

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	1
Scenario Name	Biological control
Scenario Description	Management of woody non-herbaceous plant species through the use of livestock that are closely herded to concentrate grazing on targeted shrubs. Typical area is moderate rolling to gentle sloping, moderately deep to deep soils that have dense stands of woody non-herbaceous species that exceed the desirable ecological site condition. This scenario is an alternative for organic producers.
Before Practice Situation	Area consist of dense stands of woody non-herbaceous species that exceed the desirable ecological site condition degrading forage quality, promoting noxious and invasive species, increasing risk of soil erosion and degrading wildlife habitat.
After Practice Situation	Woody species are grazed to limit the regrowth of shrubs and achieve a desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels.
Scenario Feature Measure	Acres treated
Scenario Unit	Acre
Scenario Typical Size	3

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$190.76	\$63.59
Labor	\$383.68	\$127.89
Mobilization	\$25.64	\$8.55
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$600.08	\$200.03

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	961	Trucking, moving livestock to new paddock	Livestock transportation costs to implement a grazing rotation using a gooseneck trailer 6'8" x 24'. Includes equipment, power unit and labor costs.	Mile	\$1.54	15	\$23.10
Equipment/Installation	965	All terrain vehicles, ATV	Includes equipment, power unit and labor costs.	Hour	\$28.76	4	\$115.04
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	2	\$52.62
Labor	230	Skilled Labor	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$23.98	16	\$383.68
Mobilization	1137	Mobilization, very small equipment	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	\$25.64	1	\$25.64

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Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	2
Scenario Name	Mechanical, Hand tools
Scenario Description	Using hand tools, such as axes, shovels, hoes, nippers, brush pullers, and including chainsaws to cut off woody plants at or below the root collar (autumn olive, bush honeysuckle, multiflora rose and privet typical targets). Typical area is moderate rolling to gentle sloping, moderately deep to deep soils that have stands of woody and non herbaceous species that are in the early phases of invasions. Typical unit is 25 acres.
Before Practice Situation	Area is in the very early phases of woody non herbaceous species encroachment that degrades habitat for desired wildlife species. Future degradation of key forage species and ecological site condition promoting noxious and invasive species and increased soil erosion if woody species are allowed to expand.
After Practice Situation	Woody species are removed to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition continues to progress in an upward trend, hydrology and plant health and vigor are sustained.
Scenario Feature Measure	Acres treated
Scenario Unit	Acre
Scenario Typical Size	25

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$888.62	\$35.54
Labor	\$2,987.20	\$119.49
Mobilization	\$25.64	\$1.03
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$3,901.46	\$156.06

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	1318	Pruning tools, hand tools	Pruning tools, hand tools, shears, loppers, pole saw, handsaw Equipment costs only. Labor not included.	Hour	\$2.00	10	\$20.00
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	2	\$52.62
Equipment/Installation	937	Chainsaw	Equipment and power unit costs. Labor not included.	Hour	\$5.44	150	\$816.00
Labor	231	General Labor	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	\$18.67	160	\$2,987.20
Mobilization	1137	Mobilization, very small equipment	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	\$25.64	1	\$25.64

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Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	3
Scenario Name	Mechanical, light Infestation
Scenario Description	Removal of small woody vegetation of light infestations on gentle sloping to moderately deep to deep soils. The practice entails the removal of brush by the use of mechanical cutter, chopper or other light equipment in order to reduce fuel loading and improve ecological site condition. Brush density has exceeded desired levels based on ecological site potential. It has been determined that the brush is at the medium infestation. Typical unit is 40 acres.
Before Practice Situation	Area consist of excessive stands of shrub species degrading health and vigor of native herbaceous species promoting noxious and invasive species and degrading wildlife habitat.
After Practice Situation	Woody species are removed to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels, and improved wildlife habitat.
Scenario Feature Measure	Acres planned
Scenario Unit	Acre
Scenario Typical Size	30

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$3,229.85	\$107.66
Labor	\$844.80	\$28.16
Mobilization	\$63.20	\$2.11
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$4,137.85	\$137.93

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	943	Mechanical cutter, chopper	Masticator, flail shredder, hydro axe, brush cutter, etc. Equipment and power unit costs. Labor not included.	Hour	\$118.67	25	\$2,966.75
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	10	\$263.10
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$19.62	25	\$490.50
Labor	234	Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$35.43	10	\$354.30
Mobilization	1138	Mobilization, small equipment	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	\$63.20	1	\$63.20

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Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	4
Scenario Name	Mechanical, medium Infestation
Scenario Description	Removal of large woody vegetation of medium infestations on gentle sloping to moderately deep to deep soils. The practice entails the removal of brush by pushing, grubbing, masticating, chaining and then raking or piling in order to reduce fuel loading and improve ecological site condition. Brush density has exceeded desired levels based on ecological site potential. It has been determined that the brush is at the medium infestation. Typical unit is 30 acres.
Before Practice Situation	Area consist of excessive stands of shrub species degrading health and vigor of native herbaceous species promoting noxious and invasive species and degrading wildlife habitat.
After Practice Situation	Woody species are removed to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels, and improved wildlife habitat.
Scenario Feature Measure	Acres planned
Scenario Unit	Acre
Scenario Typical Size	30

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$2,642.46	\$88.08
Labor	\$2,273.93	\$75.80
Mobilization	\$92.60	\$3.09
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$5,008.99	\$166.97

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	18	\$473.58
Equipment/Installation	933	Skidsteer, 80 HP	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$35.06	60	\$2,103.60
Equipment/Installation	937	Chainsaw	Equipment and power unit costs. Labor not included.	Hour	\$5.44	12	\$65.28
Labor	231	General Labor	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	\$18.67	28	\$522.76
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$19.62	60	\$1,177.20
Labor	234	Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$35.43	16.2	\$573.97
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$92.60	1	\$92.60

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Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	5
Scenario Name	Mechanical, heavy Infestation
Scenario Description	Removal of large woody vegetation of heavy infestations on gentle sloping to moderately deep to deep soils. The practice entails the removal of brush by pushing, grubbing, masticating, chaining and then raking or piling in order to reduce fuel loading and improve ecological site condition. Brush density has exceeded desired levels based on ecological site potential. It has been determined that the brush is at the medium infestation. Typical unit is 30 acres.
Before Practice Situation	Area consist of excessive stands of shrub species degrading health and vigor of native herbaceous species promoting noxious and invasive species and degrading wildlife habitat.
After Practice Situation	Woody species are removed to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels, and improved wildlife habitat.
Scenario Feature Measure	Acres planned
Scenario Unit	Acre
Scenario Typical Size	30

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$3,575.78	\$119.19
Labor	\$2,997.18	\$99.91
Mobilization	\$63.20	\$2.11
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$6,636.16	\$221.21

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	18	\$473.58
Equipment/Installation	933	Skidsteer, 80 HP	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$35.06	86	\$3,015.16
Equipment/Installation	937	Chainsaw	Equipment and power unit costs. Labor not included.	Hour	\$5.44	16	\$87.04
Labor	231	General Labor	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	\$18.67	36	\$672.12
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$19.62	86	\$1,687.32
Labor	234	Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$35.43	18	\$637.74
Mobilization	1138	Mobilization, small equipment	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	\$63.20	1	\$63.20

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Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	6
Scenario Name	Mechanical & Chemical
Scenario Description	Removal of woody vegetation of light-medium infestations on gentle sloping to moderately deep to deep soils. The practice entails the removal of brush by the use of mechanical cutter, chopper or other light equipment followed by an application of low cost chemicals in low volumes of material in order to reduce fuel loading and improve ecological site condition. Brush density has exceeded desired levels based on ecological site potential. It has been determined that the brush is at the medium infestation rate. Typical unit is 30 acres.
Before Practice Situation	Area consist of excessive stands of shrub species degrading health and vigor of native herbaceous species promoting noxious and invasive species and degrading wildlife habitat.
After Practice Situation	Woody species are removed and burned to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels, and improved wildlife habitat.
Scenario Feature Measure	Acres planned
Scenario Unit	Acre
Scenario Typical Size	30

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$411.60	\$13.72
Equipment/Installation	\$2,551.62	\$85.05
Labor	\$2,640.24	\$88.01
Mobilization	\$92.60	\$3.09
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$5,696.06	\$189.87

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1095	Herbicide, Surfactant	Surfactants reduce the surface tension of water to produce more uniform coverage and penetration of herbicides, and weed killers. Paraffin Based Petroleum Surfactant. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$1.09	30	\$32.70
Materials	337	Herbicide, Picloram	A systemic herbicide used for general woody plant control. Product is typically used in these practices 314, 595, 666, and 645. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$12.63	30	\$378.90
Equipment/Installation	948	Chemical, ground application	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$4.41	30	\$132.30
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	12	\$315.72
Equipment/Installation	933	Skidsteer, 80 HP	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$35.06	60	\$2,103.60
Labor	231	General Labor	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	\$18.67	48	\$896.16
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$19.62	60	\$1,177.20
Labor	234	Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$35.43	16	\$566.88
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$92.60	1	\$92.60

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	7
Scenario Name	Mechanical & Chemical, chip debris
Scenario Description	Removal of woody vegetation of medium-heavy infestations on gentle sloping to moderately deep to deep soils. The practice entails the removal of brush by the use of mechanical cutter, chopper or other light equipment followed by an application of low cost chemicals in low volumes of material in order to reduce fuel loading and improve ecological site condition. Brush density has exceeded desired levels based on ecological site potential. It has been determined that the brush is at the medium infestation rate. Typical unit is 40 acres.
Before Practice Situation	Area consist of excessive stands of shrub species degrading health and vigor of native herbaceous species promoting noxious and invasive species and degrading wildlife habitat.
After Practice Situation	Woody species are removed and burned to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels, and improved wildlife habitat.
Scenario Feature Measure	Acres planned
Scenario Unit	Acre
Scenario Typical Size	40

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$3,216.00	\$80.40
Equipment/Installation	\$6,711.44	\$167.79
Labor	\$3,594.18	\$89.85
Mobilization	\$185.20	\$4.63
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$13,706.82	\$342.67

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1095	Herbicide, Surfactant	Surfactants reduce the surface tension of water to produce more uniform coverage and penetration of herbicides, and weed killers. Paraffin Based Petroleum Surfactant. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$1.09	40	\$43.60
Materials	336	Herbicide, Imazapyr	Pre and post-emergent, non-selective herbicide for control of undesirable vegetation in non-crop areas. Product is typically used in these practices 314, 595, 666 and 645. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$79.31	40	\$3,172.40
Equipment/Installation	943	Mechanical cutter, chopper	Masticator, flail shredder, hydro axe, brush cutter, etc. Equipment and power unit costs. Labor not included.	Hour	\$118.67	40	\$4,746.80
Equipment/Installation	948	Chemical, ground application	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$4.41	40	\$176.40
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	12	\$315.72
Equipment/Installation	933	Skidsteer, 80 HP	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$35.06	42	\$1,472.52
Labor	231	General Labor	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	\$18.67	48	\$896.16
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$19.62	40	\$784.80
Labor	234	Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$35.43	54	\$1,913.22
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$92.60	2	\$185.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	8
Scenario Name	Chemical, Individual Plant Treatment
Scenario Description	This Practice is for the implementation of brush management on range, pasture or native pasture using Individual Plant Treatment (IPT). The typical method of control is application of herbicides (basal or foliar location) on selected individual plants.
Before Practice Situation	Brush species exceed desired levels resulting in degraded plant condition, loss of forage production, or degraded wildlife habitat. Densities of brush exceed levels indicated in the ecological site descriptions.
After Practice Situation	Brush has been treated to a level which results in improved plant condition, forage production, or wildlife habitat. The typical method of control is application of herbicides (basal or foliar location) on selected individual plants.
Scenario Feature Measure	Acres treated
Scenario Unit	Acre
Scenario Typical Size	30

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$1,189.65	\$39.66
Equipment/Installation	\$1,850.46	\$61.68
Labor	\$0.00	\$0.00
Mobilization	\$25.64	\$0.85
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$3,065.75	\$102.19

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	336	Herbicide, Imazapyr	Pre and post-emergent, non-selective herbicide for control of undesirable vegetation in non-crop areas. Product is typically used in these practices 314, 595, 666 and 645. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$79.31	15	\$1,189.65
Equipment/Installation	964	Chemical, spot treatment, single stem application	Ground applied chemical to individual plants or group of plants, e.g., backpack sprayer treatment. Equipment and labor cost included.	Hour	\$55.87	20	\$1,117.40
Equipment/Installation	965	All terrain vehicles, ATV	Includes equipment, power unit and labor costs.	Hour	\$28.76	20	\$575.20
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	6	\$157.86
Mobilization	1137	Mobilization, very small equipment	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	\$25.64	1	\$25.64

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	9
Scenario Name	Chemical - Ground Applied
Scenario Description	Apply brush management on 30 acres of rangeland, grazed forest, or pasture thru the use of broadcast application of material using low cost chemical(s) to reduce or remove undesirable deciduous species (brush) in uplands and other areas not in or directly adjacent to streams, ponds, or wetlands.
Before Practice Situation	Plant, animal, or wildlife resource concerns associated with uplands and other areas not in or adjacent to stream, ponds, or wetland on grazed range, grazed forest, or pasture which are adversely affected by brush.
After Practice Situation	A 30 acre unit of pasture, grazed range, or grazed forest where reduction or removal of undesirable deciduous species have been accomplished by broadcast or spot treatment chemical application to address plant, animal, and wildlife resource concerns.
Scenario Feature Measure	Acres planned
Scenario Unit	Acre
Scenario Typical Size	30

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$2,412.00	\$80.40
Equipment/Installation	\$184.92	\$6.16
Labor	\$70.86	\$2.36
Mobilization	\$92.60	\$3.09
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$2,760.38	\$92.01

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1095	Herbicide, Surfactant	Surfactants reduce the surface tension of water to produce more uniform coverage and penetration of herbicides, and weed killers. Paraffin Based Petroleum Surfactant. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$1.09	30	\$32.70
Materials	336	Herbicide, Imazapyr	Pre and post-emergent, non-selective herbicide for control of undesirable vegetation in non-crop areas. Product is typically used in these practices 314, 595, 666 and 645. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$79.31	30	\$2,379.30
Equipment/Installation	948	Chemical, ground application	Chemical application performed by ground equipment. Includes equipment, power unit and labor costs.	Acre	\$4.41	30	\$132.30
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	2	\$52.62
Labor	234	Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$35.43	2	\$70.86
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$92.60	1	\$92.60

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Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	10
Scenario Name	Chemical, Aerial Applied
Scenario Description	Apply brush management on 80 acres of rangeland, grazed forest, or pasture thru the use of broadcast aerial application of material with low cost chemical(s) to reduce or remove undesirable deciduous species (brush) in uplands and other areas not in or directly adjacent to streams, ponds, or wetlands.
Before Practice Situation	Plant, animal, or wildlife resource concerns associated with uplands and other areas not in or adjacent to stream, ponds, or wetland on grazed range, grazed forest, or pasture which are adversely affected by brush.
After Practice Situation	A 80 acre unit of pasture, grazed range, or grazed forest where reduction or removal of undesirable deciduous species have been accomplished by broadcast or spot treatment chemical application to address plant, animal, and wildlife resource concerns.
Scenario Feature Measure	Acres planned
Scenario Unit	Acre
Scenario Typical Size	80

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$1,097.60	\$13.72
Equipment/Installation	\$654.13	\$8.18
Labor	\$106.29	\$1.33
Mobilization	\$173.20	\$2.17
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$2,031.22	\$25.39

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1095	Herbicide, Surfactant	Surfactants reduce the surface tension of water to produce more uniform coverage and penetration of herbicides, and weed killers. Paraffin Based Petroleum Surfactant. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$1.09	80	\$87.20
Materials	337	Herbicide, Picloram	A systemic herbicide used for general woody plant control. Product is typically used in these practices 314, 595, 666, and 645. Refer to WIN-PST for product names and active ingredients. Materials only.	Acre	\$12.63	80	\$1,010.40
Equipment/Installation	947	Chemical, aerial application, fixed wing	Chemical application performed by fixed wing aircraft. Includes equipment, power unit and labor costs.	Acre	\$7.19	80	\$575.20
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	\$26.31	3	\$78.93
Labor	234	Supervisor or Manager	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	\$35.43	3	\$106.29
Mobilization	1140	Mobilization, large equipment	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$173.20	1	\$173.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	11
Scenario Name	Mechanical - bush hog
Scenario Description	Removal of small woody vegetation of light infestations on gentle sloping to moderately deep to deep soils. The practice entails the removal of brush by the use of mechanical cutter, chopper or other light equipment in order to reduce fuel loading and improve ecological site condition. Brush density has exceeded desired levels based on ecological site potential. It has been determined that the brush is at a light infestation. Typical unit is 40 acres.
Before Practice Situation	Area consist of excessive stands of shrub species degrading health and vigor of native herbaceous species promoting noxious and invasive species and degrading wildlife habitat.
After Practice Situation	Woody species are removed to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels, and improved wildlife habitat.
Scenario Feature Measure	Acres Planned
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$128.46	\$12.85
Labor	\$58.86	\$5.89
Mobilization	\$63.20	\$6.32
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$250.52	\$25.05

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	940	Mower, Bush Hog	Equipment and power unit costs. Labor not included.	Hour	\$42.82	3	\$128.46
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$19.62	3	\$58.86
Mobilization	1138	Mobilization, small equipment	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	\$63.20	1	\$63.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Range/Pasture Grazing
Practice Code/Name	314 - Brush Management
Scenario ID	12
Scenario Name	Mechanical - heavy disking
Scenario Description	Removal of small woody vegetation of light infestations on gentle sloping to moderately deep to deep soils. The practice entails the removal of brush by the use of mechanical cutter, chopper or other light equipment in order to reduce fuel loading and improve ecological site condition. Brush density has exceeded desired levels based on ecological site potential. It has been determined that the brush is at a light infestation. Typical unit is 40 acres.
Before Practice Situation	Area consist of excessive stands of shrub species degrading health and vigor of native herbaceous species promoting noxious and invasive species and degrading wildlife habitat.
After Practice Situation	Woody species are removed to achieve the desirable plant community based on species composition, structure, density, and canopy cover or height. Ecological site condition is progressing in an upward trend, hydrology and plant health and vigor is returning to near normal levels, and improved wildlife habitat.
Scenario Feature Measure	Acres Planned
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$0.00	\$0.00
Equipment/Installation	\$150.40	\$15.04
Labor	\$0.00	\$0.00
Mobilization	\$0.00	\$0.00
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$150.40	\$15.04

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation	946	Tillage, Primary	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	\$15.04	10	\$150.40