Operator Training vs Operator Certification

OTCO-B13454-OM 1.00 Hour

Curtis L. Truss Jr., OTCO Executive Director

Operator Training vs Operator Certification
OTCO-B12409-OM 1.00 Hour

1) What is Certification ?
2) What is OEPA Take on Operator Certification?
3) Public Officials on Training & Certification

What Are Your Thoughts Now?

Operator Training vs Operator Certification

A *certificate* verifies that a person has completed a course or series of courses at an educational institution.

A *certificate* demonstrates that the learner understands course content at a specific period in time and is often listed on a resume as evidence of knowledge for prospective employers. Both newcomers to the workforce and experienced professionals may earn certificates.

Operator Training vs Operator Certification

A *certification* verifies that a professional has met a certain set of criteria for a skill or job as measured by a third-party assessment.

Certifications are awarded by a third-party, standard-setting organization when a candidate passes an assessment process indicating mastery of a defensible set of standards.

Operator Training vs Operator Certification

A *certification* verifies that a professional has met a certain set of criteria for a skill or job as measured by a third-party assessment.

The standards are developed through a comprehensive job analysis resulting in an outline of the required knowledge and skills for a particular profession. Certifications typically require some level of professional experience before beginning the process.

Operator Training vs Operator Certification

A *license* is verification by a government agency that a professional is able to perform a particular occupation in a particular location, such as a certain state.

Licenses are similar to certifications, as they indicate competency of a set of standards and must be renewed with continuing education.

Operator Training vs Operator Certification

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Operator Training vs Operator Certification

Rhode Island

- Acupuncturists
- Adult Day Care Providers
- Aquatic Venues
- Asbestos Professionals
- Assisted Living
- Athletic Trainers
- Barber, Hairdresser and Cosmetologist
- Behavioral Analysts
- Birth Centers
- Blood Testing Screening Programs
- Chemical Dependency Professionals
- Chiropractic
- Dairy Industry Professionals
- Dental Professionals
- Dialysis Centers
- Dietitians and Nutritionists
- Drinking Water Operators
- Electrologists
- Electronic Nicotine-Delivery System Distributors
- Emergency Medical Service Providers
- Food Markets
- Food Processors
- Food Safety Managers
- Freestanding Emergency

The Search For Certified Professional Water & Wastewater Operators

Tuscarawas County Mayor's Dinner Meeting

September 24, 2019-Tuscarawas Park Pavillion

Curtis L. Truss Jr., OTCO Executive Director

WHAT DO YOU EXPECT

The Beginning of Mandatory Certification

Of Water & Wastewater Treatment Plant Operators

July 15, 1937

Public Health Council Passed Regulations

“Governing Operating Personnel of Water & Sewage Treatment Works”

Effective August 1, 1937

What did rules say?

1. Water & Sewage works be under supervision of a trained individual whose ability shall have been certified by the State Director of Health.

2. Director of Health shall set up rules for examination; classification and certification.

3. Director of Health shall prescribe tests and require Monthly Reports of Operations.

MAJOR IMPACTS ON DEVELOPMENT OF OPERATOR CERTIFICATION

Water Plants built at turn of century – major reduction of typhoid fever and related water borne diseases

1. WPA projects in 1930's building thousands of water & sewer systems across the country.
2. 1937 – Mandatory Certification of Operators in charge of facilities.
3. Formation of OTCO 1964.
4. Clean Water Act of 1972 providing grants to construct sewer systems and upgrade Wastewater treatment plants across America

What was status of Water and Sewage Works in 1937?

First Water Plants in Ohio

1821 Cincinnati
1835 Steubenville
1840. Zanesville, Lisbon
1853. Massillon
1855. Cleveland
1857. Waynesburg
1862. Salem
1869. Wooster, Canton, Dayton
1870. Mansfield
By 1940, 414 Water Plants serving 4,961,500 people

First Wastewater plants in Ohio

1893. Canton
1894. Oberlin
1886. Alliance, Fostoria
1898. Clyde
1900. Shelby
1901. Kenton, Lakewood
1902. Plain City, Mansfield, Westerville, Xenia, Ashland
1903. Delaware, Geneva
By 1940, 183 Wastewater Treatment Plants serving 3,230,400 people

By August 1, 1937

127 Water Treatment Plants and 114 Sewage Works are classified.

Classifications were determined by the type of plant and the population served.

Plants were classified as A, B, & C

"What classification is equal to today's Class III ?"

SUGGESTED CLASSIFICATIONS OF WATER PURIFICATION AND WATER SOFTENING PLANTS IN OHIO

Class A. 1. Any purification or softening plant using surface water from an impounded supply or other relatively unpolluted source which supplies a population of over 15,000.

2. Any purification or softening plant using surface water from a highly polluted source which supplies a population over 5,000.

3. Any softening plant using ground water which supplies a population over 30,000.

Class B. 1. Any purification or softening plant using surface water from an impounded supply or other relatively unpolluted source which supplies a population less than 15,000.

2. Any purification or softening plant using surface water from a highly polluted source which supplies a population less than 5,000.

2. Any softening plant using ground water which supplies a population between 5,000 and 30,000.

Class C. 1. Any softening plant using ground water which supplies a population less than 5,000.

Advisory Board of Examiners consisted of:

5 members

- 2 engineers (1-consultant; 1-professor)
- 1 water operator
- 1 sewage works operator
- 1 member of Division of Engineering-Ohio Department of Health

First Board met March 29, 1938

1) R.W. Furman, Supt. Of Water Purification, Toledo
2) T.C. Schaetzle, Supt. Of Sewage Works, Akron
3) A.E. Kimberly, Consulting Sanitary Engineer, Columbus
4) G.E. Barnes, Professor, Case School of Applied Science, cleveland
5) F.D.Stewart, Engineer, State Department of Health, Columbus

"Grandfather Clause"

A number of certificates were issued based upon eligibility under the *"Grandfather Clause Rule VII"*.

Grandfather certificates were issued on the basis of the position held **not** on qualifications of the individuals.

First written exams were given on November 3, 1939

- 136 Water Works Applicants
- 136 Sewage Works Applicants

By the end of 1939

- 486 Persons certified in water
- 320 Persons certified in Sewage Treatment

The first examinations were given in five locations throughout the state.

- Class "D" certificates were given orally.
- Written Examinations – 1 hour to take. Three types of answers:
    (1) circle answer
    (2) check true & false:
    (3) multiple choice

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First water exam: 55 out of 86 passed written exam 76 passed oral exam

First Sewage Works exam: 59 out of 98 passed written exam 72 passed oral exam

By 1941, Class "D" Certificate discontinued & not permit holder to be in responsible charge.

In 1949 Grandfather Clause was removed.

FIRST WATER CERTIFICATES IN OHIO (Class A)

Number	
57	Stewart, Franklin Dean
58	Waring, Frederick Holman
61	Finkbeiner, Carleton S.
23	Hoover, Charles P.
76	Sheets, W. D.
90	Melick, Richard F.
92	Riehl, Merrill Landis

Rules were adopted by the Director of the Health Department in September 1937 and amended in 1939. The eight rules, as amended and adopted by the Director, are summarized as follows:

I. Provides for appointing an Advisory Board to examine applicants and recommend issuance or non-issuance of certificates.
II. Applications for examination must be submitted 30 days prior to examination.
III. The Board is authorized to give examinations either oral or written or both.
IV. Authorizes the Director to revoke certificates with cause, and to reinstate after 12 months if evidence warrants.
V. Certificates shall be issued in four classes; A, B, C & D.
VI. Requirements for applicants are defined:

Class A, prerequisite – **registration as a professional engineer** and six years experience.

Class B, college graduation and three years experience or high school graduation and six years experience.

Class C, college graduation and six months experience or high school graduation and three years experience.

Class D, eighth grade education and one year experience.

I. Provided for issuance of certificates to qualified personnel employed prior to August 1, 1937. This rule was known as the "Grandfather Clause."

VIII. "No fee shall be charged for the application, examination and certification of – personnel."

In the first six examinations given by the Board, **53% passed.**

Certification activities were suspended during World War II.

In February, 1964, the following changes were made:

- Certification required in systems over 250 population

- A point system would be used to classify treatment plants

- Certificate changes to Class I, II, III and IV

- An operator-in-training position was formed

- Limited certificates were approved

- Reciprocation allowed with other states

Exam would consist of two sections: (1) theory & operations; (2) design & math

STATUS OF WATER & WASTEWATER BY 1960

521 Water Works Serving 6,830,800 persons

or

70.4% of state's population

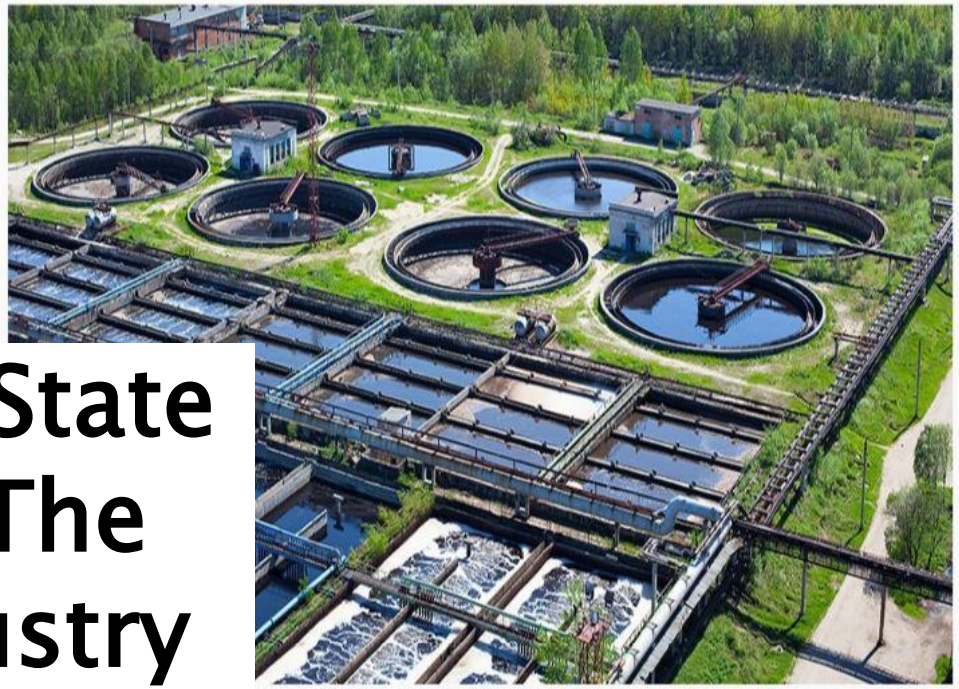
WATER PLANTS BY TYPE

- Water Purification	71
- Water Softening & Purification	140
- Water Softening only	61
- Iron Removal only	56
- Chlorine Disinfection only	95
- No Treatment	115
	538

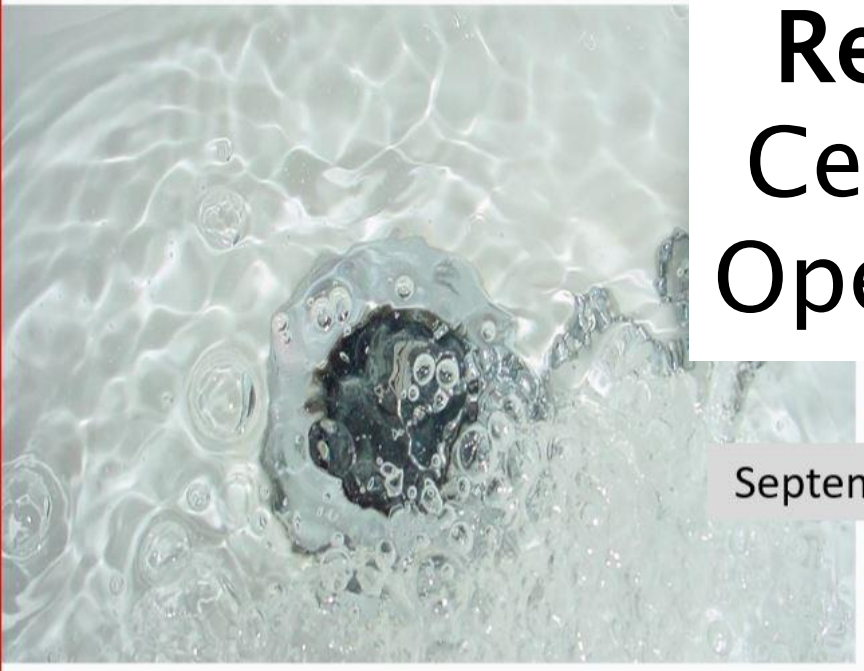
325 Sewage Works Severing 6,223,187 PERSONS

SEWAGE WORKS BY TYPE

- Activated Sludge	92
- Sand Filters	15
- Trickling Filters	64
- Chemical Precipitation	3
- Plain Sedimentation only	66
	325



The State of The Industry Report: Certified Operators



September 19, 2018

Ohio Environmental Protection Agency

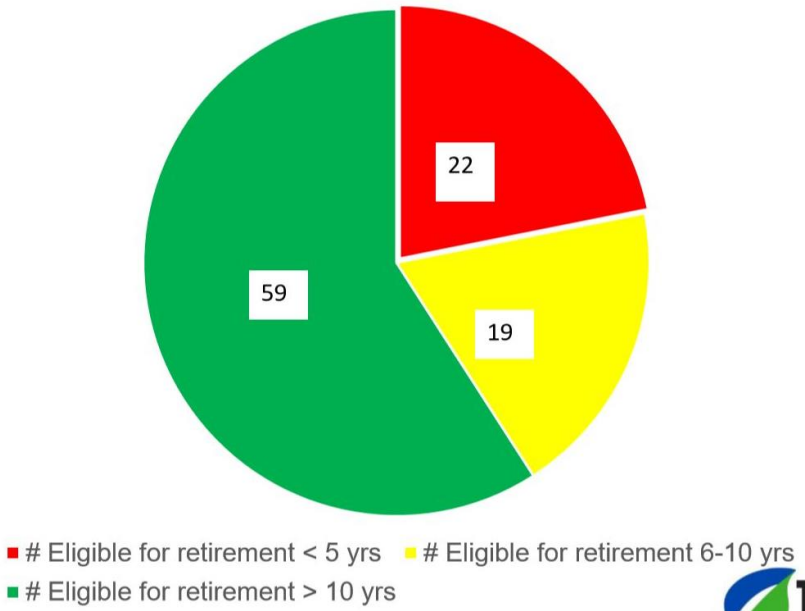
Ohio Water and Wastewater Operator Workforce Development Summit

Andy Barienbrock, Manager

Operations, Resiliency and Certification
Division of Drinking and Ground Waters
614-728-1216
Andrew.barienbrock@epa.ohio.gov

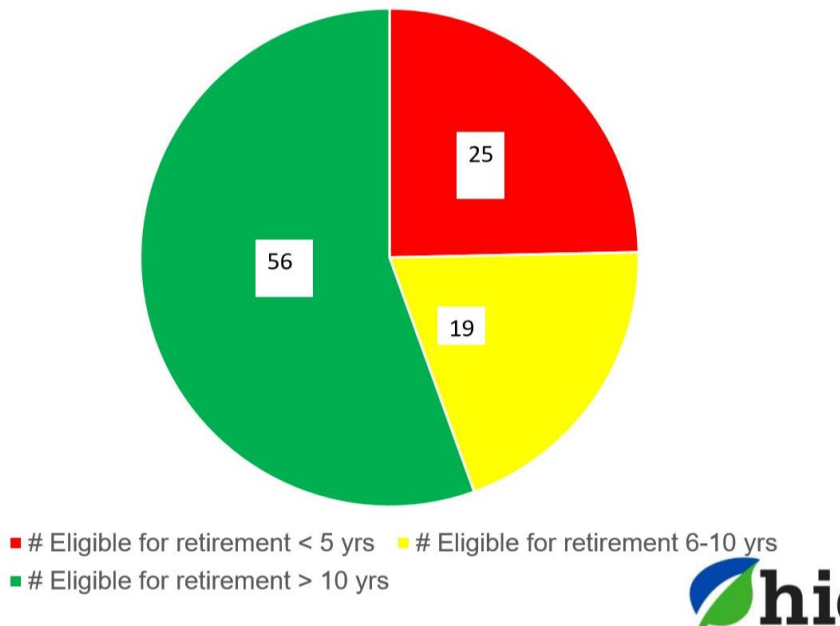
Ohio Environmental Protection Agency

Water Operators Eligibility for Retirement



Ohio Environmental Protection Agency

Wastewater Operators Eligibility for Retirement



Ohio Environmental Protection Agency


WHAT
NEXT?

New Credentials for 2019-2020

The Ohio Department of Education, in collaboration with the Governor's Office of Workforce Transformation, has released additions to its FY2020 Industry-Recognized Credential List. The methodology for building the list of industry-recognized credentials was updated with the passage of Ohio House Bill 49. Industry-recognized credentials may be added to the current list by approval from a committee of Industry Professionals convened by the State Superintendent of Education in collaboration with the Governor's Office of Workforce Transformation.

This year our panel of industry professionals reviewed all currently approved credentials, as well as all credential applications received, in spring and summer 2019. The industry panel did not recommend removing any currently approved industry-recognized credentials from the 2019-2020 list. The updated FY2020 Industry Recognized Credential list will be posted in the coming weeks on the Ohio Department of Education's Website, but you can view the approved additions to the list below.

Career Field	Credential Name	Credential Vendor	Point Value
Agriculture	Ohio EPA Professional Class A Wastewater Operator OIT (Operator In Training)	Operator Training Committee of Ohio (OTCO)	12
Agriculture	Ohio EPA Professional Class A Water Operator OIT (Operator In Training)	Operator Training Committee of Ohio (OTCO)	12
Agriculture	Ohio EPA Professional Class I Wastewater Operator OIT (Operator In Training)	Operator Training Committee of Ohio (OTCO)	12
Agriculture	Ohio EPA Professional Class I Water Operator OIT (Operator In Training)	Operator Training Committee of Ohio (OTCO)	12

https://www.youtube.com/watch?v=KrBBePhuFII&feature=youtu.be

Champaign, Clark, Cuyahoga, Erie, Washington Wayne, Meigs, Morgan

LT. Governor
Jon Husted


RITTMAN
HIGH SCHOO


Rural King
Rural King
Rural King
Rural King
Dylan
Makenna


LEHMAN'S


UTILITY MANAGEMENT IN THE 21ST CENTURY
The future
of operator training

The future of operator training

Formation of the US Environmental Protection Agency and passage of the Safe Drinking Water Act of 1974 and its subsequent amendments forever changed the role of the water treatment plant operator. Well-developed training has always been viewed as crucial for drinking water engineers, consultants, managers, and lab technicians, but operator training has only recently evolved from small informal get-togethers to sophisticated delivery methods such as satellite downlinks with two-way communication. Training and certification are now required to ensure that personnel on the front lines of the treatment process are continually educated about water treatment advances and regulations. By 2050, operator training and certification will have advanced even further to meet increasing demands for safer drinking water.

Operator training to become more comprehensive

In the new century, operator training will become more in-depth. The scope of operators' jobs will broaden so that they can satisfy customer demands, stay in compliance with regulatory requirements, and "do more with less." Operators will have to increase their knowledge of laboratory issues and reporting information, and training will encompass more of the compliance side of operations. Virtual training on Web sites will be prominent. Simulations will be used more to train operators to perform under various conditions and to test their competency to solve problems.

Wastewater treatment training will be introduced

Training will also include the other side of our profession: wastewater treatment. Collaboration of the two areas is vital to achieving the best-quality drinking water. It will be commonplace for a utility to have water–wastewater operators or, as they may be called in 2050, water–water reclamation technicians. The integration of water and wastewater technology and cross-training of personnel will be needed on the medium to large scale. (Small systems have been accomplishing this feat for decades.)

Some medium-size utilities have already begun to combine distribution crews and wastewater collection systems crews, and AWWA has begun collaborative efforts with the Water Environment Federation in technological, managerial, and regulatory endeavors. This is the shape of things to come.

Simulations will be used more to train operators to perform under various conditions and to test their competency to solve problems.

Certification will be mandatory

Certification will be mandatory for all operators. Certification examinations will have to test operators' knowledge of operations as well as their problem-solving skills. Certification and licensure will be the flag water suppliers will wave to the public to instill confidence. Professionals in other fields (e.g., engineers, nurses, contractors, plumbers, carpenters, and accountants) are licensed. It makes sense that operators will need a license to run a drinking water plant because water is one of the few products that cannot be recalled after production and distribution.

One concept holds true

Despite all the advances anticipated over the next 50 years, one basic concept will still hold true: the demand for educated operators will increase, the need for their ongoing education will continue to rise, and there will always be a need for one-on-one training sessions. Backyard seminars (small informal and formal training sessions) must be used as one of the tools to pass skills and knowledge from person to person. This personal contact should never be lost in the technological strides we make in the next 50 years.

Curtis L. Truss Jr. is executive director of the Operator Training Committee of Ohio Inc., 3972 Indianola Ave., Columbus, OH 43214; (614) 268-6826; <leeotco@ohiowater.org>.

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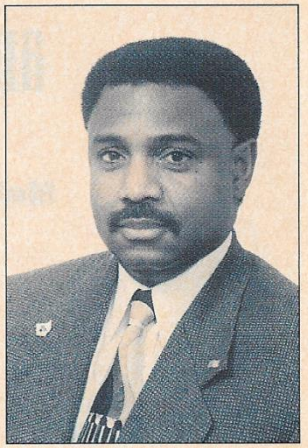

QUESTIONS