

INDUSTRIAL WASTE OPERATOR CERTIFICATION

For certification rules and regulations please refer to NWEA's Policies & Procedures which can be accessed online at www.nvwea.org.

I. Definitions

“**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 Nevada Water Environment Association Certification Board.

“**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.

“**Continuing Education Unit (CEU)**” = 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 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. Computerized exams are available anytime at locations in Nevada and nationwide for an additional fee of \$64. 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 be considered from applicants holding valid certificates from all certification programs in the United States and Canada. The applicant must meet all current education and experience requirements. Upon approval of the applicant's qualifications, reciprocity will be granted one grade lower than the equivalent grade currently held by the applicant, with the exception that if an applicant currently holds the equivalent of a grade one certification that reciprocity will be granted at grade one.

If an applicant has received certification directly from the Association of Boards of Certification reciprocity will be granted as follows: 1) They must hold a valid certificate that was issued by the Association of Boards of Certification. 2) The applicant must meet all current education and experience requirements. 3) Upon approval of the applicant's qualifications, reciprocity will be granted at the equivalent grade currently held by the applicant.

Reciprocity will be considered on a case by case basis from applicants holding valid certificates from certification programs located outside of the United States and Canada.

Certificates issued by reciprocity will be designated as such.

The fee for reciprocity is \$200.

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 Program Administrator for renewal of any Nevada certificate. Any renewal post-marked 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 NWEA 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 Program 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 NWEA Executive Board, 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

Suggested ABC Industrial Waste Exam References

The following are approved as reference sources for the ABC industrial waste examinations. Operators should use the latest edition of these reference sources to prepare for the exam.

California State University, Sacramento (CSUS) Foundation, Office of Water Programs

- Industrial Waste Treatment, Volumes I and II
- Operation of Wastewater Treatment Plants, Volumes I and II
- Manage for Success
- Advanced Waste Treatment
- Treatment of Metal Wastestreams
- Pretreatment Facility Inspection

To order, contact: Office of Water Programs

California State University, Sacramento
6000 J Street
Sacramento, CA 95819-6025
Web site: www.owp.csus.edu
Phone: (916) 278-6142
Fax: (916) 278-5959
E-mail: wateroffice@csus.edu

Water Environment Federation

- Operation of Municipal Wastewater Treatment Plants, Manual of Practice No. 11
- Industrial Wastewater Management, Treatment, and Disposal, Manual of Practice FD-3

To order, contact: Water Environment Federation

601 Wythe Street
Alexandria, VA 22314-1994
Web site: www.wef.org
Phone: (800) 666-0206
Fax: (703) 684-2492
E-mail: pubs@wef.org

Operators must also be knowledgeable about federal and state/provincial regulations that apply to industrial dischargers. Most of the US federal regulations that apply to industrial dischargers are found in the Code of Federal Regulations, Title 40 (www.gpo.gov).

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)

College Courses Earning Full Credit

(1.5 CEUs per semester credit):

1. College Chemistry - up to 12 CEUs.

Certification Training (continued)

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*
- *Plant Maintenance Technologist*

Nevada Wastewater Certification Programs



Industrial Waste Operator

(Physical/Chemical & Biological)

Nevada Water Environment Association

PO Box 98235
Las Vegas, Nevada 89193

775-465-2045

www.nvwea.org