

Practice: 382 - Fence

Scenario: #1 - Barbed Wire, multi-strand

Scenario Description:

Multi-strand, Barbed Wire - Installation of fence will allow for implementation of a grazing management plan that allows for an adequate rest and recovery period, protection of sensitive area, improved water quality, reduction of noxious and invasive weeds. Constructed using fencing materials rather than a pre-manufactured gate. The fence is typically 4 strands over 3/4 of a mile (3,960 ft).

Before Situation:

On grazing lands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, cattle access to water bodies is uncontrolled. Reduced vegetative cover, as a result of over grazing/improper distribution, increases the opportunity for the encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of a grazing management plan that allows adequate rest and recovery periods, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Fence includes posts, wire, fasteners, gates, etc. Four strand wire is commonly installed. Fence will be installed with wildlife friendly considerations.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 3,960

Scenario Cost: \$6,970.56

Scenario Cost/Unit: \$1.76

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	15	\$130.65
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	15	\$580.50
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$24.41	21	\$512.61
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	\$18.71	90	\$1,683.90
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	21	\$469.98
Materials						
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	80	\$496.00
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	7	\$55.93
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	10	\$111.60
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	160	\$1,059.20
Fence, Wire Assembly, Barbed Wire	30	Brace pins, battens, clips, staples. Includes materials and shipping only.	Foot	\$0.16	5280	\$844.80
Wire, Barbed, Galvanized, 12.5 Gauge, 1,320' roll	1	Galvanized 12.5 gauge, 1,320' roll. Includes materials and shipping only.	Each	\$70.53	12	\$846.36
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	\$179.03	1	\$179.03

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Scenario: #2 - Barbed Wire, multi-strand with fence markers

Scenario Description:

Multi-strand, Barbed Wire - Installation of fence will allow for implementation of a grazing management plan that allows for an adequate rest and recovery period, protection of sensitive areas, improved water quality, and reduction of noxious and invasive weeds. Constructed using fencing materials rather than a pre-manufactured gate. The fence is typically 4 strands with wildlife markers, over 3/4 of a mile (3,960 ft).

Before Situation:

On grazing lands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, cattle access to water bodies is uncontrolled. Reduced vegetative cover, as a result of over grazing/improper distribution, increases the opportunity for the encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of a grazing management plan that allows for an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Fence includes posts, wire, fasteners, gates, etc. Four strand wire is commonly installed. Fence will be installed with wildlife friendly considerations. The after condition includes markers placed on the fence to protect and deter wildlife, primarily protected wildlife include Sage grouse, Lesser Prairie Chicken, etc.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 3,960

Scenario Cost: \$7,324.78

Scenario Cost/Unit: \$1.85

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	15	\$130.65
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$24.41	21	\$512.61
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	15	\$580.50
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	21	\$469.98
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	\$18.71	92	\$1,721.32
Materials						
Wire, Barbed, Galvanized, 12.5 Gauge, 1,320' roll	1	Galvanized 12.5 gauge, 1,320' roll. Includes materials and shipping only.	Each	\$70.53	12	\$846.36
Vinyl Undersill Strips	241	Marking material using the "undersill" strips of vinyl siding made by Georgia Pacific. Priced per foot of fence per each wire. Materials only.	Foot	\$0.04	7920	\$316.80
Fence, Wire Assembly, Barbed Wire	30	Brace pins, battens, clips, staples. Includes materials and shipping only.	Foot	\$0.16	5280	\$844.80
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	160	\$1,059.20
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	10	\$111.60
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	80	\$496.00
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	7	\$55.93
Mobilization						

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	\$179.03	1	\$179.03
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Practice: 382 - Fence

Scenario: #3 - Barbed Wire, multi-strand, difficult terrain

Scenario Description:

Multi-strand, Barbed Wire - Installation of fence will allow for implementation of a grazing management plan that provides adequate rest and recovery periods, protection of sensitive areas, improved water quality, and reduction of noxious and invasive weeds. Constructed using fencing materials rather than a pre-manufactured gate. Installed on rugged land or where site conditions require longer time to install the fence than the typical scenario.

Before Situation:

On grazing lands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing, and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, cattle access to water bodies is uncontrolled. Reduced vegetative cover, as a result of over grazing/improper distribution, increases the opportunity for the encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of a grazing management plan that provides an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Fence includes posts, wire, fasteners, gates, etc... Four strand wire is commonly installed. Fence will be installed with wildlife friendly considerations.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 3,960

Scenario Cost: \$8,236.72

Scenario Cost/Unit: \$2.08

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.41	25	\$610.25
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	20	\$774.00
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	20	\$174.20
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	25	\$559.50
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	\$18.71	135	\$2,525.85
Materials						
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	10	\$111.60
Fence, Wire Assembly, Barbed Wire	30	Brace pins, battens, clips, staples. Includes materials and shipping only.	Foot	\$0.16	5280	\$844.80
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	80	\$496.00
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	160	\$1,059.20
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	7	\$55.93
Wire, Barbed, Galvanized, 12.5 Gauge, 1,320' roll	1	Galvanized 12.5 gauge, 1,320' roll. Includes materials and shipping only.	Each	\$70.53	12	\$846.36
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	\$179.03	1	\$179.03

Practice: 382 - Fence

Scenario: #4 - Barbed Wire, multi-strand with fence markers, difficult terrain

Scenario Description:

Multi-strand, Barbed Wire - Installation of fence will allow for implementation of a grazing management plan that provides adequate rest and recovery periods, protection of sensitive areas, improved water quality, and reduction of noxious and invasive weeds. Constructed using fencing materials rather than a pre-manufactured gate. Installed on rugged land or where site conditions require longer time to install the fence than the typical scenario. Some of the sites that may be considered as difficult terrain are steep slopes, badlands, or rocky soils.

Before Situation:

On grazing lands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, cattle access to water bodies is uncontrolled. Reduced vegetative cover, as a result of over grazing/improper distribution, increases the opportunity for the encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of a grazing management plan that provides for an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Fence includes posts, wire, fasteners, gates, etc... Four strand wire is commonly installed. Fence will be installed with wildlife friendly considerations. The after condition includes markers placed on the fence to protect and deter wildlife, primarily protected wildlife include Sage grouse, Lesser Prairie Chicken, etc.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 3,960

Scenario Cost: \$8,590.94

Scenario Cost/Unit: \$2.17

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.41	25	\$610.25
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	20	\$774.00
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	20	\$174.20
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	25	\$559.50
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	\$18.71	137	\$2,563.27
Materials						
Vinyl Undersill Strips	241	Marking material using the "undersill" strips of vinyl siding made by Georgia Pacific. Priced per foot of fence per each wire. Materials only.	Foot	\$0.04	7920	\$316.80
Fence, Wire Assembly, Barbed Wire	30	Brace pins, battens, clips, staples. Includes materials and shipping only.	Foot	\$0.16	5280	\$844.80
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	160	\$1,059.20
Wire, Barbed, Galvanized, 12.5 Gauge, 1,320' roll	1	Galvanized 12.5 gauge, 1,320' roll. Includes materials and shipping only.	Each	\$70.53	12	\$846.36
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	10	\$111.60
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	80	\$496.00
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	7	\$55.93

Mobilization

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	\$179.03	1	\$179.03
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Practice: 382 - Fence

Scenario: #5 - Woven Wire

Scenario Description:

Woven - Installation of fence will allow for implementation of a grazing management plan that promotes adequate rest and recovery periods, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Woven wire is typically used in applications with sheep, goats, hogs, wildlife exclusion, shelterbelt/tree protection, etc. Constructed using fencing materials rather than a pre-manufactured gate. Includes 32" woven wire with 2 strands of barbed wire.

Before Situation:

On grazing lands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing, and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, livestock access to water bodies is uncontrolled. Reduced vegetation, as a result of over grazing/improper distribution, increases the opportunity for the encroachment of noxious and invasive weeds. cover increases opportunity for encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of a rotational grazing plan that promotes adequate rest and recovery periods, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Woven wire fence includes posts, wire, fasteners, gates, etc. Woven wire is typically used in applications with sheep, goats, hogs, wildlife exclusion, shelterbelt/tree protection, etc. Fence will be installed with wildlife friendly considerations.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 3,960

Scenario Cost: \$6,393.71

Scenario Cost/Unit: \$1.61

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.41	6	\$146.46
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	5	\$193.50
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	5	\$43.55
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	\$18.71	30	\$561.30
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	6	\$134.28
Materials						
Wire, Barbed, Galvanized, 12.5 Gauge, 1,320' roll	1	Galvanized 12.5 gauge, 1,320' roll. Includes materials and shipping only.	Each	\$70.53	6	\$423.18
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	160	\$1,059.20
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	10	\$111.60
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	7	\$55.93
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	80	\$496.00
Fence, Wire Assembly, Barbed Wire	30	Brace pins, battens, clips, staples. Includes materials and shipping only.	Foot	\$0.16	2640	\$422.40
Wire, Woven, Galvanized, 12.5 Gauge, 32"	3	Galvanized 12.5 gauge, 32" - 330' roll. Includes materials and shipping only.	Each	\$174.34	12	\$2,092.08
Fence, Wire Assembly, Woven Wire	35	Brace pins, twist sticks, staples. Includes materials and shipping only.	Foot	\$0.12	3960	\$475.20

Mobilization

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	\$179.03	1	\$179.03
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Practice: 382 - Fence

Scenario: #6 - Woven Wire, with fence markers

Scenario Description:

Woven - Installation of fence will allow for implementation of a grazing management plan that promotes an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Woven wire is typically used in applications with sheep, goats, hogs, wildlife exclusion, shelterbelt/tree protection, etc. Constructed using fencing materials rather than a pre-manufactured gate. Includes 32" woven wire with 2 strands of barbed wire.

Before Situation:

On grazing lands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing, and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, livestock access to water bodies is uncontrolled. Reduced vegetative cover, as a result of over grazing/improper distribution, increases opportunity for encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of a rotational grazing plan that promotes an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Woven wire fence includes posts, wire, fasteners, gates, etc. Woven wire is typically used in applications with sheep, goats, hogs, wildlife exclusion, shelterbelt/tree protection, etc. Fence will be installed with wildlife friendly considerations. The after condition includes markers placed on the fence to protect and deter wildlife, primarily protected wildlife include Sage grouse, Lesser Prairie Chicken, etc.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 3,960

Scenario Cost: \$6,747.93

Scenario Cost/Unit: \$1.70

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	5	\$43.55
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	5	\$193.50
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$24.41	6	\$146.46
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	\$18.71	32	\$598.72
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	6	\$134.28
Materials						
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	160	\$1,059.20
Fence, Wire Assembly, Barbed Wire	30	Brace pins, battens, clips, staples. Includes materials and shipping only.	Foot	\$0.16	2640	\$422.40
Vinyl Undersill Strips	241	Marking material using the "undersill" strips of vinyl siding made by Georgia Pacific. Priced per foot of fence per each wire. Materials only.	Foot	\$0.04	7920	\$316.80
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	10	\$111.60
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	7	\$55.93
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	80	\$496.00
Fence, Wire Assembly, Woven Wire	35	Brace pins, twist sticks, staples. Includes materials and shipping only.	Foot	\$0.12	3960	\$475.20
Wire, Woven, Galvanized, 12.5 Gauge, 32"	3	Galvanized 12.5 gauge, 32" - 330' roll. Includes materials and shipping only.	Each	\$174.34	12	\$2,092.08

Materials

Wire, Barbed, Galvanized, 12.5 Gauge, 1,320' roll	1	Galvanized 12.5 gauge, 1,320' roll. Includes materials and shipping only.	Each	\$70.53	6	\$423.18
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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	\$179.03	1	\$179.03
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Practice: 382 - Fence

Scenario: #7 - Electric, high tensile with energizer

Scenario Description:

Electric - Installation of fence will allow for implementation of a grazing management plan that allows for an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Includes 3 strands of high tensile wire with energizer.

Before Situation:

On grazinglands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing, and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, cattle access to water bodies is uncontrolled. Reduced vegetative cover, as a result of over grazing/improper distribution, increases opportunity for encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of grazing management that allows for an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Fence includes posts, wire, fasteners, gates, fence charger, etc. Two to three strand wire is commonly installed. Fence will be installed with wildlife friendly considerations.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 2,640

Scenario Cost: \$2,861.01

Scenario Cost/Unit: \$1.08

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.41	6	\$146.46
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	10	\$387.00
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	4	\$34.84
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	\$18.71	40	\$748.40
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	6	\$134.28
Materials						
Electric, Energizer, 6 joule	29	Electric, Energizer, 6 joule for electric fence. Includes materials and shipping only.	Each	\$321.21	1	\$321.21
Wire, High Tensile, 12.5 Gauge, 4,000' roll	2	High Tensile 12.5 gauge, 4,000' roll. Includes materials and shipping only.	Each	\$113.03	2	\$226.06
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	4	\$31.96
Electric, Ground Rod Clamps	21	Electric, Ground Rod Clamps for electric fence. Includes materials and shipping only.	Each	\$1.79	2	\$3.58
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	35	\$231.70
Electric, Ground Rods	20	Electric, Ground Rod for electric fence. Includes materials and shipping only.	Each	\$10.41	1	\$10.41
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	8	\$89.28
Fence, Wire Assembly, High Tensile, Electric, 3 Strand	34	Brace pins, springs, strainers, battens, clips, crimp sleeves, staples, insulators, wrap around sleeves. Includes materials and shipping only.	Foot	\$0.12	2640	\$316.80

Mobilization

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	\$179.03	1	\$179.03
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Practice: 382 - Fence

Scenario: #8 - Electric, high tensile with energizer and fence markers

Scenario Description:

Electric - Installation of fence will allow for implementation of grazing management that allows for an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Includes 3 strands of high-tensile wire with energizer.

Before Situation:

On grazing lands, health and vigor are negatively impacted by poor grazing distribution, timing of grazing, and inadequate rest and recovery periods. Water quality is impacted by increased erosion and runoff, cattle access to water bodies is uncontrolled. Reduced vegetative cover, as a result of over grazing/improper distribution, increases opportunity for encroachment of noxious and invasive weeds.

After Situation:

Installation of interior fencing will allow for implementation of grazing management that allows for an adequate rest and recovery period, protection of sensitive areas, improved water quality, reduction of noxious and invasive weeds. Fence includes posts, wire, fasteners, gates, fence charger, etc. Two to three strand wire is commonly installed. Fence will be installed with wildlife friendly considerations. The after condition includes markers placed on the fence to protect and deter wildlife, protected wildlife species include Sage grouse, Lesser Prairie Chicken, etc.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 2,640

Scenario Cost: \$3,109.63

Scenario Cost/Unit: \$1.18

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	4	\$34.84
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	10	\$387.00
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$24.41	6	\$146.46
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	6	\$134.28
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	\$18.71	42	\$785.82
Materials						
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	35	\$231.70
Vinyl Undersill Strips	241	Marking material using the "undersill" strips of vinyl siding made by Georgia Pacific. Priced per foot of fence per each wire. Materials only.	Foot	\$0.04	5280	\$211.20
Fence, Wire Assembly, High Tensile, Electric, 3 Strand	34	Brace pins, springs, strainers, battens, clips, crimp sleeves, staples, insulators, wrap around sleeves. Includes materials and shipping only.	Foot	\$0.12	2640	\$316.80
Electric, Energizer, 6 joule	29	Electric, Energizer, 6 joule for electric fence. Includes materials and shipping only.	Each	\$321.21	1	\$321.21
Electric, Ground Rods	20	Electric, Ground Rod for electric fence. Includes materials and shipping only.	Each	\$10.41	1	\$10.41
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	8	\$89.28
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	4	\$31.96
Wire, High Tensile, 12.5 Gauge, 4,000' roll	2	High Tensile 12.5 gauge, 4,000' roll. Includes materials and shipping only.	Each	\$113.03	2	\$226.06

Materials

Electric, Ground Rod Clamps	21	Electric, Ground Rod Clamps for electric fence. Includes materials and shipping only.	Each	\$1.79	2	\$3.58
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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	\$179.03	1	\$179.03
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Practice: 382 - Fence

Scenario: #9 - Protective Fence

Scenario Description:

A barrier (fence) implemented on an NRCS constructed waste storage system site per an approved engineering design. Permanently installed fence built to (1) keep humans away from waste ponds & lagoons, (2) to protect sensitive areas (riparian areas, wetlands, springs, etc.) from heavy livestock pressure, (3) to protect newly installed conservation practices where vulnerable to livestock damage. Heavy grade fence materials and close post spacing required.

Before Situation:

Where a NRCS designed and constructed waste storage pond is planned whereby significant risk to human safety is determined to be evident. Livestock has access to sensitive areas, or area with newly installed conservation practices that may cause detrimental effects to animal/human health and wildlife habitat. Resource concerns affected are plant health and vigor, wildlife habitat, compaction of soils, runoff of sediment or water quality degradation due to increased turbidity.

After Situation:

Humans and livestock are excluded from the waste storage pond for safety purposes by installing a fence around a waste holding pond. Improved livestock control and access to water, or other sensitive areas, will promote safety for livestock/humans, improve health and vigor of sensitive species, limit soil erosion, and improve soil condition.

Scenario Feature Measure: Length of Fence

Scenario Unit: Feet

Scenario Typical Size: 1,320

Scenario Cost: \$2,564.66

Scenario Cost/Unit: \$1.94

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$24.41	7	\$170.87
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	6	\$52.26
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	5	\$193.50
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	7	\$156.66
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	\$18.71	30	\$561.30
Materials						
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	55	\$364.10
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	30	\$186.00
Fence, Wire Assembly, Barbed Wire	30	Brace pins, battens, clips, staples. Includes materials and shipping only.	Foot	\$0.16	1760	\$281.60
Wire, Barbed, Galvanized, 12.5 Gauge, 1,320' roll	1	Galvanized 12.5 gauge, 1,320' roll. Includes materials and shipping only.	Each	\$70.53	4	\$282.12
Post, Wood, CCA treated, 5" x 8'	11	Wood Post, End 5" X 8', CCA Treated. Includes materials and shipping only.	Each	\$11.16	8	\$89.28
Post, Wood, CCA treated, 4" x 8'	10	Wood Post, Line 4" X 8', CCA Treated. Includes materials and shipping only.	Each	\$7.99	6	\$47.94
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	\$179.03	1	\$179.03

Practice: 382 - Fence

Scenario: #10 - Confinement

Scenario Description:

Installation of a confinement fence is needed to address resource concerns associated with livestock feeding operations. The fence will provide protection of sensitive areas, improve water quality, and reduce of noxious and invasive weeds. Resource Concerns: Water Quality, Plant Condition.

Before Situation:

Livestock feeding operation requires relocation to address water quality concerns. The site has conditions with the potential to negatively impact water quality in the designated area. These potential adverse effects will be addressed by moving the livestock facility away from the area(s) of concern.

After Situation:

Installation of fence reduces water quality and plant condition resource concerns associated with livestock facilities. The fence would typically be 150' wide x 200' long (700 lf) with two gates, installed by a fencing contractor. 8 ft tall woven wire fence with 6" diameter posts spaced at 8 ft increments. Associated practices may include 614-Watering Facility, 516-Pipeline, 533-Pumping Plant, 342-Critical Area Planting.

Scenario Feature Measure: Length of Fence

Scenario Unit: Foot

Scenario Typical Size: 700

Scenario Cost: \$3,815.63

Scenario Cost/Unit: \$5.45

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Auger, Post driver attachment	934	Auger or post driver attachment to a tractor or skidsteer. Does not include power unit. Labor not included.	Hour	\$8.71	10	\$87.10
Tractor, agricultural, 60 HP	963	Agricultural tractor with horsepower range of 50 to 90. Equipment and power unit costs. Labor not included.	Hour	\$24.41	10	\$244.10
Truck, Pickup	939	Equipment and power unit costs. Labor not included.	Hour	\$38.70	6	\$232.20
Labor						
Equipment Operators, Light	232	Includes: Skid Steer Loaders, Hydraulic Excavators <50 HP, Trenchers <12", Ag Equipment <150 HP, Pickup Trucks, Forklifts, Mulchers	Hour	\$22.38	16	\$358.08
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	\$18.71	20	\$374.20
Materials						
Post, Wood, Untreated, 8-9" X 8'	1078	Wood Post, End 8-9" X 8', Untreated. Includes materials and shipping only.	Each	\$44.18	8	\$353.44
Post, Steel T, 1.33 lbs, 6'	15	Steel Post, Studded 6' - 1.33 lb. Includes materials and shipping only.	Each	\$6.62	88	\$582.56
Post, Wood, CCA treated, 3-4" x 7'	9	Wood Post, Line 3-4" X 7', CCA Treated. Includes materials and shipping only.	Each	\$6.20	8	\$49.60
Wire, Woven, Galvanized, 12.5 Gauge, 32"	3	Galvanized 12.5 gauge, 32" - 330' roll. Includes materials and shipping only.	Each	\$174.34	3	\$523.02
Gate, Game, 8' High X 16'	1086	16' Wide Game Gate (8' Tall). Includes materials and shipping only.	Each	\$416.15	2	\$832.30
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	\$179.03	1	\$179.03