



New England Water Environment Association

WASTEWATER LABORATORY ANALYST CERTIFICATION PROGRAM

CERTIFICATION PROGRAM FOR

**WASTEWATER LABORATORY ANALYSTS NEW ENGLAND WATER
ENVIRONMENT ASSOCIATION, INC.**

**GENERAL INFORMATION
SECTIONS 1-9**

1.0 OBJECTIVE

This program, for the examination and certification of wastewater laboratory analysts in the New England States, is hereby established in order to promote the employment of trained, experienced, reliable and efficient personnel for the operation of public and industrial wastewater works; and to establish standards whereby wastewater laboratory analysts can demonstrate proficiency. By means of this program, the New England Water Environment Association, Inc., (NEWEA) will strive to:

- a) Improve the quality of wastewater laboratory operations;
- b) Improve the knowledge of wastewater laboratory analysts;
- c) Promote safety conditions for wastewater laboratory analysts;
- d) Provide a roster of qualified analysts; and
- e) Provide a means whereby those responsible for employment of wastewater laboratory analysts can readily determine the qualifications that are considered desirable in such personnel.

2.0 GENERAL POLICIES

- 2.1 This is a voluntary program. It will be unnecessary for any person to hold membership in the NEWEA or in any other organization or association to receive certification, provided that said person meets the requirements set forth herein.
- 2.2 All wastewater laboratory analysts are encouraged to: a) apply for certification; and to b) strive for increased knowledge, training and experience to permit future advancement in their grade of certification.
- 2.3 This program provides for certification of personnel whose duties are confined to work, or supervision of work in a) wastewater laboratories; or b) analytical laboratories that test wastewater samples.
- 2.4 The NEWEA will endeavor to cooperate with, and request the cooperation of those State, Municipal, Civil Service, Industrial, and Institutional agencies in New England which own, operate or exercise control over wastewater laboratories, to the end that the maximum benefits of the Program may be realized throughout the New England States.

3.0 DEFINITIONS

- 3.1 Wastewater laboratory – Shall mean any facility that performs any wastewater testing for process control or regulatory reporting.
- 3.2 Laboratory analyst – Shall mean any person that performs any wastewater test or analysis or supervises wastewater testing or analysis for process control or regulatory reporting.
- 3.3 Certification – Shall mean Wastewater Laboratory Analyst Certification.
- 3.4 Sub Committee – Shall mean the NEWEA Laboratory Practices Sub-committee

- 3.5 Reciprocity – Shall describe the certification of an applicant who has passed a written exam in another state and meets the experience and education requirements of this program.

4.0 CERTIFICATION SUB COMMITTEE

- 4.1 The NEWEA Laboratory Practices Sub Committee may consist of twelve members in the following categories:

Six wastewater industry professionals to include any currently employed or currently retired;

Two members of State Regulatory Agencies;

Two university faculty members;

Two sanitary engineers employed by consultants or industry, or self-employed.

The wastewater industry personnel shall be chosen as follows: One each from the States of Massachusetts, Connecticut, Rhode Island, New Hampshire, Maine and Vermont.

The State Regulatory Agency members or a substitute member for any state shall be chosen as follows:

One from Massachusetts, Connecticut or Rhode Island

One from New Hampshire, Vermont or Maine.

Each of the two faculty members shall be engaged in the field of sanitary sciences and shall be chosen from separate universities in any of the New England States. Each of the two sanitary engineers shall be practicing in the field of public or industrial wastewater works design. All Sub Committee members shall be members of NEWEA.

- 4.2 All Sub Committee members shall be appointed by the President of NEWEA in accordance with Section 4.1.
- 4.3 A Chair of the Sub Committee shall be appointed by the President from its membership. The secretary-treasurer shall be the Executive Director of the Association and shall serve the Committee concurrently.
- 4.4 The Sub Committee shall have responsibility for implementing and administering the Certification Program, subject to the approval of the Executive Committee. The Sub Committee may adopt such rules and regulations, consistent with the provisions contained herein, as necessary for the conduct of this program.
- 4.5 It shall be the duty of the Sub Committee to receive all applications for certification from NEWEA; to investigate, verify and evaluate the accompanying record of each applicant; to prepare examinations for the various grades of certification as herein provided; and to perform such other duties as may be necessary to ensure compliance with the provisions herein contained.

5.0 GENERAL PROCEDURES

- 5.1 Application for certification shall be made to the NEWEA office using online forms to be prescribed by NEWEA. Applications shall be submitted 30 days in advance of the date of examination established by NEWEA. Applicants are required to evaluate their education and work credit and apply for the appropriate grade level of examination for which they qualify using the online application form. Applicants shall refer to Section 9.0 QUALIFICATION OF WASTEWATER LABORATORY PERSONNEL to evaluate their education and work credit. Applications will be returned to NEWEA. Applications will be given preliminary screening, by any Sub Committee member, to ascertain whether the applicant meets the education and experience requirements. NEWEA will

notify applicants possessing the necessary education and experience who are applying for examination for certification. Applicants will then select from the scheduled dates and time of online examinations. Applicants may also choose to take the exam in-person using Paper/pen format when offered at prescribed locations listed on the NEWEA website. Applicants not possessing the necessary requirements will be so advised and will be urged to re-apply by NEWEA.

- 5.1 Applicants requesting Reciprocal certification must submit the online application and provide proof of satisfactory completion of an examination for approval by the Sub Committee chair, or designee.
- 5.2 Certificates provided herein will be issued by NEWEA only after applicants have fully qualified themselves in accordance with the provisions of this program.

6.0 EXAMINATION

- 6.1 The Sub Committee shall prepare such written examinations as to properly reflect the knowledge and ability required of the laboratory analyst as herein provided.
- 6.1 The examinations will be offered as online or in-person format for applicants deemed qualified by the Sub Committee.
- 6.2 The Sub Committee may hold examination periods at the time and place of the annual meetings of NEWEA and at such other times and places throughout the year as may be required and convenient. The time and place of examinations may be announced on the NEWEA website, in the NEWEA Newsletter, or by such other methods as the Sub Committee may deem necessary and proper.
- 6.3 The passing grade on all examinations shall be a minimum of 70%.
- 6.4 In the event an applicant fails to pass an examination, he/she may apply for re-examination at their discretion, using the online application. The normal \$75.00 fee must be paid upon submitting the online application.
- 6.5 The Sub Committee may, at its discretion, waive examination for applicants holding certificates or licenses issued by other states or associations having equivalent standards, as determined by the Sub Committee.

7.0 ISSUANCE OF CERTIFICATES

- 7.1 Upon satisfactory fulfillment of the requirements provided herein, NEWEA shall issue a suitable certificate. Said certificate shall state the grade for which the applicant is certified and the date of issue.
- 7.2 Certificates will be permanent upon successful completion of the requirements unless revoked for proper cause.
- 7.3 The Sub Committee is authorized to revoke the certificate of any person who, after a hearing before the Sub Committee, shall be found guilty of fraud or deceit in obtaining a certificate, or of gross negligence, incompetency or misconduct in the performance of their duties as a laboratory analyst.

8.0 FEES FOR CERTIFICATION

- 8.1 Fees for certification in each grade shall be \$75.00 payable to the New England Water Environment Association.

Fees for upgrading of certification and fees for reciprocal certificates issued in accordance with Sections 5.2 and 6.6 shall be \$75.00.

- 8.2** Fees will accompany online applications for examinations.
- 8.3** Fee payment using electronic format will be available to applicants.
- 8.4** Fees collected from applicants who fail to pass the examination will not be returned.
- 8.5** The fee as listed here may be revised, if it is found necessary, to make the Wastewater Laboratory Analyst Certification Program self-sustaining, provided that the Executive Committee of NEWEA gives its approval.

9.0 QUALIFICATION OF WASTEWATER LABORATORY PERSONNEL

- 9.1** Two grades of laboratory analyst certification are hereby established.

Note - The Lab Analyst II exam is currently unavailable please check back after September 2021.

- Lab Analyst I
- Lab Analyst II

- 9.2** All applicants shall meet the following general requirements:

- a) Be able to read and write the English language; and
- b) Be able to maintain desirable logs and records of sampling, testing, and maintenance in a laboratory.

- 9.2** All applicants must have a minimum of a High School diploma or High School Equivalency (HSE certificate), or equivalent.

- 9.3** Laboratory Analyst I – All applicants for this grade must submit satisfactory evidence of a least one year's experience in conducting or supervising wastewater analyses and pass a Grade I examination.

- 9.4** Laboratory Analyst II – All applicants for this grade must submit satisfactory evidence of at least three years' experience in conducting or supervising wastewater analyses and pass a Grade II examination.

Note- The Lab Analyst II exam is currently unavailable please check back after September 2021.

An Associate's Degree in a physical or biological science may be substituted for one year of experience. A Bachelor's Degree in a physical or biological science may be substituted for two years of experience.

Training Credit Calculation and Equivalents

10 Training Contact Hours (TCH) = 1.0 Continuing Education Unit (CEU)

1.5 CEUs = 1.0 College Level Credit

Wastewater Laboratory Analyst Certification Examination

Examination: The test is a one-hundred question, multiple-choice examination. The use of a non-programmable basic calculator, blank scratch paper, and the NEWEA Formula sheet is allowed.

Laboratory Analyst I

Topics Covered:

- pH
- Total & Volatile Suspended Solids
- Total & Volatile Solids & Settleable Solids
- Microscopy
- Ammonia-N
- BOD
- Dissolved Oxygen
- Fecal Coliform/E. Coli
- Temperature
- Laboratory Safety
- Chlorine Residual
- Sampling Techniques, Preservation, & Holding Times
- Phosphorus
- Quality Control and Assurance
- Record Keeping

Laboratory Analyst II

Topics Covered:

- All those listed for Laboratory Analyst I, and
- Turbidity
- COD
- Ammonia
- Phosphorous
- Oil & Grease
- Microbiology of Activated Sludge
- Principles of Supervision
- Quality Control
- Chemical Hygiene Plan

References and Resources

- Formula Sheet
- 40 CFR 136, including the Method Update Rules (2012)
- Standard Methods (23rd edition or most recent promulgated version)
- Wastewater Sampling for Process and Quality Control MOP #OM-1 WEF
- Methods for Chemical Analysis of Water and Wastes EPA-600/4-79-020

The following resources may be used to obtain study materials:

Operation of Wastewater Treatment Plants Volumes I and II

Office of Water Programs

California State University, Sacramento

6000 J Street

Sacramento, CA 95819-6025

Telephone: (916) 278-6142 Email:

wateroffice@owp.csus.edu

<http://www.owp.csus.edu>

Water Environment Federation

601 Wythe Street

Alexandria, VA 22314-1994

Telephone: (800) 666-0206 Email:

pubs@wef.org <http://www.wef.org>