Practice: 643 - Restoration and Management of Rare and Declining Habitats

Scenario: #2 - Habitat Monitoring and Management, Low Intensity and Complexity

Scenario Description:

This scenario is applied to all landuse types including those with wildlife as a modifier, where native plant conditions (T&E plants) or wildlife have been identified as the resource concern, and where low intensity and complexity of monitoring or management will treat the identified resource concern. Only 1-2 monitoring efforts are needed and each requiring less than 2 people and 4 hours per effort. The adaptive management actions such as cutting of limbs that are impeding access of birds into nest boxs, replacing damaged fence markers, cleaning of nest structures and debris around other structures requires only hand labor and less than 8 hours labor per year.

Before Situation:

Rare or declining habitat is deficient due to the absence of annual monitoring and adaptive management actions of low intensity and complexity.

After Situation:

Rare and declining habitat is improved by implementation of annual adaptive management actions of low intensity and complexity.

Scenario Feature Measure: Monitoring efforts and adaptive management actions

Scenario Unit: Acre

Scenario Typical Size: 160

Scenario Cost: $554.47 **Scenario Cost/Unit:** $3.47

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	$38.64	1.5	$57.96
Rangeland/grassland field monitoring kit	967	Miscellaneous tools needed to complete rangeland/grassland monitoring. Materials may include camera, clippers, plot frame, scale, tape measure, etc. Includes materials and shipping only.	Each	$45.96	1	$45.96
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	$6.54	1	$6.54
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	$19.21	7	$134.47
Specialist Labor	235	Labor requiring a specialized skill set: Includes Agronomists, Foresters, Biologists, etc. to provide additional technical information during the planning and implementation of the practice. Does not include NRCS or TSP services.	Hour	$103.18	3	$309.54

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Scenario: #4 - Habitat Monitoring and Management, High Intensity and Complexity

Scenario Description:

This scenario is applied to all landuse types including those with wildlife as a modifier, where any resource concern is identified for wildlife, and where high intensity and complexity of monitoring or management will treat the identified resource concern. Two - four monitoring efforts are needed and each requiring less than 2 people and less than 8 hours per effort. The adaptive management actions (2 - 5 efforts) such as cutting of limbs that are impeding access of birds into nest boxes, replacing damaged fence markers, cleaning of nest structures and debris around other structures requires hand labor and light equipment, requiring a 2-person crew less than 1 day per effort.

Before Situation:

Wildlife habitat is deficient due to the absence of annual monitoring and adaptive management actions of high intensity and complexity.

After Situation:

Wildlife habitat is improved by implementation of annual adaptive management actions of high intensity and complexity.

Scenario Feature Measure: Monitoring efforts and adaptive management actions

Scenario Unit: Acre

Scenario Typical Size: 80

Scenario Cost: $1,973.58 **Scenario Cost/Unit:** $24.67

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Rangeland/grassland field monitoring kit	967	Miscellaneous tools needed to complete rangeland/grassland monitoring. Materials may include camera, clippers, plot frame, scale, tape measure, etc. Includes materials and shipping only.	Each	$45.96	1	$45.96
Chainsaw	937	Equipment and power unit costs. Labor not included.	Hour	$6.54	8	$52.32
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	$38.64	6	$231.84
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	$52.79	3	$158.37
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$23.03	3	$69.09
Specialist Labor	235	Labor requiring a specialized skill set: Includes Agronomists, Foresters, Biologists, etc. to provide additional technical information during the planning and implementation of the practice. Does not include NRCS or TSP services.	Hour	$103.18	10	$1,031.80
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	$19.21	20	$384.20

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Scenario: #7 - Oyster reef restoration using planted oyster shells

Scenario Description:

Oyster shells are delivered to a staging area by supplier; the shells are loaded on to a barge then transported/delivered to reef site where they are dropped over the side to the floor of the Chesapeake Bay. Their presence also allows naturally occurring oyster spat to have appropriate medium to attach themselves to. The resources protected are the decling numbers of bivalves that process/filter sediment and nutrients out of the bay water. Their filtering improves water quality in the bay. NRCS AQUACULTURE PROGRAM Eligibility for Funding through the EQIP Chesapeake Bay Program is based upon concern for: the land-based shell preparation activities that contribute to restoration of shellfish habitat begin on the shore and continue on permanently submerged lands under lease to the state (the tidal bottoms within areas of the bays and rivers of Virginia that are capable of supporting oysters which biofilter Bay waters. Because tidal waters are considered waters of the State, almost all bottom aquaculture operations require a state lease. The participant must have control of the submerged land in the form of a lease or other documentation showing they have sufficient control to implement and manage the contracted activities).

Before Situation:

Declining numbers of reproducing native oysters results in less bilvalve filtering of the Chesapeake Bay and reduced water quality.

After Situation:

Shallow water habitat/shoreline reef, planted with oyster shells, 2,000-5,000 bushels planted per acre to a thickness of 2-5 shells thick; The resulting artificial reef functions to improve water quality as oyster spat find, attach and grow within the provided shells.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 1

Scenario Cost: $15,018.98 **Scenario Cost/Unit:** $15,018.98

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Boat, 150 HP	2407	22 foot boat with 150hp motor used to place cultch to create reef habitat.	Hour	$166.76	16	$2,668.16
Barge with crane and operator	2408	Barge to transport and place 1 ton bags of cultch to form oyster reef habitat.	Hour	$381.10	16	$6,097.60
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	$19.21	32	$614.72
Materials						
Cultch	2409	Cultch material (used and/or slightly crushed, cleaned, medium to large sized shells). Includes materials only.	Ton	$62.65	90	$5,638.50

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Scenario: #8 - Oyster reef restoration at site with some exisitng cultch using planted oyster shells

Scenario Description:

Oyster shells are delivered to a staging area by supplier; the shells are loaded on to a barge then transported/delivered to reef site where an existing bed is located that needs augmentation. The cultch are dropped over the side to the floor of the Chesapeake Bay. Their presence also allows naturally occurring oyster spat to have appropriate medium to attach themselves to. The resources protected are the decling numbers of bivalves that process/filter sediment and nutrients out of the bay water. Their filtering improves water quality in the bay. NRCS AQUACULTURE PROGRAM Eligibility for Funding through the EQIP Chesapeake Bay Program is based upon concern for: the land-based shell preparation activities that contribute to restoration of shellfish habitat begin on the shore and continue on permanently submerged lands under lease to the state (the tidal bottoms within areas of the bays and rivers of Virginia that are capable of supporting oysters which biofilter Bay waters. Because tidal waters are considered waters of the State, almost all bottom aquaculture operations require a state lease. The participant must have control of the submerged land in the form of a lease or other documentation showing they have sufficient control to implement and manage the contracted activities).

Before Situation:

Declining numbers of reproducing native oysters results in less bilvalve filtering of the Chesapeake Bay and reduced water quality.

After Situation:

Shallow water habitat/shoreline reef, planted with oyster shells, 1,000-3,000 bushels planted per acre to a thickness of 2-5 shells thick when added to existing cultch; The resulting artificial reef functions to improve water quality as oyster spat find, attach and grow within the provided shells.

Scenario Feature Measure: Area planted

Scenario Unit: Acre

Scenario Typical Size: 1

Scenario Cost: $7,321.54 **Scenario Cost/Unit:** $7,321.54

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Boat, 150 HP	2407	22 foot boat with 150hp motor used to place cultch to create reef habitat.	Hour	$166.76	8	$1,334.08
Barge with crane and operator	2408	Barge to transport and place 1 ton bags of cultch to form oyster reef habitat.	Hour	$381.10	8	$3,048.80
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	$19.21	16	$307.36
Materials						
Cultch	2409	Cultch material (used and/or slightly crushed, cleaned, medium to large sized shells). Includes materials only.	Ton	$62.65	42	$2,631.30