

TABLE 4-8: OPINION OF PROBABLE COSTS - E. MOLINE WWTP IMPROVEMENTS

WWTP Improvements:	Quantity	Units	Unit Cost	Extended Cost
1. Bar Screen				\$1,587,000
Upstream gate replacement including blocking at low flow	2	EA	\$46,000	
Replacement bar screens including angle new screen and roof penthouse				
A. Infilco Degremont Climber Screen	2	EA	\$982,000	
B. US Filter	2	EA		
C. Vulcan Industries Inc.	2	EA		
Conveyor and dumpster	1	LS	\$362,000	
Replace HVAC to provide appropriate air changes per hour	1	LS	\$93,000	
Concrete repair of structure	1	LS	\$15,000	
Corrosion protection - blast and epoxy paint roof deck bottom and ferrous surfaces	1	LS	\$74,000	
Composite sample influent	1	EA	\$15,000	
2. Main Lift Station (Service and Pump Bldgs) Improvements				\$1,771,000
Replace HVAC to provide appropriate air changes per hour	1	LS	\$107,000	
Corroded piping and valve replacement (not including check valves)	1	LS	\$646,000	
Replace check valves	3	EA	\$188,000	
Replace pumps with high efficiency pumps	3	EA	\$667,000	
Relocate transfer switch per code	1	LS	\$43,000	
Install smaller pump in spare location to handle low flows	1	EA	\$120,000	
Optional fine screen to allow land application of sludge - eliminate tipping fee at landfill			\$945,000	\$945,000
A. Vulcan	1	LS		
B. Parkson	1	LS		
3. Grit Chamber Improvements			\$1,938,000	\$1,938,000
Replace entire grit removal system				
A. Westech	1	LS		
B. Jones and Atwood	1	LS		
C. Smith and Loveless	1	LS		
Enclose handling process	1	LS		
4. Primary Clarifier Improvements (85' Dia.)				\$558,000
Blast and Epoxy paint submerged ferrous surfaces for corrosion protection	3	EA	\$106,000	
Replacement squeegees	3	EA	\$5,000	
Install Stamford baffles to prevent short-circuiting	3	EA	\$148,000	
Install new brackets on clarifier weirs & leak test and repair	3	EA	\$59,000	
Primary Sludge Pump Replacement	1	LS	\$240,000	
5. Secondary Pump Station and Control Bldg Improvements				\$1,173,000
Replace HVAC to provide appropriate air changes per hour	1	LS	\$93,000	
Replace pumps with higher efficiency pumps	1	LS	\$483,000	
Corroded piping and valve replacement	1	LS	\$597,000	
6. Aeration Basin Improvements			\$825,000	\$825,000
Install fine bubble aeration	1	LS		
Remove mixers and sparge rings	12	EA		
7. Final Clarifier Improvements (85' Dia)				\$496,000
Replace original drives	3	EA	\$183,000	
Blast and Epoxy paint submerged ferrous surfaces for corrosion protection	3	EA	\$106,000	
Install Stamford baffles to prevent short-circuiting	3	EA	\$148,000	
Install new brackets on clarifier weirs	3	EA	\$59,000	
8. Disinfection Basin Improvements (Storage and control rooms)				\$112,000
Replace HVAC to provide appropriate air changes per hour	1	LS	\$107,000	
Replace galvanized fittings in chlorine room	1	LS	\$5,000	
9. Mississippi Outfall Improvements				\$0
back up influent flow meter - see yard piping - item 14 below				
10. Anaerobic Digestion and Bldg Improvements			\$276,000	\$383,000
Replace HVAC to provide appropriate air changes per hour	1	LS	\$107,000	
Relocate flare fifty feet away from structure	1	LS		
Add pilot light, auto-ignition to flare	1	LS		
Roof fall protection - hand rail	1	LS		
Demo 2 original digestors & original building	1	LS		
Install new flex line on floating covers	3	EA		
Electrical improvements for code compliance	1	LS		
11. DAF and Bldg Improvements				\$1,285,000
A. Replace HVAC to provide appropriate air changes per hour, or	1	LS		
B. Replace DAF with polymer thickening (use DAF for storage)	1	LS	\$1,285,000	
12. Sludge Filtration and Bldg Improvements				\$7,000
Roof access to improve safety ladder fall protection	1	LS	\$7,000	
13. Methane Storage Improvements				\$0
none identified at this time				
14. Yard Piping and Misc. Improvements				\$270,000
Influent flow meter	1	LS	\$270,000	
15. Administration Bldg Improvements				\$291,000
New lab cabinets	1	LS	\$177,000	
New employee breakroom - seating for 13 with kitchenette	400	SQFT	\$114,000	
16. Standby Power Improvements				\$155,000
Expand connected load	1	LS	\$141,000	
Phase monitor improvements	1	LS	\$14,000	
17. Concrete repair - throughout plant				\$7,000
Concrete repair - throughout plant	1	LS	\$7,000	
18. Repave parking lot				\$234,000
Repave parking lot	1	LS	\$234,000	
WWTP subtotal			\$12,037,000	\$12,037,000

Notes:

Costs are based on Year 2005 costs.
 Assume City is responsible for on-site SCADA hardware, software, installation, etc.
 Assumes drives on primary clarifiers don't require replacement
 Each subtotal cost includes general requirements, contingency and engineering individually
 Phosphorous and nutrient reduction ==> future EPA requirements
 Further evaluation clarifiers required (primary and secondary for flow variation)