

PASO ROBLES AQUATIC COMPLEX

38 meter x 25 yard pool operation & maintenance cost

Pool Data: Area: 9,305 Square Feet
Volume: 556,811 Gallons
Turnover: 1,546 gpm



		Winter			Spring			Summer			Fall			Total:		
ELECTRICITY:		Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec			
1-ph	Misc. Equipment	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$200.00	\$2,400.00		
3-ph	1-Circ Pump Hrs. 40 BHP	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	11,601.79	KWh		
	Cost per Hr.:	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180	\$0.180			
	Subtotal Cost:	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$2,088.32	\$25,059.87		
	Cost:	assume pumps run 18 hrs day (off from 11:00PM 4:00AM) - see pump efficiency calcultions below,												\$27,459.87		
NATURAL GAS:		3,500,000 BTU, T-delta = 30 degrees F, wind at 5 mph.				(100,000 BTU =1-Therm)										
	Pool Heater: BTU/month	28,000.00	28,000.00	18,000.00	9,000.00	9,000.00	0.00	0.00	0.00	9,000.00	18,000.00	28,000.00	28,000.00			
	Cost per Therm:	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58	\$0.58			
	Subtotal Cost:	\$16,240.00	\$16,240.00	\$10,440.00	\$5,220.00	\$5,220.00	\$0.00	\$0.00	\$0.00	\$5,220.00	\$10,440.00	\$16,240.00	\$16,240.00	\$101,500.00		
	Service Fee:	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$20.00	\$240.00		
	Cost:	assume pool covers are utilized - winter time run approx 8 hrs daily												\$101,740.00		
CHEMICALS:		Cost/Gallon														
Gal	Chlorine	\$2.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	3,000.00	\$72,000.00		
Gal	Acid 15%	\$2.50	750.00	750.00	750.00	750.00	750.00	750.00	750.00	750.00	750.00	750.00	750.00	\$22,500.00		
	Cost:	assume purchase in bulk by the gallon												\$94,500.00		
WATER:		Volume of pool 556,811,000 Gallons, Area of pool = 9,305 FT2													644,000.00	
	Backwash:	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00	3,200.00			
	Evap: 1/2" wk	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00	2,900.00			
	Total Gallons Per Month	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	6,100.00	73,200.00		
	Total Gallons Year													717,200.00		
	Cost per Gallon:													0.001893		
	Cost:	assume use of regenerative filter with 40 TDH												\$1,357.66		
TOTAL COST TO MAINTAIN AND OPERATE 38M POOL ANNUALLY:														\$225,057.53		
PUMP ANALYSIS:																
	PACO 6012-3 KPV, 1,780 rpm, 30hp.	GPM			Head	factor	HP	EFFICIENCY								
Regenerative Filter	HORSEPOWER	30	1,546	40	3,960.00	30.00	74.91%									
	Watt conversion	0.7460														
		Hours/month														
	KW	21,485	540.00	11,601,792.00	11,601.79	KWh	139,221.50	\$0.180	\$25,059.87	assume use of regenerative filter with 60 TDH						