Practice: 647 - Early Successional Habitat Development and Management

Scenario: #1 - Disking

Scenario Description:

This practice addresses inadequate wildlife habitat for species requiring early successional habitat at varying stages. This scenario provides early successional habitat by setting back succession and manipulating species composition by disking vegetation and creating bare ground, forbs for feeding habitat, and NWSGS for nesting habitat all within the homerange for grassland birds, such as quail. No more than 1/3 to 1/2 of the area should be disked within 1 year. The typical setting for this scenario is at the edge of crop fields, in pastures, odd areas such as pivot corners, and thinned forest understory. This scenario is applicable nationwide. Where the management of woody plants is required to create or maintain early successional habitat, conservation practice 314 brush management or 666 forest stand improvement should be used. Where chemical control of weeds, including invasives, is required to reduce competition for the desired plant community conservation practice 315 herbaceous weed control should be used. Where the seedbank is inadequate for natural regeneration and seeding is required, use conservation practice 550 range seeding or 327 Conservation Cover.

Before Situation:

The site is static or trending to higher successional plant species. The disturbance regime to maintain a lower successional stage is lacking. Pastures are often monotypic, lacking in diversity. Bare ground for seedling establishment is absent. Stands are often dense and inhibit the movements of younger wildlife species suchh as game bird chicks.

After Situation:

The application of this scenario improves wildlife habitat for species requiring early successional plant communities by reducing competition and creating bare ground for the establishment of early successional plants. Additionally, brood rearing habitat is improved both by the resultant food resources and the increased openess of the plant community that allows chicks to negotiate the terrain and exploit those food resources.

Scenario Feature Measure: width and length of treated area

Scenario Unit: Acres

Scenario Typical Size: 40

Scenario Cost: $1,036.80 **Scenario Cost/Unit:** $25.92

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	$9.87	40	$394.80
Labor						
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	$32.10	20	$642.00

Practice: 647 - Early Successional Habitat Development and Management

Scenario: #2 - CRP Mowing/Bailing

Scenario Description:

This practice scenario is used as a mid-contract management activity for the CRP program. It involves mowing and bailing established plant communities to both stimulate new growth and to set back woody, less desirable species. The typical size of the practice is 20 acres. Increased annual/herbaceous plant diversity will improve wildlife habitat, pollinator habitat, and overall soil health. The typical setting for this scenario is on CRP lands established in early successional vegetation. This scenario is applicable nationwide. Where the management of woody plants is require to create or maintain early successional habitat conservation practice 314 brush management or 666 forest stand improvement should be used. Where chemical control of weeds, including invasives, is required to reduce competition for the desired plant community conservation practice 315 herbaceous weed control should be used. Where the seedbank is inadequate for natural regeneration and seeding is required, use conservation practice 550 range seeding or 327 Conservation Cover.

Before Situation:

The site has an established native plant cover and is being managed under a conservation plan and CRP contract. Typically, plant diversity and vigor begins to diminish over time and less desirable woody species begin to emerge as a part of natural succession. Wildlife populations are healthy, some pollinator habitat is being provided, and soil health is improving. Wildlife populations are healthy, some pollinator habitat is being provided, and soil health is improving.

After Situation:

With the introduction of a mowing/bailing activity, wildlife populations improve considerably, pollinator habitat is improved and exists for a longer period of time, woody species are set back, and soil health improves at a faster pace.

Scenario Feature Measure: width and length of treated area

Scenario Unit: Acre

Scenario Typical Size: 20

Scenario Cost: $404.04 **Scenario Cost/Unit:** $20.20

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	$47.56	6	$285.36
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12”, Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$19.78	6	$118.68

Practice: 647 - Early Successional Habitat Development and Management

Scenario: #3 - Wetland Disking

Scenario Description:

This practice addresses inadequate wetland wildlife habitat for species preferring early successional foods and habitat. This scenario provides early successional habitat by setting back succession and manipulating species composition. The typical setting for this scenario is managed moist-soil wetlands, restored wetlands, and shallow natural wetlands that periodically dry under normal conditions. Where the management of woody plants is require to maintain early successional habitat conservation practice 314 brush management or 666 forest stand improvement should be used. Where chemical control of weeds, including invasives, is required to reduce competition for the desired plant community conservation practice 315 herbaceous weed control should be used.

Before Situation:

The site is static or trending to late successional perennial plant species. The disturbance regime to maintain a early successional stage is lacking. Bare ground for annual seedling establishment is absent. Stands are often dense and do not produce preferred foods for wetland dependant wildlife species, such as waterfowl and shorebirds.

After Situation:

The application of this scenario improves wetland wildlife foods and habitat for species requiring early successional plant communities by reducing competition and creating bare ground for the establishment of early successional plants. Additionally, plant diversity and wetland functions and values can be improved.

Scenario Feature Measure: width and length of treated area

Scenario Unit: Acre

Scenario Typical Size: 15

Scenario Cost: $542.73 **Scenario Cost/Unit:** $36.18

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Tillage, Primary	946	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	$14.71	15	$220.65
Mobilization						
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	$161.04	2	$322.08

Practice: 647 - Early Successional Habitat Development and Management

Scenario: #4 - Wetland Mowing

Scenario Description:

This scenario address inadequate habitat for wetland wildlife where setting back succession by mowing herbaceous and/or woody species will improve habitat for the target species. Mowing can be used to increase structural diversity by creating areas of shorter vegetation prefered by some species or certain life stages of species. Mowing also allows wildlife access when habitat is flooded, makes seed more available, and provides vegetation and soil contact necessary for invertebrate response in wetlands. The typical setting for this scenario is in managed moist-soil wetlands, restored wetlands, andshallow natural wetlands that periodically dry under normal conditions. Where the management of woody plants is require to create or maintain early successional habitat conservation practice 314 brush management or 666 forest stand improvement should be used. Where chemical control of weeds, including invasives, is required to reduce competition for the desired plant community conservation practice 315 herbaceous weed control should be used.

Before Situation:

The site is static or trending to late successional perennial plant species. The disturbance regime to maintain a early successional stage is lacking. Bare ground for annual seedling establishment is absent. Stands are often dense and do not produce preferred foods for wetland dependant wildlife species, such as waterfowl and shorebirds.

After Situation:

The application of this scenario improves wetland wildlife foods and habitat for species requiring early successional plant communities by reducing competition and creating bare ground for the establishment of early successional plants. Additionally, plant diversity and wetland functions and values can be improved.

Scenario Feature Measure: width and length of treated area

Scenario Unit: Acre

Scenario Typical Size: 15

Scenario Cost: $524.10 **Scenario Cost/Unit:** $34.94

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	$47.56	3	$142.68
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12”, Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$19.78	3	$59.34
Mobilization						
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	$161.04	2	$322.08

Practice: 647 - Early Successional Habitat Development and Management

Scenario: #5 - Late Season Shallow Water with Manipulation

Scenario Description:

Used on rice fields, crawfish fields, other cropland, moist soil units, shallow water areas to provide habitat for wildife. This scenario addresses inadequate habitat for fish and wildlife on cropland and/or moist soil areas. The resource concern is addressed by providing shallow water habitat for wildlife such as shorebirds, waterfowl, wading birds, mammals, fish, reptiles, amphibians, and other species that require shallow water for at least part of their life cycle. Sites are flooded up to a depth of 18" with an average depth of 9". Associated practices are P.C. 587, Structure for Water Control and P.C. 356, Dikes.

Before Situation:

Currently these agricultural fields do not provide habitat for waterfowl/shorebirds. Water and moist soil is typically not managed during this timeframe.

After Situation:

Water control structures are closed, holding 8 to 18 inches of water as of May 1, to catch rainfall. Depths will be dependent on actual rainfall for that year. Based on climatic data, we assume enough rainfall to average 6-8 inches, lasting through July. The producer will manipulate emergent vegetation by rolling or lightly disking, so that 50% or more of the vegetation is at or below the soil surface. This management will benefit wildlife while minimizing nutrient export and aquifer depletion.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 40

Scenario Cost: $1,580.18 **Scenario Cost/Unit:** $39.50

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	$9.87	10	$98.70
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	$47.56	22	$1,046.32
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12”, Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$19.78	22	$435.16

Practice: 647 - Early Successional Habitat Development and Management

Scenario: #6 - Extended Late Season Shallow Water w/ Manipulation

Scenario Description:

Used on rice fields, crawfish fields, other cropland, moist soil units, shallow water areas to provide habitat for wildife. This scenario addresses inadequate habitat for fish and wildlife on cropland and/or moist soil areas. The resource concern is addressed by providing shallow water habitat for wildlife such as shorebirds, waterfowl, wading birds, mammals, fish, reptiles, amphibians, and other species that require shallow water for at least part of their life cycle. Sites are flooded up to a depth of 18" with an average depth of 9". Associated practices are P.C. 587, Structure for Water Control and P.C. 356, Dikes.

Before Situation:

Currently these agricultural fields do not provide habitat for waterfowl/shorebirds. Water and moist soil is typically not managed during this timeframe.

After Situation:

Water control structures are closed, holding 8 to 18 inches of water as of May 1, to catch rainfall. Depths will be dependent on actual rainfall for that year. Based on climatic data, we assume enough rainfall to average 6-8 inches, lasting through August. The producer will manipulate emergent vegetation by rolling or lightly disking, so that 50% or more of the vegetation is at or below the soil surface. This management will benefit wildlife while minimizing nutrient export and aquifer depletion.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 40

Scenario Cost: $2,928.40 **Scenario Cost/Unit:** $73.21

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	$47.56	20	$951.20
Tillage, Light	945	Includes light disking (tandem) or field cultivator. Includes equipment, power unit and labor costs.	Acre	$9.87	40	$394.80
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12”, Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$19.78	80	$1,582.40

Practice: 647 - Early Successional Habitat Development and Management

Scenario: #7 - Mottled Duck Habitat,low intensity grassland component-activity #5

Scenario Description:

Used on grasslands near other core grasslands with high intensity improvementswith an adjacent wetland component to provide nesting and brooding habitat for mottled ducks and wintering habitat for other water birds through specific management objectives.

Before Situation:

Currently these agricultural fields do not provide habitat for waterfowl/shorebirds. Grassland and wetland components are typically not managed adequately to provide suitable nesting and brooding habitat for mottled ducks.

After Situation:

Grasslands are managed to promote large expanses of a diverse plant community of grasses, legumes, and forbs. Trees and shrubs are not desirable.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 250

Scenario Cost: $2,222.22 **Scenario Cost/Unit:** $8.89

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	$47.56	33	$1,569.48
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	$19.78	33	$652.74

Practice: 647 - Early Successional Habitat Development and Management

Scenario: #8 - Mottled Duck Habitat, high intensity grassland component-activity #5

Scenario Description:

Used on grasslands with an adjacent wetland component to provide nesting and brooding habitat for mottled ducks and wintering habitat for other water birds through specific management objectives. High intensity measures are applicable when significant changes in management techniques and expenitures are planned to bring the grassland component from minimal mottled duck nesting habitat to high quality. Low intensity measures should be applied where slight changes are planned for on-going grassland management techniques which will increase benefits to mottled duck nesting habitats. This scenario addresses inadequate habitat for fish and wildlife on cropland and/or moist soil areas. Sites are flooded up to a depth of 18" with an average depth of 9". Associated practices are P.C. 587, Structure for Water Control and P.C. 356, Dikes.

Before Situation:

Currently these agricultural fields do not provide habitat for waterfowl/shorebirds. Grassland and wetland components are typically not managed adequately to provide suitable nesting and brooding habitat for mottled ducks.

After Situation:

Grasslands are managed to promote large expanses of a diverse plant community of grasses, legumes, and forbs. Trees and shrubs are not desirable.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 250

Scenario Cost: $14,061.00 **Scenario Cost/Unit:** $56.24

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price ($/unit)	Quantity	Cost
Equipment/Installation						
Mower, Bush Hog	940	Equipment and power unit costs. Labor not included.	Hour	$47.56	120	$5,707.20
Tillage, Primary	946	Includes heavy disking (offset) or chisel plow. Includes equipment, power unit and labor costs.	Acre	$14.71	60	$882.60
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	$17.72	120	$2,126.40
Supervisor or Manager	234	Labor involving supervision or management activities. Includes crew supervisors, foremen and farm/ranch managers time required for adopting new technology, etc.	Hour	$32.10	16	$513.60
Mobilization						
Mobilization, small equipment	1138	Equipment <70 HP but can't be transported by a pick-up truck or with typical weights between 3,500 to 14,000 pounds.	Each	$161.04	30	$4,831.20