

Practice: 666 - Forest Stand Improvement

Scenario: #1 - Forest Stand Improvement, Light

Scenario Description: All materials and labor required to manipulate species composition, stand structure and stocking on forestland. Light forest stand improvement will: Reduce basal area by 20 - 29 square feet per acre (or) Cut and/or kill 100 - 199 trees per acre (or) Release 10 - 20 crop trees per acre and/or kill any vines growing on crop trees by an approved method such as "cut stump" with herbicide to prevent resprouting. Use a current and approved Forest Management Plan for estimated basal area to be removed, number of trees needing to be cut and/or killed, crop trees needing to be released, and/or vines needing killed.

Before Situation: Forest stand is slightly overstocked and/or composed of some undesirable species due to lack of forest management. This has negatively impacted forest health, productivity, and/or sustainability. Wildlife habitat, such as hard and soft mast production, browse, nesting cover, bedding areas, etc. is lacking.

After Situation: After adjusting the stocking to an acceptable level, stand growth, condition, and overall quality is improved. In addition, wildlife habitat is improved with the resulting increase of sunlight reaching the forest floor.

Scenario Feature Measure: Area Treated

Scenario Unit: Acre

Scenario Typical Size: 55

Total Scenario Cost: \$6,094.89

Scenario Cost/Unit: \$110.82

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
----------------	----	-------------	------	------	-----	-------

Labor

Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$31.88	110	\$3,506.63
---------------	-----	---	------	---------	-----	------------

Materials

Herbicide, Picloram	337	Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$18.77	55	\$1,032.40
---------------------	-----	--	------	---------	----	------------

Equipment Installation

Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$4.30	90	\$386.60
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	\$58.46	20	\$1,169.26

Practice: 666 - Forest Stand Improvement

Scenario: #2 - Forest Stand Improvement, Medium

Scenario Description: All materials and labor required to manipulate species composition, stand structure and stocking on forestland. Medium forest stand improvement will: Reduce basal area by 30-40 square feet per acre (or) Cut and/or kill 200 - 400 trees per acre (or) Release 21 - 40 crop trees per acre and kill any vines growing on crop trees by an approved method such as "cut stump" with herbicide to prevent resprouting. Use a current and approved Forest Management Plan for estimated basal area to be removed, number of trees needing to be cut and/or killed, crop trees needing to be released, and/or vines needing killed.

Before Situation: Forest stand is moderately overstocked and/or composed of an unacceptable level of undesirable species due to lack of forest management. This has negatively impacted forest health, productivity, and/or sustainability. Wildlife habitat, such as hard and soft mast production, browse, nesting cover, bedding areas, etc. is lacking.

After Situation: After adjusting the stocking to an acceptable level, stand growth, condition, and overall quality is improved. In addition, wildlife habitat is improved with the resulting increase of sunlight reaching the forest floor.

Scenario Feature Measure: Area Treated

Scenario Unit: Acre

Scenario Typical Size: 55

Total Scenario Cost: \$7,432.77

Scenario Cost/Unit: \$135.14

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
----------------	----	-------------	------	------	-----	-------

Labor

Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$31.88	138	\$4,399.22
---------------	-----	---	------	---------	-----	------------

Materials

Herbicide, Picloram	337	Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$18.77	55	\$1,032.40
---------------------	-----	--	------	---------	----	------------

Equipment Installation

Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$4.30	112	\$481.11
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	\$58.46	26	\$1,520.04

Practice: 666 - Forest Stand Improvement

Scenario: #3 - Forest Stand Improvement, Heavy

Scenario Description: All materials and labor required to manipulate species composition, stand structure and stocking on forestland. Heavy forest stand improvement will: Reduce basal area by 41 or more square feet per acre (or) Cut and/or kill over 400 trees per acre (or) Release 41 or more crop trees per acre and kill any vines growing on crop trees by an approved method such as "cut stump" with herbicide to prevent resprouting. Use a current and approved Forest Management Plan for estimated basal area to be removed, number of trees needing to be cut and/or killed, crop trees needing to be released, and/or vines needing killed.

Before Situation: Forest stand is heavily overstocked and/or composed of an unacceptable level of undesirable species due to lack of forest management. This has negatively impacted forest health, productivity, and/or sustainability. Wildlife habitat, such as hard and soft mast production, browse, nesting cover, bedding areas, etc. is lacking. Understory vegetation consists of mostly shade-tolerant species with little to no desirable regeneration present.

After Situation: After adjusting the stocking to an acceptable level, stand growth, condition, and overall quality is improved. In addition, wildlife habitat is improved with the resulting increase of sunlight reaching the forest floor.

Scenario Feature Measure: Area Treated

Scenario Unit: Acre

Scenario Typical Size: 55

Total Scenario Cost: \$9,349.24

Scenario Cost/Unit: \$169.99

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
----------------	----	-------------	------	------	-----	-------

Labor

Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$31.88	179	\$5,706.24
---------------	-----	---	------	---------	-----	------------

Materials

Herbicide, Picloram	337	Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$18.77	55	\$1,032.40
---------------------	-----	--	------	---------	----	------------

Equipment Installation

Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$4.30	145	\$622.86
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	\$58.46	34	\$1,987.75

Practice: 666 - Forest Stand Improvement

Scenario: #4 - Temporary Forest Openings, patch clearcuts

Scenario Description: Creating 2 one acre patches in over-mature and/or degraded stands using hand tools such as chainsaws. Resource concerns include: Undesirable plant productivity and health, Inadequate structure and composition, and habitat degradation.

Before Situation: The existing stand is overly mature and/or has been degraded in value by past harvesting practices. The level of acceptable growing stock is too low to justify managing this stand in its present condition. The present form, species composition and structure cannot meet the resource concerns and landowner objectives. Creating small openings by cutting all trees greater than 2" in diameter will foster the regeneration of high-value shade intolerant species. The work will be done with chainsaws.

After Situation: A new, young stand of desirable species is established In addition, early successional wildlife habitat as well as forest type diversity are created.

Scenario Feature Measure: Area treated

Scenario Unit: Acre

Scenario Typical Size: 2

Total Scenario Cost: \$416.07

Scenario Cost/Unit: \$208.04

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
----------------	----	-------------	------	------	-----	-------

Labor

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	\$21.71	16	\$347.34
---------------	-----	--	------	---------	----	----------

Equipment Installation

Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$4.30	16	\$68.73
----------	-----	---	------	--------	----	---------

Practice: 666 - Forest Stand Improvement

Scenario: #5 - Open Woodland Restoration

Scenario Description: Removing or reducing tree canopy and utilizing chemical treatment (except for non-sprouting woody species) to promote herbaceous growth or early woody succession to benefit wildlife habitat. Designed for open woodland restoration where Basal Area removal is >40 square feet per acre, or >400 stems per acre. This practice is intended to restore and manage the ecological site for associated wildlife species that benefit from habitats such as open woodlands by felling the majority of the undesirable trees to allow installation of facilitating practices. Facilitating practices may include but not limited to: Early Successional Habitat Management/Development (647), Prescribed Burning (338), Restoration and Management of Rare and Declining Habitats (643), and Conservation Cover (327).

Before Situation: A stand of trees that is even aged and lacks structural diversity. The understory has a minimal amount of herbaceous and early woody successional vegetation. Wildlife food, cover, and shelter are lacking, and woody cover control is needed to manage for associated wildlife species that benefit from habitats such as savannas and open woodlands.

After Situation: The ecological site is restored and flora and fauna that depend on open woodland habitat flourish.

Scenario Feature Measure: area of opening

Scenario Unit: Acre

Scenario Typical Size: 10

Total Scenario Cost: \$2,718.96

Scenario Cost/Unit: \$271.90

Cost Details

Component Name	Id	Description	Unit	Cost	Qty	Total
----------------	----	-------------	------	------	-----	-------

Labor

Skilled Labor	230	Labor requiring a high level skill set: Includes carpenters, welders, electricians, conservation professionals involved with data collection, monitoring, and or record keeping, etc.	Hour	\$31.88	55	\$1,753.31
---------------	-----	---	------	---------	----	------------

Materials

Herbicide, Picloram	337	Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$18.77	10	\$187.71
---------------------	-----	--	------	---------	----	----------

Equipment Installation

Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	\$4.30	45	\$193.30
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	\$58.46	10	\$584.63