

ECONOMIC COST DATA

Pumping Plant (533)

OKLAHOMA

Cost Data

Typical Implementation Scenario

533.1 Solar Powered

A solar powered pumping plant to provide water for agriculture use such as livestock or wildlife water. A typical pumping plant consists of installing a solar pump and solar panel that will deliver 1200 gallons of water per day.

Data Source: 2006-2007 actual cost data

Geographic Area: Statewide

Unit for Cost Estimate: gallon/day

Practice Life (Years): 15

Discount Rate (%/Year): 5%

	Cost/Unit
Materials	\$1.69
Total cost includes Materials, Equipment/Installation, Labor and Mobilization	
Equipment/Installation	\$0.00
Included in Materials	
Labor	\$0.00
Included in Materials	
Mobilization	\$0.00
Included in Materials	
Operation & Maintenance (Annual)	\$0.03
2% of Installation Cost	
Acquisition of Technical Knowledge	\$0.00
N/A	
Forgone Income (Annual)	\$0.00
None	
Risk	\$0.00
None	
Administration & Permit Costs	\$0.00
None	
Total Cost Estimate:	\$1.72

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Typical Implementation Scenario

533.2 Electric Powered

A permanent pumping plant consisting of pumping irrigation water associated with tailwater recovery systems, subsurface system and low pressure sprinkler systems. The typical pumping plant provides the needed water for 130 AC irrigation system at a total cost of \$12,800.00

This same scenario can also be used for establishing costs for waste pumps (both portable and permanent) used in disposal of waste water as part of a waste management plan. Portable pumps may be needed where portable pumps cannot as effectively serve the purpose (i.e. a system with two lagoons).

Cost is based on 2006 Lugert-Altus LEA cost list which is for a turnkey installation of pump with electric motor.
No actual cost has been collected for installation in FY 2007.

Geographic Area: Statewide

Unit for Cost Estimate: Each

Practice Life (Years): 15

Discount Rate (%/Year): 5%

	<u>Cost/Unit</u>
Materials	\$12,800.00
Total cost includes Materials, Equipment/Installation, Labor and Mobilization	
Equipment/Installation	\$0.00
Included in Materials	
Labor	\$0.00
Included in Materials	
Mobilization	\$0.00
Included in Materials	
Operation & Maintenance (Annual)	\$256.00
2% of Installation Cost	
Acquisition of Technical Knowledge	\$0.00
N/A	
Forgone Income (Annual)	\$0.00
None	
Risk	\$0.00
None	
Administration & Permit Costs	\$0.00
None	
Total Cost Estimate:	\$13,056.00

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Cost Data

Typical Implementation Scenario		
533.3 Internal Combustion Engine		
<p>Consisting of pumping irrigation water associated with tailwater recovery systems, subsurface system and low pressure sprinkler systems. The typical pumping plant provides the needed water for 130 AC irrigation system at a total cost of \$20,000.00</p> <p>This same scenario can also be used for establishing costs for waste pumps (both portable and permanent) used in disposal of waste water as part of a waste management plan. Portable pumps may be needed where portable pumps cannot as effectively serve the purpose (i.e. a system with two lagoons).</p>		
<p>Data Source: 2006-2007 actual cost data</p>		
Geographic Area:	Statewide	
Unit for Cost Estimate:	Each	
Practice Life (Years):	15	
Discount Rate (%/Year):	5%	
		Cost/Unit
Materials		\$20,000.00
<p>Total cost includes Materials, Equipment/Installation, Labor and Mobilization</p>		
Equipment/Installation		\$0.00
<p>Included in Materials</p>		
Labor		\$0.00
<p>Included in Materials</p>		
Mobilization		\$0.00
<p>Included in Materials</p>		
Operation & Maintenance (Annual)		\$400.00
<p>2% of Installation Cost</p>		
Acquisition of Technical Knowledge		\$0.00
<p>N/A</p>		
Forgone Income (Annual)		\$0.00
<p>None</p>		
Risk		\$0.00
<p>None</p>		
Administration & Permit Costs		\$0.00
<p>None</p>		
Total Cost Estimate:		\$20,400.00

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Cost Data

Typical Implementation Scenario

533.4 Pumping Plant-Rehabilitation of an existing irrigation pumping facility

Rehabilitation of an existing irrigation pumping facility in conjunction with the conversion of an existing irrigation system. A typical job is the rehabilitation of an 8 inch pump set at 200 ft below surface with a total cost of \$9596.00

Data Source: 2006-2007 actual cost data

Geographic Area: Statewide

Unit for Cost Estimate: LF

Practice Life (Years): 15

Discount Rate (%/Year): 5%

Cost/Unit

Materials

\$47.98

Total cost includes Materials, Equipment/Installation, Labor and Mobilization
\$47.98/LF (Depth to pump)

Equipment/Installation

\$0.00

Included in Materials

Labor

\$0.00

Included in Materials

Mobilization

\$0.00

Included in Materials

Operation & Maintenance (Annual)

\$0.96

2% of Installation Cost

Acquisition of Technical Knowledge

\$0.00

N/A

Forgone Income (Annual)

\$0.00

None

Risk

\$0.00

None

Administration & Permit Costs

\$0.00

None

Total Cost Estimate:

\$48.94

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Typical Implementation Scenario

533.5 Pumping Plant Waste Water (Pump Only)

For pumping waste water. A typical pumping plant is a pump that will deliver 200 gpm at 100 psi discharge pressure at a cost of \$1,000.00

Data Source: Collaboration of field engineers estimates.

Geographic Area: Statewide

Unit for Cost Estimate: LF

Practice Life (Years): 15

Discount Rate (%/Year): 5%

Cost/Unit

Materials

\$1,000.00

Total cost includes Materials, Equipment/Installation, Labor and Mobilization

Equipment/Installation

\$0.00

Included in Materials

Labor

\$0.00

Included in Materials

Mobilization

\$0.00

Included in Materials

Operation & Maintenance (Annual)

\$20.00

2% of Materials and Installation Cost

Acquisition of Technical Knowledge

\$0.00

N/A

Forgone Income (Annual)

\$0.00

None

Risk

\$0.00

None

Administration & Permit Costs

\$0.00

None

Total Cost Estimate:

\$1,020.00