

.16 Tables.

Table 1
CLASSIFICATION OF INDUSTRIAL WASTEWATER WORKS

<i>Class of Plants</i>	<i>Type of Treatment Systems</i>	<i>Typical Processes Included in the System</i>
1	Basic Treatment	Petroleum base oil separators, liquid cooling, and pH control.
2	Physical Treatment	Sedimentation, screening, pH control, solids removal.
3	Land Treatment	Primary treatment, sedimentation, solids removal, pumping and land treatment.
4	Biological Lagoons	Aerobic or anaerobic waste stabilization lagoons, disinfection, and chemical addition.
5	Activated Sludge	Primary treatment, sedimentation, activated sludge, and sludge handling.
6	Physical Chemical Treatment	Reduction of chemical and toxic substances including but not limited to cyanide and chromium, acid-alkali neutralization, coagulation, and flocculation.
7	Site Specific	Plants not covered under the first six types of treatment yet covered under these regulations.

Table 2
CLASSIFICATION OF WASTEWATER TREATMENT PLANTS

<i>Class of Plants</i>	<i>Types of Treatment Systems</i>	<i>Typical Processes Included in the System</i>
1	Lagoons	Aerated or nonaerated lagoons, filtration, disinfection, and land or wetland treatment.
2	Physical/Biological	Primary treatment, sand filter, land or wetland treatment, and disinfection.
3	Package Activated Sludge Plants	Screening, activated sludge, sedimentation, filtration, disinfection, chemical addition, sludge handling, pumping and land or wetland treatment.
4	Trickling Filters Rotating Biological Contractors (RBC)	Preliminary treatment, primary treatment, sedimentation, activated sludge, oxidation ditches, filtration, chemical addition, disinfection, sludge handling, and pumping.
5	Activated Sludge	Preliminary treatment, primary treatment, sedimentation, activated sludge, oxidation ditches, filtration, chemical addition, disinfection, sludge handling, and pumping.
6	Site Specific	Other alternative technology systems not covered under this classification system which may include groundwater discharge systems such as spray irrigation systems, and drip dispersal systems.
S*	Solids Handling	Chemical conditioning, sludge thickening, sludge digestion, thermal treatment, chlorine treatment, filtration, dewatering, composting, land application.
A**	Advanced Wastewater Treatment	Filtration, activated carbon adsorption, nitrification, denitrification, phosphorus removal, ammonia stripping, chemical feeding and conditioning, coagulation and flocculation.

*Class S will only be required when the specific works is limited to solids handling.

**Class A is used in conjunction with other classes.

Table 3
CLASSIFICATION OF WATER TREATMENT PLANTS

<i>Class of Plants</i>	<i>Type of Treatment Systems</i>	<i>Typical Processes Included in the System</i>
1	Disinfection	Chlorination.
2	Chemical Treatment	Chlorination, pH control, and fluoridation.
3	Simple Iron Removal	Chlorination, pH control, fluoridation, filtration, and iron removal utilizing ion exchange or contact oxidation processes.
4	Complete Treatment	Chlorination, pH control, fluoridation, aeration, coagulation, sedimentation, filtration, and complex iron removal.
5	Site Specific	Site specific - any alternative technology plant not covered under the classification system.

G	No chemical treatment	Well, storage tanks, UV disinfection
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**Table 4
INDUSTRIAL WASTEWATER WORKS**

A Class of Plants	B Class of Operators and Superintendents	C Authorized to Operate or Supervise Plants (Class)	D Operators				E Superintendents					
			1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution	1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution		
1	1	1	Completion of High School OR High School Equivalency	NONE	250 hours or 6 months ¹	NONE	Completion of High School OR High School Equivalency	NONE	NONE	NONE		
2	2	2			500 hours or 1 year ¹							
3	3	2 and 3			5400 hours or 3 years ⁷	1800 hours or 1 year ³	2 years college ⁴	2 years ⁵	3600 hours or 2 years ⁶	1800 hours or 1 year ³		
4	4	2 and 4			3600 hours or 2 years ⁷		1 year college ⁴	1 year ⁵	1800 hours or 1 year ⁶			
5	5	1,2,3,4, and 5			AS DETERMINED BY THE BOARD							
6	6	1,2, and 6										
7	7	7										

Notes:

- 1 Whichever is longer, years of experience is based on 1 hour/day operation.
- 2 Whichever is longer, years of experience is based on 2 hours/day operation.
- 3 One year of college course work in science or engineering leading toward a degree, for 1 year experience.
- 4 In science, engineering, or management leading toward a degree.
- 5 One year experience for 1 year college.
- 6 Experience obtained as provided in Regulation .06E of this chapter.
- 7 Whichever is longer (for applications received by the Board before the effective date of these regulations, see Regulation .06 of this chapter).

**Table 5
WASTEWATER TREATMENT PLANTS**

A Class of Plants	B Class of Operators	C Authorized to Operate or Supervise Plants (Class)	D Operators				E Superintendents					
			1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution	1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution		
1	1	1	Completion of High School OR High School Equivalency	NONE	500 hours or 1 year ¹	NONE	Completion of High School OR High School Equivalency	NONE	NONE	NONE		
2	2	1 and 2			1800 hours or 2 years ²						1800 hours or 1 year ²	900 hours or 1 year ^{2, 6}
3	3	1,2, and 3			5400 hours or 3 years ⁹	2 years college ⁴	2 years ⁵	3600 hours or 2 years ⁶	1800 hours or 1 year ³			
4	4	1,2, 4, and C2										
5	5	1,2,3, 5, and C2										

6	6	6			AS DETERMINED BY THE BOARD					
S ⁷	S ⁷	S ⁷	Completion of High School OR High School Equivalency	NONE	5400 hours or 3 years ⁹	1800 hours or 1 year ³	2 years college ⁴	2 years ⁵	3600 hours or 2 years ⁶	1800 hours or 1 year ³
A ⁸	A ⁸	A ⁸								

Notes:

- 1 Whichever is longer, years of experience is based on 2 hours/day operation.
- 2 Whichever is longer, years of experience is based on 3.5 hours/day operation.
- 3 One year of college course work in science or engineering leading toward a degree, for 1 year experience.
- 4 In science, engineering, or management leading toward a degree.
- 5 One year experience for 1 year college.
- 6 Experience obtained as provided in Regulation .06E of this chapter.
- 7 Is limited to solids handling.
- 8 Class A is used in conjunction with other classes.
- 9 Whichever is longer.

**Table 6
WASTEWATER COLLECTION SYSTEMS**

A	B	C	D				E			
			Operators				Superintendents			
Class of Plants	Class of Operators and Superintendents	Authorized to Operate or Supervise Plants (Class)	1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution	1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution
1	1	1	Completion of High School OR High School Equivalency	NONE	1800 hours or 1 year ³	NONE	Completion of High School OR High School Equivalency	NONE	NONE	NONE
2	2	2			3600 hours or 2 years ³	1800 hours or 1 year ¹			1800 hours or 1 year ²	

Notes:

- 1 One year of college course work in science or engineering leading toward a degree, for 1 year experience.
- 2 Experience obtained as provided in Regulation .06E of this chapter.
- 3 Whichever is longer (for application received by the Board before the effective date of these regulations, see Regulation .06 of this chapter).

**Table 7
WATER TREATMENT PLANTS AND DISTRIBUTION SYSTEMS**

A	B	C	D				E			
			Operators				Superintendents			
Class of Plants	Class of Operators and Superintendents	Authorized to Operate or Supervise Plants (Class)	1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution	1 Education Requirements	2 Maximum Education Substitution	3 Experience Requirements	4 Maximum Experience Substitution
D	D	None	Completion of High School OR High School Equivalency	NONE	500 hours or 1 year ¹	NONE	Completion of High School OR High School Equivalency	NONE		NONE
1	1	D, G, and 1							NONE	
2	2	D, G, 1, and 2							500 hours or 1 year ^{1,6}	

3	3	D, G, 1, 2, and 3		1800 hours or 2 years ²	900 hours or 1 year ^{2,3}	1 year college ⁴	1 year ⁵	900 hours or 1 year ^{2,6}	900 hours or 1 year ³
4	4	D, G, 1, 2, 3, and 4		5400 hours or 3 years ⁷	1800 hours or 1 year ³	2 years college ⁴	2 years ⁵	3600 hours or 2 years ⁶	1800 hours or 1 year ³
5	5	5		AS DETERMINED BY THE BOARD					
G	G	G		AS DETERMINED BY THE BOARD					

Notes:

- 1 Whichever is longer, years of experience is based on 2 hours/day operation.
- 2 Whichever is longer, years of experience is based on a 3.5 hours/day operation.
- 3 One year of college course work in science or engineering leading toward a degree, for 1 year of experience.
- 4 In science, engineering, or management leading toward a degree.
- 5 One year experience for 1 year college.
- 6 Experience obtained as provided in Regulation .06E of this chapter.
- 7 Whichever is longer (for applications received by the Board before the effective date of these regulations, see Regulation .06 of this chapter).

**Table 8
TRAINING REQUIREMENTS FOR OPERATORS AND SUPERINTENDENTS
CERTIFICATE RENEWAL FOR 3-YEAR RENEWAL PERIOD**

Class	INDUSTRIAL WASTEWATER WORKS			WASTEWATER TREATMENT PLANTS			WASTEWATER COLLECTION SYSTEMS			WATER TREATMENT PLANTS			WATER DISTRIBUTION SYSTEMS		
	Operators ⁽⁴⁾	Super-intendents ⁽³⁾	Temporary ⁽⁴⁾	Operators ⁽⁴⁾	Super-intendents ⁽³⁾	Temporary ⁽⁴⁾	Operators ⁽⁴⁾	Super-intendents ⁽³⁾	Temporary ⁽⁴⁾	Operators ⁽⁴⁾	Super-intendents ⁽³⁾	Grandparented, and Temporary ⁽⁴⁾	Operators ⁽⁴⁾	Super-intendents ⁽³⁾	Grandparented, and Temporary ⁽⁴⁾
	UNITS ⁽²⁾			UNITS ⁽²⁾			UNITS ⁽²⁾			UNITS ⁽²⁾			UNITS ⁽²⁾		
1	0	0	0	16	7	24	16	7	24	16	7	24	16	7	24
2	0	0	0	16	7	24	16	7	24	16	7	24			
3	16	7	24	30	7	45				30	7	45			
4	16	7	24	30	7	45				30	7	45			
5	30	7	45	30	7	45				(1)					
6	16	7	24	(1)		(1)									
7	(1)		(1)												
S															
A				16	7	24									
G										7	7	7			

Notes:

- 1 For site-specific operator classifications, training units to be determined by the Board on a case-by-case basis.
- 2 For operators that hold multiple certificates, units of training may be applied to multiple classifications if the training is approved as defined in Regulation .13.
- 3 For superintendents, training units approved by the Board for superintendents are required in addition to their operator's training.
- 4 Effective January 1, 2006, for all operator categories, except Water Class 1, Water Class 2, Water Class G, Water Distribution, and Wastewater Collection, a minimum of 50 percent of the training units submitted for issuance or renewal of a certificate shall be process related.

