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**RULES AND REGULATIONS**  
**ON**  
**LICENSING**  
**OF**  
**SUPERINTENDENTS**  
**OR OPERATORS**  
**OF**  
**PUBLIC WATER SUPPLY SYSTEMS**  
**PUBLIC WATER TREATMENT PLANTS, AND**  
**PUBLIC SEWAGE TREATMENT PLANTS**



NJ/KA8  
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1973

**NEW JERSEY STATE DEPARTMENT**  
**OF ENVIRONMENTAL PROTECTION.**

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## **PREFACE**

This booklet has been prepared for the purpose of assisting those interested in becoming a licensed operator or superintendent of a Public Water Supply System, Public Water Treatment Plant or Public Sewage Treatment Plant.

Public health is rapidly expanding both in scope and in the application of technical methods. The necessity for training was an important reason for the passage of laws in 1918 requiring licenses for persons employed as superintendents or operators. The necessity for employing trained and qualified personnel has become imperative.

Various universities and colleges offer courses in the sanitary and biological sciences.

In addition to courses giving collegiate credits, special courses are offered from time to time in particular aspects for those interested in operations of Public Water Supply Systems, Public Water Treatment Plants and Public Sewage Treatment Plants.

In evaluating applications for admissions to examinations, the New Jersey High School Equivalent Certificate will be recognized as the equivalent to graduation from an accredited high school. Information concerning the securing of such a Certificate can be obtained from the Division of Academic Credentials, State Department of Education, Trenton, New Jersey.

Field experience and training under qualified supervision is an important supplement to formal education.

Examination inquiries should be addressed to State Department of Health, Bureau of Examination and Licensing, P. O. Box 1540, Trenton, New Jersey 08625.

# NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

The State Department of Environmental Protection of the State of New Jersey pursuant to the authority vested in it by Chapter 177, Laws of 1947, hereby promulgates the following Rules and Regulations governing the examination and licensing of superintendents or operators of Public Water Supply Systems, Public Water Treatment Plants and Public Sewage Treatment Plants. All prior Rules and Regulations in these matters adopted on various dates by the Department of Environmental Protection of the State of New Jersey are hereby rescinded.

STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION  
THE STATE OF NEW JERSEY

**RICHARD J. SULLIVAN**  
*State Commissioner of  
Environmental Protection*

Filed Secretary of State: January 7, 1969  
Effective date: October 1, 1969

Chapter 33, P.L. 1970, which became effective May 2, 1970, transferred responsibility for examination and licensure of sewage and water treatment operators from the State Department of Health to the Department of Environmental Protection.

Applicants passing their examination will be issued a license in the name of the Department of Environmental Protection.

**AND**

One year full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply system, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

**OR**

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided, such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

One year of full time operating experience while in possession of a valid license one grade lower than that sought.

b. Associate Degree related to engineering or non-related college degree and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

Two years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

Two years of full time operating experience while in possession of a valid license one grade lower than that sought.

c. High School graduate or Equivalency Certificate with successful completion of an Introduction and an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

Four years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

Four years of full time operating experience while in possession of a valid license one grade lower than that sought.

**W-3**

a. College Degree related to engineering field or New Jersey Professional Engineer's license.

**AND**

One year full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply systems, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

**OR**

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided, such experience has been obtained under a licensed operator approved by this Department for this purpose.

b. Associate Degree related to engineering or non-related college degree.

**AND**

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

c. High School graduate or Equivalency Certificate and successful completion of an Introduction Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

Three years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

Equivalent training and/or experience may be accepted in lieu of completion of courses. The academic qualifications is a basic requirement and no substitution is to be accepted.

License Classifications

**PUBLIC WATER TREATMENT PLANTS**

T-1

a. College Degree related to engineering field or New Jersey Professional Engineer's license and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by License being sought.

**AND**

Two years full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply systems, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

**OR**

Two years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator in responsible charge approved by this Department for this purpose.

**OR**

Two years of full time operating experience while in possession of a valid license one grade lower than that sought.

b. Associate Degree related to engineering or college degree non-related and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

Three years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

Three years of full time operating experience while in possession of a valid license one grade lower than that sought.

c. High School graduate or Equivalency Certificate with successful completion of an Introduction and an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

Five years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

Five years of full time operating experience while in possession of valid license one grade lower than that sought.

**T-2**

a. College Degree related to engineering field or New Jersey Professional Engineer's license and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

One year full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply systems, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

**OR**

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided, such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

One year of full time operating experience while in possession of a valid license one grade lower than that sought.

b. Associate Degree related to engineering or non-related college degree and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

Two years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

Two years of full time operating experience while in possession of a valid license one grade lower than that sought.

c. High School graduate or Equivalency Certificate with successful completion of an Introduction and Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

**AND**

Four years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

**OR**

Four years of full time operating experience while in possession of a valid license one grade lower than that sought.

### T-3

a. College Degree related to engineering field or New Jersey Professional Engineer's license.

AND

One year full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply systems, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

OR

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided, such experience has been obtained under a licensed operator approved by this Department for this purpose.

b. Associate Degree related to engineering or non-related college degree.

AND

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

c. High School graduate or Equivalency Certificate and successful completion of a course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

Three years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

Equivalent training and/or experience may be accepted in lieu of completion of courses. The academic qualifications is a basic requirement and no substitution is to be accepted.

## License Classifications

### PUBLIC SEWAGE TREATMENT PLANTS

#### S-1

a. College Degree related to engineering field or New Jersey Professional Engineer's license and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

Two years full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply systems, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

OR

Two years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator in responsible charge approved by this Department for this purpose.

OR

Two years of full time operating experience while in possession of a valid license one grade lower than that sought.

b. Associate Degree related to engineering or college degree non-related and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

Three years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

OR

Three years of full time operating experience while in possession of a valid license one grade lower than that sought.

c. High School graduate or Equivalency Certificate with successful completion of an Introduction and an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

Five years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

OR

Five years of full time operating experience while in possession of a valid license one grade lower than that sought.

S-2

a. College Degree related to engineering field or New Jersey Professional Engineer's license and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

One year full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply systems, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

OR

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided, such experience has been obtained under a licensed operator approved by this Department for this purpose.

OR

One year of full time operating experience while in possession of a valid license one grade lower than that sought.

b. Associate Degree related to engineering or non-related college degree and successful completion of an Advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

Two years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

OR

Two years of full time operating experience while in possession of a valid license one grade lower than that sought.

c. High School graduate or Equivalency Certificate with successful completion of an Introduction and an advanced Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

Four years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

OR

Four years of full time operating experience while in possession of a valid license one grade lower than that sought.

S-3

a. College Degree related to engineering field or New Jersey Professional Engineer's license.

AND

One year full time working experience in a position requiring direct administrative responsibility for design and construction and placing of public water supply systems, public water treatment plants, or public sewage treatment plants into operation, provided experience has been obtained in the field for which license is being sought.

OR

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided, such experience has been obtained under a licensed operator approved by this Department for this purpose.

b. Associate Degree related to engineering or non-related college degree.

AND

One year full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

c. High School graduate or Equivalency Certificate and successful completion of an Introduction Course approved by the State Department of Environmental Protection in subject matter required by license being sought.

AND

Three years full time complete operating experience in a utility at least equivalent to that to be covered by the license sought provided such experience has been obtained under a licensed operator approved by this Department for this purpose.

S-In

This classification shall be limited to Industrial Waste Treatment Plants. Education requirements and/or experience shall be acceptable to the Department, with successful completion of a course in Industrial Waste Treatment approved by the State Department of Environmental Protection required by license being sought.

Equivalent training and/or experience may be accepted in lieu of completion of courses. The academic qualifications is a basic requirement and no substitution is to be accepted.

**6. EXAMINATION WEIGHTS.** In order to qualify in examination for a license, each applicant must receive a minimum rating of 70 %.

**7. LICENSES.** Applicants who attain a passing grade in their examination will be notified and a license issued upon payment of the required license fee. Applicants so notified shall forward the license fee within 10 days.

**8. CLASSIFICATION OF LICENSES.** Licenses are classified as set forth below.

*(a) Water Supply Systems.*

1. W-1 All water supply systems designed to deliver or delivering more than approximately 1,000,000 gallons per day.

2. W-2 All water supply systems designed to deliver or delivering less than approximately 1,000,000 gallons per day but serving approximately 50 or more dwelling units or properties.

3. W-3 All water supplies designed to deliver or delivering water to less than approximately 50 dwelling units or properties.

*(b) Water Treatment Plants.*

1. T-1 All surface water treatment plants and those plants employing sedimentation and/or coagulation, filtration, disinfection and other processes such as defined in T-2.

2. T-2 All water treatment plants employing iron and/or manganese removal, flouridation, chemical stabilization, pH adjustment, softening, and disinfection.

3. T-3 All water treatment plants employing disinfection only.

*(c) Sewage Treatment Plants.*

1. S-1 All biological and/or chemical coagulation treatment plants with approved design capacities of more than 250,000 gallons per day. All plants comprising primary treatment only with an approved design capacity of 5,000,000 gallons per day or more.

2. S-2 All biological and/or chemical coagulation treatment plants with approved design capacities of less than 250,000 gallons per day.

3. S-3 All primary treatment plants with approved capacities of less than 5,000,000 gallons per day.

4. S-In All industrial waste treatment plants. This classification of license shall be limited to use for the particular treatment facility to which it applies, except as permitted in Section 9 hereof.

**9. RESTRICTION ON USE OF LICENSES.** No licensee shall serve as the superintendent or licensed operator of a public water supply system, public water treatment plant, or public sewage treatment plant at which the classification of license required is of a higher grade than the license held by the licensee except that when a plant or system is upgraded during the period of employment of the present licensee, he shall be permitted to operate that plant or system on his existing license.

Permission to operate more than one utility shall be obtained from the Department. The Department reserves the right to limit the number of plants or systems a licensee may operate. Permits granted under this regulation shall be for a period of time designated by the Department, permits are granted for the express purpose of training another person or persons for license/s required at such a utility they shall not be renewable for any time period beyond the minimum time required of training for operating experience required for license at such utility.

Licensees shall notify the Bureau of Examination and Licensing of the Department at least two weeks prior to changing their positions.

**10. OPERATING REPORTS.** It shall be the duty of the persons authorized to be in charge of and holding the licenses to operate water purification and/or treatment plants and sewage treatment plants to furnish the New Jersey State Department of Environmental Protection, on or before the tenth day of the month following the one which the report is made and upon forms provided by the said State Department of Environmental Protection for that purpose, a monthly report or statement describing the operation of water purification and/or treatment plants and sewage treatment plants. Such a report or statement shall include all the applicable data required on the forms provided for that particular plant.

**11. VIOLATION OF REGULATIONS.** Violation of these regulations subjects licensee to penalties provided by statute.

**Appendix I**  
**ABSTRACTS OF N.J.S.A. TITLE 58, CHAPTER 11**  
**ARTICLE 5 AS AMENDED**

**Definitions**

58:11-18.10 Definitions. As used in this act (58:11-18.10 et seq.):

(a) "Public water treatment plant" means any structure or structures by means of which water prior to discharge into a public water supply system is subjected to the addition or abstraction of a substance or substances in order to enhance the safeness, palatability, public health or aesthetic qualities, or reduce the corrosive or hazardous properties of the water used for potable or domestic purposes.

(b) "Public sewage treatment plant" means any structure or structures by means of which domestic wastes are subjected to any artificial process in order to remove or so alter constituents as to render the wastes less offensive or dangerous to the public health, comfort or property of any of the inhabitants of this state before the discharge of the plant effluent into any of the waters of this state; this definition includes plants for the treatment of industrial wastes as well as a combination of domestic and industrial wastes.

(c) "Public water supply system" means a system comprising structures which operating alone or with other structures result in the derivation, conveyance or (transmission) or distribution of water for potable or domestic purposes to consumers in twenty or more dwellings or properties; this definition does not include a public water treatment plant.

(d) "Superintendent or operators" means all persons under any local titles or other designations who are now or shall hereafter be in direct general charge of public water treatment plants, public sewage treatment plants or public water supply systems and who are responsible for and supervise the condition, operation and effectiveness of the structures comprising the said plants or systems and who are responsible for the safeness or quality of the effluents discharged or delivered from said plants or said systems and who are experienced in the operation of the structures and have knowledge of the methods and controls used in the treatment of water or sewage or the deliveries or conveyance of water for potable or domestic purposes.

(e) "Department" means the department of ~~health~~ of the State of New Jersey.

(f) "Rules and regulations" means the rules and regulations adopted by the department of health of the State of New Jersey for the conduct of examinations for the licensing of superintendents or operators and may include qualifications for admittance to examinations and classifications based upon: the capacity of the plant or system, the amount of water supplied or sewage treated, the method of treatment, the source of water supply, the method of water distribution, the method of sewage collection, the nature or use of the waters prior to the use of said waters for potable or domestic purposes, the nature or use of the waters receiving the effluents from sewage treatment plants, and, the limitation of the use of licenses issued pursuant to this act. (58:11-18.10 et seq.).

(g) "Waters of this state" means the ocean and its estuaries, all springs, streams and bodies of surface waters, whether natural or artificial, within the boundaries of this state or subject to its jurisdiction.

(h) All other words or phrases shall be defined and construed as provided by chapter one of Title 1 of the Revised Statutes.

#### *Licensing by Examination*

58:11-18.11. In order to protect and preserve public health, safety and welfare, by providing that municipalities, corporations or persons owning or operating public water treatment plants, public sewage treatment plants or public water supply systems may secure the services of capable superintendents or operators, the department is hereby authorized to cause examinations to be made at least twice annually, by such persons and at such times and places as it may appoint and under such rules and regulations as it may adopt, for the purpose of determining the qualifications of applicants for licenses as superintendents or operators. Such examinations shall be in such subjects and conducted in such a manner as the department shall direct. Every applicant whose examination shall be approved by the department shall receive a license as superintendent or operator of public water treatment plants or public water supply systems or public sewage treatment plants, as the case may be.

Source. L. 1946, c. 295, section 2. Approved May 6, 1946, effective immediately.

58:11-18.12. No municipality, corporation or person shall appoint any person as superintendent or operator in charge of any public water treatment plant or of any public sewage treatment plant or of any public water supply system, or permit any person to discharge the duties of superintendent or operator of any such plant or system who is not a holder of a license issued by the department under the provisions of this act (58:11-18.10 et seq.); provided, however, that nothing herein contained shall prevent any municipality, corporation or person from continuing in office any person now occupying the office of superintendent or operator in charge of such plant or system, and the department upon certification from the proper municipal officer, corporation or individual, that such person held the office of superintendent or operator in charge of such plant or system at the time this act (58:11-18.10 et seq.) became effective, shall issue a license to said person to operate such plant or system in the same manner as if he had passed an examination held by the department; provided, further, however, that this act (58:11-18.10 et seq.) shall not affect the validity of licenses already issued by the department to superintendents or operators to operate such plants or systems under the provisions of chapter twenty-three, laws of one thousand nine hundred and eighteen (now sections 58:11-14 to 58:11-18 of the Revised Statutes) and chapter two hundred six, laws of one thousand nine hundred and thirty-eight (now sections 58:11-18.1 to 58:11-18.6 of the Revised Statutes).

#### *License and Renewal Fees; Expiration of Licenses*

58:11-18.13. The department shall issue a license upon payment of a license fee to any applicant who, in the opinion of the

department, has satisfactorily met all the requirements of this act (58:11-18.10 et seq.). The license fee shall be ten dollars (\$10.00), of which five dollars (\$5.00) shall accompany the application, the remainder to be paid upon notification that the applicant is entitled to a license. Should the department deny admittance to the examination or the issuance of a license to any applicant the initial fee of five dollars (\$5.00) shall be retained. Licenses shall expire on the thirtieth day of September following issuance or renewal. Licensees shall apply for renewal on or before the thirtieth day of September of each year. Renewal may be effected at any time during the month of September by the payment of a fee of five dollars (\$5.00). The failure on the part of the licensee to renew his license annually in the month of September as required shall not deprive such person of the right of renewal but the fee to be paid for renewal of a license after the thirtieth day of September shall be one dollar (\$1.00) for every three months or fraction thereof that payment of renewal is delinquent in addition to the annual renewal fee of five dollars (\$5.00). The failure on the part of the licensee to renew his license within two years from the date of expiration of said license will automatically revoke such license.

#### *Revocation of Licenses*

58:11-18.14. The department may revoke or suspend the license of any superintendent or operator of a public water treatment plant or public sewage treatment plant or public water supply system if, after a hearing held by the department or its director at which the superintendent or operator shall have had an opportunity to be heard, either in person or by counsel, the department determines that the superintendent or operator is incompetent to manage the plant or system, or that he has willfully neglected his duty in supervising the operation of the plant or system, or that he has disregarded or disobeyed the lawful orders, rules or regulations of the department. Any person whose license shall have been revoked shall be ineligible for admission to any examination authorized by this act (58:11-18.10 et seq.) for a period of not less than six months nor more than two years.

#### *Penalties*

58:11-18.15. Any municipality, corporation or person owning or operating a public water treatment plant, or a public sewage treatment plant or a public water supply system who shall violate any of the provisions of this act (58:11-18.10 et seq.), or any person commencing or continuing to discharge the duties of a superintendent or operator of a public water treatment plant, a public sewage treatment plant or a public water supply system without first having obtained a license or having failed to renew his license as provided in this act (58:11-18.10 et seq.), or discharging the duties of a superintendent or operator of such plants or systems contrary to any of the provisions of this act (58:11-18.10 et seq.), shall be subject to a fine of ten dollars (\$10.00) for each day on which the violation has occurred. The penalty shall be recovered in the manner hereinafter provided.

Source. L. 1946, c. 295, section 6. Approved May 6, 1946, effective immediately.

*Prior-to Section*

58:11-18.18. Nothing herein contained shall be held to abate or render invalid any notice or proceeding, or suit at law or in equity, which may have been served, begun or instituted by the department, prior to the date hereof, in accordance with the powers and duties heretofore conferred upon it, but the same shall continue in full force and effect, and be further advanced and prosecuted in the name of the department; nor shall anything in this act (58:11-18.10 et seq.) be construed to anyway affect the tenure, term or status of any person holding a position requiring a license under the provisions of this act (58:11-18.10 et seq.) at the time of the passage of this act (58:11-18.10 et seq.).

Source. L. 1946, c. 295, section 9. Approved May 6, 1946, effective immediately.

*Act Supersedes Prior Statutes; Tenure Act Applies*

58:11-18.21. In so far as the provisions of this act (58:11-18.10 et seq.) are inconsistent with the provisions of any act, general or special, the provisions of this act (58:11-18.10 et seq.) shall be controlling, but nothing in this act (58:11-18.10 et seq.) contained shall be construed to repeal or in anyway impair the provisions of chapter two hundred thirty-four of the laws of one thousand nine hundred and forty-one, and said last mentioned act shall also be applicable to persons licensed under this act (58:11-18.10 et seq.).

Source. L. 1946, c. 295, section 12. Approved May 6, 1946, effective immediately.

**The Tenure Act — Chapter 234, Laws of 1941**

58:11-18.7. *Tenure for persons in charge; removal; hearing.*

No person now or hereafter licensed under the provisions of article five of chapter eleven of Title 58 of the Revised Statutes, having direct general charge of the operation and maintenance of public water systems or sewage disposal or treatment plants after five years' consecutive service in any such position shall be removed from his position or subjected to a reduction of salary except for good cause and after a public hearing. In computing such five years' service the time served before the passage of this act shall be included, as well as time served after the passage hereof. The public board, officer or commission having power of appointment of any such person or

having the power to appoint a successor of any such person whom it is sought to remove or whose salary it is sought to reduce, shall formulate or receive charges, in writing, against such person and shall fix a time and a place for a hearing thereon. A written copy of the charges and a written notice of the time and place of the hearing shall be served upon the person sought to be removed at least five days prior to the hearing. At the hearing the public board, officer or commission shall hear all witnesses and receive all evidence produced and if the charges are found to be true in fact and just cause be shown the public board, officer or commission may remove or reduce the salary of the person against whom charges are made.

Source. L. 1941, c. 234, section 1, p. 654. Approved June 28, 1941, effective immediately.

**58:11-18.8. Purpose; persons not affected.** The purpose of this act (58:11-18.7 et seq.) is to prevent the unwarranted removal or reduction of salary without just cause of the individual who is now or shall hereafter be directly responsible for and in direct charge of the maintenance and operation of public water systems and sewage disposal or treatment plants. This act (58:11-18.7) shall not, however, affect any public officer whose term of office is now or shall hereafter be fixed by statute.

Source. L. 1941, c. 234, section 2, p. 655. Approved June 28, 1941, effective immediately.

**58:11-18.9. Private corporations not affected.** This act (58:11-18.7 et seq.) shall not apply to private corporations engaged in selling water to the public, either at wholesale or retail or to private corporations owning and operating public sewage disposal or treatment plants.

Source. L. 1941, c. 234, section 4, p. 655. Approved June 28, 1941, effective immediately.

Note: L. 1941, c. 234, section 4, p. 655, approved June 28, 1941, effective immediately, provided for the repeal of all acts or parts of acts inconsistent with chapter 234 (58:11-18.7 to 58:11-18.9).

## Appendix II

### WHAT CANDIDATES SHOULD KNOW IN PREPARING FOR EXAMINATIONS

The following are to be considered as general guides in preparing for various licensing examinations. However, it is expected all candidates will prepare themselves by studying and reviewing all aspects even though some plants or systems may not presently require full treatment facilities etc.

#### Water Supply System Operator Candidates

1. Statutes pertinent to Water Supplies.
2. Statutes pertinent to Licensing of Operators.
3. Elementary Bacteriology and Chemistry.
4. Physical (cross) connections.
5. Water Well maintenance and operation.
6. Various aspects of Water Distribution.
7. Public Health considerations.
8. Administration, including monthly records and reports.

#### Water Treatment Plant Operator Candidates

1. Statutes pertinent to Water Supplies.
2. Statutes pertinent to Licensing of Operators.
3. Bacteriology and Chemistry.

4. Physical (cross) connections.
5. Various methods of Water Treatment.
6. Plant Operations and maintenance.
7. Public Health considerations.
8. Administration, including monthly records and reports.  
Sewage Treatment Plant Operator Candidates
1. Statutes pertinent to Stream Pollution and Sewage Facilities.
2. Statutes pertinent to Licensing of Operators.
3. Definitions of commonly used Sewerage terms.
4. Computation and Analysis of Mathematical Data.
5. Principles of Sedimentation, Filtration, Chemical Treatment, Activated Sludge, Sludge Digesting, Handling, Conditioning and Disinfection.
6. Laboratory Procedures, Field Tests and Interpretations.
7. Public Health aspects of Sewage Treatment.
8. Sewerage Facilities Administration aspects.
9. Treatment Plant Operating difficulties. causes and remedies.
10. Monthly Records and Reports.

### Appendix III

## SUGGESTED TEXTS FOR REVIEW BY PROSPECTIVE LICENSEES

#### *Water Treatment and Water Supply*

**Manual of Instruction for Water Treatment Plant Operators—New York State Department of Health, Albany, New York**

**Manual for Water Works Operators—Texas Water and Sewerage Works Association, Austin, Texas**

**Operators Manuals of the American Water Works Association, 2 Park Avenue, New York, New York**

**Water Supply Engineering (Babbitt and Doland) McGraw-Hill Book Company, New York, New York**

#### *Sewerage Treatment*

**Manual of Instruction for Sewerage Treatment Plant Operators, New York State Department of Health, Albany, New York**

**Manual for Sewerage Treatment Plant Operators—Texas Water and Sewerage Works Association, Austin, Texas**

**Operators Manuals of the Water Pollution Control Federation, 4435 Wisconsin Avenue, N.W., Washington 16, D. C.**

**Sewerage Treatment (Imhoff and Fair)—John Wiley & Sons, New York, New York**

#### *Laboratory*

**Analysis of Water and Sewerage (Theroux, Eldridge and Mallman), McGraw-Hill Book Company, New York, New York**

**Standard Methods for the Examination of Water, Sewerage and Industrial Wastes—American Public Health Association, Inc., 1790 Broadway, New York, New York**

**Note: There are many fine texts on the above subjects and prospective licensees may obtain additional references from other sources.**