practice may be applied as a part of conservation management system to achieve one or more of the following:

- Improve or maintain desired species composition and vigor of plant communities.
- Improve or maintain quantity and quality of forage for grazing and browsing animals' health and productivity.
- Improve or maintain surface and/or subsurface water quality and quantity.
- Improve or maintain riparian and watershed function.
- Reduce accelerated soil erosion, and maintain or improve soil condition.
- Improve or maintain the quantity and quality of food and/or cover available for wildlife.
- Manage fine fuel loads to achieve desired conditions.

Adjust intensity, frequency, timing and duration of grazing and/or browsing to meet the desired objectives for the plant communities and the associated resources, including the grazing and/or browsing animal.

Manage kind of animal, animal number, grazing distribution, length of grazing and/or browsing periods and timing of use to provide grazed plants sufficient recovery time to meet planned objectives. The recovery period of non-grazing can be provided for the entire year or during the growing season of key plants. Deferment (non-grazing period less than one year) and/or rest (non-grazing period equal or greater than one year) will be planned for critical periods of plant needs.

Provide deferment or rest from grazing or browsing to ensure the success of prescribed fire, brush management, seeding or other conservation practices that cause stress or damage to key plants.

Manage grazing and/or browsing animals to maintain adequate vegetative cover on

Practice Definition

Practice Purpose

Practice design criteria states this practice involves managing grazing intensity, frequency, timing and duration in order to address the purposes related to the resource concerns.



Environmental Quality Incentives Program (EQIP)

Resource Concern means a specific natural resource problem that represents a significant concern in a State or region, and is likely to be addressed successfully through the implementation of the conservation activities by producers.

**□ Soil, Water, Animals, Plants, Air & Energy
(SWAPA & Energy)**



Environmental Quality Incentives Program (EQIP)

☐ Soil Erosion:

- Sheet and Rill Erosion
- Irrigation-induced Erosion
- Roads, Road Sides and Construction
- Streambank
- Classic Gully Erosion
- Wind Erosion



Environmental Quality Incentives Program (EQIP)

EQIP statute provides NRCS authority to provide payments and EQIP rule defines payment as:

"Payment means financial assistance provided to the participant based on the estimated costs incurred in performing or implementing conservation practices, including costs for: planning, design, materials, equipment, installation, labor, maintenance, management, or training, as well as the estimated income foregone by the producer for designated conservation practices."

These estimated costs are documented in "Payment Schedules".



Practice Code	Cost Share Program	Practice/Activity Name	Practice/Activity Type	Unit Type	Payment Rate
600	EQIP	Terrace (Ft.)	Level Terrace	Foot	\$0.92
600	WHIP	Terrace (Ft.)	Level Terrace	Foot	\$0.00

← **Payment Schedule (Blue Box)**

“Payment Rate” entered into FA Programs contracting software & posted to web

Cost Category	Cost/Unit	EQIP		WHIP	
		Program Payment Percentage	Program Payment Percentage	EQIP Payment Rate	WHIP Payment Rate
Materials	\$0.00	50%	0%	\$0.00	\$0.00
Equipment/Installation	\$1.75	50%	0%	\$0.88	\$0.00
Labor	\$0.00	50%	0%	\$0.00	\$0.00
Mobilization	\$0.09	50%	0%	\$0.04	\$0.00
Operation & Maintenance (Annual)	\$0.04	0%	0%	\$0.00	\$0.00
Acquisition of Technical Knowledge	\$0.00	0%	0%	\$0.00	\$0.00
Forgone Income (Annual)	\$0.00	0%	0%	\$0.00	\$0.00
Risk (Annual)	\$0.00	0%	0%	\$0.00	\$0.00
Administration & Permit Costs	\$0.00	0%	0%	\$0.00	\$0.00
Total:	\$1.87			\$0.92	\$0.00

← **Payment Rate (Green Box)**

FA Program Manager applies a “Payment Percent” to the cost data to develop the “Payment Rate” (FA Programs & Contracting World)

Typical Implementation Scenario

320 acre field, wheat/fallow rotation, relatively steep slopes with sheet & rill and concentrated flow erosion. Level terrace.

An earth embankment, a channel, or a combination ridge and channel constructed across the slope.

Geographic Area: Statewide

Unit for Cost Estimate: Foot
Practice Life (Years): 10
Discount Rate (%/Year): 5%

	Cost/Unit
Materials	\$0.00
None	
Equipment Installation	\$1.75
Excavation/Fill (bulk earth moving with road grader)	
Units Moved per hour: 20	
Units: CuYd	
Equipment Cost w/Operator (\$/Hr): \$70	
Total Excavation Cost/Unit: \$3.50	
Units Moved per LnFt Terrace: 0.5	
Total Excavation/Fill Cost: \$1.75	
Data Source: NRCS Engineering Technician & Local Contractor Data, Redmond, Oregon 3/2007	
Labor	\$0.00
Excavation/Fill (bulk earth moving with road grader) (Included in Equipment/Installation Costs)	
Mobilization	\$0.09
5% of Materials, equipment and labor costs.	
Operation & Maintenance (Annual)	\$0.04
2% of Installation Costs	
Acquisition of Technical Knowledge	\$0.00
None	
Forgone Income (Annual)	\$0.00
Minimal to no land taken out of production.	
Risk (Annual)	\$0.00
None	
Administration & Permit Costs	\$0.00
None	
Total Cost Estimate:	\$1.87

← **Cost Data (Grey Box)** Itemized list of all costs to the land user to implement the practice scenario – “Program Neutral” (Technology Specialist World)

Payment Schedule Worksheet



Typical Implementation Scenario

320 acre field, wheat/fallow rotation, relatively steep slopes with sheet & rill and concentrated flow erosion.
Level terrace. ←

An earth embankment, a channel, or a combination ridge and channel constructed across the slope.

Geographic Area: Statewide

Unit for Cost Estimate: Foot

Practice Life (Years): 10

Discount Rate (%/Year): 5%



<p>Materials</p> <p>None</p> <p>Equipment/Installation</p> <p>Excavation/Fill (bulk earth moving with road grader)</p> <p>Units Moved per hour: 20</p> <p>Units CuYd</p> <p>Equipment Cost w/Operator (\$/Hr) \$70</p> <p>Total Excavation Cost/Unit: \$3.50</p> <p>Units Moved per LnFt Terrace: 0.5</p> <p>Total Excavation/Fill Cost: \$1.75</p> <p>Data Source: NRCS Engineering Technician & Local Contractor Data, Redmond, Oregon 3/2007</p> <p>Labor</p> <p>Excavation/Fill (bulk earth moving with road grader)</p> <p>(Included in Equipment/Installation Costs)</p> <p>Mobilization</p> <p>5% of Materials, equipment and labor costs.</p> <p>Operation & Maintenance (Annual)</p> <p>2% of Installation Costs</p> <p>Acquisition of Technical Knowledge</p> <p>None</p> <p>Forgone Income (Annual)</p> <p>Minimal to no land taken out of production.</p> <p>Risk (Annual)</p> <p>None</p> <p>Administration & Permit Costs</p> <p>None</p> <p>Total Cost Estimate:</p>	<p>\$0.00</p> <p>\$1.75</p> <p>\$0.00</p> <p>\$0.09</p> <p>\$0.04</p> <p>\$0.00</p> <p>\$0.00</p> <p>\$0.00</p> <p>\$0.00</p> <p>\$0.00</p> <p>\$1.87</p>	<p>1. Materials</p> <p>2. Equipment</p> <p>3. Labor</p> <p>4. Mobilization</p> <p>5. Operation/Maintenance</p> <p>6. Acquisition of Technical Knowledge</p> <p>7. Foregone Income</p> <p>8. Risk</p> <p>9. Administrative-Permit Costs</p>
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Payment Schedule Cost Categories

1. Materials: Inputs used to make, develop, or implement a practice or activity.

Examples:

Filter Strip (393):

Native perennial grass/clover seed mix, 18 Lbs/Acre, \$11.60/Lb
 Fertilizer (placed with seed) 16-16-16-0, 100lbs/Ac, \$30.00/Acre

Spring Development (574):

<u>Materials</u>	<u>Units</u>	<u>Unit</u>	<u>\$/Unit</u>	<u>Total</u>
Excavation/Fill, On-Site	5	CuYd	\$18.00	\$90.00
Geotextile Fabric	200	SqFt	\$1.10	\$220.00
Collection Pipe	20	Foot	\$5.00	\$100.00
Gravel, Sand	5	CuYd	\$40.00	\$200.00
Rock	2	CuYd	\$40.00	\$80.00
Concrete Work, Reinforced	2	CuYd	\$200.00	\$400.00
Spring Collection Box	1	Each	\$750.00	\$750.00
				<u>\$1,840.00</u>



Payment Schedule Cost Categories

2. Equipment: Tools, machinery or similar items need to implement a practice.

Examples:

Pond (378): Excavation/fill, bulk earth moving with dozer

Units Moved per hour:	70
Unit	CuYd
Equipment Cost w/Operator (\$/Hr)	\$90.00
Total Excavation Cost/CuYd:	\$1.29
Units Moved per Pond:	\$1,000.00
Total Excavation/Fill Cost/Pond:	\$1,290.00

Conservation Cover (327):

<u>Seeding Machinery</u>	<u>\$/Pass</u>	<u>Passes</u>	<u>\$/Ac/Yr</u>
Tractor 200 HP	\$7.59	4	\$30.37
Disk	\$2.56	3	\$7.69
Grain Drill	\$4.53	1	\$4.53
			\$42.59



Payment Schedule Cost Categories

3. Labor: The time and wage rate for hiring individuals or self labor needed to implement the practice or activity.

□ Example:

**Fence (382): 65% of installed Materials Cost =
.65 X \$4.61/Foot = \$3.00/Foot**

Labor cost can also include the cost for hiring a consultant to provide a service.



Payment Schedule Cost Categories

4. Mobilization: The cost of moving equipment, materials and labor to and from the installed practice site. It may also include site access costs such as a temporary road, bridge, or trail.

5. Operation & Maintenance: Operation includes the administration, management, and performance of actions needed to keep the completed practice/activity safe and functioning as intended.

- ❑ **Example: Filter Strip (393): Inspect, remove settled sediment, control invasive species and noxious weeds, re-seed to maintain plant cover and density. Estimated to be 5% of installation costs = $.05 \times \$75/\text{Acre} = \$3.75/\text{Ac}/\text{Yr}$**



Payment Schedule Cost Categories

6. Acquisition of Technical Knowledge: Includes typical expenditures by the producer to obtain direct technical assistance for services obtained from sources other than NRCS.

Cost category provides many potential opportunities to support implementation of conservation practices.



Payment Schedule Cost Categories

Examples:

- Feed Management (592): Hire a dairy feed nutritionist, $\$.05/\text{Day} \times 365 \text{ Days} = \$18.25/\text{Year}$
- Prescribed Grazing (528): Grazing management software acquisition and training $\$500/200\text{A} = \$2.50/\text{A}$
- Pest Management (595): Hire certified pesticide advisor, $\$2.00/\text{Acre}$

This cost category has many opportunities!



Payment Schedule Cost Categories

7. Foregone Income: The net income lost by taking land taken out of production or a change in land use. Foregone income may be a one-time cost during the installation year or an annual cost occurring each year after the installation year. However, even though Foregone Income may occur over many years, it is documented as a one-year annual cost in the payment schedule process:

Total Installation Cost =
Implementation Costs + 1 Year "Annual Costs"



Payment Schedule Cost Categories

The last two payment schedule cost categories are:

8. Risk, and

9. Administrative-Permit Costs



Put it all together!

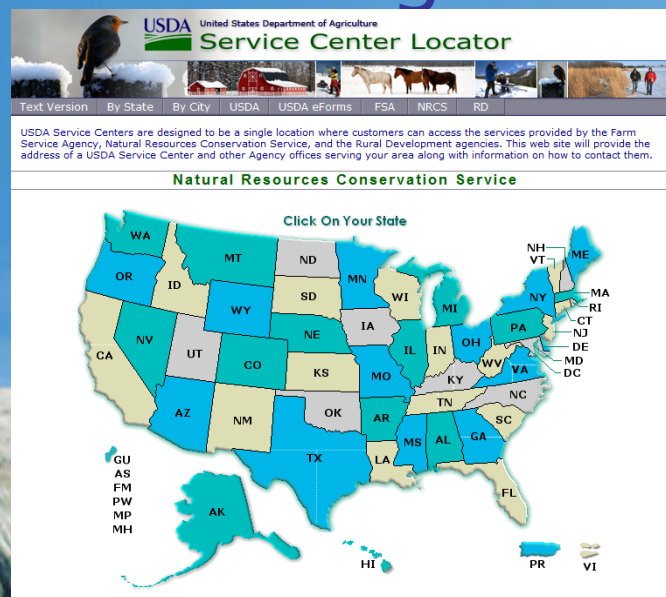
NRCS programs provide technical and financial assistance to help producers implement conservation practices which address natural resource concerns.

1. Identify resource concerns
2. Conservation practices
3. Payment Schedules
4. Program application/implementation
5. You can help!



More Information?

- ❑ NRCS National Website:
www.nrcs.usda.gov/programs/
- ❑ NRCS State & Local Offices:
<http://offices.sc.egov.usda.gov/>





Thank You!

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Questions?