

Practice: 516 - Livestock Pipeline

Scenario: #1 - Buried Pipeline, all diameters

Scenario Description:

Description: Buried installation of PVC or HDPE (Iron Pipe Size & Tubing) pipeline. Scenario is for 1000 feet of 1½-inch, Sch 40 PVC, ASTM D1785 (0.52#/ft) or (SIDR-PR) ASTM D2239 (PE 3408) HDPE pipe weighs 0.43 lb/ft. Appurtenances include: couplings, fittings, anchors, thrust blocks, gate valves (2), air release valves (2), drain valve (1), and pressure relief valve (1), and are included in the cost of pipe material (additional 10% of pipe material quantity). Revegetation is not included.

Resource Concerns: Inadequate Livestock Water, Inefficient Energy Use.

Associated Practices: Critical Area Planting (342), Pond (378), Pumping Plant (533), Watering Facility (614), and Water Harvesting Catchment (636).

Before Situation:

Water supplies need to be conveyed through pipelines for use by livestock or wildlife.

After Situation:

Pipeline(s) convey and/or distribute water to storage and/or watering facilities, for use by livestock or wildlife.

Scenario Feature Measure: Length of pipe

Scenario Unit: Linear Foot

Scenario Typical Size: 1,000

Scenario Cost: \$2,419.64

Scenario Cost/Unit: \$2.42

Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price (\$/unit) | Quantity | Cost |
|--------------------------------------|------|--|-------|-----------------|----------|------------|
| Equipment/Installation | | | | | | |
| Trenching, Earth, 12" x 48" | 53 | Trenching, earth, 12" wide x 48" depth, includes equipment and labor for trenching and backfilling | Foot | \$1.12 | 1000 | \$1,120.00 |
| 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 | \$19.09 | 12 | \$229.08 |
| Materials | | | | | | |
| Pipe, PVC, dia. < 18", weight priced | 1323 | Polyvinyl Chloride (PVC) pressure rated pipe priced by the weight of the pipe materials for pipes with diameters less than 18". Materials only. | Pound | \$1.42 | 572 | \$812.24 |
| Mobilization | | | | | | |
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | \$258.32 | 1 | \$258.32 |

Practice: 516 - Livestock Pipeline

Scenario: #2 - Buried Pipeline in Rocky Terrain

Scenario Description:

Description: Buried installation of PVC or HDPE (Iron Pipe Size & Tubing) pipeline with 10% of line in rocky terrain. 1000 feet of 1½-inch, Sch 40 PVC, ASTM D1785 (0.52#/ft) or (SIDR-PR) ASTM D2239 (PE 3408) HDPE pipe weighs 0.43 lb/ft. Appurtenances include: couplings, fittings, anchors, thrust blocks, gate valves (2), air release valves (2), drain valve (1), and pressure relief valve (1), and are included in the cost of pipe material (additional 10% of pipe material quantity). Revegetation is not included.

Resource Concerns: Inadequate Livestock Water, Inefficient Energy Use.

Associated Practices: Critical Area Planting (342), Pumping Plant (533), Watering Facility (614), Pond (378) and Water Harvesting Catchment (636).

Before Situation:

Water supplies need to be conveyed through pipelines for use by livestock or wildlife.

After Situation:

Pipeline(s) convey and/or distribute water to storage and/or watering facilities, for use by livestock or wildlife.

Scenario Feature Measure: Length of Pipe

Scenario Unit: Linear Foot

Scenario Typical Size: 1,000

Scenario Cost: \$4,817.64

Scenario Cost/Unit: \$4.82

Cost Details (by category):

| Component Name | ID | Component Description | Unit | Price (\$/unit) | Quantity | Cost |
|--------------------------------------|------|--|-------|-----------------|----------|------------|
| Equipment/Installation | | | | | | |
| Trenching, Rock | 1097 | Includes equipment and labor for cutting trench in rock 6" x 36" | Foot | \$25.10 | 100 | \$2,510.00 |
| Trenching, Earth, 12" x 48" | 53 | Trenching, earth, 12" wide x 48" depth, includes equipment and labor for trenching and backfilling | Foot | \$1.12 | 900 | \$1,008.00 |
| 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 | \$19.09 | 12 | \$229.08 |
| Materials | | | | | | |
| Pipe, PVC, dia. < 18", weight priced | 1323 | Polyvinyl Chloride (PVC) pressure rated pipe priced by the weight of the pipe materials for pipes with diameters less than 18". Materials only. | Pound | \$1.42 | 572 | \$812.24 |
| Mobilization | | | | | | |
| Mobilization, medium equipment | 1139 | Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds. | Each | \$258.32 | 1 | \$258.32 |