

CITY OF WHITEFISH WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR PREDESIGN WASTEWATER TREATMENT PLANT EQUIPMENT POWER SUMMARY

4-Dec-17

Unit Process	Equipment Item	Quantity	Horsepower/item	Avg. Daily Horsepower Used	Kilowatts	% Run Time	kwhr/year	Power Cost/Year
RAW WASTEWATER PUMPING								
	Main Lift Pumps	3	75	150	111.9	100%	979849.8	\$ 97,984.98
PRETREATMENT								
	Perforated Screen	2	2	2	1.5	100%	13064.7	\$ 1,306.47
	Washer/Compactor	1	2	2	1.5	100%	13064.7	\$ 1,306.47
	Ventilation	1	1	1	0.7	50%	3266.2	\$ 326.62
GRIT REMOVAL								
	Grit Pumps	1	10	10	7.5	20%	13064.7	\$ 1,306.47
	Paddle Drive Motor	1	1.5	1.5	1.1	100%	9798.5	\$ 979.85
	HVAC	1	3	3	2.2	100%	19597.0	\$ 1,959.70
SBR*								
	Decant Arm	4	0.5	2	1.5	25%	3266.2	\$ 326.62
	Submersible Mixers	4	10	40	29.8	25%	65323.3	\$ 6,532.33
	Blowers	3	125	250	186.4	50%	816541.5	\$ 81,654.15
	WAS Pump	4	7.5	30	22.4	25%	48992.5	\$ 4,899.25
	Msc.	1	5	5	3.7	100%	32661.7	\$ 3,266.17
SOLIDS HANDLING								
	Storage Aeration	2	30	60	44.7	80%	313551.9	\$ 31,355.19
	Digested Sludge Pumps	2	10	10	7.5	20%	13064.7	\$ 1,306.47
DISINFECTION								
	UV System**	1	21	21.0	5	100%	43800.0	\$ 4,380.00
OTHER								
	Chem. Feed, HVAC, etc	1	20	20	14.9	100%	130646.6	\$ 13,064.66
TOTAL KWH/YEAR							2519553.8	
TOTAL ANNUAL POWER COST								\$ 251,955.38

*From Sanitaire Quote

** From Trojan Quote