

Facility Name _____

SPDES # _____

Facility Operator _____

FOAS 100-4/95

Facility phone number (____) _____

Date Completed _____

Regional Reviewer _____

Circle units/items that apply

Design Flow - 3 points per MGD or part (Minimum 1 point - Maximum 50 points) 3 points x _____ MGD = _____ Flow Points			
Unit or Item	Points	Unit or Item	Points
Preliminary Treatment (Maximum 8 points)		Phosphorus Removal (required by permit), 4K	8
Bar Screens and/or Comminutor, 1A	2	Chemical Addition for neutralization, 4L	3
Manual Grit Removal, 1B	2	Advanced Treatment Subtotal₄	
Mechanical or Aerated Grit Removal, 1C	3	Disinfection (Maximum 8 points)	
Pre-aeration, 1D	2	Chlorination:	
Raw sewage or Effluent pumping, 1E	3	Gas Chlorination, 5A	5
Flow equalization basin, 1F	3	Other Chlorination, 5B	2
(Preliminary Score) Subtotal₁		Dechlorination, 5C	3
Primary Treatment (Maximum 5 points)		Ultraviolet, 5D	5
Primary Treatment Including: Primary Clarifiers, Imhoff tanks, Spirogesters, Clarigesters, Fixed Screens, and Hydroscreens, 2A	5	Ozonization, 5E	5
		Bromine Chloride, 5F	5
Primary Treatment Subtotal₂		Disinfection Subtotal₅	
Secondary Treatment (Maximum 25 points)		Solids Handling / Disposal (Maximum 25 points)	
Lagoon (unaerated), 3B	3	Gravity Thickener, 6A	5
Intermittent sand filters without recirculation, 3C	3	Dissolved air floatation thickener, 6B	8
Intermittent sand filters with recirculation, 3D	5	Centrifugation, (includes all modifications) 6C	8
Aerated Lagoon, 3E	7	Aerobic Digestion, 6D	5
Trickling Filter / Biological Filter without recirculation, 3F	9	Single Stage Anaerobic Digestion (unheated), 6E	5
Trickling Filter / Biological Filter with recirculation, 3G	11	Single Stage Anaerobic Digestion (heated), 6F	8
Rotating Biological Contactors, 3H	11	Two Stage Anaerobic Digestion, 6G	10
Activated Sludge (includes all process modifications), 3I	20	Sludge Drying Beds, except vacuum assisted drying bed, 6H	3
Chemical Coagulation with rapid mix, flocculation, clarification, 3J	20	Belt Filter Press, 6I	8
Secondary Treatment Subtotal₃		Plate & Frame Press, 6O	8
Advanced Waste Treatment / Tertiary Treatment (Maximum 20 points)		Vacuum Filters, 6P	8
Polishing pond, 4A	2	All other dewatering units, 6J	5
Microscreens, 4B	3	Land Application, 6K	5
Intermittent sand filter, 4C	3	Composting:	
Rapid sand filter, 4D	5	In vessel, 6L	10
Activated carbon columns or beds, 4E	5	Static Pile, 6M	5
Reverse osmosis, electro dialysis, ion exchange, 4F	5	Solids Reduction (incineration, wet oxidation), 6N	15
Nitrification required by permit (Ammonia, TKN, or UOD limit):		Solids Handling/Disposal Subtotal₆	
by Activated Sludge, 4G	8	Miscellaneous	
Nitrification by other process, 4H	5	Nutrient addition (nitrogen and/or phosphorus), 7A	3
Denitrification required by permit (Nitrate or Total Nitrogen limit):		Carbon Regeneration (onsite), 7B	10
Nitrification by Activated Sludge and Denitrification, 4I	13	Miscellaneous Subtotal₇	
Nitrification by other process and Denitrification, 4J	10	Total Score (add subtotals 1 thru 7 plus Flow Points)	

Wastewater Treatment Plant Rating Worksheet for Wastewater Treatment Plant Certification (Ref: Part 650.3, 650.6)

Attached is the scoring system for wastewater treatment plants in New York State. Scoring will be done to determine the certification grade of the chief operator and the assistant/shift operator needed at each wastewater treatment plant. The operator grades are divided into two designations, a number (1, 2, 3, or 4 with 1 being the lowest and 4 the highest grade), and the letter "A" for wastewater treatment plant operators working at facilities using the activated sludge process. All other treatment processes have no letter designation.

The scoring system is based on types of treatment processes at the wastewater treatment plant and flow. **Generally the treatment unit receives points only for its designed purpose or function** (example - a spare aerobic digester being used as a gravity thickener only receives points for an aerobic digester). Below are some basic guidelines for completing the scoring sheet. These guidelines are intended to cover most but not all possible options. DEC, specifically FOAS, will make the final determination regarding scoring questions. No additional points will be given for units/items not listed in the scoring system.

- 1) **Flow Scoring** - Flow scoring should be based on the 30 day average design flow limit of the treatment plant. If the 30 day average design flow is not known, the SPDES permit 30 day average flow limit should be used. If the average design flow is not known and there is no SPDES permit flow limit, flow points will be based on actual flow measurements - the flow points will be calculated from the maximum recorded 30 day average flow. The calculated flow point score should be rounded to the nearest whole number.
Example; 3 pts x 6.4 MGD = 19.2 or 19 Flow Points.
- 2) **Raw sewage or effluent pumping** - can be onsite, or offsite such as a pump station if there are no connections between the pump station and the plant.
- 3) An **aerated grit chamber** is not a preaeration unit.
- 4) A **flow equalization basin** must be a unit designed for flow equalization, not a sewer or an empty tank.
- 5) **Secondary Treatment** - Secondary Clarifier scoring is included in the secondary treatment processes. No additional points are given for secondary clarifiers.
- 6) **Lagoons** - No double scoring for lagoons. Example; the first lagoon is aerated and subsequent lagoons are unaerated, scores 7 points for the aerated lagoon, no additional points for the unaerated lagoon.
- 7) **A lagoon or pond is not an activated sludge process** unless it meets the following definition; A mixture of wastewater and activated sludge is agitated and aerated. The activated sludge is then separated from the treated wastewater by sedimentation and returned or wasted to the process as needed.
- 8) **Trickling Filters** - No double scoring for trickling filters. Two trickling filters in series or parallel are 1 unit regardless of differences in size, media or recirculation capability. If one or more units has recirculation, the facility receives 11 points (TF with recirculation).
- 9) **Polishing Pond** - to be considered a polishing pond, the pond must directly follow a settling unit that has sludge withdrawal. Example; Two lagoons in series do not receive points for a lagoon and a polishing pond even if the second lagoon is unaerated. A trickling filter followed by a secondary clarifier then a pond or lagoon will receive points for the polishing pond.
- 10) **Multiple Treatment Units** - Two treatment units may be scored if they exist at the WWTP, (see exceptions above), but the maximum scoring for secondary treatment is still 25 points. Example #1; Activated Sludge 20 points + Trickling Filter 11 points = 31 points, would receive 25 points for secondary treatment. Example #2; Trickling Filter with recirculation 11 points followed by an RBC 11 points = 22 points.
- 11) **Chemical Coagulation with Rapid mix, flocculation, & clarification** - To receive credit for this option, there must be separate rapid mix, flocculation and clarification units that are independent of primary or biological treatment systems. Chemical coagulation processes following biological treatment are ineligible.
- 12) **Rapid Sand Filter** - any filter with backwash capability is considered a rapid sand filter.

- 13) **Advanced Waste Treatment, Nitrification** - To get points for nitrification the WWTP must have a permit limit for Ammonia, TKN, or UOD. Monitoring alone does not receive the points. Credit for Nitrification is limited to one treatment process (activated sludge or other processes, not both).
- 14) **Denitrification points** - the WWTP must have a permit limit for Nitrates or Total Nitrogen. Denitrification is limited to one treatment process (activated sludge or other processes, not both).
- 15) **Nitrification/Denitrification** - No plant can receive points in both the nitrification and denitrification categories. The nitrification fraction is built into the denitrification points.
- 16) **Chemical Addition for Neutralization** - To receive credit, the chemical addition must be performed for metals removal or be necessary to meet effluent pH limits .
- 17) **Solids Handling Aerobic Digester** - To be considered an aerobic digester the unit must have a volume of at least 5% of the design flow of the plant and have aeration and decant capability.
- 18) **Sludge Lagoons, Sludge Holding Tanks and/or Wet hauling sludge** to another facility does not receive points.
- 19) **Solids Handling** - To receive points for composting or land application, it must be the primary stabilization/solids disposal process of the WWTP (more than 50 percent of the sludge produced by the WWTP must be composted or land applied) and have a valid Part 360 Permit. Example; pilot composting projects do not receive points.
- 20) **Spray Irrigation** of waste is considered the same as raw sewage or effluent pumping and receives 3 points. There is no double scoring for pumping. Example; Influent pumping and spray irrigation only receives 3 points not 6.
- 21) **Miscellaneous** - Nutrient addition, nitrogen or phosphorus, must have permanently installed equipment with the proper tanks and metering pumps to receive points.
- 22) **Out-of-Service Equipment or Equipment not being used** - If a piece of equipment is at the WWTP and not regularly used, but is operable if needed, it does receive points. If a piece of equipment has been abandoned, or disconnected from the flow scheme, or is inoperable, it does not receive points.
- 23) **Overland Treatment** does not receive points.

When each subtotal and the Flow Points are determined, they are all added together to reach the Total WWTP Score. This score, with the following table, establishes the minimum grade of Chief Operator and the Assistant/shift Operator needed at the WWTP.

Total Treatment Plant Score	30 and less	31 - 55	56 - 75	76 and greater
Grade of Chief Operator Required	1/1A	2/2A	3/3A	4/4A
Grade of Assistant/Shift Operator Required	1/1A	1/1A	2/2A	3/3A

If you have any questions please contact the Bureau of Water Compliance, at (518) 402-8177.