United States Department of Agriculture

# OREGON CONSERVATION STEWARDSHIP PROGRAM

## self-assessment workbook

**THIS WORKBOOK** is intended to help Oregon producers applying for the 2020 Conservation Stewardship Program (CSP) complete a detailed assessment of their agricultural operation. The questions in this workbook will help you determine if your operation meets basic program requirements for CSP; evaluate your current level of conservation stewardship; and explore options for potential conservation enhancements you may wish to pursue through CSP. As you work with your local NRCS field office to submit your CSP application, the information you provide within this workbook will help ensure your CSP application best reflects your needs on-the-farm to address important natural resource concerns.

FOR OREGON USE ONLY

MARCH 2020

United States Department of Agriculture

# CSP Funding Pools

## STATE PRIORITY RESOURCE CONCERN CATEGORIES:

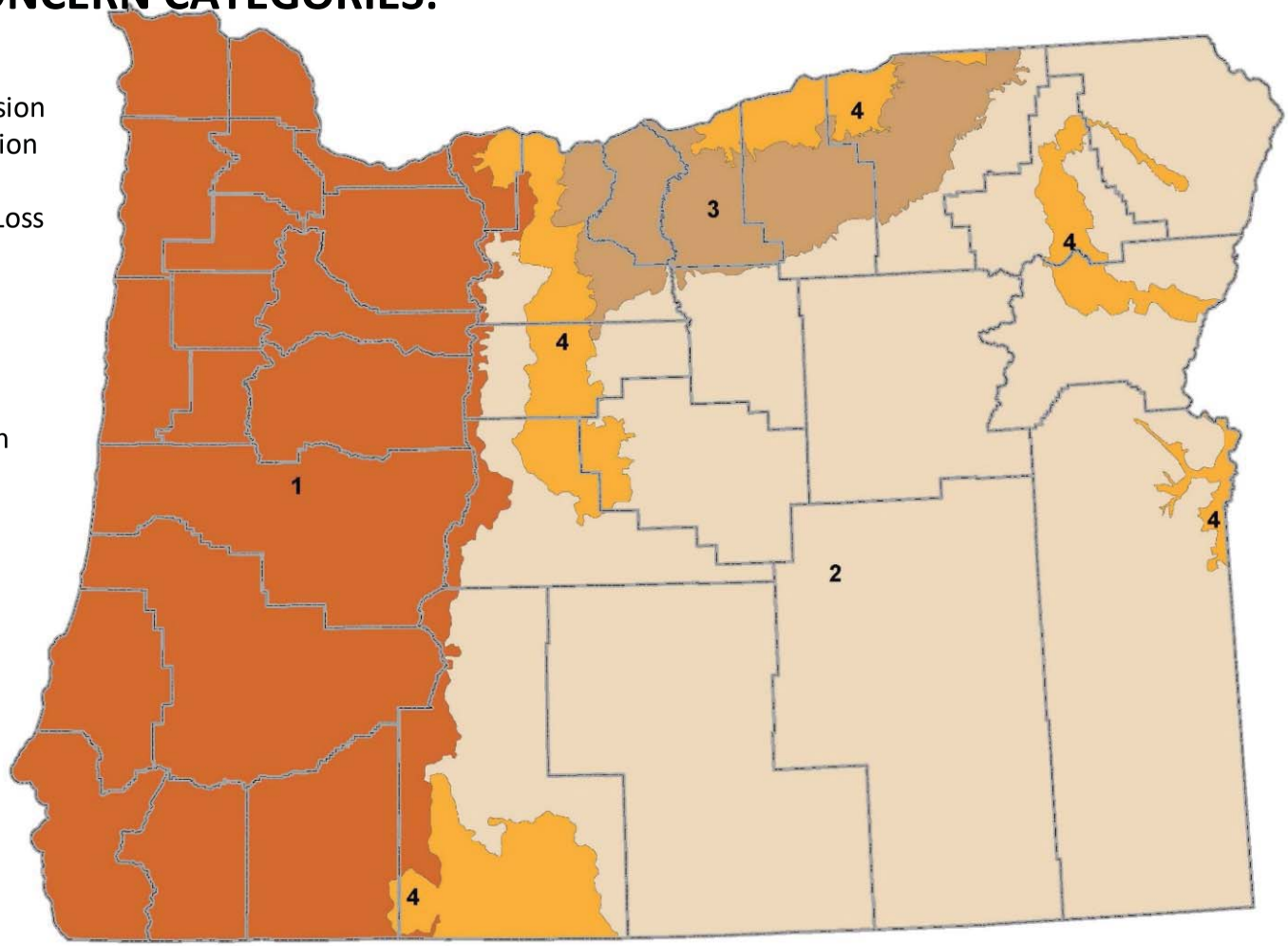
**ZONE 1**
- Wind and Water Erosion
- Soil Quality Limitations
- Field Sediment, Nutrient, & Pathogen loss
- Degraded Plant Condition
- Aauatic Habitat

**ZONE 2**
- Wind and Water Erosion
- Field Sediment, Nutrient, & Pathogen Loss
- Degraded Plant Condition
- Terrestrial Habitat
- Livestock Production Limitation

**ZONE 3**
- Wind and Water Erosion
- Soil Quality Limitations
- Field Sediment, Nutrient, & Pathogen Loss
- Terrestrial Habitat
- Degraded Plant Condition

**ZONE 4**
- Wind and Water Erosion
- Source Water Depletion
- Field Sediment, Nutrient, & Pathogen Loss
- Field Pesticide Loss
- Terrestrial Habitat

**ZONE 5 (Forestry, Statewide)**
- Concentrated Erosion
- Pest Pressure
- Fire Management
- Degraded Plant Condition
- Terrestrial Habitat

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**Thank you** for your interest in CSP and taking the time to complete this workbook!

This workbook is organized in two parts.

**PART 1:** Assessment worksheets and inventories to help you gather information about your land. These pages are organized by land use. **You do not need to complete all of these sheets, only the sheets for land uses you have.**

**PART 2:** CSP Eligibility Evaluation and Enhancement information. Answer the evaluation to the best of your knowledge. **You only need to respond to statements that correspond to your land use. Skip statements that do not apply to you.**

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## PART 1: Worksheets and Land Use Inventories


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## PART 2: Evaluation and Enhancement Information


| | |
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# Assessing Your Land Use

## WHAT KIND OF LAND USES DO YOU MANAGE?

Please check all applicable for land uses within your operation.

- ☐ Cropland (including Hayland), Vineyards, or Orchards
  Note: Cropland includes permanent hayland and hayland as part of a long-term rotation. Pasture that is not cultivated, but mowed for hay, is addressed as a Pastureland land use.
- ☐ Pastureland
- ☐ Rangeland
- ☐ Farmstead, Headquarters, or Livestock Feeding and Handling Areas

The following questions help to determine if the land you wish to enroll in CSP meets basic program requirements.

**RESOURCE CONCERNS TO BE EVALUATED UNDER THIS PROGRAM**

CONCENTRATED EROSION

WIND & WATER EROSION

SOIL QUALITY LIMITATION

FIELD SEDIMENT, NUTRIENT, & PATHOGEN LOSS

FIELD PESTICIDE LOSS

STORAGE & HANDLING OF POLUTANTS

LIVESTOCK PRODUCTION LIMITATION

AIR QUALITY EMMISSIONS

DEGRADED PLANT CONDITION

FIRE MANAGEMENT

PEST PRESSURE

AQUATIC HABITAT

TERRESTRIAL HABITAT

INEFFICIENT ENERGY USE

SOURCE WATER DEPLETION

WEATHER RESILIENCE

# Describe Your Operation

This page shows an EXAMPLE in green.
Your Description begins on the next page.

Describe the fields or portion of your farm or ranch that you are proposing for CSP.

**AG OPERATION NAME:** *Jones Farm and Ranch*

**For the land you wish to enroll in CSP:**

- Describe your Management Type and Crop Rotation
  OR
- Describe your pasture or range rotation and grass type

| Land Use/ Field/Acres | Management Type and Crop Rotation OR Pasture Rotation/Grass Type | Conservation work already installed or in use on this field |
|---|---|---|
| crop<br>Field 1<br>28 ac. | *Direct Seed System*<br>*Winter Wheat-Chem Fallow*<br>*(3 pass chemical fallow)* | *Terraces, Grassed Waterways, Direct Seed* |
| range<br>North End<br>240 ac. | *120 acres*<br>*2 pasture: rest rotation*<br>*Orchardgrass and clover mix* | *Alternative watering sites, buffer, stream crossing, spring burn, salt placement* |

# Describe Your Operation

Describe the fields or portion of your farm or ranch that you are proposing for CSP.

The name or parcel identifier can be whatever term (or number) you use for the operation you wish to enroll in CSP.

**AG OPERATION NAME:** _____

**For the land you wish to enroll in CSP:**

- Describe your Management Type and Crop Rotation
  OR
- Describe your pasture or range rotation and grass type

| Land Use/ Field/Acres | Management Type and Crop Rotation OR Pasture Rotation/Grass Type | Conservation work already installed or in use on this field |
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## Definitions:

**Crop**: Land used primarily for the production and harvest of annual or perennial field, forage, food, fiber, horticultural, orchard, vineyard, or energy crops.

**Forest**: Land on which the historic and/or introduced vegetation is predominantly tree cover managed for production of wood products or non-timber forest products.

**Range:** Land on which the historic and/or introduced vegetation is predominantly grasses, grass-like plants, forbs or shrubs managed as a natural ecosystem. Range land may include natural grasslands, savannas, shrub-lands, tundra, alpine communities, marshes and meadows.

**Pasture**: Land composed of introduced or domesticated native forage species that is used primarily for the production of livestock. Pastures receive periodic renovation and cultural treatments, such as tillage, fertilization, mowing, weed control, and may be irrigated. Pastures are not in rotation with crops.

**Farmstead**: Land used for facilities and supporting infrastructure where farming, forestry, animal husbandry, and ranching activities are often initiated. This may include dwellings, equipment storage, plus farm input and output storage and handling facilities. Also includes land dedicated to the facilitation and production of high-intensity animal agriculture in a containment facility where daily nutritional requirements are obtained from other lands or feed sources.

**Associated Agriculture Lands:** Land associated with farms and ranches that are not purposefully managed for food, forage, or fiber and are typically associated with nearby production or conservation lands. This could include incidental areas, such as idle center pivot corners, odd areas, ditches and watercourses, riparian areas, field edges, seasonal and permanent wetlands, and other similar areas.

**PAMS:** A management strategy for Prevention, Avoidance, Monitoring, and Suppression of pest populations (the PAMS approach).

# Oregon Crop Criteria

## 1. High Residue Producing Crops:

Small grains, winter/spring; Corn, field; Vetch; Corn, sweet; Flax; Eggplant; Camelina; Sorghum

## 2. Low Residue Producing Crops:

Artichoke; Asparagus; Beans, dry; Beans, green; Beets; Broccoli; Buckwheat; Celery; Cauliflower; Carrot; Cantaloupe; Canola; Cabbage; Chicory; Corn, silage; Cucumbers; Garlic; Greens; Lavender; Lettuce; Onions; Peas; Peppers; Potatoes; Pumpkin; Radish; Safflower; Soybean; Spinach; Squash; Sugar beet; Tomato; Turnip; Watermelon
All others:

## The following crops are acceptable for use as deep rooted crops in Oregon:

Alfalfa; Camelina; Canola; Common vetch; Crimson clover; Flax; Forage radish; Hairy vetch; Pine lupine; Rapeseed; Red clover; Safflower; Subclover; Sugar beets; Sunflower; Yellow Sweetclover; Other deep rooted crops with large taproots may be practical/feasible in your area. Contact the NRCS State Agronomist for further guidance.

**EXAMPLE**

| Date | Management Operation | Vegetation Type | Yield Goal | Yield Units |
|---|---|---|---|---|
| 10/1/16 | Seed Winter Wheat- Hoe type openers 12" spacing w/ fert. openers | Winter Wheat | 90 | bu/ac |
| 3/10/2017 | Spray standing wheat-post emergence and tank mix fert. | | | |
| 7/20/2017 | Harvest Winter wheat | | Farm Average **85** | bu/ac |
| 3/10/2018 | Spray Stubble | Volunteer wheat and russian thistles | | |
| 5/25/2018 | Mow Stubble-Custom mowing | | | |
| 6/10/2018 | Spray Stubble | Volunteer wheat, Tumble Mustard, and Russian Thistles | | |
| 9/1/2018 | Spray Stubble | pre-plant burn down | | |
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Custom mow operator used
Sprayer has GPS and autoboom technology

| Date | Management Operation | Vegetation Type | Yield Goal | Yield Units |
|---|---|---|---|---|
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| Date | Management Operation | Vegetation Type | Yield Goal | Yield Units |
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(AGRONOMY TECHNICAL NOTE 20, JULY 2003 - DRAFT)

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**CROPLAND INVENTORY WORKSHEET #3**
CROP NUTRIENT INPUTS

**EXAMPLE**

| Crop | Nutrient 1/ Source (kind) | Application 2/ Rate | Application Method/Date | Application Depth |
|---|---|---|---|---|
| *w. Wheat (Irr.)* | *20-0-0-5* | *100 #/AC* | *Broadcast pre-plant 10/1 – 10/15* | *2" – 3" cover w/cult.* |
| ↓ | *45-0-0-10* | *300#/AC* | *Split appl. In spring Broadcast 150# - 2x* | *Surface* |
| *Established Mint* | *11-48-0* | *10 #N & 30 #P* | *Broadcast late August* | *Surface* |
| ↓ | *Custom Blend* | *80# N 25# P.K.S.* | *Broadcast late Apr. or early May* | *Surface* |
| ↓ | *Aqua* | *100# - 200# N* | *Fertigation w/ Irr. Application* | *Surface* |
| *W. Wheat (nirr.)* | *82-0-0* | *60-80# N + 15# S* | *Late August in fallow-shank* | *6"-8"* |
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If irrigated, has water been tested for nutrients? Yes___ No _X_ If yes, attach results.
1/ e.g., 16-20-0, urea, liquid dairy manure, etc.
2/ Units (lbs/ac., gals/ac., inches/ac.)

**Additional Nutrient Management Information (Attach copies of soil tests, manure test, etc., if applicable**:

*Irrigation water from aquifer with know 5-10 ppm No 3. Need well test to account for N in irr. Application.*

(AGRONOMY TECHNICAL NOTE 20, JULY 2003 - DRAFT)

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**CROPLAND INVENTORY WORKSHEET #3**
**CROP NUTRIENT INPUTS**

| Crop | Nutrient 1/ Source (kind) | Application 2/ Rate | Application Method/Date | Application Depth |
|---|---|---|---|---|
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If irrigated, has water been tested for nutrients? Yes/No If yes, attach results.

1/ e.g., 16-20-0, urea, liquid dairy manure, etc.
2/ Units (lbs/ac., gals/ac., inches/ac.)

Additional Nutrient Management Information (Attach copies of soil tests, manure test, etc., if applicable):

(AGRONOMY TECHNICAL NOTE 20, JULY 2003 - DRAFT)

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**CROPLAND INVENTORY WORKSHEET #4**
PEST MANAGEMENT INPUTS

**EXAMPLE**

| Crop | Target Pests | Control Method 1/ | Pesticide (if used) 2/ | Pesticide Application Rate 3/ | Date/Application Method |
|---|---|---|---|---|---|
| Fallow | Vol. Grain<br>Downy brome | Chemical | Glyphosate | 16 oz. | Early March by air. |
| W. Wheat (nirr) | Downy<br>Brome | | Metribuzin | 0-3 # ai | Fall by Nov. 1 |
| | | | Chlor-<br>sulfuron | 0-4 oz | |
| | broadleafs | | Thifen-<br>sulfuron | 0.4 oz | Spring - air |
| | | | dicamba | 0.12 # ai | |
| | Canada<br>Thistle | | 2, 4 - D | 0.75 # ai | Spring - ground |
| | Stripe<br>fungus | Cultural | --- | --- | Annual crop spring barley |
| Mint | Dock &<br>thistle | Chemical | Stinger | 8 oz. | mid Fall – only if weeds present.<br>Ground appl. |
| | Symphia mint<br>root borer | | Dyfonate<br>Lorsban | 2# ai. | Early Sept., before 9/15 |
| | Strawberry<br>rootweevil | | | | Ground Application. |

1/ Cultural, chemical, mechanical, biological
2/ Common name or trade name
3/ Lbs. or oz. of active ingredient

**Historic field conditions for weeds, disease, insects, other pests and observations, comments on current management:**
*Tract 1311 – fields have increase in stripe fungus w/ residue increase @ planting w/ mulch till.*

(AGRONOMY TECHNICAL NOTE 20, JULY 2003 - DRAFT)

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**CROPLAND INVENTORY WORKSHEET #4**
**PEST MANAGEMENT INPUTS**

| Crop | Target Pests | Control Method 1/ | Pesticide Product Name Active Ingred. (if used) 2/ | Pesticide Applic. Rate 3/ | Applic. Date(s) | Broadcast or Banded 4/ | Application Surface Soil Incorp. Foliar 5/ | Rate Standard Low Ultra Low 6/ |
|---|---|---|---|---|---|---|---|---|
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1/ Cultural, chemical, mechanical, biological
2/ Common name or trade name
3/ Lbs. or oz. of active ingredient
4/ Broadcast – pesticide applied to > 50% of field. Banded – pesticide applied to < 50% of field.
5/ Surface application – applied to soil surface. Soil incorporated – with light tillage or irrigation. Foliar – Sprayed on nearly full crop/weed canopy and/or > 50% residue cover.
6/ Rates: Std. > ¼ lb/acre., Low - > $^{1}/_{10}$ lb/acre and ≤ ¼ lb/acre., Ultra Low - $^{1}/_{10}$ lb/acre.

Historic field conditions for weeds, disease, insects, other pests and observations, comments on current management:

(AGRONOMY TECHNICAL NOTE 20, JULY 2003 - DRAFT)

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**CROPLAND INVENTORY WORKSHEET #5**
IRRIGATION MANAGEMENT AND SYSTEM DESCRIPTION

| Tract Number | Field Number | Type of Irr. System | Crop (s) | Irrigation System Description (from List 1 or 2) | Total Water Applied to Crop | Number Irr. & Amount Water per Irr. |
|---|---|---|---|---|---|---|
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1. Sprinkler System Description:
Mainline Size
Lateral Spacing
Sprinkler Head Spacing
Nozzle Size
Revolution/ Set Time / Speed of Gun
Operating Pressure of Line
Pressure Regulator Rating
Flow GPM to System

2. Surface System:
Length of field(s)
Furrow/Border Spacing
Grade at end of field Flat Moderate Steep
Furrow Method – Siphon tubes, gated pipe, ditch w/ feeders
% water that runs off

Other:
Soil Moisture Monitoring Devices Used:_____
ET (Evapotransporation Predictions Used: _____
Frequency of surface runoff: _____
Frequency of irr. water discharge from tile drains: _____

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# Livestock Inventory

NRCS Natural Resources Conservation Service

The next two worksheets will help you document your herd inventory needs (demands) and corresponding forage and roughage inventory available (supply). This will help you and your conservation planner determine whether your grazing system is balanced for the most sustainable use of your grazing land.

The ***Livestock Inventory Worksheet*** captures an overall description of your livestock operation, including the number of animals and the corresponding Animal Units (au). First, refer to Table G1 below to determine the appropriate Animal Unit Equivalents (aue) for your livestock or wildlife type. For example, the intake required for one 1,000-pound mature cow and her calf equals one Animal Unit (1.0 au). An Animal Unit Month (AUM) is the amount of forage needed to sustain an animal unit, or its equivalent, for one month. Your total AUMs/year (shown with an asterisk* in the example) depicts the total number of AUMs of forage or roughage needed for your operation. Please refer to the example below when entering your information on the following page. If your livestock type is not listed, use the closest Animal Unit Equivalent provided below.

## Table G1: **Animal Unit Equivalents**

| *Type of Livestock* | *Animal Unit Equivalent (aue)* |
|---|---|
| **1,000 lb Cow w/calf** | **1.0 au** |
| **1200 lb Cow w/calf** | **1.15 au** |
| **850 lb Replacement Heifers** | **.9 au** |
| **1,500 lb Bull** | **1.35 au** |
| **1,500 lb Horse** | **1.25 au** |
| **200 lb Ewe/Doe** | **.16 au** |
| **Geese** | **.07 au** |
| **Deer** | **.2 au** |
| **Elk** | **.6 au** |

***EXAMPLE***

## Worksheet G1: **Livestock Inventory, Total AUMs Needed**

| | *1* | *2* | *3* | *4* | *5* | *6* |
|---|---|---|---|---|---|---|
| ***Herd Designation*** | ***Livestock or Wildlife Type*** | ***Number of Animals*** | ***Animal Unit Equivalent (aue)*** ***from Table G1 above*** | ***Total AUs*** **(multiply columns 2 & 3)** | ***Months on Farm*** | ***Total AUMs Needed per year*** **(multiply column 4 by column 5)** |
| *Pairs* | *Cow w/calf (1,200 lb)* | *350* | **X** *1.15 aue* | **=** *403 AUs* | **X** *12* | **=** *4,836 AUMs/year* |
| *Heifers* | *Replacement Heifers* | *30* | *0.9 aue* | *27 AUs* | *12* | *324 AUMs/year* |
| *Wildlife* | *Elk* | *50* | *.6 aue* | *30 AUs* | *3* | *90 AUMs/year* |
| *Bulls* | *Bulls* | *20* | *1.35 aue* | *27 AUs* | *12* | *324 AUMs/year* |
| ***Totals*** | | *450* | | *487* **AUs** | | ***** *5,574* **AUMs/year** |

# Livestock Inventory

Natural Resources Conservation Service NRCS

## Worksheet G1: **Livestock Inventory, Total AUMs Needed**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| ***Herd Designation*** | ***Livestock or Wildlife Type*** | ***Number of Animals*** | ***Animal Unit Equivalent (aue)*** *from Table G1 above* | ***Total AUs*** (multiply columns 2 & 3) | ***Months on Farm*** | ***Total AUMs Needed per year*** (multiply column 4 by column 5) |
| | | **(# animals) X** | **(aue)** | **=** | **AU's X** | **(# months) = AUMs/year** |
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| | ***Totals*** | | | **AUs** | | **AUMs/year** |

***G-3***

# Grazing System Plan

NRCS Natural Resources Conservation Service

The ***Grazing System Plan Worksheet*** documents your grazing management system. Use the information identified in the previous worksheet to complete the field and Herd Designation. This worksheet shows the yearly grazing system for each herd or movement group for your operation. Use additional sheets to document each year.

For the Conservation Security Program, at least two year of records should be completed.

To complete this worksheet, please use the same Herd Designations used on the previous worksheet. Please show the corresponding date in and the date out for the herd, as shown in the example below.

***EXAMPLE***

Worksheet G2: **Grazing System Plan** **YEAR:** *2005*

| Field/ Unit | Acres | Field Type | Herd Designation/ Approximate Numter | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tract 2395* | *30 ac* | *Feedlot* | *Pairs, 350 cows* | *Jan. 1, Fed Hay, March 25* | | | | | | | | | *Oct. 15, Fed Hay, Dec. 27* | | |
| *Miller Place* | *650 ac* | *Pasture* | *Pairs, 350cows* | | | | *April 1* | *---* | *June 15* | | | | | | |
| *Tract 523* | *825 ac* | *Grazed Forest* | *Pairs, 350 cows* | | | | | | *June 15* | *---* | *---* | *---* | *Oct. 15* | | |
| *Home Place* | *845 ac* | *Range* | *Heifers, 30* | *Jan. 1, Fed Hay, March 27* | | | *April 1* | *---* | *June 27* | | | | | | |
| *Fields 11, 15* | *720 ac* | *Range* | *Heifers, 30* | | | | | | | *July 1* | *---* | *Sept. 28* | *Oct. 1, Fed Hay, Dec. 27* | | |
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***G-4***

# Grazing System Plan

Natural Resources Conservation Service NRCS

## Worksheet G2: **Grazing System Plan** YEAR: _____

| Field/ Unit | Acres | Field Type | Herd Designation/ Approximate Numter | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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G-5

# Grazing System Plan

NRCS Natural Resources Conservation Service

Worksheet G2: **Grazing System Plan** **YEAR:** _____

| Field/ Unit | Acres | Field Type | Herd Designation/ Approximate Numter | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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***G-6***

# Pasture Nutrients

NRCS Natural Resources Conservation Service

This worksheet captures information on the nutrient applications on your pastures. In the ***Soil Test*** column, please indicate whether your fertilizer application rate is based on soil test results and how often a test is completed.

Refer to the example below when entering your information on the following page.

***EXAMPLE***

## Worksheet G3: **Pasture Nutrient Input**

| *Forage Grown* | *Field/ Unit* | *Nutrient Source* | *Application Rate lbs/ac* | *Application Method and Date* | *Application Depth* | *Soil/Manure/ Plant Tissue Test* |
|---|---|---|---|---|---|---|
| *Irrigated Orchardgrass* | *3 & 4* | *20-0-0* | *400 lbs/ac* | *Surface Broadcast 3 times* | *----* | *No* |
| *Int. Wheatgrass and Alfalfa* | *6* | *20-10-10* | *150 lbs/ac* | *Surface Broadcast 1 time* | *----* | *Yes. Completed every 2 years* |
| *Tillamook Mix* | *5* | *manure* | *150 lbs N/ac* | *Surface Broadcast 3 times* | *----* | *Soil test every 2 years; manure test last year* |

| | | |
|---|---|---|
| **1. Do you irrigate grazed lands?**<br>***If you irrigate extensively, please complete the *Irrigation System Description* section of the *Conservation Records*.** | ***Yes** ✓ | **No** |
| **2. If irrigated, has irrigation water been tested for nitrates?**<br>***If you have the results from this test, please attach them to this page.*** | **Yes** | **No** ✓ |
| **3. Do you apply nutrients according to NRCS, Extension, or accredited industry recommendations or realistic yield goals?** | **Yes** ✓ | **No** |
| **4. Do you properly dispose of rinse water after cleansing fertilizer application equipment?** | **Yes** ✓ | **No** |

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|---|
| **5. Do you alter your irrigation schedule based on when nutrients and pesticides are applied? How?** |
| *Yes—irrigation applied after animal waste application to incorporate nutrients.* |
| |
| **6. Do you utilize your irrigation system for application of pesticides and fertilizers (chemical/ fertigation)? If yes, how?** |
| *No* |
| |

| |
|---|
| **7. If fields are located near a surface water source, do you have designated set-back areas (buffers, vegetation)? If so, what is the approximate width of the area?** |
| *60 foot buffer with mixture of herbaceous vegetation and grasses.* |
| *Equal amount of native trees and shrubs.* |

# Pasture Nutrients

Natural Resources Conservation Service NRCS

## Worksheet G3: **Pasture Nutrient Input**

| *Forage Grown* | *Field/ Unit* | *Nutrient Source* | *Application Rate lbs/ac* | *Application Method and Date* | *Application Depth* | *Soil/ Plant Tissue Test* |
|---|---|---|---|---|---|---|
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|---|---|---|
| **1. Do you irrigate grazed lands?**<br>***If you irrigate extensively, please complete the *Irrigation System Description* section of the *Conservation Records*.** | ***Yes** | **No** |
| **2. If irrigated, has irrigation water been tested for nitrates?**<br>***If you have the results from this test, please attach them to this page.*** | **Yes** | **No** |
| **3. Do you apply nutrients according to NRCS, Extension, or accredited industry recommendations or realistic yield goals?** | **Yes** | **No** |
| **4. Do you properly dispose of rinse water after cleansing fertilizer application equipment?** | **Yes** | **No** |

| |
|---|
| **5. Do you alter your irrigation schedule based on when nutrients and pesticides are applied? How?** |
| |
| **6. Do you utilize your irrigation system for application of pesticides and fertilizers (chemical/ fertigation)? If yes, how?** |
| |

| |
|---|
| **7. If fields are located near a surface water source, do you have designated set-back areas (buffers, vegetation)? If so, what is the approximate width of the area?** |
| |

***G-9***

# Pasture and Range Pest Management

NRCS Natural Resources Conservation Service

This worksheet documents information on the methods used to control pests and weeds on your operation. The following bullets include additional information to assist in completing this worksheet:

- Under the ***Suppression Method*** column, please include the product name or the active ingredient of the method used to manage the target pest listed, if you know the EPA Registration Number, list that as well.
- Under the ***Pesticide Application Rate*** column, include the pounds or ounces of the active ingredient (ai) per acre.
- In the ***Broadcast or Banded*** column, indicate the pesticide application method: broadcast (more than 50% of field) or banded (less than 50% of field). If these options do not apply, simply indicate that they are not applicable.
- In the ***Application Surface, Soil Incorporated or Foliar Applied*** column, indicate the pesticide application method: surface-applied (applied to soil surface), soil-incorporated (mixed into the soil with light tillage or irrigation), or a foliar application (sprayed on a nearly full crop/weed canopy and/or on a more than 50 percent residue cover). If none of these practices apply, simply indicate that they are not applicable.

Please refer to the example below for reference when entering your information on the following page.

***EXAMPLE***

## Worksheet G4: **Pasture and Range Pest Management**

| Forage Grown | ***Field/ Unit*** | ***Target Pest*** | ***Suppression Method (EPA Reg. #)*** | ***Pesticide Application Rate*** | ***Date Applied*** | ***Broadcast or Banded*** | ***Surface, Soil-Incorp., or Foliar-Applied*** |
|---|---|---|---|---|---|---|---|
| *Irrigated Orchard-Grass* | *3 & 4* | *Canada Thistle* | *Clipping/Mowing* | *None* | ---- | ---- | ---- |
| *Intermediate Wheatgrass and Alfalfa* | *1* | *Sage brush* | *Tebuthiuron 105501* | *1.0 lb/ai/ acre* | *Nov.* | *Broadcast* | *Surface* |

| | | |
|---|---|---|
| **1. Do you apply pesticides based on field scouting, treatment thresholds and follow-up evaluations?** | **Yes** ✓ | **No** |
| **2. Do you replace worn nozzle tips, cracked hoses and faulty gauges?** | **Yes** ✓ | **No** |
| **3. Do you properly dispose of rinse water after cleansing pesticide application equipment?** | **Yes** ✓ | **No** |

| |
|---|
| **4. If fields are located near a surface water source, do you have designated set-back areas (buffers, vegetation)? If so, what is the approximate width of the area?** |
| *60 foot buffer with mixture of herbaceous vegetation and grasses.* |
| *Equal amount of native trees and shrubs.* |

# Pasture and Range Pest Management

Natural Resources Conservation Service NRCS

## Worksheet G4: **Pasture and Range Pest Management**

| *Forage Grown* | *Field/ Unit* | *Target Pest* | *Suppression Method (EPA Reg. #)* | *Pesticide Application Rate* | *Date Applied* | *Broadcast or Banded* | *Surface, Soil-Incorp., or Foliar-Applied* |
|---|---|---|---|---|---|---|---|
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| | | |
|---|---|---|
| **1. Do you apply pesticides based on field scouting, treatment thresholds and follow-up evaluations?** | **Yes** | **No** |
| **2. Do you replace worn nozzle tips, cracked hoses and faulty gauges?** | **Yes** | **No** |
| **3. Do you properly dispose of rinse water after cleansing pesticide application equipment?** | **Yes** | **No** |

| |
|---|
| **4. If fields are located near a surface water source, do you have designated set-back areas (buffers, vegetation)? If so, what is the approximate width of the area?** |
| |

***G-11***

# Pasture Irrigation Management

NRCS Natural Resources Conservation Service

This ***Pasture Irrigation Management Worksheet*** documents information on your irrigation method. If you irrigate, please complete the ***Irrigation System Description*** portion of the Conservation Records Book in addition to the worksheet below.

Please refer to the example below when entering your information on the following page.

***EXAMPLE***

## Worksheet G5: **Pasture Irrigation Management**

| ***Forage Grown*** | ***Field/Unit*** | ***Irrigation Dates*** | ***Irrigation Application*** |
|---|---|---|---|
| *Alfalfa* | *5 & 6* | *5/15 - 7/15* | *20 in.* |
| *Meadow Foxtail* | *7* | *5/1 - 7/15* | *May—4 in.*<br>*June—6 in.*<br>*July—7 in.* |

***G-12***

# Pasture Irrigation Management

Natural Resources Conservation Service NRCS

## Worksheet G5: **Pasture Irrigation Management**

| *Forage Grown* | *Field /Unit* | *Irrigation Dates* | *Irrigation Application* |
|---|---|---|---|
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| **Additional Comments or Observations:** |
|---|
| |

***G-13***

# Livestock Inventory

NRCS Natural Resources Conservation Service

The next two worksheets will help you document your herd inventory needs (demands) and corresponding forage and roughage inventory available (supply). This will help you and your conservation planner determine whether your grazing system is balanced for the most sustainable use of your grazing land.

The ***Livestock Inventory Worksheet*** captures an overall description of your livestock operation, including the number of animals and the corresponding Animal Units (au). First, refer to Table G1 below to determine the appropriate Animal Unit Equivalents (aue) for your livestock or wildlife type. For example, the intake required for one 1,000-pound mature cow and her calf equals one Animal Unit (1.0 au). An Animal Unit Month (AUM) is the amount of forage needed to sustain an animal unit, or its equivalent, for one month. Your total AUMs/year (shown with an asterisk* in the example) depicts the total number of AUMs of forage or roughage needed for your operation. Please refer to the example below when entering your information on the following page. If your livestock type is not listed, use the closest Animal Unit Equivalent provided below.

## Table G1: **Animal Unit Equivalents**

| *Type of Livestock* | *Animal Unit Equivalent (aue)* |
|---|---|
| **1,000 lb Cow w/calf** | **1.0 au** |
| **1200 lb Cow w/calf** | **1.15 au** |
| **850 lb Replacement Heifers** | **.9 au** |
| **1,500 lb Bull** | **1.35 au** |
| **1,500 lb Horse** | **1.25 au** |
| **200 lb Ewe/Doe** | **.16 au** |
| **Geese** | **.07 au** |
| **Deer** | **.2 au** |
| **Elk** | **.6 au** |

***EXAMPLE***

## Worksheet G1: **Livestock Inventory, Total AUMs Needed**

| | *1* | *2* | *3* | *4* | *5* | *6* |
|---|---|---|---|---|---|---|
| ***Herd Designation*** | ***Livestock or Wildlife Type*** | ***Number of Animals*** | ***Animal Unit Equivalent (aue)*** ***from Table G1 above*** | ***Total AUs*** **(multiply columns 2 & 3)** | ***Months on Farm*** | ***Total AUMs Needed per year*** **(multiply column 4 by column 5)** |
| *Pairs* | *Cow w/calf (1,200 lb)* | *350* | **X** *1.15 aue* | **=** *403 AUs* | **X** *12* | **=** *4,836 AUMs/year* |
| *Heifers* | *Replacement Heifers* | *30* | *0.9 aue* | *27 AUs* | *12* | *324 AUMs/year* |
| *Wildlife* | *Elk* | *50* | *.6 aue* | *30 AUs* | *3* | *90 AUMs/year* |
| *Bulls* | *Bulls* | *20* | *1.35 aue* | *27 AUs* | *12* | *324 AUMs/year* |
| ***Totals*** | | *450* | | *487* **AUs** | | ***** *5,574* **AUMs/year** |

# Livestock Inventory

Natural Resources Conservation Service NRCS

## Worksheet G1: **Livestock Inventory, Total AUMs Needed**

| | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| ***Herd Designation*** | ***Livestock or Wildlife Type*** | ***Number of Animals*** | ***Animal Unit Equivalent (aue)*** *from Table G1 above* | ***Total AUs*** (multiply columns 2 & 3) | ***Months on Farm*** | ***Total AUMs Needed per year*** (multiply column 4 by column 5) |
| | | (# animals) X | (aue) = | AU's X | (# months) = | AUMs/year |
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| | ***Totals*** | | | AUs | | AUMs/year |

***G-3***

# Grazing System Plan

NRCS Natural Resources Conservation Service

The ***Grazing System Plan Worksheet*** documents your grazing management system. Use the information identified in the previous worksheet to complete the field and Herd Designation. This worksheet shows the yearly grazing system for each herd or movement group for your operation. Use additional sheets to document each year.

For the Conservation Security Program, at least two year of records should be completed.

To complete this worksheet, please use the same Herd Designations used on the previous worksheet. Please show the corresponding date in and the date out for the herd, as shown in the example below.

***EXAMPLE***

## Worksheet G2: **Grazing System Plan** **YEAR:** *2005*

| ***Field/ Unit*** | ***Acres*** | ***Field Type*** | ***Herd Designation/ Approximate Numter*** | ***Jan*** | ***Feb*** | ***Mar*** | ***Apr*** | ***May*** | ***Jun*** | ***Jul*** | ***Aug*** | ***Sep*** | ***Oct*** | ***Nov*** | ***Dec*** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Tract 2395* | *30 ac* | *Feedlot* | *Pairs, 350 cows* | *Jan. 1, Fed Hay, March 25* | | | | | | | | | *Oct. 15, Fed Hay, Dec. 27* | | |
| *Miller Place* | *650 ac* | *Pasture* | *Pairs, 350cows* | | | | *April 1* | *---* | *June 15* | | | | | | |
| *Tract 523* | *825 ac* | *Grazed Forest* | *Pairs, 350 cows* | | | | | | *June 15* | *---* | *---* | *---* | *Oct. 15* | | |
| *Home Place* | *845 ac* | *Range* | *Heifers, 30* | *Jan. 1, Fed Hay, March 27* | | | *April 1* | *---* | *June 27* | | | | | | |
| *Fields 11, 15* | *720 ac* | *Range* | *Heifers, 30* | | | | | | | *July 1* | *---* | *Sept. 28* | *Oct. 1, Fed Hay, Dec. 27* | | |
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***G-4***

G-5

Natural Resources Conservation Service NRCS

# Grazing System Plan

## Worksheet G2: **Grazing System Plan** YEAR: _____

| Field/ Unit | Acres | Field Type | Herd Designation/ Approximate Numter | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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# Grazing System Plan

NRCS Natural Resources Conservation Service

Worksheet G2: **Grazing System Plan** **YEAR:** _____

| Field/ Unit | Acres | Field Type | Herd Designation/ Approximate Numter | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
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***G-6***

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# Forest Stand Description

The following information will provide your conservation planner with the information needed to determine the condition of and conservation opportunities on your forest stand.

***EXAMPLE***

## Worksheet F1: **Forest Stand Description**

| ***List Your Management Units*** | | | | | | |
|---|---|---|---|---|---|---|
| ***Management Units*** **Number or Name** | ***Total Acres*** | ***Forest Type*** | ***Age*** | | ***Last Harvest*** | |
| | | | ***Uneven Aged*** **(Enter age of oldest component)** | ***Even Aged (Enter Year Planted)*** | ***Kind*** **(PCT*, Selection, Clearcut)** | ***Date*** |
| *North Unit* | *35* | *Douglas Fir* | *-----* | *1987* | *PCT* | *2000* |
| *Unit 5* | *85* | *Douglas Fir* | *60* | *-----* | *Selection* | *1994* |
| | | | | | | |

* PCT is Pre-Commercial Thin

# Forest Stand Description

The following information will provide your conservation planner with the information needed to determine the condition of and conservation opportunities on your forest stand.

## Worksheet F1: **Forest Stand Description**

| ***List Your Management Units*** | | | | | | |
|---|---|---|---|---|---|---|
| ***Management Unit(s)*** *Number or Name* | ***Total Acres*** | ***Forest Type*** | ***Age*** | | ***Last Harvest*** | |
| | | | ***Uneven Aged*** *(Enter age of oldest component)* | ***Even Aged (Enter Year Planted)*** | ***Kind*** *(PCT*, Selection, Clearcut)* | ***Date*** |
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* PCT is Pre-Commercial Thin

# Forest Management Plan & Activities

***EXAMPLES***

## Worksheet F2: **Forest Management Plan**

| ***Forest Management Plan*** | | ***Yes*** | ***No*** |
|---|---|---|---|
| **Do you have a forest management plan developed?** | | ✓ | |
| ↳ **If "YES," is it more than ten years old?** | | | ✓ |
| ↳ **If "YES," who was it developed by? When?** | *Oregon Department of Forestry* | **Year:** | *1996* |
| **Has your plan been implemented?** | | ✓ | |

## Worksheet F3: **Forest Management Activities**

| ***Forest Management Activities*** ***(occurring in the last ten years)*** | | ***Management Unit*** | ***Year*** |
|---|---|---|---|
| **Have you applied fertilizer to your forest stand?** | *YES* | *North Unit* | *1998* |
| ↳ **Name and Amount of Fertilizer Applied:** | *300 lbs, Urea (46-0-0)* | | |
| **Have you conducted a prescribed burn?** | *NO* | *N/A* | |
| **Was grass seeded after logging?** | *YES, only on skid trails* | *5* | *1994* |
| **Are there areas of active erosion?** | *NO* | | |
| ↳ **Describe:** | | | |
| **Is water runoff along roads managed?** | *YES* | *North Unit, 5* | |
| ↳ **If "YES," how?** | *Water bars* | | |
| **Are roads surfaced?** | *YES* | *5* | |
| ↳ **If "YES," how?** | *Only on main haul roads* | | |
| **Do livestock graze in the forest?** ***(If yes, complete the Grazing Lands Packet)*** | *YES* | *North Unit* | |
| **Is wildlife actively managed?** | *NO* | | |
| **Were management activities completed in the last 5 years?** | *YES* | *Unit 5, North Unit* | |
| ↳ **List Activity & Year:** | *Limited pruning completed when PCT was finished. Road maintenance is completed yearly.* | | |
| **Are management activities planned in the next 5 years?** | *YES* | *Unit 5, North Unit* | *2006-2008* |
| ↳ **List Activity & Year:** | *Additional Pre-Commercial Thinning, Road grading, water bar installation* | | |

## Worksheet F4: **Forest Management on Your Farm Map**

| ***Please indicate the following on the Farm Map included in the first section of your Conservation Records:*** | | | | |
|---|---|---|---|---|
| • Forest Unit | • Fire Breaks | • Log Landings | • Forest Roads | • Culverts |

# Forest Management Plan & Activities

## Worksheet F2: **Forest Management Plan**

| *Forest Management Plan* | | *Yes* | *No* |
|---|---|---|---|
| **Do you have a forest management plan developed?** | | | |
| **↳ If "YES," is it more than ten years old?** | | | |
| **↳ If "YES," who was it developed by? When?** | | **Year:** | |
| **Has your plan been implemented?** | | | |

## Worksheet F3: **Forest Management Activities**

| *Forest Management Activities (occurring in the last ten years)* | | | *Management Unit* | *Year* |
|---|---|---|---|---|
| **Have you applied fertilizer to your forest stand?** | **YES** | **NO** | | |
| **↳ Name and Amount of Fertilizer Applied:** | | | | |
| **Have you conducted a prescribed burn?** | **YES** | **NO** | | |
| **Was grass seeded after logging?** | **YES** | **NO** | | |
| **Are there areas of active erosion?** | **YES** | **NO** | | |
| **↳ Describe:** | | | | |
| **Is water runoff along roads managed?** | **YES** | **NO** | | |
| **↳ If "YES," how?** | | | | |
| **Are roads surfaced?** | **YES** | **NO** | | |
| **↳ If "YES," how?** | | | | |
| **Do livestock graze in the forest?** *(If yes, complete the Grazing Lands Packet)* | **YES** | **NO** | | |
| **Is wildlife actively managed?** | **YES** | **NO** | | |
| **Were management activities completed in the last 5 years?** | **YES** | **NO** | | |
| **↳ List Activity & Year:** | | | | |
| **Are management activities planned in the next 5 years?** | **YES** | **NO** | | |
| **↳ List Activity & Year:** | | | | |

## Worksheet F4: **Forest Management on Your Farm Map**

| *Please indicate the following on the Farm Map included in the first section of your Conservation Records:* | | | | |
|---|---|---|---|---|
| • Forest Unit | • Fire Breaks | • Log Landings | • Forest Roads | • Culverts |

# Associated Agricultural Land

**Sheet and rill erosion**

| | |
|---|---|
| Site is stable and without visible signs of active erosion. | |
| Site is NOT stable and has visible signs of active erosion. | |

**Classic gully erosion**

| | |
|---|---|
| No active gully erosion observed. | |
| Active gully erosion is observed. | |

**Organic matter depletion**

| | |
|---|---|
| Soil is bare, vegetation and litter are sparse. | |
| Ground is partly covered with plant litter in various stages of decomposition, herbaceous vegetation, and/or a biological crust that protects the soil. | |
| The ground is thoroughly covered with plant litter in various stages of decomposition, herbaceous vegetation, and/or a biological crust that protects the soil. | |

**Soil organism habitat loss or degradation**

| | |
|---|---|
| The ground is covered with plant litter in various stages of decomposition, herbaceous vegetation, and/or a biological crust that protects the soil. | |
| Soil organic matter depletion exist and is uncontrolled. | |

**Wind erosion**

| | |
|---|---|
| site is stable and without visible signs of active erosion. | |
| Site is NOT stable and has visible signs of active erosion. | |

**Bank erosion**

| | |
|---|---|
| Not applicable | |
| Banks are protected by roots of natural vegetation, wood, and rock. No fabricated structures present on bank. No excessive erosion or bank failures. No recreational or livestock access. | |
| Banks are protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number of structures present on bank. Evidence of erosion or bank failures, some with reestablishment of vegetation. Recreational use and/or grazing do not negatively impact bank condition. | |
| There is very little protection of banks by roots of natural wood, vegetation, or rock. Fabricated structures cover more than half of reach or entire bank. Excessive bank erosion or active bank failures. Recreational and/or livestock use are contributing to bank instability. | |
| There is no bank protection with roots, wood, rock, or vegetation. Riprap and/or other structures dominate banks. Numerous active bank failures. Recreational and/or livestock use are contributing to bank instability. | |

# Associated Agricultural Land

**Risk and Hazard of Wildfire**

| | |
|---|---|
| Accumulation of plant biomass is being managed to reduce the potential risk of wildfire | |
| The potential for wildfire hazard from biomass accumulation exists, but site resources are not at a risk or value level to require fire management | |
| The potential for wildfire hazard from biomass accumulation exists | |
| Significant wildfire hazard from biomass accumulation exists | |

**Compation**

| | |
|---|---|
| No observed evidence of compaction, such as ponding, stunted plant growth, or root growth limitation. | |
| Evidence of compaction, such as ponding, stunted plant growth, or root growth limitation is observed. | |

**Surface salinization risk**

| | |
|---|---|
| Soil or irrigation water test report indicates salinity/sodicity is within suitable range for desired plants OR No plant tissue salt injury symptoms are apparent. | |
| Observation of mineral crust on the soil surface; OR Soil or irrigation water test report indicates a salinity/sodicity impairment for desired plants; OR Observation of plant tissue salt injury symptoms including necrosis (burning) of leaf margins, stunted plants, wilting and in severe cases, plant death. | |
| No evidence of existing salinity/sodicity problem | |

**Aggregate instability**

| | |
|---|---|
| Evidence of poor aggregate stability, such as surface crusting, lack of soil structure | |
| No evidence of poor aggregate stability, such as surface crusting, lack of soil structure | |

# Associated Agricultural Land

**Surface water depletion condition**

| | |
|---|---|
| AAL activities do not affect water withdrawals. | |
| AAL activities are commensurate with available water supplies and/or meet state/local regulations. | |
| AAL activities contribute to depletion and/or do not meet state/local regulations. | |

**Groundwater depletion condition**

| | |
|---|---|
| AAL activities do not affect water withdrawals. | |
| AAL activities are commensurate with available water supplies and/or meet state/local regulations. | |
| AAL activities contribute to depletion and/or do not meet state/local regulations. | |

**Integrated Pest Management (IPM)**

| | |
|---|---|
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs and manage pesticide environmental risk, including Windows Pesticide Screening Tool results for risks to water quality. | |
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs. | |
| An IPM System is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs, and pesticide drift is minimized with drift reducing spray technologies. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to address production needs and the development of pest resistance is carefully managed. | |
| Pests (including invasive plants) are managed to meet production needs without the use of pesticides. | |
| Pests (including Invasive plants) are not managed (no pesticides are used) so production may be reduced beyond tolerable limits. | |

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# CROP

**Cover/Residue/Biomass Crop Rotation Credit**

| | |
|---|---|
| Inversion tillage w/ no residue cover. | |
| Minimal Tillage with little cover/Undisturbed bare soil prevalent. | |
| No-Till with Chemical fallow/Grass rotations w/ occasional tillage. | |
| Perennial systems that maintain living plants. | |

**Classic gully erosion condition**

| | |
|---|---|
| No active gully erosion observed | |
| Active gully erosion is observed | |

**Ephemeral gully erosion condition**

| | |
|---|---|
| No ephermal gullies observed | |
| Ephemeral gullies are observed | |

**Organic Matter Depletion (Crop)** (Note - Durable residue examples inlcude hay, perennials, corn, and seeds and cereals)

| | |
|---|---|
| Generally fallow, or crops with no durable residue or cover crops, with up to full field tillage. | |
| Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with up to full field tillage. | |
| Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with reduced tillage or no-till. | |

**Soil organism habitat loss or degradation (Crop)** (Note - Durable residue examples inlcude hay, perennials, corn, and seeds and cereals)

| | |
|---|---|
| Generally fallow, or crops with no durable residue or cover crops, with up to full field tillage. | |
| Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with up to full field tillage. | |
| Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with reduced tillage or no-till. | |

# CROP

**Aggregate instability (Crop)** (Note - Durable residue examples inlcude hay, perennials, corn, and seeds and cereals)

| | |
|---|---|
| Generally fallow, or crops with no durable residue or cover crops, with up to full field tillage. | |
| Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with up to full field tillage. | |
| Generally, crops with durable residue or cover crops, or part of the rotation in high residue conserving use crops, with reduced tillage or no-till. | |

**Bank Erosion**

| | |
|---|---|
| Not applicable | |
| Banks are protected by roots of natural vegetation, wood, and rock. No fabricated structures present on bank. No excessive erosion or bank failures. No recreational or livestock access. | |
| Banks are protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number of structures present on bank. Evidence of erosion or bank failures, some with reestablishment of vegetation. Recreational use and/or grazing do not negatively impact bank condition. | |
| There is very little protection of banks by roots of natural wood, vegetation, or rock. Fabricated structures cover more than half of reach or entire bank. Excessive bank erosion or active bank failures. Recreational and/or livestock use are contributing to bank instability. | |
| There is no bank protection with roots, wood, rock, or vegetation. Riprap and/or other structures dominate banks. Numerous active bank failures. Recreational and/or livestock use are contributing to bank instability. | |

**Compaction**

| | |
|---|---|
| No observed evidence of compaction, such as ponding, stunted plant growth, or root growth limitation. | |
| Evidence of compaction, such as ponding, stunted plant growth, or root growth limitation is observed. | |

**Surface salinization risk**

| | |
|---|---|
| Soil or irrigation water test report indicates salinity/sodicity is within suitable range for desired plants OR No plant tissue salt injury symptoms are apparent. | |
| Observation of mineral crust on the soil surface; OR Soil or irrigation water test report indicates a salinity/sodicity impairment for desired plants; OR Observation of plant tissue salt injury symptoms including necrosis (burning) of leaf margins, stunted plants, wilting and in severe cases, plant death. | |
| No evidence of existing salinity/sodicity problem | |

# CROP

**Crop Plant Productivity**

| | |
|---|---|
| 100% of potential Crop yield based on soil, climate, and fertility (10 yr. avg. or county avg.) | |
| >75% of potential Crop yield based on soil, climate, and fertility (10 yr. avg.) | |
| >50% of potential Crop yield based on soil, climate, and fertility (10 yr. avg.) | |
| >20% of potential Crop yield based on soil, climate, and fertility (10 yr. avg.) | |
| ≤20% of potential Crop yield based on soil, climate, and fertility (10 yr. avg.) | |

**Crop Plant Health**

| | |
|---|---|
| Plants are healthy | |
| Evidence of nutrient deficiency is minimal | |
| Evidence of both nutrient deficiency and disease | |
| Evidence of plant health damage | |

**Surface water depletion condition**

| | |
|---|---|
| Activities on cropland do not affect water withdrawals. | |
| Activities on cropland are commensurate with available water supplies and/or meet state/local regulations. | |
| Activities on cropland contribute to depletion and/or do not meet state/local regulations. | |

**Groundwater depletion condition**

| | |
|---|---|
| Activities on cropland do not affect water withdrawals. | |
| Activities on croplandare commensurate with available water supplies and/or meet state/local regulations. | |
| Activities on cropland contribute to depletion and/or do not meet state/local regulations. | |

# CROP

**Integrated Pest Management (IPM)**

| | |
|---|---|
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs and manage pesticide environmental risk, including Windows Pesticide Screening Tool results for risks to water quality. | |
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs. | |
| An IPM System is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs, and pesticide drift is minimized with drift reducing spray technologies. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to address production needs and the development of pest resistance is carefully managed. | |
| Pests (including invasive plants) are managed to meet production needs without the use of pesticides. | |
| Pests (including Invasive plants) are not managed (no pesticides are used) so production may be reduced beyond tolerable limits. | |

**Nutrient Application**

| | |
|---|---|
| No organic or inorganic nutrients are applied mechanically or by hand. Note that this does not include nutrients deposited by grazing animals when these are the only nutrients applied to cropland. | |
| Organic or inorganic nutrients are applied to cropland mechanically or by hand. | |

**Manure, compost, or biosolid application**

| | |
|---|---|
| Not applicable | |
| Left on the surface without incorporation | |
| Injected or incorporated into the soil soon after application | |

# FARMSTEAD

**Classic gully erosion condition**

| | |
|---|---|
| No active gully erosion observed | |
| Active gully erosion is observed | |

**Bank Erosion**

| | |
|---|---|
| Not applicable | |
| Banks are protected by roots of natural vegetation, wood, and rock. No fabricated structures present on bank. No excessive erosion or bank failures. No recreational or livestock access. | |
| Banks are protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number of structures present on bank. Evidence of erosion or bank failures, some with reestablishment of vegetation. Recreational use and/or grazing do not negatively impact bank condition. | |
| There is very little protection of banks by roots of natural wood, vegetation, or rock. Fabricated structures cover more than half of reach or entire bank. Excessive bank erosion or active bank failures. Recreational and/or livestock use are contributing to bank instability. | |
| There is no bank protection with roots, wood, rock, or vegetation. Riprap and/or other structures dominate banks. Numerous active bank failures. Recreational and/or livestock use are contributing to bank instability. | |

**Surface water depletion condition**

| | |
|---|---|
| Farmstead activities do not affect water withdrawals. | |
| Farmstead activities are commensurate with available water supplies and/or meet state/local regulations. | |
| Farmstead activities contribute to depletion and/or do not meet state/local regulations. | |

**Groundwater depletion condition**

| | |
|---|---|
| Farmstead activities do not affect water withdrawals. | |
| Farmsteadactivities are commensurate with available water supplies and/or meet state/local regulations. | |
| Farmstead activities contribute to depletion and/or do not meet state/local regulations. | |

# FARMSTEAD

**Resource Concern Risk Categories for Inefficient Energy Use - Equipment and Facilities**

| | |
|---|---|
| Does not apply; no appreciable amount of supplemental energy is used for agricultural operations under typical conditions. | |
| Energy use is appropriately managed and the potential for a Resource Concern is negligible. | |
| Energy use is controlled well. | |
| Energy use is marginally controlled. | |
| Energy use is poorly controlled. | |
| Energy use is effectively uncontrolled. | |

**Energy Use Intensity for Energy Resource Concern Risk Categories for Inefficiency – Farming/Ranching Practices and Field Operations**

| | |
|---|---|
| Does not apply; no appreciable amount of supplemental energy is used for agricultural operations under typical conditions. | |
| Energy use is appropriately managed and the potential for a Resource Concern is negligible. | |
| Energy use is controlled well. | |
| Energy use is marginally controlled. | |
| Energy use is poorly controlled. | |
| Energy use is effectively uncontrolled. | |

**Petroleum products stored and handled on the Farmstead**

| | |
|---|---|
| Not applicable | |
| Yes - ARE stored and handled on the PLU, but secondary containment is NOT in place. | |
| Yes - ARE stored and handled on the PLU and secondary containment IS in place that meets the minimum planning criteria. | |

**Agrichemical Product Storage (Pesticides and Fertilizers)**

| | |
|---|---|
| Not applicable | |
| Yes - ARE stored, mixed, loaded, or handled on PLU AND secondary containment is NOT in place | |
| Yes - ARE stored, mixed, loaded, or handled on PLU AND secondary containment IS in place | |

# FARMSTEAD

**Concentrated nutrient and pathogen effluent discharged or stored on the Farmstead**

| | |
|---|---|
| Not applicable - Nutrient and pathogen effluents are NOT discharged or stored on the PLU. | |
| Nutrient and pathogen effluents ARE discharged or stored on the PLU and adequate control/treatment is NOT in place. | |
| Nutrient and pathogen effluents ARE discharged or stored on the PLU and adequate control/treatment IS in place. | |

**Mine Waste Pollutants present**

| |
|---|
| Not applicable |
| Yes - present, and adequate control or treatment is NOT in place |
| Yes - present, but adequate control or treatment IS in place |

# FOREST

**Sheet and rill erosion**

| | |
|---|---|
| Site is stable and without visible signs of active erosion. | |
| Site is NOT stable and has visible signs of active erosion. | |

**Classic gully erosion**

| | |
|---|---|
| No active gully erosion observed. | |
| Active gully erosion is observed. | |

**Organic matter depletion**

| | |
|---|---|
| Soil is bare, vegetation and litter are sparse. | |
| Ground is partly covered with plant litter in various stages of decomposition, herbaceous vegetation, and/or a biological crust that protects the soil. | |
| The ground is thoroughly covered with plant litter in various stages of decomposition, herbaceous vegetation, and/or a biological crust that protects the soil. | |

**Soil organism habitat loss or degradation**

| | |
|---|---|
| The ground is covered with plant litter in various stages of decomposition, herbaceous vegetation, and/or a biological crust that protects the soil. | |
| Soil organic matter depletion exist and is uncontrolled. | |

**Wind erosion**

| | |
|---|---|
| site is stable and without visible signs of active erosion. | |
| Site is NOT stable and has visible signs of active erosion. | |

**Bank erosion**

| | |
|---|---|
| Not applicable | |
| Banks are protected by roots of natural vegetation, wood, and rock. No fabricated structures present on bank. No excessive erosion or bank failures. No recreational or livestock access. | |
| Banks are protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number of structures present on bank. Evidence of erosion or bank failures, some with reestablishment of vegetation. Recreational use and/or grazing do not negatively impact bank condition. | |
| There is very little protection of banks by roots of natural wood, vegetation, or rock. Fabricated structures cover more than half of reach or entire bank. Excessive bank erosion or active bank failures. Recreational and/or livestock use are contributing to bank instability. | |
| There is no bank protection with roots, wood, rock, or vegetation. Riprap and/or other structures dominate banks. Numerous active bank failures. Recreational and/or livestock use are contributing to bank instability. | |

# FOREST

**Compation**

| | |
|---|---|
| No observed evidence of compaction, such as ponding, stunted plant growth, or root growth limitation. | |
| Evidence of compaction, such as ponding, stunted plant growth, or root growth limitation is observed. | |

**Surface salinization risk**

| | |
|---|---|
| Soil or irrigation water test report indicates salinity/sodicity is within suitable range for desired plants OR No plant tissue salt injury symptoms are apparent. | |
| Observation of mineral crust on the soil surface; OR Soil or irrigation water test report indicates a salinity/sodicity impairment for desired plants; OR Observation of plant tissue salt injury symptoms including necrosis (burning) of leaf margins, stunted plants, wilting and in severe cases, plant death. | |
| No evidence of existing salinity/sodicity problem | |

**Aggregate instability**

| | |
|---|---|
| Evidence of poor aggregate stability, such as surface crusting, lack of soil structure | |
| No evidence of poor aggregate stability, such as surface crusting, lack of soil structure | |

**Current condition of the client's Forest Management Plan that addresses plant productivity and health**

| | |
|---|---|
| Plan is actively being followed AND all current practices have been implemented that will improve plant productivity and health | |
| Plan is actively being followed BUT there are still current practices to be implemented that will improve plant productivity and health | |
| No plan exists OR plan exists but is not being actively followed | |

**Managed tree species are native, and best suited for sustainability on the site and commensurate with client's objectives**

| | |
|---|---|
| Yes | |
| No | |

**Stocking levels are appropriate for the site and commensurate with client's objectives**

| | |
|---|---|
| Yes | |
| No | |

# FOREST

**Tree Vigor (Health) Within a Forest Stand or Management Unit**

| | |
|---|---|
| <10% dead and dying trees on the site | |
| 10-20% dead and dying trees on the site | |
| 21-40% dead and dying trees on the site | |
| 41-60% dead and dying trees on the site | |
| >60% dead and dying trees on the site | |

**Wildfire Hazard Potential on the site**

| | |
|---|---|
| None to Slight: Fuels do not ignite readily from small firebrands, although a more intense *-heat-* source, such as lightning, may start many fires in duff or punky wood. Fires in open cured grassland may burn freely a few hours after rain, but woods fires spread slowly by creeping or smoldering, and burn in irregular fingers. There is little danger of spotting. | |
| Slight to Moderate: Fires can start from most accidental causes, but with the exception of lightning fires in some areas, the number of starts is generally low. Fires in open-cured grassland will burn briskly and spread rapidly on windy days. Woods fires spread slowly to moderately fast. The average fire is of moderate intensity, although heavy concentrations of fuel, especially draped fuel, may burn hot. Short-distance spotting may occur, but is not persistent. Fires are not likely to become serious, and control is relatively easy | |
| Moderate: All fine dead fuels ignite readily and fires start easily from most causes. Unattended brush and campfires are likely to escape. Fires spread rapidly and short-distance spotting is common. High-intensity burning may develop on slopes, in concentrations of fine fuel. Fires may become serious and their control difficult, unless they are hit hard and fast while small | |
| Moderate to Extreme: Fires start easily from all causes, and immediately after ignition, spread rapidly and increase quickly in intensity. Spot fires are a constant danger. Fires burning in light fuels may quickly develop high-intensity characteristics; such as, long-distance spotting and fire whirlwinds, when they burn into heavier fuels. Direct attack at the head of such fires is rarely possible after they have been burning more than a few minutes | |
| Extreme: Fires under extreme conditions start quickly, spread furiously, and burn intensely. All fires are potentially serious. Development into high-intensity burning will usually be faster and occur from smaller fires than in the very high danger class. Direct attack is rarely possible, and may be dangerous, except immediately after ignition. Fires that develop headway in heavy slash or in conifer stands may be unmanageable while the extreme burning condition lasts. Under these conditions, the only effective and safe control action is on the flanks until the weather changes or the fuel supply lessens. . | |

# FOREST

**Forest conditions that will support the ignition and propagation of an active wildfire**

| | |
|---|---|
| <10% of Stand | |
| 10-20% of Stand | |
| 21-50% of Stand | |
| 51-70% of Stand | |
| >70% of stand | |

**Integrated Pest Management (IPM)**

| | |
|---|---|
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs and manage pesticide environmental risk, including Windows Pesticide Screening Tool results for risks to water quality. | |
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs. | |
| An IPM System is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs, and pesticide drift is minimized with drift reducing spray technologies. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to address production needs and the development of pest resistance is carefully managed. | |
| Pests (including invasive plants) are managed to meet production needs without the use of pesticides. | |
| Pests (including Invasive plants) are not managed (no pesticides are used) so production may be reduced beyond tolerable limits. | |

# PASTURE

**Bank erosion**

| | |
|---|---|
| Not applicable | |
| Banks are protected by roots of natural vegetation, wood, and rock. No fabricated structures present on bank. No excessive erosion or bank failures. No recreational or livestock access. | |
| Banks are protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number of structures present on bank. Evidence of erosion or bank failures, some with reestablishment of vegetation. Recreational use and/or grazing do not negatively impact bank condition. | |
| There is very little protection of banks by roots of natural wood, vegetation, or rock. Fabricated structures cover more than half of reach or entire bank. Excessive bank erosion or active bank failures. Recreational and/or livestock use are contributing to bank instability. | |
| There is no bank protection with roots, wood, rock, or vegetation. Riprap and/or other structures dominate banks. Numerous active bank failures. Recreational and/or livestock use are contributing to bank instability. | |

**Surface salinization risk**

| | |
|---|---|
| Soil or irrigation water test report indicates salinity/sodicity is within suitable range for desired plants. (Crop specific electrical conductivity (EC), pH, or sodium adsorption ratio (SAR) threshold values are not exceeded.) OR **No plant tissue salt injury symptoms are apparent** OR For range and pasture, salt concentrations match what is expected for the ecological site description | |
| **Observation of mineral crust on the soil surface**, OR Soil or irrigation water test report indicates a salinity/sodicity impairment for desired plants. (Crop specific electrical conductivity (EC), pH, or sodium adsorption ratio (SAR) threshold values are exceeded.) OR Observation of plant tissue salt injury symptoms including necrosis (burning) of leaf margins, stunted plants, wilting and in severe cases, plant death OR For range and pasture, salt concentrations are outside what is expected for the ecological site description. | |
| No evidence of existing salinity/sodicity problem | |

**Livestock Feed and Forage Imbalance**

| | |
|---|---|
| Not applicable | |
| Adequate forage supply and producer desired production goals are being met | |
| Inadequate forage supply and producer desired production goals are NOT being met | |

# PASTURE

**Livestock shelter**

| | |
|---|---|
| Not applicable | |
| Livestock are adapted to local climatic conditions and do not require additional shelter | |
| Livestock have adequate shelter | |
| Production goals are not being met due to livestock stresses caused by local climatic conditions or lack of shelter | |
| Production goals not being met due to livestock death or stresses caused by local climatic conditions or lack of shelter | |

**Inadequate Livestock Water (1.Quality, 2.Quantity, and 3.Distribution)**

| | |
|---|---|
| Not applicable | |
| Three livestock water factors met | |
| Two livestock water factors met | |
| One livestock water factor met | |
| No livestock water factors met | |

**Pasture Group**

| | |
|---|---|
| Warm season grasses | |
| Cool season grasses | |

**Surface water depletion condition**

| | |
|---|---|
| Pasture activities do not affect water withdrawals. | |
| Pasture activities are commensurate with available water supplies and/or meet state/local regulations. | |
| Pasture activities contribute to depletion and/or do not meet state/local regulations. | |

**Groundwater depletion condition**

| | |
|---|---|
| Pasture activities do not affect water withdrawals. | |
| Pasture activities are commensurate with available water supplies and/or meet state/local regulations. | |
| Pasture activities contribute to depletion and/or do not meet state/local regulations. | |

# PASTURE

## Integrated Pest Management (IPM)

| | |
|---|---|
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs and manage pesticide environmental risk, including Windows Pesticide Screening Tool results for risks to water quality. | |
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs. | |
| An IPM System is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs, and pesticide drift is minimized with drift reducing spray technologies. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to address production needs and the development of pest resistance is carefully managed. | |
| Pests (including invasive plants) are managed to meet production needs without the use of pesticides. | |
| Pests (including Invasive plants) are not managed (no pesticides are used) so production may be reduced beyond tolerable limits. | |

## Nutrient Application

| | |
|---|---|
| No organic or inorganic nutrients are applied mechanically or by hand. Note that this does not include nutrients deposited by grazing animals when these are the only nutrients applied to the PLU. | |
| Organic or inorganic nutrients are applied to the PLU mechanically or by hand. | |

## Manure, compost, or biosolid application

| | |
|---|---|
| Not applicable | |
| Left on the surface without incorporation | |
| Injected or incorporated into the soil soon after application | |

Intentionally left blank.

# RANGE

**Classic gully erosion condition**

| | |
|---|---|
| No active gully erosion observed | |
| Active gully erosion is observed | |

**Bank Erosion**

| | |
|---|---|
| Not applicable | |
| Banks are protected by roots of natural vegetation, wood, and rock. No fabricated structures present on bank. No excessive erosion or bank failures. No recreational or livestock access. | |
| Banks are protected by roots of natural vegetation, wood, or rock or a combination of materials. Limited number of structures present on bank. Evidence of erosion or bank failures, some with reestablishment of vegetation. Recreational use and/or grazing do not negatively impact bank condition. | |
| There is very little protection of banks by roots of natural wood, vegetation, or rock. Fabricated structures cover more than half of reach or entire bank. Excessive bank erosion or active bank failures. Recreational and/or livestock use are contributing to bank instability. | |
| There is no bank protection with roots, wood, rock, or vegetation. Riprap and/or other structures dominate banks. Numerous active bank failures. Recreational and/or livestock use are contributing to bank instability. | |

**Risk and Hazard of Wildfire (land uses other than Forest)**

| | |
|---|---|
| Accumulation of plant biomass is being managed to reduce the potential risk of wildfire | |
| The potential for wildfire hazard from biomass accumulation exists, but site resources are not at a risk or value level to require fire management | |
| The potential for wildfire hazard from biomass accumulation exists | |
| Significant wildfire hazard from biomass accumulation exists | |

**Range Group**

| | |
|---|---|
| Unknown | |
| Natural Grasslands | |
| Savannas | |
| Most Deserts | |
| Tundra | |
| Alpine Plant Communities | |
| Coastal and Freshwater Marshes | |
| Wet Meadows | |

# RANGE

**Surface salinization risk**

| | |
|---|---|
| Soil or irrigation water test report indicates salinity/sodicity is within suitable range for desired plants. (Crop specific electrical conductivity (EC), pH, or sodium adsorption ratio (SAR) threshold values are not exceeded.) OR **No plant tissue salt injury symptoms are apparent** OR For range and pasture, salt concentrations match what is expected for the ecological site description | |
| Observation of mineral crust on the soil surface, OR Soil or irrigation water test report indicates a salinity/sodicity impairment for desired plants. (Crop specific electrical conductivity (EC), pH, or sodium adsorption ratio (SAR) threshold values are exceeded.) OR **Observation of plant tissue salt injury symptoms including necrosis (burning) of leaf margins, stunted plants, wilting and in severe cases, plant death** OR For range and pasture, salt concentrations are outside what is expected for the ecological site description. | |
| No evidence of existing salinity/sodicity problem | |

**Livestock Feed and Forage Imbalance**

| | |
|---|---|
| Not applicable | |
| Adequate forage supply and producer desired production goals are being met | |
| Inadequate forage supply and producer desired production goals are NOT being met | |

**Livestock shelter**

| | |
|---|---|
| Not applicable | |
| Livestock are adapted to local climatic conditions and do not require additional shelter | |
| Livestock have adequate shelter | |
| Production goals are not being met due to livestock stresses caused by local climatic conditions or lack of shelter | |
| Production goals not being met due to livestock death or stresses caused by local climatic conditions or lack of shelter | |

**Inadequate Livestock Water (1.Quality, 2.Quantity, and 3.Distribution)**

| | |
|---|---|
| Not applicable | |
| Three livestock water factors met | |
| Two livestock water factors met | |
| One livestock water factor met | |
| No livestock water factors met | |

# RANGE

**Surface water depletion condition**

| | |
|---|---|
| Range activities do not affect water withdrawals. | |
| Range activities are commensurate with available water supplies and/or meet state/local regulations. | |
| Range activities contribute to depletion and/or do not meet state/local regulations. | |

**Groundwater depletion condition**

| | |
|---|---|
| Range activities do not affect water withdrawals. | |
| Range activities are commensurate with available water supplies and/or meet state/local regulations. | |
| Range activities contribute to depletion and/or do not meet state/local regulations. | |

**Integrated Pest Management (IPM)**

| | |
|---|---|
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs and manage pesticide environmental risk, including Windows Pesticide Screening Tool results for risks to water quality. | |
| A full IPM System is utilized including Prevention, Avoidance, Monitoring, and Suppression to manage pests (including invasive plants) to meet production needs. | |
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| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to meet production needs, and pesticide drift is minimized with drift reducing spray technologies. | |
| An IPM system is not utilized, but pesticides are applied according to label guidance to manage pests (including invasive plants) to address production needs and the development of pest resistance is carefully managed. | |
| Pests (including invasive plants) are managed to meet production needs without the use of pesticides. | |
| Pests (including Invasive plants) are not managed (no pesticides are used) so production may be reduced beyond tolerable limits. | |

Intentionally left blank.

# CSP Enhancements

The following tables include available enhancements you may add to your CSP application to improve the conservation level on your land.

FY 2020 Activity List
Enhancements

| Enhancement Code | Resource Concern | Resource Concern Cause | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Range | Forest | Associated Ag Land | Farmstead | Full Enhancement Name | Enhancement Description | Units | Enhancement Lifespan | Max years enh. can be contracted | Unit Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E314A | PLANTS; ANIMALS | Plant Structure and Composition, Plant Pest Pressure; Terrestrial Habitat for Wildlife and Invertebrates | | | X | X | X | X | | Brush management to improve wildlife habitat | Brush management is employed to create a desired plant community, consistent with the related ecological site steady state, which will maintain or enhance the wildlife habitat desired for the identified wildlife species. It will be designed to provide plant structure, density and diversity needed to meet those habitat objectives. This enhancement does not apply to removal of woody vegetation by prescribed fire or removal of woody vegetation to facilitate a land use change. | acre | 10 | 5 | $ 19.78 |
| E315A | PLANTS | Plant Productivity and Health, Plant Structure and Composition, Plant Pest Pressure | | | X | X | X | X | | Herbaceous weed treatment to create desired plant communities consistent with the ecological site | Mechanical, chemical, or biological, herbaceous weed treatment will be used to control targeted, herbaceous weeds to create, release, or restore desired plant communities that are consistent with achievable, ecological site, steady state descriptions. | acre | 5 | 5 | $ 13.75 |
| E327A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | | | X | X | X | Conservation cover for pollinators and beneficial insects | Seed or plug nectar and pollen producing plants in non-cropped areas such as field borders, vegetative barriers, contour buffer strips, grassed waterways, shelterbelts, hedgerows, windbreaks, conservation cover, and riparian forest and herbaceous buffers. | acre | 5 | 1 | $ 57.49 |
| E327B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | | | | X | X | Establish Monarch butterfly habitat | Seed or plug milkweed (Asclepias spp.), and high-value monarch butterfly nectar plants on marginal cropland, field borders, contour buffer strips, and similar areas. | acre | 5 | 1 | $ 1,723.10 |
| E328A | SOIL; PLANTS | Sheet and Rill Erosion; Wind Erosion; Organic Matter Depletion; Compaction; Plant Pest Pressure; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Resource conserving crop rotation | Establish a Resource Conserving Crop Rotation. Rotation must include AT LEAST one resource conserving crop as determined by the State Conservationist in a minimum three year crop rotation. The crop rotation will reduce soil erosion (water and wind), improve soil health, improve soil moisture efficiency, and reduce plant pest pressures. | acre | 1 | 5 | $ 23.17 |
| E328B | SOIL; PLANTS | Sheet and Rill Erosion; Wind Erosion; Organic Matter Depletion; Compaction; Plant Pest Pressure; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Improved resource conserving crop rotation | Improve an existing Resource Conserving Crop Rotation. Must enrich an existing rotation which already includes AT LEAST one resource conserving crop as determined by the State Conservationist in a minimum three year crop rotation. The crop rotation will reduce soil erosion (water and wind), improve soil health, improve soil moisture efficiency, and reduce plant pest pressures. | acre | 1 | 5 | $ 8.28 |
| E328C | SOIL | Sheet and Rill Erosion, Wind Erosion | X | | | | | | | Conservation crop rotation on recently converted CRP grass/legume cover | Implement a crop rotation management system on crop land acres that have recently converted from CRP grass/legume conservation cover to annual planted crops. Crop rotation minimizes disturbance resulting in a Soil Tillage Intensity Rating (STIR) less than 10 and reduces soil erosion from water and wind to below soil tolerance (T) level. The current NRCS wind and water erosion prediction technologies must be used to document the rotation, soil erosion estimate, and STIR calculations. *This enhancement is limited to acres where the conversion event took place not more than 2 years prior. Enhancement not applicable on hayland. | acre | 1 | 5 | $ 3.31 |
| E328D | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | | | | | | | Leave standing grain crops unharvested to benefit wildlife | Implement a crop rotation which allows a portion of grain crops to be left in fields un-harvested to provide food and cover for wildlife during winter months. | acre | 1 | 5 | $ 4.08 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E328E | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Soil health crop rotation | Implement a crop rotation which addresses all four principle components of soil health: increases diversity of the cropping system; maintains residue throughout the year; keeps a living root; and minimizes soil chemical, physical and biological disturbance. The rotation will include at least 4 different crop and/or cover crop types (crop types include cool season grass, warm season grass, cool season broadleaf, warm season broadleaf) grown in a sequence that will produce a positive trend in the Organic Matter (OM) sub factor value over the life of the rotation, as determined by the Soil Conditioning Index (SCI). The current NRCS wind and water erosion prediction technologies must be used to document the rotation and SCI calculations. | acre | 1 | 5 | $ 5.52 |
| E328F | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Modifications to improve soil health and increase soil organic matter | Use of soil health assessment to evaluate impact of current conservation crop rotation in addressing soil organic matter depletion (primary assessment made in Year 1). Modifications to the crop rotation and/or crop management will be made as a result of the assessment results (adding a new crop and/or cover crop to the rotation; making changes to planting and/or tillage system, harvest timing of crops, or termination timing of cover crops). During Year 3 a follow up assessment will be completed to allow time for the modifications to show increased soil organic matter. Modified system must produce a positive trend in the Organic Matter (OM) sub factor value over the life of the rotation, as determined by the Soil Conditioning Index (SCI). The current NRCS wind and water erosion prediction technologies must be used to document the rotation and SCI calculations. | acre | 1 | 5 | $ 10.78 |
| E328G | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Crop rotation on recently converted CRP grass/legume cover for soil organic matter improvement | Crop rotation on acres converted, no more than 2 years prior, from CRP grass/legume cover to annual crops. Diverse rotation with living roots and residue cover throughout year and minimal disturbance. Enhancement not applicable on hayland. | acre | 1 | 5 | $ 5.52 |
| E328H | SOIL | Concentration of Salts and other Chemicals | X | | | | | | | Conservation crop rotation to reduce the concentration of salts | Implement a crop rotation to reduce the concentration of salts and other chemicals from saline seeps. The rotation should include at least 3 crops and/or cover crops grown in a sequence in the recharge areas of saline seeps that have rooting depths and water requirements adequate to fully utilize all available soil water. Do not use summer fallow. Use an approved water balance procedure to determine crop selection and sequence. Select crops with a tolerance to salinity levels that match the salinity of the discharge area. (See state lists ) | acre | 1 | 5 | $ 4.41 |
| E328I | WATER | Nutrients Transported to Surface Water | X | X | | | | | | Forage harvest to reduce water quality impacts by utilization of excess soil nutrients | Establish a forage crop (single species or mix) following a primary annual crop to take up excess soil nutrients. Select forage known to effectively utilize and scavenge nutrients. Forage shall be harvested for forage, but not be grazed or burned. | acre | 1 | 1 | $ 5.07 |
| E328J | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | | | | | | | Improved crop rotation to provide benefits to pollinators | Improve the existing crop rotation by adding pollinator friendly crops into the rotation. The crop rotation shall include a minimum of three different crops in a minimum five year crop rotation. Each year, the pollinator friendly crop will be planted on a minimum of 5% of cropland acres contained within the agricultural operation. Use of insecticides is limited for the pollinator friendly crop. | acre | 1 | 5 | $ 88.27 |
| E328K | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | | | | | | | Multiple crop types to benefit wildlife | Alternating crops in a systematic arrangement of strips across a field to provide diverse rotations of crops that provide wildlife food. At least two crops will be planted in adjacent strips a minimum of 0.5 acres in size. | acre | 1 | 5 | $ 5.52 |
| E329A | SOIL | Sheet and Rill Erosion; Wind Erosion | X | | | | | | | No till to reduce soil erosion | Establish no till system to reduce sheet and rill and wind erosion soil loss. Field(s) must have a soil loss at or below the soil tolerance (T) level for water and wind erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 10 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to calculate soil loss and STIR. | acre | 1 | 5 | $ 3.31 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E329B | AIR | Emissions of Particulate Matter (PM) and PM Precursors | X | | | | | | | No till to reduce tillage induced particulate matter | Establish no till system to reduce tillage induced particulate matter. Field(s) must have a soil loss at or below the soil tolerance (T) level for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 10 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to document soil loss and STIR calculations. | acre | 1 | 5 | $ 3.31 |
| E329C | WATER | Inefficient Irrigation Water Use; Naturally Available Moisture Use | X | | | | | | | No till to increase plant-available moisture | Establish a no till system to increase plant-available moisture. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 20. The current NRCS wind and water erosion prediction technologies must be used to document STIR calculations. Maintain a minimum 60 percent surface residue cover throughout the year to reduce evaporation from the soil surface. | acre | 1 | 5 | $ 3.31 |
| E329D | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | No till system to increase soil health and soil organic matter content | Establish a no till system to increase soil health and soil organic matter content. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 20. The crop rotation must achieve a soil conditioning index (SCI) of zero or higher. The current NRCS wind and water erosion prediction technologies must be used to document STIR and SCI calculations. Residue shall not be burned, grazed, or harvested. | acre | 1 | 5 | $ 4.41 |
| E329E | ENERGY | Energy Efficiency of Farming/Ranching Practices and Field Operations | X | | | | | | | No till to reduce energy | Establish a no till system which reduces total energy consumption associated with field operations by at least 25% compared to current tillage system (benchmark). Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 20. The current NRCS wind and water erosion prediction technologies must be used to document STIR calculations and energy consumption. | acre | 1 | 5 | $ 4.41 |
| E338A | PLANTS | Plant Pest Pressure, Wildfire Hazard from Biomass Accumulation | | | X | X | X | | | Strategically planned, patch burning for grazing distribution and wildlife habitat | Patch burn grazing is the application of prescribed fires on portions of an identified grazing unit at different times of the year. Patch burn grazing allows grazing animals to select where they want to graze creating a mosaic of vegetation structures and diversity that will maintain or enhance the wildlife habitat desired for the identified wildlife species and maintain livestock production. | acre | 1 | 5 | $ 8.02 |
| E338B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates; Feed and Forage Imbalance | | | | | X | | | Short-interval burns to promote a healthy herbaceous plant community | The controlled use of fire is applied in a forest to restore fire-adapted plants while improving wildlife habitat, wildlife food supply, and reducing the risk of damage from intense, severe wildfires. The ideal interval between prescribed burns is not often achieved. To improve the effectiveness of prescribed burning, the frequency of prescribed burning is increased appropriately, for a specified time period, to help restore ecological conditions in forests and woodlands. Short return interval prescribed burning is used to regenerate desirable tree species, improve the condition of fire-adapted plants and native herbaceous vegetation, improve wildlife food supply, create wildlife habitat (snags and den/cavity trees), limit encroachment of competing vegetation including non-native species, and reduce the future risk of damage from intense, severe wildfires. | acre | 1 | 5 | $ 90.32 |
| E340A | SOIL | Sheet and Rill Erosion; Wind Erosion | X | X | | | | | | Cover crop to reduce soil erosion | Cover crop added to current crop rotation to reduce soil erosion from water and wind to below soil tolerance (T) level. Cover crops grown during critical erosion period(s). Species are selected that will have physical characteristics to provide adequate erosion protection. | acre | 1 | 5 | $ 6.26 |
| E340B | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Intensive cover cropping to increase soil health and soil organic matter content | Implementation of cover crop mix to provide soil coverage during ALL non-crop production periods in an annual crop rotation. Cover crop shall not be harvested or burned. Planned crop rotation including cover crops and associated management activities must achieve a soil conditioning index (SCI) of zero or higher. The current NRCS wind and water erosion prediction technologies must be used to document SCI calculations. | acre | 1 | 5 | $ 11.42 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E340C | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | X | | | | | | Use of multi-species cover crops to improve soil health and increase soil organic matter | Implement a multi-species cover crop to add diversity and increase biomass production to improve soil health and increase soil organic matter. Cover crop mix must include a minimum of 4 different species. The cover crop mix will increase diversity of the crop rotation by including crop types currently missing, e.g. Cool Season Grass (CSG), Cool Season Broadleaves (CSB), Warm Season Grasses (WSG), Warm Season Broadleaves (WSB). | acre | 1 | 5 | $ 9.70 |
| E340D | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | | X | | | | | | Intensive orchard/vineyard floor cover cropping to increase soil health | Implement orchard or vineyard floor cover crops. Cover crop shall not be harvested, grazed, or burned. Must achieve a soil conditioning index of zero or higher and produce a positive trend in the Organic Matter subfactor over the life of the rotation. | acre | 1 | 5 | $ 9.70 |
| E340E | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Use of soil health assessment to assist with development of cover crop mix to improve soil health | Soil health assessment (year 1) to evaluate current crop rotation in addressing soil organic matter depletion. Results are utilized to select a multi-species cover crop mix to add to the current crop rotation. Follow up assessment completed (year 3). | acre | 1 | 5 | $ 13.00 |
| E340F | SOIL | Compaction | X | X | | | | | | Cover crop to minimize soil compaction | Establish a cover crop mix that includes plants with both fibrous root and deep rooted systems. Fibrous to treat and prevent both near surface (0-4") and deep (>4") soil compaction and deep rooted to break up deep compacted soils. Cover crop shall not be harvested, grazed, or burned. | acre | 1 | 5 | $ 9.18 |
| E340G | WATER | Nutrients Transported to Surface Water; Nutrients Transported to Groundwater | X | X | | | | | | Cover crop to reduce water quality degradation by utilizing excess soil nutrients | Establish a cover crop mix to take up excess soil nutrients. Select cover crop species for their ability to effectively utilize nutrients. Terminate the cover crop as late as practical to maximize plant biomass production and nutrient uptake. Cover crop shall not be harvested, grazed, or burned. | acre | 1 | 5 | $ 9.18 |
| E340H | PLANT | Plant Pest Pressure | X | X | | | | | | Cover crop to suppress excessive weed pressures and break pest cycles | Establish a cover crop mix to suppress excessive weed pressures and break pest cycles. Select cover crop species for their life cycles, growth habits, and other biological, chemical and/or physical characteristics. Select cover crop species that do not harbor pests or diseases of subsequent crops in the rotation. Cover crop shall not be harvested, grazed, or burned. | acre | 1 | 5 | $ 9.70 |
| E340I | SOIL | Compaction | X | | | | | | | Using cover crops for biological strip till | Establish alternating strips of cover crops in which one strip acts as a biological strip-tiller and the adjacent strip promotes soil health with high residue cover crops. This will facilitate planting of the subsequent cash crop into the biologically strip-tilled row without the need for mechanical disturbance. | acre | 1 | 5 | $ 11.27 |
| E345A | SOIL | Sheet and Rill Erosion; Wind Erosion | X | | | | | | | Reduced tillage to reduce soil erosion | Establish a reduced tillage system to reduce soil loss. Field(s) must have a soil loss at or below the soil tolerance (T) level for water and wind erosion for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 40 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to calculate soil loss and STIR. | acre | 1 | 5 | $ 4.41 |
| E345B | AIR | Emissions of Particulate Matter (PM) and PM Precursors | X | | | | | | | Reduced tillage to reduce tillage induced particulate matter | Establish a reduced tillage system to reduce tillage induced particulate matter. Field(s) must have a soil loss at or below the soil tolerance (T) level for the crop rotation and a Soil Tillage Intensity Rating (STIR) of no greater than 40 for each crop in the planned rotation. The current NRCS wind and water erosion prediction technologies must be used to document soil loss and STIR calculations. | acre | 1 | 5 | $ 3.31 |
| E345C | WATER | Inefficient Irrigation Water Use; Naturally Available Moisture Use | X | | | | | | | Reduced tillage to increase plant-available moisture | Establish a reduced till system to increase plant-available moisture. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 80. The current NRCS wind and water erosion prediction technologies must be used to document STIR calculations. Maintain a minimum 60 percent surface residue cover throughout the year to reduce evaporation from the soil surface. | acre | 1 | 5 | $ 3.31 |
| E345D | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Reduced tillage to increase soil health and soil organic matter content | Establish a reduced till system to increase soil health and soil organic matter content. Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 80. The crop rotation must achieve a soil conditioning index (SCI) of zero or higher and produce a positive trend in the Organic Matter (OM) subfactor over the life of the crop rotation. The current NRCS wind and water erosion prediction technologies must be used to document STIR and SCI calculations. Residue shall not be burned, grazed, or harvested. | acre | 1 | 5 | $ 4.41 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E345E | ENERGY | Energy Efficiency of Farming/Ranching Practices and Field Operations | X | | | | | | | Reduced tillage to reduce energy use | Establish a reduced tillage system which reduces total energy consumption associated with field operations by at least 25% compared to conventional tillage systems (benchmark). Each crop in the crop rotation shall have a Soil Tillage Intensity Rating (STIR) of no greater than 80. The current NRCS wind and water erosion prediction technologies must be used to document STIR calculations and energy consumption. | acre | 1 | 5 | $ 3.31 |
| E374A | ENERGY | Energy Efficiency of Farming/Ranching Practices and Field Operations | X | X | X | | | X | X | Install variable frequency drive(s) on pump(s) | Install Variable Frequency Drive(s) (VFD) on Pumping Plant (Conservation Practice Standard CPS 533) with the correct sensors, on all pumps indicated in the energy audit. | no | 10 | 1 | $ 100.53 |
| E374B | ENERGY | Energy Efficiency of Farming/Ranching Practices and Field Operations | X | X | X | | | X | X | Switch fuel source for pump motor(s) | Switch the fuel source for the pump motor(s) indicated in the energy audit to a renewable source (wind, solar, geothermal, etc.). (CPS 533 Pumping Plant) | no | 10 | 1 | $ 3,178.65 |
| E382A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | X | X | X | X | | Incorporating "wildlife friendly" fencing for connectivity of wildlife food resources | Retrofitting or constructing fences that provide a means to control movement of animals, people, and vehicles, but minimizes wildlife movement impacts. | ft | 20 | 1 | $ 0.14 |
| E382B | SOIL | Plant productivity and Health, PLant Structure and Composition | | | X | X | | | | Installing electrical fence offsets and wire to facilitate cross-fencing for improved grazing management | Retrofitting conventional fences such as barb wire, with new electrical offsets and electrical wire to facilitate cross-fencing for improved grazing management. | ft | 20 | 1 | $ 0.54 |
| E383A | PLANT | Wildfire Hazard from Biomass Accumulation | | | | X | X | | | Grazing-maintained fuel break to reduce the risk of fire | The area has existing fuel break(s) of 30 to 60 feet in width, supporting a mixture of woody sprouts and some herbaceous vegetation. Warm-season perennial vegetation will be established on the fuel breaks, and will be over-seeded with cool-season annual forages in the fall. Grazing will be managed on the fuel breaks to remove or modify the fine fuel vegetation, thus reducing the risk of fire spread from ground fires. Ground cover will be maintained to control soil erosion and facilitate prescribed burning. | acre | 10 | 1 | $ 259.35 |
| E384A | PLANT, SOIL | Wildfire Hazard from Biomass Accumulation, Organic Matter Depletion | | | | | X | X | | Biochar production from woody residue | Utilizes woody debris remaining after fuel reduction harvests or wildfires to create biochar. Biochar stores carbon and is a useful soil amendment that improves SOM and water-holding capacity. | acre | 10 | 1 | $ 5,911.93 |
| E386A | SOIL | Sheet and Rill Erosion; Wind Erosion | X | X | | | | X | | Enhanced field borders to reduce soil erosion along the edge(s) of a field | Enhance existing field borders to a width of at least 30 feet and establish a single species or mixture of species that provide a dense ground cover along the edge(s) of the field. | acre | 10 | 1 | $ 582.86 |
| E386B | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | X | | | | X | | Enhanced field borders to increase carbon storage along the edge(s) of the field | Enhance existing field borders to a width of at least 30 feet and establish a single species or mixture of species that provide a dense ground cover and dense rooting system along the edge(s) of the field. | acre | 10 | 1 | $ 582.86 |
| E386C | AIR | Emissions of Particulate Matter (PM) and PM Precursors | X | X | | | | X | | Enhanced field borders to decrease particulate emissions along the edge(s) of the field | Enhance existing field borders to a width of at least 40 feet and establish a mixture of species that decrease the particulate emissions along the edge(s) of the field. | acre | 10 | 1 | $ 582.86 |
| E386D | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | | | | X | | Enhanced field borders to increase food for pollinators along the edge(s) of a field | Enhance existing field borders to a width of at least 40 feet and establish a mixture of species that provide food for pollinators along the edge(s) of the field. | acre | 10 | 1 | $ 582.86 |
| E386E | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | | | | X | | Enhanced field borders to increase wildlife food and habitat along the edge(s) of a field | Enhance existing field borders to a width of at least 40 feet and establish a mixture of species that provide wildlife food and habitat along the edge(s) of the field. The extended field border will also provide enhanced wildlife habitat continuity. | acre | 10 | 1 | $ 582.86 |
| E390A | WATER | Nutrients Transported to Surface Water; Sediment Transported to Surface Water | X | X | | | | | | Increase riparian herbaceous cover width for sediment and nutrient reduction | Where an existing herbaceous riparian buffer is located along a river, stream, pond, lake, or other waterbody, increase the width of the buffer in order to allow a greater percentage of sediment and nutrient removal from surface and subsurface flows. | acre | 5 | 1 | $ 419.16 |
| E390B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | | X | X | Increase riparian herbaceous cover width to enhance wildlife habitat | Where an existing herbaceous riparian buffer is located along a river, stream, pond, lake, or other waterbody, increase the diversity of native species, control invasive species, install fencing and relocate equipment operations, trails, and livestock, and increase the width of the buffer. | acre | 5 | 1 | $ 484.98 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E391A | WATER | Nutrients Transported to Surface Water; Sediment Transported to Surface Water | X | X | | | | | | Increase riparian forest buffer width for sediment and nutrient reduction | Where an existing forested riparian area is located along a river, stream, pond, lake, or other waterbody, increase the width of the buffer in order to allow a greater percentage of sediment and nutrient removal from surface and subsurface flows. | acre | 15 | 1 | $ 1,689.62 |
| E391B | WATER | Elevated Water Temperature | X | X | X | X | X | X | X | Increase stream shading for stream temperature reduction | Riparian area tree canopy cover density is increased and the extent of the forested riparian area is increased to provide greater stream shading. | acre | 15 | 1 | $ 1,714.07 |
| E391C | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | | X | X | Increase riparian forest buffer width to enhance wildlife habitat | Where an existing riparian forest buffer is located along a river, stream, pond, lake, or other waterbody, increase the diversity of native species, control invasive species, install fencing and relocate equipment operations, trails, and livestock to increase the functional width of the buffer. | acre | 15 | 1 | $ 1,714.07 |
| E393A | WATER | Nutrients Transported to Surface Water; Pathogens and Chemicals from Manure, Bio-solids or Compost Applications Transported to Surface Water | X | X | | | | X | | Extend existing filter strip to reduce water quality impacts | Extend existing filter strips for water quality protection. Extend the existing buffer for a total of 60 feet or more to enhance water quality functions. The extended buffers must be composed of at least 5 species of non-noxious, wildlife friendly grasses and/or perennial forbs best suited to site conditions. Include species that provide pollinator food and habitat where possible. | acre | 10 | 1 | $ 803.54 |
| E395A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | | Stream habitat improvement through placement of woody biomass | Flexible placement of wood (unanchored/unpinned) in small, 1st and 2nd order streams to improve stream habitat conditions for aquatic species and natural stream processes. | acre | 5 | 1 | $ 19,172.71 |
| E449A | WATER; ENERGY | Inefficient Irrigation Water Use; Energy Efficiency of Farming/Ranching Practices and Field Operations | X | X | X | | | X | X | Complete pumping plant evaluation for water savings | Evaluation of all pumping plants to determine the potential to rehabilitate/replace/reconfigure pump performance to improve water delerivery efficiency 10% or more. Evaluate to determine if a Variable Frequency Drive motor controller(s) is recommended and the simple payback in terms of energy savings is less than 10 years. | acre | 1 | 1 | $ 6.15 |
| E449C | WATER | Inefficient Irrigation Water Use | X | X | X | | | | | Advanced Automated IWM – Year 2-5, soil moisture monitoring | Advanced automated irrigation water management using soil moisture or water level monitoring (installed as per IWM plan) with data loggers. | acre | 1 | 5 | $ 21.46 |
| E449D | WATER | Inefficient Irrigation Water Use | X | X | X | | | | | Advanced Automated IWM – Year 1, Equipment and soil moisture or water level monitoring | Installing and monitoring soil moisture or water leveling equipment for advanced automated irrigation water management | acre | 1 | 1 | $ 51.45 |
| E449F | WATER | Inefficient Irrigation Water Use | X | X | X | | | | | Intermediate IWM— Year 1, Equipment with Soil or Water Level monitoring | This activity involves monitoring soil moisture or water levels within a irrigated field for intermediate irrigation water management include installation of equipment year 1. | acre | 1 | 1 | $ 43.67 |
| E449G | WATER | Inefficient Irrigation Water Use | X | | | | | | | Intermediate IWM— Years 2-5, Soil or Water Level monitoring | Field currently flooded through a cascade levee system will be converted to furrow irrigation. It is required that field is leveed on the lower end and approximately 25% up the sides for furrow irrigation prior to implementing the enhancement. After the previous year's crop is harvested, elevated planting beds and furrows will be reshaped as needed to guarantee proper irrigation of the rice crop. Layflat tubing will be utilized with the correct holes or gates installed to advance water down the furrows at the appropriate rate across the length of the field as prescribed by an NRCS "PHAUCET" design, Delta Plastic® Pipe Planner® or similar. | acre | 1 | 5 | $ 9.19 |
| E472A | WATER | Nutrients transported to surface water, Pathogens and chemicals from manure, bio-solids or compost applications transforted to surface water | X | X | X | X | X | X | X | Manage livestock access to waterbodies to reduce nutrients or pathogens to surface water | Installation of structures and implementation of grazing management actions that restrict livestock access to streams, ditches, and other waterbodies in order to reduce nutrient loading or reduce the introduction of pathogens from manure, bio-solids or compost to surface waters. | ft. | 10 | 1 | $ 2.37 |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E484A | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | | | | | | | Mulching to improve soil health | Implement a crop rotation which utilizes mulch and addresses all four principle components of soil health: increases diversity of the cropping system; maintains residue throughout the year; keeps a living root; and minimizes soil chemical, physical and biological disturbance. Plant-based mulching materials will be applied at least once during the rotation. The rotation will include at least 4 different crops and/or cover crops grown in a sequence that will produce a positive trend in the Organic Matter (OM) subfactor value over the life of the rotation, as determined by the Soil Conditioning Index (SCI). The current NRCS wind and water erosion prediction technologies must be used to document the rotation and SCI calculations. | acre | 1 | 5 | $ 2.21 |
| E484B | AIR | Emissions of Particulate Matter (PM) and PM Precursors | | X | | | | | | Reduce particulate matter emissions by using orchard or vineyard generated woody materials as mulch | Reduce particulate matter emissions by using orchard or vineyard generated woody materials as mulch. At least 90% of all woody materials are to be used as mulch on the operation. *An exception may be made when it is determined that infected material must be burned to preserve crop health.* | acre | 1 | 5 | $ 15.92 |
| E484C | PLANTS | Plant Pest Pressure | X | X | | | | | | Mulching with natural materials in specialty crops for weed control | Application of straw mulch or other state approved natural material (such as wood chips, compost, green chop, dry hay or sawdust) for weed control in specialty crops. | Acre | 1 | 5 | $ 44.08 |
| E511A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | | | | | | Harvest of crops (hay or small grains) using measures that allow desired species to flush or escape | Harvest of crops (hay or small grains) using conservation measures that allow desired species to flush or escape. (For species list see State Wildlife Action Plan) Conservation measures include timing of harvest, idling land during the nesting or fawning period, and applying harvest techniques that reduce mortality to wildlife. | acre | 1 | 5 | $ 3.65 |
| E511B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | | | | Forage harvest management that helps maintain wildlife habitat cover, shelter or continuity | The timely cutting and removal of forages from the field as hay, green-chop, or ensilage in such a way, and in time frames, to optimize both forage yield/quality and wildlife cover and shelter and/or continuity between otherwise disconnected habitats. | acre | 1 | 5 | $ 4.68 |
| E512A | SOIL | Sheet and Rill Erosion; Wind Erosion | X | X | | | | | | Cropland conversion to grass-based agriculture to reduce soil erosion | Conversion of cropped land to grass-based agriculture to reduce soil erosion. Mixtures of perennial grasses, forbs, and legume species are established on cropland where annually-seeded cash crops have been grown. | acre | 5 | 1 | $ 5.39 |
| E512B | SOIL | Sheet and Rill Erosion | | | X | | | | | Forage plantings that help increase organic matter in depleted soils | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production that can provide for reduced soil erosion, improving soil health. | acre | 5 | 1 | $ 12.98 |
| E512C | SOIL | Organic Matter Depletion; Soil Organism Habitat Loss or Degradation; Aggregate Instability | X | X | | | | | | Cropland conversion to grass for soil organic matter improvement | Conversion of cropped land to grass-based agriculture. Mixtures of perennial grasses, forbs, and/or legume species are established on cropland where annually-seeded cash crops have been grown. | acre | 5 | 1 | $ 15.65 |
| E512D | SOIL | Organic Matter Depletion | X | X | X | | | | | Forage plantings that help increase organic matter in depleted soils | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production that can help improve soil quality of depleted sites through increase or conservation of the organic matter in the soil. | acre | 5 | 1 | $ 15.85 |
| E512E | PLANT | Plant Productivity and Health | X | X | | | | | | Forage and biomass planting that produces feedstock for biofuels or energy production. | Conversion of cropped land to grass-based agriculture. Mixtures of perennial grasses, forbs, and/or legume species are established on cropland where annually-seeded cash crops have been grown. | acre | 5 | 1 | $ 32.54 |
| E512F | PLANT, ANIMALS | Plant productivity and Health, Plant Structure and Composition, Terrestrial Habitat for Wildlife and Invertebrates | | | X | | | X | | Establishing native grass or legumes in forage base to improve the plant community | Establishing adapted and/or compatible species, varieties, or cultivars of perennial, herbaceous species that can provide the structure and composition needed to enhance livestock and wildlife habitat, particularly when targeted forage supply and quality, cover, and shelter are not available in other pastures. | acre | 5 | 1 | $ 56.17 |
| E512G | ANIMALS | Feed and Forage Imbalance | | X | X | | | X | | Native grasses or legumes in forage base | Establishing adapted and/or compatible species, varieties, or cultivars of perennial, herbaceous species that can provide the structure and composition needed to enhance livestock and wildlife habitat, particularly when targeted forage supply and quality, cover, and shelter are not available in other pastures. | acre | 5 | 1 | $ 34.75 |
| E512H | PLANTS AND ANIMALS | Plant Structure and Composition, Terrestrial Habitat for Wildlife and Invertebrates | | | X | | | X | | Forage plantings that enhance bird habitat cover and shelter or structure and composition | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species suitable for pasture, hay, or biomass production that can provide cover and shelter or structure and composition to b | acre | 5 | 1 | $ 71.06 |

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| E512I | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | X | | | X | X | Establish pollinator and/or beneficial insect and/or monarch habitat | Establishing adapted and/or compatible species, varieties, or cultivars of herbaceous species that can provide nectar for Monarch butterflies and/or pollinators and forage and other habitat values for wildlife and livestock, particularly at times when targeted nectar, forage supply and quality, cover, and shelter are not available in other pastures. | acre | 5 | 1 | $ 57.27 |
| E512J | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | X | | | X | X | Establish wildlife corridors to provide habitat continuity or access to water | Establishing adapted and/or compatible species, varieties, or cultivars of perennial, herbaceous species that can provide cover needed for wildlife species of concern to move from food/cover/water sources to other food/cover/water sources as needed for their life cycles, and/or to enhance the utility of underused wildlife habitat areas. | acre | 5 | 1 | $ 18.67 |
| E528A | ANIMALS | Feed and Forage Imbalance | | | X | X | | X | | Maintaining quantity and quality of forage for animal health and productivity | Managing the harvest of vegetation with grazing and/or browsing animals for the purposes of maintaining desired pasture composition/plant vigor and improving/maintaining quantity and quality of forage for the animals' health and productivity following the recommendations of a qualifying professional, as detailed in the documentation and implementation requirements. | acre | 1 | 5 | $ 3.78 |
| E528B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | X | X | | | | Grazing management that improves monarch butterfly habitat | Implement a grazing management plan that will increase the abundance and diversity of monarch nectar-producing perennial forbs, including milkweed, while maintaining ecosystem benefits for other wildlife and livestock. | acre | 1 | 5 | $ 9.18 |
| E528C | ANIMALS | Feed and Forage Imbalance, Terrestrial Habitat for Wildlife and Invertebrates | | | X | X | | | | Incorporating wildlife refuge areas in contingency plans for wildlife. | A prescribed grazing plan that includes 12 month (or longer) rest (non-grazing period equal or greater than one year) of a grazing unit that consists of native grasses and/or legumes and/or perennial forbs for the purpose of meeting the needs for drought/disaster contingency plans that will also provide wildlife habitat or wildlife access to water for a period of time. | acre | 1 | 5 | $ 15.87 |
| E528D | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | X | X | X | | | Grazing management for improving quantity and quality of food or cover and shelter for wildlife | Grazing management employed will provide the plant structure, density and diversity needed for improving the quantity and quality of cover, shelter and food for the desired wildlife species of concern. | acre | 1 | 5 | $ 0.52 |
| E528E | PLANTS | Plant Structure and Composition, Terrestrial Habitat for Wildlife and Invertebrates | | | X | X | X | X | | Improved grazing management for enhanced plant structure and composition for wildlife | Managing the harvest of vegetation with grazing and/or browsing animals for the purpose of improving the quantity and quality of the structure and composition of the plant community that is available for wildlife. | acre | 1 | 5 | $ 0.98 |
| E528F | PLANTS | Plant Productivity and Health, Plant Structure and Composition | | | X | | | X | | Stockpiling cool season forage to improve structure and composition or plant productivity and health | Grazing management employed to stop grazing events of selected paddock(s) to allow pasture forages to grow to maximum vegetative biomass accumulation before the end of the growing season. | acre | 1 | 5 | $ 22.52 |
| E528G | PLANTS | Plant Productivity and Health | | | X | | | | | Improved grazing management on pasture for plant productivity and health with monitoring activities | Managing the harvest of vegetation with grazing and/or browsing animals as adjusted when following recommendations of a qualifying professional, as detailed in the enhancement criteria, generated through pasture condition scoring (PCS). | acre | 1 | 5 | $ 9.66 |
| E528H | WATER | Elevated Water Temperature | | | | X | | | | Prescribed grazing to improve/maintain riparian and watershed function-elevated water temperature | Grazing management employed will provide cover and density needed in the watershed in order to reduce runoff, improve infiltration, provide for above ground water filtration and sustain applicable fish and wildlife species habitat. | acre | 1 | 5 | $ 1.56 |
| E528I | WATER | Nutrients transported to surface water, Nutrients transported to ground water | | | X | X | | | | Grazing management that protects sensitive areas -surface or ground water from nutrients | Grazing management employed will provide cover and density needed in the watershed in order to protect sensitive areas such as sinkholes, streams, highly erodible areas, or locations with plants that cannot tolerate defoliation. | acre | 1 | 5 | $ 1.72 |
| E528J | WATER | Nutrients transported to surface water, Pathogens and chemicals from manure, bio-solids or compost applications transforted to surface water, Sediment transported to surface water | | | x | | | | | Prescribed grazing on pastureland that improves riparian and watershed function. | Grazing management employed will provide cover and density needed in the watershed in order to reduce runoff, improve infiltration, provide for above ground water filtration and sustain applicable fish and wildlife species habitat. | acre | 1 | 5 | $ 15.01 |
| E528K | SOIL | Compaction | | | X | | | | | Improved grazing management for soil compaction on pasture through monitoring activities | Manage the harvest of vegetation with grazing and/or browsing animals as adjusted when following recommendations of a qualifying professional, as detailed in the enhancement criteria, generated through pasture condition scoring (PCS). | acre | 1 | 5 | $ 7.94 |

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| E528L | SOIL | Bank erosion from streams, shorelines or water conveyance channels | | | X | X | X | | | Prescribed grazing that improves or maintains riparian and watershed function-erosion | Grazing management employed will provide cover and density needed in the watershed in order to reduce runoff, improve infiltration, provide for above ground water filtration and sustain applicable fish and wildlife species habitat. | acre | 1 | 5 | $ 9.78 |
| E528M | SOIL | Classic Gully Erosion | | | X | X | | | | Grazing management that protects sensitive areas from gully erosion | Grazing management employed will provide vegetative cover and density needed in the watershed in order to protect sensitive areas such as sinkholes, streams, highly erodible areas, or locations that cannot tolerate plant defoliation. | acre | 1 | 5 | $ 1.57 |
| E528N | SOIL, WATER, PLANTS | Sheet and Rill Erosion, Wind Erosion, Classic Gully, Compaction, Aggregate Instability, Surface Water Depletion, Plant Productivity and Health, Plant Structure and Compositon and Plant Pest Pressure | | | | X | | | | Improved grazing management through monitoring activities | Three predominant key grazing areas are evaluated utilizing the Rangeland Health Assessment (where reference material is developed) or Describing Indicators of Rangeland Health protocols (where reference material is not developed) to determine how well the ecological processes of the site(s) are functioning. Utilizing knowledge learned from this as a part of the ranch resource assessment, a qualifying professional, as detailed in the enhancement criteria, will provide recommendations or follow-up evaluations toward mitigating some of the degradation risks that are initially identified. | acre | 1 | 5 | $ 2.01 |
| E528O | ANIMAL, PLANT | Feed and Forage Imbalance, Plant productivity and health | | | X | | | | | Clipping mature forages to set back vegetative growth for improved forage quality | Plant maturity is the most important factor that determines forage quality. Timely clipping through mowing, swathing or some other mechanical cutting will occur on grazing lands after plants mature. This enhancement will promote increased forage palatability by setting forages that have matured back to a vegetative state for improved grazing managment and forage quality. | acre | 1 | 5 | $ 35.76 |
| E528P | SOIL, WATER | Pathogens and chemicals from manure, bio-solids or compost applications transforted to surface water, Nutrients transported to surface water, Organic Matter Depletion | X | X | X | X | | | | Implementing Bale or Swath Grazing to increase organic matter and reduce nutrients in surface water | Improve organic matter, aggregate stability and soil organism habitat in the soil by leaving the biomass harvested from the field on site for animal use, or supplementing organic matter needs with off-field forages. Grazing harvested forages in this manner, will help to incorporate organic matter, feed and diversify the soil microbiome, build better aggregation and increase soil health and critical functions such as infiltration, nutrient cycling, and weather resilience. Forages should be placed evenly throughout the field, but can be concentrated in areas where particular concerns, such as bare ground, need to be remedied. Decisions of forage placement must take into account areas that would be sensitive to such activity such as protecting surface waters from nutrients or steep slopes from erosion. | acre | 1 | 5 | $ 136.62 |
| E528Q | ANIMALS | Feed and Forage Imbalance | X | X | X | X | X | X | X | Use of body condition scoring for livestock on a monthly basis to keep track of herd health | Body condition scoring (BCS) serves as a useful management tool to monitor livestock performance with respect to current and recent feeding or grazing programs. Body condition scoring is a numeric scoring system, producers can use to consistently evaluate animals' estimated body energy reserves through degree of fatness. This information can be used to adjust nutritional strategies to reach optimal BCS. Since body condition is closely associated with reproductive performance as well as feed efficiency, monitoring body condition can help producers reach production goals and increase the operation's bottom line. Knowledge and understanding of BCS will assist producers to adjust a supplemental feeding program to maintain animal health and nutrition on a-monthly-basis. | acre | 1 | 5 | $ 1.70 |
| E528R | PLANTS | Plant Productivity and Health, Plant Structure and Composition | | | X | X | | | | Management Intensive Rotational Grazing | Management intensive, multi-paddock grazing system where livestock are regularly and systematically moved to fresh forage to optimize quantity and quality of forage growth, improve manure distribution, improve wildlife cover, and improve soil health. | acre | 1 | 5 | $ 35.69 |
| E533A | WATER | Inefficient Irrigation Water Use | X | X | X | | | | | Advanced Pumping Plant Automation | This enhancement consists of installing a control device to a pump station that allows the user to remotely monitor and operate the pump station based on field measured data. Pumping stations may have either a combustible or electric power unit that are compatible with the control device or sensor. These devices/sensors collect field-measured data and provide this data in real time to the landowner to make irrigation decisions and adjustments to the pump operation | No | 1 | 1 | $ 5,461.99 |
| E533B | ENERGY | Energy Efficiency of Farming/Ranching Practices and Field Operations; Energy Efficiency of Equipment and Facilities | X | X | X | | | X | X | Complete pumping plant evaluation for energy savings | Evaluation of all pumping plants to determine the potential to rehabilitate/replace/reconfigure pump performance to improve water delerivery efficiency 10% or more. Evaluate to determine if a Variable Frequency Drive motor controller(s) is recommended and the simple payback in terms of energy savings is less than 10 years. | acre | 15 | 1 | $ 6.15 |

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| E550A | SOIL | Organic Matter Depletion | X | X | | X | X | | | Range planting for increasing/maintaining organic matter | Establishment of adapted perennial or self-sustaining vegetation such as grasses, forbs, legumes, shrubs and trees for the purpose of increasing or maintaining organic matter levels in the soil. | acre | 5 | 1 | $ 41.92 |
| E550B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | | X | | | | Range planting for improving forage, browse, or cover for wildlife | Establishment of adapted perennial or self-sustaining vegetation such as grasses, forbs, legumes, shrubs and trees for the purpose of improving forage, browse, or cover for wildlife on areas that have been degraded beyond recovery via ecological principles, or old crop fields and pastures devoid of desirable, native rangeland species that fit within an ecological site description steady state. | acre | 5 | 1 | $ 89.94 |
| E578A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | X | Stream crossing elimination | Existing stream crossings on an operation are consolidated into fewer crossings in order to reduce impacts to stream habitat. | no | 10 | 1 | $ 7,512.46 |
| E580A | SOIL | Streambank, Shoreline, Water Conveyance Channels | X | X | X | X | X | X | X | Stream corridor bank stability improvement | Stream corridor bank vegetation components are established to provide additional streambank stability. | acre | 20 | 1 | $ 1,902.99 |
| E580B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | X | Stream corridor bank vegetation improvement | Stream corridor bank vegetation components are established to improve ecosystem functioning and stability. | acre | 20 | 1 | $ 1,902.99 |
| E590A | WATER; AIR | Nutrients Transported to Surface Water; Nutrients Transported to Ground Water; Emission of Greenhouse Gases (GHGs) | X | X | | | | | | Improving nutrient uptake efficiency and reducing risk of nutrient losses | Nutrient management encompasses managing the amount, source, placement, and timing of the application of plant nutrients and soil amendments. Nutrients are currently being applied on the farm based on the 4R nutrient stewardship principles. Enhanced nutrient use efficiency strategies or technologies are utilized to improve nutrient use efficiency and reduce risk of nutrient losses to surface and groundwater and reduce risks to air quality by reducing emissions of greenhouse gases (GHGs). | acre | 1 | 5 | $ 17.56 |
| E590B | WATER | Nutrients Transported to Surface Water; Nutrients Transported to Ground Water | X | X | | | | | | Reduce risks of nutrient loss to surface water by utilizing precision agriculture technologies | Precision application technology and techniques are utilized to plan and apply nutrients to improve nutrient use efficiency and reduce risk of nutrient losses. | acre | 1 | 5 | $ 15.51 |
| E590C | WATER | Nutrients Transported to Surface Water; Nutrients Transported to Ground Water | | | X | | | | | Improving nutrient uptake efficiency and reducing risk of nutrient losses on pasture | Nutrient management encompasses managing the amount, source, placement, and timing of the application of plant nutrients and soil amendments. Nutrients are currently being applied on the farm based on the 4R nutrient stewardship principles. Enhanced nutrient use efficiency strategies or technologies are utilized to improve nutrient use efficiency and reduce risk of nutrient losses on pasture. | acre | 1 | 5 | $ 18.37 |
| E595A | WATER | Pesticides Transported to Surface Water | X | X | | | | | | Reduce risk of pesticides in surface water by utilizing precision pesticide application techniques | Utilize precision application techniques to reduce risk of pesticides in surface water by reducing total amount of chemical applied and reducing the potential for delivery of chemicals into water bodies. | acre | 1 | 5 | $ 10.62 |
| E595B | WATER, AIR | Pesticides Transported to Surface Water; Emissions of Ozone PrecursorsPesticides | X | X | X | | | | | Reduce risk of pesticides in water and air by utilizing IPM PAMS techniques | Utilize integrated pest management (IPM) prevent, avoidance, monitoring, and suppression (PAMS) techniques to reduce risk of pesticides in water and air. Reduce the potential for delivery of chemicals into water or ozone precursor emmisions. | acre | 1 | 5 | $ 7.48 |
| E595D | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | | | | | | | Increase the size requirement of refuges planted to slow pest resistance to Bt crops | Bacillus thuringiensis (Bt) plant incorporated protectants are plants that have been genetically altered to produce proteins that are harmful to certain insect pests. Widespread implementation of Bt crops has decreased insecticide use and increased crop yields, but it must be used as part of an integrated pest management (IPM) approach to protect the crop from pest species that are not susceptible to the Bt toxin and to manage pest resistance. Crop rotation, scouting and resistance management strategies, such as planting and creating refuges of non-Bt crops, are essential when farming Bt crops. Insects have developed resistance to Bt proteins. To mitigate the development of further resistance, growers are required to plant refuges of non-transgenic crops. These refuges produce numbers of susceptible insects that will help sustain populations of non-resistant insects. The size of Refuge requirement depends on the environment, pest and strain of the crop. Size of refuge is determined by resistance risk. Most Bt corn requires that 20% of the total Bt crop planted be non-Bt. Cotton can require 50% of the crop be planted to non-Bt. A recent study published in the Journal of Integrated Pest Management revealed, compliance has been a challenge. Nearly 40% of growers surveyed did not plant the required refuge (Reisig 2017). They credit non-compliance, in part, to lack of understanding by small-scale farmers about the need for refuges. | acre | 1 | 5 | $ 15.95 |

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| E595E | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | X | X | | | | Eliminate use of chemical treatments to control pests and to increase the presence of dung beetles | Pests and parasites can have a significant impact on the economic viability of livestock operations, by affecting the performance and health of animals. The use of broad-spectrum insecticides, pour-ons and avermectins have been shown to have a detrimental effect on dung beetle populations. Having a healthy population of dung beetles facilitates the recycling of nutrients and promotes soil and grassland health. By eliminating the application of broad-spectrum insecticides, pour-ons, and avermectins, including injectable avermectins, for pest control in and on livestock along with rotational grazing and higher stock densities has shown to increase the dung beetle population. Use of natural or alternative methods of pest control over multiple years is encouraged. | acre | 1 | 5 | $ 6.22 |
| E612A | WATER | Sediment Transported to Surface Water | X | X | | | | | | Cropland conversion to trees or shrubs for long term improvement of water quality | Cropland conversion to trees and shrubs for long term erosion control and improvement of water quality. Trees and shrubs are established on cropland where annually-seeded cash crops have been grown. Tree and/or shrub species are selected for their efficacy in holding soil, and the planting design is configured to control runoff and trap sediment. | acre | 15 | 1 | $ 891.10 |
| E612B | AIR | Emission of Greenhouse Gases (GHGs) | X | X | X | X | X | X | X | Planting for high carbon sequestration rate | Plant tree species and use stocking levels for higher growth to increase the rate of carbon sequestration (capture). Use species with a longer life span as well as relatively fast growth, and species suitable for durable manufactured products. Increase stocking levels in forests that are not fully stocked. Implement afforestation on appropriate open lands. | acre | 15 | 1 | $ 756.62 |
| E612C | Plants Animals | Plant Productivity and Health; Plant Structure and Composition Terrestrial Habitat for Wildlife and Invertebrates | | | | X | X | X | | Establishing tree/shrub species to restore native plant communities | Establish trees and/or shrubs to restore elements of plant diversity that have been lost through past diseases or improper management. For example, disease-resistant varieties of elm and chestnut can be established to restore the ecological functions of American elm and American chestnut. At the stand level, past forest management may have eliminated certain native tree species. Restoring stand-level diversity and function addresses a wide array of resource concerns and strengthens ongoing management activities. This enhancement improves a forest that is already in good condition by increasing plant diversity, and improving health and vigor through adding plants with resistance to disease, pests, or other local hazards. Additional benefits include contributing to carbon storage, and providing diversity in wildlife habitat and food sources. | acre | 15 | 1 | $ 679.19 |
| E612E | PLANTS | Plant Structure and Composition | | | X | X | X | X | X | Cultural plantings | Plant trees and shrubs that are of cultural significance, such as those species utilized by Tribes in traditional practices, medicinal plants, species used in basket-making, etc. (e.g., paper birch, slippery elm, witch hazel). | acre | 15 | 1 | $ 1,447.79 |
| E612G | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | X | Tree/shrub planting for wildlife food | Tree or shrub planting to enhance habitat for native wildlife. A minimum of five tree or shrub species will be used; they will be species that provide food and/or cover for identified wildlife species. | acre | 15 | 1 | $ 1,346.09 |
| E643A | PLANTS | Plant Structure and Composition | | | | X | X | | | Restoration of sensitive coastal vegetative communities | Enhance the level of restoration in unique and diminishing coastal ecosystems by establishing native herbaceous and woody plants. Protect established vegetation, and manage to maintain floristic quality and the provision of environmental services. This enhancement is applied on unique areas with rare and declining habitat conditions, where vegetation has been detrimentally altered by human or natural events. Targeted sites are those that formerly supported vegetative communities that are now declining and/or becoming rare. The sites will vary across the continent. The enhancement will expand and elevate the process of restoring these unique areas, increasing their ecological value and benefits to wildlife. It re-establishes a select group of trees and/or shrubs that are key components in this ecosystem. | acre | 5 | 1 | $ 129.53 |
| E643B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | | | Restoration and management of rare or declining habitat | Provide protection from adverse environmental conditions to create refugia for documented occurrences of sensitive plant communities. | acre | 5 | 1 | $ 8.07 |
| E643C | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | | Restore glade habitat to benefit threatened and endangered species and state species of concern | Restore Glade natural communities as shown by the Ecological Site Description to conserve biodiversity. Enhancement requires reducing woody canopy cover and applying at least one prescribed fire to treated acres. Restoration of glade communities provide habitat for rare and declining species. Sites that previously or currently support the rare and declining habitat will be targeted for restoration. | acre | 5 | 1 | $ 1,297.54 |

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| E644A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | | | | | Managing Flood-Irrigated Landscapes for Wildlife | Developing and implementing a conservation plan that supports maintenance of flood-irrigation in key landscapes to provide important foraging habitat for local breeding and migratory waterfowl and waterbirds. | acre | 1 | 5 | $ 24.83 |
| E645A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | X | Reduction of attractants to human-subsidized predators in sensitive wildlife species habitat | Reduction of artificial perching sites, nest sites, food, and water available to subsidized predators in areas where human-subsidized predators are a threat to sensitive wildlife species. Human-subsidized predators may include ravens, crows, magpies, coyotes, foxes, skunks, raccoons, and other species. Activities under this enhancement may include removal of non- native or invasive trees; removal of unused power poles, corrals, windmills, buildings, and other vertical structures; and/or removal or management of watering facilities, dead livestock, road kill, garbage, animal feed, dumps, and other non-natural food sources. | Each | 1 | 1 | $ 45.60 |
| E645B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | X | Manage existing shrub thickets to provide adequate shelter for wildlife | Existing shrub thickets provide an instant and important cover for wildlife. Various wildlife species may use shrubs as winter/thermal cover, summer shade, roosting, or as escape cover from predators. Proper management ensures that these shrubs will continue to provide the desired benefits for the local wildlife. A combination of herbicide treatments, cutting and trimming branches, and removal of other competing vegetation will occur. An eligible existing shrub thicket needs to have a canopy cover of 750 square feet, with an end goal of expanding to 1500 square feet. Any existing shrub thicket (not hand planted within the last 5 years) are eligible for this enhancement. Shrub thickets found within fence rows may now be very wide, but still meet the 750 square feet, are eligible. | Acre | 1 | 1 | $ 305.98 |
| E645C | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | X | Edge feathering for wildlife cover | Selected trees are cut, and brush clipped along the border between a wooded area and a grassland, cropland, or idle land, creating a dense woody cover of interlocking branches at ground level. The feathered edge will be an average of 30 feet wide and a minimum of 50 feet long, resulting in an area of 1500 square feet. The width of the strip will vary to follow topographic features and to create a wavy border; the design will also consider aesthetics. Vegetative composition and cover will vary within the edge, ranging from areas with no trees and shrubs to areas with scattered trees and extensive shrub cover. The variation in vegetation structure along with variable width of the edge will create feathering. The edge may include shrub plantings for wildlife food and aesthetics. | Acre | 1 | 1 | $ 856.48 |
| E646A | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | | | | | | | Close structures to capture and retain rainfall for waterfowl and wading bird winter habitat | When flooded to shallow depths during fall and winter, agricultural fields provide ideal foraging habitat for myriad species of waterfowl and wading birds . In addition, flooded conditions promote establishment of aquatic invertebrate populations, thus providing protein-rich food sources for shorebirds as well as waterfowl and wading birds. | acre | 5 | 1 | $ 27.32 |
| E646B | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | | | | | | | Extend retention of captured rainfall for migratory waterfowl and wading bird late winter habitat | When flooded to shallow depths during fall and winter, agricultural fields provide ideal foraging habitat for myriad species of waterfowl and wading birds. Harvested and idled agricultural lands, notably those occurring within rice rotations, contain high densities of residual (i.e., waste) grain and natural seeds following harvest. In addition, flooded conditions promote establishment of aquatic invertebrate populations, thus providing protein-rich food sources for shorebirds as well as waterfowl and wading birds. Benefits may become greatest during late winter and early spring as birds are assimilating nutrient and fat reserves in preparation for northward migration. However, agricultural fields flooded during fall-winter are typically drained during late January or February in advance of spring planting. This often results in a rapid reduction in available habitat, and may constrain ability of migratory birds to adequately prepare for migration, with greatest impacts likely occurring during years of low winter precipitation. Retention of water on agricultural lands into early spring will produce maximum benefits to migratory waterfowl and shorebirds by providing high quality habitat during a time when habitat may otherwise be in low abundance. | acre | 5 | 1 | $ 32.16 |

FY 2020 Activity List
Enhancements

| Enhancement Code | Resource Concern | Resource Concern Cause | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Range | Forest | Associated Ag Land | Farmstead | Full Enhancement Name | Enhancement Description | Units | Enhancement Lifespan | Max years enh. can be contracted | Unit Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E646C | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | | | | | | | Manipulate vegetation and maintain closed structures for shorebirds mid-summer habitat | Suitable shorebird habitat is limited during the summer and fall as birds migrate south post-breeding and providing shallow water and mud flat habitat will benefit a variety of shorebird species. Optimal conditions are created when water levels are slowly reduced through evaporation, which allows for propagation of invertebrates (typically insect larvae) used as food by shorebirds. Manipulation of vegetation, preferably through rolling, creates open conditions required by this suite of birds as a means to detect and avoid predators, and provides nutrient inputs for invertebrate production. | acre | 5 | 1 | $ 51.65 |
| E645C | ANIMALS | Terrestrial Habitat for Wildlife and Invertebrates | X | X | X | X | X | X | X | Edge feathering for wildlife cover | Selected trees are cut and brush clipped along the border between a wooded area and a grassland, cropland, or idle land, creating a dense woody cover of interlocking branches at ground level. The feathered edge will be an average of 30 feet wide and a minimum of 50 feet long, resulting in an area of 1500 square feet. The width of the strip will vary to follow topographic features and to create a wavy border; the design will also consider aesthetics. Vegetative composition and cover will vary within the edge, ranging from areas with no trees and shrubs to areas with scattered trees and extensive shrub cover. The variation in vegetation structure along with variable width of the edge will create feathering. The edge may include shrub plantings for wildlife food and aesthetics. | Acres | 5 | 1 | $ 856.48 |
| E666D | PLANT, ANIMAL, WATER | Plant Pest Pressure; Terrestrial Habitat for Wildlife and Invertebrates; Naturally Available Moisture Use; Nutrients Transported to Surface Water; Nutrients Transported to Ground Water; | | | | | X | | | Forest management to enhance understory vegetation | This enhancement provides for management of the understory vegetation in a forested area by mechanical, chemical, and/or manual methods to improve the plant species mix and the health of the residual vegetation. Managing the understory vegetation increases available water to the plants, minimizes runoff and erosion, and improves water quality. An adequately stocked forest provides inputs of leaves, needles, and woody twigs and stems to the forest floor, adding to soil organic matter and contributing to forest soil health. Desirable tree species and understory vegetation, with spacing that allows ground cover to develop, will allow moisture to infiltrate and be stored in the soil, releasing moisture over longer periods of time. | acre | 10 | 1 | $ 261.46 |
| E666E | PLANT | Wildfire Hazard from Biomass Accumulation | | | | | X | | | Reduce height of the forest understory to limit wildfire risk | Forest stand improvement that manages forest structure to reduce the risk of wildfire, and creates conditions that facilitate prescribed burning. The fire risk reduction is accomplished by reducing the height of the woody understory and midstory, creating space between the ground cover and the tree canopy. This enhancement provides for management of the understory vegetation in a forested area, using mechanical, chemical or manual methods to improve the plant species mix and the health of the residual vegetation, and reduce the risk of wildfire. In appropriate stands, the treatment creates conditions that favor prescribed burning. Forest stand improvement (FSI) activities are used to remove trees of undesirable species, form, quality, condition, or growth rate. The quantity and quality of forest for wildlife and/or timber production will be increased by manipulating stand density and structure. These treatments can also reduce wildfire hazards, improve forest health, restore natural plant communities, and achieve or maintain a desired native understory plant community for soil health, wildlife, grazing, and/or browsing. | acre | 10 | 1 | $ 261.46 |
| E666F | PLANT, ANIMAL | Plant Productivity and Health; Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | | | Reduce forest stand density to create open stand structure | Reducing forest stand density creates open forest conditions with a low basal area which promotes the health and vigor of the residual trees. The open stand structure allows a significant amount of sunlight to reach the forest floor and stimulates the growth of understory vegetation. Understory vegetation management, along with the wide spacing between trees or clumps of trees, provides visual appeal, lowers the risk of wildfire, and provides habitat for many at-risk and listed wildlife species. The enhancement creates conditions that facilitate a follow-up treatment with prescribed burning. | acre | 10 | 1 | $ 298.98 |

FY 2020 Activity List
Enhancements

| Enhancement Code | Resource Concern | Resource Concern Cause | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Range | Forest | Associated Ag Land | Farmstead | Full Enhancement Name | Enhancement Description | Units | Enhancement Lifespan | Max years enh. can be contracted | Unit Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E666G | PLANT, ANIMAL | Wildfire Hazard from Biomass Accumulation; Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | | | Reduce forest density and manage understory along roads to limit wildfire risk and improve habitat | Opening the tree canopy along roads ("daylighting"), and providing space between ground vegetation and tree crowns minimizes the spread of wildfires that often start along roads, and improves wildlife habitat and food sources for many species. Some trees near a forest road are removed through harvesting, cutting, mulching, or another option available at the site, with the objective of creating a partially open forest canopy bordering the road. A semi-open canopy allows more sunlight to reach the forest floor to promote herbaceous understory plants, and reduces maintenance needs by allowing moisture to evaporate from roads. The reduced canopy and herbaceous understory limit woodland fuel buildup and reduce fire intensity. | acre | 10 | 1 | $ 303.21 |
| E666H | SOIL, AIR | Emission of Greenhouse Gases (GHGs), Organic Matter Depletion | | | | | X | X | X | Increase on-site carbon storage | Use forest management techniques to maintain and increase on-site carbon storage. These include, but are not limited to, applying uneven-aged management, using longer rotations, retaining cavity/den trees, snags, and down woody debris, and protecting or increasing soil organic material. | acre | 10 | 1 | $ 14.34 |
| E666J | PLANT, ANIMAL | Plant Productivity and Health; Plant Structure and Composition; Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | | Facilitating oak forest regeneration | Facilitate oak regeneration following a forest stand improvement treatment for natural oak regeneration (i.e., a regeneration cut). After a regeneration cut, oaks in the seedling and sapling stages are often out-competed by invasive brush and undesirable tree and shrub species. This enhancement will release seedling and sapling oaks from competing invasive plants and other undesirable species, and thin stump sprouts. A forester will monitor site conditions, treat competition, protect seedlings, and recommend additional follow-up treatments as needed. The enhancement protects investments in oak regeneration by providing for follow-up activities that require the expertise of a professional forester. | acre | 10 | | $ 528.45 |
| E666K | PLANT, ANIMAL | Plant Structure and Composition; Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | X | Creating structural diversity with patch openings | Forest stand improvement that creates patch openings. Size, shape, and arrangement of patches will be based on natural features, and emulate patches that would result from natural disturbance regimes of wind or fire, varying geographically and by forest type, and by tree species desired from natural regeneration. The treatment will create diversity in stand composition and structure, increase pest resistance, and enhance wildlife food availability. Openings may provide regeneration sites and restore natural plant communities, and achieve or maintain a desired understory plant community for wildlife habitat. | acre | 10 | 1 | $ 520.24 |
| E666L | PLANT, ANIMAL | Plant Structure and Composition, Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | | | Forest Stand Improvement to rehabilitate degraded hardwood stands | Hardwood forestland has been subject to poor logging practices ("high-grading") for decades. Without professional forestry assistance the best species and individual trees are removed, often before maturity ("diameter-limit cutting"), leaving the poorest species and individual trees to regenerate the stand. Reversing this process requires cutting or killing poor quality trees while retaining any desirable species that might still be present. A combination of 3 silvicultural methods are applied: crop tree release, group selection (all trees removed from an area 0.25 to 1.0 acre in size) and small clear-cuts (all trees removed from an area 1-3 acres in size). | acre | 10 | 1 | $ 517.78 |
| E666M | PLANT, ANIMAL | Wildfire Hazard from Biomass Accumulation, Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | | Maintaining structural diversity in dry Western forests | This enhancement retains the beneficial effects of treatments that have been applied to restore ecological function in dry Western forests. It is implemented following a forest stand improvement treatment designed to restore variable and patchy conditions typical of benchmark ecological sites. After a restoration treatment, young trees often regenerate in numbers higher than desired, leading to increased fire risk and loss of wildlife habitat. The enhancement will address follow-up activities needed for maintaining forest structure. Site conditions will be monitored and follow-up treatments recommended as needed. The enhancement protects investments in habitat creation by providing for follow-up activities that require the expertise of a forester or wildlife biologist. | acre | 10 | | $ 270.20 |

FY 2020 Activity List
Enhancements

| Enhancement Code | Resource Concern | Resource Concern Cause | Crop (Annual and Mixed) | Crop (Perennial) | Pasture | Range | Forest | Associated Ag Land | Farmstead | Full Enhancement Name | Enhancement Description | Units | Enhancement Lifespan | Max years enh. can be contracted | Unit Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| E666N | PLANT, ANIMAL | Wildfire Hazard from Biomass Accumulation,Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | | Creating structural diversity in dry Western forests | Restore natural stand structure in dry Western forests by creating openings characteristic of reference ecological site conditions in stands where even thinning treatments have already been applied to reduce wildfire risk. Thinning treatments are effective in reducing fuels, but typically do not restore forest structural diversity to emulate benchmark or reference conditions. Applying this enhancement as a follow-up treatment will create a patchy structure that provides open areas where grasses and forbs can thrive and produce wildlife food and cover. The size, shape, and arrangement of openings will be based on moisture availability and site physiography, to emulate structural conditions that would result from natural disturbance regimes of wind and/or fire. | acre | 10 | | $ 1,084.55 |
| E666O | ANIMAL | Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | X | Snags, den trees, and coarse woody debris for wildlife habitat | Improve wildlife habitat through creation and retention of snags, den trees, forest stand structural diversity, and coarse woody debris on the forest floor, to provide cover/shelter for native wildlife species. | acre | 10 | 1 | $ 56.03 |
| E666P | ANIMAL | Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | X | Summer roosting habitat for native forest-dwelling bat species | Create new potential roost trees within upland and riparian forests to achieve desired summer habitat for forest-dwelling bat species. | acre | 10 | 1 | $ 207.32 |
| E666Q | PLANT, ANIMAL | Terrestrial Habitat for Wildlife and Invertebrates | | | | | X | X | X | Increase diversity in pine plantation monocultures | Create small openings to provide diversity in pine plantations, which are typically monocultures and inhospitable to wildlife. Small openings are one-half (0.5) to three (3) acres in size. The cleared area will have the vegetation removed through cutting, mulching, or other means compatible with the site. | acre | 10 | 1 | $ 520.24 |

# CSP Bundles

The following table includes available bundles you may add to your CSP application to improve the conservation level on your land.

# FY 2020 CSP Activity List
## Bundles

| Bundle Code | Eligible Land Uses | | | | | | | Bundle Name | NEW Consolidated Bundle Description NEW | Units | Bundle Lifespan | Max years bundle can be contracted | Unit Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Crop (Annual | Crop (Perennial | Pasture | Range | Forest | Associated Ag Land | Farmstead | | | | | | |
| B000BFF1 | X | X | | | | X | | Buffer Bundle#1 | Extend existing Buffers to address water quality degredation, fish/wildlife inadequate habitat, degraded plant condition plus an option for air quality impacts. Adopt E393A, E327A, and E612D as well as one of the following enhancements: E612B, E612G. This bundle will be applied one time and the enhancements maintained for their lifespan. | acre | 15 | 1 | $2,319.51 |
| B000CPL18 | X | | | | | | | Crop Bundle #18 - Precision Ag | Addresses water quality degradation, fish and wildlife inadequate habitat, air quality impairment, and either soil erosion or soil quality degradation resource concerns. Adopt E595A, E590B, E328D, E329A or E345A, and E340A. This bundle may be applied multiple times. | acre | 1 | 5 | $41.50 |
| B000CPL19 | X | | | | | | | Crop Bundle #19 - Soil Health Precision Ag | Addresses water quality degradation, soil quality degradation, fish and wildlife inadequate habitat, and insufficient water resource concerns. Adopt E595A, E590B, E328D, E327A, and E329C or E345C. This bundle may be applied multiple times. | acre | 1 | 5 | $44.12 |
| B000CPL20 | X | | | | | | | Crop Bundle #20 - Soil Health Assessment | Addresses water quality degradation, soil quality degradation, fish and wildlife inadequate habitat, and insufficient water resource concerns. Adopt E595B, E590A, E328F, E327A, and E329C or E345C. This bundle may be applied multiple times. | acre | 1 | 5 | $48.92 |
| B000CPL21 | X | | | | | | | Crop Bundle #21 - Crop Bundle (Organic) | Addresses soil quality degradation, water quality degradation, and degraded plant condition resource concerns. Adopt E484A, E595B, E590A, E393A, and E612D. This bundle may be applied multiple times. | acre | 1 | 5 | $60.61 |
| B000CPL22 | X | | | | | | | Crop Bundle #22 - Erosion Bundle (Organic) | Addresses soil quality degradation, water quality degradation, soil erosion, and fish and wildlife inadequate habitat resource concerns. Adopt E328E, E345D, E595B, E590A, E340A, and E327A. This bundle may be applied multiple times. | acre | 1 | 5 | $49.90 |
| B000FST1 | | | | | X | | | Forest Bundle#1 | Address forest management on sites that are not adapted to natural fire disturbances. Address soil quality degradation, degraded plant condition, fish/wildlife inadequate habitat, and insufficient water. Adopt E666A, E666I, E666O, E612G, and E666D. | acre | 15 | 1 | $94.19 |
| B000GRZ1 | | | X | X | | | | Grazing Bundle 1 - Range and Pasture | The participant will implement site specific strategies applied to range or pasture through the following enhancements: E528L, E315A, and E645A. This bundle may be applied multiple times in order to address soil erosion, degraded plant condition, and fish and wildlife inadequate habitat resource concerns. | acre | 5 | 5 | $89.38 |

# FY 2020 CSP Activity List
## Bundles

| Bundle Code | Eligible Land Uses | | | | | | | Bundle Name | NEW Consolidated Bundle Description NEW | Units | Bundle Lifespan | Max years bundle can be contracted | Unit Cost |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Crop (Annual | Crop (Perennial | Pasture | Range | Forest | Associated Ag Land | Farmstead | | | | | | |
| B000GRZ2 | | | X | X | | | | Grazing Bundle 2 - Range and Pasture | The participant will implement site specific strategies applied to range or pasture through the following enhancements: E472A, E382A, and E580A. This bundle will be applied one time and the enhancements maintained for their lifespan in order to address water quality degradation, fish and wildlife inadequate habitat, and soil erosion resource concerns. | acre | 20 | 1 | $2,324.96 |
| B000GRZ3 | | | X | X | | | | Grazing Bundle 3 - Range and Pasture | The participant will implement site specific strategies applied to range or pasture through the following enhancements: E472A, E390B, and E580A. This bundle will be applied one time and the enhancements maintained for their lifespan in order to address water quality degradation, fish and wildlife inadequate habitat, and soil erosion resource concerns. | acre | 10 | 1 | $1,675.59 |
| B000GRZ4 | | | X | X | | | | Grazing Bundle 4 - Range and Pasture | The participant will implement site specific strategies applied to range or pasture through the following enhancements: E472A, E391C, and E580A. This bundle will be applied one time and the enhancements maintained for their lifespan in order to address water quality degradation, fish and wildlife inadequate habitat, and soil erosion resource concerns. | acre | 15 | 1 | $2,977.48 |
| B000GRZ5 | | | X | X | | | | Grazing Bundle 5 - Range and Pasture | The participant will implement site specific strategies applied to range or pasture through the following enhancements: E528A, E315A, and E645A. This bundle may be applied multiple times in order to address soil erosion, degraded plant condition, and fish and wildlife inadequate habitat resource concerns. | acre | 5 | 5 | $6.17 |
| B000PST5 | | | X | | | | | Pasture Bundle 5 | The participant will implement site specific strategies applied to pasture by implementing the following enhancements E528J, E315A, and E645A. This bundle may be applied multiple times in order to address soil erosion, degraded plant condition, and fish and wildlife inadequate habitat resource concerns. | acre | 5 | 5 | $64.42 |
| B000RNG4 | | | | X | | | | Range Bundle 4 | The participant will implement site specific strategies applied to range by implementing the following grazing management enhancements E528N, E315A, and E645A. This bundle may be applied multiple times in order to address soil erosion, degraded plant condition, and fish and wildlife inadequate habitat resource concerns. | acre | 5 | 5 | $91.28 |

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