

FAC 8412 WATER TREATMENT FACILITY

FY24 SUC: \$43.38 / KG
Source: Calculated using R.S. Means CostWorks 2023 Qtr 4 component prices

FAC 8412 WATER TREATMENT FACILITY

SUC \$43.38

Release 2023 Qtr 4
Zip Code Prefix 222
Type MR

UM KG
Design Life 50
Average Size 930.0

Adjusted Occurrences are the occurrences remaining after subtracting Repair/Replacement Overlaps. Overlap reduction removes a repair when it occurs the same year as a replacement.

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Repair feed water supply pump	15	2.00 Ea.	\$11,930.39	\$13,726.57	3.3333	3	3	\$41,179.70	\$41,179.70
Replace deaerator	20	1.00 Ea.	\$53,575.39	\$62,555.59	2.5000	2	2	\$125,111.18	\$125,111.18
Clean separator strainer	10	2.00 Ea.	\$1,556.48	\$1,948.44	5.0000	5	5	\$9,742.20	\$9,742.20
Replace separator	20	1.00 Ea.	\$88,907.86	\$101,580.10	2.5000	2	2	\$203,160.21	\$203,160.21
Repair flash tank 24 gallon	5	1.00 Ea.	\$461.58	\$577.81	10.0000	10	10	\$5,778.13	\$5,778.13
Repair condensate meter	15	2.00 Ea.	\$3,082.13	\$3,576.29	3.3333	3	3	\$10,728.86	\$10,728.86
Replace flanged steel pipe and fittings, 6"	75	240.00 L.F.	\$64,132.00	\$76,551.63	0.6667	0	0	\$0.00	\$0.00
Repair deaerator	10	1.00 Ea.	\$77.82	\$97.42	5.0000	5	5	\$487.11	\$487.11
Repack gate valve gland, 8" - 12" valves	5	4.00 Ea.	\$718.65	\$873.66	10.0000	10	10	\$8,736.56	\$8,736.56
Replace drain valve, 3/4" valves	20	14.00 Ea.	\$1,131.12	\$1,365.58	2.5000	2	2	\$2,731.17	\$2,731.17
Repair circulator pump, 1 H.P.	5	4.00 Ea.	\$414.80	\$489.34	10.0000	10	7	\$4,893.36	\$3,425.35
Replace circulator. pump, 1 H.P.	15	4.00 Ea.	\$22,531.31	\$25,853.13	3.3333	3	3	\$77,559.39	\$77,559.39
Refill expansion tank	5	2.00 Ea.	\$31.13	\$38.97	10.0000	10	10	\$389.69	\$389.69
Repair failed breaker, molded case, 600 V, 3 pole	10	4.00 Ea.	\$1,454.30	\$1,735.96	5.0000	5	5	\$8,679.78	\$8,679.78
Maintenance and inspection circuit breaker, molded case, 600 V, 3 pole	0.33	4.00 Ea.	\$136.51	\$171.03	151.5152	151	151	\$25,825.61	\$25,825.61
Maintenance and repair safety switch, 3 pole safety switch, heavy duty	8	4.00 Ea.	\$169.38	\$212.20	6.2500	6	6	\$1,273.23	\$1,273.23
Minor repairs to fire alarm control panel	5	2.00 Ea.	\$298.83	\$365.19	10.0000	10	10	\$3,651.91	\$3,651.91
Minor repairs to annunciation panel	5	2.00 Ea.	\$298.83	\$365.19	10.0000	10	10	\$3,651.91	\$3,651.91
Maintenance and repair voice/data outlet	10	4.00 Ea.	\$217.29	\$271.37	5.0000	5	5	\$1,356.83	\$1,356.83
Maintenance and inspection patch panel	0.5	1.00 Ea.	\$91.01	\$114.02	100.0000	100	100	\$11,402.04	\$11,402.04
Remove and replace 50 HP pump motor	25	6.00 Ea.	\$54,093.71	\$61,799.20	2.0000	2	2	\$123,598.40	\$123,598.40
Remove and replace steel guard rail	7	14.00 L.F.	\$979.82	\$1,137.72	7.1429	7	7	\$7,964.03	\$7,964.03
Raise MH or catch basin frame and cover	10	1.00 Ea.	\$409.62	\$499.08	5.0000	5	5	\$2,495.39	\$2,495.39
Prepare & paint 100K gal. ground level water stor tank, 30' dia x 19' tall	10	1.00 Ea.	\$33,314.80	\$39,778.27	5.0000	5	5	\$198,891.35	\$198,891.35
Remove and replace post indicator valve	35	1.00 Ea.	\$8,838.81	\$10,159.38	1.4286	1	1	\$10,159.38	\$10,159.38
Repack gate valve gland, 2" - 3" valves	10	4.00 Ea.	\$155.68	\$186.31	5.0000	5	5	\$931.54	\$931.54
Refinish concrete steps	3	64.00 S.F.	\$104.10	\$128.43	16.6667	16	16	\$2,054.94	\$2,054.94
Repair metal stairs	15	20.00 S.F.	\$1,443.35	\$1,668.92	3.3333	3	3	\$5,006.76	\$5,006.76
Replace metal hand rail	30	80.00 L.F.	\$4,843.22	\$5,629.94	1.6667	1	1	\$5,629.94	\$5,629.94
Metal floor grating repairs - (2% of grating)	10	64.00 S.F.	\$2,122.05	\$2,557.32	5.0000	5	5	\$12,786.62	\$12,786.62
Repair 8" concrete block wall, 1st floor	25	68.00 S.F.	\$1,747.54	\$2,139.87	2.0000	2	2	\$4,279.75	\$4,279.75

Description	Frequency	Qty Unit	Total In-House	Total Incl OP	Design Life/Frequency	Occurrences in Design Life	Adjusted Occurrences	Life Cost	Adjusted Cost
Waterproof concrete block wall, 1st floor	10	68.00 C.S.F.	\$17,576.40	\$20,849.58	5.0000	5	5	\$104,247.92	\$104,247.92
Repair concrete steps	15	16.00 S.F.	\$500.39	\$576.80	3.3333	3	3	\$1,730.40	\$1,730.40
Remove old meter, install new water meter 4"	25	4.00 Ea.	\$20,379.45	\$23,827.76	2.0000	2	2	\$47,655.52	\$47,655.52
Replace water softener	15	2.00 Ea.	\$2,386.53	\$2,851.28	3.3333	3	3	\$8,553.83	\$8,553.83
Unclog main drain pipe & fittings, cast iron	10	2.00 Ea.	\$97.68	\$122.28	5.0000	5	5	\$611.41	\$611.41
Unclog 4" - 12" diameter main drain per L.F.	10	4.00 L.F.	\$15.97	\$20.00	5.0000	5	5	\$99.98	\$99.98
Insp/chk pump/mtr oper, lub, chk align, rainwater sump pump	1	2.00 Ea.	\$25.12	\$31.44	50.0000	50	50	\$1,572.19	\$1,572.19
Replace rainwater sump pump / motor assembly	20	2.00 Ea.	\$1,279.74	\$1,514.61	2.5000	2	2	\$3,029.21	\$3,029.21
General maintenance pipe & fittings, industrial gas	2	12.00 M.L.F.	\$463.72	\$580.50	25.0000	25	25	\$14,512.52	\$14,512.52
Check and adjust 2 H.P. compressor	1	2.00 Ea.	\$178.06	\$222.90	50.0000	50	50	\$11,145.08	\$11,145.08
Replace 2 H.P. compressor	25	2.00 Ea.	\$9,345.69	\$10,844.44	2.0000	2	2	\$21,688.88	\$21,688.88
Replace oil filter housing	30	1.00 Ea.	\$70.87	\$85.18	1.6667	1	1	\$85.18	\$85.18
Replace gate valve, partial, 2" - 3" valves	20	4.00 Ea.	\$8,492.95	\$9,719.11	2.5000	2	2	\$19,438.22	\$19,438.22
			\$420,082.08	\$489,399.80				MR Subtotal	\$1,153,039.27
								MR Per Year	\$23,060.79
								PM Total	\$17,285.56
								Subtotal	\$40,346.35
								Total Per Unit	\$43.38

FAC 8412 WATER TREATMENT FACILITY

SUC \$43.38

Release 2023 Qtr 4

UM KG

Zip Code Prefix 222

Design Life 50

Type PM

Average Size 930.0

Description	Qty	Labor Hours	Bare Mat	Bare Labor	Bare Equip	Bare Total	Total In-House	Total Incl OP
Valve, OS&Y, above 4", annually	8.00	1.27	\$33.11	\$68.02	\$0.00	\$101.13	\$124.84	\$150.22
Water heater, steam 2500 gal., annually	1.00	0.94	\$149.78	\$50.14	\$0.00	\$199.92	\$229.94	\$267.44
Valve, sediment strainer, above 4", annualized	8.00	2.50	\$47.36	\$133.94	\$0.00	\$181.30	\$226.22	\$273.50
Duplex sump, annualized	4.00	6.62	\$107.27	\$355.78	\$0.00	\$463.05	\$580.51	\$703.33
Oxygen monitor, annualized	1.00	5.00	\$490.82	\$265.96	\$0.00	\$756.78	\$885.65	\$1,039.06
Deaerator tank, annualized	2.00	3.01	\$50.60	\$191.84	\$0.00	\$242.44	\$305.05	\$370.19
Centrifugal, over 1 HP, annualized	4.00	4.78	\$33.19	\$256.37	\$0.00	\$289.56	\$369.79	\$451.68
Heat exchanger, steam, annualized	1.00	0.92	\$23.78	\$49.27	\$0.00	\$73.05	\$90.21	\$108.56
Controls, central system, electro/pneumatic, annualized	2.00	3.84	\$338.01	\$242.42	\$0.00	\$580.42	\$686.95	\$810.38
Backflow prevention device, up to 4", annualized	2.00	0.67	\$28.03	\$41.86	\$0.00	\$69.89	\$85.25	\$102.01
Switchboard, annualized	2.00	1.40	\$7.96	\$97.94	\$0.00	\$105.90	\$136.08	\$166.66
Panelboard, 225 A and above, annualized	2.00	0.88	\$44.00	\$60.83	\$0.00	\$104.83	\$127.48	\$152.33
Motor control center, over 400 A, annually	1.00	0.39	\$22.00	\$26.81	\$0.00	\$48.81	\$59.05	\$70.39
Motor control center, over 400 A, annualized	4.00	1.56	\$88.00	\$107.22	\$0.00	\$195.23	\$236.20	\$281.56
Manual slide gate, annualized	1.00	1.52	\$10.33	\$79.01	\$0.00	\$89.34	\$114.08	\$139.33
Storage tank, ground level, annualized	3.00	2.17	\$59.29	\$112.81	\$0.00	\$172.10	\$211.87	\$254.61
Water flow meter, turbine, annualized	4.00	2.36	\$74.90	\$121.68	\$0.00	\$196.58	\$240.57	\$288.31
Pump, metering (slurry), annualized	2.00	1.86	\$53.95	\$96.33	\$0.00	\$150.28	\$184.58	\$221.57
Turbine well, annualized	1.00	5.85	\$127.60	\$304.20	\$0.00	\$431.80	\$535.82	\$646.23
Vertical lift, over 1 H.P., annualized	2.00	2.91	\$92.93	\$151.25	\$0.00	\$244.18	\$298.85	\$358.17
Filter plant, annualized	1.00	17.46	\$45.08	\$908.38	\$0.00	\$953.45	\$1,230.47	\$1,509.75
De-ionization, annualized	1.00	4.01	\$1,109.60	\$207.87	\$0.00	\$1,317.47	\$1,490.79	\$1,719.59
Reverse osmosis system, annualized	4.00	14.91	\$682.40	\$774.02	\$0.00	\$1,456.42	\$1,756.87	\$2,091.44
Chlorine detector, annualized	1.00	3.20	\$185.86	\$165.62	\$0.00	\$351.48	\$419.75	\$497.31
Ejector, sewage, annualized	2.00	1.91	\$98.48	\$98.86	\$0.00	\$197.34	\$236.85	\$281.28
Ejector pump, sump type, annualized	2.00	3.30	\$98.48	\$170.69	\$0.00	\$269.17	\$330.22	\$396.20
Sewage lift, over 1 H.P., annualized	2.00	2.91	\$61.03	\$151.25	\$0.00	\$212.28	\$263.76	\$318.29
Aerator, floating, annualized	2.00	10.27	\$83.22	\$532.35	\$0.00	\$615.57	\$783.60	\$955.79
Blower, aerator, annualized	1.00	10.31	\$244.11	\$532.35	\$0.00	\$776.46	\$960.58	\$1,156.90
Clarifier, annualized	1.00	5.39	\$78.37	\$278.85	\$0.00	\$357.22	\$448.71	\$544.12
Comminutor, annualized	1.00	2.71	\$35.37	\$140.27	\$0.00	\$175.64	\$221.26	\$268.64
Filter, trickling, annualized	4.00	4.54	\$119.28	\$234.91	\$0.00	\$354.19	\$436.59	\$524.96
Cathodic protection system, annualized	1.00	1.46	\$26.08	\$83.23	\$0.00	\$109.31	\$136.89	\$165.77
						\$11,842.60	\$14,445.32	\$17,285.56

FAC 8412 WATER TREATMENT FACILITY
Modeled Component List
CostWorks Release 2023 Qtr 4

D30 HVAC

Deaerator	1.0 Ea.
Circulator Pump, 1 H.P.	4.0 Ea.
Valves	4.0 Ea.

G30 Site Mechanical Utilities

Ground Level Water Storage Tank 100K Gallon	1.0 Ea.
Post Indicator Valve	1.0 Ea.
Storage Tank Ground Level, annualized	3.0 Each
Water Flow Meter, Turbine, annualized	4.0 Each
Vertical Lift, annualized	2.0 Each
Filter Plant, annualized	1.0 Each
Reverse Osmosis System, annualized	4.0 Each
Ejector Pump, annualized	2.0 Each
Sewage Lift, annualized	2.0 Each
Aerator, annualized	2.0 Each
Clarifier, annualized	1.0 Each
Comminutor, annualized	1.0 Each
Filter, annualized	4.0 Each

B10 Superstructure

Railing, Metal	80.0 L.F.
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D20 Plumbing

Rainwater Sump Pump	2.0 Ea.
Compressed Air Systems, Compressors, 2 H.P.	2.0 Ea.

G20 Site Improvements

Gate, Manual slide, annualized	1.0 Each
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G40 Site Electrical Utilities

Cathodic Protection, annualized	1.0 Each
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FAC 8412 WATER TREATMENT FACILITY
Sustainment by Year
CostWorks Release 2023 Qtr 4

