

INDUSTRIAL WASTE OPERATOR CERTIFICATION

I. Definitions

“**Assistant Program Administrator**” is a contracted position overseen by the Board to perform certification activities.

“**Assistant Supervisor**” means a person in direct responsible charge of operations in the absence of the supervisor.

“**Biological**” means wastewater treatment processes that are biological in nature, including activated sludge, sequencing batch reactors, rotating biological contactors, fixed growth processes, attached growth processes, suspended growth processes, anaerobic treatment, aerobic treatment, biological nutrient removal, etc.

“**Board**” means the Board of Certification for Nevada Industrial Waste Operators as appointed by the NWEA President.

“**Certificate**” means a certificate of competency issued by the Nevada Water Environment Association stating that the Industrial Waste Operator has met the requirements of a specific operator classification. It specifies the name and grade of the person certified, as well as the date the certificate was issued.

“**Certification Administrator**” means the person appointed by the Board to administer the Industrial Waste Operator Certification Program for the State of Nevada.

“**Continuing Education Units (CEUs)**” = 10 contact hours.

“**Full Time or Equivalent (FTE)**” = qualifying experience.

“**Industrial Waste Operator**” means any person, other than a supervisor or assistant supervisor, who is working as an operator at an industrial wastewater treatment plant.

“**Industrial Waste Operator in Training (IWOIT)**” means a person who has passed the Grade 1 exam but has not yet met the education and/or experience requirements to be certified as a Grade 1 Industrial Waste Operator.

“**Industrial Wastewater Treatment Plant**” means a group or assemblage of structures, equipment and processes which treat or condition wastewater, affecting its physical, chemical, or bacteriological quality.

“**Physical/Chemical**” means wastewater treatment processes that are physical/chemical in nature, including coagulation, flocculation, sedimentation, precipitation, equalization, screening, pH adjustment, filtration, air stripping, dissolved air flotation, reverse osmosis, carbon adsorption, ion exchange, etc.

“**Responsible Charge**” means a person responsible for all activities associated with treatment plant operations and compliance with all applicable regulations.

“**Rules and Regulations**” means rules, regulations, and policy for certification of Industrial Waste Operators.

“**Supervisor**” means a person in direct responsible charge of the industrial wastewater treatment plant’s treatment operation.

II. Experience and Education Requirements

Grade	Education & Certification	Experience*
1	High School or equivalent & 6 CEUs (see Section XII)	1 year full-time or equivalent (FTE)
2	Grade 1 Certification	2 years FTE
3	Grade 2 Certification	3 years FTE
4	Grade 3 Certification	4 years FTE

*Industrial Waste Operator experience includes time spent performing industrial wastewater treatment plant operational duties.

In addition to the above requirements, the applicant must pass a written examination at each grade level.

III. Industrial Waste Operator in Training

An individual may take the Grade I Physical/Chemical exam or the Grade I Biological exam without first meeting the required education and/or experience requirements. Upon passing the exam, the individual will be issued a Physical/Chemical or Biological Industrial Waste Operator in Training (IWOIT) certificate. The IWOIT certificate may be renewed every two (2) years. When the IWOIT has met all of the requirements for the Grade I, the individual may submit documentation of having met said requirements to the Board. Upon approval of the documentation, the IWOIT certificate will be converted to a Grade I certificate that expires on the date the IWOIT certificate previously did.

IV. How to Apply for Certification

To apply for certification, an applicant needs to submit a completed application form and a \$150 nonrefundable fee to the Assistant Program Administrator. Applications must be postmarked no later than 30 days prior to the posted examination date. Upon approval of the application, the applicant will be notified of the approval and the available examination dates and locations. The Board reserves the right to deny an application for certification if the Board determines that any requirement for such certification is not met. A fee of \$25 may be charged to any person whose check is returned because of a lack of funds.

V. Certification Exam

The Board will hold examinations at times and places throughout the year as may be required and convenient to the applicants. In the event an applicant fails to pass an examination, the applicant may apply for re-examination upon submission of a new application and filing fee. Applicants for

certification will be required to pass a written examination to demonstrate their knowledge in the following areas:

GRADE 1

Basic principles and methods of industrial wastewater treatment; basic flow monitoring procedures, basic equipment/instrumentation operation and maintenance; basic wastewater math; sample collection procedures; basic laboratory and chemical knowledge; and plant and personnel safety procedures.

GRADE 2

General principles and methods of industrial wastewater treatment and solids handling, conditioning and disposal; general flow monitoring procedures, general equipment/instrumentation operation and maintenance; general wastewater math; sample collection procedures; general laboratory and chemical knowledge; federal regulatory requirements; and plant and personnel safety procedures.

GRADE 3

Advanced principles and methods of industrial wastewater treatment and solids handling, conditioning and disposal; advanced equipment/instrumentation operation and maintenance; advanced wastewater math; sample collection procedures; advanced laboratory and chemical knowledge; federal regulatory requirements; and plant and personnel safety procedures.

GRADE 4

Specific knowledge relating to design applications, operations, control, and calculations involved in treating wastes by advanced waste treatment methods; advanced equipment/instrumentation operation and maintenance; advanced wastewater math; sample collection procedures; advanced laboratory and chemical knowledge; federal regulatory requirements; and plant and personnel safety procedures.

VI. Reciprocity with Other States

Reciprocity will only be considered from applicants holding active certificates that were not obtained through reciprocity from certification programs listed on the Association of Boards of Certification (ABC) "ABC Certification Exam Equivalency Chart" and persons holding ABC certificates. Persons applying for reciprocity must also meet current education and experience requirements, and must have passed written exam(s) at each grade level up to and including the level for which they are applying. Certificates issued by reciprocity will be designated as such. The fee for reciprocity is \$200.

Applicants holding active certificates that were not obtained through reciprocity from certification programs not listed on the Association of Boards of Certification (ABC) "ABC Certification Exam Equivalency Chart" may be allowed to test at the same equivalent grade level they currently hold without having to take the exam(s) below that grade level, but not before meeting the education, experience and sequential examination requirements. Upon passing that exam, the individual will be issued a certificate at the Grade level for which he/she was approved to test.

IV. Certificate Renewals

Any certificate issued under the present rules and regulations shall be valid for a period of two (2) years from the date of issuance. Any certificate not renewed after two (2) years becomes automatically suspended. No examination shall be required for renewal, provided that the previous certificate shall not have been invalid for a period of more than one (1) year. The renewal application and renewal fee of \$80 should be sent to the Certification Administrator for renewal of any Nevada certificate. Any renewal received after the expiration date will be charged a \$20 late fee.

VIII. Replacement / Duplicate Certificate

Certified Industrial Waste Operators desiring a replacement or duplicate certificate may obtain such certificate upon payment of a \$20 fee.

IX. Decertification

The State may revoke or refuse to renew the certificate of any Industrial Waste Operator. All revocation cases will be reviewed by a hearing before the Board of Certification, and a decision will be made by a unanimous vote of the quorum; quorum being five (5) out of seven (7).

A case for decertification may be considered by the Board for, but not limited to, the following:

- 1) The Industrial Waste Operator is incompetent or unable to perform his/her duties properly; or
- 2) The Nevada experience and education requirements for Industrial Waste Operator certification have not been satisfied; or
- 3) The Industrial Waste Operator has practiced fraud or deception; or
- 4) The Industrial Waste Operator has failed to renew his/her certificate in accordance with these provisions.

X. Appeals and Protests

Any appeal or protest made because of the determination of the Certification Administrator shall be in writing to the Board Chair. This notification shall be sent within twenty (20) days of receipt of the Administrator’s written determination. The Chair shall, within sixty (60) days, make an inquiry of the protest and give an answer in writing. Any appeal of the Board Chair’s determination shall be to the Certification Board. Further appeal may be made to the Division of Environmental Protection, whose decision shall be final. Appellant must send the original facts again, and state in writing which part of the Committee’s decision he/she deems improper, and why.

XI. Suggested Study Materials

Exam Topic	Reference Source
Biological Treatment Processes	Industrial Waste Treatment, Volume I, Ch. 5, 7 Industrial Waste Treatment, Volume II, Ch. 2 - 7 Operation of Wastewater Treatment Plants, Volume I, Ch. 4 - 10 Operation of Wastewater Treatment Plants, Volume II, Ch. 11 - 13 Advanced Waste Treatment, Ch. 2 - 8
Physical/Chemical Treatment Processes	Industrial Waste Treatment, Volume I, Ch. 5 and 7 - 11 Treatment of Metal Wastestreams, Ch. 5 and 6 Advanced Waste Treatment, Ch. 4
General Treatment Processes	Industrial Waste Treatment, Volume I, Ch. 7 and 9 Industrial Waste Treatment, Volume II, Ch. 7 Operation of Wastewater Treatment Plants, Volume I, Ch. 4 - 10 Operation of Wastewater Treatment Plants, Volume II, Ch. 11 - 13 Advanced Waste Treatment, Ch. 3 and 4
Laboratory Analysis	Operation of Wastewater Treatment, Volume II, Ch. 16 Code of Federal Regulations, Title 40, Part 136
Operate Support Equipment	Industrial Waste Treatment, Volume I, Ch. 6 and 12 Industrial Waste Treatment, Volume II, Ch. 8 Operation of Wastewater Treatment Plants, Volume I, Ch. 10 Operation of Wastewater Treatment Plants, Volume II, Ch. 15
Evaluate and Maintain Support Equipment	Industrial Waste Treatment, Volume I, Ch. 12 Industrial Waste Treatment, Volume II, Ch. 8 Operation of Wastewater Treatment Plants, Volume I, Ch. 10 Operation of Wastewater Treatment Plants, Volume II, Ch. 15
Perform Administrative Duties	Utility Management, Ch. 3 - 13 Code of Federal Regulations, Title 40, Part 122, 403 and 433
Perform Security and Safety Procedures	Industrial Waste Treatment, Volume I, Ch. 2 Operation of Wastewater Treatment Plants, Volume I, Ch. 10 Operation of Wastewater Treatment Plants, Volume II, Ch. 14

Ordering Information

California State University, Sacramento, Office of Water Programs, 6000 J Street, Sacramento, CA 95819, Web site: www.owp.csus.edu, Phone: (916) 278-6142
Code of Federal Regulations, Title 40, Web site: www.gpo.gov
For additional information, see Web site www.nwwea.org

XII. Certification Training

Courses directly related to wastewater treatment will receive full value. Courses indirectly related to wastewater treatment will receive one-half value. Directly related short courses, including those given at the Water Quality Control Institute, are equivalent to one CEU per 8-hour day, with a maximum of three CEUs per week. If the course is considered to be indirectly related, one CEU will be given for each two days, with a maximum of two CEUs per week. College courses (including extension and correspondence courses taken for credit) earn 1.5 CEUs per semester credit. Indirectly related courses earn a half-credit. (Half-credit = 0.7 CEU per semester credit)

Directly Related Correspondence Courses

California State University, Sacramento

1. Operation of Wastewater Treatment Plants, Vol. I & II (9 CEUs each)
2. Advanced Waste Treatment (9 CEUs)
3. Small Wastewater System Operation and Maintenance, Vol. I & II (9 CEUs each)
4. Industrial Waste Treatment, Vol. I & II (9 CEUs each)
5. Treatment of Metal Wastestreams (4.5 CEUs)
6. Pretreatment Facility Inspection (9 CEUs)
7. Operation and Maintenance of Wastewater Collection Systems, Vol. I & II (9 CEUs each)

Certification Training (continued)

College Courses Earning Full Credit

(1.5 CEUs per semester credit):

1. College Chemistry - up to 12 CEUs.
2. Mathematics area: Algebra, Geometry, Trigonometry, Statistics - up to 12 CEUs. Does not include basic, introductory, or business math courses.
3. Biological Science area: Microbiology, Pathogenic Bacteriology, etc. - up to 9 CEUs.
4. General Physics - up to 9 CEUs.
5. Engineering courses: Fluid Mechanics, Hydraulics, and Engineering courses not directly related.

College Courses Earning Half Credit

(0.7 CEU per semester credit):

1. Technical Writing - up to 3 CEUs.
2. Public or Business Administration - up to 9 CEUs in the areas of Organization, Management, Finance, Supervision, Budgeting, etc.
3. Public Speaking - up to 3 CEUs.

Courses Accepted by WWET for CEUs

1. One-day training seminars, safety conferences, or NWEA, CWEA, or WEF-sponsored conventions will receive one CEU per day attended, up to 3 CEUs, provided that an education program is offered.
2. Other extension courses or training of any type which might relate to the operator's duties will be evaluated on a case-by-case basis. CEUs will be allowed based on the material covered, the depth of the coverage, and the time required to complete the course.

Please note: Obtaining certification as an Industrial Waste Operator does not satisfy the Nevada Administrative Code 445A.287-292 certification requirements for operator of a plant for sewage treatment.

Other Wastewater Certification Programs available through NWEA:

- *Wastewater Treatment Plant Operator*
- *Wastewater Quality Analyst*
- *Industrial Waste Inspector*
- *Collection System Operator*

01/08

Nevada Wastewater Certification Programs



Industrial Waste Operator

(Physical/Chemical & Biological)

Nevada Water Environment Association

PO Box 190
Smith, Nevada 89430

775-465-2045

www.nwwea.org