

Scenario Worksheet

Practice and Scenario Description:

Information Type	Data
Region	Appalachian
State	North Carolina
Discipline Group	Engineering General
Practice Code/Name	642 - Water Well
Scenario ID	1
Scenario Name	Well Consolidated
Scenario Description	Typical construction is for the installation of a well, in areas where sufficient water is known to occur 100 - 600 feet of the ground surface in stable (consolidated) geologic formation. The well shall be drilled, driven, bored, jetted or otherwise constructed to an aquifer for water supply. The purpose of the practice is to provide water for livestock or micro-irrigation. An average well depth is 400 feet. Well casings are 4-6" in diameter. Plastic casing is installed to a depth of 20 feet.
Before Practice Situation	Livestock have insufficient water or are fenced from their water source. There is insufficient water for use in micro-irrigation.
After Practice Situation	Sufficient water is available for livestock or micro-irrigation. Utilize Pumping Plant (533) and Pipeline (516) as associated practices. Use Critical Area Seeding (342) where necessary to prevent erosion following construction activities.
Scenario Feature Measure	yes
Scenario Unit	Foot
Scenario Typical Size	400

Cost Summary:

Cost Category	Scenario Cost	Scenario Cost/Unit
Materials	\$697.47	\$1.74
Equipment/Installation	\$3,169.02	\$7.92
Labor	\$0.00	\$0.00
Mobilization	\$136.14	\$0.34
Acquisition of Technical Knowledge	\$0.00	\$0.00
Foregone Income	\$0.00	\$0.00
Total	\$4,002.63	\$10.01

Cost Details:

Cost Category	Component ID	Component Name	Component Description	Unit	Price (\$/unit)	Quantity	Cost
Materials	1804	Well Casing, Plastic, 6"	PVC or ABS well casing, 6". Materials only.	Foot	\$18.14	20	\$362.80
Materials	1335	Chlorine	Liquid chlorine bleach. Materials only.	Gallon	\$2.32	1	\$2.32
Materials	1786	Well Cap, 6"	Well cap, 6". Materials only.	Each	\$32.35	1	\$32.35
Materials	1333	Grout, cement	Cement grout meeting ASTM specifications for well sealing. Includes both neat-cement grout and bentonite grout mixtures. Includes materials, equipment and labor to place.	Cubic Yard	\$65.30	2	\$130.60
Materials	309	Test, Standard Water Test, Well Water	Domestic Well Water Suitability	Each	\$52.20	1	\$52.20
Materials	1999	Well Screen, plastic, 6"	6" PVC well screen. Materials only.	Foot	\$11.72	10	\$117.20
Equipment/Installation	36	Concrete, CIP, formless, non reinforced	Non reinforced concrete cast-in-place without forms by chute placement. Typical strength is 3000 to 4000 psi. Includes materials, labor and equipment to transport, place and finish.	Cubic yard	\$101.67	0.25	\$25.42
Equipment/Installation	1595	Rotary Drill Rig with Operator	Rotary drill rig including equipment and power unit costs and labor.	Hour	\$157.18	20	\$3,143.60
Mobilization	1144	Mobilization, Heavy Equipment Operator	Mobilization of heavy equipment operators: Hydraulic Excavators >=50 HP, Dozers, Paving Machines, Rock Trenchers, Trenchers >=12", Dump Trucks, Ag Equipment >=150 HP, Scrapers, Water Wagons.	Hour	\$21.77	2	\$43.54
Mobilization	1139	Mobilization, medium equipment	Equipment with 70-150 HP or typical weights between 14,000 and 30,000 pounds.	Each	\$92.60	1	\$92.60