

Cobey Creek Habitat Enhancement

A Proposal Presented to:

The Mule Deer Foundation



By the:

**Tonasket Ranger District, Okanogan-Wenatchee
National Forest**



**Contact: Patti Baumgardner
1 West Winesap
Tonasket, WA 98855
509 486-5123
pbaumgardner@fs.fed.us**

Cobey Creek Habitat Enhancement

Project Need: We propose to continue work in the Cobey Creek Drainage of the West Fork San Poil Watershed to enhance fish and wildlife habitat and to improve riparian function. In 2003 we began in Jimmy's Meadows with a project to move runoff water from a dug channel back onto the meadow, thereby increasing the amount of water stored and released slowly over the season. We now intend to enhance aspen stands near Jimmy's Meadows, raise the water table in nearby Snyder's Meadow, and remove a passage barrier to red-band trout on Cobey Creek.

Our aspen is declining. Sixty percent of western aspen stands are thought to have disappeared since the mid 19th century. Reasons vary somewhat by location, but common causes are fire suppression; succession to conifers (itself a result of fire suppression); and over browsing, both by native ungulates and domestic livestock. Mule deer use aspen stands for hiding cover, summer forage and fawning habitat, and the groves are a haven for many species of songbirds and primary cavity excavators. In addition to serving as wildlife habitat, aspen contributes to the landscape by providing aesthetic values, erosion control, and water. In eastern



Washington's dry climate, loss of water is substantial. When conifers replace aspen, there is less water available to produce undergrowth, recharge soil profiles, and increase streamflow. Currently, most of our stands are being invaded by conifers that would not have survived a normal fire cycle. Shading by conifers has arrested clonal sprouting, and the aspen stands are maturing and dying out. Removing the conifers through fire or mechanical means stimulate sprouting, and recent surveys indicate that our clones still have the ability to respond. Indeed, several stands burned by wildfires this decade are thriving with hundreds of new sprouts/acre. In 2004, James Hadfield and Roy Magelssen published "Assessment of Aspen Condition on the Okanogan and Wenatchee National Forests". The document reinforces the general sentiment of Forest biologists that there is a need to manage our aspen if we want it to perpetuate.

Downstream and hydrologically connected to previous work at Jimmy's Meadows is Snyder's Meadow. Here, a culvert was installed to run a tributary of Cobey Creek under a road. The disruption of the natural drainage has caused downcutting, and photos show that bluegrass has displaced sedges in a lowered water table. Presently, the damage is on National Forest, but each year it extends downstream and will soon reach private land. We intend to improve conditions and avoid damage to neighboring property with a redesigned installation. Once a more natural drainage pattern is established, we will work to heal the downcutting by planting willow shoots and other riparian vegetation. To protect the



plantings from grazing, we will rebuild the fence that once encircled the meadow and install a water trough. The sedges and other wetland plants will reestablish themselves from remnant populations, enhancing habitat for downstream fisheries and for wildlife dependent on functioning riparian systems.

On Cobey Creek, yet another misplaced culvert is blocking fish passage. Redband trout have been collected downstream, but only eastern brook trout are found upstream. We will remove the culvert and work in stream to restore fish passage. In addition, using integrated weed management techniques, we will treat weeds within the project area.

Students from Tonasket High School will work with us. They will collect and plant willow, and establish photo points and monitoring transects. Before they're done, they will understand how riparian systems function, how a series of projects can help raise the water table in an entire watershed, and how they can bring a watershed in their own community toward sustainability. Students will also gain career exposure to the natural resources field. This exposure is paramount for these kids to envision futures for themselves.

Objectives: Our ecological objectives are to:

- Increase the aspen component in treated areas by 25% by 2012
- Raise the water table in Snyder's Meadow by two feet by 2013
- Allow 100% passage redband trout above road 3123-200
- Reduce target noxious weed populations by 80% by 2014

Our educational objectives are:

- To increase student knowledge of meadow and upland processes by 80% by 2012
- Increase student knowledge about natural resource careers by 100% by 2012

Methodology: During the field season, contractors will cut small diameter conifers from three aspen stands and from 100 feet around those stands. Slash will be piled and piles will be burned during an appropriate weather window. During the same season, Forest Service engineers will replace the culvert on the road adjacent to Snyder's Meadow with a bottomless arch design. A crew will build a buck and pole fence around the meadow itself and students will cut and plant willow shoots and other riparian vegetation along the channel's edge. Simultaneously, engineers will move to Cobey Creek and remove the culvert that is blocking red-band trout passage. Contractors will also treat noxious weeds in the area by hand pulling, biological controls, and/or herbicides, depending on the species and severity of the infestation.

Expected Results: As a result of our work, we expect ecological processes within the Cobey Creek Drainage to function more sustainably. Water, the life blood of the Okanogan Highlands, will be held and released more slowly throughout the season. Mule deer will find nearly 80 acres of cover and sustenance in the young aspen, and redband trout will have close to two more miles of habitat in Cobey Creek. In addition, young people will gain an understanding of ecological processes by watching the results of their work. This will help ensure that the habitat gains will last into future generations.

Budget: We estimate that the project will cost \$129,360.00. Through its competitive Challenge Cost Share program, other competitive federal sources and appropriated dollars, the Forest

Service (FS) will contribute up to \$95,360.00. The value of work from Tonasket School District (TSD) is estimated to be \$3,520.00. We have submitted requests for support to the Rocky Mountain Elk Foundation Educational program (RMEF) and the Upper Columbia Regional Fish Enhancement Group totaling \$10,450.00. We hope the **Mule Deer Foundation (MDF)** will consider supporting the project with labor to build the fence, valued at \$10,030.00, and with funds to procure \$10,000.00 worth of fencing materials. The estimated figures are displayed on the following page.



Task	Unit Cost	Unit Measure	Amount Needed	Cost	FS	MDF	RMEF	UCREFG	TSD	Total
Aspen Enhancement										
Cutting out conifers	325.00	acres	78	25,350.00	25,350.00					25,350.00
Layout and supervision	238.00	days	14	3,330.00	3,330.00					3,330.00
Culverts										
Snyder's Meadow										
Engineering	6,000.00	each	1	6,000.00	6,000.00					6,000.00
Culvert work	35,000.00	each	1	35,000.00	35,000.00					35,000.00
Cobey Creek										
Engineering	6,000.00	each		7,000.00	7,000.00					7,000.00
Culvert work	12,000.00	each		12,000.00	8,500.00			3,500.00		12,000.00
Snyder's Meadow Fence										
Materials	3.00	foot	5016	15,050.00		10,000.00		5,050.00		15,050.00
Labor	2.00	foot	5016	10,030.00		10,030.00				10,030.00
Water trough	2,500.00	each	1	2,500.00	2,500.00					2,500.00
Jimmy's Meadow Fence										
Maintenance	218.00	day	4	870.00	870.00					870.00
Student Work										
20 kids	1,560.00	days	2	3,120.00					3,120.00	3,120.00
Teacher	200.00	days	2	400.00					400.00	400.00
Fish biologist	280.00	day	4	1,120.00	1,120.00					1,120.00
Fish technician	156.00	day	2	312.00	310.00					310.00
Project manager	243.00	day	4	970.00	970.00					970.00
Bus	2.00	Mile	200	400.00			400.00			400.00
Equipment				1500.00			1500.00			1,500.00
Weed Control	325.00	acre	5	1,625.00	1,625.00					1,625.00
Vehicle Costs										
Volunteers	0.56	mile	800	450.00	450.00					450.00
FS mileage	0.31	mile	900	280.00	280.00					280.00
FS usage	220.00	month	0.5	110.00	110.00					110.00
Project Development	243.00	days	8	1,945.00	1,945.00					1,945.00
Totals				129,360.00	95,360.00	20,030.00	1,900.00	8,550.00	3,520.00	129,360.00

