



FIRST NATIONS
DEVELOPMENT INSTITUTE

STEWARDING NATIVE LANDS:

**Conservation Planning
Curriculum for Native
American Ranchers: Workbook**

firstnations.org





INTRODUCTION

A conservation plan supports Native American ranchers in assessing and addressing natural resource concerns related to soil, water, animals, plants, air energy, and human interaction. Implementing a conservation plan prevents environmental harm, enhances natural resources, protects cultural resources, creates or improves wildlife habitat, and strengthens land management systems. What is most important about a conservation plan is that helps individuals make informed decisions.

The Conservation Planning Curriculum for Native American Ranchers Workbook is designed to guide Native American ranchers through the conservation planning process. Tips and guiding questions are provided throughout the workbook to provide space to reflect and advance planning efforts.

Similar to the Conservation Planning Curriculum, the Conservation Planning Workbook is divided into four sections: Planning, Monitoring, Identifying, and Technical Assistance. These sections have related PowerPoints that are needed to move through workbook activities. Additional resources are provided, including conservation plan forms, that will guide ranchers on a successful conservation planning journey.

First Nations Development Institute. (2024)
“Conservation Planning Curriculum for Native American Ranchers.” Longmont, CO:
First Nations Development Institute.

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Learn how to develop an inventory map.....	10
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Resources

- Conservation Planning Process PowerPoint
- Principles of Range Management PowerPoint
- Ecological Site Composition and Biomass PowerPoint
- Developing a Conservation Plan PowerPoint
- First Nations Development Institute Stewarding Native Lands: A Conservation Planning Guide for Native American Ranchers, 2nd edition (pages 4; 16-22)



CONSERVATION PLANNING PROCESS

NRCS CONSERVATION PROCESS

1. Identify Concerns and Opportunities
2. Determine Objectives
3. Inventory Resources
4. Analyze Resource Data
5. Formulate Alternatives
6. Evaluate Alternatives
7. Make Decisions
8. Implement the Plan

See pages 6-7 for more information.

What concern or opportunity do you want to address?

Native American ranchers have been introduced to the nine-step NRCS Conservation Planning Process. Please provide 2-3 concerns or opportunities that you want to work on for your plan.

DEFINITIONS

Ecological site: land with similar and distinctive ecological characteristics such as structure and functional plant communities, wildlife habitat, soil, and climate types.

Biomass: weight of living organisms in a given area or ecosystem

Ground truth: Assesses the accuracy of data by comparing it with physical measurements collected at the ground level

Resource Management System Alternative: Identifies all the goals and resource concerns that need to be addressed in addition to the conservation practices needed to achieve and address them

CONSERVATION PLANNING

A conservation plan identifies the rancher's conservation objectives and assesses and analyzes the natural resources issues on that rancher's land related to soil, water, animals, plants, air, energy, and human interaction. The plan offers alternatives, documents decisions, records progress and tracks successful long-term progress of conservation practices and systems. It helps provide guidance and direction for continued maintenance of conservation systems once established.

The conservation plan includes tools and resources customized specifically for each rancher, like a land use map, soils site information, monitoring with photo points, inventory of resources, economic costs and benefits, schedule of recommended practices, maintenance schedules, and engineering notes - all based on the producer's goals and the resource needs. The plan is written in a clear, step-by-step format that meets each individual rancher's needs. Ranchers choose options that suit their circumstances and time schedule.

The conservation planning process is a collaboration between the conservation planner and the rancher. Conservation planners are there every step of the way to assist ranchers with implementation as needed.

NRCS Uses a Nine-Step Planning Process

1: IDENTIFY PROBLEMS AND OPPORTUNITIES

Planning can start with a problem, an opportunity, shared concerns, or a perceived threat. Initial opportunities and problems are first identified based on readily available information provided by the customer. There may be information available through local Soil and Water Conservation Districts or through a larger-scale conservation plan.

2: DETERMINE OBJECTIVES

During this step, the stakeholders identify their objectives. A conservationist guides the process so that it includes both the stakeholder needs and values, the resource use, and on-site and off-site ecological protection. Objectives may need to be revised and modified as new information is gathered later in the process. Objectives may not be finalized until Step 4 of the planning process.

3: INVENTORY RESOURCES

In this step, appropriate natural resource, economic and social information for the planning area is collected. The information will be used to further define the problems and opportunities. It will also be used throughout the process to define alternatives and to evaluate the plan. It is important that as much information as possible can be collected so that the plan will fit both the needs of the landowner and the natural resources. Inventories can range from a farmstead or small watershed to a complete inventory of resources for a state or the entire nation, such as with the NRCS National Resources Inventory or the Soil Survey Program.

4: ANALYZE RESOURCE DATA

This involves studying the resource data and clearly defining existing conditions for the natural resources, including limitations and potential for the desired use. This step is crucial to developing plans that will work for a landowner and their land. It also provides a clear understanding of the baseline conditions that will help assess how effective a project is after it has been put into place.

5: FORMULATE ALTERNATIVES

The purpose here is to achieve the goals for the land, by solving all identified problems, taking advantage of opportunities, and meeting the needs of the planning project. With NRCS conservation planning, we often can help landowners come up with alternatives based on financial assistance programs that help offset the financial expense of implementing conservation practices.

6: EVALUATE ALTERNATIVES

Next is to evaluate the alternatives to determine their effectiveness in addressing the customer's problems, opportunities and objectives. Attention must be given to those ecological values protected by law or executive order.

7: MAKE DECISIONS

At this point, the landowner chooses which project or plan will work best for their situation. The planner prepares the documentation. In the case of an areawide plan, public review and comment are obtained before a decision is reached.

8: IMPLEMENT THE PLAN

Technical assistance is provided to help with the installation of adequate and properly designed conservation practices. At this point in NRCS conservation planning, our conservation engineers' step in and make designs based on our technical standards. Also, assistance is given in obtaining permits, land rights, surveys, final designs, and inspections for structural practices.

9: EVALUATE THE PLAN

Conservation planning is an ongoing process that continues long after the implementation of a conservation practice. By evaluating the effectiveness of a conservation plan or a practice within a plan, stakeholders can decide whether to continue with other aspects of an overall areawide plan.

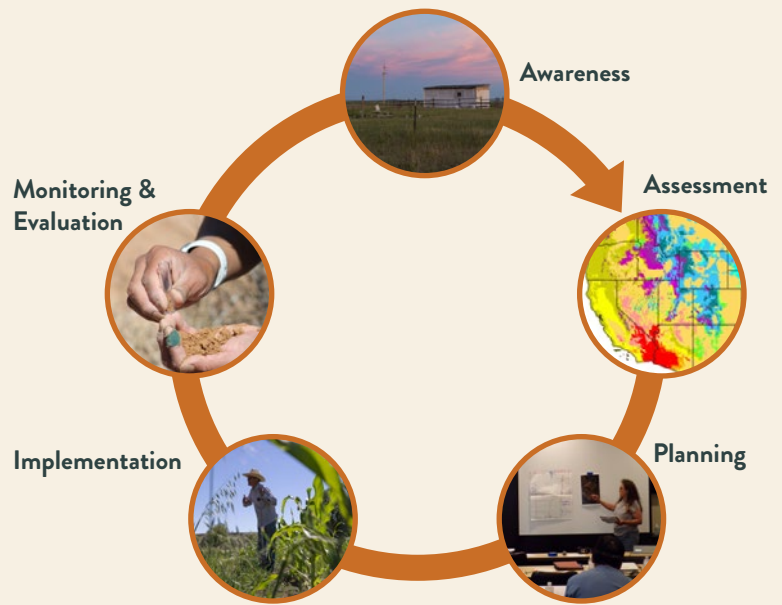
Source:

<https://www.nrcs.usda.gov/getting-assistance/conservation-technical-assistance/conservation-planning>

Principles of Range Management

Climate Considerations

Climate change is increasing the effects of drought in southwestern states. Climate adaptation at USDA is an iterative process reflected in the diagram to the right. Adaptation actions aim to reduce the vulnerability of natural and human systems to climate change and can include measures to increase adaptive capacity. Examples include:



Adapted from the Fourth National Climate Awareness Assessment (2018)

- **Changes in farming and land management practices to build long-term resilience**
 - Adopting certain practices, such as cultural burning, will reduce shrub-land fuels and minimize the risk of severe fire occurrences.
- **Strengthening disaster preparedness and recovery**
 - Have a drought plan and set critical dates for making important decisions to reduce risk.
- **Increased access to useful and usable tools and technology**
 - Access to relevant technology and software can allow for accurate monitoring and data collection, which can help inform decisions about climate action and natural resource management.
- **Outreach and education to build adaptive capacity**
 - Promote adoption and application of climate-start strategies across community operations

Drought monitoring tools help anticipate low forage production, leading to an adjusted carrying capacity or stocking rate. You can check projected peak forage production maps or precipitation maps produced by NRCS.

What is your average rainfall per year?

How many normal and drought years are expected? At what frequency?

An inventory map provides a complete picture of all the resources available on the land that has been identified for planning.

DEFINITIONS

Cultural resources:

non-renewable resources that tell the story of human past and interaction with the natural environment.

Erosion: process of weathering and moving earthen materials by natural forces such as wind or water

RESOURCES

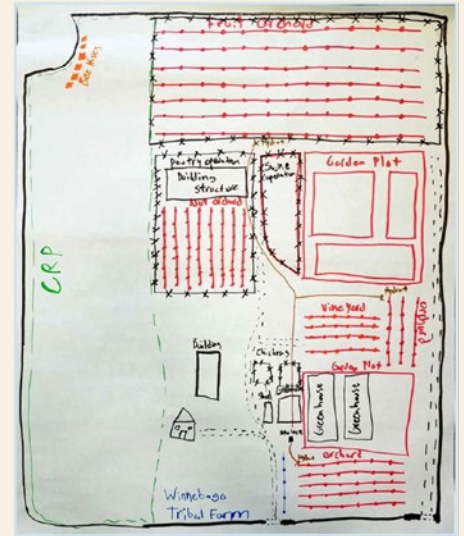
Standard map symbols, pages 56-57, “Stewarding Native Lands: A Conservation Planning Guide for Native American Ranchers”

NRCS SWAPAE+H inventory requirements can be found in Section III of the FOTG

Developing an Inventory Map

An inventory map should include:

- Existing fields/pastures
- Structures—wells, storage tanks, troughs, pastures, fences, corrals, working pens, pipelines, etc.
- Direction of water flow patterns
- Wildlife corridors
- Brush management
- Resource concern areas (erosion, overgrazed land, etc.)
- Invasive species



Provide a brief description of your operation, including the general location of the land and the kinds of livestock and other agricultural products.

Describe the permitted grazing area and the approximate acres.

Helpful resource: At the end of this workbook, there are worksheets that you can complete and use as a part of your NRCS application.

Developing Web Soil and Ecological Site Survey Map Reports

Ready? Go to USDA NRCS Web Soil Survey website

- Open a web browser of your choice and type Web Soil Survey.
- If you don't have a computer, you can contact your local Conservation District, NRCS, Bureau of Indian Affairs (BIA), or Cooperative Extension Service Office to ask if they can provide you with a soil or ecological site map for your land.

Using your soil and/or ecological site survey map report describe the suitable soils within your grazing area.



A map showing relevant features, fields, land uses, acreage, and soils is a part of a comprehensive conservation plan. Do you know which map NRCS requires to be submitted with a conservation plan?

- a. Topographic
- b. Aerial photograph
- c. Both
- d. Not sure

Stewarding Native Lands Conservation Planning Guide
Refer to pages 22-23 for Soil and Ecological Site Mapping details
Refer to page 62 for Soil Texture Feel Method

The objective is to create a soil and/or ecological site map for the grazing area. The grazing area will have specific plant communities for the rangeland type, annual precipitation, soil profiles, and state and transition models.

ACRONYMS

AOI: Area of Interest

USDA: United States
Department of Agriculture

NRCS: Natural Resources
Conservation Service

T&E Species: Threatened and
Endangered Species

RMS: Resource Management
System

SWAPAE+H: Soil,
Water, Air, Plants, Animal,
Energy and Human Resources

RESOURCES

USDA NRCS Web Soil Survey
website (Page 12)

SECTION 1 RESOURCES

Websites

USDA NRCS Web Soil Survey:
websoilsurvey.nrcs.usda.gov/app

USDA NRCS Web Soil Survey Brochure:
nrcspad.sc.egov.usda.gov/DistributionCenter/pdf.aspx?productID=865

USDA Southwest Climate Hub:
<https://www.climatehubs.usda.gov/>

Presentations

[Conservation Planning Process](#)

[Principles of Range Management](#)

[Ecological Site Composition & Biomass](#)

[Developing a Conservation Plan](#)

SECTION 2: MONITORING

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Create goals and objectives for your conservation plan 17
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Field Day Model 20
Section 2 Resources 21

Resources

- Rangeland Monitoring PowerPoint
- Goals and Objectives PowerPoint
- NRCS Resource Concerns PowerPoint



Rangeland Management

Sustainability is the basic goal of conservation and rangeland management. A conservation plan provides a vision and identifies the actions needed to get each acre of land as healthy and productive as possible to promote greater longevity.

Monitoring provides decision makers with information about changes over time.

Here are some basic things to monitor on the grazing area:

- Precipitation
- Livestock kinds, classes, and numbers
- Kinds (e.g., cattle, sheep, goats, horse, buffalo, etc.)
- Classes (e.g., sheep: ram, lamb, yearling; goat: kid, doe, milkers; cattle: calf, heifer, cow, steer, bull)
- Percentage of calf crop and weaning weights
- Grazing periods for each pasture
- Ground cover changes
- Plant community changes
- Photo points

Keeping records will help inform current and future decisions based on these data. As a result, you can expect that the conservation plan will continue to evolve through planning and monitoring over many years.

Example: Ground cover changes over time and can be measured. Changes can help you understand environmental conditions and climate impacts on your land. This data can help you decide if your current management strategy is meeting your goals and objectives. The table below shows plant species count found in a specific ecological site chosen for a conservation plan from 1981-1993. What do you think is happening?

Date	Feb-81	Nov-81	Jan-83	Nov-84	Nov-85	Dec-87	Dec-89	Nov-90	Nov-93
Shrubby Buckwheat	37	36	32	34	38	32	3	15	7
Hopseed Bush	27	32	28	32	33	40	28	13	22
Sideoats Grama	10	9	8	20	22	10	9	10	2

How do you keep track of changes now for your grazing area or other agricultural enterprise?

How have you used traditional methods of evaluating changes that you learned from your parents, grandparents, or community?

Establishing Goals and Objectives

Writing down goals and objectives is essential. Range management and monitoring will give a picture of what is needed to include in your conservation plan.

Set goals and objectives to address your concern or opportunity:

- Goals are broad, long term ecological, economic, and community visions for your conservation plan.
- Objectives are the steps you take to achieve the goals of your conservation plan.

Examples of Measurable Objectives:

- Develop an inventory map and conservation plan map for my operation.
- Measure current forage production on each ecological site.
- Get livestock numbers are in balance with the available forage production on the ranch.
- Install and maintain a reliable, well distributed water sources that can supports a flexible grazing plan.
- Control invasive noxious weeds and woody species to maintain the balance of grasses, forbs, shrubs and trees appropriate for each ecological site.
- Monitoring precipitation, livestock health and production, actual grazing use, and plant community health and production on the ranch.

Ecological Goals	Economic Goals	Community Goals
Ensure that ability of the land to support livestock grazing is maintained or improved for future generations.	Maintain an economically viable agricultural operation.	Minimize or eliminate detrimental impacts from the agricultural operation on local communities, such as excess dust, excess runoff and flooding, or contamination of surface and groundwater.
Maintain or restore the balance of grasses, forbs, shrubs and trees on each ecological site.	Maintain or improve livestock health and productivity.	Provide safe, reliable, locally grown food.
Maintain sufficient vegetation and litter cover to capture the maximum possible amount of precipitation.	Reduce energy use and costs.	Be an example of good land stewardship. Teach neighbors to do the same.

Establishing Goals and Objectives

Write down a few goals and objectives for your conservation plan.

Use this space to brainstorm. When you are ready to submit your conservation plan, transfer your ideas to the Conservation Plan goals and objectives form in the Appendix.

1. Identify a long term ecological, economic, and community goal for your conservation plan.
2. Write down the two tasks you need to complete that will help you to accomplish those goals in the Measurable Objectives column.
3. Write a target date for each Measurable Objective – when you are planning to have each goal completed

Ecological Goals	Measurable Objectives	Target Date

Economic	Measurable Objectives	Target Date

Community Goals	Measurable Objectives	Target Date

Interpreting Indicators of Rangeland Health (IIRH)

To the field of conservation, Native peoples bring a deep understanding of holistic relationships as they know the balance needed in order for all relatives (plants, water, animals, air, soil, etc.) to thrive.

Three attributes are used to rate rangeland health: soil and site stability, hydrologic function, and biotic integrity. 17 indicators (e.g., rills) are used to assess these rangeland health attributes. There are five categories used to rate condition for each indicator: Extreme to Total, Moderate to Extreme, Moderate, Slight to Moderate, and None to Slight.

Soil/Site Stability		Hydrologic Function	Biotic Integrity
1. Rills		12. Functional/Structural Groups	
3. Water Flow Patterns		13. Dead or Dying Plants or Plant Parts	
3. Pedestals and/or Terracettes		15. Annual Production	
4. Bare Ground		16. Invasive Plants	
5. Gullies			
6. Wind-Scoured and/or Depositional Areas	14. Litter Cover and Depth		
7. Litter Movement	10. Effects of Plant Community Composition and Distribution on Infiltration	17. Vigor with an Emphasis on Reproductive Capability of Perennial Plants	
8. Soil Surface Resistance to Erosion			
9. Soil Surface Loss and Degradation			
11. Compaction Layer			

Name two resource concerns within the grazing area and the category (soil/site stability, hydrologic function, biotic integrity) they included in?

What are you doing to address these issues? What ideas do you have to address these issues?

Field Day Model

Whether you are participating in a First Nations in-person workshop or are working through this curriculum alone, you will need to get into the field to gather data necessary for your conservation plan. You will:

- Identify different types of rangeland plants
- Complete a vegetation inventory to determine production and composition
- Identify and evaluate different types of soil and ecological sites
- Identify wildlife habitats



Before you go out to collect data, here are some supplies you should gather in advance:

FIELD PREPARATION CHECKLIST

Essential Supplies and Gear:

- Stewarding Native Lands: A Conservation Planning Guide for Ranchers
- Pencil
- Drinking water
- Distilled water for soil testing
- Shovel and Auger
- Sifter (can be a flour sifter)
- Soil tester
- Scale (inexpensive food scale)
- 10 frames (9.6 sq. ft)
- Brown paper bags
- Garden clippers
- Tape measure (25 ft)
- Gloves
- Rangeland Plant Guide

Recommended Supplies and Gear:

- Collapsible camp chair or stool
- Sunglasses
- Umbrella
- First aid kit
- Outdoor hat
- Sunscreen
- Pants and long-sleeve shirt
- Sturdy walking/hiking boots (closed toed shoes preferred)
- Cell phone



SECTION 2 RESOURCES

Worksheets and Handouts

Interpreting Indicators of Rangeland Health Version 5 Evaluation Form Example

Stewarding Native Lands: A Conservation Planning Guide for Native American Ranchers, 2nd Edition, November 2021. p. 26-28.

Websites

Interpreting Indicators of Rangeland Health (Version 5): www.blm.gov/documents/national-office/blm-library/technical-reference/interpreting-indicators-rangeland-health-0

Presentations

[Rangeland Monitoring](#)

[Goals and Objectives](#)

[NRCS Resource Concerns](#)

INTERPRETING INDICATORS OF RANGELAND HEALTH VERSION 5 EVALUATION FORM - PAGE 1
Complete the following information as necessary for project documentation and assessment purposes.

Evaluation area name or ID: Big Sage CM 14 Date: 8/14/2018
 Management unit: C&W c. u.li. State: TX Office: 411rt.4- 1W. 10
 Evaluator(s): Z. J. ., 5171.ith., - J., G. C. attle/1,

Ecological Site/Reference Sheet Used for Evaluation (Complete this section last)

Ecological site name: Loamy 13-16" Ecological site ID: R025XY011(D)
 Reference sheet used/authors: Attachment to provisional ESD/J. Thompson Date: 3/12/2011
 Soil component: Vitale, Composition based on (check one): Cover Annual Production **M**

Ecological Site Determination (Describe reference on the left and observations of the evaluation area on the right.)

Soil Survey: Owryhee Country Soil Map Unit: 193

Soil and site reference description

Description Source: Ecological Site Description OR Soil Survey

Parent material: <u>Alluvium</u>	Slope range: <u>5-40</u> %
Elevation range: <u>1,700-2,100</u> ft (m)	Aspect (if specified):
Topographic position: <u>side slopes</u>	Topographic position: <u>5uu- slope</u>
Precipitation range: <u>33-46</u>	
Seasonal precipitation distribution:	Average annual precipitation: <u>40</u> in cm
Soil depth: <input checked="" type="checkbox"/> Very shallow <input type="checkbox"/> Shallow <input checked="" type="checkbox"/> Moderate <input type="checkbox"/> Deep <input type="checkbox"/> Very deep	Seasonal precipitation distribution:
	Pit depth: <u>70</u>

Soil and site characterization

Type and depth of diagnostic horizons: in (cm)

Soil horizon	Depth	Texture	Eff ²	Other
<u>A</u>	<u>0-8</u>	<u>Very stony loam</u>		
<u>B1</u>	<u>8-40</u>	<u>V. gravelly sandy loam</u>		
<u>B2</u>	<u>40-71</u>	<u>V. cobbly clay loam</u>		
<u>B3</u>	<u>71-86</u>	<u>Extremely cobbly loam</u>		

Soil and site characterization

Type and depth of diagnostic horizons:	in cm			
Soil horizon	Depth	Texture	Eff ²	Other
<u>A</u>	<u>0-8</u>	<u>Stony loam</u>		
<u>B1</u>	<u>5-35</u>	<u>V. gravelly sandy loam</u>	<u>nt</u>	<u>0 4 .2 .msUt</u>
<u>B2</u>	<u>35-60</u>	<u>V. cobbly clay loam</u>	<u>V.5</u>	<u>estimate 30%</u>
<u>B3</u>	<u>60-70</u>	<u>Extremely cobbly loam</u>		

Criteria used to select evaluation area: Randomized sampling

Evaluation Area Location

Location description/directions: Approximately 300 meters north from country road and 150 meters west of Cow Creek drainage in pasture 3 of Cow Creek allotment.

Size of evaluation area: 0.7 acre UTM Zone: 11 Datum: NAD 83 Position by GPS? Yes No

Township Range OR UTM E 692990.65 m OR N. Latitude
 Section 1/4 Section OR N 26770633982.74 m OR W. Longitude

Supplemental Information & Reference Community Phase

Recent weather (last 2 years): drought normal wet

Natural disturbance type(s) and date(s): Wildfire burned this area 15 years ago (2004).

Land treatment type(s) and date(s): No treatment records were found, but evaluation area is probably part of a shrub control (herbicide) project completed in 1960's, per grazing permittee.

Wildlife, livestock, recreation, or other uses: Grazed by cattle in April and May this year. Some off-road OHV travel occurring adjacent to evaluation area. Jackrabbit and sage-grouse sign observed on evaluation area.

Offsite influences: Evaluation area may receive runoff & weed seeds from adjacent road.

Photos taken? Yes No Quantitative data collected: Line point intercept, soil stability

F/S groups worksheet completed? Yes (attach worksheet) No (document expected relative dominance on next line)

Reference community phase/description³: 1.1

Depth classes: Very shallow < 25 cm; Shallow 25-50 cm; Moderate 50-100 cm; Deep 100-150 cm; Very Deep > 150 cm Soil effervescence (Eff) codes: NE- non-eff.; VS- very slightly eff.; SL- slightly eff.; ST- strongly eff.; V- violently eff. If F/S worksheet is not completed, describe expected reference community F/S groups/relative dominance in this field.

Figure A4.2. Example of a completed page 1 of the evaluation sheet.

Interpreting Indicators of Rangeland Health, Version 5

of Rangeland Health, Version 5

EXAMPLE

SECTION 3: IDENTIFYING

Learn how to identify conservation practices needed
to address resource concerns27

Understand how to formulate resource management
system alternatives28

Section 3 Resources.....29

Resources

- Field Office Technical Guide PowerPoint
- Conservation Practice Standards PowerPoint
- Resource Management System Alternative PowerPoint
- Implementing a Conservation Plan PowerPoint



Identify Conservation Practices

Now it's time to identify the conservation practices for your conservation plan! On each ecological site plant community area, identify any resource problems that will need to be addressed in your conservation plan. When you are ready to submit your conservation plan, transfer your ideas to the Rangeland Conservation Plan form in the Appendix.

Resource	Resource Concern	Resource Concern Component
Water	Pesticides transported to groundwater	Nonpoint pesticide leaching loss
Plant	Plant pest pressure	Invasive species

What are some examples of cultural resources?

What information can you include about cultural resources in your plan?

Tips:

- To know what you can put into your plan about cultural resources, read page 21 of First Nations Stewarding Native Lands Conservation Planning Guide.
- Information in the field offices apply specifically to the geographic area for which they are prepared. Refer to Page 28 for a locator website link.
- Review this important publication when you can: Indigenous Stewardship Methods and NRCS Conservation Practices. Refer to page 28 for a website link.

Try out a standard from the Field Office Technical Guide (FOTG)!

Ranchers: What conservation standard does a wildlife ramp need to address?

Farmers: What conservation standard does an irrigation system need to address?

Formulate Resource Management System Alternative

A Resource Management System (RMS) Alternative identifies all the goals and resource concerns that need to be addressed, and identifies all the conservation practices that are needed to achieve the goals and address the resource concerns. You should aim to achieve the goals for the land, solve all identified problems, take advantage of opportunities, and meet the needs of the planning project.

Take some time to list resource concerns on your ranch. When you are ready to submit your conservation plan, transfer your ideas to the Resource Management System Alternative form in the Appendix.

Resource Concern	Pasture or Grazing Area	Description of Problem	Conservation Practices Needed
Soil - soil organism habitat loss or degradation	1	Quantity, quality, diversity or connectivity to food, cover, space, shelter and/or water is inadequate to meet requirements of beneficial soil organisms.	Practice name: Prescribed grazing Practice code: 528

Evaluating Your Alternatives and Making Decisions

Evaluate your alternatives to determine their effectiveness in addressing concerns, opportunities, and objectives. Then choose which project or plan will work best to address the objectives. The Resource Management System (RMS) Alternative can be your conservation plan. It identifies everything that needs to be done to achieve your goals and address identified resource concerns.

Your Conservation Plan should identify the pasture(s) or grazing area(s) that you are ready to work on, what resource concern(s) you are going to address, and the conservation practices you plan to install or apply.

SECTION 3 RESOURCES

Websites

Conservation Practice Standards:

www.nrcs.usda.gov/resources/guides-and-instructions/conservation-practice-standards

NRCS Field Office Technical Guide (FOTG):

www.nrcs.usda.gov/resources/guides-and-instructions/field-office-technical-guides

Field Office Technical Guide Locator:

efotg.sc.egov.usda.gov/#/

Indigenous Stewardship Methods and NRCS Conservation Practices:

efotg.sc.egov.usda.gov/references/public/va/IndigenousStewardship.pdf

Presentations

[Field Office Technical Guide](#)

[Conservation Practice Standards](#)

[Resource Management System Alternative](#)

[Implementing a Conservation Plan](#)



SECTION 4: TECHNICAL ASSISTANCE

This workbook was designed to broaden readers understanding of the NRCS Conservation Planning Process. As you work on the forms needed for your conservation plan, you can learn more about environmental laws, plant production and initial stocking rate calculations, rangeland health, and NRCS financial assistance programs.

Assistance may be required to completed the forms needed for a conservation plan—reach out to representatives from NRCS, BIA, a Cooperative Extension Office, or First Nations Development Institute for support.

SOME ADDITIONAL TOPICS TO EXPLORE:

NRCS Prescribed Grazing Conservation Practice Standard 528: www.nrcs.usda.gov/resources/guides-and-instructions/prescribed-grazing-ac-528-conservation-practice-standard

Wildlife Escape Ramps for Watering Facilities and Open Storage Tanks: efotg.sc.egov.usda.gov/references/public/NM/bio55_v3.pdf

Presentations

Environmental Law

Plant Production & Initial Stocking Rate Plan

Range Health

Rangeland Plants

APPENDIX: CONSERVATION PLAN FORMS

Conservation Plan Inventory Workbook.....	one copy
Conservation Plan Field Inventory Worksheet.....	two copies
Soil and Rangeland Health Assessment.....	two copies
Estimating Plant Production Worksheet.....	two copies
Initial Stocking Rate Calculation.....	two copies
Sample Site Information.....	two copies
Goals and Objectives Worksheet.....	two copies
Resource Management System Alternative.....	two copies
Rangeland Conservation Plan (My Ranch Plan).....	two copies



CONSERVATION PLAN INVENTORY WORKBOOK FOR RANCHERS



Business Name:

CONTACT INFORMATION

Provide contact information for the land owners, grazing permittees or managers on this operation.

Name					
Position (Business Owner, Land Owner, Permittee, Manager Etc)					
Address					
City		State		Zip Code	
Business Phone		Home		Cell Phone	
Email Address				Tax ID	

Name					
Position (Business Owner, Land Owner, Permittee, Manager Etc)					
Address					
City		State		Zip Code	
Business Phone		Home		Cell Phone	
Email Address				Tax ID	

DESCRIPTION OF THE OPERATION

Provide a brief description of the operation, including the general location, a general description of the land and the kinds of livestock and other agricultural products being produced. Describe the land ownership and approximate acres.



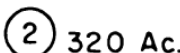





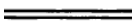

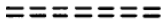

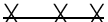



FIELDS AND PASTURES

Draw existing fields, pastures or grazing areas on an inventory map, labeling each with a number, a name if desired, and the estimated acres. Provide the following information about each grazing area.

Field or Pasture Number	Field or Pasture Name	Land Use (range, crop, pasture)	Acres	Land Ownership

INVENTORY MAP INFORMATION AND SYMBOLS

Identify any of the following features and existing improvements on your Conservation Plan Inventory. Use different colors or symbols as desired or needed. Include a legend for the symbols you use on the map. Label the features on the map and describe each of the improvements in this workbook .

GENERAL FEATURES			
	Ranch Boundary		Intermittent Streams
	Pasture, field, or grazing area. Label number, name acres		Perennial streams
	Ranch Headquarters		Railroad
	Natural barrier or boundary separting grazing areas		Power line
	Paved roads		Wetland
	Dirt roads		Buildings
EXISTING RANGE IMPROVEMENTS			
	Fence (with label)		Gully plug or grade stabilization structures (with label)
	Corral (with label)		Past range planting (with label)

	Exclosure (with label)		Past mechanical treatment (ripping, pitting etc) with label
	Well, well with windmill (with label)		Past brush control area (with label)
	Spring (with label)		Past noxious weed control (with label)
	Developed Spring (with label)		Past prescribed burn area (with label)
	Lake (with label)		Pipeline (with label)
	Pond, tank, charco (with label)		Irrigation ditch (with label)
	Water Harvesting Catchment (with label)		Water storage tank (with label)
	Waterspreader (with label)		Trough (with label)

RESOURCE CONCERN AREAS

	Range condition boundary (with label)		Excess flooding problem area
EC, GC, FC, PC			Soils polluted with petroleum or other pollutants
	Gully		Wind erosion area
	Sheet and rill erosion area		Salty soil
	Road erosion		Chemical polluted stream (petroleum, nutrients, heavy metals)
	Streambank erosion		Sediment polluted stream
	Noxious weeds		Plant health and production problem area
	Area with inadequate water for livestock and/or wildlife		Excess tree and/or shrub invaded area
	Soil compaction		Poor soil health area (organic matter, organisms, aggregate instability)
	Past burn area		Monitoring locations (with labels)

OTHER MAP SYMBOLS

	Put a north arrow on your map		Section, township, range or UTM locations if known
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PRECIPITATION

Provide any record of precipitation measured on the operation for the last couple of years.

Location		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total

WILDLIFE

The following table identifies the kinds of wildlife on the operation, and whether the conservation plan will benefit the species or if the species is causing problems for the operation.

Wildlife Species	Approximate Number	Desirable	Undesirable	Activities being done to benefit the species	Reasons the species is undesirable

OTHER CONSIDERATIONS

Other considerations that will need to be considered in conservation practice designs.

	Public Rights of Way		Flooding Problems		Cultural resource sites
	Underground Utilities		Air Quality Non-Attainment Area		Threatened or endangered species
	Mining Activities		Noxious weeds		Recreation Activities

ADDITIONAL INFORMATION

Additional information about this operation.

Interpreting Indicators of Rangeland Health Version 5 Evaluation Form (page 2)

Evaluation area name or ID: _____ Date: _____

Departure from Expected	Code	Instructions
None to slight	N-S	(1) Assign 17 indicator ratings, record comments and any measurements. (2) In the attribute rating tables at the bottom of the form, write the indicator number in the appropriate column for each indicator applicable to the attribute. (3) Assign overall rating for each attribute based on preponderance of evidence. (4) Provide rationale for each attribute rating in writing.
Slight to moderate	S-M	
Moderate	M	
Moderate to extreme	M-E	
Extreme to total	E-T	

Indicator	Rating	Comments
1. Rills	S H	
2. Water flow patterns	S H	
3. Pedestals and/or terracettes	S H	
4. Bare ground (observed): _____ %	S H	
5. Gullies	S H	
6. Wind-scoured and/or depositional areas	S	
7. Litter movement (wind or water)	S	
8. Soil surface resistance to erosion Interspace: _____ Plant canopy: _____	S H B	
9. Soil surface loss and degradation	S H B	
10. Effects of plant community composition and distribution relative to infiltration	H	
11. Compaction layer	S H B	
12. Functional/structural groups	B	
a. Relative dominance: _____		
b. F/S groups not expected at the site: _____		
c. Number of F/S groups: _____		
d. Spp # in dom & subdom F/S groups: _____		
13. Dead or dying plants or plant parts	B	
14. Litter cover and depth Observed cover: _____ % Depth: _____ cm / in	H B	
15. Annual production: Pounds or Kilograms Observed: _____ ÷ Expected _____ = _____	B	
16. Invasive plants	B	
17. Vigor with an emphasis on reproductive capability of perennial plants	B	

Soil/Site Stability "S" (10 indicators)					Hydrologic Function "H" (10 indicators)					Biotic Integrity "B" (9 indicators)				
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Attribute Rating:					Rationale:					Attribute Rating:					Rationale:					Attribute Rating:					Rationale:																								

E-T	M-E	M	S-M	N-S	E-T	M-E	M	S-M	N-S	E-T	M-E	M	S-M	N-S
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INTERPRETING INDICATORS OF RANGELAND HEALTH VERSION 5 EVALUATION FORM – PAGE 1
 Complete the following information as necessary for project documentation and assessment purposes.

Evaluation area name or ID:					Date:				
Management unit:				State:			Office:		
Evaluator(s):									
Ecological Site/Reference Sheet Used for Evaluation (Complete this section last)									
Ecological site name:					Ecological site ID:				
Reference sheet used/authors:							Date:		
Soil component:			Composition based on (check one): Cover <input type="checkbox"/> Annual Production <input type="checkbox"/>						
Ecological Site Determination (Describe reference on the left and observations of the evaluation area on the right.)									
Soil Survey:					Soil Map Unit:				
Soil and site reference description					Evaluation area soil and site characterization				
Description Source: Ecological Site Description OR Soil Survey									
Parent material:			Slope range: %		Parent material:			Slope: %	
Elevation range: ft / m			Aspect (if specified):		Elevation: ft / m			Aspect:	
Topographic position:					Topographic position:				
Precipitation range: in / cm					Average annual precipitation: in / cm				
Seasonal precipitation distribution:					Seasonal precipitation distribution:				
Soil depth ¹ : Very shallow <input type="checkbox"/> Shallow <input type="checkbox"/> Moderate <input type="checkbox"/> Deep <input type="checkbox"/> Very deep <input type="checkbox"/>					Pit depth: in / cm				
Type and depth of diagnostic horizons: in / cm					Type and depth of diagnostic horizons: in / cm				
Soil horizon	Depth	Texture	Eff ²	Other	Soil horizon	Depth	Texture	Eff ²	Other
Evaluation Area Location									
Criteria used to select evaluation area:									
Location description/directions									
Size of evaluation area:			UTM Zone:		Datum:		Position by GPS? Yes / No		
Township	Range	OR	m		OR	N. Latitude			
Section	1/4 Section		m			W. Longitude			
Supplemental Information & Reference Community Phase									
Recent weather (last 2 years): drought <input type="checkbox"/> normal <input type="checkbox"/> wet <input type="checkbox"/>									
Natural disturbance type(s) and date(s):									
Land treatment type(s) and date(s):									
Wildlife, livestock, recreation, or other uses:									
Offsite influences:									
Photos taken? Yes / No		Quantitative data collected:							
F/S groups worksheet completed? Yes (attach worksheet) No (document expected relative dominance on next line)									
Reference community phase/description ³									

¹ Depth classes: Very shallow < 25 cm; Shallow 25-50 cm; Moderate 50-100 cm; Deep 100-150 cm; Very Deep > 150 cm

² Soil effervescence (Eff) codes: NE – non-eff.; VS – very slightly eff.; SL – slightly eff.; ST – strongly eff.; V – violently eff.

³ If F/S worksheet is not completed, describe expected reference community F/S groups' relative dominance in this field.

a	b	c	d	e	f	g	h	i
Pasture or Grazing Area	Ecological Site Plant Community	Acres	Available Grass and Forb Production (lbs/ac)	25% Grass and Forb Harvest Efficiency Forage (lbs/ac)	Available Palatable Shrub Production (lbs/ac)	15% Browse Harvest Efficiency Forage (lbs/ac)	Total Harvest Efficiency Forage Amount (lbs/ac)	Total Ecological Site Plant Community AUMs
Total Ranch AUMS								
Total Ranch Animal Units Yearlong								

a	b	c	d	e	f	g	h	i
Pasture or Grazing Area	Ecological Site Plant Community	Acres	Available Grass and Forb Production (lbs/ac)	25% Grass and Forb Harvest Efficiency Forage (lbs/ac)	Available Palatable Shrub Production (lbs/ac)	15% Browse Harvest Efficiency Forage (lbs/ac)	Total Harvest Efficiency Forage Amount (lbs/ac)	Total Ecological Site Plant Community AUMs
Total Ranch AUMS								
Total Ranch Animal Units Yearlong								

SAMPLE SITE INFORMATION

Sample Site Number _____ Pasture _____ Location (UTM or Sec T R) _____

Location Description _____ % Slope _____

Soil / Ecological Site Name _____ Map Unit Symbol _____

Plant Community (Top 3 Plant Functional Groups) _____

SOIL INFORMATION

Horizon	Depth Range	Texture	% Rock	Limy	Salty	Other

RANGELAND HEALTH ASSESSMENT

Indicate departure from what is expected for the soil/ecological site | **N-S** (None to Slight) **S-M** (Slight to Moderate) **M** (Moderate) **M-E** (Moderate to Extreme) **E-T** (Extreme to Total)

Rills	Water flow patterns	Pedestals and/ or terraces
Bare ground observed % __	Gullies	Wind scoured or deposition areas
Litter movement (wind or water)	Soil surface resistance to erosion	Soil surface loss and degradation
Plant community composition relative to infiltration	Compaction layer	Plant functional / structure groups
Dead or dying plants or plant Parts	Litter cover and depth	Annual production
Invasive plants	Plant vigor/ reproduction	

WILDLIFE HABITAT ASSESSMENT

Wildlife Food Available					
Spore Plants (0.1)	Seed (0.1)	Flowers (0.1)	Food Plots (0.1)		
Mast (0.1)	Grasses (0.1)	Forbs (0.1)	Browse (0.1)		
Invertebrates (0.1)		Vertebrates (0.1)			
Wildlife Cover Available					
Bare Patches (0.1)	Burrows (0.1)	Rocks / Boulders (0.1)	Nest / Middens (0.1)		
Caves / Cavities (0.1)	Plant Litter (0.1)	Plant Cavities/Snags (0.1)	Tree cover (0.1)		
Shrub Cover (0.1)	Herbaceous Cover (0.1)				
Wildlife Water					
Perennial Streams or Springs (0.2)	Intermittent Streams or Springs (0.1)	Perennial Lakes, Ponds or Wetlands (0.2)	Seasonal Lakes, Ponds or Wetlands (0.1)		
Watering Facility (0.1)	Perennial irrigation canal or ditch (0.2)	Seasonal irrigation ditch (0.1)			
Good quality water (0.1)	Poor water quality (-.06)	Reliable water year-round (0.1)	Unreliable water for wildlife (-0.6)		
Habitat Fragmentation					
Dirt roads (-0.1)	Paved roads (-0.1)	Utility right of way (-0.1)	Veg modification (-0.6)		
Motor/Equipment Noise (-0.2)	Human occupation (-0.1)	No water escape ramps (-0.6)	Hazards across water (-0.6)		
Fence wildlife friendly (-0.1)	Fence wildlife barrier (-0.6)				

SAMPLE SITE INFORMATION

Sample Site Number _____ Pasture _____ Location (UTM or Sec T R) _____

Location Description _____ % Slope _____

Soil / Ecological Site Name _____ Map Unit Symbol _____

Plant Community (Top 3 Plant Functional Groups) _____

SOIL INFORMATION

Horizon	Depth Range	Texture	% Rock	Limy	Salty	Other

RANGELAND HEALTH ASSESSMENT

Indicate departure from what is expected for the soil/ecological site | **N-S** (None to Slight) **S-M** (Slight to Moderate) **M** (Moderate) **M-E** (Moderate to Extreme) **E-T** (Extreme to Total)

Rills	Water flow patterns	Pedestals and/ or terraces
Bare ground observed % __	Gullies	Wind scoured or deposition areas
Litter movement (wind or water)	Soil surface resistance to erosion	Soil surface loss and degradation
Plant community composition relative to infiltration	Compaction layer	Plant functional / structure groups
Dead or dying plants or plant Parts	Litter cover and depth	Annual production
Invasive plants	Plant vigor/ reproduction	

WILDLIFE HABITAT ASSESSMENT

Wildlife Food Available					
Spore Plants (0.1)	Seed (0.1)	Flowers (0.1)	Food Plots (0.1)		
Mast (0.1)	Grasses (0.1)	Forbs (0.1)	Browse (0.1)		
Invertebrates (0.1)		Vertebrates (0.1)			
Wildlife Cover Available					
Bare Patches (0.1)	Burrows (0.1)	Rocks / Boulders (0.1)	Nest / Middens (0.1)		
Caves / Cavities (0.1)	Plant Litter (0.1)	Plant Cavities/Snags (0.1)	Tree cover (0.1)		
Shrub Cover (0.1)	Herbaceous Cover (0.1)				
Wildlife Water					
Perennial Streams or Springs (0.2)	Intermittent Streams or Springs (0.1)	Perennial Lakes, Ponds or Wetlands (0.2)	Seasonal Lakes, Ponds or Wetlands (0.1)		
Watering Facility (0.1)	Perennial irrigation canal or ditch (0.2)	Seasonal irrigation ditch (0.1)			
Good quality water (0.1)	Poor water quality (-.06)	Reliable water year-round (0.1)	Unreliable water for wildlife (-0.6)		
Habitat Fragmentation					
Dirt roads (-0.1)	Paved roads (-0.1)	Utility right of way (-0.1)	Veg modification (-0.6)		
Motor/Equipment Noise (-0.2)	Human occupation (-0.1)	No water escape ramps (-0.6)	Hazards across water (-0.6)		
Fence wildlife friendly (-0.1)	Fence wildlife barrier (-0.6)				

MY RANCH PLAN



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DEVELOPMENT INSTITUTE

Business Name:

Identified Resource Concerns to be Addressed

Put an "X" next to the resource concerns that will be addressed in your conservation plan.

- Sheet and rill erosion
- Wind erosion
- Classic gully erosion
- Bank erosion from streams, shorelines, or water conveyance channels
- Soil Compaction
- Soil Organic matter depletion
- Concentration of salts or other chemicals in soil
- Soil organism habitat loss or degradation in soil
- Soil Aggregate instability
- Ponding and flooding
- Surface water depletion
- Ground water depletion
- Naturally available moisture use
- Pathogens and chemicals from manure, biosolids, or compost applications transported to surface water
- Pathogens and chemicals from manure, biosolids, or compost applications transported to ground water
- Petroleum, heavy metals, and other pollutants transported to surface water
- Petroleum, heavy metals, and other pollutants transported to ground water
- Sediment transported to surface water
- Elevated water temperature
- Emissions of particulate matter into the air
- Emissions of greenhouse gases into the air
- Emissions of ozone precursors into the air
- Emissions of airborne reactive nitrogen into the air
- Plant productivity and health
- Plant structure and composition
- Plant pest pressure
- Wildfire hazard from biomass accumulation
- Terrestrial habitat for wildlife and invertebrates
- Aquatic habitat for fish and other organisms
- Livestock Feed and forage imbalance
- Inadequate livestock shelter
- Inadequate livestock water quantity, quality, and distribution
- Energy efficiency of equipment and facilities
- Energy efficiency of farming/ranching practices and field operations

___ Water Well (Code 642)

Wells will be installed to provide water sources for livestock needed to successfully implement the Prescribed Grazing Plan and to provide water for wildlife. Planned wells are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Pastures water is supplied to	Average local well depths (if present and known)	Planned Month and Year

___ Water Harvesting Catchment (Code 636)

Water harvesting catchments will be installed to provide water sources needed to successfully implement the Prescribed Grazing Plan and to provide water for wildlife. Planned catchments are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Surface Type (poly, rock, asphalt etc.)	Planned Month and Year

___ Spring Development (Code 574)

Water from reliable springs or seeps will be collected, stored, and transported away from the source to provide water sources for livestock needed to successfully implement the Prescribed Grazing plan. No more than half of the available flow will be collected to ensure that the wetland or riparian area around the source is maintained for wildlife. Float valves on storage tanks and troughs will be used limit the diversion of water to the amount needed to replenish the water distribution system. The area around the spring or seep will be excluded from livestock so that they cannot concentrate in the area of the water source and affect water quality and/or spring flow. Planned spring developments are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Estimated flow rate (gpm)	Estimated daily diversion needed (gal)	Spring Box Type (concrete, steel etc.)	Planned Month and Year

___ Livestock Pipeline (Code 516)

Pipelines will be installed to distribute water from a reliable source to a location that will help improve grazing distribution and provide reliable water to successfully implement the Prescribed Grazing plan and provide water for wildlife.

Map Label	Pasture	From Water Source Map Label	To Watering Facility Map Label	Pipeline Type (pvc, pe, steel etc)	Estimated Length (ft)	Planned Month and Year

___ Pumping Plant (Code 533)

Pumping plants will be installed to provide reliable, well distributed water sources to successfully implement the Prescribed Grazing Plan and provide water for wildlife. Pumping Plants are labeled on the Conservation Plan Map with the Map Label

Map Label	Pasture	Power Type (windmill, solar, diesel etc)	Planned Flow (gpm)	Planned Month and Year

___ Watering Facility (Code 614)

Storage Tanks and/or Troughs will be installed to provide reliable, well distributed water sources for livestock to successfully implement the Prescribed Grazing Plan and to provide water for wildlife. Watering Facilities are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Land Units Benefitted	Water Type (Storage or Trough)	Planned Material (concrete, steel, polyethylene etc.)	Planned Capacity (gallons)	Planned Month and Year

___ Fence (Code 382)

Fences will be installed to help control livestock grazing to successfully implement the Prescribed Grazing Plan. Planned fences are labeled on the Conservation Plan Map with the Map Label.

Map Label	Between Pastures	Fence Type (barbed wire, electric, woven wire, wildlife barrier etc.)	Approximate Length (feet)	Planned Month and Year

___ Brush Management (Code 314)

Woody species will be controlled to restore the natural balance of grasses, forbs, shrubs and trees as described in the ecological site description for the desired plant community. The location of the brush management projects is shown on the Conservation Plan Map with the Map Label.

Map Label	Pasture(s)	Target Species	Planned Method of Treatment	Avg Plants/Ac Being Removed	Acres planned for treatment	Planned Month and Year

___ Herbaceous Weed Treatment (Code 315)

Herbaceous noxious or invasive weeds will be treated to restore the natural balance of grasses, forbs, shrubs and trees as described in the ecological site description for the desired plant community phase. The locations of the Herbaceous Weed Treatments are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Target Species	Planned Method of Treatment	Approximate Plants Per Acre Being Removed	Planned Acres	Planned Month and Year

___ Diversions (Code 362)

Water bars will be installed on sections of dirt road that are eroding to divert runoff water away from the road in a way that does not cause new erosion problems. Planned Diversion locations are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Length of Road Section	Average Road Width	Average Slope of Road (%)	Planned Number of Diversions	Planned Month and Year

MY RANCH PLAN



FIRST NATIONS
DEVELOPMENT INSTITUTE

Business Name:

Identified Resource Concerns to be Addressed

Put an "X" next to the resource concerns that will be addressed in your conservation plan.

- Sheet and rill erosion
- Wind erosion
- Classic gully erosion
- Bank erosion from streams, shorelines, or water conveyance channels
- Soil Compaction
- Soil Organic matter depletion
- Concentration of salts or other chemicals in soil
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- Soil Aggregate instability
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- Surface water depletion
- Ground water depletion
- Naturally available moisture use
- Pathogens and chemicals from manure, biosolids, or compost applications transported to surface water
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- Sediment transported to surface water
- Elevated water temperature
- Emissions of particulate matter into the air
- Emissions of greenhouse gases into the air
- Emissions of ozone precursors into the air
- Emissions of airborne reactive nitrogen into the air
- Plant productivity and health
- Plant structure and composition
- Plant pest pressure
- Wildfire hazard from biomass accumulation
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- Energy efficiency of farming/ranching practices and field operations

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Map Label	Pasture	Pastures water is supplied to	Average local well depths (if present and known)	Planned Month and Year

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Map Label	Pasture	Surface Type (poly, rock, asphalt etc.)	Planned Month and Year

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Map Label	Pasture	Estimated flow rate (gpm)	Estimated daily diversion needed (gal)	Spring Box Type (concrete, steel etc.)	Planned Month and Year

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Map Label	Pasture	Power Type (windmill, solar, diesel etc)	Planned Flow (gpm)	Planned Month and Year

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Map Label	Pasture	Land Units Benefitted	Water Type (Storage or Trough)	Planned Material (concrete, steel, polyethylene etc.)	Planned Capacity (gallons)	Planned Month and Year

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Map Label	Between Pastures	Fence Type (barbed wire, electric, woven wire, wildlife barrier etc.)	Approximate Length (feet)	Planned Month and Year

___ **Brush Management (Code 314)**

Woody species will be controlled to restore the natural balance of grasses, forbs, shrubs and trees as described in the ecological site description for the desired plant community. The location of the brush management projects is shown on the Conservation Plan Map with the Map Label.

Map Label	Pasture(s)	Target Species	Planned Method of Treatment	Avg Plants/Ac Being Removed	Acres planned for treatment	Planned Month and Year

___ **Herbaceous Weed Treatment (Code 315)**

Herbaceous noxious or invasive weeds will be treated to restore the natural balance of grasses, forbs, shrubs and trees as described in the ecological site description for the desired plant community phase. The locations of the Herbaceous Weed Treatments are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Target Species	Planned Method of Treatment	Approximate Plants Per Acre Being Removed	Planned Acres	Planned Month and Year

___ **Diversions (Code 362)**

Water bars will be installed on sections of dirt road that are eroding to divert runoff water away from the road in a way that does not cause new erosion problems. Planned Diversion locations are labeled on the Conservation Plan Map with the Map Label.

Map Label	Pasture	Length of Road Section	Average Road Width	Average Slope of Road (%)	Planned Number of Diversions	Planned Month and Year

FIRST NATIONS
DEVELOPMENT INSTITUTE

NATIONAL HEADQUARTERS

First Nations Development Institute
2432 Main Street
Longmont, CO 80501
Tel: 303.774.7836
Fax: 303.774.7841
info@firstnations.org

NEW MEXICO FIELD OFFICE

First Nations Development Institute
8421 Osuna Rd. N.E.
Albuquerque, NM 87111
Tel: 505.312.8641
Fax: 303.774.7841

CALIFORNIA FIELD OFFICE

First Nations Development Institute
141-B Spring Street
Claremont, CA 91711
Tel: 303.774.7836
Fax: 303.774.7841

