Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	9
Scenario Name	Hardwood Est.-Direct Seeding
Scenario Description	Native seed (acorns, nuts, etc) from natvie tree species are directly planted in the soil. Site preparation is completed (discing to eliminate competing vegetation). The native seed are collected/purchased locally so as to get trees known to be adapted to local conditions. Resource concerns are degraded plant condition, inadequate habitat for fish and widllife.
Before Practice Situation	The hardwood forest is degrading. High value species, lumber and widlife habitat, are not regenerating due to changes in the natural disturbance regime or past harvesting. Unwanted shade tolerant tree species have regenerated and are in the overstory competing with desirable species as well as in the mid and understory where they will eventually out-compete with desirable species.
After Practice Situation	Seed from native species are collected or purchased and planted at prescribed rates. Site preparation is done prior to direct seeding. Degraded plant condition is on an upward trend and habitat for wildlife will improve.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$233.25	$23.33
Equipment/Installation	$155.04	$15.50
Labor	$249.86	$24.99
Mobilization	$509.48	$50.95
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$1,147.63	$114.76

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1871	Trees and shrubs, seed	Tree or shrub seed, e.g., acorns, to establish trees. Materials only.	Pound	$3.11	75	$233.25
Equipment/Installation	1601	Mechanical nut planter	Mechanical nut planter for direct seeding of trees and shrubs. Requires a pulling unit of either tractor or small dozer depending upon site conditions. Does not include labor.	Hour	$9.85	4	$39.40
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Equipment and power unit costs. Labor is included.	Acre	$9.63	4	$38.52
Equipment/Installation	963	Tractor, agricultural, 60 HP	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	$19.28	4	$77.12
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	$25.71	6	$154.26
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$23.90	4	$95.60
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	2	$52.42
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	$187.23	2	$374.46
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	2	$82.60

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	6
Scenario Name	High Density planting
Scenario Description	This practice applies to forestlands that are being actively managed. Tree seedlings are planted after the site has been prepared for seedling establishment and growth. Forest site productivity is high or very high and dense planting is planned. Larger containerized seedlings are planted. Resource concerns addressed are degraded plant condition -- undesirable plant productivity and health, and inadequate structure and composition and degraded wildlife habitat. Terrain conditions allow for mechanical tree planting
Before Practice Situation	The land lacks forest cover and needs replanting, is stocked with the wrong tree species, or is a nonstocked field. Seedlings selected are appropriate for the site and site conidtions. The main resource concerns are degraded plant condition and inadequate structure and composition. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the loss organic matter in top soil. Tree seedlings with larger size root systems are planted to compete with other vegetation.
After Practice Situation	50 acres of land is established with permanent tree cover that will improve degraded plant condition, establish wildlife habitat, sequester atmospheric carbon. Establishing forest vegetation also creates corridors for wildlife movement. Actions should be planned with competing vegetation concerns.
Scenario Feature Measure	area of treatment
Scenario Unit	Acre
Scenario Typical Size	50

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$22,780.00	$455.60
Equipment/Installation	$2,409.78	$48.20
Labor	$2,496.22	$49.92
Mobilization	$1,382.97	$27.66
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$29,068.97	$581.38

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1519	Tree, conifer, seedling, containerized, 10 cu. in.	Containerized conifer stock, 10 cubic inches (approx 6" plug), 1.7" x 6"). Materials only.	Each	$0.67	34000	$22,780.00
Equipment/Installation	1600	Mechanical tree planter	Mechanical tree planter. Requires a pulling unit of either tractor or small dozer depending upon site conditions. Does not include labor.	Hour	$4.38	34	$148.92
Equipment/Installation	929	Dozer, 80 HP	Track mounted Dozer with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	$55.58	34	$1,889.72
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	14	$371.14
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	$25.71	40	$1,028.40
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	$41.68	14	$583.52
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$23.90	37	$884.30
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	6	$157.26
Mobilization	1143	Mobilization, Light Equipment Operator	Mobilization of light equipment operators: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$23.67	6	$142.02
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	100	$100.00
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	$187.23	1	$187.23

Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	$274.33	2	$548.66
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	6	$247.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	3
Scenario Name	Medium Density-hand plant Conifer, protect from widlife
Scenario Description	This practice involves planting of tree seedlings after the site has been prepared for seedling growth and establishment. The productivity of the site is good and will handle a medium density planting rate. Newly planted conifer seedlings are protected from browsing by installing open tree tubes. Resource concerns addressed are degraded plant condition -- undesirable plant productivity and health, and inadequate structure and composition and degraded wildlife habitat. Terrain is moderatey to steeply sloping, too steep to be planted with a mechanical tree planter so the area is hand planted.
Before Practice Situation	The land has a little/no tree cover, or is stocked with the wrong tree species. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the lose of the native forest ecosystem (organic matter in top soil depleted). The main resource concern is degraded plant condition and inadequate structure and composition
After Practice Situation	40 acres of land is established with permanent tree coverthat will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement. Half of planted trees have vexar tubes, or similar, installed to protect from animal damage.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	40

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$24,480.00	$612.00
Equipment/Installation	$813.40	$20.34
Labor	$6,295.00	$157.38
Mobilization	$405.06	$10.13
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$31,993.46	$799.84

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1513	Tree, conifer, seedling, bare root, 1-1	Bare root conifer trees, 1-1 (2 years old). Materials only.	Each	$0.39	18000	$7,020.00
Materials	1585	Stakes, bamboo 3/8" x 48"	3/8" x 48" bamboo stakes to anchor items in place. Materials only.	Each	$0.10	18000	$1,800.00
Materials	1560	Tree shelter, solid tube type, 3-1/4" x 30"	3-1/4" x 30" tree tube for protection from animal damage. Materials only.	Each	$1.74	9000	$15,660.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	30	$283.20
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	20	$530.20
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	$25.71	180	$4,627.80
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	$41.68	40	$1,667.20
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	6	$157.26
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	6	$247.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	4
Scenario Name	Medium Density-hand plant Conifer
Scenario Description	This practice involves planting of tree seedlings after the site has been prepared for seedling growth and establishment. The productivity of the site is good and will handle a medium density planting rate. Resource concerns addressed are degraded plant condition -- undesirable plant productivity and health, and inadequate structure and composition and degraded wildlife habitat. Terrain is moderatey to steeply sloping, too steep to be planted with a mechanical tree planter so the area is hand planted.
Before Practice Situation	The land has a little/no tree cover, or is stocked with the wrong tree species. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the lose of the native forest ecosystem (organic matter in top soil depleted). The main resource concerns are degraded plant condition and inadequate structure and composition
After Practice Situation	40 acres of land is established with permanent tree cover that will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	40

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$7,020.00	$175.50
Equipment/Installation	$813.40	$20.34
Labor	$1,592.44	$39.81
Mobilization	$405.06	$10.13
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$9,830.90	$245.77

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1513	Tree, conifer, seedling, bare root, 1-1	Bare root conifer trees, 1-1 (2 years old). Materials only.	Each	$0.39	18000	$7,020.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	30	$283.20
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	20	$530.20
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	$25.71	36	$925.56
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	$41.68	16	$666.88
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	6	$157.26
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	6	$247.80

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	5
Scenario Name	Medium Density-Conifer
Scenario Description	This practice involves planting of tree seedlings after the site has been prepared for seedling growth and establishment. The productivity of the site is good and will handle a medium density planting rate. The resource concerns addressed is degraded plant condition -- undesirable plant productivity and health, and inadequate structure and composition and degraded wildlife habitat. Terrain is moderatey sloping and will be planted with a mechanical tree planter. Smaller size seedlings (1-0) are planted.
Before Practice Situation	The land has a little or no tree cover, or is stocked with the wrong tree species. Competing vegetation is a before and after planting concern. Soil condition is degraded due to the lose of the native forest ecosystem (organic matter in top soil depleted). Native wildlife habitat is lacking. The main resource concern is degraded plant condition and inadequate structure and composition
After Practice Situation	40 acres of land is established with permanent tree coverthat will improve degraded plant condition, reduce soil erosion, establish wildlife habitat, sequester carbon and reduce invasive species presence. Establishing forest vegetation also creates corridors for wildlife movement. Half of planted trees have vexar tubes, or similar, installed to protect from animal damage.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	40

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$5,760.00	$144.00
Equipment/Installation	$1,291.36	$32.28
Labor	$1,428.48	$35.71
Mobilization	$461.77	$11.54
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$8,941.61	$223.54

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1512	Tree, conifer, seedling, bare root, 1-0	Bare root conifer trees, 1-0 (1 year old). Materials only.	Each	$0.32	18000	$5,760.00
Equipment/Installation	1600	Mechanical tree planter	Mechanical tree planter. Requires a pulling unit of either tractor or small dozer depending upon site conditions. Does not include labor.	Hour	$4.38	18	$78.84
Equipment/Installation	929	Dozer, 80 HP	Track mounted Dozer with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	$55.58	18	$1,000.44
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	8	$212.08
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	$25.71	24	$617.04
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	$41.68	8	$333.44
Labor	232	Equipment Operators, Light	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$23.90	20	$478.00
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	3	$78.63
Mobilization	1143	Mobilization, Light Equipment Operator	Mobilization of light equipment operators: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$23.67	3	$71.01
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	1	$1.00
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	$187.23	1	$187.23

Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	3	$123.90

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	1
Scenario Name	Individual tree - hand planting
Scenario Description	Tree seedlings will be hand planted in the forested area where few or no forest trees are growing, the existing stand of trees needs underplanting, or the previously planted seedling tree stocking level is below desirable conditions. Wildlife habitat is degraded by loss of forest conditions. This resource concern addressed is degraded plant condition -- and inadequate structure and composition, and inadequate wildlife & fish habitat.
Before Practice Situation	The stocking level of the forest does not meet the minimum recommended number of trees per acre. The existing condition of the forest stand does not meet the landowners objectives. To be a viable forest additional seedlings need planting. Wildlife habitat is rated poor.
After Practice Situation	The prescribed number of trees are hand planted on 20 acres, and the objectives of the landowner are met. The forest will provide wildlife habitat, provide a long term ground cover, and capture atmospheric carbon.
Scenario Feature Measure	Area Planted
Scenario Unit	Each
Scenario Typical Size	6000

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$3,360.00	$0.56
Equipment/Installation	$306.48	$0.05
Labor	$475.24	$0.08
Mobilization	$235.02	$0.04
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$4,376.74	$0.73

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1518	Tree, conifer, seedling, containerized, 8 cu. in.	Containerized conifer stock, 8 cubic inches (e.g. 1.5" x 6"). Materials only.	Each	$0.56	6000	$3,360.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	10	$94.40
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	8	$212.08
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	$25.71	12	$308.52
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	$41.68	4	$166.72
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	2	$52.42
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	100	$100.00
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	2	$82.60

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	2
Scenario Name	Individual tree - hand planting w/browse protection
Scenario Description	Tree seedlings will be hand planted in the forested area where few or no forest trees growing, the existing stand of trees needs underplanting, or the previously planted seedling tree stocking level is below desirable conditions. Seedlings are protected from wildlife browsing. Wildlife habitat is degraded by loss of forest conditions. This resource concern addressed is degraded plant condition -- and inadequate structure and composition, and inadequate wildlife & fish habitat.
Before Practice Situation	The stocking level does not meet the minimum recommended number of trees per acre and does not meet the landowners objectives. To be a viable forest additional seedlings need planting. Wildlife habitat is rated poor. Wildlife are known to browse tree seedlings in the area causing great damage.
After Practice Situation	The prescribed number of trees are hand planted, and the objectives of the landowner are met. Seedlings are protected from widlife browsing by installing some type of protection devise. A forest will provide wildlife habitat, provide a long term ground and capture atmospheric carbon.
Scenario Feature Measure	Each Planted Seedling
Scenario Unit	Each
Scenario Typical Size	6000

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$14,760.00	$2.46
Equipment/Installation	$219.32	$0.04
Labor	$3,546.40	$0.59
Mobilization	$370.04	$0.06
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$18,895.76	$3.15

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1518	Tree, conifer, seedling, containerized, 8 cu. in.	Containerized conifer stock, 8 cubic inches (e.g. 1.5" x 6"). Materials only.	Each	$0.56	6000	$3,360.00
Materials	1584	Stake, bamboo, 3/8" x 36"	3/8" x 36" bamboo stakes to anchor items in place. Materials only.	Each	$0.08	12000	$960.00
Materials	1560	Tree shelter, solid tube type, 3-1/4" x 30"	3-1/4" x 30" tree tube for protection from animal damage. Materials only.	Each	$1.74	6000	$10,440.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	12	$113.28
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	4	$106.04
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	$25.71	112	$2,879.52
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	$41.68	16	$666.88
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	4	$104.84
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	100	$100.00
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	4	$165.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	8
Scenario Name	Hardwood Planting 1 gal pots
Scenario Description	Hardwood seedlings (potted) to be planted to restablish an upland hardwood forest. Planting will be by hand. The resource setting is an area that historically was an upland hardwood forest. Resource concerns are degrade plant condition - undesireable productivity and health, and Inadequate structure and composition; inadequate habitat for fish and wildlife.
Before Practice Situation	The native forest that has been removed and the land is either row cropped, grazed or hayed or brushy forest. If any upland trees exist they are poor quality tree or undesirable species. Terrain is gently to moderately sloping with soil erosion-sheet and rill ocurring.
After Practice Situation	The area of treatment is 10 acres. Potted/containerized hardwood seedlings are planted by hand. Post vegetation control should be evaluated and conducted it necessary.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$34,050.00	$3,405.00
Equipment/Installation	$353.68	$35.37
Labor	$847.64	$84.76
Mobilization	$918.70	$91.87
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$36,170.02	$3,617.00

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1530	Tree, hardwood, seedling or transplant, potted, 1/2 gal.	Potted hardwood tree, 1/2 gallon. Materials only.	Each	$11.35	3000	$34,050.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	15	$141.60
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	8	$212.08
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	$25.71	20	$514.20
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	$41.68	8	$333.44
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	4	$104.84
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	100	$100.00
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	$274.33	2	$548.66
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	4	$165.20

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	7
Scenario Name	Hardwood Hand Planting-bare root-protected
Scenario Description	Improving the hardwood forest setting by hand planting hardwood tree seedlings. Seedlings are protected from deer browsing. The number of trees to plant is lower than establishing a new forest. Resource concerns are degraded plant condition - undesireable productivity and health, and Inadequate structure and composition; inadequate habitat for fish and wildlife - habitat degradation.
Before Practice Situation	In an existing upland forest the present trees are poor quality, at low stocking levels, or are undesirable species. Existing conditions do not meet landonwer objectives of growing high quality trees. Wildlife habitat is poor due to the above described conditions. Resource concerns are degrade plant condition - undesireable productivity and health, and Inadequate structure and composition; inadequate habitat for fish and wildlife - habitat degradation. Prior to planting any needed vegetation control will be conducted first.
After Practice Situation	The area of treatment is 10 acres. Bare root hardwood seedlings are planted by hand in the best locations for seedling survival. Solid tree tubes are installed to protect seedlings from animal browsing damage. Post planting vegetation control is planned to ensure seedling survival.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$4,575.00	$457.50
Equipment/Installation	$287.60	$28.76
Labor	$1,773.20	$177.32
Mobilization	$851.19	$85.12
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$7,486.99	$748.70

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1509	Tree, hardwood, seedling or transplant, bare root, 6-18"	Bare root hardwood trees 6-18" tall. Materials only.	Each	$0.65	1500	$975.00
Materials	1581	Stakes, wood, 3/4" x 3/4" x 36"	3/4" x 3/4" x 36" wood stakes to fasten items in place. Materials only.	Each	$0.66	1500	$990.00
Materials	1560	Tree shelter, solid tube type, 3-1/4" x 30"	3-1/4" x 30" tree tube for protection from animal damage. Materials only.	Each	$1.74	1500	$2,610.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	8	$75.52
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	8	$212.08
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	$25.71	56	$1,439.76
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	$41.68	8	$333.44
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	3	$78.63
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	100	$100.00
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	$274.33	2	$548.66
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	3	$123.90

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	10
Scenario Name	Shrub Planting
Scenario Description	Shrubs are planted to provide a more diverse habitat. Plantings are in either uplands or bottomlands. The site lacks ground level habitat structure and diversity for widlife. Resource concern is inadequate habitat for fish and wildife - habitat fragmentation.
Before Practice Situation	No shrubbery vegetation, or very little, is present under the forest overstory. Wildlife species that need shrub cover are not present. An adequate stand of overstory trees is present, but it is a single level, not multi-level.
After Practice Situation	A 10 acre area is planted with shrubs. Shrubs are not planted over the entire 10 acres. They are planted in groups or motts. The motts, more or less circular in shape, are 50 feet in diameter, with 50 shrubs planted within each mott. 4 motts are planted per acre for a total of 200 shrubs per acre. Motts are randomly established to take advantage of site conditions and shrub species being planted.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	10

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$1,400.00	$140.00
Equipment/Installation	$253.46	$25.35
Labor	$558.60	$55.86
Mobilization	$783.68	$78.37
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$2,995.74	$299.57

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1506	Shrub, seedling or transplant, bare root, 6-18"	Bare root hardwood trees 6-18" tall. Materials only.	Each	$0.70	2000	$1,400.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	10	$94.40
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	6	$159.06
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	$25.71	12	$308.52
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	$41.68	6	$250.08
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	2	$52.42
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	100	$100.00
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	$274.33	2	$548.66
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	2	$82.60

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Forestry
Practice Code/Name	612 - Tree & Shrub Establishment
Scenario ID	10
Scenario Name	Plant Small Areas/Quantities
Scenario Description	Trees and shrubs are planted to improve habitat and the successional process. Trees and shrubs are planted in an upland or wetland setting. The resource concerns are insufficient cover/shelter and insufficient food for wildlife. Small quantities of trees and shrubs are needed to plant portions of fields to meet habitat and food needs.
Before Practice Situation	Old fields or other open areas lack sufficient cover/shelter and food for species of concern. There is a lack of native woody cover and the open areas are dominated by forbs and grass.
After Practice Situation	A 5 acre field will have portions planted to trees and shrubs in a scattered pattern equalling about an acre of planting. Small quantities of trees and shrubs, 200 stems, will need to be ordered. Larger trees and shrubs will be planted to compete better with idle area forbs and tall grasses.
Scenario Feature Measure	Area of Treatment
Scenario Unit	Acre
Scenario Typical Size	1

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	$756.50	$756.50
Equipment/Installation	$155.05	$155.05
Labor	$641.96	$641.96
Mobilization	$235.02	$235.02
Acquisition of Technical Knowledge	$0.00	$0.00
Foregone Income	$0.00	$0.00
Total	$1,788.53	$1,788.53

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price ($/unit)	Quantity	Cost
Materials	1511	Tree, hardwood, seedling or transplant, bare root, 36-60"	Bare root hardwood trees 3 to 5 foot tall. Materials only.	Each	$1.61	250	$402.50
Materials	1508	Shrub, seedling or transplant, bare root, 36-60"	Bare root shrubs 3 to 5 foot tall. Materials only.	Each	$1.77	200	$354.00
Equipment/Installation	1590	Hand tools, tree planting	Various hand tools for digging holes and planting trees such as augers, dibble bars, planting shovel, hoe-dad. Equipment only.	Hour	$9.44	8	$75.52
Equipment/Installation	939	Truck, Pickup	Equipment and power unit costs. Labor not included.	Hour	$26.51	3	$79.53
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	$25.71	12	$308.52
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	$41.68	8	$333.44
Mobilization	1142	Mobilization, General labor	Mobilization of general labor: Ex. pipe layer, herder, concrete placement, materials spreader, flagger, etc.	Hour	$26.21	2	$52.42
Mobilization	1043	Mobilization, Material, distance > 50 miles	Mobilization cost of materials for special cases where the distance from the supplier delivery point to the job site exceeds 50 miles. The costs for shipping by UPS or bulk freight shipping to a location within 50 miles of the job site have already been included in the component price.	Dollar	$1.00	100	$100.00
Mobilization	1145	Mobilization, Supervisor or Manager	Mobilization of supervisors or management. Includes crew supervisors, foremen and farm/ranch managers, etc.	Hour	$41.30	2	$82.60