

Practice: 466 - Land Smoothing

Scenario: #1 - Minor Shaping

Scenario Description:

Removing irregularities on the land surface of cropland by use of heavy equipment.

Before Situation:

Field damaged by flooding, past agricultural practices, or other topographic issues causing drainage or field workability issues. Typically less than 100 cy/acre material moved.

After Situation:

Land level, backhoe, bulldozer or other heavy equipment used to correct irregularities and address drainage or workability issues.

Scenario Feature Measure: Acres of land treated

Scenario Unit: Acre

Scenario Typical Size: 40

Scenario Cost: \$4,314.75

Scenario Cost/Unit: \$107.87

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
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	\$15.35	25	\$383.75
Dozer, 140 HP	927	Track mounted Dozer with horsepower range of 125 to 160. Equipment and power unit costs. Labor not included.	Hour	\$123.10	25	\$3,077.50
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	\$34.14	25	\$853.50

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Scenario: #2 - Cranberry Bog Leveling

Scenario Description:

Leveling of the base of cranberry bogs during bog renovation to reduce water needs during flooding and improve equipment operation and efficiency

Before Situation:

Uneven old bogs require excessive water for flooding.

After Situation:

Irregularities in the land surface are removed using a laser level and dozer. Multiple small bog cells are accessed for treatment.

Scenario Feature Measure: Acres of land treated

Scenario Unit: Acre

Scenario Typical Size: 5

Scenario Cost: \$2,873.48

Scenario Cost/Unit: \$574.70

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Dozer, 140 HP	927	Track mounted Dozer with horsepower range of 125 to 160. Equipment and power unit costs. Labor not included.	Hour	\$123.10	14	\$1,723.40
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	14	\$346.36
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	\$34.14	14	\$477.96
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
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