

Appendix A

(a) Wastewater treatment facilities will be classified as follows:

**Table A
Classification Rating by Range of Points**

Facility Class	1	2	3	4	5
Sum of all Points					
Domestic	0-50	51-90	91-120	121-150	151+
Industrial	0-50	51-105	n/a	106-151+	n/a

(b) To classify wastewater treatment facilities the Department will use the following point system:

Category	Points
Preliminary Treatment	
Influent / primary pump / sewage pump (on-site).....	1
Pump stations (off-site) less than 10.....	1
Pump stations (off-site) 10 or more	2
Grit collection / removal.....	2
Comminutor / grinder.....	1
Coarse screen automatic / fine or micro-screen automatic.....	2
Septage receiving (sophistication)	2
Flow equalization basin(s).....	2
Imhoff tank / other predigestion / sedimentation.....	1
Maximum Points:	10
Primary Treatment	
Primary settling tank(s).....	1
Primary clarifiers.....	2
Primary clarifiers with chemical addition.....	3
Receives external industrial waste that requires a pretreatment permit.....	2
Maximum Points:	5

Category	Points
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Secondary Treatment

Extended Aeration (EA).....	20
Conventional Activated Sludge (AS).....	20
with pure oxygen (add points).....	5
Oxidation ditch or closed loop reactor.....	10
Aerated Lagoon(s)(AL).....	5
Sequencing Batch Reactor(s) (SBR), other batch treatment	20
Rotating Biological Contactor(s) (RBC).....	20
Chemical addition non-nutrient related (2 points each chemical added/max 10).....	10
Secondary clarifiers.....	5
pH adjustment / control	5
Maximum Points:	35

Disinfection

Chlorination.....	5
Dechlorination.....	5
Ultra-violet (UV) disinfection	10
Maximum Points:	10

Advanced Treatment

Sand filter	5
Sand filter multi-media.....	5
Membrane (or cloth) filtration.....	5
Chemical phosphorus removal.....	10
Biological phosphorus removal.....	10
Nitrification (permit required).....	5
Denitrification (permit required).....	5
Computer based control system for the facility (SCADA or DCS)*.....	5
Reverse osmosis / electro dialysis.....	5
Sprayfield Operation / Disposal	5
Maximum Points:	50

* SCADA = Supervisory Control And Data Acquisition

* DCS = Distributive Control System

Solids Handling, Sludge Processing and Management

Sludge holding tank / decanting tank.....	2
Sludge concentrator mechanical.....	3
Sludge gravity thickener basin.....	3
Sand drying beds.....	1
Digester (aerobic).....	5
Digester (anaerobic).....	10
Dissolved Air Flootation (DAF).....	10
Belt filter press / plate & frame / vac filter.....	10
Centrifuge.....	10
Rotary press.....	10
Lime stabilization.....	3
Two-stage digestion, ATAD.....	10
Maximum Points:	25

Category	Points
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Biosolids Management

Composting / heat drying.....	10
Land application.....	10
Maximum Points:	10

Design Capacity (gallons per day (gpd))

Less than 10,000.....	1
10,000 to 50,000.....	2
50,001 to 100,000.....	4
100,001 to 500,000.....	9
500,001 to 1,000,000.....	12
1,000,001 to 5,000,000.....	16
5,000,001 to 10,000,000.....	20
Greater than 10,000,000.....	25
Indirect discharge or high-strength waste disposal (in addition to above gpd).....	5
Maximum Points:	30

Odor Control

Odor control, site (scrubber / carbon)	10
Site odor control (biofilter).....	10
Other odor control (chemical, bacteria, spray).....	2
Maximum Points:	10

Laboratory Controls (analysis performed by plant personnel)

Basic laboratory (pH, chlorine, settleable solids, temperature, dissolved oxygen, etc.).....	2
Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), or <i>Escherichia coli</i> bacteria (E. Coli) (4 points each with max. of 10)..	10
Phosphorus, Total Kjeldahl Nitrogen (TKN), or other nutrients (4 points each with max of 10 points).....	10
Advanced metals.....	10
Microscope ID.....	5
Maximum Points:	25

Other

Emergency power (entire plant).....	10
Emergency power (partial plant).....	5
Multi-permit.....	5
Maximum Points:	15

TOTAL MAXIMUM POINTS: 215

* SCADA = Supervisory Control And Data Acquisition
 * DCS = Distributive Control System

(c) Definitions

Biochemical Oxygen Demand (BOD) means the amount of oxygen utilized by bacteria in the biochemical oxidation of organic matter over five days.

Biological wastewater treatment means the process by which metabolic activities of bacteria and other microorganisms break down complex organic materials into simple, more stable substances.

Chemical Precipitation as used in Section 7 means a method of wastewater treatment utilizing chemicals for flocculation and may include precipitation. Addition of these chemicals is specifically designed to remove Biochemical Oxygen Demand (BOD), suspended solids (SS), Chemical Oxygen Demand (COD), phosphorus, heavy metals or other deleterious constituents of wastewater and as distinguished from chemical addition to enhance sludge dewatering capabilities or to disinfect wastes.

Design flow means the design hydraulic capacity of the wastewater treatment facility.

Domestic wastewater means wastewater discharged from residences or from employee or public washrooms in institutions, businesses, or industrial establishments.

Industrial wastewater means wastewater, other than domestic wastewater, discharged from institutions, businesses, or industrial establishments that is amenable to treatment by means of biological wastewater treatment.

Wastewater treatment facility means a pollution abatement facility permitted by the Department for the purpose of treating domestic sewage or industrial wastewaters, or both.

(d) The Department may, after considering the advice of the Advisory Board, modify the wastewater facility classification rating system.