

# Conservation Plan for the Planning Scenario



## Conservation Plan

For:

### Douglas and Kathy Fir Fir Farms

612 Plantation Pine Rd.  
Birch, USA 31100

Phone

1-XXX-XXX-XXXX

Prepared in Cooperation with the:

**USDA – Natural Resources Conservation Service**

And

**Any Soil and Water Conservation District**

USDA Service Center

Address

City, State ZIP

Phone

#### **Conservation Plan Approval**

As an Approved Conservation Planner, I certify that I have reviewed this Conservation Plan for technical adequacy and that the elements of the Conservation Plan are technically compatible, reasonable and implementable.

Signature

Date:

Name: Joe Planner

Title: Approved Conservation Planner

#### **Any SWCD**

The SWCD has reviewed the Conservation Plan and concur that the plan meets the SWCD goals.

Signature

Date:

Name: Dedicated Supervisor

Title: Chairman SWCD

#### **Owner/Operator**

As the owner/operator of this Conservation Plan, I certify that I, as the decision maker, have been involved in the planning process and agree the items/practices listed are needed. I understand that I am responsible for keeping all the necessary records associated with the implementation of this Plan. It is my intent to implement/accomplish this Conservation Plan in a timely manner as described in the plan.

Signature: Douglas and Kathy Fir

Date:

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## Resource Information for the Forestry Planning Example Farm Soils Data - Reference Any Soil Survey [need to match with Soils Tables or modify tables to match materials here]

Soil Sym	Soil Name and Description	Drainage	Flooding Frequency	Hydro Group	HEL Y or N	Hydric Y or N
Soil A	silt loam, 0 to 2 percent slopes	Moderately well drained	None	A	No	No
Soil B	silt loam, 3 to 8 percent and 8 to 15 percent slopes	Well drained	None	C	Yes	No
Soil C	Loamy sand, 25 to 40 percent slopes	Excessively well Drained	None	B/D	Yes	No
Soil D	Silt loam, 0 to 2 percent slopes	Very poorly drained	Frequently	A/D	No	Yes
Soil E	Silt loam, 10 to 25 percent slopes	Moderately well drained	None	C/D	Yes	No

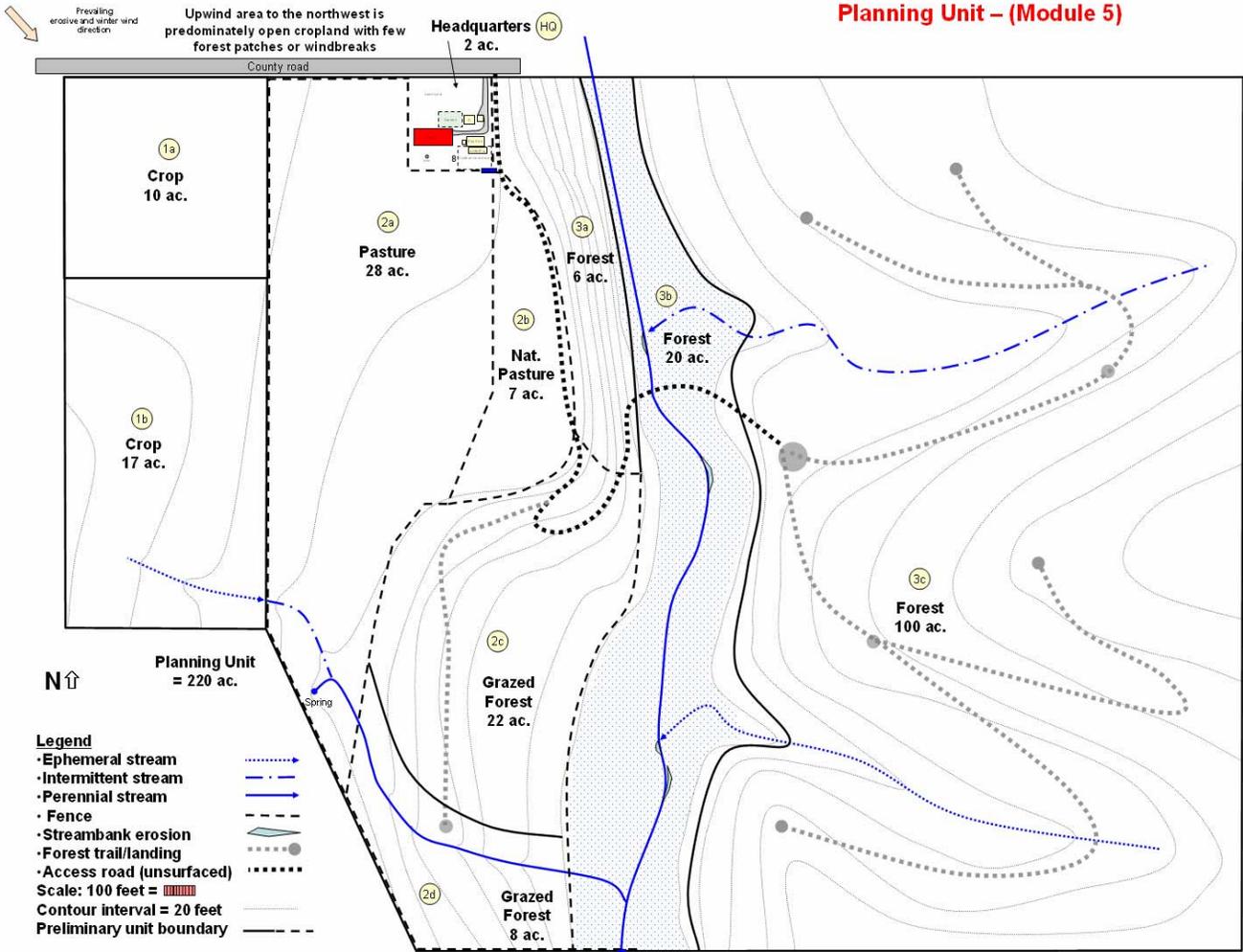
		Erodibility	Soil Tol.	Average	Avg. Slope	Wind Erod. I
Soil Sym	Soil Name & Description	K Value	"T" Tons	Slope %	Length Ft.	Group
Soil A	silt loam, 0 to 2 percent slopes	.43	3	0-2	150	56
Soil B	silt loam, 3 to 8 percent slopes	.37	3	3-8	125	
Soil B	Silt loam, 8 to 15 percent slopes	.37	3	8-15	125	
Soil C	Loamy sand, 25 to 40 percent slopes	.28	5	25-40	150	
Soil D	Silt loam, 0 to 2 percent slopes	.28	3	0-2	200	
Soil E	Silt loam, 10 to 25 percent slopes		3	10-25	100	

### FARMER OBJECTIVES:

- Reduce home heating costs, and damage to ornamental plants, while increasing bird watching opportunities.
- Control the ephemeral gully erosion on crop and forestland.
- Reduce soil erosion from wind and sheet and rill erosion on cropland.
- Reduce woods road erosion and sedimentation into the stream.
- Keep input costs to a minimum.
- Increase income by planting fruit and nut-producing trees where possible.
- Increase fire safety around headquarters.
- Increase vehicular traffic safety on county road by property.
- Improve livestock grazing efficiency on all grazed areas while protecting sensitive areas and providing an income from timber products.
- Reduce damage to forest by bark beetles.
- Stabilize the stream banks on Noname Creek.
- Improve stream crossing for fish passage and vehicular traffic.
- Increase income by planting Ginseng where possible.
- Reduce woods road and skid trail erosion and sedimentation into the stream.
- Limit vehicular traffic on all farm roads during "mud season(s)".
- Increase quantity and quality of desirable tree species in the forestlands.
- Manage all land uses for fish and wildlife, as well as timber.
- Farm more efficiently.

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## Planning Unit – (Module 5)



Planning unit joins with a large Nature Conservancy bottomland forest property



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Practice Name	CMU #	Planned Amount (Number, Acres, or Feet)	Year Planned to be Applied / Installed
<p><b>CROPLAND</b></p> <p>This land use consists of a resource management system containing two very different CMUs (Fields). Both CMUs have an existing conservation crop rotation. CMU 1a has a herbaceous wind barrier that will reduce wind erosion and protect crops from damage in the short-term. The windbreak will reduce wind erosion and improve wildlife cover and possibly provide food in the long-term.</p> <p>In CMU 1b, sheet and rill, and concentrated flow is reduced by the addition of a vegetative barrier for short-term erosion control and alley cropping with commercial nut trees for long-term erosion control and an alternate income source. There are also increased hunting opportunities with the new system. The practices included in this Resource Management System address the following resource and human concerns: soil erosion caused by wind, sheet &amp; rill soil erosion, concentrated flow erosion, poor soil condition, onsite soil deposition, poor air quality due to blowing soil, poor plant conditions, unsuitable plantings, lack of wildlife cover, and low profitability.</p>		27.0 Ac	
<p><b>Conservation Crop Rotation 328</b> Continue growing crops in a planned rotation for biodiversity and to provide adequate amounts of organic material for erosion reduction, nutrient balance and sustained soil organic matter. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	1a 1b	10.0 Ac. 17.0 Ac.	3/Year 1 3/Year 1
<p><b>Windbreak/Shelterbelt Establishment 380</b> Establish and maintain a windbreak/shelterbelt according to NRCS standards and specifications.</p>	1a	1200 Ft.	5/Year 3
<p><b>Herbaceous Wind Barriers 603</b> Establish a row or strips of herbaceous vegetation across the prevailing wind direction to reduce wind erosion, protect growing crops, and improve moisture management. Plan and design in accordance with NRCS standards and specifications for this practice.</p>	1a	8400 Ft.	5/Year 3

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<p>Alley Cropping 311 (with erosion controlling herbaceous vegetation) Plant trees and/or shrubs in a set or series of single or multiple rows with agronomic crops or forages produced in the alleys between the rows of woody plants in accordance to NRCS standards and specifications.</p>	1b	1.0 Ac.	5/Year 3
<p>Vegetative Barrier 601 Plant permanent strips of stiff, dense vegetation along the general contour of slopes or across concentrated flow areas. Plan and design shall be in accordance with NRCS standards and specifications.</p>	1b	350 Ft.	5/Year 3
<p>Upland Wildlife Habitat Management 645 Create, maintain or enhance area(s) to provide upland wildlife food and cover, in accordance with NRCS standards and specifications for this practice.</p>	1a	1.0 Ac.	5/Year 3
	1b	1.0 Ac.	5/Year 3
<p><b>FOREST LAND</b> This land use consists of a resource management system containing four very different CMUs (Fields). CMU 2d is a high-quality stand of hardwoods with a well-defined riparian forest buffer. This stand is protected from livestock grazing and is thinned to the appropriate stocking level. A small area will also be planted to Ginseng, an interest of the landowner. CMU 3 is adjacent to headquarters and therefore the landowner's health and safety will be protected by installing a firebreak between headquarters and CMU 3a, putting up a barrier to exclude the teenager partygoers, and by thinning and weeding out large, overmature trees. Reducing the cover density and stocking rate within this stand will reduce the mortality rate due to both competition and insect damage that has already occurred. CMU 3b is a bottomland hardwood forest that will be well stocked with trees and shrubs. Noname creek will be well shaded with large trees and a culvert will be appropriately installed on the access road so as to facilitate fish passage upstream, and reduce or eliminate any soil erosion and deposition into the creek. The streambank will also be stabilized. A fully functioning riparian forest buffer will be maintained along the creek. CMU 3c will be prepared and planted with the appropriate trees for the location, according to the desires of the landowner, type of soil and timber markets in the area. The roads and trails will be repaired appropriately for use in future harvesting operations or protected by installing water bars, revegetating and excluding vehicle</p>		134 Ac.	

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<p>traffic. The practices included in this Resource Management System will address the following resource and human concerns: ephemeral and classic gully erosion, streambank and roadbank erosion, soil compaction, surface water quality degradation from pathogens, nutrients, organics, and sediment, surface water temperature increases, air quality problems from smoke, undesirable tree species, impaired establishment, growth and harvest of desirable trees, livestock and insect damage to trees and wildlife habitat, decreased fish health and habitat, and low profitability.</p>			
<p><b>Forest Trails and Landings 655</b>          Establish and/or maintain trails and landings according to NRCS standards and specifications. At a minimum: Keep road and skid trail grades less than 10% except for short distances when necessary. Avoid building trails or landings in or close to streams. Provide for good drainage by establishing water bars, drainage dips and/or culverts for cross drains, and divert runoff to protected areas. Use a bridge or culvert when crossing streams. Restrict traffic during wet periods on soft roads. Seed skid trails, ditches and other disturbed areas when work is completed or suspended for long periods. Follow all federal, state and local laws and regulations.</p>	3c	100.0 Ac.	6/Year 2
<p><b>Critical Area Planting 342</b>          Plant this area to permanent vegetative cover according to NRCS standards and specifications. Maintain in a vigorous soil erosion resistant cover.</p>	3c	2.0 Ac	9/Year 3
<p><b>Fence 382</b>          Construct fencing where shown on plan map according to NRCS standards and specifications. Follow Operation &amp; Maintenance Plan prepared with design.</p>	2d	6000 Ft.	10/Year 3
<p><b>Riparian Forest Buffer 391</b>          This area will be planted to trees, shrubs and forbs and maintained according to NRCS standards and specifications. At a minimum: Native plants shall be used to the extent possible. Pest control, including deer, mice and weeds is essential. The buffer will be inspected periodically and protected from adverse impacts. Replacement of dead plant materials and control of undesirable competition will be continued until the buffer has progressed to a functional condition. Cut and remove</p>	3c	1.0 Ac.	5/Year 4

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<p>filter strip vegetation where the purpose for the buffer is nutrient uptake and water quality. For wildlife benefits, mow as appropriate to maintain grass cover. Exclude livestock.</p>			
<p>Maintain a Riparian Forest Buffer (391) according to NRCS standards and specifications, with at the minimum the following specifications: Follow all local, state and federal wetland protection laws and regulations, but as a minimum:</p> <ol style="list-style-type: none"> <li>1. Leave a minimum of 15 feet, Zone 1, undisturbed from the average high water mark, except for the occasional tree, and exclude livestock.</li> <li>2. Manage the next 20 feet, at a minimum, Zone 2, to maintain the maximum vigor of overstory and understory species. If wildlife habitat is an objective, manage an expanded Zone 1 and/or Zone 2 to maintain maximum vigor of overstory and understory species to provide a wildlife corridor and cover for a variety of species.</li> <li>3. In both zones, a full stocking rate of trees and shrubs should be maintained.</li> <li>4. Maintain a diversity of native species.</li> </ol>	3b	20.0 Ac.	2/Year 1
	2d	2.0 Ac.	2/Year 3
<p>Firebreak 394 Establish a strip of bare land or vegetation that resists fire for protection from wildfire and for control of prescribed burns. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	3a	500 Ft.	9/Year 5
<p>Forest Stand Improvement 666 Manipulate species composition by weeding, releasing or thinning of selected trees and understory vegetation. Forest stand improvement should be as planned and directed by a professional forester in accordance with NRCS standards and specifications.</p>	3a	2.0 Ac.	12/Year 2
	2d	2.0 Ac.	2/Year 4
	3c	10.0 Ac.	12/Year 6
	3b	5.0 Ac.	11/Year 7
<p>Fish Stream Improvement 395 Improve the stream channel to create or enhance fish habitat. Follow a plan and design in accordance with NRCS standards and specifications for this practice. A permit may be needed for this practice.</p>	3b	50 Ft.	8/Year 5
<p>Fish Passage 396 Modify or remove barriers that restrict or prevent movement or migration of fish. Follow a plan and design in accordance with NRCS standards and specifications for this practice. A permit may be needed for this practice.</p>	3b	1 No.	8/Year 5

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<p><b>Streambank and Shoreline Protection 580</b> Use vegetation and/or structures to stabilize and protect banks or streams, lakes, estuaries, or excavated channels against scour and erosion. Follow a plan and design in accordance with NRCS standards and specifications for this practice. A permit may be needed for this practice.</p>	3b	300 Ft.	5/Year 2
<p><b>Use Exclusion 472</b> Exclude livestock from area shown on plan map according to NRCS standards and specifications.</p>	2d	8.0 Ac.	4/Year 3
<p>Install barriers to exclude animals, people, and vehicles to protect the natural resources. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	3a	6.0 Ac.	11/Year 1
	3c	100.0 Ac.	3/Year 2
<p><b>Access Road 560</b> Build a designated route or constructed travel way to be used by vehicles necessary for management of the operation. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	3b	1000 Ft.	7/Year 4
<p><b>Pest Management 595</b> Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth, crop production and material resources. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	3a	6.0 Ac.	3/Year 1
	3c	20.0 Ac.	8/Year 3
<p><b>Forest Site Preparation 490</b> Prepare land for establishing woody species by controlling weeds, removing slash and debris, or otherwise altering the site conditions to favor tree establishment by natural or artificial methods. Practice will be according to NRCS standards and specifications.</p>	3c	100.0 Ac.	9/Year 3
<p><b>Tree/Shrub Establishment 612</b> Establish and maintain a tree and/or shrub planting according to NRCS standards and specifications.</p>	2d	1.0 Ac.	5/Year 3
	3c	100.0 Ac.	5/Year 4
<p><b>Upland Wildlife Habitat Management 645</b> Create, maintain or enhance area(s) to provide upland wildlife food and cover. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	2d	7.0 Ac.	2/Year 6
<p><b>GRAZED FOREST</b> This land use consists of a resource management system that uses silvopasture. CMU 2c has forest stand</p>		22.0 Ac.	

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<p>improvement and tree/shrub pruning to reduce the shading of the herbaceous, forage species. The livestock will be managed to optimize the utilization of forage produced. These practices together will also optimize the timber production potential of the conifers, which will increase long-term income. The practices included in this Resource Management System address the following resource and human concerns: reduced forage productivity, impaired establishment, growth and harvest of forage and trees, poor forage quality, population and resources are out of balance, damaged riparian area, and reduced profitability.</p>			
<p><b>Prescribed Grazing 528A</b> Grazing will be managed according to a schedule that meets the needs of the soil, water, air, plant and animal resources and the objectives of the resource manager. . Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	2c	22.0 Ac.	5/Year 2
<p><b>Forest Stand Improvement 666</b> Manipulate species composition by weeding, releasing or thinning of selected trees and understory vegetation. Forest stand improvement should be as planned and directed by a professional forester in accordance with NRCS standards and specifications.</p>	2c	10.0 Ac.	11/Year 1
	2c	11.0 Ac.	11/Year 4
<p><b>Tree/Shrub Pruning 660</b> Prune woody plants or shrubs to enhance the function and/or beauty of the species. Tree pruning should be as planned and directed by a professional forester in accordance with NRCS standards and specifications.</p>	2c	2.0 Ac.	3/Year 8
	2c	2.0 Ac.	3/Year 13
<p><b>HEADQUARTERS</b> Headquarters is well protected from the chilling winter winds and blowing snow due to the windbreak/shelterbelt. The windbreak and ornamental plantings are protected from deer browsing by individual protective shelters and chemical deterrents. At the same time, birds are attracted to the plantings and windbreak, which the landowners enjoy. The practices included in this Resource Management System address the following resource and human concerns: snow drifts causing safety hazards, colder air temperatures in the winter, damaged ornamental plants, lack of wild bird sitings, and decreased client well being.</p>		2.0 Ac.	

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<p>Windbreak/Shelterbelt Establishment 380 Establish and maintain a windbreak/shelterbelt according to NRCS standards and specifications.</p>	HQ	300 Ft.	5/Year 2
<p>Use Exclusion 472 Install barriers to exclude animals, people, and vehicles to protect the natural resources. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	HQ	2.0 Ac.	5/Year 2
<p>Fence Construct fencing where shown on plan map according to NRCS standards and specifications. Follow Operation &amp; Maintenance Plan prepared with design.</p>	HQ	700 Ft.	5/Year 2
<p>Pest Management 595 Manage infestations of weeds, insects and disease to reduce adverse effects on plant growth, crop production and material resources. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	HQ	2.0 Ac.	4/Year 2
<p>Upland Wildlife Habitat Management 645 Create, maintain or enhance area(s) to provide upland wildlife food and cover. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	HQ	0.5 Ac.	5/Year 2
<p><b>NATIVE/NATURALIZED PASTURE</b> This land use consists of a resource management system on CMU 2b that is planted with commercial tree species in widely spaced rows so that the areas between rows may be used to graze livestock at a more intensive management level. This improves the condition of the naturalized pasture and adds a long-term income for the farmer. The practices included in this Resource Management System address the following resource and human concerns: soil compaction, plants are inappropriate for intended use, limited forage production, unmanaged plant establishment, growth and harvest, impaired livestock health, and low profitability.</p>		7 Ac.	
<p>Prescribed Grazing 528A Grazing will be managed according to a schedule that meets the needs of the soil, water, air, plant and animal resources and the objectives of the resource manager. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	2b	7.0 Ac.	4/Year 5

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<p>Fence 382 Construct fencing where shown on plan map according to NRCS standards and specifications. Follow Operation &amp; Maintenance Plan prepared with design.</p>	2b	3000 Ft.	9/Year 4
<p>Forest Site Preparation 490 Prepare land for establishing woody species by controlling weeds, removing slash and debris, or otherwise altering the site conditions to favor tree establishment by natural or artificial methods. Practice will be according to NRCS standards and specifications.</p>	2b	7.0 Ac.	8/Year 3
<p>Tree/Shrub Establishment 612 Establish and maintain a tree and/or shrub planting according to NRCS standards and specifications.</p>	2b	7.0 Ac	5/Year 4
<p>Tree/Shrub Pruning 660 Prune woody plants or shrubs to enhance the function and/or beauty of the species. Tree pruning should be as planned and directed by a professional forester. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	2b	1.0 Ac.	3/Year 14
<p>Upland Wildlife Habitat Management 645 Create, maintain or enhance area(s) to provide upland wildlife food and cover. Follow a plan and design in accordance with NRCS standards and specifications for this practice.</p>	2b	1.5 Ac.	12/Year 6
<p>PASTURE This land use consists of a resource management system on CMU 2a that is a well-managed pasture with the livestock excluded from the stream by a fence and using a spring-fed watering facility. A riparian forest buffer is located along the stream. The buffer has also stabilized the bank and compaction has been eliminated. Upland bird species are favored on the south end of this area by special management of the vegetation. The practices included in this Resource Management System address the following resource and human concerns: streambank erosion, soil compaction, reduced surface water quality from sediment, nutrients, organics, and pathogens, high surface water temperatures, inappropriate plants as a buffer, plant damage from livestock, fish health and habitat are impaired, and reduced profitability and community well being.</p>		28 Ac.	
<p>Use Exclusion 472 Exclude livestock from riparian area shown on plan map.</p>	2a	4.0 Ac.	9/Year 4

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Follow a plan and design in accordance with NRCS standards and specifications for this practice.			
Spring Development 574 Utilizing springs and seeps to provide water for livestock.	2a/2c	1 Ea.	9/Year 4
Watering Facility 614 A device (tank, trough or other watertight container) for providing animal access to water.	2a/2c	1 Ea.	9/Year 4
Pipeline 516 Conveys water from spring to point of use for livestock.	2a/2c	500 Ft.	9/Year 4
Fence 382 Exclude livestock from riparian area shown on plan map according to NRCS standards and specifications.	2a	3000 Ft.	9/Year 4
Riparian Forest Buffer 391 This area will be planted to trees, shrubs and forbs and maintained according to NRCS standards and specifications. At a minimum: Native plants shall be used to the extent possible. Pest control, including deer, mice and weeds is essential. The buffer will be inspected periodically and protected from adverse impacts. Replacement of dead plant materials and control of undesirable competition will be continued until the buffer has progressed to a functional condition. Cut and remove filter strip vegetation where the purpose for the buffer is nutrient uptake and water quality. For wildlife benefits, mow as appropriate to maintain grass cover. Exclude livestock.	2a	4.0 Ac.	5/Year 5
Early Successional Habitat Development/Management 647 Manage early plant succession to benefit wildlife or natural communities. Follow a plan and design in accordance with NRCS standards and specifications for this practice.	2a	9.0 Ac.	6/Year 6

## Conservation Plan for the Planning Scenario

Jobsheets (in both landowner and case file)

Engineering Plans (in both landowner and case file)

Other Support Data (only in case file)

- Inventory Data

- Conservation Effects Benchmark Management System, NRCS-CPA-53

- Site-Specific Practice Effects Worksheets (SSPEWs)

- Resource Management System Option Worksheets (RMSOWs)

- Environmental Effects for Resource Management Plans, NRCS-CPA-52

Assistance Notes: (only in case file)