Practice: 500 - Obstruction Removal

Scenario # 1 Removal and Disposal of Brush and Trees < 6 inch Diameter

Scenario Description: **Actual Scenario # 1** **New York**

Remove and disposal of brush and trees < 6 inches in diameter by demolition, excavation or other means required for removal. Dispose of all brush and trees so that it does not impede subsequent work or cause onsite or offsite damage. Dispose of all brush and trees by removal to an approved landfill, wood chipping and or land distribution, or recycling center, burial at an approved location or burning. If burning is used, implement appropriate smoke management to protect public health and safety. Remove and dispose of brush and trees in order to apply conservation practices or facilitate the planned land use. Brush and tree removal will address the resource concerns of the prevention or hindrance to the installation of conservation practices or present a hazard to their use and enjoyment.

Associated Practices: Animal Mortality Facility (316), Composting Facility (317), Contour Farming (330), Diversion (362), Early Successional Habitat Development and Management (647), Grass Waterway (412), Heavy Use Area Protection (561), Livestock Pipeline (516), Stripcropping (585), Subsurface Drainage (606), Terrace (600), Underground Outlet (620), Upland Wildlife Habitat Management (645), Waste Storage Facility (313).

Before Practice Situation:

On any land where existing obstructions interfere with planned land use development, public safety or infrastructure including habitat fragmentation for grassland dependent birds. The site may be abandoned mine lands, construction sites, recreation areas, farms, ranches, and areas affected by natural disasters. This is not intended for the removal of obstructions from aquatic environments.

After Practice Situation:

The typical area will be a 2.0 acre impaired area. The removal of brush and trees < 6 inch diameter will be performed with the use of equipment and hand labor. Dispose of all brush and trees from the obstruction removal so that it does not impede subsequent work or cause onsite or offsite damage. Revegetate or otherwise protect from erosion disturbed areas as soon as possible. Refer to NRCS Conservation Practice Standard 342, Critical Area Planting for seedbed preparation, seeding, fertilizing, and mulching requirements. The practice is to improve site conditions in order to apply conservation practices or facilitate better use of the landscape.

Scenario Feature Measure:

Land Area

Scenario Typical Size:

2	Acre	Tot Unit Cost	$1,294.99

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Dozer, 140 HP	8	Hour	$136.36	$1,090.88
Equip./Install.	Brush Chipper, 6" capacity	8	Hour	$24.24	$193.92
Equip./Install.	Truck, Pickup	8	Hour	$40.77	$326.16
Labor	Skilled Labor	8	Hour	$39.82	$318.56
Labor	General Labor	8	Hour	$23.16	$185.28
Labor	Equipment Operators, Light	8	Hour	$24.05	$192.40
Mobilization	Mobilization, medium equipment	1	Each	$282.78	$282.78
				Total Cost:	$2,589.98

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$971.24	EQIP-HU	$1,165.49
WHIP	$971.24	WHIP-HU	$1,165.49

500 1 Removal and Disposal of Brush and Trees < 6 inch Diameter

Practice: 500 - Obstruction Removal

Scenario # 2 **Removal and Disposal of Brush and Trees > 6 inch Diameter**

Scenario Description: **Actual Scenario # 2** **New York**

Remove and disposal of brush and trees > 6 inches in diameter by demolition, excavation or other means required for removal. Dispose of all brush and trees so that it does not impede subsequent work or cause onsite or offsite damage. Dispose of all brush and trees by removal to an approved landfill, wood chipping and or land distribution, or recycling center, burial at an approved location or burning. If burning is used, implement appropriate smoke management to protect public health and safety. Remove and dispose of brush and trees in order to apply conservation practices or facilitate the planned land use. Brush and tree removal will address the resource concerns of the prevention or hindrance to the installation of conservation practices or present a hazard to their use and enjoyment.

Associated Practices: Animal Mortality Facility (316), Composting Facility (317), Contour Farming (330), Diversion (362), Early Successional Habitat Development and Management (647), Grass Waterway (412), Heavy Use Area Protection (561), Livestock Pipeline (516), Stripcropping (585), Subsurface Drainage (606), Terrace (600), Underground Outlet (620), Upland Wildlife Habitat Management (645), Waste Storage Facility (313).

Before Practice Situation:

On any land where existing obstructions interfere with planned land use development, public safety or infrastructure including habitat fragmentation for grassland dependent birds. The site may be abandoned mine lands, construction sites, recreation areas, farms, ranches, and areas affected by natural disasters. This is not intended for the removal of obstructions from aquatic environments.

After Practice Situation:

The typical area will be a 2.0 acre impaired area. The removal of brush and trees > 6 inch diameter will be performed with the use of equipment and hand labor. Dispose of all brush and trees from the obstruction removal so that it does not impede subsequent work or cause onsite or offsite damage. Revegetate or otherwise protect from erosion disturbed areas as soon as possible. Refer to NRCS Conservation Practice Standard 342, Critical Area Planting for seedbed preparation, seeding, fertilizing, and mulching requirements. The practice is to improve site conditions in order to apply conservation practices or facilitate better use of the landscape.

Scenario Feature Measure:

Land Area

Scenario Typical Size:	2	Acre	Tot Unit Cost	$2,499.42

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Dozer, 200 HP	12	Hour	$204.49	$2,453.88
Equip./Install.	Truck, Pickup	12	Hour	$40.77	$489.24
Equip./Install.	Brush Chipper, 15" capacity	12	Hour	$71.78	$861.36
Labor	Skilled Labor	12	Hour	$39.82	$477.84
Labor	General Labor	12	Hour	$23.16	$277.92
Labor	Equipment Operators, Heavy	12	Hour	$36.55	$438.60
				Total Cost:	$4,998.84

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$1,874.57	EQIP-HU	$2,249.48
WHIP	$1,874.57	WHIP-HU	$2,249.48

500 2 Removal and Disposal of Brush and Trees > 6 inch Diameter

Practice: 500 - Obstruction Removal

Scenario # 3 Brush and Tree Removal with Hand Tools

Scenario Description: **Actual Scenario # 3** **New York**

Cut brush and trees using hand tools such as a chainsaw. Remove brush and trees using a pick-up truck, chipper or other means required for removal. Dispose of all brush and trees so that it does not impede subsequent work or cause onsite or offsite damage. Dispose of all brush and trees by removal to an approved landfill, wood chipping and or land distribution, or recycling center, burial at an approved location or burning. If burning is used, implement appropriate smoke management to protect public health and safety. Remove and dispose of brush and trees in order to apply conservation practices or facilitate the planned land use. Brush and tree removal will address the resource concerns of the prevention or hindrance to the installation of conservation practices or present a hazard to their use and enjoyment.

Associated Practices: Animal Mortality Facility (316), Composting Facility (317), Contour Farming (330), Diversion (362), Early Successional Habitat Development and Management (647), Grass Waterway (412), Heavy Use Area Protection (561), Livestock Pipeline (516), Stripcropping (585), Subsurface Drainage (606), Terrace (600), Underground Outlet (620), Upland Wildlife Habitat Management (645), Waste Storage Facility (313).

Before Practice Situation:

On any land where existing obstructions interfere with planned land use development, public safety or infrastructure including habitat fragmentation for grassland dependent birds. The site may be abandoned mine lands, construction sites, recreation areas, farms, ranches, and areas affected by natural disasters. This is not intended for the removal of obstructions from aquatic environments.

After Practice Situation:

The typical area will be a 1.0 acre impaired area. The cutting of brush and trees was performed using hand tools and manual labor. Removal of brush and trees occured using a pick-up truck, chipper or other method. Dispose of all brush and trees from the obstruction removal so that it does not impede subsequent work or cause onsite or offsite damage. Revegetate or otherwise protect from erosion disturbed areas as soon as possible. Refer to NRCS Conservation Practice Standard 342, Critical Area Planting for seedbed preparation, seeding, fertilizing, and mulching requirements. The practice is to improve site conditions in order to apply conservation practices or facilitate better use of the landscape.

Scenario Feature Measure:

Land Area

Scenario Typical Size:	1	Acre	Tot Unit Cost	$1,094.58

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Chainsaw	6	Hour	$6.90	$41.40
Equip./Install.	Truck, Pickup	6	Hour	$40.77	$244.62
Equip./Install.	Brush Chipper, 15" capacity	6	Hour	$71.78	$430.68
Labor	Skilled Labor	6	Hour	$39.82	$238.92
Labor	General Labor	6	Hour	$23.16	$138.96
				Total Cost:	$1,094.58

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$820.94	EQIP-HU	$985.12
WHIP	$820.94	WHIP-HU	$985.12

Practice: 500 - Obstruction Removal

Scenario # 4 **Rock blasting and disposal**

Scenario Description: **Actual Scenario # 5** **New York**

Remove and disposal of rock and or boulders by drilling and blasting for removal. Dispose of all rocks and or boulders so that it does not impede subsequent work or cause onsite or offsite damage. Dispose of all rock and or boulders by removal to an approved location, or reuse location. Remove and dispose all rock and or boulders in order to apply conservation practices or facilitate the planned land use. Rocks and or boulders will address the resource concerns of the prevention or hindrance to the installation of conservation practices or present a hazard to their use and integrity.

Associated practices: Waste Storage Facility(313), Grassed waterway (412), Terrace (600), Heavy Use Area Protection (561), Underground outlet (620), Pipeline (516)

Before Practice Situation:

On any land where existing obstructions interfere with planned land use development, public safety or infrastructure. The site may be abandoned mine lands, construction sites, recreation areas, farms, ranches, and areas affected by natural disasters. This is not intended for the removal of obstructions from aquatic environments.

After Practice Situation:

The typical area will be have rock extending to the surface or within the excavation limits of the practice to be installed. The removal of rock and or boulders will be performed by drilling and blasting required for removal with the use of heavy equipment and hand labor. Typically done on larger projects like waster storage facility where the location must be done in an area with rock formations. Rock is pre-blasted and removed during the excavatoni process. Material un suitable for fill is hauled away and buried or stockpiled for alternate uses. Dispose of all rocks and boulders from the obstruction removal so that it does not impede subsequent work or cause onsite or offsite damage. Revegetate or otherwise protect from erosion disturbed areas as soon as possible. Refer to NRCS Conservation Practice Standard 342, Critical Area Planting for seedbed preparation, seeding, fertilizing, and mulching requirements. The practice is to improve site conditions in order to apply conservation practices or facilitate better use of the landscape.

Scenario Feature Measure:

Volume

Scenario Typical Size:	500	Cubic Yard	Tot Unit Cost	$42.96

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Drilling and Blasting Rock, Bulk	500	Cubic Yard	$13.39	$6,695.00
Equip./Install.	Truck, dump, 18 CY	40	Hour	$132.98	$5,319.20
Equip./Install.	Track Loader, 95HP	48	Hour	$97.13	$4,662.24
Labor	Equipment Operators, Light	40	Hour	$24.05	$962.00
Labor	General Labor	40	Hour	$23.16	$926.40
Labor	Equipment Operators, Heavy	48	Hour	$36.55	$1,754.40
Labor	Skilled Labor	2	Hour	$39.82	$79.64
Mobilization	Mobilization, large equipment	2	Each	$539.90	$1,079.80
				Total Cost:	$21,478.68

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$32.22	EQIP-HU	$38.66
WHIP	$32.22	WHIP-HU	$38.66

500 **4** **Rock blasting and disposal**

Practice: 500 - Obstruction Removal

Scenario # 5 Rock, Mechanical Destruction

Scenario Description: **Actual Scenario # 6** **New York**

Remove and disposal of rock and or boulders by mechanical destruction. Work typically done on projects like waste storage facility or pipelines where rock formations were not anticipated or small in quantity. Requires either a man held jack hammer or track hoe with a rock pecker to break up rock. Rock loaded and or boulders removed with equipment to an approved location, or reuse location. Additional work may include burial of unsuitable materials. This process allows appliction of conservation practices or facilitate the planned land use. Removal address the resource concerns of the prevention or hindrance to the installation of conservation practices or present a hazard to their use and integrity.

Associated practices: Waste Storage Facility(313), Grassed waterway (412), Terrace (600), Heavy Use Area Protection (561), Underground outlet (620), Pipeline (516)

Before Practice Situation:

On any land where existing obstructions interfere with planned land use development, public safety or infrastructure. The site may be abandoned mine lands, construction sites, recreation areas, farms, ranches, and areas affected by natural disasters. This is not intended for the removal of obstructions from aquatic environments.

After Practice Situation:

The site had 50 CY rock extending above required bottom of excavation or within the excavation limits of the practice to be installed. The removal of rock and or boulders was performed by jack hammering with an equipment mouted rock pecker. Material then removed with heavy equipment and hauled away. Material un suitable for fill is hauled away and buried or stockpiled for alternate uses. Revegetate or otherwise protect from erosion disturbed areas as soon as possible. Refer to . The practice is to improve site conditions in order to apply conservation practices or facilitate better use of the landscape.

Scenario Feature Measure:

Volume of rock removed

Scenario Typical Size: 50 | Cubic Yard | Tot Unit Cost | $48.03

Cost Category	Component Name	Quantity	Unit	Unit Cost	Cost
Equip./Install.	Auger, Post driver attachment	6	Hour	$9.17	$55.02
Equip./Install.	Hydraulic Excavator, 1 CY	6	Hour	$125.10	$750.60
Equip./Install.	Track Loader, 95HP	2	Hour	$97.13	$194.26
Equip./Install.	Truck, dump, 12 CY	2	Hour	$106.21	$212.42
Labor	General Labor	8	Hour	$23.16	$185.28
Labor	Equipment Operators, Heavy	12	Hour	$36.55	$438.60
Mobilization	Mobilization, medium equipment	2	Each	$282.78	$565.56
				Total Cost:	$2,401.74

Payment types:

PayType	Unit Payment	PayType	Unit Payment
EQIP	$36.03	EQIP-HU	$43.23
WHIP	$36.03	WHIP-HU	$43.23