

CONFIDENTIAL/PROPRIETARY INFORMATION

Ralph Heringer
Rec Dist 2028 Bacon Island
P O Box 4005
Stockton, CA 95204

Wednesday, Jan 06, 2021

SUBJECT: PUMPING COST ANALYSIS
HP: 75.00 Plant: West Pump 2
PUMP TEST REFERENCE NUMBER: PT-24634
PUMP TEST RUN: Run 1

The following Pumping Cost Analysis is presented as an aid to your cost accounting. This analysis is an estimate prepared from operating criteria supplied from the pump test performed Jan 05 2021 and information provided by you during the pump test.

It is recommended and assumed that:

- **Overall plant efficiency can be improved to: 70.6%**
- **Water requirements will be the same as for the past year**
- **All operating conditions (annual hours of operation, discharge head, and water pumping level) will remain the same as they were at the time of the pump test**

	EXISTING PLANT EFFICIENCY	IMPROVED PLANT EFFICIENCY	SAVINGS
kWh/AF	44.8	44.8	0.00
Estimated Total kWh	72,802	72,802	*
Average Cost per kWh	\$0.18	\$0.18	
Average Cost per hour	\$13.44	\$12.48	\$0.96
Cost Per Acre Ft.	\$8.27	\$8.27	*
Estimated Acre Ft. Per Year	1,624.79	1,624.79	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	70.6%	70.6%	
Estimated Total Annual Cost	\$13,440.71	\$13,440.71	*

It is sincerely hoped that this information will prove helpful to you, and that your concerns over maintaining optimum pumping efficiency will be continued. If you have any questions, please contact Bill Power at (209) 527-2908.

Regards,

William Thomas Power, III

Enclosures

Agricultural and Domestic Pump Test Report

Rec Dist 2028 Bacon Island - West Pump 2 - Run 1

Latitude: 37.97924
Test Date: Jan 05 2021

Longitude: -121.57063
Tester: Bill Power

Elevation: -7
Nameplate HP: 75.00

Customer Information	Power Company Data	Equipment Data
Rec Dist 2028 Bacon Island	PG&E	Motor Make: General Electric
P O Box 4005	Meter #: 1010076943	Volts/Amps: 440V/91.00A
Stockton, CA 95204	Rate Schedule: AG5B	Serial #: N0J6799590
Contact: Ralph Heringer	Average Cost: \$0.18	Pump Make: No Name Plate
Cell: 916-777-6091		Pump Type: Mix Flow
		Drive Type: Electric Motor
		Gearhead Make:

Hydraulic Data	Flow Data
Pumping Water Level (PWL): 18.00 ft	Run Number: 1 of 1
Discharge Pressure: 5.60 lb/sqft	Measured Flow: 8824 gpm
Discharge Level: 12.94 ft	Customer Flow: 0 gpm
Total Lift: 30.94 ft	Flow Velocity: 6.63 ft/sec
Water Source: Canal	Acre Feet per 24 Hr: 39.04
	Cubic Feet Per Second (CFS): 19.65 ft

Power Data
Horsepower Input to Motor: 97.59 hp
Brake Horsepower: 88.8 hp
Kilowatt Input to Motor: 72.8 kW
Energy Cost: \$13.44/hr
Nameplate RPM: 1175 rpm
VFD: 0 hz
Percent of Rated Motor Load: 118%
Kilowatt Hours per Acre Foot: 44.81
Cost to Pump an Acre Foot: \$8.27
Overall Plant Efficiency: 70.64%
Water Horsepower: 68.93 hp
Run Hours: 1000

Remarks
All results are based on conditions during the time of the test. If these conditions vary from the normal operation of your pump, the results shown may not describe the pump's normal performance.
<u>This pump has an adequate test section.</u>
<u>This pump did not have a flow meter.</u>
Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.
<u>HPI measured with direct read KWI.</u>
Overall efficiency of this plant is considered to be very good assuming this run represents plant's normal operating condition.

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Pump Name: West Pump 2

HYDRAULIC TEST RESULTS

PT-24634

Test Date: Jan 05 2021

Tester: Bill Power

Meter #: 1010076943

Annual Run Hrs: 1000

Utility: PG&E

Rate Sched: AG5B

Avg Cost kWh: \$0.18

Meter kWh: 1.80

Meter Const: 80

Motor Make: General Electric

Volts: 440

Gearhead Make:

Pump Make: No Name Plate

Water Source: Canal

Motor Serial: N0J6799590

Amps: 91.00

Nameplate RPM: 1175

Pump Type: Mix Flow

Horsepower: 75.00

Drive Type: Electric Motor

Pipe Diameter: 23.31

Results

Test 1

Discharge Pressure, PSI	5.60
Standing Water Level, Feet	0.00
Recovered Water Level	0.00
Drawdown, Feet	18
Discharge Head, Feet	12.94
Pumping Water Level, Feet	18.00
Total Measured Head, Feet	12.936
Measured GPM	8824.00
Customer Meter, GPM	
Well Yield, GPM/ft Drawdown	490.22
Acre Feet Pumped in 24 Hours	39.04
kW Input to Motor	72.8
HP Input to Motor	97.59
Motor Load %	118.4
Measured Speed of Pump, RPM	
VFD, Hz:	
kWh per Acre Foot	44.81
Overall Plant Efficiency (%)	70.6
Energy Cost per Hour	13.44
Water Horsepower, hp	68.93
Flow Velocity, ft/sec	6.63