



Report ID: PT-28948

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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: 100.00 Plant: North Pump 1
PUMP TEST REFERENCE NUMBER: PT-28948
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 Oct 01 2024 and information provided by you during the pump test.

It is recommended and assumed that:

- Overall plant efficiency can be improved to: 73.4%
- 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	38.2	38.2	*
Estimated Total kWh	77,602	77,602	*
Average Cost per kWh	\$0.18	\$0.18	
Average Cost per hour	\$14.33	\$16.65	*
Cost Per Acre Ft.	\$7.05	\$7.05	*
Estimated Acre Ft. Per Year	2,032.65	2,032.65	
Run Hours	1,000.00	1,000.00	
Overall Plant Efficiency	73.4%	73.4%	
Estimated Total Annual Cost	\$14,326.91	\$14,326.91	*

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 - North Pump 1 - Run 1

 Latitude: 38.435
 Test Date: Oct 01 2024

 Longitude: -121.54816
 Tester: Devin Power

 Elevation: 0
 Nameplate HP: 100.00

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 #: 1010055722 Rate Schedule: AG5B Average Cost: \$0.18	Motor Make: Westinghouse Volts/Amps: 460V/127.00A Serial #: 7804 Pump Make: No Name Plate Pump Type: Mix Flow Drive Type: Electric Motor Gearhead Make:

Hydraulic Data	Flow Data
Pumping Water Level (PWL): 17.00 ft Discharge Pressure: 4.50 PSI Discharge Level: 10.4 ft Total Lift: 27.4 ft Water Source: Canal	Run Number: 1 of 1 Measured Flow: 11039 gpm Customer Flow: 0 gpm Flow Velocity: 5.31 ft/sec Acre Feet per 24 Hr: 48.85 Cubic Feet Per Second (CFS): 24.59 ft

Power Data	
Horsepower Input to Motor: 104.02 hp Brake Horsepower: 94.66 hp Kilowatt Input to Motor: 77.6 kW Energy Cost: \$14.33/hr Nameplate RPM: 885 rpm VFD: 0 hz	Percent of Rated Motor Load: 95% Kilowatt Hours per Acre Foot: 38.18 Cost to Pump an Acre Foot: \$7.05 Overall Plant Efficiency: 73.41% Water Horsepower: 76.37 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 very good assuming this run represents plant's normal operating condition.

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Pump Name: North Pump 1

HYDRAULIC TEST RESULTS

PT-28948

Test Date: Oct 01 2024

Tester: Devin Power
Meter #: 1010055722
Annual Run Hrs: 1000

Utility: PG&E
Rate Sched: AG5B
Avg Cost kWh: \$0.18

Meter kWh: 4.80
Meter Const: 80

Motor Make: Westinghouse
Volts: 460
Gearhead Make:
Pump Make: No Name Plate
Water Source: Canal

Motor Serial: 7804
Amps: 127.00
NameplateRPM: 885
Pump Type: Mix Flow

Horsepower: 100.00
Drive Type: Electric Motor
Pipe Diameter: 29.13

Results	Test 1
Discharge Pressure, PSI	4.50
Standing Water Level, Feet	0
Recovered Water Level	0.00
Drawdown, Feet	17
Discharge Head, Feet	10.4
Pumping Water Level, Feet	17.00
Total Measured Head, Feet	27.395
Measured GPM	11039.00
Customer Meter, GPM	
Well Yield, GPM/ft Drawdown	649.35
Acre Feet Pumped in 24 Hours	48.85
kW Input to Motor	77.6
HP Input to Motor	104.02
Motor Load %	94.7
Measured Speed of Pump, RPM	
VFD, Hz:	
kWh per Acre Foot	38.18
Overall Plant Efficiency (%)	73.4
Energy Cost per Hour	14.33
Water Horsepower, hp	76.37
Flow Velocity, ft/sec	5.31