



NEWEA

**New England
Water Environment
Association**

**COLLECTION SYSTEMS
VOLUNTARY
CERTIFICATION PROGRAM**

VOLUNTARY CERTIFICATION PROGRAM
FOR WASTEWATER COLLECTIONS SYSTEMS PERSONNEL

As part of an assessment of regional water pollution abatement and control needs in the mid-1950s NEWEA (then the New England Sewerage and Industrial Waste Association) established an ad hoc committee to investigate and develop a voluntary certification program to rate skilled qualified operators. The committee submitted its report and program in the Fall of 1957 when it was adopted and the program initiated.

In June 1979, the issues of collection systems operator were raised. An Ad Hoc Committee on Collection System Operator Certification presented its report to the NEWEA (then the New England Water Pollution Control Association) Executive Committee on August 30, 1979, where it was adopted and the program implemented.

After the adoption of NEWEA's Voluntary Certification Program for treatment plant operators, all six New England states adopted mandatory certification requirements. As a result, NEWEA's Plant Operator Certification Program has been phased out. During its active years, nearly 1,000 operators were certified. NEWEA's Voluntary Certification Program for Collection System Operators continues to administer examinations and issued certificates. (Through December 2014, over 6,000 collections systems operators have been certified.)

Founded in 1929 with 40 members, NEWEA now has over 2,000 members representing scientists, state, federal and municipal officials, educators, consulting engineers and wastewater collection system operators, equipment manufacturers and distributors, wastewater treatment plant personnel, and others who are actively concerned with the preservation and enhancement of our water environment including the protection of water resources and restoration of water quality.

VOLUNTARY CERTIFICATION PROGRAM
FOR WASTEWATER COLLECTIONS SYSTEMS PERSONNEL,
NEW ENGLAND WATER ENVIRONMENT ASSOCIATION, INC.

GENERAL INFORMATION
SECTIONS 1-8

1.0 OBJECTIVE

This Voluntary Certification Program, for the examination and certification of wastewater collection systems personnel 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 and facilities whereby wastewater collection systems personnel 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 collection systems operations;
- b) Improve the status of wastewater collection systems personnel;
- c) Promote safety conditions for wastewater collection systems personnel;
- d) Provide a roster of qualified personnel; and
- e) Provide a means whereby those responsible for employment of wastewater collection systems personnel can readily determine the qualifications, which 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 of association to receive certification, provided that said person meets the requirements set forth herein.
- 2.2 All wastewater collection systems personnel, including those in subordinate positions, are encouraged to: a) apply for certification in the highest grade consistent with their present qualifications, regardless of whether or not the qualifications established for their present position could be satisfied by a person holding a lower grade of certification; and 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 on: a) sewer maintenance or construction; or b) pumping stations.
- 2.4 The NEWEA will endeavor to cooperate with, and requests the cooperation of those State, Municipal, Civil Service, Industrial and Institutional agencies in New England which own, operate or exercise control over wastewater collection systems, to the end that the maximum benefits of the program may be realized throughout the New England States.

3.0 DEFINITIONS

- 3.1 "Wastewater Collection Systems" means an arrangement of piping, devices and structures constructed and installed for the purpose of transporting and treating wastewater from domestic, commercial or industrial sources, or combinations thereof, and including gravity sewers, force mains, manholes, pumping equipment and other facilities that collect and convey wastewater.

3.2 “Collection Systems Personnel” means both (a) the individual who is the superintendent or administrative head and has full responsibility for the operation of a wastewater collection system, and (b) the individual who works under the supervision of the superintendent, and who normally has charge of or performs important operating functions.

NOTE: In the title of this Program and in all places where it appears, the word “Operator” covers both superintendent and operator as here defined.

4.0 CERTIFICATION COMMITTEE

4.1 The Certification Committee may consist of twelve members in the following categories:

Six currently employed wastewater industry professionals;

Two members of State Regulatory Agencies;

Two university faculty members;

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

The Wastewater Collection systems 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 Certification Committee members shall be members of NEWEA.

4.2 All Certification Committee members shall be appointed by the President of NEWEA in accordance with Section 4.1.

4.3 A Chair and Vice-Chair of the Certification 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 Certification Committee concurrently.

4.4 The Certification Committee shall have responsibility for implementing and administering the Voluntary Certification Program, subject to the approval of the Executive Committee. The Certification 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 Certification Committee to receive all applications for certification; to investigate, verify and evaluate the accompanying record of each applicant; to prepare and conduct examinations for the various grades of certification as herein provided; to issue certificates of the proper grade in behalf of NEWEA to all applicants meeting the requirements herein provided; and to perform such other duties as may be necessary to insure compliance with the provisions herein contained.

5.0 GENERAL PROCEDURE

- 5.1 Application for certification shall be made to any member of the Certification Committee on forms to be prescribed by the Committee. Applications shall be submitted a reasonable time (30 days) in advance of date of examination established by the Committee. Applications will be given preliminary screening by any Certification Committee member to ascertain whether or not the applicant possesses the educational and experience requirements provided herein for the grade for which he/she applies. Applicants possessing the necessary educational and experience background and applying for grades requiring examinations for certification will be notified of the scheduled time and place of examination. Applicants not possessing the necessary requirements for the grade for which they applied will be so advised and will be urged to reapply for such lower grade as their education and experience may qualify them.
- 5.2 Certificates for all grades provided herein will be issued by the Certification Committee only after applicants have fully qualified themselves in accordance with the provision of this program.

6.0 EXAMINATION

- 6.1 The Certification Committee shall prepare such written and oral examinations as will properly reflect the knowledge and ability required of the various grades of operators as herein provided.
- 6.2 The Certification Committee may hold examination periods at the time and place of the annual meeting 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 in the NEWEA Journal and Newsletter, or by such other methods as the Committee may deem necessary and proper.
- 6.3 In the event an applicant fails to pass an examination, he/she may apply for reexamination in the same grade or he/she may apply for certification in a lower grade at any time. In either case the normal \$50.00 fee must accompany the application.
- 6.4 The Certification 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 Certification Committee.
- 6.5 In accordance with the Americans with Disabilities Act, if you have a disability and need testing accommodations, please contact the NEWEA office so that appropriate arrangements can be made.

7.0 ISSUANCE OF CERTIFICATES

- 7.1 Upon satisfactory fulfillment of the requirements provided herein, the Certification Committee shall issue a suitable certificate on behalf of NEWEA. Said certificate shall state the grade for which the applicant is certified and the date of issue.
- 7.2 Certification status: In addition to assignment of the grade to operators, the Collection System Certification Committee shall assign operators a status as follows:
- (1) Operator-in-Training Status. Upon passing an examination, the Collection System Certification Committee shall review the applicant's experience, education and training. If the applicant is working at a collection system but does not meet the experience qualifications established in Section 7.0 ISSUANCE OF CERTIFICATES and 10.0 QUALIFICATIONS OF COLLECTION SYSTEMS PERSONNEL or the grade passed, the applicant shall receive an Operator-in-Training (OIT) Certification. When an OIT operator gains sufficient experience at a collection system to meet the qualifications and notifies the Collection System Certification Committee in writing, the Collection System Certification Committee shall review the operator's status and (if merited) upgrade it to Full Operator Status.

- (2) When and If Status. An applicant may take an examination for any grade. If the applicant passes the examination, is not working in the field and/or does not have experience as defined in 10.0 QUALIFICATIONS OF COLLECTION SYSTEMS PERSONNEL to qualify for full certification, the Collection System Certification Committee will issue a When and If Certification (W&I). When the W&I operator gains employment at a collection systems and notifies the Collection System Certification Committee in writing, the Collection System Certification Committee shall review the operator's status and upgrade it to Operator-in-Training or (if merited) Full Operator Status.
- (3) Full Operator Status. Full operator status refers to an operator who has passed a certification examination and meets all experience requirements set forth in 10.0 QUALIFICATIONS OF COLLECTION SYSTEMS PERSONNEL for a specified collection system.

7.3 Certificates will be permanent on successful completion of the requirements unless revoked for proper cause.

7.4 Previously certified personnel wishing certification in higher grades must reapply to the Certification Committee and must satisfactorily pass the examination for the higher grade, if examination for that grade is required herein.

7.5 The Certification Committee is authorized to revoke the certificate of any person who, after a hearing before the Committee, is found guilty of fraud or deceit in obtaining a certificate, or of gross negligence, incompetence or misconduct in the performance of his/her duties as an operator.

8.0 FEES FOR CERTIFICATION

8.1 Fees for original certification in each grade shall be \$50.00.

Fees for upgrading of certification and fees for reciprocal certificates issued in accordance with Section 6.4 shall be \$50.00.

8.2 Each applicant for a provisional certificate shall be subject to the same original fees as required of applicants for full certification under this section. Upon completion of experience requirements, his/her application for full certification shall be subject only to fees as stipulated in sections 8.3 through 8.5.

8.3 Fees shall accompany all initial applications for certificates or advancement to a higher grade.

8.4 Fees for all applicants whose applications are rejected, or who fail to pass the examination will not be returned.

8.5 The fee schedule as listed herein may be revised, if it is found necessary, to make the Certification Program self-sustaining, as approved by the NEWEA Executive Committee.

9.0 CLASSIFICATION OF WASTEWATER COLLECTION SYSTEMS

9.1 The Certification Committee shall, from time to time, classify all Collection Systems into four grades based on the size and complexity of a point system as indicated below.

The point system is based on the 11 areas described in Section 9.2

Grade I	1 - 20
Grade II	21 - 39
Grade III	40 - 55
Grade IV	55 - >

9.2

1	Largest Pipe Size	Points	Max. No. of Points
	a. Up to 42"	3	6
	b. Greater than 42"	6	
2	Average Total Flow MGD		
	a. 0 - 0.10	1	*Extra 2 pts. for industrial flow in excess of 20% of total flow.
	b. 0.10 - 0.40	2	
	c. 0.40 - 0.70	3	
	d. 0.70 - 1.00	4	
	e. 1.0 - 5.0	5	
	f. 5.0 - 10.0	6	
	g. 10.0 - 20.0	7	
	h. 20.0 - 50.0	8	
	i. 50.0 - 100.0	9	
	j. 100.0>	10	
3	Total Miles of Sewer Sanitary & Combined. Do not include storm sewers.		
	a. 0 - 10	2	
	b. 10 - 20	4	
	c. 20 - 50	6	
	d. 50 - 100	8	
	e. 100>	10	10
4	Pump Stations Under Control of Collection Systems Operators		
	a. Standby power	2	
	b. Dry well station	2	
	c. Wet well station	2	
	d. Grit removal	1	
	e. Comminution	1	
	f. Bar rack	1	
	g. Aeration	1	
	h. Variable speed pumps	2	
	i. Number of stations		
	1) 2-4	2	
	2) 5-10	4	
	3) 10>	5	
	j. Alarm systems:		
	Flow	1	
	Personal safety	1	
	Telecommunications	1	18
5	Flow Measurement in Collection System	2	2
6	Siphons	2	2
7	Combined Sewers	3	3
8	Force Main	2	2

9	Chemical Additions		
	a. Hypochlorite	2	
	b. Gas	5	
	c. Other (explain)	2	9
10	Oldest Part of System		
	a. Prior 1940	3	
	b. Prior 1960	2	
	c. Prior 1980	1	
	d. New	0	3
11	Mechanical Equipment		
	a. High pressure jet truck		3
	b. Mechanical rodder	3	
	c. Bucket machine	3	
	d. Combination vacuum/jet truck	3	
	e. Closed circuit TV equipment	3	
	f. High pressure grouter	3	
	g. Other (be specific)		Maximum 15 points allowed for this section

9.3 Grade I Collection System
All systems for a total point value of 1 - 20

9.4 Grade II Collection System
All systems for a total point value of 21 - 39

9.5 Grade III Collection System
All systems for a total point value of 40 - 55

9.6 Grade IV Collection System
All systems for a point value of 55 or greater

10.0 QUALIFICATIONS OF COLLECTION SYSTEMS PERSONNEL

10.1 Four grades of Collection Systems personnel are hereby established to parallel the previously described classification of Collection Systems.

Grade I certified personnel shall be considered as qualified to maintain operation of Grade I Collections Systems.

Grade II certified personnel shall be considered as qualified to maintain operation of Grade II Collection Systems.

Grade III certified personnel shall be considered as qualified to maintain operation of Grade III Collection Systems.

Grade IV certified personnel shall be considered as qualified to maintain operation of Grade IV Collection Systems.

10.2 Applicants in all classifications shall meet the following general requirements:

- a. Be in satisfactory physical condition
- b. Be able to read and write the English language
- c. Be able to maintain desirable logs and records of operation and maintenance in a collection system of classification consistent with the grade applied for.

10.3 Education may be substituted for a portion of the experience as required in 10.4 - 10.7 to the degree indicated:

Grade I - No substitution

For the others as follows:

Extent of Education	Experience Equivalent
Bachelor of Science Degree	3 years
Associates Degree	2 years
Graduation from High School	1 year

Various other educational and experience equivalents will be considered as experience to the degree adjudged by the Certification Committee.

10.4 Grade I

All applicants for this grade must pass a Grade I examination and must submit satisfactory evidence of at least one year's experience in a level of responsibility in the operation and maintenance of a system in this or higher grade.

10.5 Grade II

All applicants for this grade must pass a Grade II examination and must submit satisfactory evidence of at least two years' experience in a level of responsibility in the operation of a collection system Grade I or higher, or one year's experience in operation of a system in Grade II or higher, and must submit satisfactory evidence of mechanical aptitude. Higher education may be substituted for no more than one year of experience, Section 10.3 notwithstanding.

10.6 Grade III

All applicants for this grade must pass a Grade III examination; must submit satisfactory evidence of at least six years' experience in a level of responsibility in the operation of a collection system in Grade II or higher, or of four years' experience in the operation of a collection system in Grade III or higher; and must have an educational equivalent of at least a high school graduate with mechanical aptitude. Higher education may be substituted for no more than two years' experience, Section 10.3 notwithstanding.

10.7 Grade IV

All applicants for this grade must pass a Grade IV examination; must submit satisfactory evidence of seven years' experience in a level of responsibility in the operation of a collection system in Grade III or higher, or at least six years' experience in the operation of a collection system in Grade IV; and must have an educational equivalent of at least a high school graduate with mechanical aptitude. Higher education may be substituted for no more than three years' experience, Section 10.3 notwithstanding.

EDUCATIONAL MATERIALS

The following resources may be used to obtain study materials:

Office of Water Programs
California State University, Sacramento
6000 J Street
Sacramento, CA 95819-6025
Telephone: (916) 278-6142
Fax: (916) 278-5959
<http://www.owp.csus.edu>

Water Environment Federation
601 Wythe Street
Alexandria, VA 22314-1994
Telephone: (800) 666-0206
Fax: (703) 684-2492
<http://www.wef.org>