



Report ID: PT-28971

6301 Bearden Lane
Modesto, CA 95357
209.527.2908
fax
cal.powerhydrodynamics.com

CONFIDENTIAL/PROPRIETARY INFORMATION

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

Thursday, Oct 03, 2024

SUBJECT: PUMPING COST ANALYSIS
HP: 75.00 Plant: West Pump 1
PUMP TEST REFERENCE NUMBER: PT-28971
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 Sep 30 2024 and information provided by you during the pump test.

It is recommended and assumed that:

- Overall plant efficiency can be improved to: 66%
- 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	66.1	52.5	13.60
Estimated Total kWh	72,002	57,163	14,839
Average Cost per kWh	\$0.18	\$0.18	
Average Cost per hour	\$13.29	\$12.62	\$0.67
Cost Per Acre Ft.	\$12.21	\$9.69	\$2.52
Estimated Acre Ft. Per Year	1,088.96	1,088.96	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	52.4%	66%	
Estimated Total Annual Cost	\$13,293.01	\$10,553.52	\$2,739.49

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



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Agricultural and Domestic Pump Test Report Rec Dist 2028 Bacon Island - West Pump 1 - Run 1

Latitude: 37.97923
Test Date: Sep 30 2024

Longitude: -121.57063
Tester: Devin Power

Elevation: -7
Nameplate HP: 75.00

Customer Information	Power Company Data	Equipment Data
Rec Dist 2028 Bacon Island P O Box 4005 Stockton, CA 95204 Contact: Ralph Heringer Cell: 916-777-6091	PG&E Meter #: 1010076943 Rate Schedule: AG5B Average Cost: \$0.18	Motor Make: U.S. Volts/Amps: 440V/90.00A Serial #: 1107549 Pump Make: Cascade Pump Type: Propeller Drive Type: Electric Motor Gearhead Make:

Hydraulic Data	Flow Data
Pumping Water Level (PWL): 17.00 ft Discharge Pressure: 7.30 PSI Discharge Level: 16.86 ft Total Lift: 33.86 ft Water Source: Canal	Run Number: 1 of 1 Measured Flow: 5914 gpm Customer Flow: 0 gpm Flow Velocity: 4.44 ft/sec Acre Feet per 24 Hr: 26.17 Cubic Feet Per Second (CFS): 13.17 ft

Power Data	
Horsepower Input to Motor: 96.51 hp Brake Horsepower: 86.86 hp Kilowatt Input to Motor: 72 kW Energy Cost: \$13.29/hr Nameplate RPM: 1200 rpm VFD: 0 hz	Percent of Rated Motor Load: 116% Kilowatt Hours per Acre Foot: 66.12 Cost to Pump an Acre Foot: \$12.21 Overall Plant Efficiency: 52.4% Water Horsepower: 50.57 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.
This pump has an adequate test section.
This pump did not have a flow meter.
Based on information obtained at the time the test was performed, this test represents the pumps standard operating conditions.
HPI measured with direct read KWI.
Overall efficiency of this plant is considered to be low assuming this run represents plant's normal operating condition.



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Pump Name: West Pump 1

HYDRAULIC TEST RESULTS

PT-28971

Test Date: Sep 30 2024

Tester: Devin 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: U.S.
Volts: 440
Gearhead Make:
Pump Make: Cascade
Water Source: Canal

Motor Serial: 1107549
Amps: 90.00
Nameplate RPM: 1200
Pump Type: Propeller

Horsepower: 75.00
Drive Type: Electric Motor
Pipe Diameter: 23.31

Results

Test 1

Discharge Pressure, PSI	7.30
Standing Water Level, Feet	0
Recovered Water Level	0.00
Drawdown, Feet	17
Discharge Head, Feet	16.86
Pumping Water Level, Feet	17.00
Total Measured Head, Feet	33.863
Measured GPM	5914.00
Customer Meter, GPM	
Well Yield, GPM/ft Drawdown	347.88
Acre Feet Pumped in 24 Hours	26.17
kW Input to Motor	72
HP Input to Motor	96.51
Motor Load %	115.8
Measured Speed of Pump, RPM	
VFD, Hz:	
kWh per Acre Foot	66.12
Overall Plant Efficiency (%)	52.4
Energy Cost per Hour	13.29
Water Horsepower, hp	50.57
Flow Velocity, ft/sec	4.44