

COMPLIANCE STRATEGY COST ESTIMATE - MBR Secondary Treatment

ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL
PI Headworks (6.2 MGD from WMP)					
Structure	2500	SF	\$ 300.00	\$ 750,000.00	
Equipment:					
Carbon Odor Control	1	EA	\$ 60,000.00	\$ 87,000.00	
Bar Screens	2	EA	\$ 250,000.00	\$ 725,000.00	
Screenings Washer & Compactor	2	EA	\$ 50,000.00	\$ 145,000.00	
Grit Pumps	3	EA	\$ 35,000.00	\$ 152,250.00	
Vortex Grit Removal	2	EA	\$ 75,000.00	\$ 217,500.00	
Grit Classifier & Washer	2	EA	\$ 40,000.00	\$ 116,000.00	
					\$ 2,192,750.00
PI Sanitary Disinfection (6.2 MGD from WMP)					
Equipment:					
Pump System	1	EA	\$ 100,000.00	\$ 100,000.00	
UV Disinfection	1	EA	\$ 200,000.00	\$ 200,000.00	
					\$ 300,000.00
PI Additional Structures and Modifications (6.2 MGD from WMP)					
Structure					
PE Splitter - Upstream - Rehab Existing	1	EA	\$ 500,000.00	\$ 500,000.00	
PE Splitter - Downstream	2200	SF	\$ 300.00	\$ 660,000.00	
Sludge Storage Tank	4360	SF	\$ 175.00	\$ 763,000.00	
					\$ 1,923,000.00
Biosolids Processing (6.2 MGD from WMP)					
Structure					
Rehab Existing Process Building	1	EA	\$ 350,000.00	\$ 350,000.00	
Equipment:					
Carbon Odor Control	1	EA	\$ 60,000.00	\$ 87,000.00	
Rotary Drum Thickener	2	EA	\$ 150,000.00	\$ 435,000.00	
Dewatering Screw Press	2	EA	\$ 400,000.00	\$ 1,160,000.00	
Conveyors	2	EA	\$ 50,000.00	\$ 145,000.00	
					\$ 2,177,000.00
MBR (5 MGD)					
Structure					
Demolition	1	EA	\$ 220,000.00	\$ 220,000.00	
Filter Building Modification	1	EA	\$ 770,000.00	\$ 770,000.00	
Installed Equipment Includes:	1	SET	\$ 4,889,000.00	\$ 4,889,000.00	
Steel Membrane Tanks					
Membranes					
Pumps					
Blowers					
Cleaning System					
Valves and Headers					
PLC					
					\$ 5,879,000.00
Secondary Pump Station (5 MGD from VE) - Site Work, Yard Piping, Electrical, E&C costs not included					
Structure and Equipment:					
Installed Pump Station	1	EA	\$ 1,100,000.00	\$ 1,100,000.00	
					\$ 1,100,000.00
PI ITEM TOTAL					
					\$ 13,571,750.00
Yard Piping (12%)					\$ 1,628,610.00
Electrical (22%)					\$ 2,985,785.00
Instrumentation and Controls (6%)					\$ 814,305.00
Site Work and Landscaping (7%)					\$ 950,022.50
PI TOTAL CAPITAL					
					\$ 19,950,472.50
Island Construction Premium (3%)					\$ 598,514.18
Engineering (20%)					\$ 3,990,094.50
Contingency (30%)					\$ 5,985,141.75
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE					
					\$ 30,500,000

COMPLIANCE STRATEGY COST ESTIMATE - BioMag Secondary Treatment						
ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	SUBTOTAL	
PI Headworks (6.2 MGD from WWP)						
Structure	2500 SF		\$ 300.00	\$ 750,000.00		
Equipment:						
Carbon Odor Control	1 EA		\$ 60,000.00	\$ 87,000.00		
Bar Screens	2 EA		\$ 250,000.00	\$ 725,000.00		
Screenings Washer & Compactor	2 EA		\$ 50,000.00	\$ 145,000.00		
Grit Pumps	3 EA		\$ 35,000.00	\$ 152,250.00		
Vortex Grit Removal	2 EA		\$ 75,000.00	\$ 217,500.00		
Grit Classifier & Washer	2 EA		\$ 40,000.00	\$ 116,000.00		
					\$	2,192,750.00
PI Sanitary Disinfection (6.2 MGD from WWP)						
Equipment:						
Pump System	1 EA		\$ 100,000.00	\$ 100,000.00		
UV Disinfection	1 EA		\$ 200,000.00	\$ 200,000.00		
					\$	300,000.00
PI Additional Structures and Modifications (6.2 MGD from WWP)						
Structure						
PE Splitter - Upstream - Rehab Existing	1 EA		\$ 500,000.00	\$ 500,000.00		
PE Splitter - Downstream	2200 SF		\$ 300.00	\$ 660,000.00		
Sludge Storage Tank	4360 SF		\$ 175.00	\$ 763,000.00		
					\$	1,923,000.00
Biosolids Processing (6.2 MGD from WWP)						
Structure						
Rehab Existing Process Building	1 EA		\$ 350,000.00	\$ 350,000.00		
Equipment:						
Carbon Odor Control	1 EA		\$ 60,000.00	\$ 87,000.00		
Rotary Drum Thickener	2 EA		\$ 150,000.00	\$ 435,000.00		
Dewatering Screw Press	2 EA		\$ 400,000.00	\$ 1,160,000.00		
Conveyors	2 EA		\$ 50,000.00	\$ 145,000.00		
					\$	2,177,000.00
Activated Sludge w/ BioMag (5 MGD)						
Structure						
Demolition	1 EA		\$ 220,000.00	\$ 220,000.00		
Filter Building Modification	1 EA		\$ 770,000.00	\$ 770,000.00		
Secondary Clarifiers (convert pump gallery)	1 EA		\$ 120,000.00	\$ 120,000.00		
Activated Sludge Equipment						
Blowers	2 EA		\$ 300,000.00	\$ 870,000.00		
EDi Fine Bubble Aeration	2 EA		\$ 75,000.00	\$ 217,500.00		
RAS Pumps (Centrifugal)	2 EA		\$ 25,000.00	\$ 72,500.00		
WAS Pumps (Centrifugal)	2 EA		\$ 20,000.00	\$ 58,000.00		
BioMag Equipment (Unit Price Includes Installation)	1 SET		\$ 1,600,000.00	\$ 1,600,000.00		
Secondary Clarifier Equipment	2 EA		\$ 125,000.00	\$ 362,500.00		
					\$	4,290,500.00
Secondary Pump Station (5 MGD from VE) - Site Work, Yard Piping, Electrical, E&C costs not included						
Structure and Equipment:						
Installed Pump Station	1 EA		\$ 1,100,000.00	\$ 1,100,000.00		
					\$	1,100,000.00
PI ITEM TOTAL						
					\$	11,983,250.00
					\$	1,437,990.00
					\$	2,636,315.00
					\$	718,995.00
					\$	838,827.50
PI TOTAL CAPITAL						
					\$	528,461.33
					\$	3,523,075.50
					\$	5,284,613.25
TOTAL WWTF CAPITAL TO MEET CONSENT DECREE						\$ 27,000,000