

**Practice: 464 - Irrigation Land Leveling**

**Scenario: #1 - Irrigation Land Leveling with stockpiling**

**Scenario Description:**

This scenario will level a typical 40 acres of irrigated crop land surface to enhance uniform flow of surface water to improve irrigation efficiency using dirt pans/carry-all/pan-scraper equipment and includes stripping and stockpiling. The typical volume of earth moved is 100 to 500 cubic yards per acre.

Resource Concern: Excess/Insufficient - Inefficient Use of Irrigation Water

Associated Conservation Practices: 433 - Irrigation System, Surface and Subsurface; 607 - Surface Drain, Field Ditch; 388 - Irrigation Field Ditch; 449 - Irrigation Water Management; or 587 - Structure for Water Control.

**Before Situation:**

Irregular field surface reduces uniformity of surface application and thus irrigation efficiency by localized ponding and/or excess runoff/runon.

**After Situation:**

Cropland will be reshaped to provide uniform distribution of irrigation water in order to promote irrigation efficiencies. Stockpiling assists in retaining field soil quality.

**Scenario Feature Measure:** Volume of Earth Moved

**Scenario Unit:** Cubic Yard

**Scenario Typical Size:** 14,000

**Scenario Cost:** \$18,558.10

**Scenario Cost/Unit:** \$1.33

**Cost Details (by category):**

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
<b>Equipment/Installation</b>						
Scraper, pull, 15 CY	1207	Pull type earthmoving scraper with 15 CY capacity. Does not include pulling equipment or labor. Add Tractor or Dozer, 260 HP typically required for single scraper.	Hour	\$21.60	170	\$3,672.00
Tractor, agricultural, 260 HP	1204	Agricultural tractor with horsepower range of 240 to 290. Equipment and power unit costs. Labor not included.	Hour	\$113.05	85	\$9,609.25
Stripping and stockpiling, topsoil	1199	Stripping and stockpiling of topsoil adjacent to stripping area. Includes equipment and labor.	Cubic Yard	\$0.84	2800	\$2,352.00
<b>Labor</b>						
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	\$23.09	85	\$1,962.65
<b>Mobilization</b>						
Mobilization, large equipment	1140	Equipment >150HP or typical weights greater than 30,000 pounds or loads requiring over width or over length permits.	Each	\$481.10	2	\$962.20