

Classification of Water Treatment Plants and Water Distribution Systems

Table 50	
Classification	Population Served
Water Distribution 1	1 to 1,500
Water Distribution 2	1,501 to 15,000
Water Distribution 3	15,001 to 50,000
Water Distribution 4	50,001 or more

Table 51	
Treatment or Water System Characteristic	Points
Treatment System Size (population served or flow whichever is greater)	
Population served	1/10,000 (max 30)
Average daily flow	1/1 million gallons per day (max 30)
Treatment Facility Source Type	
Groundwater	3
Surface water or GWUDI	5
Disinfection	
Ammonia/chloramination	3
Chlorination	5
Disinfectant residual maintenance	0
Ultraviolet light	2
On-site generated chlorine or mixed oxidants	7
Ozonation (on-site generation)	10
Ultraviolet light with chlorine residual	5
pH Adjustment	
Hydrated lime (calcium hydroxide)	4
Slaked-quicklime (calcium oxide)	5
All others (hydrochloric acid, sodium hydroxide, sulfuric acid, sodium carbonate)	1
Coagulation & Flocculation Processes	
Chemical addition (1 point for each type of chemical coagulant or polymer added, maximum 5 points)	1-5
Rapid Mix Units	
Mechanical mixers	3
Injection mixers	2
In-line blender mixers	2
Flocculation Units	
Hydraulic flocculators	2
Mechanical flocculators	3
Clarification and Sedimentation Processes	
Adsorption clarifier	10
Dissolved air flotation	10
Horizontal-flow (rectangular basins)	5

Horizontal-flow (round basins)	7
Inclined-plate sedimentation	10
Tube sedimentation	10
Up-flow solid contact sedimentation	15
Filtration Processes	
Cartridge/bag filtration	5
Diatomaceous earth	12
Direct filtration	5
Dual or mixed media filtration	53
Membrane filtration/microscreens	5
Pressure or greensand filtration	10
Single/mono media filtration	3
Slow sand filtration	5
Water Quality Stability or Corrosion Control	
Aeration: packed tower, diffusers	3
Calcite	2
Caustic soda (sodium hydroxide)	6
Hydrated Lime (calcium hydroxide)	8
Orthophosphate	5
Slaked-Quicklime (calcium oxide)	10
Soda ash (sodium carbonate)	4
Others: sodium bicarbonate, silicates	4
Other Treatment Processes	
Aeration	3
Copper sulfate treatment	5
Fluoridation	5
Ion exchange/softening	5
Lime-soda ash softening	20
Packed tower aeration	5
Potassium permanganate	5
Powdered activated carbon	5
Sequestering (polyphosphates)	3
Special processes (reverse osmosis, activated alumina, other)	15
Residuals Disposal	
Discharge to lagoons	5
Discharge to lagoons and then raw water source	8
Discharge to raw water	10
Disposal to sanitary sewer	3
Land application	5
Mechanical dewatering	5
On-site disposal	5
Solids composting	5
Facility Characteristics or Instrumentation	
The use of SCADA or similar instrumentation systems to provide data with no process control	1
The use of SCADA or similar instrumentation systems to provide data with partial process control	3

The use of SCADA or similar instrumentation systems to provide data with complete process control	5
Clear well size less than average day design flow	5

Table 52	
Classification of Water Treatment Plants	
Classification	Points
Water Treatment 1	1 to 30
Water Treatment 2	31 to 55
Water Treatment 3	56 to 75
Water Treatment 4	76 or more