

Environmental Operators Certification Program

PROGRAM GUIDE



Copyright © 2014 Environmental Operators Certification Program

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage or retrieval system without permission.

Environmental Operators Certification Program
3833 Henning Drive
Burnaby, BC V5C 6N5
Web: www.eocp.ca
Email: eocp@eocp.ca

Contents

Definitions	4
About the EOCP	5
Mission Statement.....	5
Strategy.....	5
Affiliations	5
Association of Boards of Certification (ABC).....	6
Reciprocity Agreement.....	6
Trade Agreements.....	6
Certification Program	7
Benefits and Key Elements.....	7
Certification in North America	8
Operator Certification Board	8
Operating Principles	8
Operator Duties	8
Facility Classification	10
Mandated Classification	10
Facility Classification System.....	10
Adjustment by Board.....	11
Facility / System Types	11
Certification Levels	12
Small System / Bulk Water Delivery Criteria	13
Multi-Utility Criteria.....	13
Certification Requirements	14
Direct Responsible Charge.....	14
Training and Experience Substitutions	17
Certification Examinations	18
Application Process	19
Examination Fees	20
Examination Sessions.....	20
Examination Grades	20
Term of a Certificate	20
Certificate Renewal	21
Payment of Dues	21
Continuing Education	21
Continuing Education Units	22
Evaluation Criteria.....	22
Activities Not Awarded Continuing Education Units	23
EOCP Training Registry.....	23
Application Forms and Study Materials	23
Need-to-Know Guide Summaries.....	23
Sample Examinations	24



Definitions

Adult Graduation Diploma – an alternative to high school graduation. This new program has replaced the GED in 2014. You can find more information about this option at:

<http://www2.gov.bc.ca/gov/content/education-training/adult-education/learn/graduate-high-school/adult-graduation-diploma-program>

Certification – the process by which EOCP, as a duly constituted body, assesses the credentials, including education, experience, and examination results, of an Operator in four utilities: water treatment, water distribution, wastewater collection, and wastewater treatment.

Chief Operator – has overall accountability for a facility/system as well as responsibility for active, daily on-site operation of the environmental control utility or a major segment of it. The Chief Operator is required to hold certification at the class of the facility/system (or higher). Where facilities use shift supervisors, the Chief Operator may hold “direct responsible charge (DRC),” or DRC may be divided between the shift supervisors.

Class – the complexity of a facility is assessed and ranked from Small System—usually the smallest and/or least complex—to Class I through Class IV, the most complex. Referred to as classification of a facility.

Classification – the process of evaluating the components of a facility and assigning a level of complexity to the facility.

Continuing education unit (CEU) – a measure of the education credit to be awarded for related educational activities that an Operator may carry out. One (1.0) CEU is equal to 10 hours of training.

Direct responsible charge (DRC) – the individual who is:

- Responsible for **daily** on-site operation of an entire facility/system or a major segment of it
- Accountable for decisions about the facility/system or a major segment of it

Good standing – Operators can maintain certification in “good standing” by meeting the continuing education unit (CEU) requirement and paying annual program membership dues.

Level – the degree of qualification of an Operator is evaluated according to experience, education, and examination results, and is categorized progressively from Small System and Operator-in-Training through Level I to Level IV, the most complex or highest.



About the EOCP

The Environmental Operators Certification Program (EOCP) is responsible for certifying water and wastewater Operators in British Columbia and the Yukon.

The EOCP evolved in BC from a handful of wastewater treatment plant Operators who began the Program in 1966. Since then, the Program has grown along with similar programs throughout North America to include over 3,500 BC and Yukon Operators.

Mission Statement

To protect human health, the environment, and the investment in facilities through increased knowledge, skill, and proficiency of the members of the Program in all matters relating to water treatment and distribution and wastewater collection, treatment, reuse, and disposal.

Strategy

The EOCP focuses its activities to accomplish its mission in the following areas:

1. Administer and continually update the provincial system of classification for water treatment, water distribution, wastewater collection, and wastewater treatment facilities.
2. Establish, update, and administer examinations to validate the knowledge that Operators require for certification.
3. Collaborate with other organizations with similar objectives and join, associate with, and affiliate with these other organizations on mutually desirable terms and conditions.
4. Provide leadership, increase networking, and open communication with members and others within the industry.
5. Carry out other related activities that elevate the profession and industry.

The mission of the EOCP will be carried out without the object of gain for its members or officers, and any profits or other accretions to the EOCP will be used in promoting its purposes. This provision is unalterable.

Affiliations

The EOCP is an independent body, duly constituted as a society in the Province of British Columbia. Because of the overlap of activities of the EOCP with others, the Program maintains official and unofficial affiliations with a number of organizations within the province and outside.



Association of Boards of Certification (ABC)

In 1973, the certification bodies from a number of jurisdictions came together to harmonize their activities and provide mutual benefits to their members. British Columbia was one of the Charter Members of this organization and remains an active participant in the various programs. ABC provides the following:

- Examinations and marking that are used in BC
- The basis of a common program with other jurisdictions
- A model for reciprocity between certification agencies
- The opportunity to network and share best practices with other certification professionals throughout North America

Reciprocity Agreement

In 1977, BC and Manitoba signed the first reciprocity agreement between Canadian certification programs. This agreement has subsequently been modified a number of times and now includes most of the Canadian certification jurisdictions. Because of this agreement, an Operator in “good standing” from BC can go to another province to work and be granted full certification at the level earned in BC.

Trade Agreements

The following trade agreements have been developed in Canada between provinces to help with labour mobility:

- New West Partnership Trade Agreement (NWPTA) (www.newwestpartnershiptrade.ca/)
- Agreement on Internal Trade (AIT) (www.ait-aci.ca/index_en.htm)

Under the **NWPTA**, BC, Alberta, and Saskatchewan have agreed to reconcile or mutually recognize occupational standards, so individuals can work in their occupation in all three provinces.

Professionals and skilled tradespersons certified in one province will be recognized as qualified in all three provinces. The benefit of the NWPTA is that workers will not need to go through additional examinations or training to practice their occupation.

Effective July 2013, the NWPTA has replaced the Trade Investment Labour Mobility Agreement (TILMA). The EOCP is on the list of TILMA BC regulatory authorities.

The **AIT** is an intergovernmental trade agreement signed by Canadian First Ministers that came into force in 1995. Its purpose is to reduce and eliminate, to the extent possible, barriers to the free movement of persons, goods, services, and investment within Canada and to establish an open, efficient, and stable domestic market.



Certification Program

Benefits and Key Elements

A certified Operator is the most valuable resource in a water or wastewater system. With water and wastewater employees properly certified, the public, the corporation, regulatory agencies, owners and managers, and peers can be confident that certified employees have the skills, knowledge, abilities, experience, and judgment necessary to competently perform their job.

Certified employees can maximize the performance of water and wastewater facilities, which will in turn minimize health risks and environmental concerns, optimize the costs of operations, protect the investment in infrastructure, and provide greater return on the utility's or industry's capital investment.

Certifying water and wastewater Operators establishes their job as a profession. Certification provides a means of recognition to peers, owners and managers, and the public. Certification has resulted in improved safety and reduced accident rates for certified Operators as well as improved compliance with water and pollution control legislation and regulations. Certification also enhances career opportunities for certified Operators and aids employers in hiring, promoting, and establishing salary levels based on certification.

Additional benefits of a certification program include:

- Defining minimum qualification standards for each level of the occupation
- Verifying that the qualification standards have been met through formal application, assessment of education, and work experience, and requiring Operators to pass a comprehensive, job-based certification exam
- Establishing a focus for the development of training materials and certification exams based on *Need to Know* criteria and job analysis
- Developing a pool of qualified Operators

The key elements of a certification program are:

- Classification system for water and wastewater systems and facilities
- Establishment of qualifications for water/wastewater facility Operators
- Administration of validated certification examinations
- Issuance and renewal of certificates
- Maintenance of records (CEUs, facility classification, personal records, and similar)
- Achievement of reciprocity between provinces regarding Operator certification



Certification in North America

In North America today, there are over 60 certifying authorities representing all Canadian provinces except Quebec, and all 50 American states. Since 1918, certification of water and wastewater Operators has been recognized as beneficial to the protection of public health and the environment. National and international organizations such the following have stated their support for facility classification and Operator certification:

- American Water Works Association
- Water Environment Federation (formerly Water Pollution Control Federation)
- Environment Canada
- United States Environmental Protection Agency

Operator Certification Board

The EOCP in BC is directed by a Board elected by the members from candidates drawn from various areas of water and wastewater activity throughout the province. For more information on the Board, see the EOCP Constitution.

Operating Principles

The Operator certification and facility classification system in almost all jurisdictions involves multiple levels of facility classification and Operator certification. The purpose of this system is to match the qualification levels of Operators with the complexity of the facilities they will operate, to help ensure that facilities are operated by appropriately qualified personnel. All personnel carrying out operating duties at a water or wastewater facility must be certified at a level that is appropriate for their responsibilities and the facility they are operating.

The EOCP recognizes that an Operator's competence develops over time and provides a staged process so that an entry-level Operator in a stable working environment can successfully advance to a position of responsibility for the system. To accommodate entry-level Operators, an Operator-in-Training examination and certificate is available. This certificate should be applied for within 3 months of starting employment (or transferring into) a water or wastewater facility.

Operator Duties

The term "Operator" applies to those with hands-on responsibility for operating water and wastewater facilities. It does not apply to individuals who do not have direct, hands-on responsibilities in the facilities or direct on-site supervision of systems and Operators, such as:

- Municipal, regional district, or industry managers
- Directors of public works
- Engineers
- Technical superintendents, or equivalents



It does not apply to welders, equipment operators, carpenters, truck drivers, or others whose work is limited to a single activity, the performance of which does not include direct responsibility for safeguarding public health or the environment in the practice of disciplines described in the guide.

Single-task employees, such as tradespersons and labourers, are not considered to be gaining operating experience for the purpose of eventual certification if they later apply to be certified.

The following table provides examples of the multitude of tasks that Operators are responsible for.

Table 1: Examples of Operator Duties

Operator Type	Operator Duties
Water and/or Wastewater Treatment Operators	<ul style="list-style-type: none"> • Controlling the flow and processing of water/wastewater, residuals, and finished water/effluent • Monitoring gauges, meters, and control panels and observing variations in operating conditions • Interpreting test results to determine processing requirements • Operating valves and gates either manually or by remote control • Starting and stopping pumps, engines, and generators to control and adjust flow and treatment processes • Maintaining shift logs and recording meter and gauge readings • Collecting samples and performing routine laboratory tests and analyses • Performing routine maintenance functions and custodial duties • Operating power-generating equipment and incinerators • Making operating decisions in the absence of supervisory personnel • Performing duties of shift supervisors in their absence and other related tasks
Water Distribution and/or Wastewater Collection Operators	<ul style="list-style-type: none"> • Excavating and backfilling material prior to installation or for the repair of any of the described systems • Installing pipe and related appurtenances • Controlling flow of water/wastewater • Monitoring gauges, meters, and control panels and observing variations in operating conditions • Operating valves and gates either manually or by remote control • Starting and stopping pumps, engines, and generators to control and adjust flow • Maintaining shift logs and recording meter and gauge readings • Collecting samples and performing routine field analyses • Performing routine maintenance functions and custodial duties • Operating power-generating equipment • Making operating decisions in the absence of supervisory personnel • Performing duties of shift supervisors in their absence and other related tasks



Facility Classification

Classification of a facility provides both Operators and the owner with an indication of the level of certificate that Operators should hold, and of the degree of knowledge and training that will be required of Operators. Under a system of mandatory facility classification:

- The owner is responsible for ensuring that Operators have access to the training activities needed to upgrade their certificates.
- Operators are responsible for ensuring that they obtain the necessary level of certification.

Since 1975, facilities in BC have been classified on a voluntary basis using standards adopted by the Association of Boards of Certification. These standards are continually upgraded to reflect the ever-increasing complexity of modern water and wastewater treatment systems and facilities.

Facility classification forms are available at the EOCP office or online at <http://www.eocp.ca/facilities/facility-classification/>.

Mandated Classification

- The Ministry of Environment (MoE) mandated a classification system for municipal wastewater treatment facilities effective August 1, 1993. The program is administered by EOCP. Municipal liquid waste discharge permits issued by MoE were amended starting in March 1993 to include this provision.
- As of July 1999, the MoE Municipal Sewage Regulation requires facility classification for wastewater treatment.
- As of April 2012, the Municipal Wastewater Regulations require facility classification for both wastewater treatment and collection systems.

Facility Classification System

Classification of systems and facilities follows two paths:

- Water distribution systems and wastewater collection systems are classified based on flow and complexity.
- Water treatment facilities and municipal and industrial wastewater treatment facilities are classified based on flow, complexity of operation, variability of influent and effluent requirements, and analytical laboratory controls carried out at the facilities.

Facilities are classified from Small Systems to Class I through IV, with Class IV systems being the largest or most complex. For Operators to become certified at Level III or IV, the facility in which they are employed first needs to be classified.

The following table summarizes the facility classification point system.



Table 2: Facility Classification System

Facility	Units	Class I	Class II	Class III	Class IV
Water distribution	Point range	<31	31-55	56-75	>75
Wastewater collection	Point range	<31	31-55	56-75	>75
Water treatment	Point range	<31	31-55	56-75	>75
Wastewater treatment	Point range	<31	31-55	56-75	>75
Industrial wastewater treatment	Point range	<31	31-55	56-75	>75
Small water system	Point range		<55	N/A	N/A
Small wastewater system	Point range		<55	N/A	N/A

Notes:

- “In-line” activities such as booster pumping, coarse screening, chlorination, or fluoridation are considered an integral part of the water distribution system and not a water treatment facility.
- A facility that provides only comminution or screening of wastewater solids, lift stations, chlorination, or odour control prior to discharge to receiving water is considered an integral part of the collection system and not a wastewater treatment facility.

Adjustment by Board

Under certain circumstances, the class of a particular plant determined by the point system may not reflect the most appropriate level of Operator needed for that facility (due to special features, design, or other characteristics). In these rare cases, the Board may adjust the class up or down to bring the plant in line with what it should be.

Facility / System Types

Wastewater collection system – the portion of a wastewater system, including pumping stations, in which wastewater is conveyed from either of the following:

- Property line in the case of a residential or commercial connection
- Perimeter of a unit process in the case of an industrial connection to the wastewater treatment plant or the receiving water

Water distribution system – the portion of a potable and/or process water system in which water is conveyed from the water treatment plant or point of supply to the point of consumption or use.

Wastewater treatment facility – the portion of a wastewater system that improves or alters the physical, chemical, or microbiological quality of the wastewater other than through the process of screening, comminution, and/or disinfection prior to discharge to the receiving environment.

Water treatment facility – A facility that includes treatment using physical, chemical, or biological processes, including any method of primary disinfection, to produce potable water.



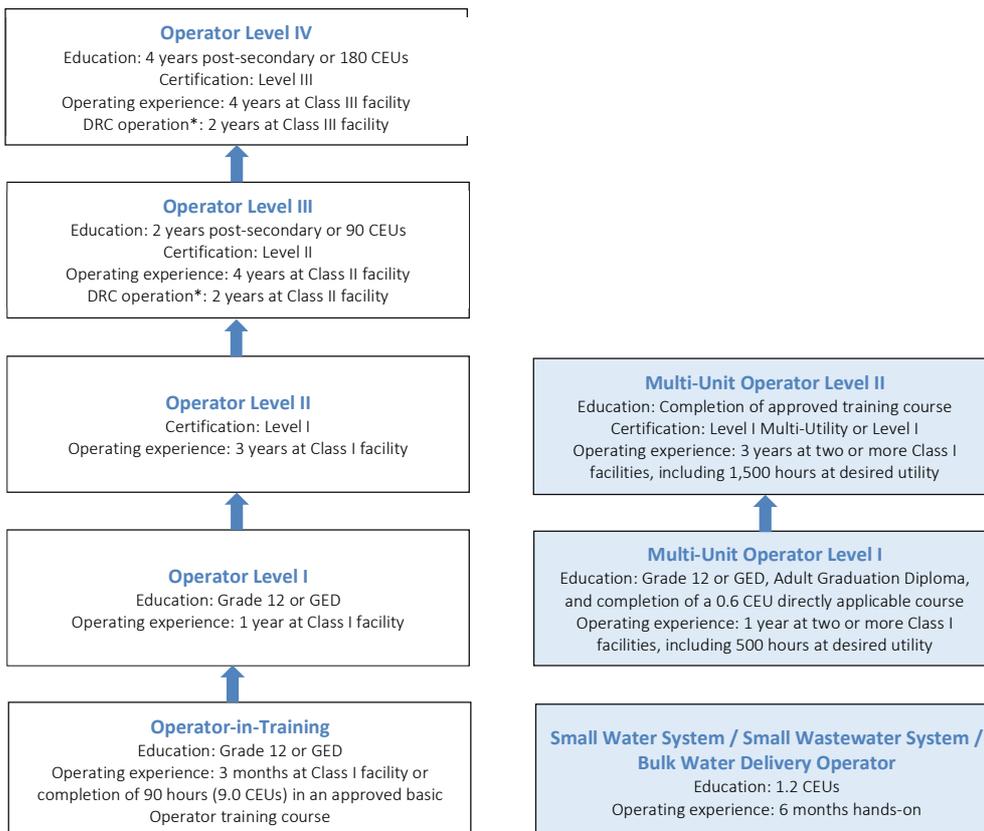
Certification Levels

Entry-Level Certification – Operator-in-Training (OIT) is an optional entry-level certification for Operators who are new to the municipal water and wastewater industry. Typically they either have some related formal education or direct hands-on experience.

Level I to Level IV – Through work in larger facilities, Operators can progress from Level I to Level IV as they gain more hands-on work experience. Level IV Operators are the highest and most advanced. Their work experience is gained in larger and more complex facilities as per the facility classification system.

Small Systems or Multi-Utility – When Operators work in small systems or in two or more utilities in cities or municipalities with smaller populations, they may not be able to meet the requirements of certification Levels I–IV. Small System and Multi-Utility classification and Operator certification (described in more detail below) are intended to ensure the qualification of Operators who work on systems that may not fit within the regular certification process.

The following figure shows the levels of certification.



* Water Treatment Operators and Wastewater Treatment Operators only



Small System / Bulk Water Delivery Criteria

The criteria for Small System classification and Operator certification have been developed in conjunction with other jurisdictions in Canada and the U.S. and follow the guidelines as identified with the Association of Boards of Certification.

Typically, small water distribution, water treatment, wastewater collection, or wastewater treatment facilities have Operators who are not required full time. The systems are relatively simple, serve only a small population, or are operating for only a portion of any given year.

The three types of facility classification and Operator certification for small systems are:

- Small Water System (includes distribution and treatment)
- Small Wastewater System – Lagoons (includes collection and treatment)
- Small Wastewater System – Mechanical (includes collection and treatment)

Operators will generally be certified as Small Water System Operators, Small Wastewater System Operators, or Bulk Water Delivery Operators if they:

- Work in small facilities serving a maximum population of 500 people or per capita equivalents, and the treatment component of the facility is classified as small or industrial, not Class I or Class II.
- Spend a limited number of hours on water Operator duties.
- Have other non-utility duties, such as park operations, ground maintenance, road construction, or similar. Typical work sites include campgrounds, parks, and work camps.

As most small systems do not require full-time care, individuals who work in them may have other unrelated job duties, and as result, may not be able to meet the minimum requirements for Level I–IV certification, and in particular, achieve the operating experience (1,800 hours) required to write a Level I exam in a reasonable period of time.

An Operator holding a Small System certificate will be recognized as a certified Operator only at facilities considered small systems. Small System Operators can apply to write exams to obtain Level I and II certification once they acquire the additional work experience and education. An Operator holding a Level I or higher certificate is recognized as a certified Operator in most small and large facilities.

Multi-Utility Criteria

This certification applies to Operators who are working in two or more utilities in cities or municipalities with smaller populations (less than 10,000 people). It recognizes the following:

- Operators working in two or more utilities are exposed to many situations where the knowledge and experience gained in one utility applies to all utilities.
- Many smaller utility facilities may not require a full-time Operator but require an Operator to be available at all times. Because they do not require full-time care, Operators may take longer to complete the work experience requirement to upgrade their certification to Level I or II in a specific utility.



An Operator who holds a Multi-Utility certificate will be recognized as a certified Operator. Once the additional hours to qualify for regular Level I certification have been completed, Operators can submit verification of their hours (page 3 of the application or a formal letter from their employer) and pay the \$15 fee to gain the Level I certificate.

A similar process takes place for an Operator holding a Multi-Utility Level II certificate who has completed the additional work experience requirement to apply for a Level II certificate.

Certification Requirements

The table on the next page lists the combinations of education, training, and experience required for eligibility to write the examinations for each level of certification. The Board will consider a variation in the requirements on a case-by-case basis on request and with sufficient explanation of special circumstances.

Note: if you are not sure where you fit on this table of requirements, please contact the EOCP office at 604-874-4784 or toll free at 1-866-552-3627, or via email at eocp@eocp.ca.

High School Graduation

In BC, high school graduation was added as a certification requirement in February 2014. As all other Canadian provinces have this requirement, it is now also mandatory for BC Operators to show proof of high school. It is important for BC to be consistent with the rest of Canada so you can have your certificates recognized in other provinces if you move and change employers. If you graduated high school in BC, you can order official transcripts using this link:

<http://www2.gov.bc.ca/gov/content/education-training/k-12/support/transcripts-and-certificates/order-online>

If you did not graduate from high school, you can earn an Adult Graduation Diploma. This new program replaced the GED in 2014. You can find more information about this option at <http://www2.gov.bc.ca/gov/content/education-training/adult-education/learn/graduate-high-school/adult-graduation-diploma-program>

Currently Employed in BC

You can apply to EOCP for Operator certification if you are currently working in BC. If you live in BC but are working in Alberta, please contact the Alberta program directly to apply:

<http://esrd.alberta.ca/water/programs-and-services/drinking-water/protection/water-and-wastewater-operator-certification.aspx>



Direct Responsible Charge

The term “direct responsible charge (DRC)” has specific meaning for the purposes of the EOCP, and is an essential component of an Operator’s experience when being considered for Level III and IV exam eligibility. DRC goes beyond doing a good job and being responsible for one’s own actions. It also includes responsibility for the overall operation of the facility and for supervision of the other Operators.

Where DRC credit is requested for more than one Operator at a time (for the operation of segments of a large facility), prior Board approval must be obtained, including classification of the segments by the Program to ensure that they meet the criteria for a Class II or Class III facility. DRC experience is required for all Level III and Level IV certificates for Wastewater Treatment Operators and Water Treatment Operators, and may be substituted between these categories for up to one-half of the post-secondary education requirements of all Level III and Level IV certificates.

Even the simplest of systems involves levels of complexity demanding that only fully qualified personnel be given responsibility for their operation. Senior Operators, Chief Operators, or similarly titled personnel must be certified at the class of the facility or higher. As there may be times when the Senior Operator or Chief Operator is not available, the individual in direct responsible charge of a Class III or IV facility should be certified at not less than one level below that of the plant and at no time less than Level II.

Note:

- To write a Level III exam, DRC must be obtained in a Class II or higher plant or system.
- To write a Level IV exam, DRC must be obtained in a Class III or higher facility or system.



Table 3: Certification Requirements

Operator-in-Training				
Education		Operating Experience		
High school diploma, GED, Adult Graduation Diploma, Red Seal Trade or PLA.		3 months (minimum 500 hours) at Class I or higher facility/system, or completion of 90 hours (9.0 CEUs) in an approved basic Operator training course		
Operator				
Level	Education	Certification Level*	Operating Experience	DRC Operation
Level I	High school diploma, GED, Adult Graduation Diploma, or Red Seal Trade or PLA.	N/A	12 months (1,800 hours) at Class I or higher facility/system	N/A
Level II	N/A	Level I	3 years (minimum 5,400 hours) at Class I or higher facility/system	N/A
Level III	2 years ¹ of directly applicable post-secondary education**	Level II	4 years (minimum 7,200 hours) at Class II or higher facility/system	2 years or 90 CEUs ² at Class II or higher facility for Water Treatment and Wastewater Treatment Operators 0 years ³ for Water Distribution or Wastewater Collection Operators
Level IV	4 years ⁴ of post-secondary training/ education***	Level III	4 years (7,200 hours) at Class III or higher facility	2 years ⁵ or 180 CEUs at Class III or higher facility for Water Treatment and Wastewater Treatment Operators 0 years ⁶ for Water Distribution or Wastewater Collection Operators
Small Water System / Small Wastewater System / Bulk Water Delivery Operator				
Education		Operating Experience		
Minimum 1.2 CEUs		6 months (minimum 50 hours) hands-on experience		
Multi-Utility Operator				
Level	Education	Certification Level	Operating Experience	
Level I	High school diploma, GED, Adult Graduation Diploma, Red Seal Trade or PLA. Completion of approved training course with minimum 0.6 CEUs (specifically approved for Multi-Utility certification in desired utility)	N/A	12 months (minimum 1,000 hours) at two or more Class I or higher facilities/ systems, including 500 hours in desired utility****	
Level II	Completion of approved training course with minimum 0.6 CEUs	Level I Multi-Utility or Level I	36 months (minimum 3,000 hours) at two or more Class I or higher facilities/ systems, including 1,500 hours in desired utility	

* All certificates must be in "good standing."

** Diploma of Water Environment Technology or Water Quality Technology, or training/education in the water or wastewater field (including core and related education/training): 900 instructional hours, or 90 CEUs, or 90 quarter credits, or 60 semester credits.

*** Training/education in water or wastewater field (including core and related education/training): 1,800 instructional hours, or 180 CEUs, or 180 quarter credits, or 120 semester credits.

**** The utilities worked in must serve a permanent population of 10,000 people or less.

¹ DRC experience over and above the 2-year requirement can be used as an education exchange for up to 45 CEUs. This means that 12 months (1,500 hours) of DRC is equivalent to 45 CEUs.

² Education over and above the required 90 CEUs can be used as a DRC exchange for up to 1 year of DRC. This means that with 135 CEUs, only 1 year of DRC is required.

³ DRC experience is not required but can be used as an education exchange for up to 45 CEUs. This means that 1,500 hours of DRC can be substituted for 45 CEUs.

⁴ DRC experience over and above the 4-year requirement can be used as an education exchange for up to 90 CEUs. This means that 24 months (3,000 hours) of DRC is equivalent to 90 CEUs.

⁵ Education over and above the required 180 CEUs can be used as a DRC exchange for up to 1 year of DRC. This means that with 225 CEUs, only 1 year of DRC is required.

⁶ DRC experience is not required but can be used as an education exchange for up to 90 CEUs. This means that 24 months (3,000 hours) of DRC is equivalent to 90 CEUs.



Training and Experience Substitutions

As shown in the following table, where applicable:

- Training/education may be substituted for operating and DRC experience. However, training/education applied to operating and/or DRC experience may not also be applied to the training/education requirement.
- Operating and DRC experience may be substituted for training/education. However, operating and/or DRC experience applied to the training/education requirement may not also be applied to the experience requirement.

Table 4: Training and Experience Substitutions

Training for Experience	
Level	Substitution
Level I	No substitution for operating experience will be accepted.
Level II	A maximum of 450 instructional hours, or 45 CEUs, or 45 quarter credits, or 30 semester credits of post-secondary training/education in the water or wastewater field, including core and related education/training, may be substituted for up to 1 year of operating experience.
Level III and IV	A maximum of 900 instructional hours, or 90 CEUs, or 90 quarter credits, or 60 semester credits of post-secondary training/education in the water or wastewater field, including core and related education/training, may be substituted for 2 years of experience. However, the applicant must still have a minimum of 1 year of DRC experience.
Experience for Training	
Level III	A maximum of 1 year of DRC experience in a Class II or higher facility may be substituted for 450 contact hours, or 45 CEUs or 45 quarter credits, or 30 semester credits of post-secondary training/education in the water or wastewater field, including core and related education/ training.
Level IV	A maximum of 2 years of DRC experience in a Class III or higher facility may be substituted for 900 contact hours, or 90 CEUs, or 90 quarter credits, or 60 semester credits of post-secondary training/education in the water or wastewater field, including core and related education/ training.
Related Experience for Experience	
At the discretion of the Board, related experience in maintenance, laboratories, other water and pollution control positions, other similar operating positions, and allied trades (such as plumber, millwright, or other certification categories) may be substituted for up to one-half of the experience requirement.	
DRC Substitutions	
Substitutions of up to 50% of the required DRC experience may be used.	
Operators may substitute Water Treatment DRC experience for Wastewater Treatment DRC experience, and vice versa. For example: <ul style="list-style-type: none"> • 2 years (3,000 hours) of DRC experience is required to write a Water Treatment Level III exam. • 1 year of Water Treatment DRC experience (1,500 hours) and 1 year of Wastewater Treatment DRC experience (1,500 hours) may be used to make up the 2 years of DRC experience. • The substituted Wastewater Treatment DRC experience may not have been used towards writing a different exam. 	



DRC Substitutions

Operators may substitute Water Distribution DRC experience for Wastewater Collection DRC experience, and vice versa. Water Distribution and Wastewater Collection DRC experience are currently used as an education exchange only. For example:

- 1 year of DRC experience (1,500 hours) may be exchanged for 45 of the 90 required CEUs to write the Water Distribution Level III exam.
- 750 hours of Water Distribution DRC experience and 750 hours of Wastewater Collection DRC experience may be used to make up the 1 year of DRC experience.
- The substituted Wastewater Collection DRC experience may not have been used towards writing a different exam.

Certification Examinations

The Certification Program has examinations available to be used in determining skill, knowledge, ability, and judgment in each of the following categories:

- Water Treatment, Level I through IV (100 multiple choice questions)
- Water Distribution, Level I through IV (100 multiple choice questions)
- Wastewater Collection, Level I through IV (100 multiple choice questions)
- Wastewater Treatment, Level I through IV (100 multiple choice questions)
- Operator-in-Training, WT, WD, WWC, or WWT (100 multiple choice questions per exam)
- Industrial Wastewater Treatment – Biological Systems, Level I through IV (100 multiple choice questions)
- Small Water System (50 multiple choice questions)
- Small Wastewater System – Collection and Mechanical (50 multiple choice questions)
- Small Wastewater System – Collection and Lagoon (50 multiple choice questions)
- Bulk Water Delivery (50 multiple choice questions)

Note: The exams for Multi-Utility certification Level I and II are the same as Level I and Level II.

The certification examinations used by the Certification Program were initially developed by the Association of Boards of Certification (ABC) working in cooperation with all of the Canadian certification boards. The metric system is used throughout the exam series and a formula sheet is provided to each examinee. The examinations are designed to test the candidate in the following areas: general knowledge, support systems, process and quality control, and administration. The following table lists the approximate apportionment of questions in each level of examination.



Table 5: Certification Examination Subject Matter

Category	Level I or Multi-Utility Level I	Level II or Multi-Utility Level II	Level III	Level IV
General knowledge	15	15	5	5
Support systems	20	15	15	10
Process / quality control	60	60	60	60
Administration	5	10	20	25
Totals	100	100	100	100

For a detailed description of the tasks involved in each of the areas of general knowledge, support systems, process and quality control, and administration, see the *Need to Know* job analysis document published by the Association of Boards of Certification. A summary of the *Need to Know* document may be obtained from the Certification Program office.

Application Process

All applications to write certification examinations must be made in writing by completing the application form, which is available as follows:

- Use the online form at [EOCP Forms and Applications: Certification, Renewal, Additional Employers | EOCP: Environmental Operators Certification Program](http://www.eocp.ca/program-info/forms/) (<http://www.eocp.ca/program-info/forms/>)
- Have a form emailed or mailed by calling the EOCP office at 604-874-4784 or toll free at 1-866-552-3627

Applications to write examinations must be submitted no later than **3 weeks prior to the examination session**.

The application form provides applicants with an opportunity to demonstrate that they possess the requisite combination of education and experience. It is important that applicants take the time to fill out this form as completely and accurately as possible, as the information provided will form part of their personal file within the Certification Program, and will be verified by the EOCP office and entered into the certification database.

Applications to write an examination in any category must be accompanied by proof of eligibility and/or a job description from the employer and must be confirmed by a supervisor or owner.

After the EOCP office has assessed the application and verified whether the Operator is in “good standing,” applicants will be informed of their eligibility or ineligibility to write a certification examination.



Examination Fees

Eligible candidates will pay the applicable fees prior to writing the examination. A Schedule of Fees and Services is available through the EOCP office and online at [Fees and Services](http://www.eocp.ca/program-info/forms/) (<http://www.eocp.ca/program-info/forms/>).

The fee structure is set by the Certification Board and subject to review at any time. It is available on request from the EOCP office staff or any Director.

Examination Sessions

Examination sessions will be held at times and places set by the Certification Board, with a suitable advance announcement. Examinations may also be written at the EOCP office or by special arrangement with any EOCP staff. See the online [Exam Schedule](http://www.eocp.ca/program-info/forms/) (<http://www.eocp.ca/program-info/forms/>).

Examination Grades

The passing grade on each examination is 70%. Examinees will be provided with an individual mastery report identifying their performance on the exam. Each report lists the total number of questions answered correctly by the examinee out of the total number of questions. The report includes objectives that enable the examinee to identify areas for further study.

Examinees may rewrite a failed exam 60 days after writing, if they receive a mark of 69% or less. The purpose of the rewrite schedule is to allow the candidate sufficient time to prepare for the exam using the study material suggested in the examination report.

Applicants who achieve a passing grade of 70% on Operator-in-Training or Level I exams will be issued a certificate designating their qualification. The certificate will state the certified individual's name, certification level, date of issuance, and official certificate number.

Operators writing Level II or higher exams will receive a sticker to affix to their Level I certificate. Certificates are issued for Level II or higher exams for a fee.

Term of a Certificate

Certificates will be valid only so long as holders use reasonable care, judgment, and application of their knowledge in the performance of their duties. No certificate will be valid if obtained or renewed through fraud, deceit, or the submission of inaccurate qualification data.

An Operator whose certificate has been suspended or revoked will be entitled, upon application to the Board, to have their written appeal discussed at the next Board meeting. The Operator will receive the Board's decision in writing within 30 days of the Board meeting. Appeal of the decision of the Certification Board may be made to a court of competent jurisdiction.



Certificate Renewal

Payment of Dues

Members who, for any reason, fail to pay their dues may apply for reinstatement. To renew their certificates, Operators must pay their annual dues, and meet CEU requirements for each two-year cycle, as set out below.

If the application for reinstatement includes **proof of continuous employment as an Operator**, the renewal will be subject to the following conditions:

- If their dues have not been paid for 1 to 3 years, they may re-enter at the level previously certified upon payment of back dues and late payment levies calculated at the applicable current rate.
- If their dues have not been paid for more than 3 years, they may re-enter at one level below the previously certified level upon payment of back dues and late payment levies calculated at the applicable current rate.

If members have **not been continuously employed as an Operator**, the renewal will be subject to the following conditions:

- If their dues have not been paid for 1 to 3 years, they may re-enter at one level below the previously certified level upon payment of back dues and late payment levies calculated at the applicable current rate.
- If their dues have not been paid for more than 3 years, they must successfully pass the Level I examination and pay the appropriate current fees to re-enter the program.

Continuing Education

During each two-year renewal period, Operators must complete continuing education appropriate to their work activities and the certificates they hold.

- Operators holding SWS or SWWS certificates will only be expected to complete 12 hours (1.2 CEUs) of approved post-secondary training directly applicable to their certificates. If they hold both certificates, they will be expected to complete 25% (3 hours) of their training in each field.
- Operators holding Level I–IV certificates will be expected to complete 24 hours (2.4 CEUs) of approved, appropriate training in each two-year renewal period. If they hold more than one certificate, they will be expected to complete a minimum of 25% (0.6 CEU) of their training in each of the fields of their certificates.

Members who, for any reason, fail to complete their continuing education requirement for any or all of their certificates will be declared as members not in good standing. These members must provide copies of course completion certificates or transcripts to bring their CEU requirements up to date. Operators who are not in good standing are not eligible to write certification exams, vote in the EOCP election, or receive the *EOCP Digest*.



Continuing Education Units

Most Operators who seek to advance through the levels of certification will need to upgrade their level of education. Even Operators who have completed full-year courses at post-secondary institutions will need to take “short courses” to satisfy the mandatory continuing education requirement.

While the Certification Program does not offer training, it does allow Operators to register their “continuing education” or “professional growth credits.” The Certification Board also provides a service to training organizations by assessing training materials and assigning continuing education units (CEUs).

A permanent CEU record serves as documentation for certification at a higher level, and a record of accomplishment in areas of technical and personal development.

The term “continuing education unit (CEU)” is registered to the Council on the Continuing Educational Unit in Washington DC. The Council has defined one continuing education unit as follows:

ten contact hours of participation in an organized, continuing education experience under responsible sponsorship, capable direction, and qualified instruction.

Evaluation Criteria

The CEU relates only to non-credit continuing education experiences. The Board will evaluate all training materials and courses with the following criteria:

- **Is a training need identified?** The training will be relevant to continuing education or job requirements.
- **Is a learning outcome named?** The program will specify skills, knowledge, or attitudes the learner should be able to demonstrate following the activity.
- **Do the instructional personnel have:**
 - Demonstrated subject competence
 - Understanding of the learning outcome
 - Knowledge of the learning process to be used
 - Ability to communicate
- **Is the course content:** consistent with objectives and sequenced in a logical manner? Does it proceed from basic to advanced levels, and permit the learner to participate and receive feedback?
- **Course completion:** Attendance should be 90% or more. Satisfactory course completion may be based on participant’s ability to demonstrate what was learned.
- **Training course assessment:** Formal - written examinations, written reports, completion of project. Informal - self-assessment, oral examination.



- **Course evaluation:** major aspects of the course are evaluated by participant reaction and sponsor evaluation to maintain quality control.

Activities Not Awarded Continuing Education Units

CEUs will not be awarded for any program of instruction of less than 0.5 hours duration or for the following activities:

- Non-educational activities, meetings, conferences, conventions of professional or occupational associations, trade shows, or exhibits. However, specific seminars held in conjunction with such meetings may qualify if program criteria are met.
- Cultural performances and participation in travel groups unless an integral part of planned training
- High school equivalency programs
- Unsupervised study (other than recognized correspondence courses), independent writings, and research reports
- Mass media programs, unless an integral part of planned training
- On-the-job training, unless planned, structured, and supervised to meet program CEU criteria

EOCP Training Registry

The EOCP has developed a Training Registry for all members who want to get training, give training, or grow their career. See the Training Registry page on the EOCP website (www.trainingregistry.eocp.ca/).

Application Forms and Study Materials

The following materials are available at the EOCP office or online (www.eocp.ca):

- *Application for Certification Form*
- *Direct Responsible Charge Registration Form*
- *Facility Classification Application Form*
- *Continuing Education Credit Registration Form*
- *EOCP Formulae, Conversions, and Abbreviations Form*

Need-to-Know Guide Summaries

Study materials are available at Association of Boards of Certification's (ABC) website www.abccert.org, on this page: http://www.abccert.org/testing_services/need_to_know_criteria.asp



Sample Examinations

ABC has online sample exam questions

http://www.abccert.org/testing_services/sample_exam_questions.asp

Many sample examination questions are available on the internet. To review sample questions, EOCB recommends that you consider purchasing the following:

- American Water Works Association's www.awwa.org *Water Operator Certification Study Guide*
- Water Environment Federation's www.wef.org *WEF/ABC Wastewater Operators' Guide to Preparing for the Certification Examination* and the *Wastewater Collection System Operator Certification Studybook*
- To focus on what you may be examined on, review the following:
 - ABC certification study guides www.abccert.org/testing_services/study_guides.asp
 - ABC's *Need to Know* criteria www.abccert.org/testing_services/need_to_know_criteria.asp

A list of EOCB-recognized training courses that allow Operators to collect CEUs is available in the EOCB Training Registry at <http://www.trainingregistry.eocb.ca/>.

