

Practice: 466 - Land Smoothing

Scenario: #1 - Minor Shaping

Scenario Description:

Removing irregularities on the land surface to improve surface drainage, provide for more uniform cultivation, and improve equipment operation and efficiency. This applies on areas where surface irregularities interfere with the application of needed soil and water conservation and management practices. Removing irregularities will address the resource concerns of localized topographic issues that cause drainage or erosion problems.

Before Situation:

Field damaged by flooding, past agricultural practices, or other topographic issues causing drainage or field workability issues.

After Situation:

Topographic issues are repaired by heavy equipment to improve drainage and/or workability. Less than 100 CY/AC is typically required to be moved. The typical scenario is an 80 acre cropland field requiring 75 CY/AC of earthen material to be moved. Refer to NRCS Conservation Practice Standard 342, Critical Area Planting for seedbed preparation, seeding, fertilizing, and mulching requirements. The practice will improve localized topographic issues causing drainage or erosion problems. It will also improve site conditions in order to apply conservation practices or facilitate better use of the landscape.

Scenario Feature Measure: Acres of land treated

Scenario Unit: Acre

Scenario Typical Size: 80

Scenario Cost: \$13,905.25

Scenario Cost/Unit: \$173.82

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
	1144				2	
Equipment/Installation						
Scraper, pull, 7 CY	1206	Pull type earthmoving scraper with 7 CY capacity. Does not include pulling equipment or labor. Add Tractor or Dozer, 160 HP typically required for single scraper.	Hour	\$13.19	96	\$1,266.24
Dozer, 140 HP	927	Track mounted Dozer with horsepower range of 125 to 160. Equipment and power unit costs. Labor not included.	Hour	\$105.78	96	\$10,154.88
Labor						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$23.61	96	\$2,266.56
Mobilization						
Mobilization, medium equipment	1139	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$217.57	1	\$217.57

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Scenario: #2 - Terrace Removal

Scenario Description:

Remove and dispose of an existing terrace system by placing earthfill, excavation, grading, leveling or other means required for removal. Dispose of terrace ridge earthfill material by placing it into the adjacent terrace channel, so that the disturbed area slope matches the adjacent field slope, and it does not impede subsequent work or cause onsite or offsite damage. Removing an existing terrace system will address the resource concerns of localized topographic issues causing drainage or erosion problems.

Before Situation:

On any land where an existing terrace system interfere with planned land use development or infrastructure. The site, commonly a crop field that is being developed into a pasture/range field, has localized topographic issues causing drainage or erosion problems.

After Situation:

The typical length will be a 12,460 linear feet of terraces. The removal of an existing terrace system will be performed by placing earthfill, excavation, grading, leveling or other means required for removal with the use of heavy equipment. Dispose of terrace ridge earthfill material by placing it into the adjacent terrace channel, so that the disturbed area slope matches the adjacent field slope, and it does not impede subsequent work or cause onsite or offsite damage. Revegetate or otherwise protect the disturbed areas from erosion as soon as possible. Refer to NRCS Conservation Practice Standard 342, Critical Area Planting for seedbed preparation, seeding, fertilizing, and mulching requirements. The practice will improve localized topographic issues causing drainage or erosion problems. It will also improve site conditions in order to apply conservation practices or facilitate better use of the landscape.

Scenario Feature Measure: Length of Removed Terraces

Scenario Unit: Linear Foot

Scenario Typical Size: 12,460

Scenario Cost: \$7,705.40

Scenario Cost/Unit: \$0.62

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
	1144				1	
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	\$158.64	40	\$6,345.60
Labor						
Equipment Operators, Heavy	233	Includes: Cranes, Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$23.61	40	\$944.40
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	\$415.40	1	\$415.40