

APPENDIX A

Municipal/Commercial Wastewater Treatment Plant Point Rating System

A wastewater system with only collection, lift stations, and chlorination is considered a collection system and not a wastewater treatment plant. Each unit process should have points assigned only once.

Item	Points	Your Plant
Size (2 point minimum to 20 point maximum)		
Maximum population equivalent (PE) or part served, peak day (1 point minimum to 10 point maximum)		
Design flow average day or peak month's part flow average day, whichever is larger (1 point minimum to 10 point maximum)		
Variation in raw waste (0 point minimum to 6 point maximum)¹		
Variations do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200% in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200% in strength and/or flow	4	
Raw wastes subject to toxic waste discharges	6	
Impact of septage or truck-hauled waste (0 point minimum to 4 point maximum)		
Preliminary treatment		
Plant pumping of main flow	3	
Screening, comminution	3	
Grit removal	3	
Equalization	1	
Primary Treatment		
Clarifiers	5	
Imhoff tanks or similar	5	
Secondary Treatment		
Fixed-film reactor	10	
Activated sludge	15	
Stabilization ponds without aeration	5	

Stabilization ponds with aeration	8	
Tertiary Treatment		
Polishing ponds for advanced waste treatment	2	
Chemical/physical advanced waste treatment w/o secondary	15	
Chemical/physical advanced waste treatment following secondary	10	
Biological or chemical/biological advanced waste treatment	12	
Nitrification by designed extended aeration only	2	
Ion exchange for advanced waste treatment	10	
Reverse osmosis, electrodialysis and other membrane filtration techniques	15	
Advanced waste treatment chemical recovery, carbon regeneration	4	
Media filtration	5	
Additional Treatment Processes		
Chemical additions (2 points each for a maximum of 6 points)	6	
Dissolved air flotation (for other than sludge thickening)	8	
Intermittent sand filter	2	
Recirculating intermittent sand filter	3	
Microscreens	5	
Generation of oxygen	5	
Solids Handling		
Solids stabilization	5	
Gravity thickening	2	
Mechanical dewatering	8	
Anaerobic digestion of solids	10	
Utilization of digester gas for heating or cogeneration	5	
Aerobic digestion of solids	6	
Evaporative sludge drying	2	
Solids reduction (including incineration, wet oxidation)	12	
On-site landfill for solids	2	
Solids composting	10	
Land application of biosolids by contractor	2	
Land application of biosolids under direction of facility operator in direct responsible charge	10	
Disinfection (0 point minimum to 10 point maximum)		
Chlorination or ultraviolet irradiation	5	

Ozonation	10	
Effluent discharge (0 point minimum to 10 point maximum)		
Mechanical post aeration	2	
Direct recycle and reuse	6	
Land treatment and disposal (surface or subsurface)	4	
Instrumentation (0 point minimum to 6 point maximum)³		
Use of SCADA or similar instrumentation systems to provide data w/ no process operation	0	
Use of SCADA or similar instrumentation systems to provide data w/ limited process operation	2	
Use of SCADA or similar instrumentation systems to provide data w/ moderate process operation	4	
Use of SCADA or similar instrumentation systems to provide data w/ extensive or total process operation	6	
Laboratory control (0 point minimum to 15 point maximum)²		
Bacteriological/biological (0 point minimum to 5 point maximum)		
..Lab work done outside the plant		0
..Membrane filter procedures		3
..Use of fermentation tubes or any dilution method; fecal coliform determination		5
Chemical/physical (0 point minimum to 10 point maximum)		
I.Lab work done outside the plant		0
II.Push-button or visual methods for simple tests such as pH, settleable solids		3
III.Additional procedures such as DO, COD, BOD, gas analysis, titrations, solids, volatile content		5
IV.More advanced determinations such as specific constituents; nutrients, total oils, phenols		7
V.Highly sophisticated instrumentation such as atomic absorption, gas chromatography		10
VI.		Total Points

1 The key concept is frequency and/or intensity of deviation or excessive variation from normal or typical fluctuations; such deviation can be in terms of strength, toxicity, shock loads, I/I, with points from 0 to 6.

2 The key concept is to credit laboratory analyses done on-site by plant personnel under the direction of the operator in direct responsible charge with points from 0 to 15.

3. Supervisory Control and Data Acquisition (SCADA) system.



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