



# EOCP

Environmental Operators  
Certification Program

Certifying Operators and Classifying  
Facilities since 1966 to enable the prudent  
management of water and wastewater  
in British Columbia and Yukon

# PROGRAM GUIDE

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Environmental Operators Certification Program

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## Contents

<b>Definitions</b> .....	<b>4</b>
<b>About the EOCP</b> .....	<b>6</b>
Vision Statement.....	6
Mission Statement.....	6
Strategy.....	6
<b>Affiliations</b> .....	<b>6</b>
Association of Boards of Certification (ABC).....	7
Reciprocity Agreement.....	7
Trade Agreements.....	7
<b>Certification Program</b> .....	<b>8</b>
Benefits and Key Elements.....	8
Certification in North America.....	9
Operator Certification Board.....	9
<b>Operating Principles</b> .....	<b>9</b>
<b>Code of Ethics and Standards of Practice for Environmental Operators</b> .....	<b>9</b>
<b>Operator Duties</b> .....	<b>10</b>
<b>Facility Classification</b> .....	<b>11</b>
Mandated Classification.....	12
<b>Facility / System Types</b> .....	<b>15</b>
<b>Certification Levels</b> .....	<b>15</b>
Small System / Bulk Water Delivery Criteria.....	15
Building Water Systems Criteria.....	16
Multi-Utility Criteria.....	17
<b>Direct Responsible Charge (DRC)</b> .....	<b>16</b>
DRC Plans.....	17
<b>Certification Requirements</b> .....	<b>17</b>
High School Graduation.....	17
Currently Employed in BC.....	18
<b>Training and Experience Substitutions</b> .....	<b>20</b>
<b>Recommended Staffing Levels</b> .....	<b>21</b>
<b>Certification Examinations</b> .....	<b>22</b>
<b>Application Process</b> .....	<b>22</b>
Examination Fees.....	23
Examination Sessions.....	23
Examination Grades.....	23
<b>Term of a Certificate</b> .....	<b>24</b>
<b>Certificate Renewal</b> .....	<b>24</b>
Payment of Dues.....	24
Continuing Education.....	25
<b>Continuing Education Units</b> .....	<b>25</b>
Evaluation Criteria.....	26
Activities Not Awarded Continuing Education Units.....	27
Career Management System.....	27
<b>Online Application Forms and Study Materials</b> .....	<b>27</b>

Exam Preparation .....	28
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## 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:

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

**Best Practices** – As defined by the Canadian Water and Wastewater Operator Certification Committee

**Building Water Systems (BWS) Operator:** Non-potable and point of use water treatment certification. The BWS Operator will be skilled in operating and maintain water treatment systems within buildings, cooling towers, decorative water features and rainwater harvesting systems.

**Career Management System (CMS)** – The portion of the EOCP’s Customer Relationship Management system that includes training and development information for Operators as well as assessment and recognition of Training Organizations and Instructors for Water and Wastewater in British Columbia and Yukon.

**Certification** – the process by which EOCP, as a duly authorized body under legislation, assesses the credentials, including education, experience, and examination results, of an Operator in four utilities: water treatment, water distribution, wastewater collection, and wastewater treatment; as well as certification in bulk water delivery, small water systems, small wastewater systems, and Operator in Training

**Certified** – Once an exam has been passed, Operators are required to maintain certification by meeting the continuing education unit (CEU) requirements and paying annual program membership dues.

**Chief Operator** – has overall accountability for a facility/system as well as responsibility for active, daily on-site operation of the utility or a major segment of it. It is recommended that the Chief Operator 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.

**Code of Ethics and Standards of Practice for Environmental Operators** – the keystone of professional conduct to ensure Environmental Operators discharge their duties to the public, their employers, fellow members, and clients, with fairness and impartiality.

**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.

**Core CEUs** - CEUs that have been assessed as directly applicable to the job functions and knowledge requirements for an Operator for a specific utility type (i.e. directly WWT).

**Customer Relationship Management (CRM) System** –The online portal that all persons in the Water/Wastewater Industry can use to access their profiles. The online system is used for everything from Exam Applications to finding Recognized Training Providers. Operators, Supervisors, and Administrators can all use the CRM to oversee their own profiles, the profiles of their staff, and/or interact with EOCP.

**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 and/or accountable for decisions about the facility/system or a major segment of it.

**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.

**Ombudsperson Committee** – the role of this committee is to provide an impartial decision on a complaint that in the opinion of the complainant has not been adequately addressed by EOCP staff. The EOCP's Ombudsperson Committee comprises of two board directors and two staff members.

**Operator Peer Network** – this is a mentoring opportunity provided via the Career Management System of the EOCP whereby both an approved mentor and mentee may gain up to 0.6 CEUs within a reporting period.

**Reciprocity** - Certified Operators from BC or YK can go to another province to work and be granted full certification at the level certified by the EOCP. Operators coming from all Canadian jurisdictions to work in BC as Operators, except for Quebec, will be granted full certification with the EOCP at the level held in the certification jurisdiction they came from.

**Related CEUs** - CEUs that are relevant to the industry as a whole, but not directly applicable to the job functions of an Operator for a specific utility type.

## About the EOCP

The Environmental Operators Certification Program (EOCP) is responsible for certifying water and wastewater Operators in British Columbia and 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 more than 6,000 BC and YK Operators.

## Vision Statement

A Canada where all people have access to safe drinking water and good sanitation. We firmly believe that this is possible.

## 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 and systems.
2. Establish, update, and administer examinations to validate the knowledge that Operators require for certification.
3. Join, associate, and/or collaborate with organizations with similar objectives on mutually desirable terms and conditions.
4. Provide leadership, increase networking, and open communication with members and other stakeholders within the industry.
5. Carry out other related activities that enhance 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 for sixteen areas
- 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, and internationally

## 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 all Canadian certification jurisdictions except Quebec. Because of this agreement, a certified Operator from BC or YK can go to another province to work and be granted full certification at the level certified by the EOCP.

## 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/](http://www.newwestpartnershiptrade.ca/))

Agreement on Internal Trade (AIT) and labour mobility

<http://www.workersmobility.ca/workers/> Under the **NWPTA**, BC, Alberta Saskatchewan and Manitoba 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 four 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 Operators can maximize the performance of water and wastewater facilities, which will in turn minimize health risks and environmental concerns, optimize the functioning of operations, protect 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. Certification also enhances career opportunities for certified Operators and aids employers in hiring, promoting, and establishing salary levels based on certification.

#### **Additional benefits of the EOCP's 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 certification exam
- Establishing a focus for the development of training materials and certification exams based on the ABC *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 Operators
- Administration of validated certification examinations
- Issuance and renewal of certificates
- Maintenance of records (CEUs, facility classification, and personal records)
- Achievement of reciprocity between provinces regarding Operator certification

## Certification in North America

In North America today, there are over 60 certifying authorities including all Canadian provinces and territories (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/YK is overseen by an unelected staff team that reports to a Board elected by the members from candidates drawn from various areas of water and wastewater industry throughout BC and YK. For more information on the Board, please 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 and 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.

## Code of Ethics and Standards of Practice for Environmental Operators

All Operators applying for certification need to review and sign the Code of Ethics and Standards of Practice. These are in the context of the Environmental Operators Certification Program's 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, re-use and disposal."*

The Code of Ethics is not an external set of restrictions. Rather, it embodies the shared values of the EOCP's members. Membership implies a commitment to these shared values. Members who contravene this Code of Ethics, as determined by the EOCP, may have their certification suspended or revoked as outlined in the Disciplinary Matrix. Review of complaints/concerns regarding contraventions will be investigated by the EOCP's Ombudsperson Committee which comprises of two Board Directors and two EOCP staff members.

[Click Here to download the EOCP Member Code of Ethics](#)

## Operator Duties

The term 'Operator' applies to those with hands-on responsibility for operating water and wastewater facilities/systems. 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, lab workers 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"> <li>• Controlling the flow and processing of water/wastewater, residuals, and finished water/effluent</li> <li>• Monitoring gauges, meters, and control panels, and observing variations in operating conditions</li> <li>• Interpreting test results to determine processing requirements</li> <li>• Operating valves and gates either manually or by remote control</li> <li>• Starting and stopping pumps, engines, and generators to control and adjust flow and treatment processes</li> <li>• Maintaining shift logs and recording meter and gauge readings</li> <li>• Collecting samples and performing routine laboratory tests and analyses</li> <li>• Performing routine maintenance functions and custodial duties</li> <li>• Operating power-generating equipment and incinerators</li> <li>• Making operating decisions in the absence of supervisory personnel</li> <li>• Performing duties of shift supervisors in their absence and other related tasks</li> </ul>

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

## 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/YK 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.

In 2017, following a collaborative stakeholder engagement process, the EOCP launched new facility classification models for Level I to IV facilities. These new models involve a systems approach and assess the complexity of physical infrastructure and operational influences to give an overall classification.

Facility classification forms are available online through the customer relationship management system. Chief Operators and Persons In Charge can login and complete their classifications at <https://crm.eocp.ca> by navigating to the facility details page and selecting 'Action -> Request Re-classification'

EOCP | Customer Relationship Management System Settings Logged In: Green

Home CRM Action Items Career Management Finance Reporting

Home > CRM > Test WT Facility

### TEST WT FACILITY

[Edit Organization](#)
[Action](#)

ORGANIZATION	RELATIONSHIPS	ACCOUNT	ACTIVITY
<a href="#">Add Classification</a> <a href="#">Request Re-classification</a> <a href="#">Apply to become a Training Organization</a>	<a href="#">Add a Relationship</a>	<a href="#">Service Order</a> <a href="#">Billing Preference</a>	<a href="#">Log Interaction</a> <a href="#">Create Task</a> <a href="#">Create Note</a> <a href="#">Attach File</a>

PROFILE RELATIONSHIPS ACCOUNT ACTION ITEMS

Activities Applications

Applications Applicants Exam Type Status

APPLICATION TYPE	APPLICATION#	NAME	DATE STARTED	STATUS	EXAM RESULTS
Facility Class. Application	336777	Test WT Facility	17-07-2018 08:42:39	Pending	
Facility Class. Application	335699	Test WT Facility	19-06-2018 09:47:26	Pending	

Showing 1 to 2 of 2 entries | Show 15 entries

Previous 1 Next

## Mandated Classification

Under the provisions of the Municipal Wastewater Regulation (2012) and the Drinking Water Protection Regulation (2016), all facilities (treatment, collection, and distribution) are required to classify with the EOCP.

The EOCP requires that all facilities must reclassify every 5 years, and following any major process change, based on whichever occurs sooner.

The EOCP requires that all facilities must have an Operator with a certification commensurate with the level of facility classification and that all hands-on Operators must be certified appropriate to their position.

As of July 1, 2021, there will no longer be any fees associated with facility classification. Instead, all facilities will pay an annual fee, similar to Operator dues. The following table outlines the fees based on facility type.

Annual Fees	Facility Type			
	WT	WD	WWC	WWT
I	\$100	\$100	\$100	\$100
II	\$200	\$200	\$200	\$200
III	\$300	\$300	\$300	\$300
IV	\$400	\$400	\$400	\$400

## Facility Classification System

Classification of systems and facilities follows two paths:

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

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 the facility in which they are employed needs to be classified. Operators in classified Level II systems can write up to Level III certification exams and classified Level III and IV systems allow Operators to write up to Level IV certification exams.

The following tables summarize the facility classification point systems.

The final classification ranking is a combination of the infrastructure point score and the influencer point score. For example, a water treatment facility with 44 infrastructure points, and 250 influencer points would be classified as Level 3.

### Water Distribution

Interim Classification	Infrastructure Point Score	Increase due to influencers	Influencer Point Score
<b>Level I</b>	0-24	0	0-230
<b>Level II</b>	25-39	1	231-430
<b>Level III</b>	40-49	2	431-500
<b>Level IV</b>	50+	3	501+

### Water Treatment

Interim Classification	Infrastructure Point Score	Increase due to influencers	Influencer Point Score
<b>Level I</b>	0-39	0	0-199
<b>Level II</b>	40-49	1	200-299
<b>Level III</b>	50-59	2	300+
<b>Level IV</b>	60+	3	N/A

### Wastewater Collection

Interim Classification	Infrastructure Point Score	Increase due to influencers	Influencer Point Score
<b>Level I</b>	0-20	0	0-199
<b>Level II</b>	21-35	1	200-299
<b>Level III</b>	36+	2	300+
<b>Level IV</b>	N/A	3	N/A

### Wastewater Treatment

Interim Classification	Infrastructure Point Score	Increase due to influencers	Influencer Point Score
<b>Level I</b>	0-29	0	0-179
<b>Level II</b>	30-59	1	180-209
<b>Level III</b>	60-89	2	210+
<b>Level IV</b>	90+	3	N/A

Small water and wastewater system classifications are available for facilities serving populations of 500 or less.

#### Note:

- A facility that includes treatment using physical, chemical or biological processes, including any method of primary disinfection, to produce potable water is to be classified as a water treatment facility. To be considered a water distribution system, the system must have source water that is already potable (i.e. water from a treatment facility or groundwater from an aquifer not at risk of containing pathogens).
- 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 EOCP

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 EOCP may adjust the class up or down to bring the plant in line with what it should be.

## Facility / System Types

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

**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.

## 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 directly applicable formal education or direct hands-on experience. These certificates are valid for three years and cover all four utilities.

**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. The following figure shows the levels of certification.

**Building Water Systems (BWS):** Non-potable and potable water treatment certification. The BWS Operator will be skilled in operating and maintain point of use water treatment systems within buildings, cooling towers, decorative water features and rainwater harvesting systems. Building Water Systems are not currently required to be classified by the EOCP.

## 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 usually relatively simple, serve only a small population, or are operating for only a portion of any given year.

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

- Small Water System (includes distribution and treatment)
- Small Wastewater System (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.
- Spend a limited number of hours on water Operator duties.
- Have other non-utility duties, such as park operations, ground maintenance, road construction, or other responsibilities. Typical work sites include campgrounds, parks, and work camps.

As most small systems do not require full-time oversight, they 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.

### **Building Water Systems (BWS) Criteria**

The criteria for Building Water System requirements were developed in conjunction with Vancouver Coastal Health and the City of Vancouver out of concern over Legionella.

Legionella are associated with the built environment. The bacteria can proliferate in unsatisfactorily maintained plumbing and building mechanical systems and are transmitted through inhalation of contaminated water that has been aerosolized, but not by ingestion of water. Sources include, but are not limited to, cooling towers, swimming pools, domestic water systems, ice-making machines, whirlpool spas, hot springs, decorative water features (fountains), and rainwater re-use systems. This certification also encompasses point of use potable water systems where anti-corrosives are used.

The EOCP will recognize the 50 hours of required work experience gained in the following areas for BWS certification:

- Relevant red seal trade e.g. plumber or boilermaker
- Facility maintenance technician
- Profession engineer working in a related field
- Certified EOCP Operator

- Water treatment service provider
- Environmental health officer
- Drinking water officer
- Swimming pool Operator
- The other requirements are proof of high school and 1.2 CEUs in an accredited BWS course.

### **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 a Level I certification have been completed, Operators can submit verification of their hours (supervisor verification form or a formal letter from their employer) and pay the certification 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.

The exams for Multi-Utility certification level. I and II are the same as the level I and II exams.

### **Direct Responsible Charge (DRC)**

The term 'direct responsible charge' (DRC) is an essential component required by the EOCP for 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.

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 the facility should be certified at not less than one level below that of the facility/system.

Note:

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- 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.
- For more information on the New DRC Guidelines, please visit <https://eocp.ca/direct-responsible-charge>

## DRC Plans

As of January 2019, DRC Plans are mandatory for all facilities classified Level II or higher. DRC Plan examples for all facility types can be found at <https://eocp.ca/direct-responsible-charge/>

## Certification Requirements

The table on the page 19 lists the combinations of education, training, and experience required for eligibility to write the examinations for each level of certification. The EOCP 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](mailto:eocp@eocp.ca).*

## High School Graduation

- High school graduation was added as a mandatory certification requirement in February 2014. As all other Canadian provinces had this requirement, it is now also mandatory for BC/YK Operators to show proof of high school. This policy is in conformance with Canadian Best Practices. If you graduated high school in BC/YK, you can order official transcripts using the link below.  
<https://www2.gov.bc.ca/gov/content/education-training/k-12/support/transcripts-and-certificates/transcripts>
- If you did not graduate from high school, you can earn an Adult Graduation Diploma. Yukon uses the same adult graduation requirements as BC. This new program replaced the GED in 2014. You can find more information about this option at:  
<https://www2.gov.bc.ca/gov/content/education-training/adult-education/graduate-high-school/bc-adult-graduation-diploma-program>

Here are links to schools in Yukon and BC.

- For BC: <http://www.educationplannerbc.ca/institution/map>
- For YK: <https://yukon.ca/en/education-and-schools/kindergarten-grade-12/find-school>



### **Currently Employed in BC**

You can apply to EOCP for Operator certification, including reciprocity, if you are currently working in BC. If you live in BC but are working in another province, please contact the certifying agency for that province. If you are working in Alberta, please contact the Alberta program directly to apply: <https://awwoa.ca/>

**Table 2: Certification Requirements**

<b>Operator-in-Training</b>				
<b>Education</b>		<b>Operating Experience</b>		
High school diploma, GED, Adult Graduation Diploma, Red Seal Trade.		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. Certification valid for one year.		
<b>Operator</b>				
<b>Level</b>	<b>Education</b>	<b>Certification Level*</b>	<b>Operating Experience</b>	<b>DRC Operation</b>
<b>Level I</b>	High school diploma, GED, Adult Graduation Diploma, or Red Seal Trade . .	N/A	12 months (1,800 hours) at Class I or higher facility/system	N/A
<b>Level II</b>	N/A	Level I	3 years (minimum 5,400 hours) at Class I or higher facility/system	N/A
<b>Level III</b>	2 years <sup>1</sup> of directly applicable post-secondary education or 90 CEUs**	Level II	4 years (minimum 7,200 hours) at Class II or higher facility/system	2 years <sup>2</sup> at Class II or higher facility with a minimum of 1 year in the utility being applied for.
<b>Level IV</b>	4 years <sup>3</sup> of post-secondary training/ education or 180 CEUs***	Level III	4 years (7,200 hours) at Class III or higher facility	2 years <sup>4</sup> at Class III or higher facility with a minimum of 1 year in the utility being applied for.
<b>Small Water System / Small Wastewater System / Bulk Water Delivery Operator / Building Water System<sup>5</sup></b>				
<b>Education</b>		<b>Operating Experience</b>		
Minimum 1.2 CEUs <sup>5</sup> BWS education requirement is 1.2 CEUs in an accredited BWS course.		Minimum 50 hours hands-on experience		
<b>Multi-Utility Operator</b>				
<b>Level</b>	<b>Education</b>	<b>Certification Level</b>	<b>Operating Experience</b>	
<b>Level I</b>	High school diploma, GED, Adult Graduation Diploma, Red Seal Trade.	N/A	12 months (minimum 1,000 hours) at two or more Class I or higher facilities/ systems, including 500 hours in desired utility****	
	Completion of approved training course with minimum 0.6 CEUs (specifically approved for Multi-Utility certification in desired utility)			
<b>Level II</b>	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 Certified status

\*\* 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.

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> DRC experience over and above the 2-year requirement can be used as an education exchange for up to 90 CEUs. This means that 2 years (3,000 hours) of DRC is equivalent to 90 CEUs.

<sup>4</sup> 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.

## Training and Experience Substitutions

As shown in the following table, where applicable:

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

**Table 3: 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"> <li>• 2 years (3,000 hours) of DRC experience is required to write a Water Treatment Level III exam.</li> <li>• 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.</li> <li>• The substituted Wastewater Treatment DRC experience may not have been used towards writing a different exam.</li> <li>• Operators may substitute Water Distribution DRC experience for Wastewater Collection DRC experience, and vice versa as in the example above.</li> </ul>	

- Water Distribution and Wastewater Collection DRC hours may not be substituted for Wastewater Treatment and Water Treatment DRC hours and vice versa.

## Recommended Staffing Levels

**Table 4: Recommended Staffing Levels**

WT/WD/WWT/WWC	Certified Operator in charge	Backup Operator/s
<b>Class I</b>	Level I or higher	Recommended
<b>Class II</b>	Level II or higher	Recommended Level I or II
<b>Class III</b>	Level III or higher	<p><i>Population 1,501 – 15,000</i></p> <ul style="list-style-type: none"> <li>- Level I or higher</li> </ul> <p><i>Population 15,001 – 50,000</i></p> <ul style="list-style-type: none"> <li>- Level II or higher</li> </ul> <p><i>Population exceeding 50,000</i></p> <ul style="list-style-type: none"> <li>- Level II or higher</li> <li>- One Operator at Level I or higher</li> <li>- Must have one certified Operator at each shift</li> </ul>
<b>Class IV</b>	Level IV	<p>WT/WWT</p> <p><i>Population up - 200,000</i></p> <ul style="list-style-type: none"> <li>- Two Level III or IV</li> <li>- Must have one certified Operator at Level II or higher at each shift</li> </ul> <p><i>Population &gt; 200,000</i></p> <ul style="list-style-type: none"> <li>- One Level IV</li> <li>- One Level III or IV</li> <li>- Must have at minimum one certified Operator Level II or higher at each shift</li> </ul> <p>WD/WWC only</p> <p><i>Population &gt; 50,001</i></p> <ul style="list-style-type: none"> <li>- Two Level III or IV</li> <li>- Must have one certified Operator at Level II or higher at each shift</li> </ul>

## 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 (110 multiple choice questions\*)
- Water Distribution, Level I through IV (110 multiple choice questions\*)
- Wastewater Collection, Level I through IV (110 multiple choice questions\*)
- Wastewater Treatment, Level I through IV (110 multiple choice questions\*)
- Operator in Training, includes all 4 utilities (100 multiple choice questions per exam)
- Small Water System (50 multiple choice questions)
- Small Wastewater System (50 multiple choice questions)
- Bulk Water Delivery (50 multiple choice questions)
- Building Water Systems (50 multiple choice questions)

Note:

- The exams for Multi-Utility certification Level I and II are the same as Level I and Level II.
- \*Please also note that the new standardized exams include 10 extra unscored questions that have not been used in previous versions of the exam. These are known as 'pre-test' questions and allow ABC to gather valuable data about the new questions before they are included as scored questions in future exams. Pre-test questions are unidentified and scattered throughout the exam to ensure candidates answer them with the same care in which they address scored items. The pre-test questions are not included in the candidate's final score.

Most of the certification examinations used by the EOCP have been developed by the Association of Boards of Certification (ABC) working in cooperation with all of the Canadian certification boards. Due to the exams being used for an international audience, two units of measurement (metric and US customary) are 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 ABC's Need-to-Know criteria can be found here:

[http://www.abccert.org/testing\\_services/need\\_to\\_know\\_criteria.asp](http://www.abccert.org/testing_services/need_to_know_criteria.asp)

## Application Process

All applications to write certification examinations must be submitted through the EOCP's CRM by completing the online application in the Operator's profile by clicking 'ACTION' and then 'APPLY FOR EXAM'.

Applications must be submitted via the CRM at least **three weeks prior to the requested examination session date**, and must include all required documentation in order for the review to confirm eligibility. The online application provides applicants with an opportunity to

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demonstrate that they possess the requisite combination of education and experience. It is important that applicants take the time to fill out the online application 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.

Operators are also required to establish appropriate relationships within the CRM to their Employer(s) and the Facilities/Systems that they work at within BC/YK.

Applications to write an examination in any category must include all requested documentation, including supervisor verification and a job description from the employer.

After the EOCP office has assessed the application applicants will be informed of their eligibility or ineligibility to write a certification examination.

### **Examination Fees**

Eligible candidates will pay the applicable fees at the end of the application process prior to submission of the application. A Complete List of Fees and Services is available online at: <https://eocp.ca/fees/>

The fee structure is set by the Certification Board and subject to review at any time.

### **Examination Sessions**

Examination sessions are held at times and locations organized by the EOCP, with a suitable advance announcement. Examinations may also be written at the EOCP office or by special arrangement with EOCP staff. See the online exam schedule by logging into the CRM and selecting Career Management>Exams.

### **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 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 30 days after writing, if they receive a mark of less than 70%. 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. All exams are marked by computer and the grades are final. The exam results cannot be changed.

Applicants who achieve a passing grade of 70% on exams will be issued a certificate designating their qualification. The certificate will state the certified Operator's name, certification level, and the Operator's certification number.

## 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 EOCP, to have their written appeal reviewed by the EOCP's Ombudsperson Committee, and subsequently, the Certification Board. 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

Several changes were incorporated into the Environmental Operators Certification Program Society Constitution and Bylaws, ratified during the June 23<sup>rd</sup>, 2016 Annual General Meeting. In accordance with Best Practices regarding membership, please note the following section from Article 1:

7. A person ceases to be a member of the society:
  - 7.1. by delivering his or her resignation in writing to the society or by mailing or delivering it to the address of the society;
  - 7.2. on his or her death;
  - 7.3. on being expelled;
  - 7.4. on his or her certification expiring or being revoked in accordance with Article 1, Section 7;
  - 7.5. on his or her annual dues having not been paid within three hundred and sixty-four (364) days of the due date established by the Directors.

Of special importance here is Section 7.5: as of December 31<sup>st</sup>, 2017, an Operator's membership with the EOCP will lapse if membership dues are more than three hundred and sixty-four (364) days past due.

Certificates are valid one year and require the payment of membership dues on an annual basis. The only exception is Operator in Training Certificates which can be renewed only three (3) times.

Operators who have not paid their annual dues and/or who have not completed their Continuing Education Requirement within ninety (90) days of the beginning of a new reporting period are designated as 'Not Certified' and are no longer certified by the EOCP. Reinstatement may be possible as per the conditions noted below:

1. If Operators have not been certified for up to two (2) years, Operators may re-enter at the level held when their membership lapsed by paying any unpaid back dues, plus a

reinstatement fee of \$150, and must show completion of the CEUs that would have been necessary during the period of no certification.

2. If Operators have not been certified for more than two (2) years, Operators may re-enter at one level below the level held when their membership became delinquent by paying any unpaid back dues, plus a \$300 reinstatement fee, and must show completion of the CEUs that would have been necessary during the period of no certification.
3. Operators who have not been certified for four (4) years or longer will need to restart the certification process as a new Operator.

## 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 BWD certificates are expected to complete 6 hours (0.6 CEUs) of approved training directly applicable to the certificate as of January 1, 2020 for each two-year renewal period. If they hold more than one certificate, they will be expected to complete 3 hours (0.3 CEUs) of their training in BWD.
- Operators holding BWS certificates are expected to complete 12 hours (1.2CEUs) of approved training directly applicable to the certificate as of January 1, 2022 for each two-year renewal period.
- Operators holding SWS or SWWS certificates are expected to complete 12 hours (1.2 CEUs) of approved 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 Not Certified. These members must provide copies of course completion certificates or transcripts to bring their CEU requirements up to date.

Operators who are Not Certified are not eligible to write certification exams, vote in the EOCP election, or receive the *Operator 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.

To maintain integrity of the Certification Program, the EOCP 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) through the CMS portion of the online CRM.

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:

- 10 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 EOCP 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 writing, 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

## Career Management System

The EOCP's Career Management System is a valuable resource for all members who want to get training, give training, or grow their career.

## Online Application Forms and Study Materials

To interact with the EOCP, it is mandatory to have an online profile at <https://crm.eocp.ca/>. From your profile, you can:

- Apply for Exam(s)
- Upload a course you have taken
- Upload Education
- Attach Files for additional Supervisor Verification and Job Description(s)
- Establish Relationships with Employers and Facilities/Systems within BC/YK
- Review your Direct Responsible Charge plan <https://eocp.ca/direct-responsible-charge/>
- Review your Facility Classification <https://eocp.ca/facilities/facility-classification/>

## Exam Preparation

Need to know guides, exam interface layout, sample questions, formula sheets provided, and math practice questions can be found at the following link

<https://eocp.ca/certified-Operators/preparing-for-your-exam/>

Sample exams for SWS, SWWS and OIT can be found at the following link  
<https://eocp.ca/certified-Operators/preparing-for-your-exam/> sample exams