

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Water Management Engineering
Practice Code/Name	390 - Riparian Herbaceous Cover
Scenario ID	1
Scenario Name	Aquatic Wildlife
Scenario Description	Aquatic Wildlife: This scenario addresses inadequate herbaceous plant community function or diversity within the specific transitional zone between terrestrial and aquatic habitats in rangeland, pasture, cropland, and forest where natural seeding methods and/or management is unlikely to improve the plant community within a reasonable time period. This scenario applies to work not covered under NRCS Conservation Practice Range Planting (528), Forage and Biomass Planting (512), Critical Area Planting (342), Filter Strip (393), Restoration and Management of Rare and Declining Habitats (643), Streambank and Shoreline Protection (580), Vegetated Treatment Area (635), Wetland Enhancement (659), or Wetland Restoration (657). This practice can be used nation wide. The typical setting for this scenario is usually a narrow strip between the aquatic and terrestrial habitats subject to intermittent flooding and saturated soils where the existing plant community has been disturbed, destroyed, or the species diversity is unable to provide adequate habitat. Where the establishment of a diverse riparian herbaceous plant community is desired, an adapted mix of grasses, sedges, rushes, ferns, legumes, and/or forbs tolerant to the site conditions will be planted. Grasses such as prairie
Before Practice Situation	The riparian zone, the specific area between terrestrial and aquatic habitats, vegetation is currently an undesirable or inadequate stand of perennial or annual vegetation as determined by the NRCS Stream Visual Assessment Protocol score of less than 5 for those elements and natural reseeding or vegetation management is unlikely to improve the plant community within a reasonable amount of time. Existing vegetation does not provide adequate food, cover, and/or connectivity for riparian wildlife, and contributes insufficient amounts of organic matter for stream species food and cover. Riparian vegetation quality and/or quantity have been compromised by human activities and/or access of vehicles, people, and/or livestock to the extent that the riparian area and floodplain are not functioning to provide the necessary stream and riparian habitat components. Existing conditions often require suppression or eradication of current vegetation by conventional mechanical or chemical (Herbaceous Weed Control (315)) methods to ensure establishment success of the new planting. Soil quality may be reduced due to compaction and may require light tillage to prepare a proper seedbed.
After Practice Situation	The riparian zone, the transitional zone between the terrestrial and aquatic habitats, is established to an adapted, diverse vegetative plant community and is under close management to insure long term survival and ecological succession. The quality and quantity of the riparian zone components are managed to support the species that depend on it for habitat as well as the functions it performs for stabilizing the streambank and/or shoreline, dissipating stream energy and trapping sediment, and improving and/or maintaining water quality. These functions include: stream temperature moderation through shading, recruitment of non-woody organic matter, habitat for terrestrial insects and other riparian dependent species, streambank integrity, and filtration of contaminants from surface run-off into the stream.
Scenario Feature Measure	Acres of Riparian Herbaceous Cover
Scenario Unit	Acre
Scenario Typical Size	0.5

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$15,265.54	\$30,531.08
Equipment/Installation	\$75.77	\$151.54
Labor	\$1,076.20	\$2,152.40
Mobilization	\$187.23	\$374.46
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$16,604.74	\$33,209.48

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1873	Softstem Bulrush (Scirpus validus)	Native Rush and shipping	Each	\$2.18	2000	\$4,360.00
Materials	1878	Bull Sedge (Carex lanuginosa)	Native Sedge and shipping, plug or rhizome	Each	\$4.36	2000	\$8,720.00
Materials	77	Eastern Gamagrass (Tripsacum dactyloides)	Native Grasses and shipping.	Pound	\$17.45	6	\$104.70
Materials	122	Illinois Bundleflower (Desmanthus illinoensis)	Native Legumes and shipping.	Pound	\$27.94	2	\$55.88
Materials	139	Western Sunflower (Helianthus occidentalis)	Native Forbs and shipping.	Pound	\$467.12	4	\$1,868.48
Materials	154	Blue Vervain (Verbena hastata)	Native Forbs and shipping.	Pound	\$78.24	2	\$156.48
Equipment/Installation	962	Tractor, agricultural, 120 HP	Agricultural tractor with horsepower range of 90 to 140. Equipment and power unit costs. Labor not included.	Hour	\$47.06	1	\$47.06
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes all costs for equipment, power unit, and labor.	Acre	\$19.08	1	\$19.08
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Equipment and power unit costs. Labor is included.	Acre	\$9.63	1	\$9.63
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	2	\$47.80
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
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

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Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Water Management Engineering
Practice Code/Name	390 - Riparian Herbaceous Cover
Scenario ID	4
Scenario Name	Cool Season Grasses w/ Forbs
Scenario Description	Cool Season Grasses with Forbs. This scenario addresses inadequate herbaceous plant community function or diversity within the specific transitional zone between terrestrial and aquatic habitats in rangeland, pasture, cropland, and forest where natural seeding methods and/or management is unlikely to improve the plant community within a reasonable time period. This scenario applies to work not covered under NRCS Conservation Practice Range Planting (528), Forage and Biomass Planting (512), Critical Area Planting (342), Filter Strip (393), Restoration and Management of Rare and Declining Habitats (643), Streambank and Shoreline Protection (580), Vegetated Treatment Area (635), Wetland Enhancement (659), or Wetland Restoration (657). This practice can be used nation wide. The typical setting for this scenario is usually a narrow strip between the aquatic and terrestrial habitats subject to intermittent flooding and saturated soils where the existing plant community has been disturbed, destroyed, or the species diversity is unable to provide proper function and/or adequate habitat. Where the establishment of a diverse riparian herbaceous plant community is desired, an adapted mix of primarily cool season grasses, legumes, and/or forbs tolerant to the site conditions will be planted by broadcast and/or no-till or range drill seeding methods as necessary to accomplish the intended purpose(s). Where chemical control of undesirable vegetation,
Before Practice Situation	The riparian zone, the specific area between terrestrial and aquatic habitats, is currently an undesirable or inadequate stand of perennial or annual vegetation and natural reseeding or vegetation management is unlikely to improve the plant community within a reasonable amount of time to adequately address streambank and/or shoreline stability, dissipate stream energy and trap sediment, improve and/or maintain water quality, and/or provide adequate habitat corridors, food and/or cover for fish, wildlife, pollinators, and/or livestock resource concern(s). Existing conditions often require suppression or eradication of current vegetation by conventional mechanical or chemical (Herbaceous Weed Control (315)) methods to ensure establishment success of the new planting. Soil quality may be reduced due to compaction and may require light tillage to prepare a proper seedbed.
After Practice Situation	The riparian zone, the transitional zone between the terrestrial and aquatic habitats, is established to an adapted, diverse vegetative plant community and is under close management to insure long term survival and ecological succession. The quality and quantity of the riparian zone components are managed to support the species that depend on it for habitat as well as the functions it performs for stabilizing the streambank and/or shoreline, dissipating stream energy and trapping sediment, and improving and/or maintaining water quality. These functions include: stream temperature moderation through shading, recruitment of non-woody organic matter, habitat for terrestrial insects and other riparian dependent species, streambank integrity, and filtration of contaminants from surface run-off into the stream.
Scenario Feature Measure	Acres of Riparian Herbaceous Cover
Scenario Unit	Acre
Scenario Typical Size	0.5

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$2,509.69	\$5,019.38
Equipment/Installation	\$122.83	\$245.66
Labor	\$47.80	\$95.60
Mobilization	\$374.46	\$748.92
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$3,054.78	\$6,109.56

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1889	Bluejoint (Calamagrostis canadensis)	Native Grasses and shipping	Each	\$0.78	6	\$4.68
Materials	1089	Western Wheatgrass (Pascopyrum smithii)	Native Grasses and shipping.	Pound	\$7.79	6	\$46.74
Materials	122	Illinois Bundleflower (Desmanthus illinoensis)	Native Legumes and shipping.	Pound	\$27.94	2	\$55.88
Materials	135	Nodding Sticktight (Bidens cernua)	Native Forbs and shipping.	Pound	\$205.45	1	\$205.45
Materials	139	Western Sunflower (Helianthus occidentalis)	Native Forbs and shipping.	Pound	\$467.12	2	\$934.24
Materials	1887	Fowl Mannagrass (Glyceria striata)	Native Grasses and shipping	Pound	\$210.45	6	\$1,262.70
Equipment/Installation	962	Tractor, agricultural, 120 HP	Agricultural tractor with horsepower range of 90 to 140. Equipment and power unit costs. Labor not included.	Hour	\$47.06	2	\$94.12
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes all costs for equipment, power unit, and labor.	Acre	\$19.08	1	\$19.08
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Equipment and power unit costs. Labor is included.	Acre	\$9.63	1	\$9.63
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	2	\$47.80
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

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Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Water Management Engineering
Practice Code/Name	390 - Riparian Herbaceous Cover
Scenario ID	2
Scenario Name	Plugging and Seeding
Scenario Description	Plugging. This scenario addresses inadequate herbaceous plant community function or diversity within the specific transitional zone between terrestrial and aquatic habitats in rangeland, pasture, cropland, and forest where natural seeding methods and/or management is unlikely to improve the plant community within a reasonable time period. This scenario applies to work not covered under NRCS Conservation Practice Range Planting (528), Forage and Biomass Planting (512), Critical Area Planting (342), Filter Strip (393), Restoration and Management of Rare and Declining Habitats (643), Streambank and Shoreline Protection (580), Vegetated Treatment Area (635), Wetland Enhancement (659), or Wetland Restoration (657). This practice can be used nation wide. The typical setting for this scenario is usually a narrow strip between the aquatic and terrestrial habitats subject to intermittent flooding and saturated soils where the existing plant community has been disturbed, destroyed, or the species diversity is unable to provide proper function and/or adequate habitat. Where the establishment of a diverse riparian herbaceous plant community is desired, an adapted mix of grasses, sedges, rushes, ferns, legumes, and/or forbs tolerant to the site conditions will be planted.
Before Practice Situation	The riparian zone, the specific area between terrestrial and aquatic habitats, is currently an undesirable or inadequate stand of perennial or annual vegetation and natural reseeding or vegetation management is unlikely to improve the plant community within a reasonable amount of time to adequately address streambank and/or shoreline stability, dissipate stream energy and trap sediment, improve and/or maintain water quality, and/or provide adequate habitat corridors, food and/or cover for fish, wildlife, pollinators, and/or livestock resource concern(s). Existing conditions often require suppression or eradication of current vegetation by conventional mechanical or chemical (Herbaceous Weed Control (315)) methods to ensure establishment success of the new planting.
After Practice Situation	The riparian zone, the transitional zone between the terrestrial and aquatic habitats, is established to an adapted, diverse vegetative plant community and is under close management to insure long term survival and ecological succession. The quality and quantity of the riparian zone components are managed to support the species that depend on it for habitat as well as the functions it performs for stabilizing the streambank and/or shoreline, dissipating stream energy and trapping sediment, and improving and/or maintaining water quality. These functions include: stream temperature moderation through shading, recruitment of non-woody organic matter, habitat for terrestrial insects and other riparian dependent species, streambank integrity, and filtration of contaminants from surface run-off into the stream.
Scenario Feature Measure	Acres of Riparian Herbaceous Cover
Scenario Unit	Acre
Scenario Typical Size	0.5

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$28,652.72	\$57,305.44
Equipment/Installation	\$122.83	\$245.66
Labor	\$1,076.20	\$2,152.40
Mobilization	\$374.46	\$748.92
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$30,226.21	\$60,452.42

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1879	Sawbeak Sedge (Carex stipata)	Native Sedge and shipping, plug or rhizome	Each	\$1.11	2000	\$2,220.00
Materials	1883	Scouringrush Horsetail (Equisetum hyemale)	Native Horsetail and shipping, plug or rhizome	Each	\$10.11	2000	\$20,220.00
Materials	1737	Native Aquatic Plants, emergent - Prairie Cordgrass	Prairie Cordgrass plugs. Initial vegetation for vertical cell constructed wetland. Materials and shipping.	Each	\$2.02	2000	\$4,040.00
Materials	1874	Hardstem Bulrush (Scirpus acutus)	Native Rush and shipping, plug or rhizome	Each	\$0.86	2000	\$1,720.00
Materials	1886	Foxtail Barley (Hordeum jubatum)	Native Grasses and shipping.	Pound	\$225.45	2	\$450.90
Materials	1888	Broadleaf Uniola (Chasmanthium latifolium)	Native Grasses and shipping	Pound	\$0.91	2	\$1.82
Equipment/Installation	962	Tractor, agricultural, 120 HP	Agricultural tractor with horsepower range of 90 to 140. Equipment and power unit costs. Labor not included.	Hour	\$47.06	2	\$94.12
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes all costs for equipment, power unit, and labor.	Acre	\$19.08	1	\$19.08
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Equipment and power unit costs. Labor is included.	Acre	\$9.63	1	\$9.63
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	2	\$47.80
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
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

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Practice and Scenario Description:

Information Type	Data
Region	New England
State	Connecticut
Discipline Group	Water Management Engineering
Practice Code/Name	390 - Riparian Herbaceous Cover
Scenario ID	3
Scenario Name	Warm Season Grass w/ Forbs
Scenario Description	Warm Season Grasses with Forbs. This scenario addresses inadequate herbaceous plant community function or diversity within the specific transitional zone between terrestrial and aquatic habitats in rangeland, pasture, cropland, and forest where natural seeding methods and/or management is unlikely to improve the plant community within a reasonable time period. This scenario applies to work not covered under NRCS Conservation Practice Range Planting (528), Forage and Biomass Planting (512), Critical Area Planting (342), Filter Strip (393), Restoration and Management of Rare and Declining Habitats (643), Streambank and Shoreline Protection (580), Vegetated Treatment Area (635), Wetland Enhancement (659), or Wetland Restoration (657). This practice can be used nation wide. The typical setting for this scenario is usually a narrow strip between the aquatic and terrestrial habitats subject to intermittent flooding and saturated soils where the existing plant community has been disturbed, destroyed, or the species diversity is unable to provide proper function and/or adequate habitat. Where the establishment of a diverse riparian herbaceous plant community is desired, an adapted mix of primarily warm season grasses, legumes, and/or forbs tolerant to the site conditions will be planted by broadcast and/or no-till or range drill seeding methods as necessary to accomplish the intended purpose(s). Where chemical control of undesirable vegetation,
Before Practice Situation	The riparian zone, the specific area between terrestrial and aquatic habitats, is currently an undesirable or inadequate stand of perennial or annual vegetation and natural reseeding or vegetation management is unlikely to improve the plant community within a reasonable amount of time to adequately address streambank and/or shoreline stability, dissipate stream energy and trap sediment, improve and/or maintain water quality, and/or provide adequate habitat corridors, food and/or cover for fish, wildlife, pollinators, and/or livestock resource concern(s). Existing conditions often require suppression or eradication of current vegetation by conventional mechanical or chemical (Herbaceous Weed Control (315)) methods to ensure establishment success of the new planting.
After Practice Situation	The riparian zone, the transitional zone between the terrestrial and aquatic habitats, is established to an adapted, diverse vegetative plant community and is under close management to insure long term survival and ecological succession. The quality and quantity of the riparian zone components are managed to support the species that depend on it for habitat as well as the functions it performs for stabilizing the streambank and/or shoreline, dissipating stream energy and trapping sediment, and improving and/or maintaining water quality. These functions include: stream temperature moderation through shading, recruitment of non-woody organic matter, habitat for terrestrial insects and other riparian dependent species, streambank integrity, and filtration of contaminants from surface run-off into the stream.
Scenario Feature Measure	Acres of Riparian Herbaceous Cover
Scenario Unit	Acre
Scenario Typical Size	0.5

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$1,419.12	\$2,838.24
Equipment/Installation	\$122.83	\$245.66
Labor	\$47.80	\$95.60
Mobilization	\$374.46	\$748.92
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$1,964.21	\$3,928.42

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	76	Big Blue Stem (Andropogon gerardii)	Native Grasses and shipping.	Pound	\$11.81	6	\$70.86
Materials	77	Eastern Gamagrass (Tripsacum dactyloides)	Native Grasses and shipping.	Pound	\$17.45	6	\$104.70
Materials	82	Switchgrass, Blackwell (Panicum virgatum)	Native Grasses and shipping.	Pound	\$9.62	6	\$57.72
Materials	122	Illinois Bundleflower (Desmanthus illinoensis)	Native Legumes and shipping.	Pound	\$27.94	2	\$55.88
Materials	139	Western Sunflower (Helianthus occidentalis)	Native Forbs and shipping.	Pound	\$467.12	2	\$934.24
Materials	154	Blue Vervain (Verbena hastata)	Native Forbs and shipping.	Pound	\$78.24	2	\$156.48
Materials	84	Wild Rye, Virginia (Elymus virginicus)	Native Grasses and shipping.	Pound	\$9.81	4	\$39.24
Equipment/Installation	962	Tractor, agricultural, 120 HP	Agricultural tractor with horsepower range of 90 to 140. Equipment and power unit costs. Labor not included.	Hour	\$47.06	2	\$94.12
Equipment/Installation	960	Seeding Operation, No Till/Grass Drill	No Till drill or grass drill for seeding. Includes all costs for equipment, power unit, and labor.	Acre	\$19.08	1	\$19.08
Equipment/Installation	945	Tillage, Light	Includes light disking (tandem) or field cultivator. Equipment and power unit costs. Labor is included.	Acre	\$9.63	1	\$9.63
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	2	\$47.80
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