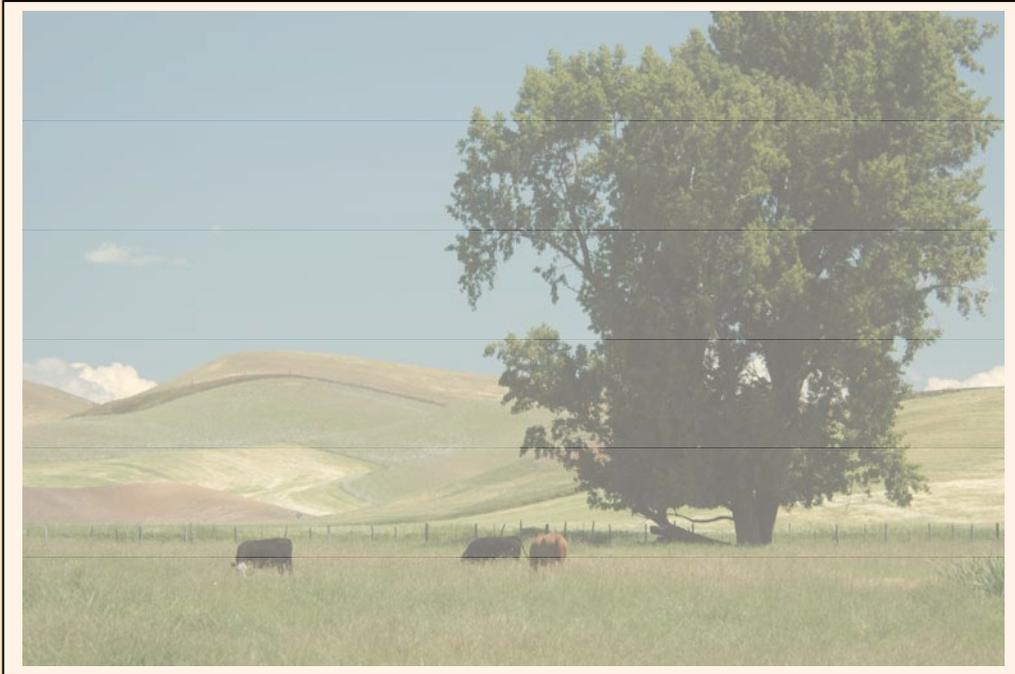


**2008 Conservation Security Program**

**Record Keeping  
Workbook**



Applicant Name: \_\_\_\_\_

Farm/Ranch Name: \_\_\_\_\_





The Application Checklist in Appendix H of the CSP Self-Assessment Workbook lists the management records **required** for your CSP application.

This Record Keeping Workbook provides optional worksheets which you may use to record the management actions that pertain to your agricultural operation, if you do not already have such records in an easily reviewable format.

The Record Keeping Workbook is made up of two parts:

- **Cropland and Hayland Records ( begins on page 5 of this workbook )**
- **Pasture and Rangeland Records ( begins on page 31 of this workbook )**

Examples of each worksheet have been provided for reference. Use multiple copies of any of the worksheets if additional space is needed to record the management information for each field or grouping of fields in the same management system. An additional blank copy of each worksheet has been included.

After you have gathered your management records, or completed the appropriate worksheets in the Record Keeping Workbook, you will need to schedule an interview with a conservation planner in your local NRCS field office within the CSP watershed. During the interview process, NRCS will use the information in your CSP Self-Assessment Workbook, benchmark inventory, management records, and other supporting documentation, to evaluate your CSP application.



# Cropland and Hayland Records

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### Cropland and Hayland Worksheets

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Typical Field Operations	Table 1	18
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## Worksheet 1

## Crop Rotation

This worksheet will provide information about your crops and crop rotations for each individual field in your operation.

- Record the Tract and Field identification for **EACH field** identified in your operation as delineated on your map of farm operation and documented on page 8 of your Applicant Eligibility Self Assessment Workbook.
- Record whether each field is Non-irrigated (NI) or Irrigated (IR). Record the rotation of crops grown on each field. Year 1 is the most recent crop grown or growing and years 2-6 are the 5 previous crop years.
- Provide a crop rotation summary description for each field. For perennial crops in rotation, record the number of years the crop is grown. Record the most recent Soil / Tissue / Manure testing you have used to manage nutrients on each field. **Attach copies of these tests to your completed Worksheet 1.**

Refer to each worksheets examples. ( Tract 310 field 1 example follows through the process )

### EXAMPLE: Worksheet 1

### Crop Rotation Worksheet

		<i>Crop Rotation Sequence</i>						
		<i>Year 1 is most recent crop grown or growing</i>						
Tract	Field ID	NI / IRR	1	2	3	4	5	6
486	1	IR	Apples	Apples	Apples	Apples	Apples	Apples
486	2	IR	Est. Alfalfa	Est. Alfalfa	Est. Alfalfa	Est. Alfalfa	New Alfalfa	Timothy
695	1	IR	W Wheat	Dry Beans	Corn	W Wheat	Dry Beans	Corn
695	2	NI	W Wheat	Fallow	W Wheat	Fallow	W Wheat	Fallow
301	1	NI	Sp Wheat	W Wheat	Fallow	Sp Wheat	W Wheat	Fallow

Tract	Field ID	Summary Description of Crop Rotations	Soil/Tissue/Manure Most recent Sample ID (s) and Dates *
486	1	Orchard - Apples	Soil - #1325 – September 2003 Tissue – #753 – June 2005
486	2	Grass (2 yr) and Alfalfa Hay (5 yr)	Soil - #7171 – October 2004
695	1	Wheat-Corn-Beans	Soil - #1544 – September 2004 Manure - #8383 – February 2003
695	2	Wheat-Fallow	Soil – #9932 - April
301	1	Wheat-Spring grain-Fallow	Soil - #43 - April 2003



## Worksheet 2                      Crop Residue Management

This worksheet will provide information regarding crop yields, planting dates and harvest dates for **each field and crop** listed in Worksheet 1.

- Document each crop within the rotation for each field.
- Record the yield per acre per year and units, date of planting, date of harvest and whether residue is removed from field.
- If a perennial hay crop is grown, record the typical seeding date, number of cuttings and per acre yield.
- For tree crops, record the month and year of establishment

Refer to the example and then fill out your information on the worksheet.

### EXAMPLE: Worksheet 2                      Crop Residue Management Worksheet

Field ID	Crop	Planting Date	Harvest Date	Annual Yield / Acre	Residue Removed? Y / N	Residue Removal Method
301-1	W Wheat	15-Sep	15-Aug	50 Bu	N	
301-1	S Wheat	1-Apr	10-Sep	40 Bu	N	
695-2	W Wheat	10-Sep	5-Aug	48 Bu	N	
486-2	Timothy	15-Apr	2 cutting	5 Ton	Y	Baled
486-2	Est Alfalfa	5-Sep	4 cutting	6 Ton	Y	Baled
695-1	Dry Beans	15-May	1-Sep	25 cwt	N	
695-1	Wheat	20-Sep	19-Jul	85 Bu	Y	Baled
695-1	Corn	1-May	15-Oct	200 Bu	N	
486-1	Apples	Mar-99	August	700 boxes	N	



## Worksheet 3

## Field Operations

Record the field operations you use to produce crops in **EACH rotation** you listed on Worksheet 1. Record a summary description of the rotation and the fields where rotation is grown at the top of the worksheet.

- Information needed includes, date of operation, operation description and comments about the field operation.
- If a field is irrigated, use space provided to record the amount of water applied monthly during the rotation.
- **Start with the first tillage after a harvest and finish with a harvest operation.**  
**Table 1** (page 16 of this workbook) provides a list of typical field operations. Select the operation that best represents what you use.
- **Complete a separate worksheet for each rotation.**

Refer to the example and then fill out your information for each of your rotations.

### EXAMPLE: Worksheet 3

### Field Operations Worksheet

Fields for which rotation applies: 301-1			
Typical rotation: W Wheat - Spring Grain - Fallow			Irrigation Summary
Date	Typical Operations	Comments	Month and Amount
15-Oct	Herbicide application	Broadcast in stubble	
1-May	Sweep plow 20-40"		
1-Jun	Sweep plow 20-40"	Apply fertilizer with tillage	
1-Jun	Rodweed		
15-Jul	Rodweed		
20-Aug	Rodweed		
1-Sep	Deep furrow hoe drill 12"		
20-Jul	Harvest wheat	50 Bu	
20-Aug	Herbicide application	Broadcast in stubble	
20-Sep	Chisel 15 inch st. shank		
15-Oct	Chisel sweeps		
20-Mar	Cultivator, Field 6-12 in sweeps		
1-Apr	Deep furrow hoe drill 12"	Band starter fertilizer	
20-May	Herbicide / fertilizer application	Broadcast top dress	
10-Sep	Harvest wheat	40 Bu	



## Worksheet 4

## Crop Nutrient Input

Nutrient management records are required for CSP eligibility. This worksheet contains information on the nutrient applications you have made to **EACH field** in your operation.

- Record Field identification, crop and yield goal, date of application, formulation of material applied, application rate of material, method of application and the **actual lb/ac** of actual N, P and K that was applied. If manure is used, record this in the formulation column.

Refer to the example below and use the blank worksheet to input your specific information.

### EXAMPLE: Worksheet 4

### Crop Nutrient Input Worksheet

Field ID	Crop and Yield Goal	Date	Formulation	Application Rate	Method	N	P	K
301-1	Fallow	1-Jun	Anhydrous	74 lb/ac	Preplant w/ sweeps	61	0	0
301-1	Winter Wheat 50 Bu	1-Sep	10-34-0	10 gal/ac	Starter Band at planting	11	38	0
		15-Mar	32-0-0	6 gal/ac	Topdress	18	0	0
301-1	Spring Wheat 40 Bu	1-Apr	10-34-0	10 gal/ac	Starter Band at planting	11	38	0
		15-May	32-0-0	12 gal/ac	Topdress	41	0	0
486-1	Apples 700 box	15-Feb	20-20-20	200 lb/ac	Broadcast dry	40	40	40
695-1	Dry Beans 25 cwt	15-Apr	11-52-0	120 lb/ac	Preplant dry broadcast	13	62	0
695-1	Corn 185 Bu	1-Mar	Manure	15 ton dry	Pre plant broadcast	45	30	60
		June-July	32-0-0	10 gal/ac (3 times/yr)	In season pivot applications	103	0	0
695-1	Wheat 80 Bu	20-Sep	10-34-0	10 gal/ac	Band starter	11	38	0
		1-Mar	32-0-0	20 gal/ac	Top dress	67	0	0



## Worksheet 5

## Pesticide Management Input

For **EACH field and crop** listed in your rotations, record information about your use of pesticides. Pest management records are required for CSP eligibility.

- Record field identification, crop, date of application, product used and rate.
- Record whether each application was surface applied, soil incorporated or foliar.
- Record whether application was broadcast or banded.
- Record the timing of application as pre-plant, pre-emerge, post emerge or on stubble. Formulation (lb active ingredient per gallon) is part of the trade name for most products. Include the formulation with the trade name when available.

### EXAMPLE: Worksheet 5 Pesticide Management Input Worksheet

Field ID	Crop	Date applied	Product	Method		Timing	Rate units/acre
			Trade Name and Formulation	Broadcast or Banded	Surface applied, Soil incorporated or Foliar	When	How much
695-2	Fallow	15-Jun	Glyphosphate 4L	Broadcast	Foliar	Stubble	1 ½ pt
695-2	Wheat	10-Apr	AIM 2ec	Broadcast	Foliar	Post emerge	1 pt
695-2	Wheat	10-Jun	TILT 45W	Broadcast	Foliar	Post emerge	1 lb
695-1	Corn	15-May	Marksman	Band	Foliar	Pre emerge	1 pt
695-1	Corn	15-May	Lorsban 4L	Pivot broadcast	Surface applied	Post emerge	1 pt
486-1	Apples	May-Aug	Guthion 2L	Band	Foliar	Post emerge	2 qt (3 times/yr)



## Worksheet 6

## Irrigation Water Management

This worksheet includes information on the method and management of irrigation water and description of your irrigation system.

- The following information provides examples of irrigation descriptions needed to complete the System Description column.
- Describe your irrigation systems as completely as possible

### Sprinkler System Descriptions

Mainline size  
Lateral spacing  
Sprinkler head spacing  
Nozzle size  
Revolution/set time  
Pressure regulator rating  
GPM to system  
Operating pressure of line

### Surface System Descriptions

Length of fields  
Furrow/Border Spacing  
Grade at end of field: Flat / Steep /  
Moderate  
Method: Siphon tube, gated pipe, concrete ditch

Refer to the example below for your reference and then fill out your field specific information.

EXAMPLE: Worksheet 6

### Irrigation Water Management Worksheet

Field ID	Irrigation system description	Moisture monitoring Techniques used
486-1	Solid set sprinklers, 600 GPM, 15 degree impact nozzles	Tensiometer
486-2	130 acre center pivot, 6 ft drop nozzles. 800 GPM	Capacitance sensors
695-1	130 acre center pivot, 6 ft drop nozzles. 900 GPM	Hand feel method



# Typical Field Operations

Table 1

Operation	Depth
<b>TILLAGE</b>	
Chisel, straight points	7.0
Chisel, straight points 5 in deep	5.0
Chisel, straight points 12 in deep	12.0
Chisel, straight points 15 in deep	15.0
Chisel, sweep shovel	7.0
Chisel, sweep shovel 5 in depth	5.0
Chisel, twisted shovel	7.0
Cultivator, field 6-12 in shovels	4.0
Cultivator, field 6-12 in sweeps	3.0
Cultivator, field w/ spike points	4.0
Cultipacker, roller	2.0
Cultivator, hipper, disc hiller on beds	
Cultivator, rotary	
Disk, offset, heavy	6.0
Disk, offset, heavy 12 in depth	12.0
Disk, offset, heavy 15 in depth	15.0
Disk, tandem heavy primary operation	6.0
Disk, tandem light finishing	3.0
Disk, tandem secondary operation	5.0
Harrow, coiled tine	2.0
Harrow, heavy	3.0
Harrow, heavy on heavy residue	1.0
Rotary harrow	1.5
Harrow, rotary, light, fluff fragile residue	1.0
Harrow, rotary, light, fluff residue	1.0
Harrow, spike tooth	2.0
Harrow, tine, on beds	2.0
Mulch treader	2.0
Mulch crimper	2.0
Power mulcher, bed conditioner	3.0
Furrow diker	4.0
Do All	4.0
Subsoiler	15.0
Subsoiler bedder (ripper/hipper)	7.0
Subsoiler ripper, 24 to 40 in deep	24.0
Subsoiler, in row	15.0
Subsoiler, wide spacing	12.0
Sweep plow 20-40 in wide	3.0
Sweep plow wider than 40 in w/ mulch treader	3.0
Sweep plow, wider than 40 in	3.0
Sweep, single under row	4.0

Operation	Depth
Plow, disk	6.0
Plow, moldboard	8.0
Plow, moldboard 10 inch depth	10.0
Plow, moldboard 6-7 inch depth	6.0
Plow, moldboard, conservation	8.0
Plow, moldboard, up hill	8.0
Plow, reversible	8.0
Slip plow 48 to 60 in. deep	24.0
Para plow or till	12.0
Rod weeder	3.0
Roller, corrugated packer	1.5
Roller, corrugated packer 6 by 16	3.0
Roller, on beds	1.0
Roller, residue	1.0
Roller, residue incorporator	2.0
Roller, row shaper	1.0
Roller, smooth	1.0
Rolling basket incorporator	1.5
Rotary hoe	1.5
Rotary hoe, residue	1.0
Rototiller, field	4.0
Rototiller, field, add residue	4.0
Rototiller, row cultivator add residue	3.0
Rototiller, row cultivator	3.0
Seedbed finisher	2.0
<b>Residue Managers</b>	
Mower, swather on stubble	NA
Mower, swather on stubble 4"	NA
Mower, swather, windrower	NA
Shredder, flail or rotary - no soil disturbance	NA
Shredder, flail or rotary, add other cover	NA
Shredder, flail or rotary, filberts and pecans	NA
Shredder, rotary mower	NA
Shredder, rotary, regrow veg	NA
Shredder, rotary, remove residue	NA
Stalk chopper, rotary	5.0
Stalk chopper, strip rotary	5.0
Stalk puller	4.0
Stalk puller high disturbance	4.0
<b>APPLICATIONS</b>	
Coulter caddy, w/ fluted coulters	2.0
Fert applic. Coulter, high pressure inject 12 in	6.0
Fert applic. Anhyd knife 12 in	4.0
Fert applic. Deep placement heavy shank	8.0
Fert applic. Shank low disturbance, 12 in	4.0

Table 1

# Typical Field Operations

Operation	Depth
Fert application Surface broadcast	1.0
Fert application Anhyd knife 30 in	4.0
Fert application Strip-till 30 in	5.0
Manure spreader, solid and semi-solid	NA
Manure injector	6.0
Manure, spreader	NA
Sprayer, post emerge	NA
Sprayer, pre-emerge	NA
Sprayer, kill crop	NA
Sprayer, insecticide, post emerge	NA
<b>PLANTERS</b>	
Planter, double disk opener on 12 inch high beds	2.5
Planter, double disk opener on 15 inch high beds	2.5
Planter, double disk opener on 18 inch high beds	2.5
Planter, double disk opener on 8 inch high beds	2.5
Planter, double disk opener	2.5
Planter, double disk opener w/fluted coulter	2.5
Planter, double disk opener, 18 in rows	2.5
Planter, furrow opener in 4 inch deep furrows	4.0
Planter, furrow opener in 6 inch deep furrows	6.0
Planter, furrow opener in 8 inch deep furrows	8.0
Planter, in row subsoiler	15.0
Planter, in row subsoiler low disturbance	12.0
Planter, in row subsoiler w/ residue manager	12.0
Planter, narrow slot w/ smooth or rippled coulter	2.5
Planter, ridge till	2.5
Planter, runner opener	2.5
Planter, small veg seed	1.5
Planter, small veg seed on 8 inch high beds	1.5
Planter, sprig conventional	2.0
Planter, sprig, no-till	2.0
Planter, transplanter, vegetable	6.0
Planter, transplanter, vegetable on 8 inch high beds	6.0
Planter, transplanter, vegetable, no-till	6.0
Planter, tree, mechanical transplanter	10.0
Residue, row cleaner	1.0
Planter, strip till	2.5
Strip till bed conditioner	2.5
Striptiller w/ middlebuster on beds	6.0
<b>Harvest</b>	NA
Harvest, silage	NA
Harvest, grain	NA
Harvest, hay, legume	NA
Harvest, hay, grass	NA

Operation	Depth
Harvest, hand pick	NA
Harvest, vine crops	NA
Harvest, vine crops mechanical	NA
Knife, windrow dry beans	4.0
Graze, continuous	NA
Graze, rotational	NA
Graze, stubble or residue	NA
Bale straw or residue	NA
Burn residue	NA
Burn residue, high intensity	NA
Burn residue, moderate intensity	NA
Burn residue, low intensity	NA
Harvest, killing crop 20 percent standing stubble	
Harvest, killing crop 30 percent standing stubble	
Harvest, killing crop 50 percent standing stubble	
Harvest, killing crop 60 percent standing stubble	
Harvest, killing crop 70 percent standing stubble	
Harvest, legume seed, remove forage	
Harvest, orchard and nut crops	
<b>Drills and seeding</b>	
Drill or air seeder tee slot openers 7-10 in spacing.	2.0
Drill or air seeder, sweep or band opener	2.5
Drill, deep furrow 7-10 in spacing	4.0
Drill, deep furrow 12-18 in spacing	4.0
Drill or air seeder, hoe opener in heavy residue	4.0
Drill or air seeder, hoe/chisel openers 6-12 in spacing	4.0
Drill or air seeder, hoe/chisel openers 12-15 in spacing	4.0
Drill, semi-deep furrow 12 to 18 in spacing	4.0
Drill or air seeder single disk openers 7-10 in spacing.	2.0
Drill or air seeder single disk openers, + fert openers 7-10 in spacing.	2.5
Drill or air seeder, dble disk opener w/ fluted coult 5X10 paired row	2.5
Drill or air seeder, double disk	1.5
Drill or air seeder, double disk w/ fluted coulters	2.0
Drill or air seeder, double disk opener, w/ fert openers	2.5
Drill, double disk, 7-8 in packer C	2.0
Drill, double disk, 7-8" packer C	1.5
Drill, heavy, direct seed, dbl disk opener	3.0
Drill, heavy, direct seed, dbl disk opener w/ row cleaners	3.0
Drill or air seeder, offset double disk openers	2.5
Drill, range	2.0
Seeder corrugated packer	1.0
Aerial seeding	NA
Planting, broadcast seeder	NA

Worksheet 1

## Crop Rotation Worksheet

		<i>Crop Rotation Sequence</i>						
		<i>Year 1 is most recent crop grown or growing</i>						
Tract	Field ID	NI / IR	1	2	3	4	5	6

Tract	Field ID	Summary Description of Crop Rotations	Soil/Tissue/Manure Most recent Sample ID (s) and Dates

**Attach copies of the most recent soil/tissue/manure testing you have used to manage nutrients on EACH field.**

### Crop Rotation Worksheet

		<i>Crop Rotation Sequence</i>						
		<i>Year 1 is most recent crop grown or growing</i>						
Tract	Field ID	NI / IR	1	2	3	4	5	6

Tract	Field ID	Summary Description of Crop Rotations	Soil/Tissue/Manure Most recent Sample ID (s) and Dates

**Attach copies of the most recent soil/tissue/manure testing you have used to manage nutrients on EACH field.**



















# Pastureland and Rangeland Records

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### Pastureland and Rangeland Worksheets

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Feeding Inventory	Worksheet 8	36
Grazing System Documentation	Worksheet 9	38
Grazing Records for Rangeland	Worksheet 10	42

#### **If any of your grazing land fields were:**

Irrigated	Complete Worksheet 6	16
Had Herbicide applied	Complete Worksheet 5	14
Had Nutrients applied	Complete Worksheet 4	12

#### **Reference Materials:**

Determining Animal Unit Equivalent	Table 2	32
Degree of Use Class	Table 3	42
Lower Snake Tucannon - Range Suggested AUM's /Ac	Appendix A	47
Lower Snake Tucannon - Pasture Suggested AUM's /Ac	Appendix B	53

## Worksheet 7

## Livestock Inventory

The livestock inventory and the feed inventory will be used to help you and the conservation planner determine that your grazing system is balanced for the sustainable use of your grazing land.

The animal unit month (AUM) is the best measure for comparing the yearlong and seasonal carrying capacity that the operation can provide to the needs of the livestock on the operation.

- Describe your herd inventory on the **Livestock Inventory** worksheet.
- Calculate feed needs (demands) in total animal unit months (AUMs).

**One animal unit (AU) is equivalent to the intake required for one 1,000 pound mature cow and her calf.**

See Table 2: Determining Animal Unit Equivalent – (AEU).

**An AUM is the amount of forage needed to sustain one animal unit for one month-30 pounds of air-dry feed for one day or 900 pounds of air-dry feed for one month.**

**Table 2 Determining Animal Unit Equivalent**

<b>Animal Weight - lb</b>	<b>AUE</b>
100	0.18
200	0.30
300	0.41
400	0.50
500	0.59
600	0.68
700	0.77
800	0.85
900	0.92
<b>1000</b>	<b>1.00</b>
1100	1.07
1200	1.15
1300	1.22
1400	1.29
1500	1.36
1600	1.42
1700	1.49
1800	1.55

Determine the weight of your kind and class of livestock and enter the number from AUE

**Example 1 Determining Animal Unit Equivalent (AUE)**

<b>Kind, class and weight of animals</b>	<b>(AUE)</b>
1,200 lb Cow w/calf (a calf is < 5 months and/or 450 pounds)	1.15
1400 lb Cow w/ calf (a calf is < 5 months and/or 450 pounds)	1.29
500 lb steer	.59
850 lb Replacement Heifer	.89
1,500 lb bull	1.36
1,500 lb horse	1.36
150 lb Ewe	.24

**Example: Worksheet 7 -**

**Livestock Inventory Worksheet**

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>	<i>Column 4</i>	<i>Column 5</i>	<i>Column 6</i>	<i>Column 7</i>
Livestock Kind &/or Class	Weight (pounds)	Number of Animals	Animal Unit Equivalent (AUE)	Total AUs (Multiply Columns 3 and 4)	Months on Unit	Total AUMs Needed per year (Multiply Columns 5 and 6)
Cow/Calf pair	1200	350	1.15	402.5	12	4830
Bulls	1500	20	1.36	27.2	12	326.4
Replacement Heifer	850	60	0.89	53.4	12	640.8
Horse	1200	5	1.15	5.8	12	69
Steers	1000	100	1	100.0	3	300
<b>Total AUMs:</b>						6166

**Livestock Inventory** worksheet describes your livestock operation by number of animals, animal unit equivalent (AUE), and the number of Animal Units Months (AUMs) needed to meet your livestock forage needs.

Use **Example 1 Determining Animal Unit Equivalent (AUE)** to help you determine the appropriate number for column 4 - Animal Unit Equivalent (AUE) of the worksheet.

Please refer to the example above and then fill out your information on the worksheet.

Worksheet 7

**Livestock Inventory Worksheet**

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>	<i>Column 4</i>	<i>Column 5</i>	<i>Column 6</i>	<i>Column 7</i>
Livestock Kind & / or Class	Weight (pounds)	Number of Animals	Animal Unit Equivalent (AUE)	Total AUs (Multiply Columns 3 and 4)	Months on Unit	Total AUMs Needed per year (Multiply Columns 5 and 6)
<b>Total AUMs:</b>						

Worksheet 8

**Feed Inventory - Forage Production**

The livestock inventory and the forage inventory will be used to help you and the conservation planner determine that your grazing system is balanced for the sustainable use of your grazing land. Please contact your local NRCS conservation planner if you need assistance to determine the average AUMs per acre that your pasture or range produces in a year.

- For each watershed, soil mapping units from the soil survey manuscript have suggested AUMs/acre as a guideline for your use.
- The Suggested AUMs/acre are appendices in this document.

**Example Worksheet 8 Feed Inventory**

**Forage Production Worksheet**

Field or Pasture – Type of Forage	Dominant Soil Map Unit	Grazable Acres	AUMs/Acre	AUMs
Tract 523 - range	37	5000	0.27	1350
Tract 2395 - pasture	9	103	4.5	464
Miller Place - range	56	2000	0.11	220
Home Place – range	PkA	54	1.39	75
<b>TOTAL AUMs:</b>				2109

FORAGE is defined as the plant material an animal grazes on pastures and range land.

The animal unit month (AUM) is the best measure for comparing the yearlong and seasonal forage needs on your operation with the carrying capacity that the operation can provide. The Livestock Inventory worksheet converted animals to AUMs. On the following worksheet, forage will be converted to AUMs for easy comparison with animal demand.

**Forage Production Worksheet**

Field or Pasture – Type of Forage	Dominant Soil Map Unit	Grazable Acres	AUMs/Acre	AUMs
			<b>TOTAL AUMs:</b>	

## Worksheet 9      Grazing System Documentation

Use the following worksheet to describe your grazing management.

- Step 1: Use the field information identified in Worksheet 2 Forage Inventory,
- Step 2: Identify the herd or movement components from Worksheet 1 Livestock Inventory and the number of animals
- Step 3: Mark the corresponding time grazed in each field or pasture (insert in & out dates &/or number of days)

This worksheet needs to show the grazing system for each of herd or movement group for your operation for the past 3 years.

**Use additional sheets to document each year.**

### Example: Worksheet 9      Grazing System Worksheet

Field	Livestock	Number	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Tract 2395	Cow/Calf pair	350	Fed Hay			X						X	Fed Hay	
Tract 523	Cow/Calf pair	350				X	X	X			X			
Miller Place	Cow/Calf pair + bulls	370					X	X	X	X				
Home Place	Heifers	60	Fed Hay			X	X	X					Fed Hay	
Fields 11, 15, & 16	Heifers	60							X	X	X			







## Worksheet 10

# Grazing Records for Range

This worksheet will combine the information you developed in the previous worksheets to demonstrate balance of forage and animals on each field.

Use **Table 3 Degree of Use Class** to evaluate your level of use for the season in the last column of the worksheet.

- At or near the end of the grazing period determine the degree of use from the chart below.
- When properly grazed, the vegetation left will supply adequate cover for soil protection and will maintain or improve the quantity and quality of desirable vegetation (identified as “Moderate” use below).

**Table 3 Degree of Use Class**

Degree of Use	Description
None : 0-15 percent	Little or no use of key forage plants. Only choice areas and choice forage grazed.
Very Light: 16-35 percent	Key forage plants lightly to moderately used. Practically no use of low-value forage plants. Most of accessible range shows grazing. Very little trailing to grazing.
Moderate: 36-65 percent	Key forage plants used correctly for the season of grazing. Some use of low-value forage plants. All fully accessible areas are grazed; some trampling damage may be evident.
Heavy: 66-80 percent	Key forage plants closely cropped. Low value forage plants generally being grazed. Trampling damage is widespread in accessible areas.
Severe: 81-100 percent	Key forage plants are weakened from continual grazing of regrowth and mechanical damage. Low-value forage plants carrying the grazing load and are closely cropped.

## Grazing Records for Range

**Directions:**

- Complete one of these for **EACH** pasture/field Identified in the Pasture Inventory (Worksheet 8b **Feed Inventory Forage Production**).
- Evaluate for the past 3 years. Additional worksheet have been provided.

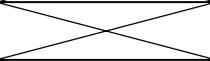
**Example 2 Grazing Record Worksheet**

<b>Pasture/Field:</b> Use the same Names/Numbers used in <b>Forage Production</b> Worksheet				Tract 523				
Use the information supplied in <b>Forage Production</b> Worksheet for Adjacent Cell				<b>AUMs Available:</b> _____ <b>1350</b> _____				
Use the information supplied in <b>Livestock Inventory</b> worksheet for these columns				AUMs Grazed =(Days Grazed x Livestock Number x AUE) / 30				
Year	Livestock Type	Livestock Number	AUE	Date In	Date Out	Days Grazed	AUMs Grazed	Use Class - Percent
2004	Cow/Calf pair	350	1.15	5/1	6/15	46	617	Moderate
2004	Cow/Calf pair	350	1.15	10/1	10/30	30	403	Moderate
2003	Cow/Calf pair	350	1.15	6/15	8/31	77	1033	Moderate
2003	+ Bulls	20	1.36	6/15	8/31	77	70	Moderate
<b>Forage Balance = AUMs Available minus AUMs Grazed    YEAR 1</b>							(1350-1020) = <b>330</b>	
<b>Forage Balance = AUMs Available minus AUMs Grazed    YEAR 2</b>							(1350-1103) = <b>247</b>	

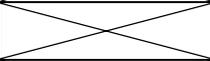
**Grazing Record Worksheet**

<b>Pasture/Field:</b> Use the same Names/Numbers used in <b>Forage Production</b> Worksheet								
Use the information supplied in <b>Forage Production</b> Worksheet for Adjacent Cell				<b>AUMs Available:</b> _____				
Use the information supplied in <b>Livestock Inventory</b> worksheet for these columns			<b>AUMs Grazed</b> =(Days Grazed x Livestock Number x AUE) / 30					
Year	Livestock Type	Livestock Number	AUE	Date In	Date Out	Days Grazed	AUMs Grazed	Use Class - Percent
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 1</b>								<del> </del>
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 2</b>								<del> </del>
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 3</b>								<del> </del>

**Grazing Record Worksheet**

<b>Pasture/Field:</b> Use the same Names/Numbers used in <b>Forage Production</b> Worksheet								
Use the information supplied in <b>Forage Production</b> Worksheet for Adjacent Cell				<b>AUMs Available:</b> _____				
Use the information supplied in <b>Livestock Inventory</b> worksheet for these columns				AUMs Grazed =(Days Grazed x Livestock Number x AUE) / 30				
Year	Livestock Type	Livestock Number	AUE	Date In	Date Out	Days Grazed	AUMs Grazed	Use Class - Percent
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 1</b>								
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 2</b>								
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 3</b>								

**Grazing Record Worksheet**

<b>Pasture/Field:</b> Use the same Names/Numbers used in <b>Forage Production</b> Worksheet								
Use the information supplied in <b>Forage Production</b> Worksheet for Adjacent Cell				<b>AUMs Available:</b> _____				
Use the information supplied in <b>Livestock Inventory</b> worksheet for these columns				AUMs Grazed =(Days Grazed x Livestock Number x AUE) / 30				
Year	Livestock Type	Livestock Number	AUE	Date In	Date Out	Days Grazed	AUMs Grazed	Use Class - Percent
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 1</b>								
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 2</b>								
<b>Forage Balance = AUMs Available minus AUMs Grazed - YEAR 3</b>								

## **APPENDIX A**

### **LOWER SNAKE - TUCANNON WATERSHED 2008 CSP SUGGESTED AUMs/ACRE**

Please contact your local NRCS conservation planner if you need assistance to determine the average AUMs per acre that your pasture or range produces in a year. For each watershed, soil mapping units from the soil survey manuscript have suggested AUMs/acre as a guideline for your use.

## **RANGE**

**RANGE - Lower Snake Watershed Suggested AUMs per Acre based on the WHITMAN COUNTY AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE**

<b>Map Unit Symbol: musym</b>	<b>RANGE AUMs/Acre</b>
4	0.31
5	0.17
6	0.26
13	0.33
15	0.16
16	0.15
18	0.11
19	1.39
26	0.31
27	0.31
28	0.25
31	1.39
35	0.31
36	0.31
37	0.26
39	0.08
40	0.06

<b>Map Unit Symbol: musym</b>	<b>RANGE AUMs/Acre</b>
41	1.04
45	0.09
47	0.14
49	0.26
54	1.39
55	0.33
56	0.31
57	0.15
58	1.74
63	1.04
69	0.38
73	0.36
74	1.04
75	1.04
77	0.15
78	0.26
79	0.20

<b>Map Unit Symbol: musym</b>	<b>RANGE AUMs/Acre</b>
80	0.16
83	0.03
84	0.31
85	0.21
86	0.17
93	0.31
95	0.07
96	0.31
97	0.21
113	0.32
116	0.35
117	0.35
118	0.27
119	0.23
121	0.18
122	0.29
123	0.16

**RANGE - Lower Snake Watershed Suggested AUMs per Acre based on the ASOTIN AND PARTS OF GARFIELD COUNTY AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE**

Map Unit Symbol: musym	RANGE AUMs/Acre
1	0.24
3	0.07
4	0.24
5	0.09
6	0.31
16	0.17
23	0.24
24	0.13

Map Unit Symbol: musym	RANGE AUMs/Acre
26	0.22
47	0.26
50	0.13
51	0.06
55	0.02
56	0.11
57	0.06
58	0.05

Map Unit Symbol: musym	RANGE AUMs/Acre
60	0.18
68	0.13
69	0.08
70	0.23
71	0.17
91	0.23

RANGE - Lower Snake Watershed Suggested AUMs per Acre based on the **COLUMBIA COUNTY** AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE

Map Unit Symbol: musym	RANGE AUMs/Acre
AnF	0.09
AsC	0.31
AsD	0.24
AsE	0.20
AsE3	0.11
AsF	0.16
AtF	0.29
AtF3	0.29
ChB	0.31
ChC	0.31
ChD	0.24
ChE	0.20
CvA	1.56
Du	0.19
EvB2	0.31
EwB	0.31
EyA2	1.04
EzA	1.04
FaA	0.21
FaC2	0.21
FaD2	0.16
FaE	0.13
FeB	0.31
FeC	0.31
FeD	0.24
FeE	0.19
HmA	1.04

Map Unit Symbol: musym	RANGE AUMs/Acre
KIF	0.07
KrG	0.02
KuD	0.12
KvF	0.04
LaF	0.18
LkE	0.12
LvF	0.26
MoA	0.63
OIC	0.42
OID	0.32
OIE	0.27
OnA	1.04
PaD3	0.22
PaE3	0.35
PaF	0.38
PeC	0.56
PeD2	0.44
PeE2	0.37
PkA	1.39
PIA	1.39
PoA	1.39
RcE	0.19
ReB	0.31
ReD	0.13
ReE	0.20
ReF	0.16
RrE	0.11

Map Unit Symbol: musym	RANGE AUMs/Acre
RsD	0.13
RsE	0.16
RsF	0.12
RuD	0.16
RuF	0.10
SpC	0.26
SrD	0.21
TuC	0.63
TuD	0.50
TuE	0.42
TuE3	0.23
TuF	0.29
WhC	0.59
WhD	0.47
WhE	0.40
WhE3	0.22
WhF	0.28
WwB	0.31
WwD	0.13
WwD3	0.13
WwE	0.20
WwE3	0.20
WwF	0.16
WyE	0.19
YmA	0.69
YvA	0.69
YvB	0.69

RANGE - Lower Snake Watershed Suggested AUMs per Acre based on the **GARFIELD COUNTY** AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE

Map Unit Symbol: musym	RANGE AUMs/Acre
3	0.07
5	0.09
50	0.13
51	0.06
56	0.11
57	0.06
58	0.05
60	0.18
71	0.17
AaD	0.28
AaF	0.22
AcE	0.22
AeD	0.31
AIE	0.21

Map Unit Symbol: musym	RANGE AUMs/Acre
AmE	0.40
AoE	0.36
AoF	0.29
ApE	0.36
ApF	0.26
AtC	0.42
AtD	0.32
BeF	0.20
CdE	0.21
ChD2	0.22
ChE2	0.21
Du	0.19
GnF	0.27
GrF	0.16

Map Unit Symbol: musym	RANGE AUMs/Acre
LcF	0.17
LkF	0.11
LIF	0.11
LnF	0.28
OIE	0.27
OIF	0.22
OnE	0.27
OsD	0.25
Ox	0.56
PIE	0.36
Qu	0.21
WaE	0.30
WwE	0.23
WwF	0.25



## **APPENDIX B**

### **LOWER SNAKE - TUCANNON WATERSHED 2008 CSP SUGGESTED AUMs/ACRE**

Please contact your local NRCS conservation planner if you need assistance to determine the average AUMs per acre that your pasture or range produces in a year. For each watershed, soil mapping units from the soil survey manuscript have suggested AUMs/acre as a guideline for your use.

## **PASTURE**

PASTURE - Lower Snake Watershed Suggested AUMs per Acre based on the **WHITMAN COUNTY** AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
1	7.5	
4	2.25	15
5	2.25	15
8	7.5	
9	7.5	
10	7.5	
19	15	
20	15	
21	7.5	
22	7.5	
23	7.5	
24	7.5	
25	7.5	
26	3	18
27	3	18
28	3	18
31	15	
35	2.25	15
38	4.5	
40	6	
41	4.5	19.5
52	5.25	
58	11.25	

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
59	9	
60	7.5	
61	6.75	
64	7.5	
65	7.5	
66	4.5	
67	6	
68	4.5	
70	8.25	
71	8.25	
72	7.5	
75	9	
90	9	18
93	3	
96		22.5
103	9	
104	9	
105	9	
107	9	
108	6.75	
112	4.5	
113	6	

**PASTURE - Lower Snake Watershed Suggested AUMs per Acre based on the ASOTIN AND PARTS OF GARFIELD COUNTY AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE**

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
2	3	
9	4.5	
10	3.75	
11	3	18
12	3	18
13	3	18
14	3	18
15	3	
16	3	
27		18
60	3	
70	3	
76	3	
77	3	
78	3	

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
80	3	
81	2.625	
82	3.75	
83	3.75	
84	3	
87	3.75	
88	3.75	
89	3.75	
90	3	
91	2.625	
98	5.25	
113	9	18
114	9	16.5
115	3	

**PASTURE - Lower Snake Watershed Suggested AUMs per Acre based on the COLUMBIA COUNTY AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE**

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
AtB	7.5	
AtD	7.5	
AuC	6	
AuD2	4.5	
ChB	3	18
ChC	3	18
ChD	3	18
ChE	3	
CvA	15	
CwA	15	
EvB2		19.5
EwB		19.5
HmA	7.5	22.5
LkE	5.25	
MoA	11.25	
PaB	7.5	
PaD	7.5	
PaD3	4.5	

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
PaE	6	
PaE3	4.5	
PeC	12	
PeD2	12	
PeE2	10.5	
PkA	6.75	18
PlA	6	18
PoA	4.5	
TuC	6	
TuD	6	
WhC	10.5	
WhD	10.5	
YmA	3	24
YvA	3	24
YvB	3	24

**PASTURE -Lower Snake Watershed Suggested AUMs per Acre based on the GARFIELD COUNTY AREA SOIL SURVEY DOCUMENT – AVAILABLE ON-LINE AND AT THE LOCAL FIELD OFFICE**

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
AdB	2.25	15
AeD	2.25	15
AmC	4.5	
AmD	3	
AmE	3	
AnC	3.75	
AoB	7.5	
AoD	7.5	
ApB	7.5	
ApD	7.5	
ArB	6	
ArD	4.5	
AtC	5.25	
AtD	3	
CdB	3	18
CdD	3	18
CdE	3	
ChD2	3	18
ChE2	3	
Hr	7.5	22.5
LaC	6	
LaD	5.5	
LaE	5.25	
LaF	5.25	
Mo	11.25	
OIB	4.5	
OID	3	

<b>Map Unit Symbol: musym</b>	<b>PASTURE AUMs/Acre NonIrrigated</b>	<b>PASTURE AUMs/Acre Irrigated</b>
OIE	3	
OIF	3	
OpE2	3	
OsC	3.75	
OsD	3	
PaB	7.5	
PaD	7.5	
PIB	12	
PID	12	
PIE	10.5	
WaC	6	
WaD	6	
WwF	3	
9	4.5	
10	3.75	
60	3	
76	3	
77	3	
80	3	
81	2.625	
83	3.75	
84	3	
88	3.75	
89	3.75	
90	3	
115	3	

