

**Practice:** 383 - Fuel Break

**Scenario:** #1 - Grinder

**Scenario Description:** Dwelling or structure exists in or adjacent to a overstocked forest standwith higher than normal wildfire threat. Fuel Break installation requires tree thinning, treating woody residue, pruning and mowing to remove wildfire hazard to stand and structure. Treating woody residue (piling/burning, crushing, grinding or off-site removal) and mowing are mostly mechanized with some hand treatment. Resource concerns are degraded plant condition - wildfire hazard, excess biomass accumulation &undesirable productivity and health.

**Before Situation:** Stand condition creates conditions conducive to wildfire movement across the landscape. Higher than normal fuel load is created by tree crowns touching, trees retaining limbs down to understory vegetation (creating a "ladder" for fire movement into the overstory), understory vegetation (brush and grasses), and existing woody residue. Slope of terrain increases fire hazard. Existing conditions can be rated as a high to severe fire hazard. Dwelling or structure and forest stand is at risk of loss if a wildfire should occur.

**After Situation:** Fuel Break is installed around structure to reduce intensity and rate of spread of a wildfire. Defensible space is provided for the structure. Existing trees should survive a wildfire. Width of fue break can vary from 30' to 250' depending on slope and fuel type. Trees are thinned so as to have at least 20' between the edge of the crowns. Trees are pruned so as not to have any branches within 15' of the ground. All woody residue (thinned trees, branches and brush) are mostly ground up but some is piled/burned, hauled of site or lopped/scattered) understory vegetation is cut down to less than 1 foot in height. Cut stumps have been chemically treated to control sprouting.

**Scenario Feature Measure:** Area of Treatment

**Scenario Unit:** Acre

**Scenario Typical Size:** 4

**Total Scenario Cost:** \$2,742.47

**Scenario Cost/Unit:** \$685.62

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Labor**

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$27.99	16	\$447.76
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.04	16	\$352.69

**Materials**

Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.93	4	\$63.70
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**Equipment Installation**

Chemical, spot treatment, single stem application	964	Ground applied chemical to individual plants or group of plants, e.g., backpack sprayer treatment. Equipment and labor cost included.	Hour	\$52.89	3	\$158.67
Mechanical cutter, chopper	943	Forestry mulcher, flail shredder, hydro axe, brush cutter, etc. Equipment and power unit costs. Labor not included.	Hour	\$84.38	16	\$1,350.08
Pruning tools, hand tools	1318	Pruning tools, hand tools, shears, loppers, pole saw, handsaw. Material costs only. Labor not included.	Hour	\$4.94	16	\$79.05

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
Mobilization, very small equipment	1137	Equipment that is small enough to be transported by a pick-up truck with typical weights less than 3,500 pounds. Can be multiple pieces of equipment if all hauled simultaneously.	Each	\$62.86	1	\$62.86

**Practice:** 383 - Fuel Break

**Scenario:** #17 - FuelBreak

**Scenario Description:** Fuel Break installation requires tree thinning, treating woody residue, pruning, and mowing. Thinning treatment and pruning is done by hand, treating woody residue (piling/burning, crushing, or off-site removal) and mowing are mechanized. Resource concerns are degraded plant condition - wildfire hazard, excess biomass accumulation & undesirable productivity and health.

**Before Situation:** Forest stand is overstocked with desirable and undesirable trees. Overstocking creates conditions conducive to wildfire movement across the landscape, and severe loss/damage of the forest stand. Shrub levels are high and significantly increase wildfire risk. Tree crowns are touching, trees retain limbs down to understory vegetation creating a "ladder" for fire movement into the overstory, and understory vegetation (brush and grasses) create a significant fuel load to rate a high to severe fire hazard. The terrain is moderately to steeply sloped (1-30%), increasing difficulty as slope steepens.

**After Situation:** Fuel Break is installed at the property line or a key locations to reduce crown fire spread. Size of fuel break is 4 acres; the width varies due to site conditions. The trees are thinned so open gaps are created in crown overstory, branches on remaining trees are pruned to 8 to 10 feet in height, all woody residue (thinned trees and pruned branches) are treated (piled/burned or lopped/scattered) so little remains in the fuel break and understory vegetation is mowed down to less than 1 foot in height. Cut stumps have been chemically treated to control sprouting.

**Scenario Feature Measure:** Area of Treatment

**Scenario Unit:** Acre

**Scenario Typical Size:** 4

**Total Scenario Cost:** \$5,748.05

**Scenario Cost/Unit:** \$1,437.01

**Cost Details**

Component Name	Id	Description	Unit	Cost	Qty	Total
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**Labor**

Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$27.99	10	\$279.85
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.70	8	\$181.61
General Labor	231	Labor performed using basic tools such as power tool, shovels, and other tools that do not require extensive training. Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	\$22.04	80	\$1,763.45
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$39.85	12	\$478.18

**Materials**

Herbicide, Triclopyr	338	Refer to WIN-PST for product names and active ingredients. Materials and shipping	Acre	\$42.30	4	\$169.20
Tree Marking Paint	313	Trees to be cut through tree marking are physically identified through the application of paint on the tree. Typically one quart of paint is used to mark one acre of trees. Includes materials and shipping only.	Acre	\$6.66	4	\$26.65

**Equipment Installation**

Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$3.89	80	\$310.90
Chemical, spot treatment, single stem application	964	Ground applied chemical to individual plants or group of plants, e.g., backpack sprayer treatment. Equipment and labor cost included.	Hour	\$52.89	8	\$423.13
Dozer, 140 HP	927	Track mounted Dozer with horsepower range of 125 to 160. Equipment and power unit costs. Labor not included.	Hour	\$110.36	10	\$1,103.63
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	\$46.19	8	\$369.53
Pruning tool, pole saw	1319	Gasoline powered pole chainsaw. Labor not included.	Hour	\$8.32	8	\$66.57

Pruning tools, hand tools	1318	Pruning tools, hand tools, shears, loppers, pole saw, handsaw. Material costs only. Labor not included.	Hour	\$4.94	8	\$39.53
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$19.39	8	\$155.09

**Mobilization**

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$227.64	1	\$227.64
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	\$153.11	1	\$153.11