

Practice: 608 - Surface Drainage, Main or Lateral

Scenario: #1 - Tailwater Main or Lateral

Scenario Description:

A new lateral ditch is constructed to collect the excess irrigation water of a series of fields creating a collection system so that the water can be recovered and reused. Typical ditch size is trapezoidal ditch with 8 ft bottom x 5 ft depth x 1950 ft length with 2:1 side slopes. The total yardage of earthwork is 6,500 cy.

Resource concerns that will be addressed: Excess/Insufficient Water - inefficient use of irrigation water; Water Quality Degradation - excessive sediments in surface waters; Water Quality Degradation - Excess nutrients in surface and ground water; Degradation Plant Condition - undesirable plant productivity and health.

Associated practices: 533 - Pumping Plants; 410 - Grade Stabilization Structure; 587 - Structure for water control; 449 - Irrigation Water Management

Before Situation:

Excess irrigation water collects at lower ends of field and backs up into crops and causes plant stress or causes erosion and travels off farm in a drainage ditch causing water quality issues in lower watersheds.

After Situation:

Excess irrigation water is collected and directed into a recovery system where the water can be recycled and reused for irrigation. Sedimentation has a chance to settle out of the water allowing for less sediment to travel down stream.

Scenario Feature Measure: Volume of Earth Excavated

Scenario Unit: Cubic Yard

Scenario Typical Size: 6,500

Scenario Cost: \$13,031.04

Scenario Cost/Unit: \$2.00

Cost Details (by category):

Component Name	ID	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Equipment/Installation						
Excavation, Common Earth, side cast, small equipment	48	Bulk excavation and side casting of common earth with hydraulic excavator with less than 1 CY capacity. Includes equipment and labor.	Cubic yard	\$1.98	6500	\$12,870.00
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	\$161.04	1	\$161.04