

Board Policy on Certification: Minimum Requirements

Municipal Wastewater Operator Certification Board of Examiners

Required by the Part 41, Sewerage Systems, administrative rules promulgated pursuant to Part 41, Sewerage Disposal and Waterworks Systems, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, Mich Admin Code, R 299.2901 et seq., all wastewater operator certification applicants must pass a written exam for certification except as provided in Rule 299.2924(2).

An operator must earn certification at the previous lower level to write an exam at the A, B, or C level.

Class A Certification Minimum Requirements

CASE I: FOUR YEAR COLLEGE DEGREE

EDUCATION REQUIREMENTS

A four-year college degree including at least nine semester hour credits from each of the three specified educational categories (see definitions). These credits must be divided between at least three courses in different subject areas from each of the three general categories.

(For example: General Chemistry 101, 102, and 103 would be considered one subject area, but General Chemistry, Biochemistry, and Analytical Chemistry would be considered three subject areas in the Science category.)

EXPERIENCE REQUIREMENTS

A minimum of four calendar years working full-time (equivalent to 7,200 hours) of acceptable operational experience in a Class B or higher treatment facility, two years of which shall have been in an acceptable supervisory position or a position of major operational responsibility (MOR). The operational experience shall include at least three months (or accumulated 480 hours) in the area of secondary treatment and at least three months (or accumulated 480 hours) in each of at least two other specified areas of operational experience (see [Definitions](#)).

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CASE II: TWO YEARS OF COLLEGE

EDUCATION REQUIREMENTS

Less than a four-year college degree, but at least the equivalent of two years (60 semester hours) of college with the minimum course subjects as outlined for a four-year college degree (Case I).

EXPERIENCE REQUIREMENTS

Two additional calendar years working full-time (equivalent to 3,600 hours) of acceptable operational experience in a Class B or higher treatment facility to those required in Case I.

CASE III: MINIMUM COLLEGE

EDUCATION REQUIREMENTS

Minimum course subjects as outlined for a four-year college degree (Case I).

EXPERIENCE REQUIREMENTS

Four additional calendar years working full-time (equivalent to 7,200 hours) of acceptable operational experience in a Class B or higher treatment facility to those required in Case I.

Class B Certification Minimum Requirements

CASE I: ONE OR TWO YEARS OF COLLEGE

EDUCATION REQUIREMENTS

Completion of at least one year (30 semester hours) of college including at least three semester hour credits in each of the three specified educational categories (see definitions).

EXPERIENCE REQUIREMENTS

A minimum of four calendar years working full-time (equivalent to 7,200 hours) of acceptable operational experience in a Class C or higher treatment facility, two years of which shall have been in an acceptable supervisory position or a position of MOR. The operational experience shall include at least three months (or accumulated 480 hours) in the area of secondary treatment and at least three months (or accumulated 480 hours) in each of at least two other specified areas of operational experience (see [Definitions](#)).

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CASE II: MINIMUM COLLEGE EDUCATION

EDUCATION REQUIREMENTS

Less than one year (30 semester hours) of college but at least the minimum course subjects as outlined for Case I and completion of at least three additional training courses acceptable to the Board, such as: hydraulics, chemistry, applied mathematics, phosphorus analysis and removal techniques, activated sludge, wastewater analysis (lab), maintenance, sludge handling, electrical maintenance, CSU-Sacramento Wastewater Treatment Course, etc. The additional courses must be a minimum of ten contact hours in length and require passage of a course ending examination.

EXPERIENCE REQUIREMENTS

One additional calendar year (equivalent to 1,800 hours) of acceptable operational experience in a Class C or higher treatment facility to those required in Case I.

Note: Class A and B applications will not be considered complete until transcripts for college courses and/or verification of satisfactory completion for all training courses are received.

Class C Certification Minimum Requirements

EDUCATION REQUIREMENTS

Completion of high school or its equivalent.

EXPERIENCE REQUIREMENTS

A minimum of two calendar years working full-time (equivalent to 3,600 hours) of acceptable operational experience in a Class D or higher wastewater treatment facility. The operational experience shall include at least one month (or accumulated 160 hours) in the area of secondary treatment and at least one month (or accumulated 160 hours) in each of at least two other specified areas of operational experience (see definitions).

Class D Certification Minimum Requirements

EDUCATION REQUIREMENTS

Completion of high school or equivalent.

EXPERIENCE REQUIREMENTS

A minimum of one calendar year working full-time (equivalent to 1,800 hours) of acceptable operation experience in a Class D or higher treatment facility. The year of acceptable operational experience shall be gained in one or more of the specified areas of operational experience (see definitions).

Class L2 Certification Minimum Requirements

EDUCATION REQUIREMENTS

Completion of high school or equivalent.

EXPERIENCE REQUIREMENTS

A minimum of one calendar year of verifiable experience, which is achieved by actual hands-on performance, observation, or immediate supervision, of the duties involved in the routine required monitoring, operation, and control of the equipment and processes, including at least one seasonal discharge, involved in a Class L2 type wastewater stabilization lagoon system.

Class L1 Certification Minimum Requirements

EDUCATION REQUIREMENTS

Completion of high school or equivalent.

EXPERIENCE REQUIREMENTS

A minimum of one calendar year of verifiable experience, which is achieved by actual hands-on performance, or immediate supervision, of the duties involved in the routine required monitoring, operation, and control of the equipment and processes, including at least one seasonal discharge, involved in a Class L1 type wastewater stabilization lagoon system.

Class SC Certification Minimum Requirements

EDUCATION REQUIREMENTS

Completion of high school or equivalent.

EXPERIENCE REQUIREMENTS

A minimum of one calendar year of verifiable experience which is achieved by actual hands-on performance, or immediate supervision, of the duties involved in the routine required monitoring, operation, and control of the equipment and processes involved in a Class SC type facility.

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Additional Education and Experience to Write Class D Exam

The following college programs, industrial wastewater experience, and overtime hours are assessed on a case-by-case basis and may be approvable to write the Class D examination.

The Associate and Bachelor's degree programs allow an operator to write the Class D examination without any provisions.

The certificate programs allow an operator to write the Class D examination, and an operator may earn a provisional certificate that is valid for up to 18 months. Following one calendar year (equivalent to 1,800 hours) of work experience, the operator must communicate with the Michigan Department of Environment, Great Lakes, and Energy (EGLE) and EGLE will verify the operator's work experience in the State of Michigan. If the operator is in good standing, the provisional Class D certificate will transition to a formal Class D certificate, and the operator may continue working towards their Class C certificate.

Approved College Degree Programs

BAY COLLEGE

Education Requirements

Completion of an Associate degree in Water Resources Management. This degree completes the Class A and B education requirements for an operator.

Experience Requirements

Completion of an internship/co-op experience as provided in the approved degree program.

DELTA COLLEGE

Education Requirements

Completion of an Associate degree in Water and Wastewater Treatment Technology. This degree completes the Class A and B education requirements for an operator.

Experience Requirements

Completion of an internship/co-op experience as provided in the approved degree program.

MICHIGAN TECHNOLOGICAL UNIVERSITY

Education Requirements

Completion of a Bachelor's degree in Engineering with a Wastewater Minor. This degree completes the Class A and B education requirements for an operator.

Experience Requirements

Completion of an internship/co-op experience as provided in the approved degree program.

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Approved Certificate Programs

BAY COLLEGE AND GRAND RAPIDS COMMUNITY COLLEGE

Education Requirements

Completion of a one-year certificate in Water Technology in the wastewater track.

Industrial Wastewater Experience

On a case-by-case basis, an operator's previous experience at an industrial wastewater treatment facility may be reviewed and approved only for the Class D examination. This experience does not advance an operator through the remaining certification process; it only allows an operator to earn the Class D certificate. Following the Class D certificate, an operator must earn a minimum of two calendar years (equivalent to 3,600 hours) of work experience at a municipal wastewater treatment facility to earn the Class C certificate.

Overtime Hours

A maximum of 160 hours of overtime may be used to meet the experience requirement for any certification exam. This is equivalent to approximately one month of work experience in a calendar year. An operator may apply for an examination and use up to 160 hours of overtime experience to qualify for an exam using the exam date, only if they are one month short of the total required calendar years.

Document Definitions

Acceptable Operational Experience for Class A, B, and C:

This consists of actual hands-on performance, or immediate supervision, of the duties involved in the routine required monitoring, operation, and control of the equipment and processes involved in at least three of the five specified areas of wastewater treatment.

Acceptable Operational Experience for Class D:

This consists of actual hands-on performance of routine required monitoring, operation, and control of the equipment and processes involved in one or more of the five specified areas of wastewater treatment.

Acceptable Supervisory Position for Class A Certification:

Immediate supervision of five or more wastewater treatment plant employees performing duties in one or more of the five specified areas of operational experience.

Acceptable Supervisory Position for Class B Certification:

Immediate supervision of three or more wastewater treatment plant employees performing duties in one or more of the five specified areas of operational experience.

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Position of Major Operational Responsibility (MOR):

One who is held responsible for making the major decisions for one or more of the five specified areas of operational experience.

Specified Areas of Operational Experience:

• **PRELIMINARY/PRIMARY TREATMENT:**

Preliminary treatment is the area involved in the removal of rocks, rags, sand, and similar materials from the raw wastewater that may hinder the operation of further treatment processes. Primary treatment is the first stage, physical removal of those substances in the wastewater that readily settle or float to be separated from the water being treated. Experience in these areas includes, but is not limited to, sludge pumping from clarifiers, skimming, grit handling and the routine monitoring and operation of the equipment involved in these areas.

• **SECONDARY/ADVANCED TREATMENT:**

The area concerned with the biological treatment of the wastewater. Experience in this area includes, but is not limited to, setting, or adjusting flows between units, setting or adjusting recirculation, wasting and aeration rates.

• **RESIDUALS PROCESSING AND DISPOSAL:**

The area concerned with handling of the settleable solids removed from liquids during processing. Experience in this area includes, but is not limited to, sludge or bio-solids thickening, stabilization, de-watering, incineration, and/or disposal.

• **LABORATORY ANALYSIS/INDUSTRIAL PRETREATMENT PROGRAM:**

The area concerned with the performance of routine required laboratory analysis at the wastewater treatment facility, required for control and reporting purposes, or of the industrial pretreatment program tasks. This does not include analyses done at small “satellite” or on-location labs used for routine control but not for reporting data such as, but not limited to, spot checks for chlorine residual, solids analysis for checking filter cake dryness and similar activities.

• **MAINTENANCE:**

The area concerned with pump, mechanical, or electrical repairs and replacement, as well as preventive maintenance activities. This does not include such activities as grounds keeping, building up-keep, and/or janitorial work.

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Specified Educational Categories:

• **SCIENCE:**

This includes, but is not limited to chemistry, biology, microbiology, and physics.

• **ENGINEERING:**

This includes, but is not limited to hydraulics, electricity, electronics, engineering materials, mechanics, statics, dynamics, technical drawing, and computer programming.

• **ADMINISTRATIVE:**

This includes, but is not limited to English composition, technical report writing, engineering contracts, environmental law, public relations and communication, utility management, basic supervision, American government, accounting, and up to a maximum of three semester hours of acceptable computer application courses.

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