

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY  
WATER RESOURCES DIVISION  
**STUDY GUIDE OF TYPICAL EXAM CONTENT FOR WASTEWATER TREATMENT OPERATOR  
CLASS C AND D  
CERTIFICATION EXAMINATION**

**Written Examination**

Exams are offered twice per year in May and November. Education and experience requirements for each of the classifications are described in the Certification Board Policy. The Board Policy for minimum requirements can be found by going to [Michigan.gov/WWCertification](http://Michigan.gov/WWCertification) and clicking on "Municipal Wastewater Treatment Plant Operator Certification."

Applications for the written examinations are accepted not less than 45 days before the examination date. The exam announcements can be found on our website. The written examinations for Class A certification are developed from need-to-know exam questions. The design of the questions has been selected so that they are clear and not misleading or tricky.

No programmable calculators, electronic data storage devices, or communications devices will be allowed to be used during the examination.

No informational material (reference books, formula lists, etc.) is allowed into the examination. Examinees are expected to know the formulas for the common calculations such as circumference, area, and volume. Examinees are expected to, without reference material, perform calculations in treatment process control, hydraulics, maintenance, and sludge/biosolids.

Examinees are expected to know the basics of operation, control, and troubleshooting all the various processes involved with wastewater treatment. These would include, but are not limited to preliminary treatment, primary treatment, activated sludge processes, trickling filters, RBCs, sludge digestion/solids handling, etc.

Examinees are expected to know and be able to apply the principles of supervision that would be required of a superintendent of a Class C or D facility.

**General Exam Makeup**

The Class C and D written examinations are divided into two parts. Each part consists of multiple-choice type questions. Part 1 consists of 50 one-point questions and Part 2 consists of 25 two-point questions. Examinees have 5.0 hours to complete the exam. The style of questions and number of questions may change without notice.

The composition of the exam is in four general areas with the approximate proportions as follows:

25% Operations, 25% Management, 25% Maintenance, and 25% Laboratory



## Exam Content

Subject areas to be covered under each area may include, but are not limited to:

### OPERATION

Basic Process Operation and Theory  
Treatment Unit Operation  
Related Mathematics  
Related Safety  
Flow Measurement  
Related Hydraulics  
Biosolids Disposal  
Odor Control

### LABORATORY

Basic Principles of All Routine Analyses  
Related Calculations  
Lab Safety  
Evaluation of Lab Data  
Quality Assurance/ Quality Control Procedures

### MAINTENANCE

Maintenance of Piping, Valves, and Pumps  
Maintenance of Drive Components  
Maintenance of Flow Meters  
Maintenance of Chemical Feed Equipment

### MANAGEMENT

Record Keeping  
Reports  
Legal Regulations (State and Federal)  
Public Relations  
Planning of Work  
Security/Emergency/Safety Regulations and Procedures  
Industrial Discharge Control

**More information is available on our website at [Michigan.gov/WWCertification](http://Michigan.gov/WWCertification). Please contact [EGLE-WRD-OpCert@Michigan.gov](mailto:EGLE-WRD-OpCert@Michigan.gov) if you have any questions.**

For information or assistance on this publication, please contact the Water Resources Division through EGLE Environmental Assistance Center at 800-662-9278. This publication is available in alternative formats upon request.

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