

Practice: 644 - Wetland Wildlife Management

Scenario: #1 - Wildlife Structures of Low Intensity with Low Complexity

Scenario Description:

This scenario covers all wetland habitats, that are not covered under 643, that need installation of wildlife structures, which are of low intensity and low complexity, when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation. This scenario include structures such as: habitat boxes, perch poles, fence markers, down logs and hand built brush piles. Intensity is the number of structures to be installed per acre. For this scenario the intensity is <0.5 structure per acre. Complexity is defined by the combination of skill level, equipment needed and ease of accesability for createing and installing these structures. For this scenario the complexity would include; general labor with minimal supervision or skilled labor without supervision; common hand tools and equipment; installation is within a quarter mile of a driveable road; and terrain is gentle to moderate. This practice may be installed alone or in combination with facilitating practices. Facilitating practices may include but not limited to: 382, 391, 647, 660 and 666.

Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need for wildlife structures of low intensity with low complexity to bring one or more habitat limiting factors under Inadequate Habitat for Fish or Wildlife, up to planning criteria. Wetland habitat limiting factors include quality, quantity and continuity of forage, cover, shelter, space and water availability. Less than 0.5 structure per acre is needed to bring the deficient habitat limiting factor up to planning criteria. The structures can be installed within a quarter mile of a driveable road and terrain is gentle to moderate. (consider all the fence markers as one structure)

After Situation:

Installation of wildlife structures bring the identified deficient habitat limiting factors up to planning criteria. The practice is installed using general labor with minimal supervision or skilled labor without supervision with use of common hand tools and small equipment;

Scenario Feature Measure: < 0.5 structures / acre

Scenario Unit: Acres

Scenario Typical Size: 10

Scenario Cost: \$1,275.13

Scenario Cost/Unit: \$127.51

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
	1145				1	
	1142				1	
Equipment/Installation						
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$36.81	2	\$73.62
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	\$42.58	5	\$212.90
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	\$24.74	14	\$346.36
Materials						
Predator Guard	1461	Predator guards (i.e. stove pipes, cone, hole guard, etc.) for habitat boxes. Materials only. Includes material and shipping only.	Each	\$28.58	6	\$171.48
Habitat Box, waterfowl	1449	Wood Duck Box, typically 24" x 11" x 12" with 4" wide oval entrance, single. Includes material and shipping only.	Each	\$69.82	2	\$139.64
Post, Wood, CCA treated, 6" x 12-14'	13	Wood Post, Line/End 6" X 12-14', CCA Treated. Includes materials and shipping only.	Each	\$26.08	6	\$156.48
Habitat Box, Bat	246	BAT-1 Bat House Single. Includes materials and shipping.	Each	\$52.08	2	\$104.16
Mobilization						
Mobilization, very small equipment	1137	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	\$70.49	1	\$70.49

Practice: 644 - Wetland Wildlife Management

Scenario: #2 - Wildlife Structures of Medium Intensity with Medium Complexity

Scenario Description:

This scenario covers all wetland habitats, that are not covered under 643, that need installation of wildlife structures, which are of medium intensity with medium complexity (also included are sites needing low to medium intensity but high complexity or high intensity but low to medium complexity structures), when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation. This scenario includes all the structures in the Wildlife Structures Low and other structures whose installation may require the use of light (< 70 horse power) to medium (70-150 horse power) sized equipment. Intensity is the number of structures to be installed per acre. For this scenario, the intensity can range from <1 structure per acre to 1 structure per acre depending on complexity. Complexity is defined by the combination of skill level, equipment needed and ease of accesability for createing and installing these structures. For this scenario the complexity would include: general labor with supervision if intensity is medium to high and complexity is low to medium or skilled labor with supervision if intensity is low to medium and complexity is medium to high; common hand tools and/or light to medium equipment; installation is within a half mile of a road: and terrain is gentle to difficult. In order for the habitat limiting factor to be improved the participant has to for go a certain amount of production or complete deferment. Facilitating practices may include but not limited to: 382, 391, 647, 660 and 666.

Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need for wildlife structures of medium intensity and high medium to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. (Also included are sites where the planning criteria would require wildlife structures of low to medium intensity and high complexity or high intensity but low complexity) Habitat limiting factors include quality, quantity and continuity of forage, cover, shelter, space and water availability. The intensity can range from <1 structure per acre to >1 structure per acre depending on complexity. All the needed wildlife structures can be installed within a half mile of a driveable road and the terrain can range from gentle to difficult.

After Situation:

Installation of wildlife structures bring the identified deficient habitat limiting factors up to planning criteria. The practice was installed using general labor with supervision(if intensity is medium to high and complexity is low to medium) or skilled labor with supervision (if intensity is low to medium and complexity is medium to high) with the use of common hand tools and/or light to medium equipment.

Scenario Feature Measure: < 1 to >1 structure / acre

Scenario Unit: Acres

Scenario Typical Size: 10

Scenario Cost: \$2,362.49

Scenario Cost/Unit: \$236.25

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	\$36.81	2	\$73.62
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	\$24.74	28	\$692.72
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	\$42.58	5	\$212.90
Materials						
Habitat Box, Bird	251	Bluebird nesting box to increase nesting success. Each is 1-1/2" x 6" x 12-1/2" w/ 1-1/2" diameter opening. Includes materials and shipping.	Each	\$29.75	2	\$59.50
Habitat Box, waterfowl	1449	Wood Duck Box, typically 24" x 11" x 12" with 4" wide oval entrance, single. Includes material and shipping only.	Each	\$69.82	4	\$279.28
Predator Guard	1461	Predator guards (i.e. stove pipes, cone, hole guard, etc.) for habitat boxes. Materials only. Includes material and shipping only.	Each	\$28.58	12	\$342.96
Post, Wood, CCA treated, 6" x 12-14'	13	Wood Post, Line/End 6" X 12-14', CCA Treated. Includes materials and shipping only.	Each	\$26.08	10	\$260.80
Post, Wood, CCA treated, 6" x 8'	12	Wood Post, End 6" X 8', CCA Treated. Includes materials and shipping only.	Each	\$14.60	2	\$29.20

Materials

Habitat Box, Bat	246	BAT-1 Bat House Single. Includes materials and shipping.	Each	\$52.08	3	\$156.24
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Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$255.27	1	\$255.27
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Practice: 644 - Wetland Wildlife Management

Scenario: #3 - Wildlife Structures of High Intensity with High Complexity

Scenario Description:

This scenario covers all wetland habitats, that are not covered under 643, that need installation of wildlife structures, which are of medium to high intensity and high complexity, when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation. This scenario includes all the structures in the Wildlife Structures-low and medium scenarios but whose installation may require medium to high intensity with high complexity. Plus, this scenario may include the installation structures that require the use of heavy (150+ horse power) sized equipment. Intensity is the number of structures to be installed per acre and for this scenario it can range from <1 structure per acre to >1 structure per acre depending on complexity. Complexity is defined by the combination of skill level, equipment needed and ease of accesability for createing and installing these structures. For this scenario the complexity would include: skilled labor and general labor with supervision; common hand tools to heavy equipment; for many of the structures, installation is within a mile of a road: and terrain is moderate to difficult. In order for the habitat limiting factor to be improved the participant has to for go a certain amount of production or complete deferment. Facilitating practices may include but not limited to: 382, 391, 647, 660 and 666.

Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need for wildlife structures of medium to high intensity with high complexity to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. (Also included are sites where the planning criteria would require wildlife structures of low intensity but high complexity or high intensity but low compexity) Habitat limiting factors include quality, quantity and continuity of forage, cover, shelter, space and water avalability. The intensity for this scenario may range from <1 structure per acre to >1 structure per acre depending on complexity. Many of the needed structures can be installed within a mile of a driveable road and the terrain will range from moderate to difficult.

After Situation:

Installation of wildlife structures bring the identified deficient habitat limiting factors up to planning criteria. Installation of wildlife structures required skilled labor and general labor with supervision and the use of common hand tools to heavy equipment.

Scenario Feature Measure: < 1 to >1 structure / acre

Scenario Unit: Acres

Scenario Typical Size: 10

Scenario Cost: \$2,910.15

Scenario Cost/Unit: \$291.02

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	\$36.81	6	\$220.86
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	\$42.58	5	\$212.90
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	\$24.74	40	\$989.60
Materials						
Habitat Box, Bat	246	BAT-1 Bat House Single. Includes materials and shipping.	Each	\$52.08	4	\$208.32
Predator Guard	1461	Predator guards (i.e. stove pipes, cone, hole guard, etc.) for habitat boxes. Materials only. Includes material and shipping only.	Each	\$28.58	16	\$457.28
Habitat Box, Bird	251	Bluebird nesting box to increase nesting success. Each is 1-1/2" x 6" x 12-1/2" w/ 1-1/2" diameter opening. Includes materials and shipping.	Each	\$29.75	3	\$89.25
Post, Wood, CCA treated, 6" x 12-14'	13	Wood Post, Line/End 6" X 12-14', CCA Treated. Includes materials and shipping only.	Each	\$26.08	13	\$339.04
Post, Wood, CCA treated, 6" x 8'	12	Wood Post, End 6" X 8', CCA Treated. Includes materials and shipping only.	Each	\$14.60	3	\$43.80
Habitat Box, waterfowl	1449	Wood Duck Box, typically 24" x 11" x 12" with 4" wide oval entrance, single. Includes material and shipping only.	Each	\$69.82	5	\$349.10

Mobilization

Mobilization

Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$255.27		\$0.00
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Practice: 644 - Wetland Wildlife Management

Scenario: #4 - Osprey/Eagle Nesting Platform

Scenario Description:

A structure is provided to support the nesting and rearing of targeted species such as Ospreys found nesting in coastal areas. These structures are designed to meet targeted species biology and life history needs.

Before Situation:

These structures are targeted for areas that lack sufficient nesting sites to support viable populations of targeted species that nest along coastal estuaries and large water bodies.

After Situation:

The installation of pole and nesting platform supports the life-cycle needs of targeted species, such as Ospreys and other types of raptors that nest along coastal estuaries and large water bodies. These structures/features enhance habitat, cover, and reduce predation. .

Scenario Feature Measure:

Scenario Unit: Each

Scenario Typical Size: 1

Scenario Cost: \$1,779.00

Scenario Cost/Unit: \$1,779.00

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
<i>Materials</i>						
Pole, Utility, Nesting Platform	2048	Fabrication and installation of avian nesting platform. Includes all equipment, labor and material needed to install utility pole with a nesting platform.	Foot	\$35.58	50	\$1,779.00

Practice: 644 - Wetland Wildlife Management

Scenario: #5 - Wetland Invasive Removal

Scenario Description:

In coastal, estuarine and freshwater wetland areas. The invasive plants Phragmites or other invasive plants has colonized marsh/wetland areas due to decreases salinity because of inadequate tidal flow, sedimentation or a change in hydrology. Native plants such as Spartina alterniflora and Spartina patens and cattails have been replaced by Phragmites. The Phragmites dominant areas provide little or no wildlife habitat benefits. Normally tidal hydrology is restored or sediments are removed prior to the use of this scenario. The scenario will consist of dual application of Imazapyr and glyphosate as well as mowing to remove the dead emergent material.

Before Situation:

The invasive plants Phragmites or other invasive plants has colonized marsh/wetland areas due to decreases salinity because of inadequate tidal flow, sedimentation or a change in hydrology. Native plants such as Spartina alterniflora and Spartina patens and cattails have been replaced by Phragmites. The Phragmites dominant areas provide little or no wildlife habitat benefits.

After Situation:

Native wetland plants recolonize the marsh or wetland. Native wildlife species dependent on the marsh can find suitable food and cover.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 5

Scenario Cost: \$2,788.01

Scenario Cost/Unit: \$557.60

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Skidsteer, 80 HP	933	Skidsteer loader with horsepower range of 60 to 90. Equipment and power unit costs. Labor not included.	Hour	\$42.73	26	\$1,110.98
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	\$42.58	5	\$212.90
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$24.86	26	\$646.36
Materials						
Herbicide, Surfactant	1095	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. Includes materials and shi	Acre	\$1.34	10	\$13.40
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	5	\$79.15
Herbicide, Imazapyr	336	Pre and post-emergent, non-selective herbicide for control of undesirable vegetation in non-crop areas. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$42.03	5	\$210.15
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	\$171.69	3	\$515.07

Practice: 644 - Wetland Wildlife Management

Scenario: #6 - Native Annual Establishment

Scenario Description:

This scenario covers all wetland habitats not covered under 643, for the establishment of native annual vegetation on all land uses. This scenario is utilized when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation due to the presence on non-native plants such as Reed Canary Grass. The typical size range for this scenario is 5 to 50 acres. This scenario would be applied on any land use where wetland habitats are utilized by targeted species. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality and develop wildlife habitat as part of a habitat management system. Often times this scenario is utilized to temporarily provide cover or forage while permanent vegetation is being established. Establishment of vegetation will require disking application. No seeding will be required for this scenario. The Native plant seed bank should be adequate for plant regeneration.

Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need to establish annual (non-persistent) wetland vegetation to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. An evaluation of the site has indicated resource concerns are present, or may become present during the implementation of the habitat management system planned. Resource concerns identified may include soil erosion with visible rills present resulting in sediment moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The current system provides little to no wildlife habitat with habitat limiting factors such as quality, quantity and continuity of forage, cover, shelter and space being identified. Plant species may include a monotypic stand such as Reed Canary Grass that does not provide adequate habitat.

After Situation:

Planning unit is adequately covered with native annual vegetation. As a result of installation soil erosion, water/sediment runoff, and/or dust emissions have been eliminated. Plants sown provide cover and forage for target species. Forage may include the vegetation itself or promote an abundance of beneficial insects. This scenario does not apply to plantings for forage production or critical area plantings and vegetation established under this scenario will remain unharvested.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 10

Scenario Cost: \$495.62

Scenario Cost/Unit: \$49.56

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
	1143				2	
Equipment/Installation						
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$23.21	5	\$116.05
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$24.86	5	\$124.30
Mobilization						
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$255.27	1	\$255.27

Practice: 644 - Wetland Wildlife Management

Scenario: #7 - Native Annual Establishment-No Herbicide

Scenario Description:

This scenario covers all wetland habitats not covered under 643, for the establishment of native annual vegetation on all land uses. This scenario is utilized when habitat assessment indicates Inadequate Habitat for Fish or Wildlife-habitat degradation due to the presence on non-native plants such as Reed Canary Grass. The typical size range for this scenario is 5 to 50 acres. This scenario would be applied on any land use where wetland habitats are utilized by targeted species. This practice scenario is typically used to reduce soil erosion, reduce soil quality degradation, improve water quality and develop wildlife habitat as part of a habitat management system. Often times this scenario is utilized to temporarily provide cover or forage while permanent vegetation is being established. Establishment of vegetation will require methods including light disking, and herbicide application. No seeding will be required for this scenario. The Native plant seed bank should be adequate for plant regeneration.

Before Situation:

A habitat assessment (using State Office approved habitat assessment method, protocol or tool) has indicated a need to establish annual (non-persistent) wetland vegetation to bring one or more habitat limiting factors of inadequate habitat for fish and wildlife, up to planning criteria. An evaluation of the site has indicated resource concerns are present, or may become present during the implementation of the habitat management system planned. Resource concerns identified may include soil erosion with visible rills present resulting in sediment moving offsite into surface water degrading water quality. Soil quality (soil organic matter) declines over time as a result of tillage practices, low residue, and long periods of bare soil. Air quality may be impacted during field operations by the creation of particulates. The current system provides little to no wildlife habitat with habitat limiting factors such as quality, quantity and continuity of forage, cover, shelter and space being identified. Plant species may include a monotypic stand such as Reed Canary Grass that does not provide adequate habitat.

After Situation:

Planning unit is adequately covered with native annual vegetation. As a result of installation soil erosion, water/sediment runoff, and/or dust emissions have been eliminated. Plants sown provide cover and forage for target species. Forage may include the vegetation itself or promote an abundance of beneficial insects. This scenario does not apply to plantings for forage production or critical area plantings and vegetation established under this scenario will remain unharvested.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 10

Scenario Cost: \$894.27

Scenario Cost/Unit: \$89.43

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
	1143				1	
Equipment/Installation						
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$23.21	10	\$232.10
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$24.86	10	\$248.60
Materials						
Herbicide, Glyphosate	334	A broad-spectrum, non-selective systemic herbicide. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$15.83	10	\$158.30
Mobilization						
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$255.27	1	\$255.27

Practice: 644 - Wetland Wildlife Management

Scenario: #8 - Nesting Boxes Waterfowl

Scenario Description:

A structure is provided to support the nesting and rearing of targeted species, such as wood ducks. These structures are designed to meet targeted species biology and life history needs.

Before Situation:

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Increased predation of target and non-targeted species may or may not be a problem.

After Situation:

The installation nesting and rearing boxes support the life-cycle needs of targeted species, such as blue birds and waterfowl. Location and conditions suggest that predator guards are not needed. These structures/features enhance habitat, cover, and improve species survivability.

Scenario Feature Measure:

Scenario Unit: Each

Scenario Typical Size: 1

Scenario Cost: \$223.44

Scenario Cost/Unit: \$223.44

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.74	4	\$98.96
Materials						
Predator Guard	1461	Predator guards (i.e. stove pipes, cone, hole guard, etc.) for habitat boxes. Materials only. Includes material and shipping only.	Each	\$28.58	1	\$28.58
Post, Wood, CCA treated, 6" x 12-14'	13	Wood Post, Line/End 6" X 12-14', CCA Treated. Includes materials and shipping only.	Each	\$26.08	1	\$26.08
Habitat Box, waterfowl	1449	Wood Duck Box, typically 24" x 11" x 12" with 4" wide oval entrance, single. Includes material and shipping only.	Each	\$69.82	1	\$69.82

Practice: 644 - Wetland Wildlife Management

Scenario: #9 - Nesting Boxes Bats

Scenario Description:

A structure is provided to support the nesting and rearing of targeted species, such as bats. These structures are designed to meet targeted species biology and life history needs.

Before Situation:

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Increased predation of target and non-targeted species may or may not be a problem.

After Situation:

The installation nesting and rearing boxes support the life-cycle needs of targeted species, such as blue birds and waterfowl. Location and conditions suggest that predator guards are not needed. These structures/features enhance habitat, cover, and improve species survivability.

Scenario Feature Measure:

Scenario Unit: Each

Scenario Typical Size: 1

Scenario Cost: \$208.28

Scenario Cost/Unit: \$208.28

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.74	4	\$98.96
Materials						
Post, Wood, CCA treated, 6" x 12-14'	13	Wood Post, Line/End 6" X 12-14', CCA Treated. Includes materials and shipping only.	Each	\$26.08	2	\$52.16
Habitat Box, Bat	246	BAT-1 Bat House Single. Includes materials and shipping.	Each	\$52.08		\$0.00
Predator Guard	1461	Predator guards (i.e. stove pipes, cone, hole guard, etc.) for habitat boxes. Materials only. Includes material and shipping only.	Each	\$28.58	2	\$57.16

Practice: 644 - Wetland Wildlife Management

Scenario: #10 - Nesting Structure Birds

Scenario Description:

A structure is provided to support the nesting and rearing of targeted species, such as blue birds. These structures are designed to meet targeted species biology and life history needs.

Before Situation:

These structures are targeted for areas that lack sufficient overall habitat conditions to support viable populations of targeted species. Increased predation of target and non-targeted species may or may not be a problem.

After Situation:

The installation nesting and rearing boxes support the life-cycle needs of targeted species, such as blue birds. Location and conditions suggest that predator guards are not needed. These structures/features enhance habitat, cover, and improve species survivability.

Scenario Feature Measure:

Scenario Unit: Each

Scenario Typical Size: 1

Scenario Cost: \$115.60

Scenario Cost/Unit: \$115.60

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.74	2	\$49.48
Materials						
Habitat Box, Bird	251	Bluebird nesting box to increase nesting success. Each is 1-1/2" x 6" x 12-1/2" w/ 1-1/2" diameter opening. Includes materials and shipping.	Each	\$29.75	1	\$29.75
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.79	1	\$7.79
Predator Guard	1461	Predator guards (i.e. stove pipes, cone, hole guard, etc.) for habitat boxes. Materials only. Includes material and shipping only.	Each	\$28.58	1	\$28.58

Practice: 644 - Wetland Wildlife Management

Scenario: #10 - Invasive Removal Limited Access

Scenario Description:

In coastal, estuarine and freshwater wetland areas where access is limited. The invasive plants Phragmites or other invasive plants has colonized marsh/wetland areas due to decreases salinity because of inadequate tidal flow, sedimentation or a change in hydrology. Native plants such as cattails have been replaced by Phragmites or other invasive plants. The Phragmites dominant areas provide little or no wildlife habitat benefits. Typical size of area is three acres. Normally the scenario will consist of application of Imazapyr or glyphosate. Application of herbicides may be done in three methods, spraying from a boom attached to a truck, backpack spraying and by boat in deeper water areas.

Before Situation:

The invasive plants Phragmites or other invasive plants has colonized marsh/wetland areas due to decreases salinity because of inadequate tidal flow, sedimentation or a change in hydrology. Native plants such as *Spartina alterniflora* and *Spartina patens* and cattails have been replaced by Phragmites. The Phragmites dominant areas provide little or no wildlife habitat benefits.

After Situation:

Native wetland plants recolonize the marsh or wetland. Native wildlife species dependent on the marsh can find suitable food and cover.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 3

Scenario Cost: \$1,765.47

Scenario Cost/Unit: \$588.49

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	\$36.81	16	\$588.96
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	\$40.66	16	\$650.56
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	\$24.74	16	\$395.84
Materials						
Herbicide, Imazapyr	336	Pre and post-emergent, non-selective herbicide for control of undesirable vegetation in non-crop areas. Refer to WIN-PST for product names and active ingredients. Includes materials and shipping only.	Acre	\$42.03	3	\$126.09
Herbicide, Surfactant	1095	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. Includes materials and shi	Acre	\$1.34	3	\$4.02

Practice: 644 - Wetland Wildlife Management

Scenario: #11 - Creation of Turtle Nesting Habitat

Scenario Description:

The creation of turtle nesting habitat through a combination of the following activities: clearing vegetation, stripping loam, and scarifying the soil.. Usually in Upland areas (suitable for turtle nesting habitat) that are adjacent to wetlands, rivers, lakes and streams. This provides benefits for Fish and Wildlife: Inadequest Space.

Before Situation:

Areas adjacent to wetland, rivers, lakes and streams do not have adequest turtle nesting habitat. Turtles have to travel excessive distances to find nesting sites. This situation can increse the mortality of the local population and impact the repopulation of the species.

After Situation:

Turtle nesting habits is created adjacent to wetland, rivers, lakes and streams. Turtles are less likley to be killed crossing roads and by predation. The typical sixe of the installed practice is 1.0 acres.

Scenario Feature Measure:

Scenario Unit: Acre

Scenario Typical Size: 0

Scenario Cost: \$2,333.39

Scenario Cost/Unit: #Div/0!

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Dozer, 200 HP	928	Track mounted Dozer with horsepower range of 160 to 250. Equipment and power unit costs. Labor not included.	Hour	\$184.60	10	\$1,846.00
Mobilization						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$487.39	1	\$487.39